Full wwPDB X-ray Structure Validation Report (i)

Mar 23, 2025 – 06:15 PM EDT

PDB ID	:	4V9O
Title	:	Control of ribosomal subunit rotation by elongation factor G
Authors	:	Pulk, A.; Cate, J.H.D.
Deposited on	:	2013-05-03
Resolution	:	2.90 Å(reported)

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.

We welcome your comments at *validation@mail.wwpdb.org*
A user guide is available at
https://www.wwpdb.org/validation/2017/XrayValidationReportHelp
with specific help available everywhere you see the (i) symbol.

The types of validation reports are described at
http://www.wwpdb.org/validation/2017/FAQs#types.

The following versions of software and data (see references (i)) were used in the production of this report:

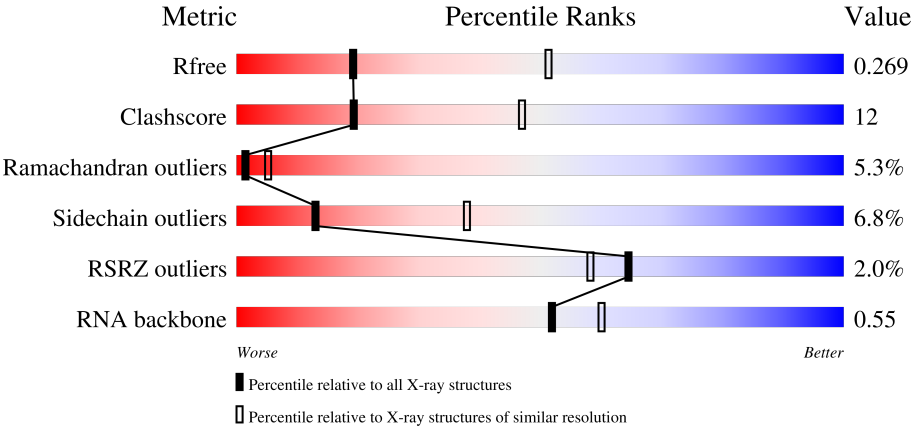
MolProbity	:	4.02b-467
Mogul	:	2022.3.0, CSD as543be (2022)
Xtriage (Phenix)	:	1.21
EDS	:	3.0
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
CCP4	:	9.0.004 (Gargrove)
Density-Fitness	:	1.0.11
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.41.4

1 Overall quality at a glance (i)

The following experimental techniques were used to determine the structure:
X-RAY DIFFRACTION

The reported resolution of this entry is 2.90 Å.

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	164625	2335 (2.90-2.90)
Clashscore	180529	2564 (2.90-2.90)
Ramachandran outliers	177936	2514 (2.90-2.90)
Sidechain outliers	177891	2516 (2.90-2.90)
RSRZ outliers	164620	2337 (2.90-2.90)
RNA backbone	3690	1039 (3.10-2.70)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	AB	120	66% 26% 7% •
1	CB	120	60% 32% 7% •
1	EB	120	62% 24% 9% • •
1	GB	120	36% 51% 10% • •

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Mol	Chain	Length	Quality of chain
2	AC	273	69% 26%
2	CC	273	68% 24% 7%
2	EC	273	64% 30%
2	GC	273	65% 29% 5%
3	AA	2904	57% 32% 9%
3	CA	2904	56% 33% 8%
3	EA	2904	57% 31% 9%
3	GA	2904	47% 40% 10%
4	AD	209	65% 29% 5%
4	CD	209	63% 32% 5%
4	ED	209	63% 31% 5%
4	GD	209	66% 31%
5	AE	201	69% 25%
5	CE	201	70% 26%
5	EE	201	70% 26%
5	GE	201	54% 40% 6%
6	AF	179	66% 28%
6	CF	179	69% 27%
6	EF	179	57% 35% 7%
6	GF	179	16% 57% 38%
7	AG	177	63% 28% 8%
7	CG	177	61% 32% 6%
7	EG	177	62% 31% 6%
7	GG	177	59% 35% 5%
8	AH	50	58% 36% 6%

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Mol	Chain	Length	Quality of chain
8	CH	50	8% 48% 48%
8	EH	50	66% 28% 6%
8	GH	50	4% 78% 16% 6%
9	AI	142	6% 51% 43% 5%
9	CI	142	3% 65% 30%
9	EI	142	5% 60% 35%
9	GI	142	21% 54% 41% 5%
10	AJ	142	2% 60% 29% 10%
10	CJ	142	% 61% 30% 8%
10	EJ	142	2% 61% 27% 11%
10	GJ	142	2% 55% 36% 8%
11	AK	123	% 55% 34% 8%
11	CK	123	58% 31% 10%
11	EK	123	2% 59% 31% 9%
11	GK	123	63% 30% 6%
12	AL	144	% 69% 25%
12	CL	144	% 65% 31%
12	EL	144	67% 27%
12	GL	144	3% 62% 32% 5%
13	AM	136	% 64% 29% 7%
13	CM	136	65% 30% 5%
13	EM	136	67% 28% 5%
13	GM	136	3% 74% 21%
14	AN	127	62% 29% 6%
14	CN	127	66% 25% 6%

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Mol	Chain	Length	Quality of chain
14	EN	127	69% 24% 6%
14	GN	127	66% 26% 6%
15	AO	117	69% 27%
15	CO	117	66% 28% 5%
15	EO	117	75% 21%
15	GO	117	3% 61% 35%
16	AP	115	2% 65% 24% 7%
16	CP	115	60% 28% 10%
16	EP	115	58% 27% 13%
16	GP	115	63% 26% 9%
17	AQ	118	3% 63% 31% 5%
17	CQ	118	4% 71% 22% 6%
17	EQ	118	2% 69% 24% 6%
17	GQ	118	3% 53% 41% 6%
18	AR	103	63% 34%
18	CR	103	65% 31%
18	ER	103	2% 64% 31% 5%
18	GR	103	5% 61% 33% 5%
19	AS	110	66% 26% 6%
19	CS	110	3% 73% 22% 5%
19	ES	110	72% 19% 9%
19	GS	110	64% 31% 5%
20	AT	100	55% 31% 6% 7%
20	CT	100	2% 54% 33% 6% 7%
20	ET	100	2% 49% 36% 6% 7%

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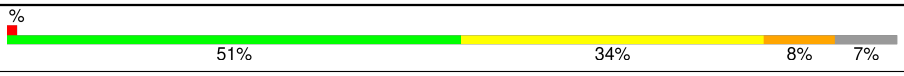
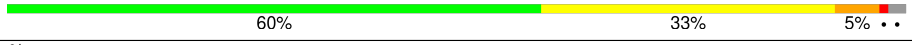
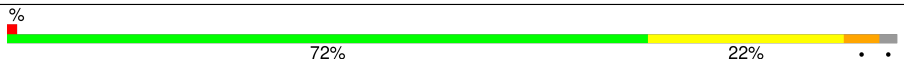
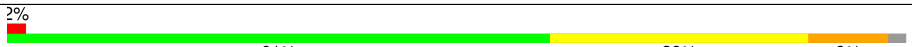
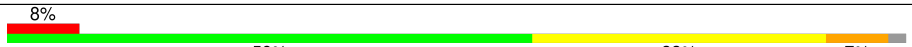
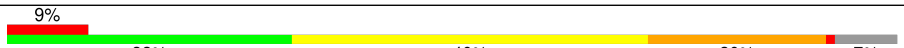
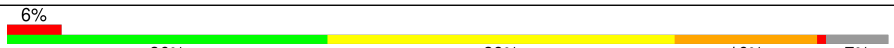
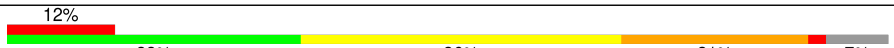
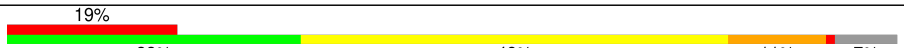
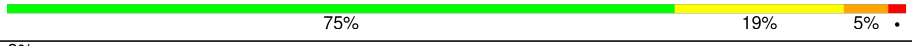
Mol	Chain	Length	Quality of chain
20	GT	100	
21	AU	104	
21	CU	104	
21	EU	104	
21	GU	104	
22	AV	94	
22	CV	94	
22	EV	94	
22	GV	94	
23	AW	85	
23	CW	85	
23	EW	85	
23	GW	85	
24	AX	78	
24	CX	78	
24	EX	78	
24	GX	78	
25	AY	63	
25	CY	63	
25	EY	63	
25	GY	63	
26	AZ	59	
26	CZ	59	
26	EZ	59	
26	GZ	59	

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Mol	Chain	Length	Quality of chain
27	A0	57	2% 70% 25%
27	C0	57	67% 28%
27	E0	57	2% 70% 25%
27	G0	57	74% 23%
28	A1	55	56% 29% 5% 9%
28	C1	55	2% 58% 29% 9%
28	E1	55	60% 25% 5% 9%
28	G1	55	5% 58% 29% 9%
29	A2	46	2% 78% 20%
29	C2	46	7% 65% 30%
29	E2	46	76% 22%
29	G2	46	4% 63% 30% 7%
30	A3	65	77% 17% 5%
30	C3	65	78% 18%
30	E3	65	2% 72% 22%
30	G3	65	11% 57% 37%
31	A4	38	55% 39%
31	C4	38	66% 26% 5%
31	E4	38	68% 24% 8%
31	G4	38	68% 24% 8%
32	A5	165	12% 24% 39% 19% 8% 10%
32	C5	165	13% 28% 36% 19% 5% 10%
32	E5	165	12% 27% 35% 20% 5% 12%
33	A6	121	7% 15% 7% 75%
34	BB	241	% 56% 29% 5% 10%

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Mol	Chain	Length	Quality of chain
34	DB	241	49% 36% 5% 10%
34	FB	241	52% 34% 5% 10%
34	HB	241	56% 31% 10%
35	BA	1542	62% 29% 7%
35	DA	1542	53% 37% 9%
35	FA	1542	56% 34% 8%
35	HA	1542	47% 42% 10%
36	BC	233	64% 21% 12%
36	DC	233	60% 26% 12%
36	FC	233	61% 24% 12%
36	HC	233	66% 20% 12%
37	BD	206	62% 31% 6%
37	DD	206	63% 31% 6%
37	FD	206	59% 36%
37	HD	206	56% 39%
38	BE	167	56% 30% 10%
38	DE	167	59% 29% 10%
38	FE	167	58% 27% 5% 10%
38	HE	167	58% 26% 6% 10%
39	BF	135	54% 15% 24%
39	DF	135	45% 25% 26%
39	FF	135	53% 15% 6% 26%
39	HF	135	43% 29% 26%
40	BG	179	65% 16% 16%
40	DG	179	60% 24% 16%

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Mol	Chain	Length	Quality of chain
40	FG	179	2% 70% 14% 16%
40	HG	179	15% 52% 31% 16%
41	BH	130	71% 23% 5%
41	DH	130	% 71% 26%
41	FH	130	2% 72% 23%
41	HH	130	63% 33%
42	BI	130	2% 54% 37% 7%
42	DI	130	9% 58% 38%
42	FI	130	3% 60% 31% 7%
42	HI	130	14% 65% 32%
43	BJ	103	% 62% 29% 5%
43	DJ	103	3% 60% 30% 5%
43	FJ	103	4% 64% 28% 5%
43	HJ	103	13% 57% 32% 6% 5%
44	BK	129	2% 65% 22% 9%
44	DK	129	5% 53% 33% 9%
44	FK	129	2% 53% 30% 8% 9%
44	HK	129	9% 39% 45% 6% 9%
45	BL	124	2% 65% 28% 6%
45	DL	124	5% 66% 29%
45	FL	124	3% 68% 25% 5%
45	HL	124	8% 63% 34%
46	BM	118	72% 19% 6%
46	DM	118	% 65% 27%
46	FM	118	% 59% 35%

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Mol	Chain	Length	Quality of chain
46	HM	118	31% 55% 38%
47	BN	101	3% 57% 33% 5% 5%
47	DN	101	% 67% 28% 5%
47	FN	101	6% 57% 35% 5%
47	HN	101	29% 60% 35% 5%
48	BO	89	79% 19%
48	DO	89	% 76% 22%
48	FO	89	75% 21%
48	HO	89	4% 74% 24%
49	BP	82	2% 72% 26%
49	DP	82	% 65% 30% 5%
49	FP	82	5% 72% 27%
49	HP	82	% 73% 27%
50	BQ	84	65% 27% 5%
50	DQ	84	% 51% 38% 5% 5%
50	FQ	84	63% 30% 5%
50	HQ	84	6% 51% 32% 12% 5%
51	BR	75	3% 53% 20% 27%
51	DR	75	59% 15% 27%
51	FR	75	3% 64% 9% 27%
51	HR	75	5% 53% 19% 27%
52	BS	92	% 62% 18% 5% 14%
52	DS	92	3% 64% 21% 14%
52	FS	92	2% 51% 29% 5% 14%
52	HS	92	29% 49% 37% 14%

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Mol	Chain	Length	Quality of chain
53	BT	87	2% 75% 22%
53	DT	87	2% 62% 28% 7%
53	FT	87	2% 70% 24%
53	HT	87	3% 72% 21%
54	BU	71	7% 31% 37% 28%
54	DU	71	11% 49% 18% 28%
54	FU	71	7% 31% 31% 10% 28%
54	HU	71	11% 37% 34% 28%
55	BV	704	68% 25% 5%
55	DV	704	% 66% 27%
55	FV	704	69% 24%
55	HV	704	2% 71% 23%
56	BW	6	17% 67% 17%
56	DW	6	17% 67% 17%
56	FW	6	17% 33% 50%
56	HW	6	33% 50% 17%

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
56	KBE	BW	1	-	X	-	-

2 Entry composition (i)

There are 60 unique types of molecules in this entry. The entry contains 592086 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, the ZeroOcc column contains the number of atoms modelled with zero occupancy, the AltConf column contains the number of residues with at least one atom in alternate conformation and the Trace column contains the number of residues modelled with at most 2 atoms.

- Molecule 1 is a RNA chain called 5S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	AB	118	Total	C	N	O	P	0	0	0
			2529	1126	464	821	118			
1	CB	118	Total	C	N	O	P	0	0	0
			2529	1126	464	821	118			
1	EB	118	Total	C	N	O	P	0	0	0
			2529	1126	464	821	118			
1	GB	118	Total	C	N	O	P	0	0	0
			2529	1126	464	821	118			

- Molecule 2 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	AC	271	Total	C	N	O	S	0	0	0
			2082	1288	423	364	7			
2	CC	271	Total	C	N	O	S	0	0	0
			2082	1288	423	364	7			
2	EC	271	Total	C	N	O	S	0	0	0
			2082	1288	423	364	7			
2	GC	271	Total	C	N	O	S	0	0	0
			2082	1288	423	364	7			

- Molecule 3 is a RNA chain called 23S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	AA	2854	Total	C	N	O	P	0	0	0
			61274	27334	11279	19807	2854			
3	CA	2854	Total	C	N	O	P	0	0	0
			61274	27334	11279	19807	2854			
3	EA	2854	Total	C	N	O	P	0	0	0
			61274	27334	11279	19807	2854			
3	GA	2854	Total	C	N	O	P	0	0	0
			61274	27334	11279	19807	2854			

- Molecule 4 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	AD	209	Total	C	N	O	S	0	0	0
			1565	979	288	294	4			
4	CD	209	Total	C	N	O	S	0	0	0
			1565	979	288	294	4			
4	ED	209	Total	C	N	O	S	0	0	0
			1565	979	288	294	4			
4	GD	209	Total	C	N	O	S	0	0	0
			1565	979	288	294	4			

- Molecule 5 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
5	AE	201	Total	C	N	O	S	0	0	0
			1552	974	283	290	5			
5	CE	201	Total	C	N	O	S	0	0	0
			1552	974	283	290	5			
5	EE	201	Total	C	N	O	S	0	0	0
			1552	974	283	290	5			
5	GE	201	Total	C	N	O	S	0	0	0
			1552	974	283	290	5			

- Molecule 6 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
6	AF	177	Total	C	N	O	S	0	0	0
			1410	899	249	256	6			
6	CF	177	Total	C	N	O	S	0	0	0
			1410	899	249	256	6			
6	EF	177	Total	C	N	O	S	0	0	0
			1410	899	249	256	6			
6	GF	177	Total	C	N	O	S	0	0	0
			1410	899	249	256	6			

- Molecule 7 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	AG	176	Total	C	N	O	S	0	0	0
			1323	832	243	246	2			
7	CG	176	Total	C	N	O	S	0	0	0
			1323	832	243	246	2			
7	EG	176	Total	C	N	O	S	0	0	0
			1323	832	243	246	2			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
7	GG	176	Total	C	N	O	S	0	0	0
			1323	832	243	246	2			

- Molecule 8 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
8	AH	50	Total	C	N	O	S	0	0	0
			384	247	68	68	1			
8	CH	50	Total	C	N	O	S	0	0	0
			384	247	68	68	1			
8	EH	50	Total	C	N	O	S	0	0	0
			384	247	68	68	1			
8	GH	50	Total	C	N	O	S	0	0	0
			384	247	68	68	1			

- Molecule 9 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
9	AI	141	Total	C	N	O	S	0	0	0
			1032	651	179	196	6			
9	CI	141	Total	C	N	O	S	0	0	0
			1032	651	179	196	6			
9	EI	141	Total	C	N	O	S	0	0	0
			1032	651	179	196	6			
9	GI	141	Total	C	N	O	S	0	0	0
			1032	651	179	196	6			

- Molecule 10 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
10	AJ	142	Total	C	N	O	S	0	0	0
			1129	714	212	199	4			
10	CJ	142	Total	C	N	O	S	0	0	0
			1129	714	212	199	4			
10	EJ	142	Total	C	N	O	S	0	0	0
			1129	714	212	199	4			
10	GJ	142	Total	C	N	O	S	0	0	0
			1129	714	212	199	4			

- Molecule 11 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
11	AK	122	Total	C	N	O	S	0	0	0
			938	587	180	165	6			
11	CK	122	Total	C	N	O	S	0	0	0
			938	587	180	165	6			
11	EK	122	Total	C	N	O	S	0	0	0
			938	587	180	165	6			
11	GK	122	Total	C	N	O	S	0	0	0
			938	587	180	165	6			

- Molecule 12 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
12	AL	143	Total	C	N	O	S	0	0	0
			1045	649	206	189	1			
12	CL	143	Total	C	N	O	S	0	0	0
			1045	649	206	189	1			
12	EL	143	Total	C	N	O	S	0	0	0
			1045	649	206	189	1			
12	GL	143	Total	C	N	O	S	0	0	0
			1045	649	206	189	1			

- Molecule 13 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
13	AM	136	Total	C	N	O	S	0	0	0
			1074	686	205	177	6			
13	CM	136	Total	C	N	O	S	0	0	0
			1074	686	205	177	6			
13	EM	136	Total	C	N	O	S	0	0	0
			1074	686	205	177	6			
13	GM	136	Total	C	N	O	S	0	0	0
			1074	686	205	177	6			

- Molecule 14 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	AN	120	Total	C	N	O	S	0	0	0
			960	593	196	166	5			
14	CN	120	Total	C	N	O	S	0	0	0
			960	593	196	166	5			
14	EN	120	Total	C	N	O	S	0	0	0
			960	593	196	166	5			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
14	GN	120	Total 960	C 593	N 196	O 166	S 5	0	0	0

- Molecule 15 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
15	AO	116	Total 892	C 552	N 178	O 162	0	0	0
15	CO	116	Total 892	C 552	N 178	O 162	0	0	0
15	EO	116	Total 892	C 552	N 178	O 162	0	0	0
15	GO	116	Total 892	C 552	N 178	O 162	0	0	0

- Molecule 16 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
16	AP	114	Total 917	C 574	N 179	O 163	S 1	0	0	0
16	CP	114	Total 917	C 574	N 179	O 163	S 1	0	0	0
16	EP	114	Total 917	C 574	N 179	O 163	S 1	0	0	0
16	GP	114	Total 917	C 574	N 179	O 163	S 1	0	0	0

- Molecule 17 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
17	AQ	117	Total 947	C 604	N 192	O 151	0	0	0
17	CQ	117	Total 947	C 604	N 192	O 151	0	0	0
17	EQ	117	Total 947	C 604	N 192	O 151	0	0	0
17	GQ	117	Total 947	C 604	N 192	O 151	0	0	0

- Molecule 18 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
18	AR	103	Total	C	N	O	S	0	0	0
			816	516	153	145	2			
18	CR	103	Total	C	N	O	S	0	0	0
			816	516	153	145	2			
18	ER	103	Total	C	N	O	S	0	0	0
			816	516	153	145	2			
18	GR	103	Total	C	N	O	S	0	0	0
			816	516	153	145	2			

- Molecule 19 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
19	AS	110	Total	C	N	O	S	0	0	0
			857	532	166	156	3			
19	CS	110	Total	C	N	O	S	0	0	0
			857	532	166	156	3			
19	ES	110	Total	C	N	O	S	0	0	0
			857	532	166	156	3			
19	GS	110	Total	C	N	O	S	0	0	0
			857	532	166	156	3			

- Molecule 20 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
20	AT	93	Total	C	N	O	S	0	0	0
			738	466	139	131	2			
20	CT	93	Total	C	N	O	S	0	0	0
			738	466	139	131	2			
20	ET	93	Total	C	N	O	S	0	0	0
			738	466	139	131	2			
20	GT	93	Total	C	N	O	S	0	0	0
			738	466	139	131	2			

- Molecule 21 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	AU	102	Total	C	N	O	0	0	0
			779	492	146	141			
21	CU	102	Total	C	N	O	0	0	0
			779	492	146	141			
21	EU	102	Total	C	N	O	0	0	0
			779	492	146	141			

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
21	GU	102	Total 779	C 492	N 146	O 141	0	0	0

- Molecule 22 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
22	AV	94	Total 753	C 479	N 137	O 134	S 3	0	0	0
22	CV	94	Total 753	C 479	N 137	O 134	S 3	0	0	0
22	EV	94	Total 753	C 479	N 137	O 134	S 3	0	0	0
22	GV	94	Total 753	C 479	N 137	O 134	S 3	0	0	0

- Molecule 23 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
23	AW	79	Total 596	C 367	N 120	O 108	S 1	0	0	0
23	CW	79	Total 596	C 367	N 120	O 108	S 1	0	0	0
23	EW	79	Total 596	C 367	N 120	O 108	S 1	0	0	0
23	GW	79	Total 596	C 367	N 120	O 108	S 1	0	0	0

- Molecule 24 is a protein called 50S ribosomal protein L28.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
24	AX	77	Total 625	C 388	N 129	O 106	S 2	0	0	0
24	CX	77	Total 625	C 388	N 129	O 106	S 2	0	0	0
24	EX	77	Total 625	C 388	N 129	O 106	S 2	0	0	0
24	GX	77	Total 625	C 388	N 129	O 106	S 2	0	0	0

- Molecule 25 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
25	AY	63	Total	C	N	O	S	0	0	0
			509	313	99	95	2			
25	CY	63	Total	C	N	O	S	0	0	0
			509	313	99	95	2			
25	EY	63	Total	C	N	O	S	0	0	0
			509	313	99	95	2			
25	GY	63	Total	C	N	O	S	0	0	0
			509	313	99	95	2			

- Molecule 26 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
26	AZ	58	Total	C	N	O	S	0	0	0
			449	281	87	79	2			
26	CZ	58	Total	C	N	O	S	0	0	0
			449	281	87	79	2			
26	EZ	58	Total	C	N	O	S	0	0	0
			449	281	87	79	2			
26	GZ	58	Total	C	N	O	S	0	0	0
			449	281	87	79	2			

- Molecule 27 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
27	A0	56	Total	C	N	O	S	0	0	0
			444	269	94	80	1			
27	C0	56	Total	C	N	O	S	0	0	0
			444	269	94	80	1			
27	E0	56	Total	C	N	O	S	0	0	0
			444	269	94	80	1			
27	G0	56	Total	C	N	O	S	0	0	0
			444	269	94	80	1			

- Molecule 28 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
28	A1	50	Total	C	N	O	0	0	0
			409	263	75	71			
28	C1	50	Total	C	N	O	0	0	0
			409	263	75	71			
28	E1	50	Total	C	N	O	0	0	0
			409	263	75	71			

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Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
28	G1	50	Total 409	C 263	N 75	O 71	0	0	0

- Molecule 29 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
29	A2	46	Total 377	C 228	N 90	O 57	S 2	0	0	0
29	C2	46	Total 377	C 228	N 90	O 57	S 2	0	0	0
29	E2	46	Total 377	C 228	N 90	O 57	S 2	0	0	0
29	G2	46	Total 377	C 228	N 90	O 57	S 2	0	0	0

- Molecule 30 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
30	A3	64	Total 504	C 323	N 105	O 74	S 2	0	0	0
30	C3	64	Total 504	C 323	N 105	O 74	S 2	0	0	0
30	E3	64	Total 504	C 323	N 105	O 74	S 2	0	0	0
30	G3	64	Total 504	C 323	N 105	O 74	S 2	0	0	0

- Molecule 31 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
31	A4	38	Total 302	C 185	N 65	O 48	S 4	0	0	0
31	C4	38	Total 302	C 185	N 65	O 48	S 4	0	0	0
31	E4	38	Total 302	C 185	N 65	O 48	S 4	0	0	0
31	G4	38	Total 302	C 185	N 65	O 48	S 4	0	0	0

- Molecule 32 is a protein called 50S ribosomal protein L10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
32	A5	148	Total	C	N	O	S	0	0	0
			1117	705	196	209	7			
32	C5	148	Total	C	N	O	S	0	0	0
			1117	705	196	209	7			
32	E5	145	Total	C	N	O	S	0	0	0
			1101	696	193	205	7			

- Molecule 33 is a protein called 50S ribosomal protein L7/L12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
33	A6	30	Total	C	N	O	S	0	0	0
			227	144	33	47	3			

- Molecule 34 is a protein called 30S ribosomal protein S2.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
34	BB	218	Total	C	N	O	S	0	0	0
			1704	1081	305	311	7			
34	DB	218	Total	C	N	O	S	0	0	0
			1704	1081	305	311	7			
34	FB	218	Total	C	N	O	S	0	0	0
			1704	1081	305	311	7			
34	HB	218	Total	C	N	O	S	0	0	0
			1704	1081	305	311	7			

- Molecule 35 is a RNA chain called 16S rRNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
35	BA	1533	Total	C	N	O	P	0	0	0
			32895	14671	6036	10655	1533			
35	DA	1533	Total	C	N	O	P	0	0	0
			32895	14671	6036	10655	1533			
35	FA	1533	Total	C	N	O	P	0	0	0
			32895	14671	6036	10655	1533			
35	HA	1533	Total	C	N	O	P	0	0	0
			32895	14671	6036	10655	1533			

- Molecule 36 is a protein called 30S ribosomal protein S3.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	BC	206	Total	C	N	O	S	0	0	0
			1624	1028	305	288	3			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
36	DC	206	Total	C	N	O	S	0	0	0
			1624	1028	305	288	3			
36	FC	206	Total	C	N	O	S	0	0	0
			1624	1028	305	288	3			
36	HC	206	Total	C	N	O	S	0	0	0
			1624	1028	305	288	3			

- Molecule 37 is a protein called 30S ribosomal protein S4.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
37	BD	205	Total	C	N	O	S	0	0	0
			1643	1026	315	298	4			
37	DD	205	Total	C	N	O	S	0	0	0
			1643	1026	315	298	4			
37	FD	205	Total	C	N	O	S	0	0	0
			1643	1026	315	298	4			
37	HD	205	Total	C	N	O	S	0	0	0
			1643	1026	315	298	4			

- Molecule 38 is a protein called 30S ribosomal protein S5.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
38	BE	150	Total	C	N	O	S	0	0	0
			1105	687	211	201	6			
38	DE	150	Total	C	N	O	S	0	0	0
			1105	687	211	201	6			
38	FE	150	Total	C	N	O	S	0	0	0
			1105	687	211	201	6			
38	HE	150	Total	C	N	O	S	0	0	0
			1105	687	211	201	6			

- Molecule 39 is a protein called 30S ribosomal protein S6.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
39	BF	102	Total	C	N	O	S	0	0	0
			832	525	150	150	7			
39	DF	100	Total	C	N	O	S	0	0	0
			817	515	148	148	6			
39	FF	100	Total	C	N	O	S	0	0	0
			817	515	148	148	6			
39	HF	100	Total	C	N	O	S	0	0	0
			817	515	148	148	6			

- Molecule 40 is a protein called 30S ribosomal protein S7.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
40	BG	151	Total	C	N	O	S	0	0	0
			1181	735	227	215	4			
40	DG	151	Total	C	N	O	S	0	0	0
			1181	735	227	215	4			
40	FG	151	Total	C	N	O	S	0	0	0
			1181	735	227	215	4			
40	HG	151	Total	C	N	O	S	0	0	0
			1181	735	227	215	4			

- Molecule 41 is a protein called 30S ribosomal protein S8.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
41	BH	129	Total	C	N	O	S	0	0	0
			979	616	173	184	6			
41	DH	129	Total	C	N	O	S	0	0	0
			979	616	173	184	6			
41	FH	129	Total	C	N	O	S	0	0	0
			979	616	173	184	6			
41	HH	129	Total	C	N	O	S	0	0	0
			979	616	173	184	6			

- Molecule 42 is a protein called 30S ribosomal protein S9.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
42	BI	127	Total	C	N	O	S	0	0	0
			1022	634	206	179	3			
42	DI	127	Total	C	N	O	S	0	0	0
			1022	634	206	179	3			
42	FI	127	Total	C	N	O	S	0	0	0
			1022	634	206	179	3			
42	HI	127	Total	C	N	O	S	0	0	0
			1022	634	206	179	3			

- Molecule 43 is a protein called 30S ribosomal protein S10.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	BJ	98	Total	C	N	O	S	0	0	0
			786	493	150	142	1			
43	DJ	98	Total	C	N	O	S	0	0	0
			786	493	150	142	1			
43	FJ	98	Total	C	N	O	S	0	0	0
			786	493	150	142	1			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
43	HJ	98	Total	C	N	O	S	0	0	0
			786	493	150	142	1			

- Molecule 44 is a protein called 30S ribosomal protein S11.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
44	BK	117	Total	C	N	O	S	0	0	0
			877	540	174	160	3			
44	DK	117	Total	C	N	O	S	0	0	0
			877	540	174	160	3			
44	FK	117	Total	C	N	O	S	0	0	0
			877	540	174	160	3			
44	HK	117	Total	C	N	O	S	0	0	0
			877	540	174	160	3			

- Molecule 45 is a protein called 30S ribosomal protein S12.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
45	BL	123	Total	C	N	O	S	0	0	0
			955	590	196	165	4			
45	DL	123	Total	C	N	O	S	0	0	0
			955	590	196	165	4			
45	FL	123	Total	C	N	O	S	0	0	0
			955	590	196	165	4			
45	HL	123	Total	C	N	O	S	0	0	0
			955	590	196	165	4			

- Molecule 46 is a protein called 30S ribosomal protein S13.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
46	BM	114	Total	C	N	O	S	0	0	0
			883	546	178	156	3			
46	DM	114	Total	C	N	O	S	0	0	0
			883	546	178	156	3			
46	FM	114	Total	C	N	O	S	0	0	0
			883	546	178	156	3			
46	HM	114	Total	C	N	O	S	0	0	0
			883	546	178	156	3			

- Molecule 47 is a protein called 30S ribosomal protein S14.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
47	BN	96	Total	C	N	O	S	0	0	0
			774	483	160	128	3			
47	DN	96	Total	C	N	O	S	0	0	0
			774	483	160	128	3			
47	FN	96	Total	C	N	O	S	0	0	0
			774	483	160	128	3			
47	HN	96	Total	C	N	O	S	0	0	0
			774	483	160	128	3			

- Molecule 48 is a protein called 30S ribosomal protein S15.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
48	BO	88	Total	C	N	O	S	0	0	0
			714	439	144	130	1			
48	DO	88	Total	C	N	O	S	0	0	0
			714	439	144	130	1			
48	FO	88	Total	C	N	O	S	0	0	0
			714	439	144	130	1			
48	HO	88	Total	C	N	O	S	0	0	0
			714	439	144	130	1			

- Molecule 49 is a protein called 30S ribosomal protein S16.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
49	BP	82	Total	C	N	O	S	0	0	0
			649	406	128	114	1			
49	DP	82	Total	C	N	O	S	0	0	0
			649	406	128	114	1			
49	FP	82	Total	C	N	O	S	0	0	0
			649	406	128	114	1			
49	HP	82	Total	C	N	O	S	0	0	0
			649	406	128	114	1			

- Molecule 50 is a protein called 30S ribosomal protein S17.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	BQ	80	Total	C	N	O	S	0	0	0
			648	411	121	113	3			
50	DQ	80	Total	C	N	O	S	0	0	0
			648	411	121	113	3			
50	FQ	80	Total	C	N	O	S	0	0	0
			648	411	121	113	3			

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Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
50	HQ	80	Total 648	C 411	N 121	O 113	S 3	0	0	0

- Molecule 51 is a protein called 30S ribosomal protein S18.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
51	BR	55	Total 455	C 288	N 86	O 81	0	0	0
51	DR	55	Total 455	C 288	N 86	O 81	0	0	0
51	FR	55	Total 455	C 288	N 86	O 81	0	0	0
51	HR	55	Total 455	C 288	N 86	O 81	0	0	0

- Molecule 52 is a protein called 30S ribosomal protein S19.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
52	BS	79	Total 637	C 408	N 120	O 107	S 2	0	0	0
52	DS	79	Total 637	C 408	N 120	O 107	S 2	0	0	0
52	FS	79	Total 637	C 408	N 120	O 107	S 2	0	0	0
52	HS	79	Total 637	C 408	N 120	O 107	S 2	0	0	0

- Molecule 53 is a protein called 30S ribosomal protein S20.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
53	BT	85	Total 665	C 411	N 137	O 114	S 3	0	0	0
53	DT	85	Total 665	C 411	N 137	O 114	S 3	0	0	0
53	FT	85	Total 665	C 411	N 137	O 114	S 3	0	0	0
53	HT	85	Total 665	C 411	N 137	O 114	S 3	0	0	0

- Molecule 54 is a protein called 30S ribosomal protein S21.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
54	BU	51	Total	C	N	O	S	0	0	0
			425	265	86	73	1			
54	DU	51	Total	C	N	O	S	0	0	0
			425	265	86	73	1			
54	FU	51	Total	C	N	O	S	0	0	0
			425	265	86	73	1			
54	HU	51	Total	C	N	O	S	0	0	0
			425	265	86	73	1			

- Molecule 55 is a protein called Elongation factor G.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
55	BV	690	Total	C	N	O	S	0	0	0
			5345	3369	920	1031	25			
55	DV	689	Total	C	N	O	S	0	0	0
			5340	3366	919	1030	25			
55	FV	689	Total	C	N	O	S	0	0	0
			5340	3366	919	1030	25			
55	HV	689	Total	C	N	O	S	0	0	0
			5340	3366	919	1030	25			

- Molecule 56 is a protein called Viomycin.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
56	BW	6	Total	C	N	O	0	0	0
			48	25	13	10			
56	DW	6	Total	C	N	O	0	0	0
			48	25	13	10			
56	FW	6	Total	C	N	O	0	0	0
			48	25	13	10			
56	HW	6	Total	C	N	O	0	0	0
			48	25	13	10			

- Molecule 57 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
57	AB	4	Total	Mg	0	0
			4	4		
57	AC	1	Total	Mg	0	0
			1	1		
57	AA	136	Total	Mg	0	0
			136	136		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	AE	1	Total Mg 1 1	0	0
57	A4	1	Total Mg 1 1	0	0
57	BA	40	Total Mg 40 40	0	0
57	BE	1	Total Mg 1 1	0	0
57	BN	1	Total Mg 1 1	0	0
57	BU	1	Total Mg 1 1	0	0
57	BV	1	Total Mg 1 1	0	0
57	CB	4	Total Mg 4 4	0	0
57	CA	136	Total Mg 136 136	0	0
57	CE	1	Total Mg 1 1	0	0
57	CN	1	Total Mg 1 1	0	0
57	C4	1	Total Mg 1 1	0	0
57	DA	43	Total Mg 43 43	0	0
57	DV	1	Total Mg 1 1	0	0
57	EA	137	Total Mg 137 137	0	0
57	EB	4	Total Mg 4 4	0	0
57	ED	1	Total Mg 1 1	0	0
57	EE	1	Total Mg 1 1	0	0
57	FA	39	Total Mg 39 39	0	0
57	FE	1	Total Mg 1 1	0	0
57	FN	2	Total Mg 2 2	0	0

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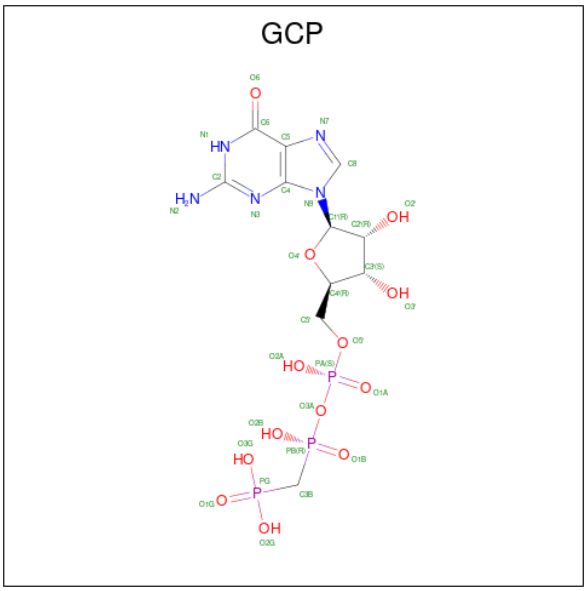
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
57	FU	1	Total Mg 1 1	0	0
57	FV	1	Total Mg 1 1	0	0
57	GB	4	Total Mg 4 4	0	0
57	GA	136	Total Mg 136 136	0	0
57	GC	2	Total Mg 2 2	0	0
57	GL	1	Total Mg 1 1	0	0
57	HA	41	Total Mg 41 41	0	0
57	HE	1	Total Mg 1 1	0	0
57	HK	1	Total Mg 1 1	0	0
57	HV	1	Total Mg 1 1	0	0

- Molecule 58 is ZINC ION (three-letter code: ZN) (formula: Zn).

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
58	A4	1	Total Zn 1 1	0	0
58	C4	1	Total Zn 1 1	0	0
58	E4	1	Total Zn 1 1	0	0
58	G4	1	Total Zn 1 1	0	0

- Molecule 59 is PHOSPHOMETHYLPHOSPHONIC ACID GUANYLATE ESTER (three-letter code: GCP) (formula: $C_{11}H_{18}N_5O_{13}P_3$).



Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
59	BV	1	Total	C	N	O	P	0	0
			32	11	5	13	3		
59	DV	1	Total	C	N	O	P	0	0
			32	11	5	13	3		
59	FV	1	Total	C	N	O	P	0	0
			32	11	5	13	3		
59	HV	1	Total	C	N	O	P	0	0
			32	11	5	13	3		

- Molecule 60 is water.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf
60	AB	18	Total	O	0	0
			18	18		
60	AC	6	Total	O	0	0
			6	6		
60	AA	614	Total	O	0	0
			614	614		
60	AD	4	Total	O	0	0
			4	4		
60	AE	1	Total	O	0	0
			1	1		
60	AF	1	Total	O	0	0
			1	1		
60	AJ	1	Total	O	0	0
			1	1		
60	AL	5	Total	O	0	0
			5	5		

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
60	AN	2	Total O 2 2	0	0
60	AP	1	Total O 1 1	0	0
60	AQ	2	Total O 2 2	0	0
60	AS	1	Total O 1 1	0	0
60	A0	2	Total O 2 2	0	0
60	A2	1	Total O 1 1	0	0
60	A3	1	Total O 1 1	0	0
60	A4	1	Total O 1 1	0	0
60	BA	202	Total O 202 202	0	0
60	BL	1	Total O 1 1	0	0
60	BN	2	Total O 2 2	0	0
60	BT	2	Total O 2 2	0	0
60	BV	1	Total O 1 1	0	0
60	CB	21	Total O 21 21	0	0
60	CA	607	Total O 607 607	0	0
60	CC	8	Total O 8 8	0	0
60	CD	3	Total O 3 3	0	0
60	CE	1	Total O 1 1	0	0
60	CJ	2	Total O 2 2	0	0
60	CL	5	Total O 5 5	0	0
60	CN	2	Total O 2 2	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
60	CQ	1	Total O 1 1	0	0
60	CS	2	Total O 2 2	0	0
60	CT	2	Total O 2 2	0	0
60	CU	1	Total O 1 1	0	0
60	C0	1	Total O 1 1	0	0
60	C2	1	Total O 1 1	0	0
60	C3	1	Total O 1 1	0	0
60	C4	2	Total O 2 2	0	0
60	DA	186	Total O 186 186	0	0
60	DC	2	Total O 2 2	0	0
60	DD	1	Total O 1 1	0	0
60	DE	1	Total O 1 1	0	0
60	DG	1	Total O 1 1	0	0
60	DK	1	Total O 1 1	0	0
60	DL	2	Total O 2 2	0	0
60	DN	8	Total O 8 8	0	0
60	DQ	1	Total O 1 1	0	0
60	DT	4	Total O 4 4	0	0
60	DU	1	Total O 1 1	0	0
60	DV	1	Total O 1 1	0	0
60	EA	610	Total O 610 610	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
60	EB	18	Total O 18 18	0	0
60	EC	9	Total O 9 9	0	0
60	ED	3	Total O 3 3	0	0
60	EE	2	Total O 2 2	0	0
60	EL	4	Total O 4 4	0	0
60	EN	3	Total O 3 3	0	0
60	ER	1	Total O 1 1	0	0
60	ET	2	Total O 2 2	0	0
60	EV	2	Total O 2 2	0	0
60	E0	1	Total O 1 1	0	0
60	E2	1	Total O 1 1	0	0
60	E3	2	Total O 2 2	0	0
60	E4	2	Total O 2 2	0	0
60	FA	197	Total O 197 197	0	0
60	FC	1	Total O 1 1	0	0
60	FE	2	Total O 2 2	0	0
60	FN	3	Total O 3 3	0	0
60	FT	4	Total O 4 4	0	0
60	FU	1	Total O 1 1	0	0
60	FV	1	Total O 1 1	0	0
60	GB	19	Total O 19 19	0	0

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Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
60	GA	606	Total O 606 606	0	0
60	GC	10	Total O 10 10	0	0
60	GD	3	Total O 3 3	0	0
60	GE	2	Total O 2 2	0	0
60	GJ	1	Total O 1 1	0	0
60	GL	4	Total O 4 4	0	0
60	GN	4	Total O 4 4	0	0
60	GQ	1	Total O 1 1	0	0
60	GR	2	Total O 2 2	0	0
60	GS	2	Total O 2 2	0	0
60	GU	1	Total O 1 1	0	0
60	GV	1	Total O 1 1	0	0
60	G2	2	Total O 2 2	0	0
60	G3	1	Total O 1 1	0	0
60	G4	1	Total O 1 1	0	0
60	HA	193	Total O 193 193	0	0
60	HD	3	Total O 3 3	0	0
60	HE	3	Total O 3 3	0	0
60	HN	7	Total O 7 7	0	0
60	HQ	1	Total O 1 1	0	0
60	HT	1	Total O 1 1	0	0

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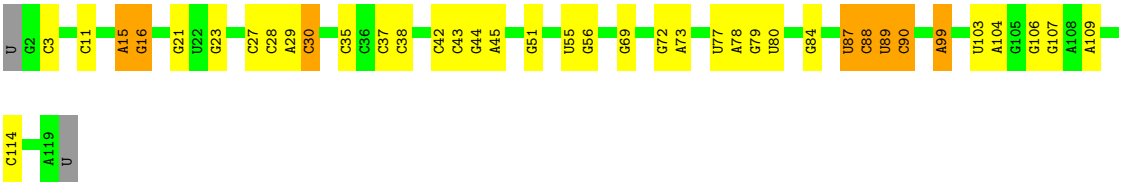
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
60	HV	1	Total O 1 1	0	0

3 Residue-property plots (i)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density (RSRZ > 2). Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

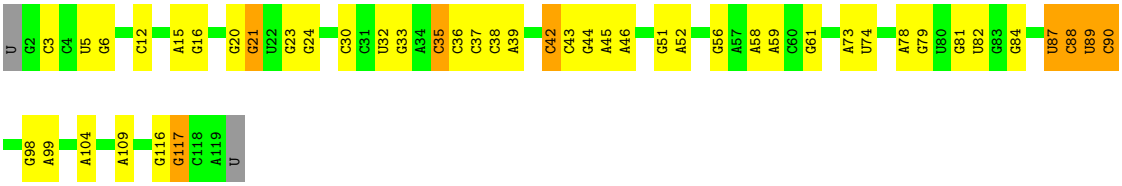
- Molecule 1: 5S rRNA

Chain AB:



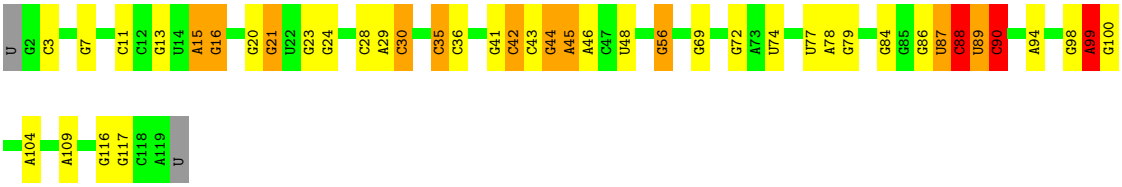
- Molecule 1: 5S rRNA

Chain CB:



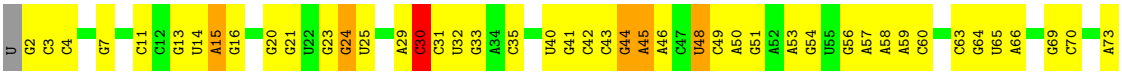
- Molecule 1: 5S rRNA

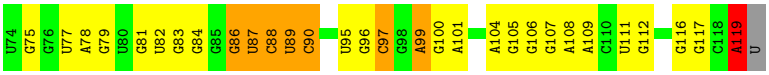
Chain EB:



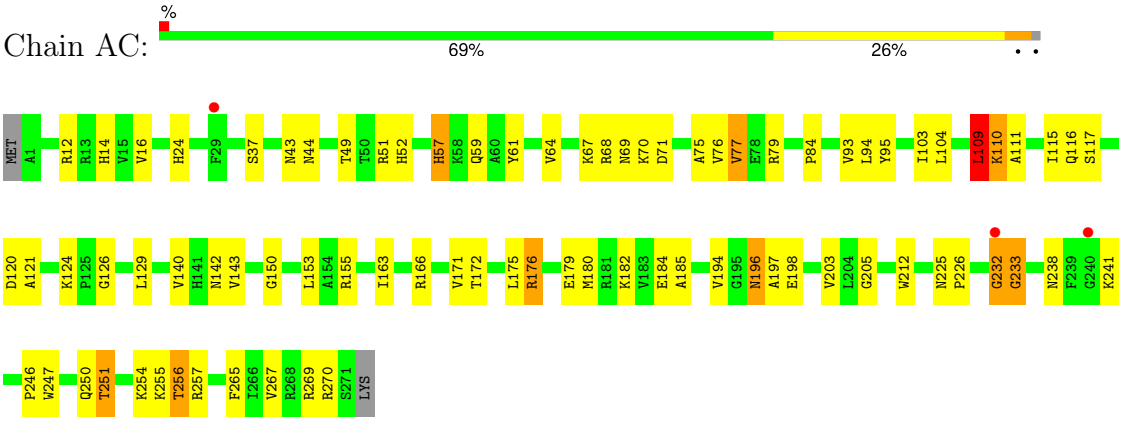
- Molecule 1: 5S rRNA

Chain GB:

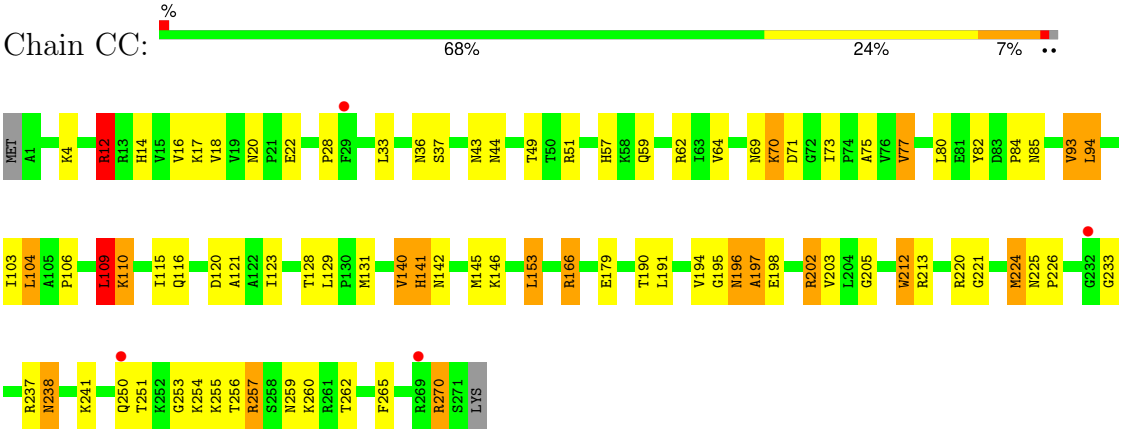




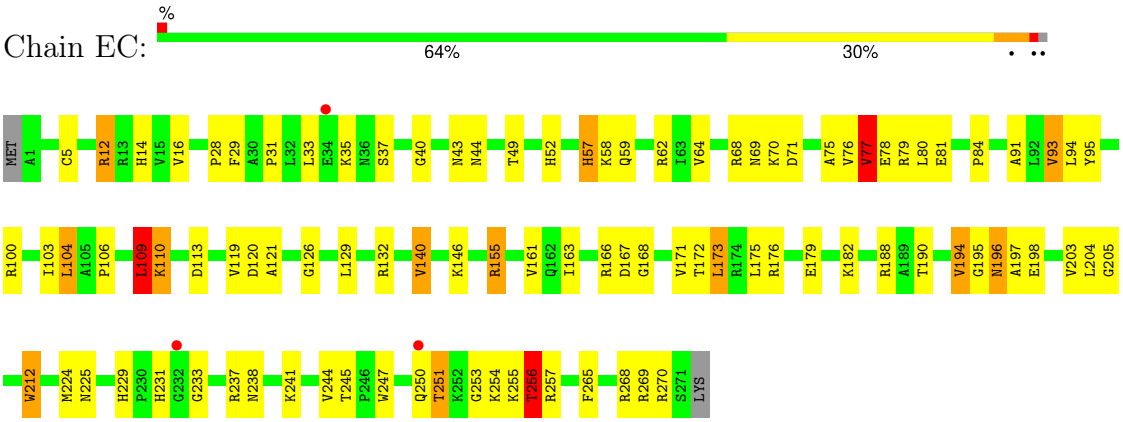
• Molecule 2: 50S ribosomal protein L2



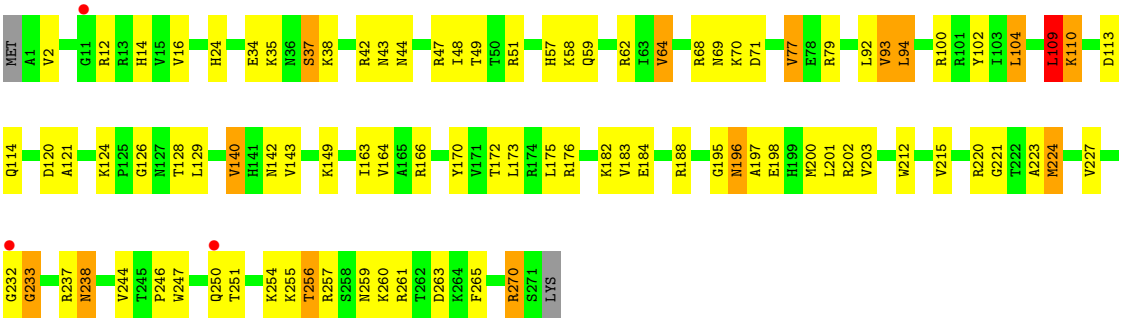
• Molecule 2: 50S ribosomal protein L2



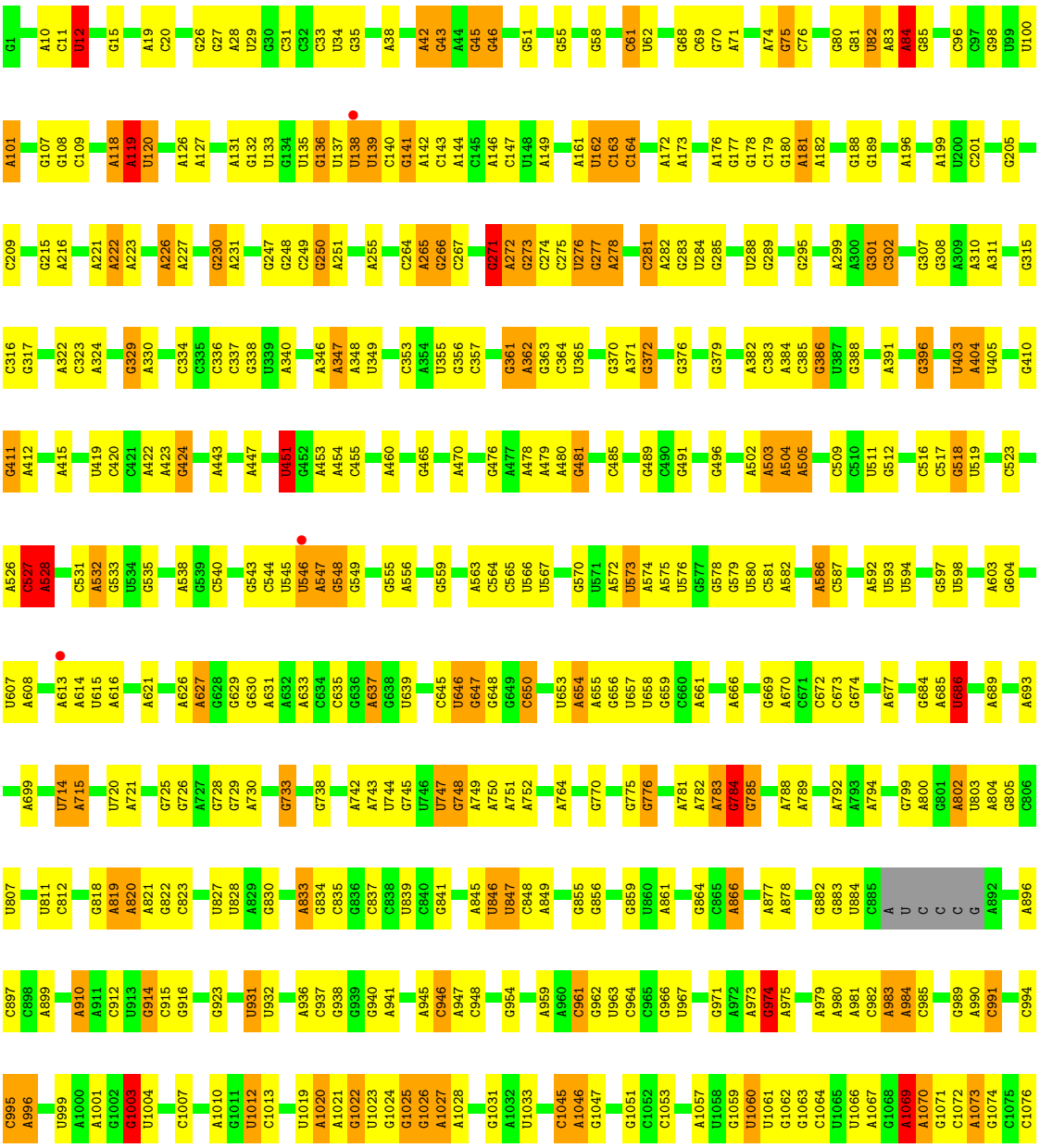
• Molecule 2: 50S ribosomal protein L2

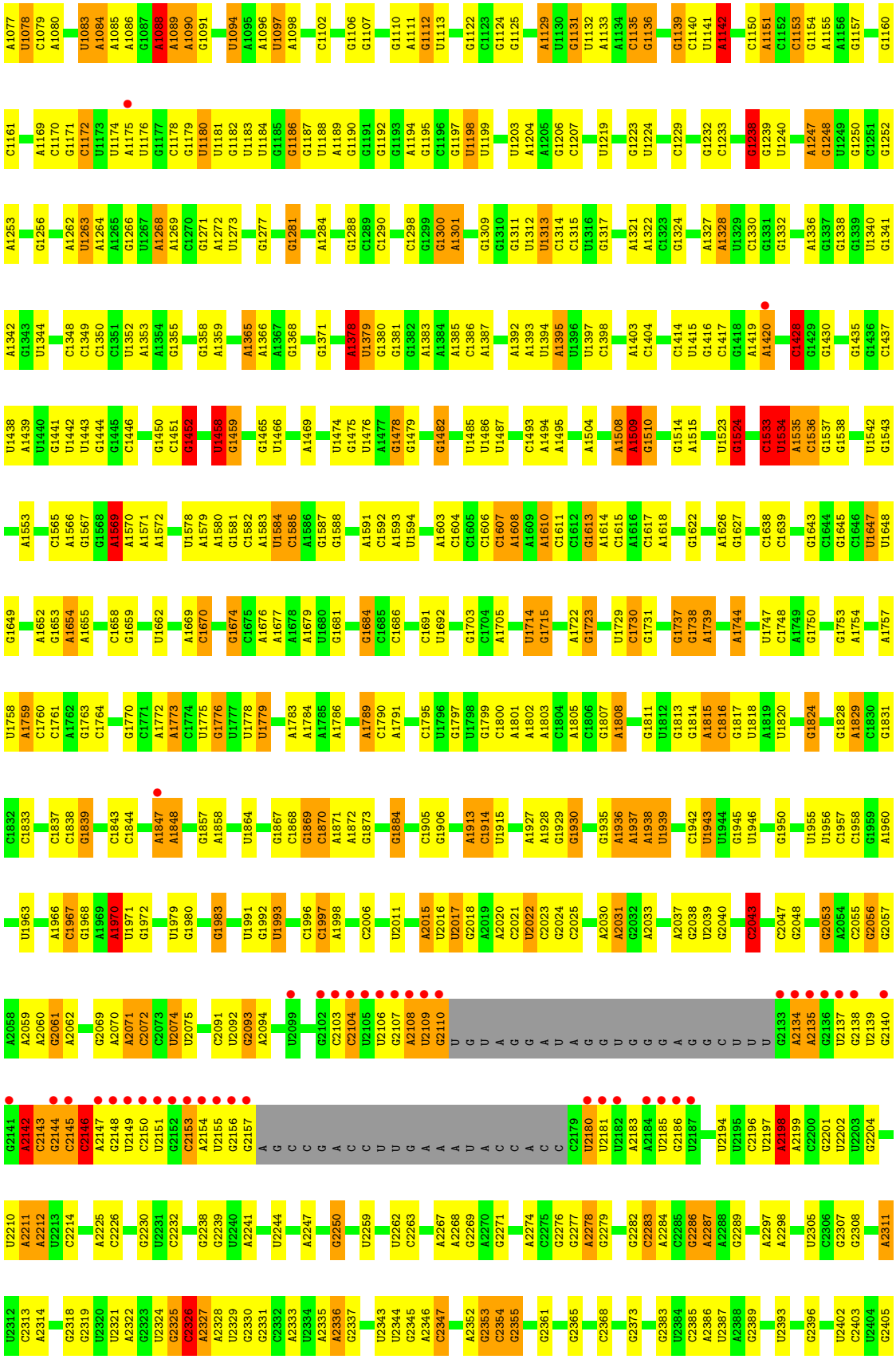


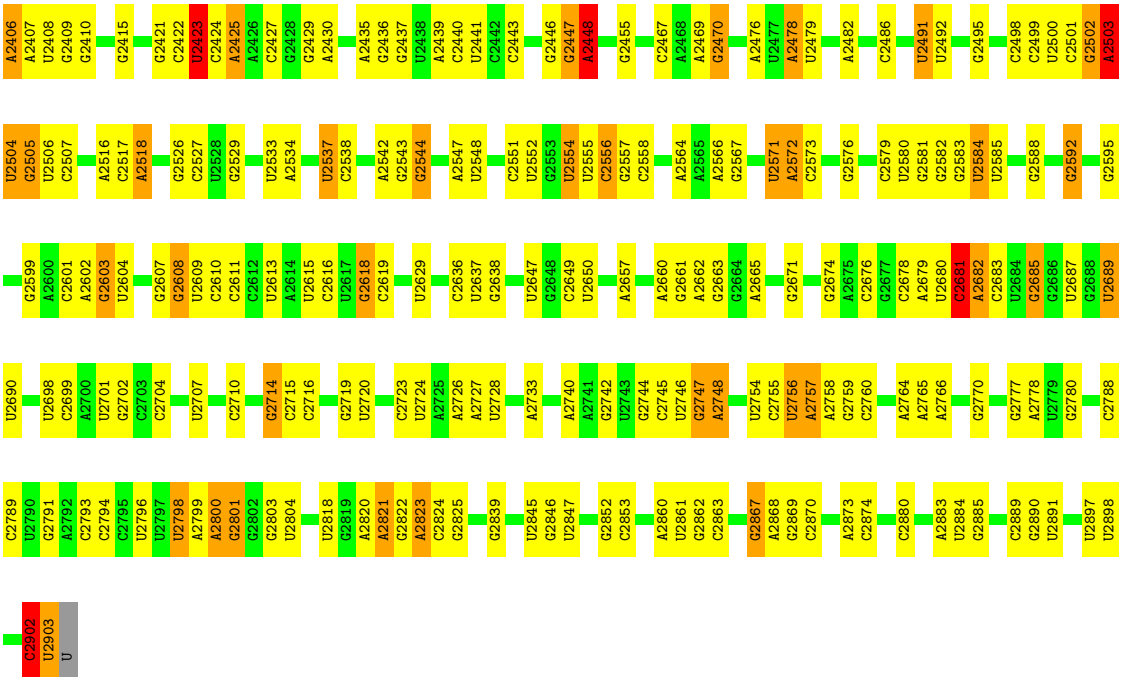
• Molecule 2: 50S ribosomal protein L2



• Molecule 3: 23S rRNA

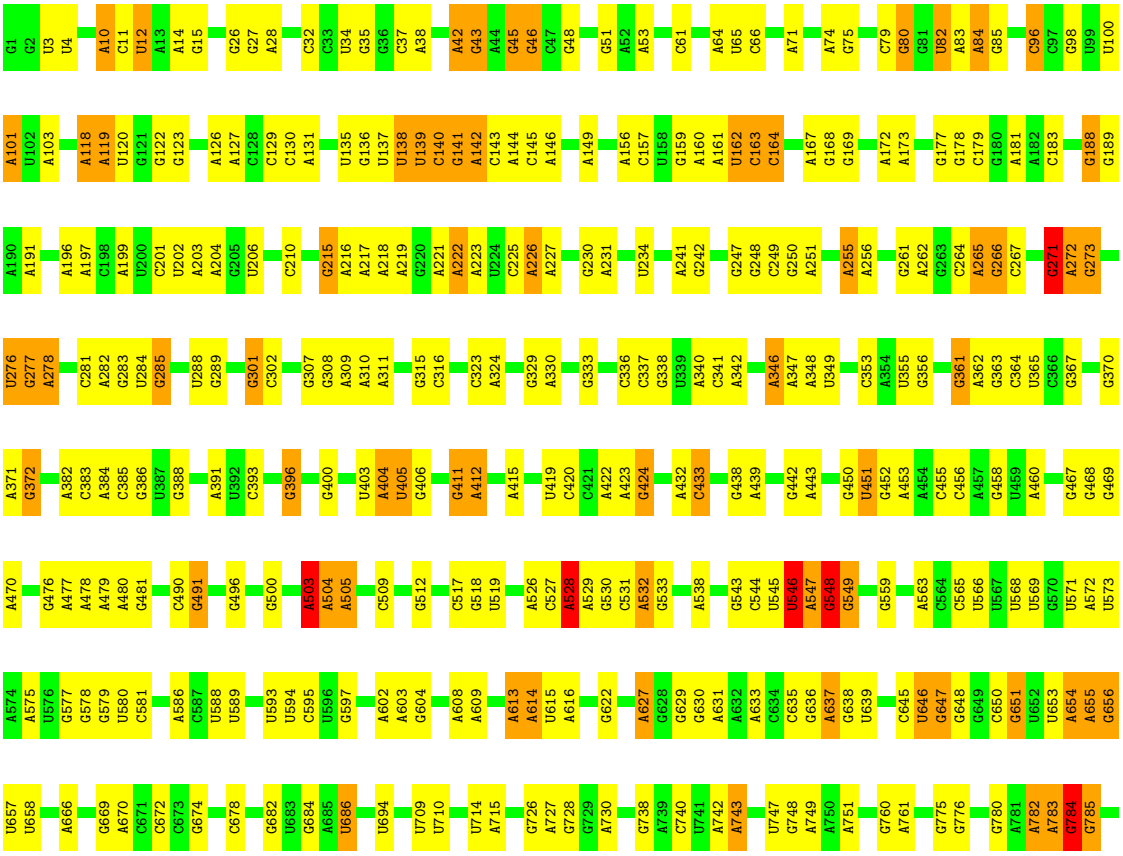


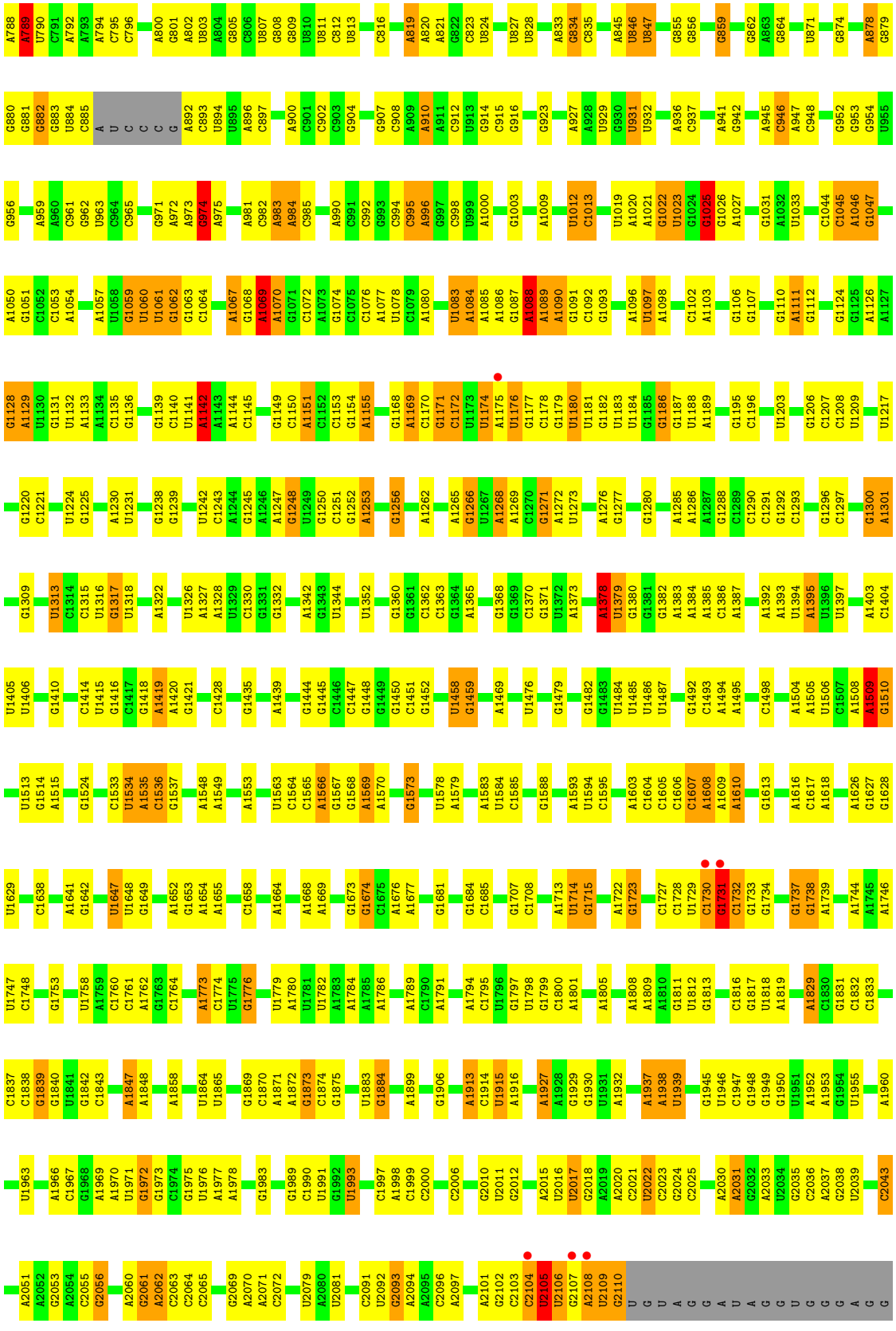




- Molecule 3: 23S rRNA

Chain CA:

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G880 G881 G882 G883 U884 C885 A U C C C A892 C893 U894 U895 A896 C897 A900 C901 C902 C903 G904 G907 C908 A909 A910 A911 C912 U913 G914 C915 G916 G923 A927 A928 U929 G930 U931 U932 A936 C937 A941 G942 A945 C946 A947 C948 G952 G953 G954 U955
G956 A959 A960 C961 G962 U963 C964 C965 G971 A972 A973 G974 A975 A981 C982 A983 A984 C985 A990 C991 C992 G993 C994 C995 A996 C997 C998 U999 A1000 G1003 A1009 U1012 C1013 U1019 A1020 A1021 G1022 U1023 G1024 G1025 G1026 A1027 G1031 A1032 U1033 C1044 C1045 A1046 G1047
A1050 G1051 C1052 C1053 A1054 A1057 U1058 G1059 U1060 U1061 G1062 G1063 C1064 A1067 G1068 A1069 A1070 G1071 C1072 A1073 G1074 C1075 C1076 A1077 U1078 C1079 A1080 U1083 A1084 A1085 A1086 G1087 A1088 A1089 A1090 G1091 C1092 G1093 A1096 U1097 A1098 C1102 A1103 G1106 G1107 G1110 A1111 G1112 G1124 G1125 A1126 A1127
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U1513 G1514 A1515 G1524 C1533 U1534 A1535 C1536 G1537 A1548 A1549 A1553 U1563 C1564 C1565 A1566 G1567 G1568 A1569 A1570 G1573 U1578 A1579 A1583 U1584 C1585 G1588 A1593 U1594 C1595 A1603 C1604 C1605 C1606 C1607 A1608 A1609 A1610 G1613 A1616 C1617 A1618 A1626 G1627 G1628
U1629 C1638 A1641 G1642 U1647 U1648 G1649 A1652 G1653 A1654 A1655 C1658 A1664 A1668 A1669 G1673 G1674 C1675 A1676 A1677 G1681 G1684 C1685 G1707 C1708 A1713 U1714 G1715 A1722 G1723 C1727 C1728 U1729 C1730 G1731 C1732 G1733 G1734 G1737 G1738 A1739 A1744 A1745 A1746
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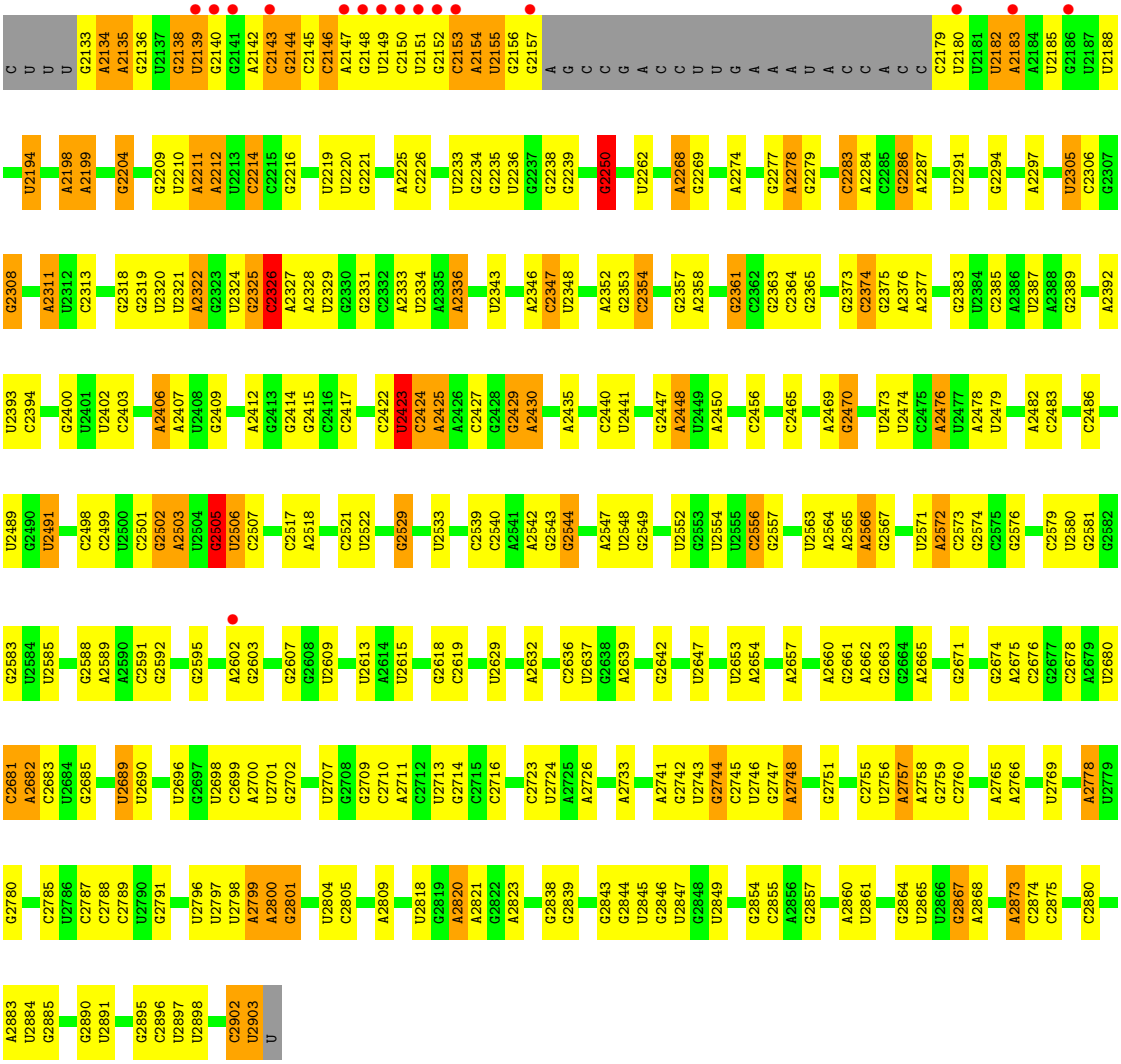
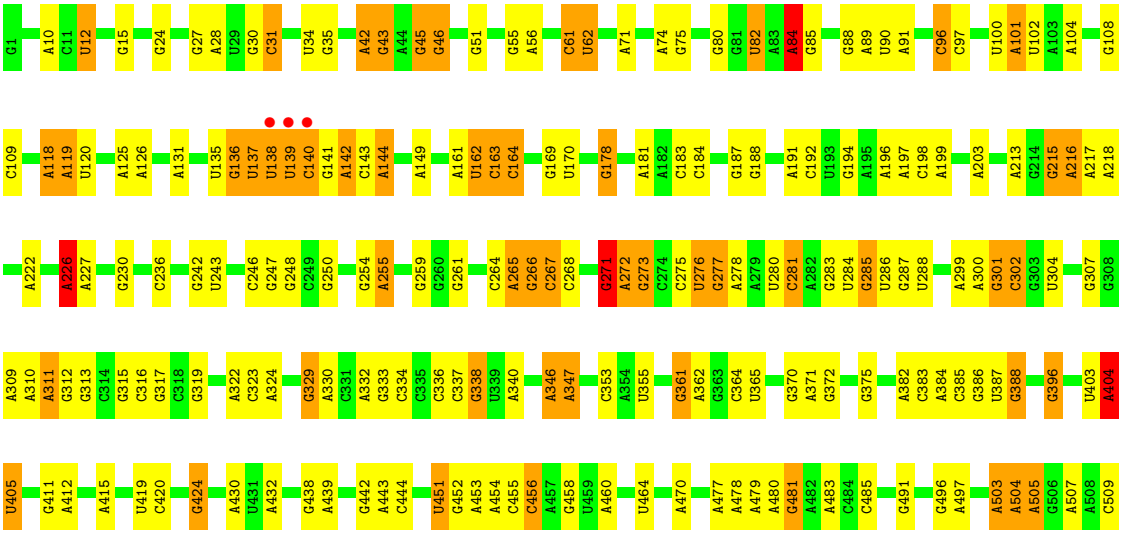
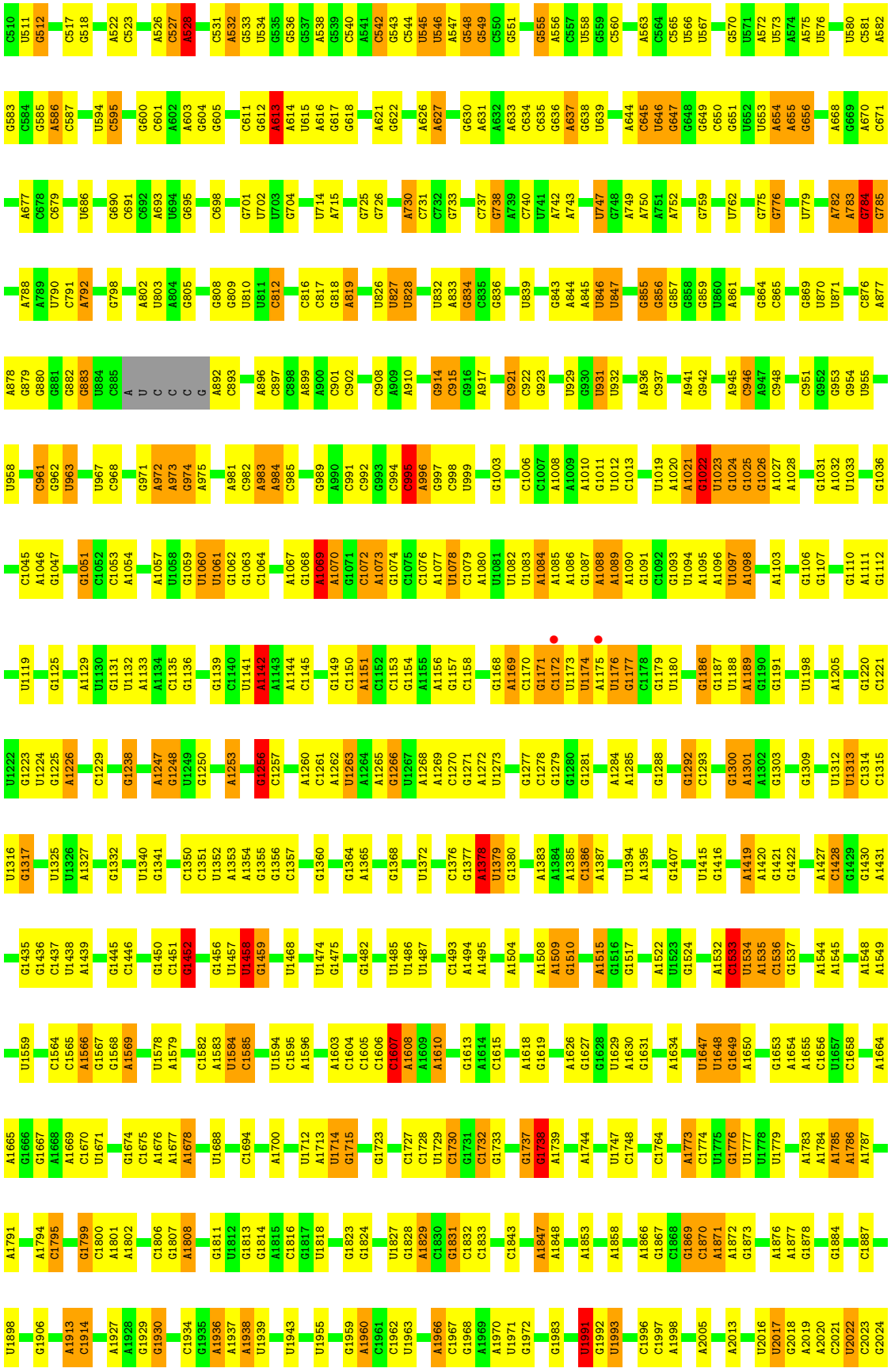
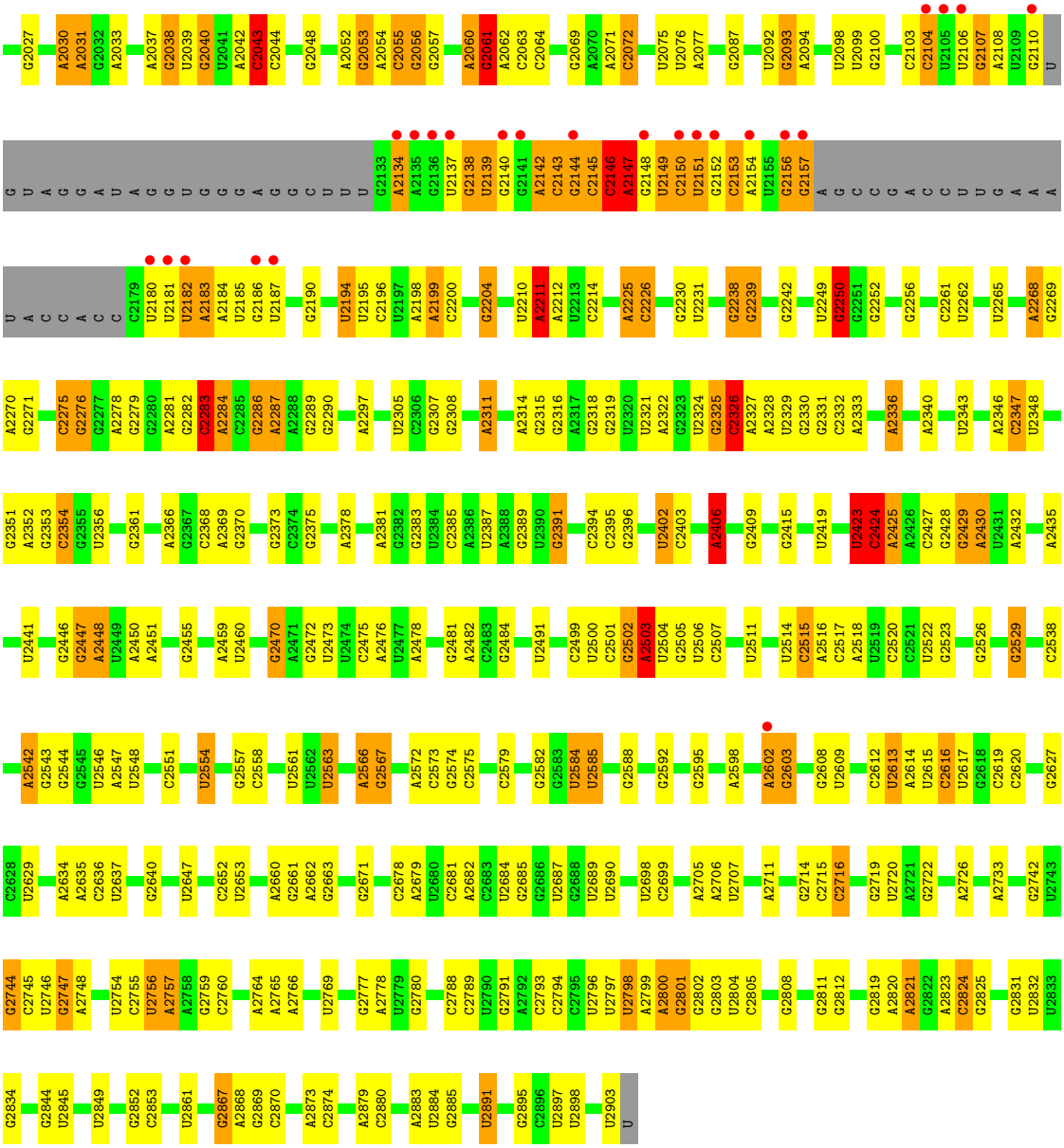


• Molecule 3: 23S rRNA

Chain EA:

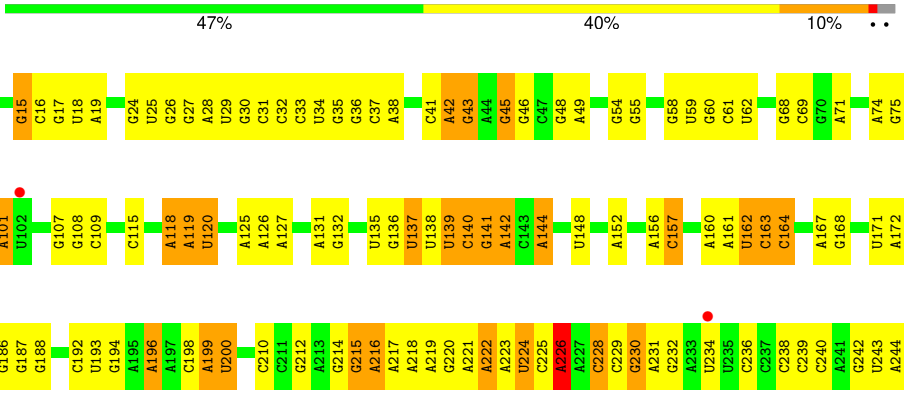


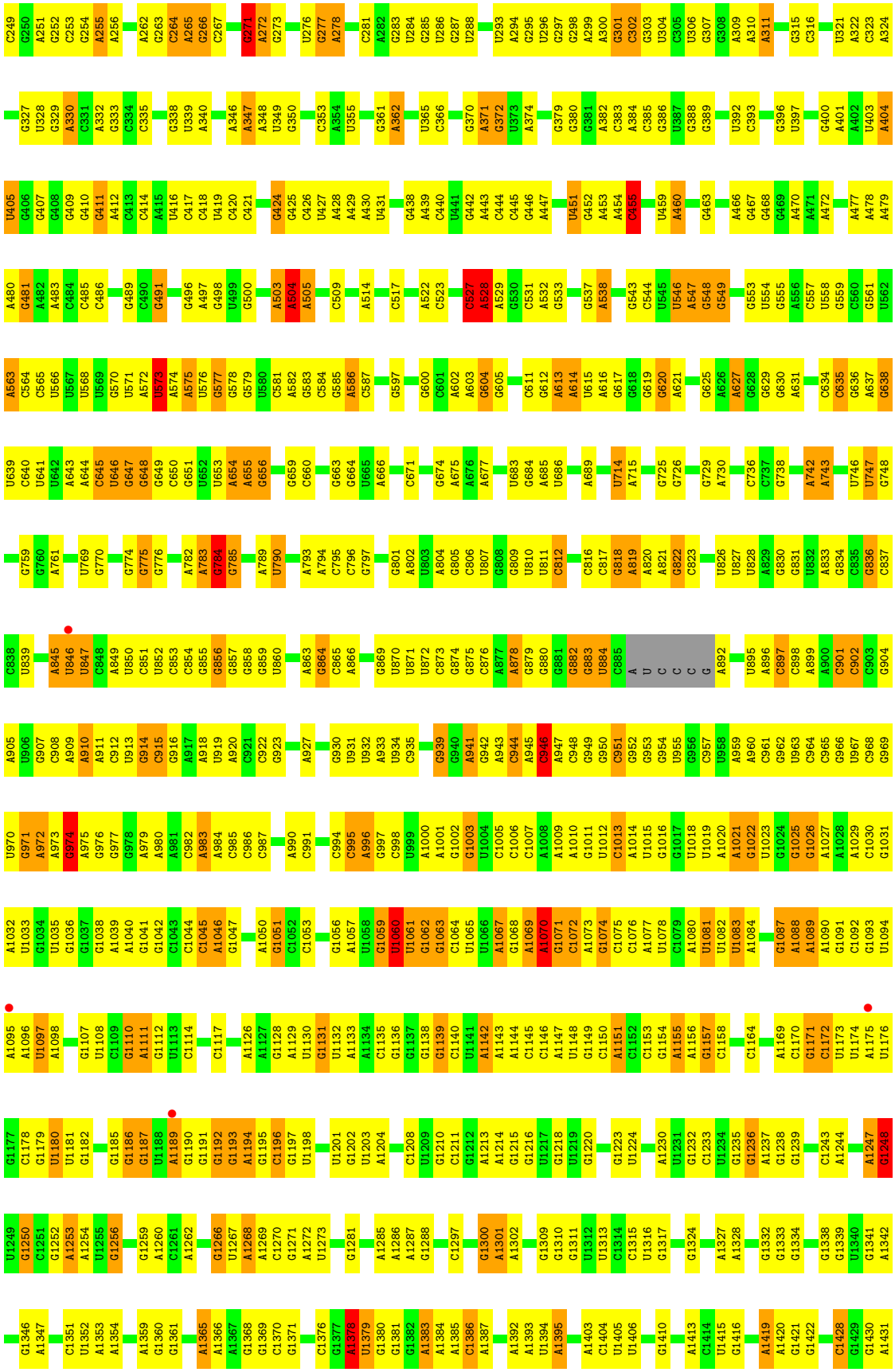


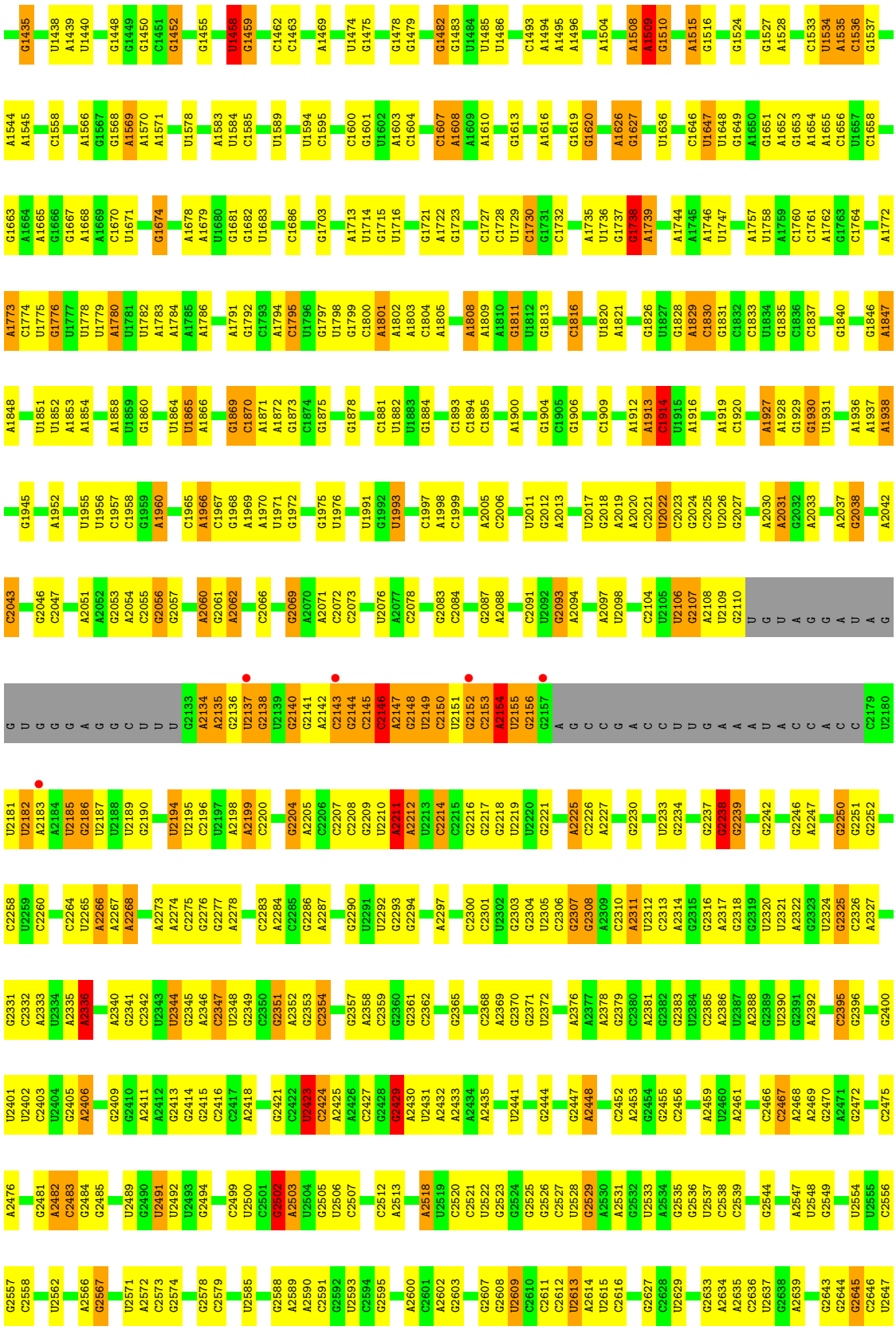


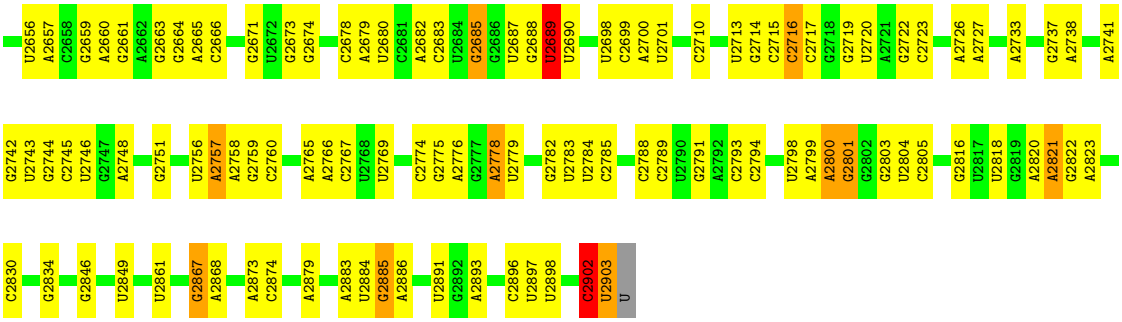
• Molecule 3: 23S rRNA

Chain GA:



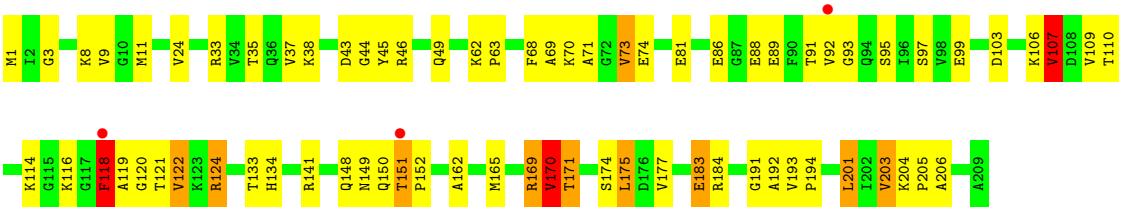






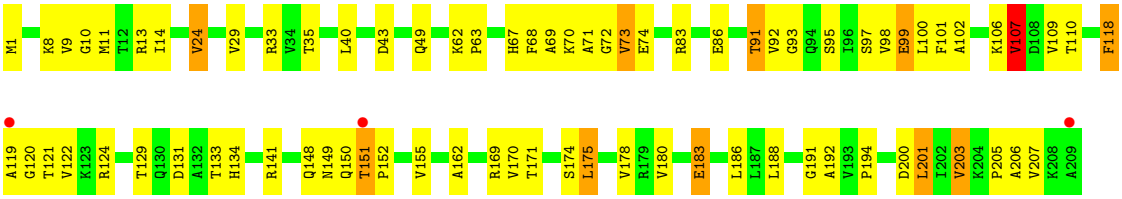
• Molecule 4: 50S ribosomal protein L3

Chain AD:



• Molecule 4: 50S ribosomal protein L3

Chain CD:



• Molecule 4: 50S ribosomal protein L3

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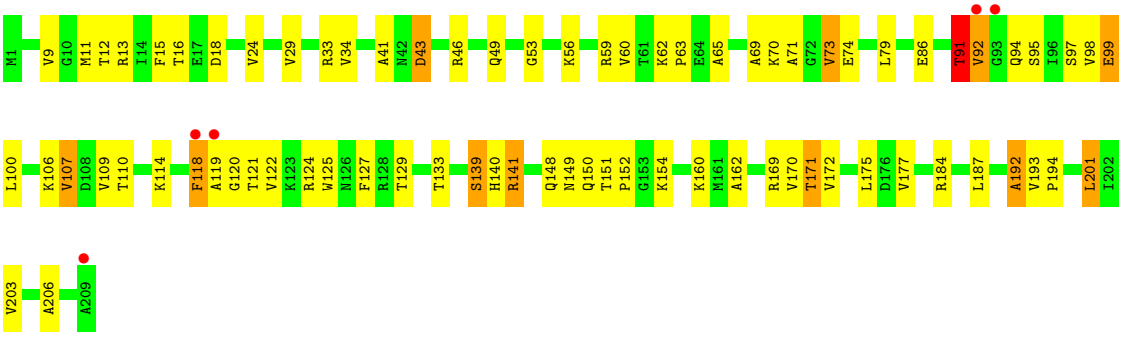

• Molecule 4: 50S ribosomal protein L3

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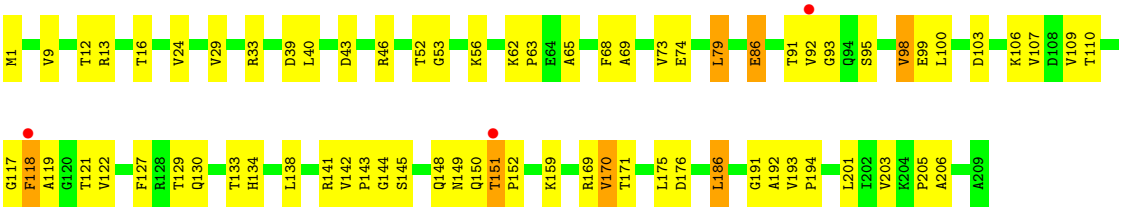
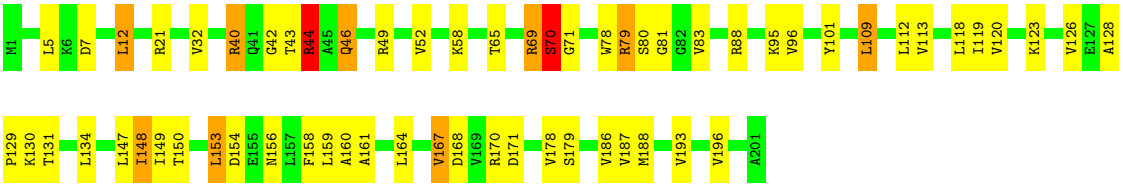


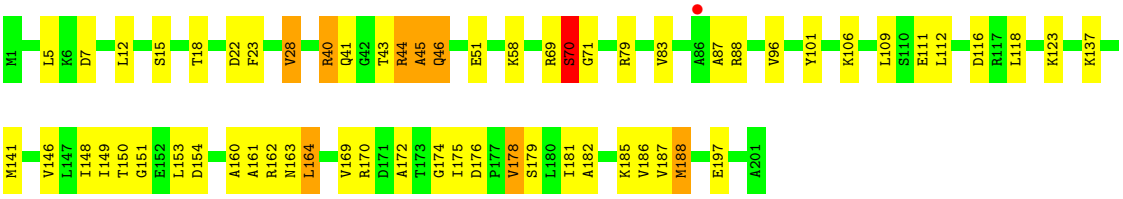
• Molecule 5: 50S ribosomal protein L4

Chain AE:



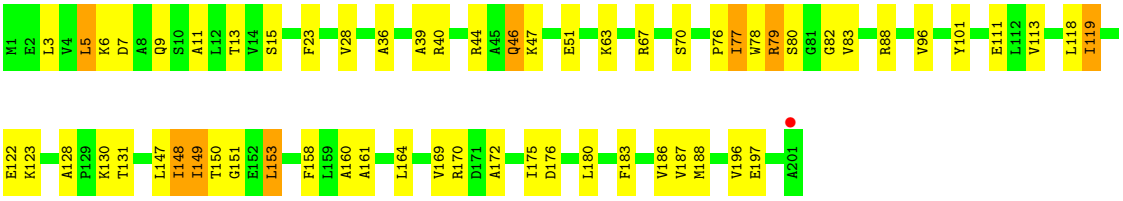
• Molecule 5: 50S ribosomal protein L4

Chain CE:



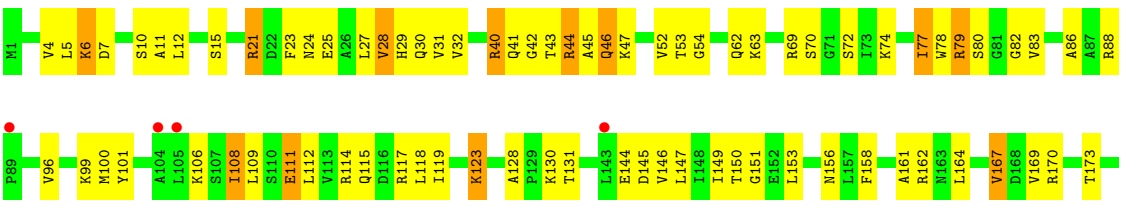
• Molecule 5: 50S ribosomal protein L4

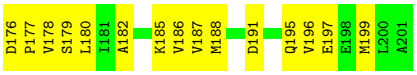
Chain EE:



• Molecule 5: 50S ribosomal protein L4

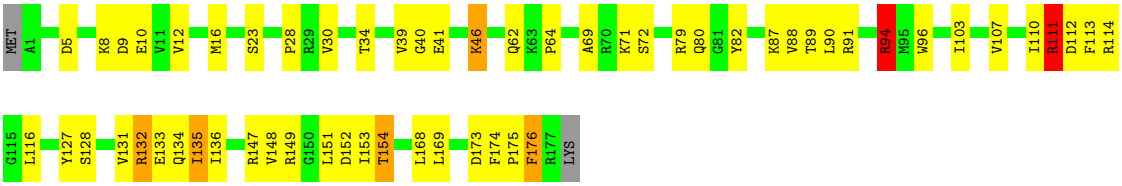
Chain GE:





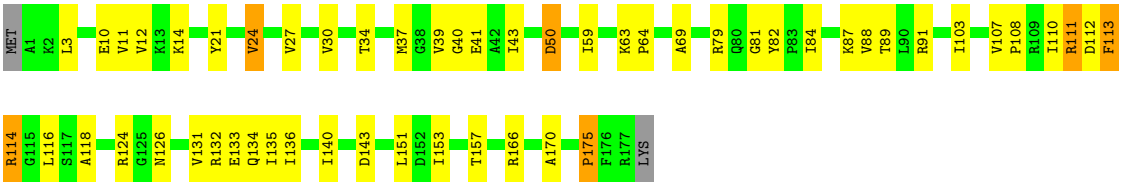
• Molecule 6: 50S ribosomal protein L5

Chain AF:



• Molecule 6: 50S ribosomal protein L5

Chain CF:



• Molecule 6: 50S ribosomal protein L5

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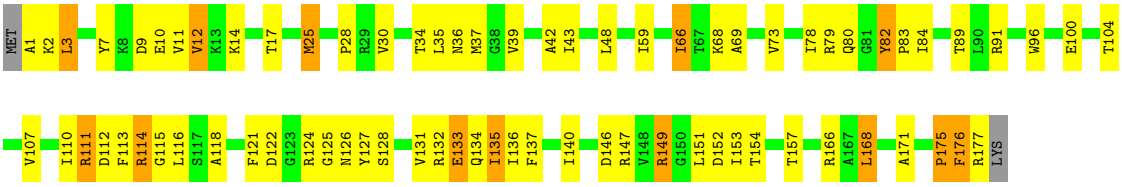
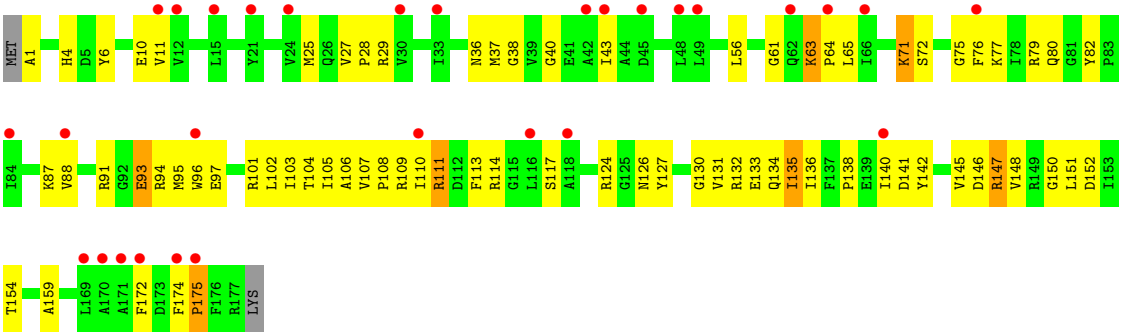


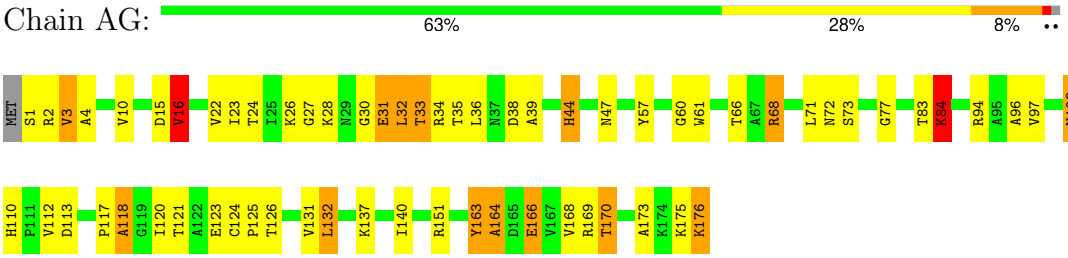
• Molecule 6: 50S ribosomal protein L5

Chain GF:



• Molecule 7: 50S ribosomal protein L6

Chain AG:



• Molecule 7: 50S ribosomal protein L6

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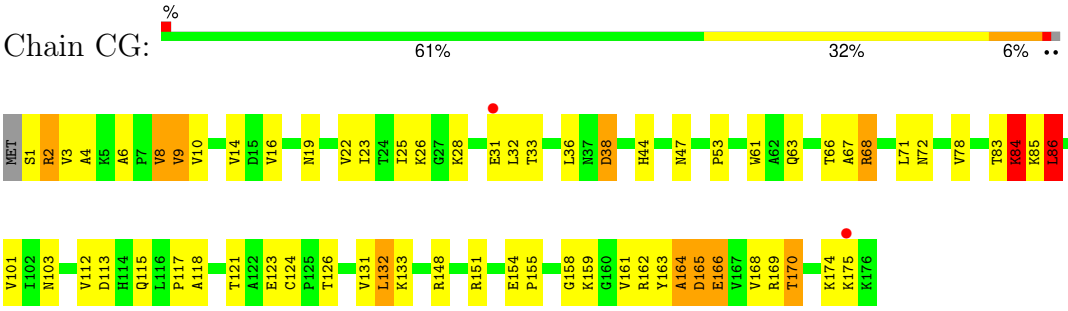
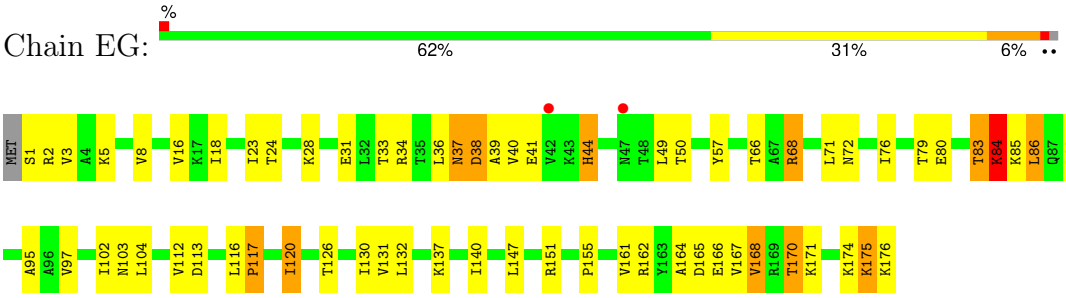


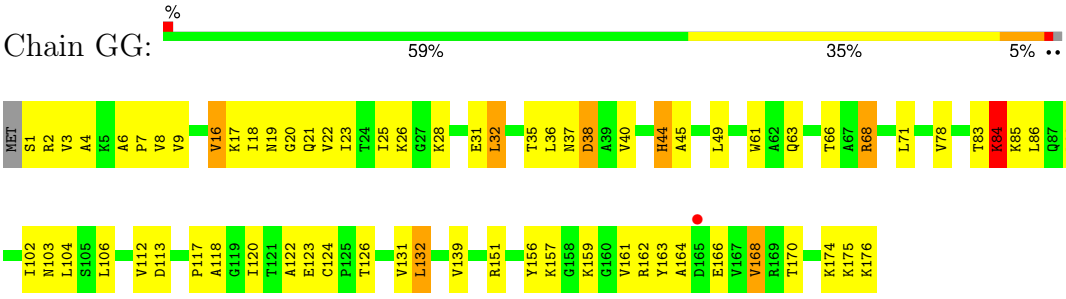
• Molecule 7: 50S ribosomal protein L6

Chain EG:



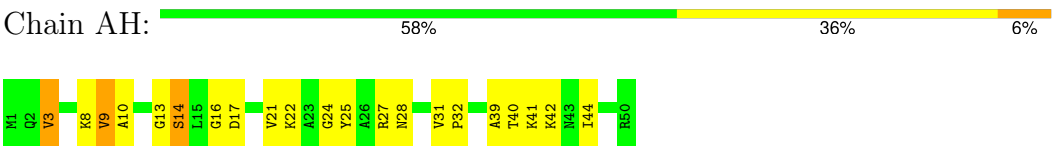
• Molecule 7: 50S ribosomal protein L6

Chain GG:



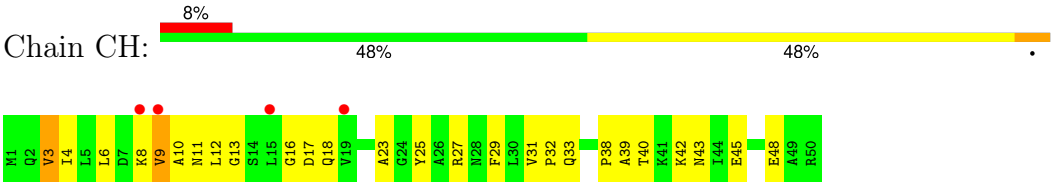
• Molecule 8: 50S ribosomal protein L9

Chain AH:



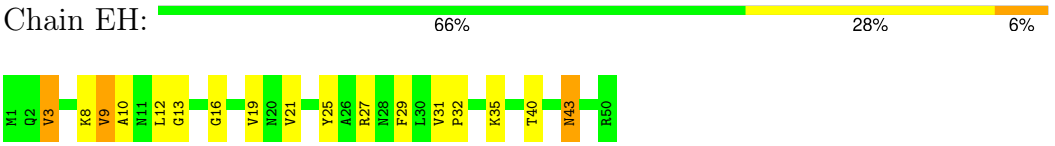
• Molecule 8: 50S ribosomal protein L9

Chain CH:



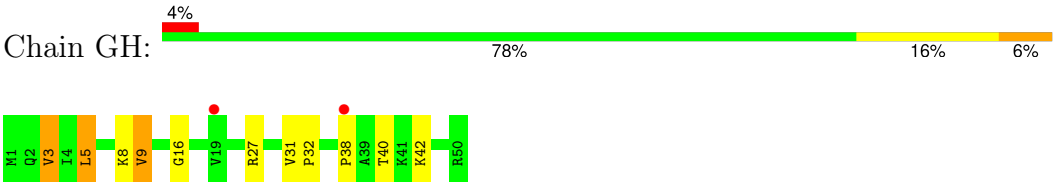
• Molecule 8: 50S ribosomal protein L9

Chain EH:



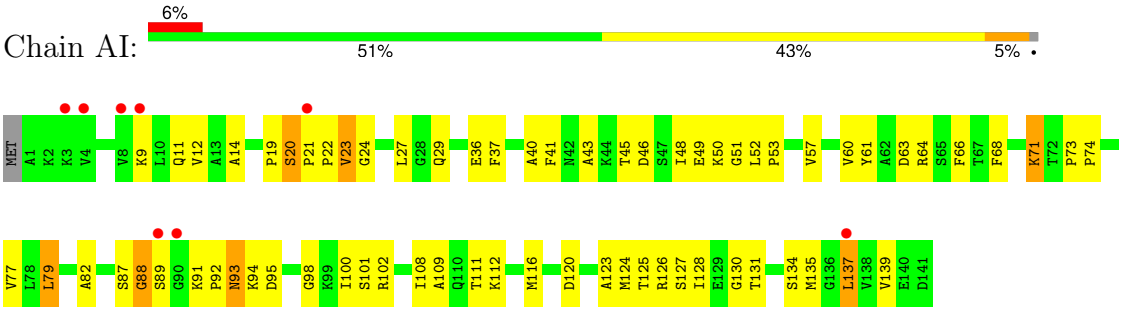
• Molecule 8: 50S ribosomal protein L9

Chain GH:



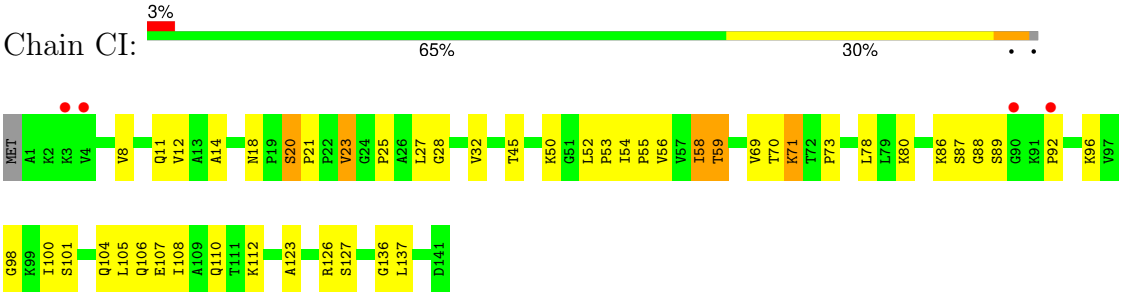
• Molecule 9: 50S ribosomal protein L11

Chain AI:



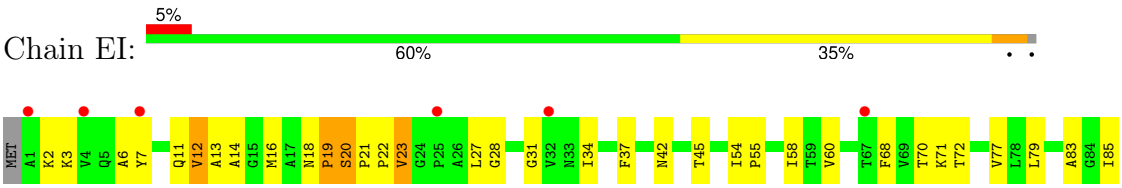
• Molecule 9: 50S ribosomal protein L11

Chain CI:

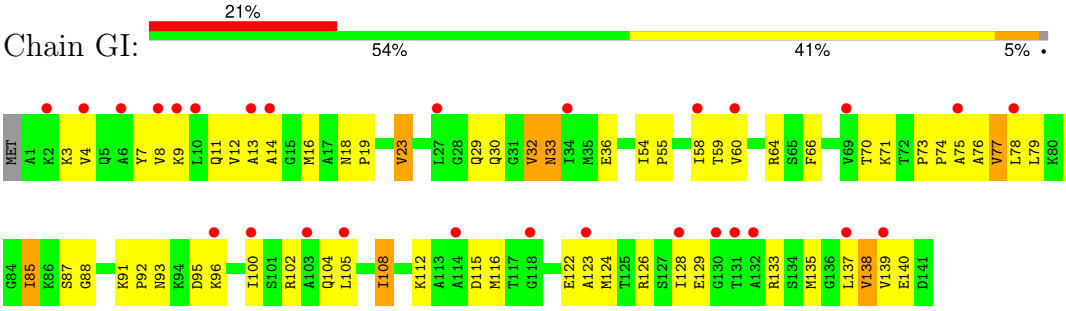


• Molecule 9: 50S ribosomal protein L11

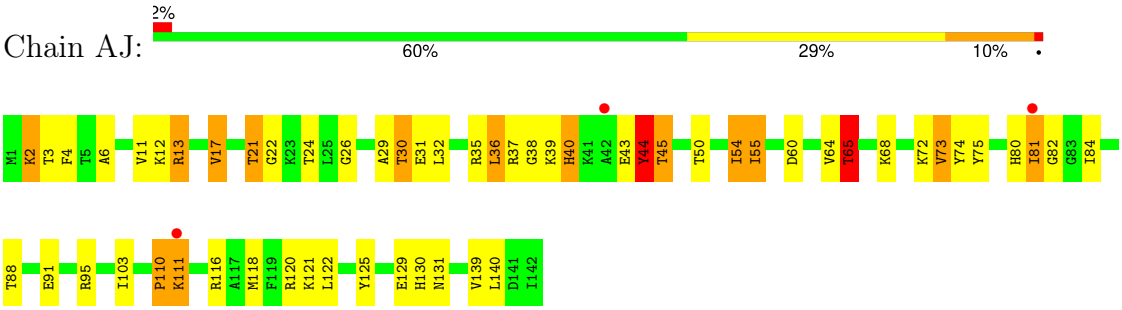
Chain EI:



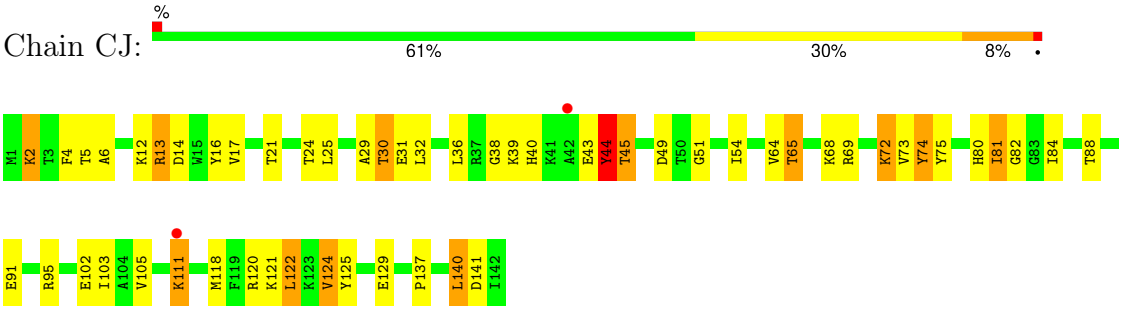
• Molecule 9: 50S ribosomal protein L11



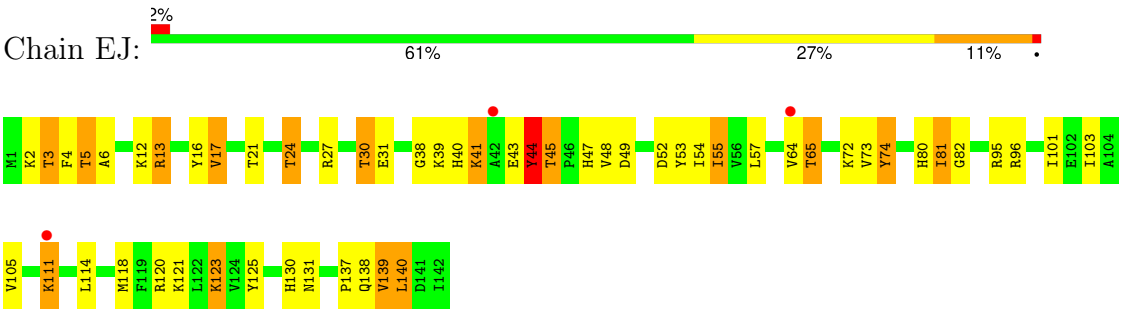
• Molecule 10: 50S ribosomal protein L13



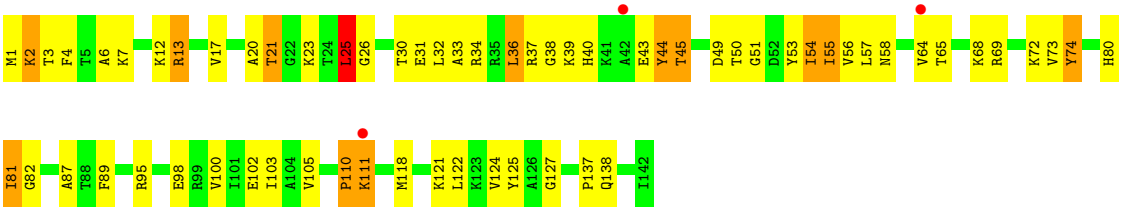
• Molecule 10: 50S ribosomal protein L13



• Molecule 10: 50S ribosomal protein L13

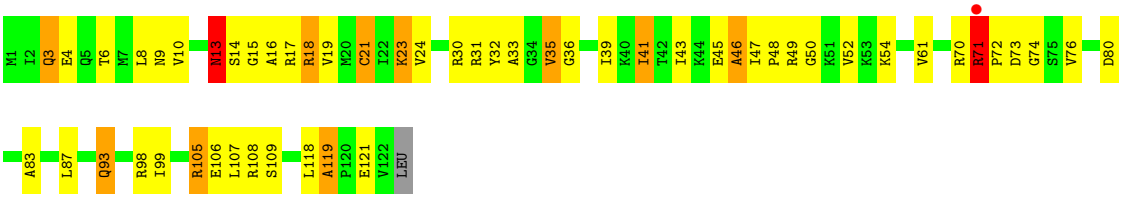


• Molecule 10: 50S ribosomal protein L13



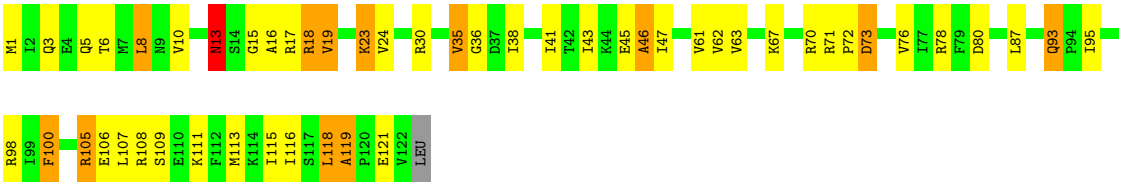
• Molecule 11: 50S ribosomal protein L14

Chain AK:



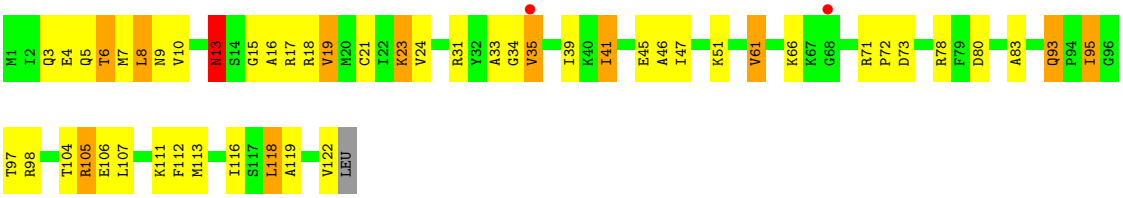
• Molecule 11: 50S ribosomal protein L14

Chain CK:



• Molecule 11: 50S ribosomal protein L14

Chain EK:

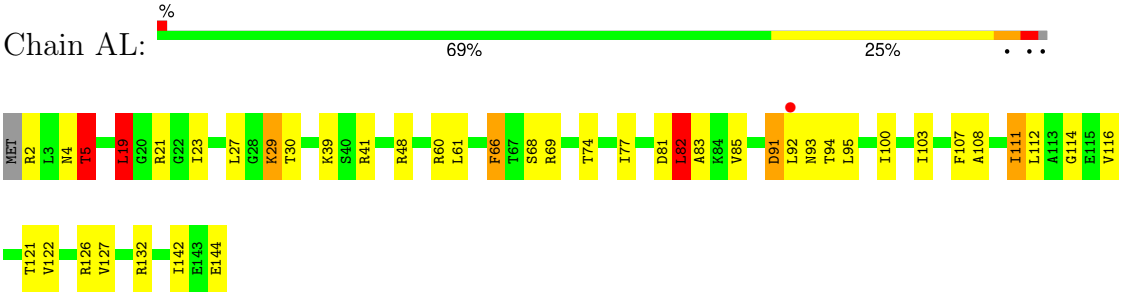


• Molecule 11: 50S ribosomal protein L14

Chain GK:

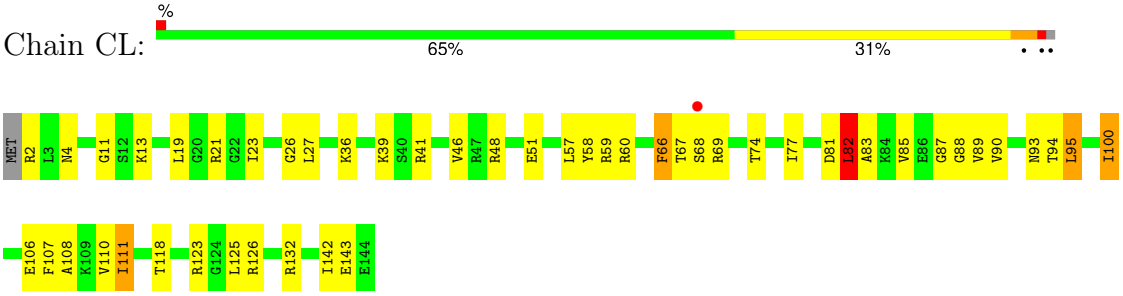
• Molecule 12: 50S ribosomal protein L15

Chain AL:



• Molecule 12: 50S ribosomal protein L15

Chain CL:



• Molecule 12: 50S ribosomal protein L15

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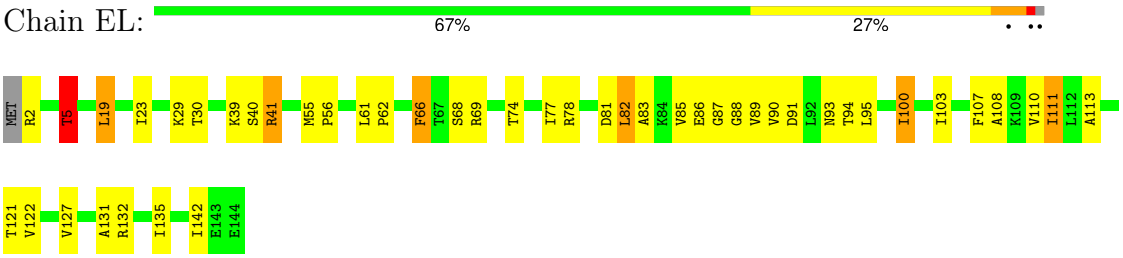

• Molecule 12: 50S ribosomal protein L15

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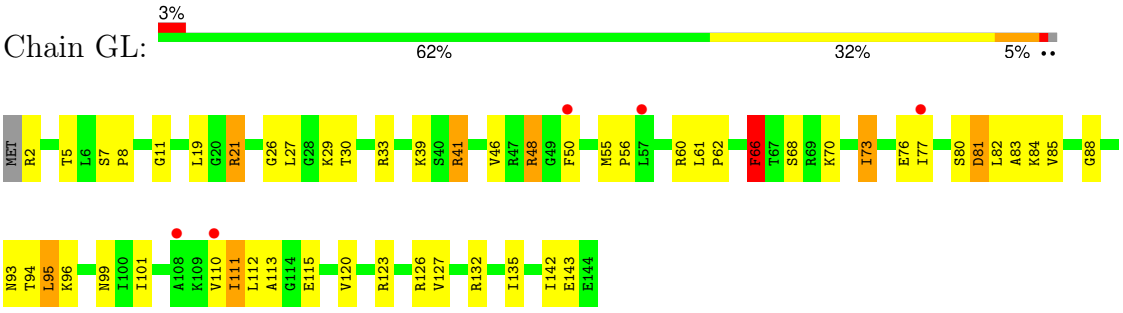
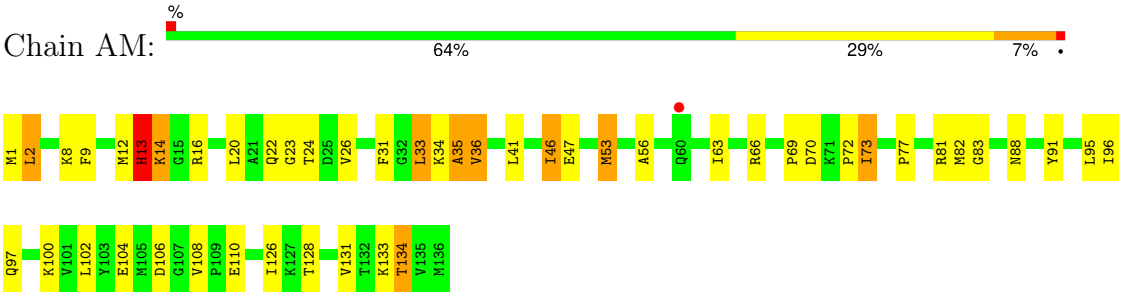


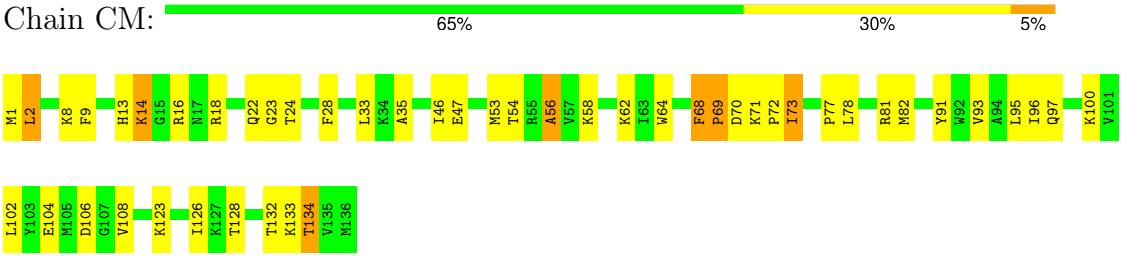
• Molecule 13: 50S ribosomal protein L16

Chain AM:



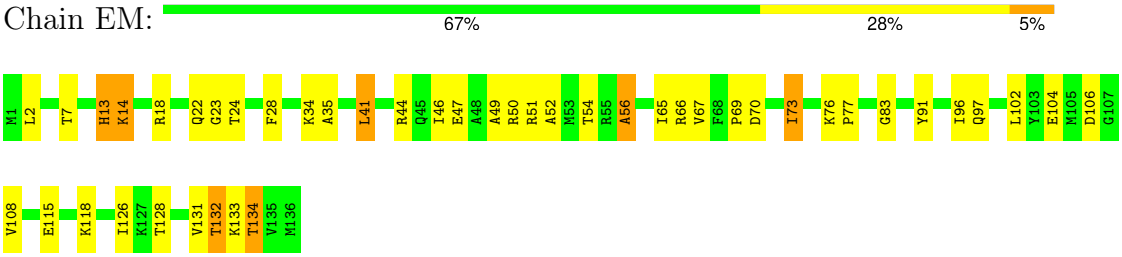
• Molecule 13: 50S ribosomal protein L16

Chain CM:



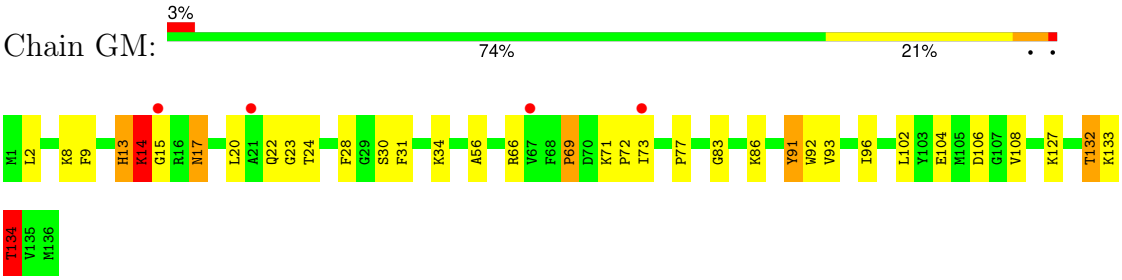
• Molecule 13: 50S ribosomal protein L16

Chain EM:



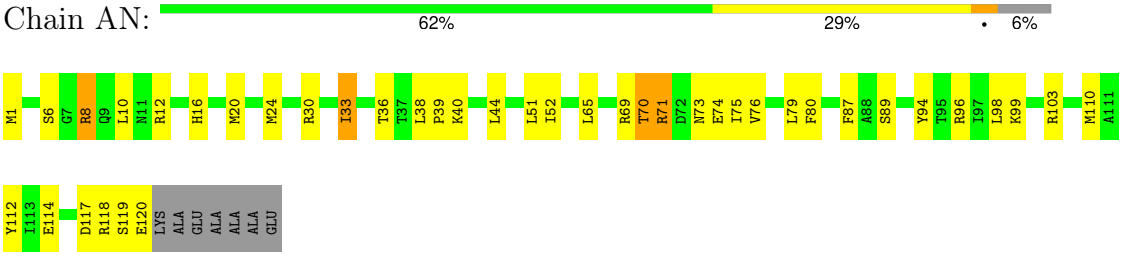
• Molecule 13: 50S ribosomal protein L16

Chain GM:



• Molecule 14: 50S ribosomal protein L17

Chain AN:



• Molecule 14: 50S ribosomal protein L17

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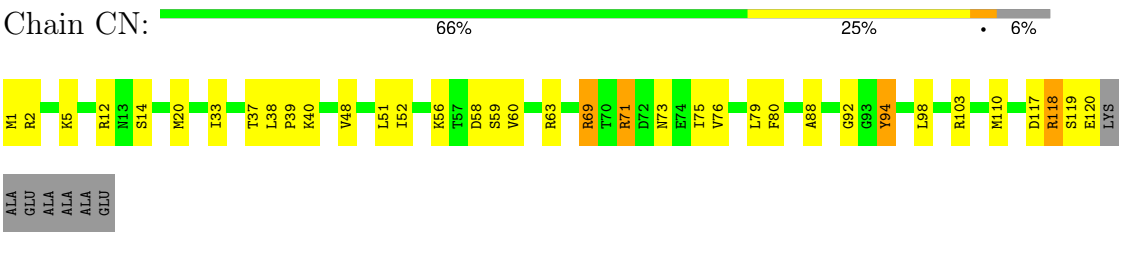
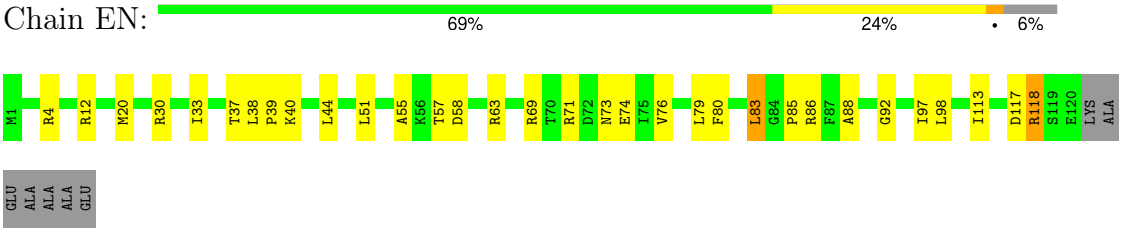


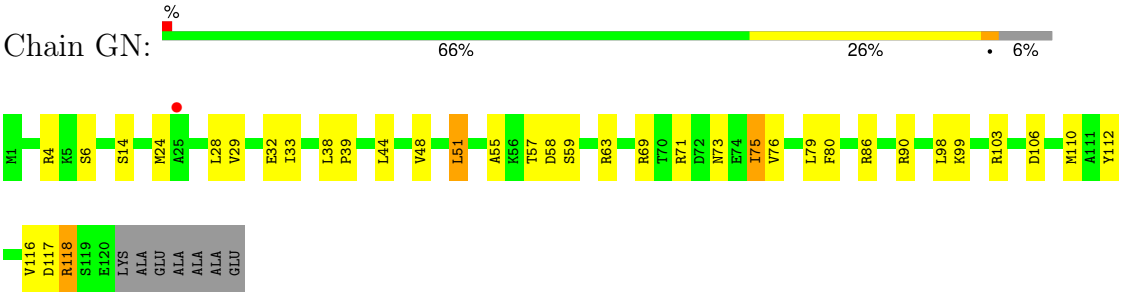
• Molecule 14: 50S ribosomal protein L17

Chain EN:



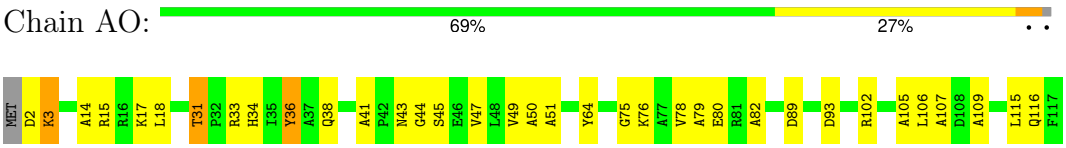
• Molecule 14: 50S ribosomal protein L17

Chain GN:



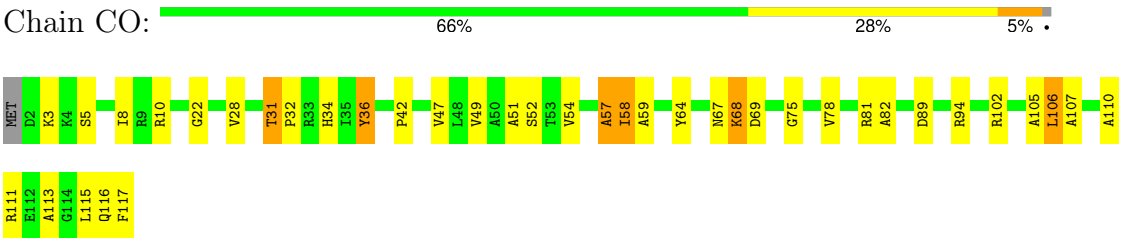
• Molecule 15: 50S ribosomal protein L18

Chain AO:



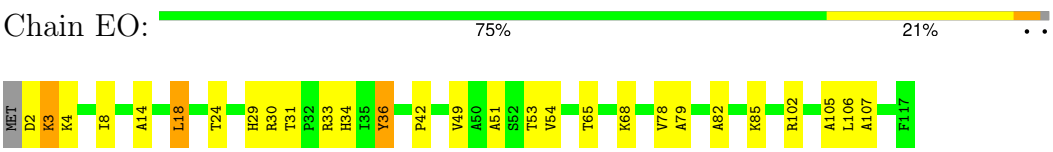
• Molecule 15: 50S ribosomal protein L18

Chain CO:



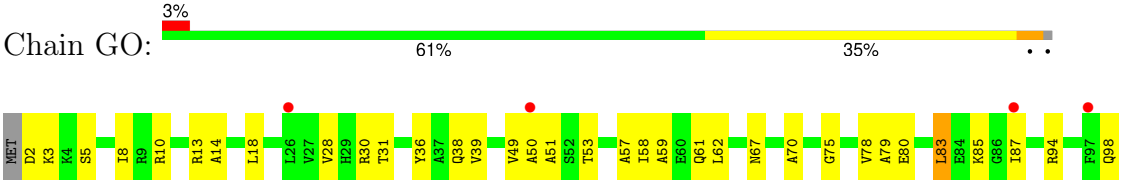
• Molecule 15: 50S ribosomal protein L18

Chain EO:



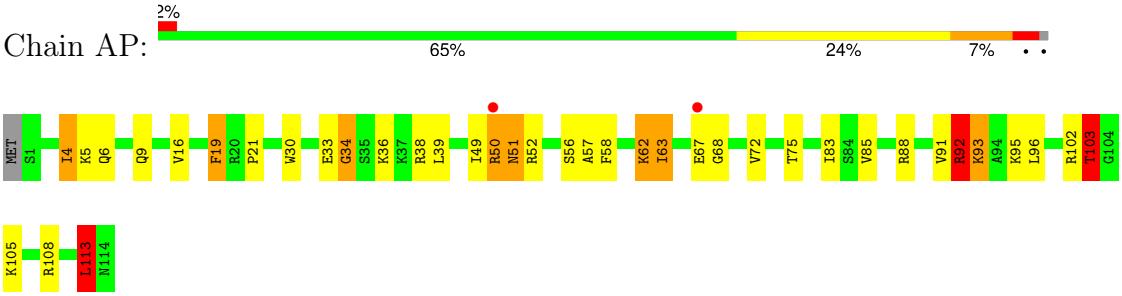
• Molecule 15: 50S ribosomal protein L18

Chain GO:



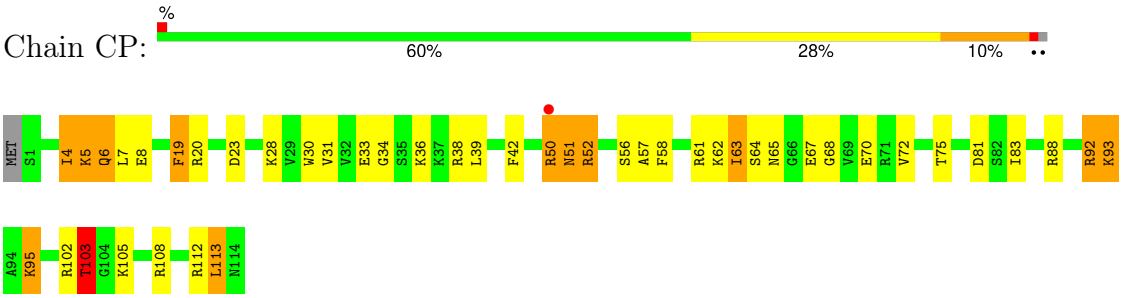
• Molecule 16: 50S ribosomal protein L19

Chain AP:



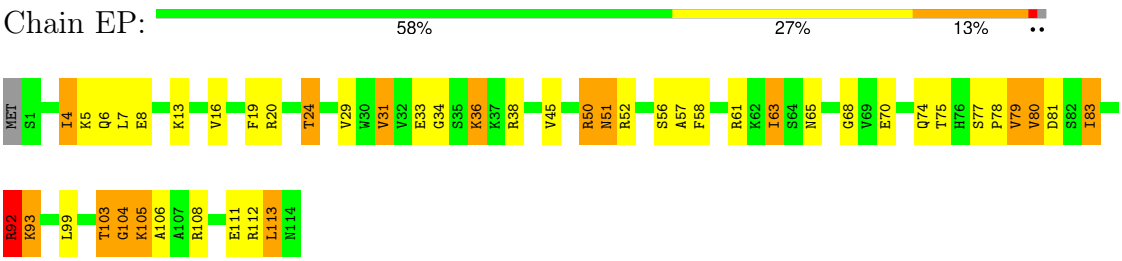
• Molecule 16: 50S ribosomal protein L19

Chain CP:



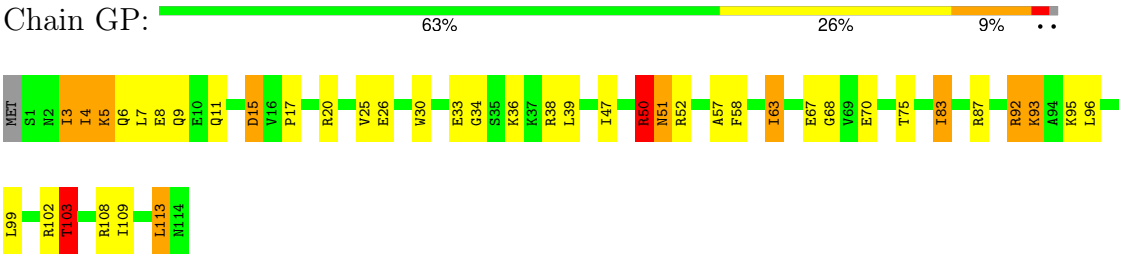
• Molecule 16: 50S ribosomal protein L19

Chain EP:



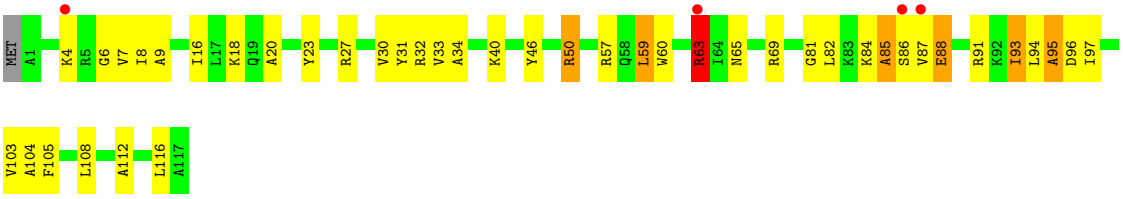
• Molecule 16: 50S ribosomal protein L19

Chain GP:

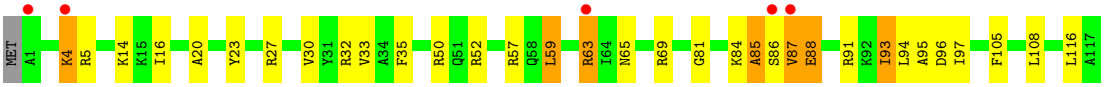


• Molecule 17: 50S ribosomal protein L20

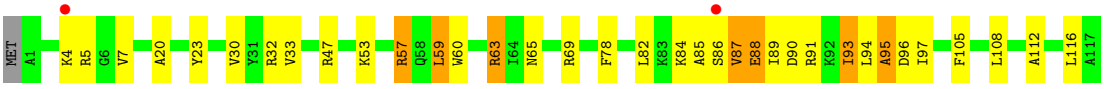
Chain AQ:



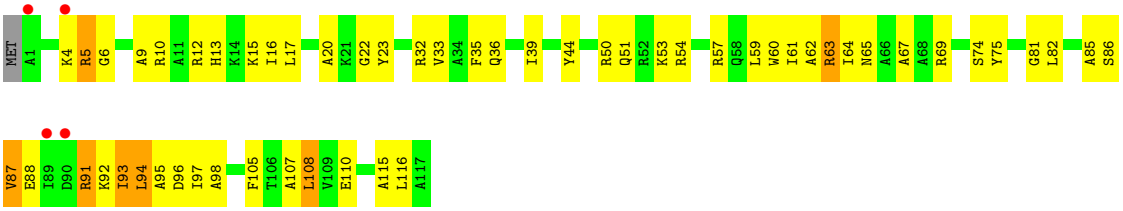
• Molecule 17: 50S ribosomal protein L20



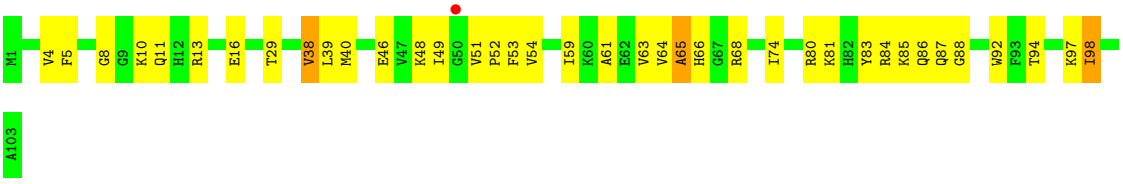
• Molecule 17: 50S ribosomal protein L20



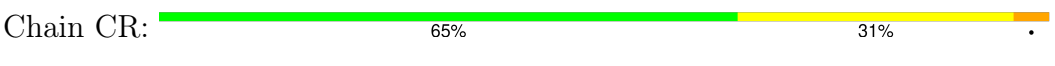
• Molecule 17: 50S ribosomal protein L20

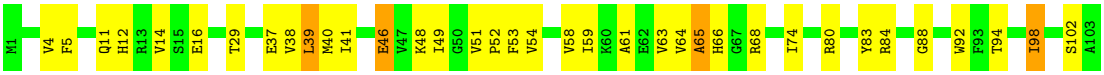


• Molecule 18: 50S ribosomal protein L21



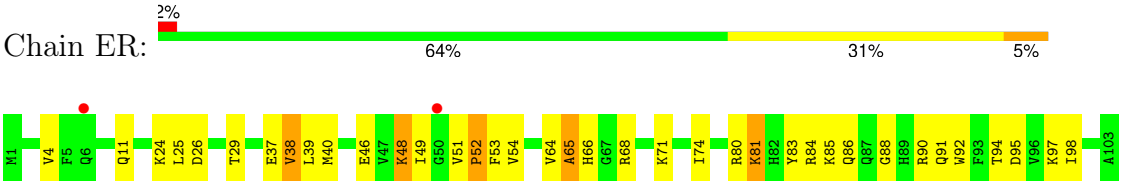
• Molecule 18: 50S ribosomal protein L21





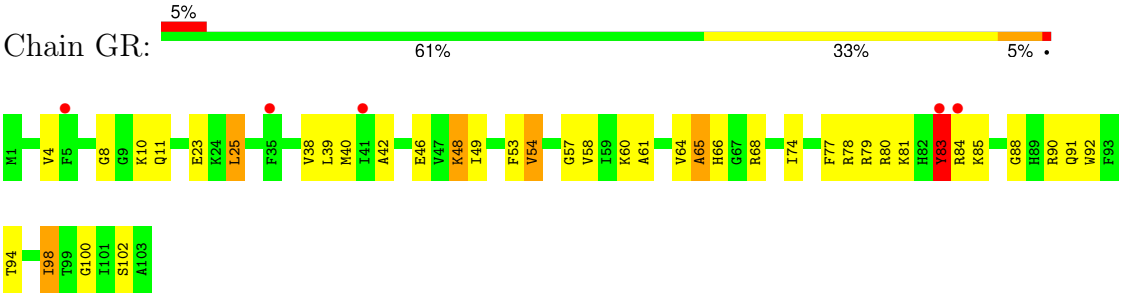
• Molecule 18: 50S ribosomal protein L21

Chain ER:



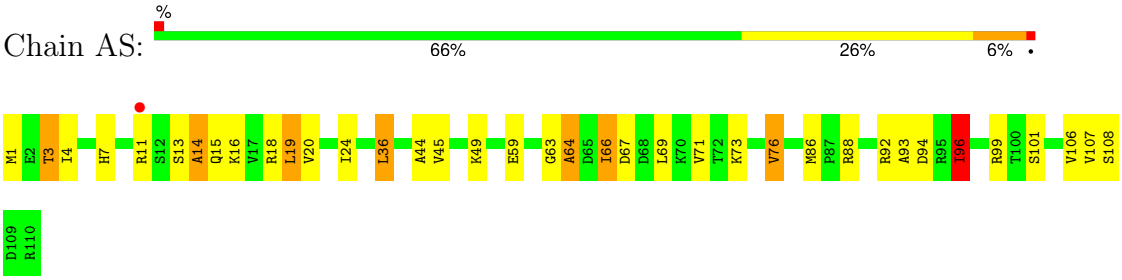
• Molecule 18: 50S ribosomal protein L21

Chain GR:



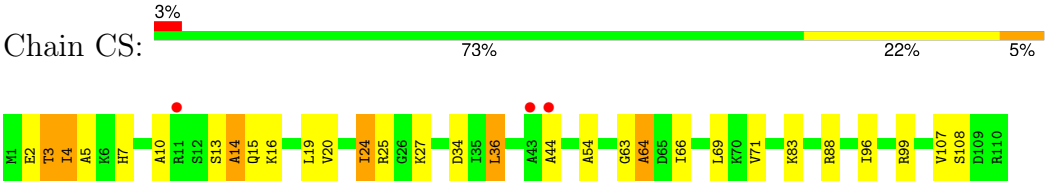
• Molecule 19: 50S ribosomal protein L22

Chain AS:



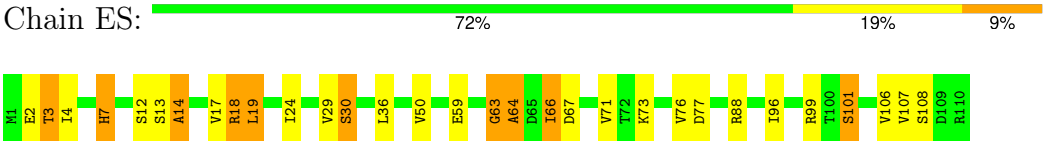
• Molecule 19: 50S ribosomal protein L22

Chain CS:



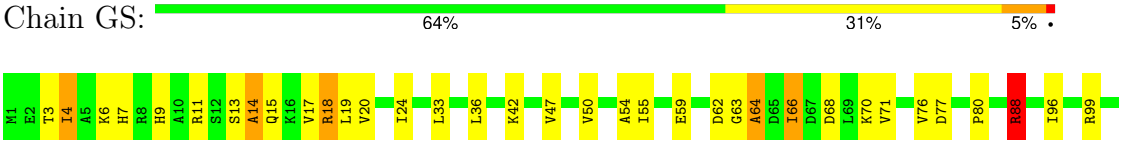
• Molecule 19: 50S ribosomal protein L22

Chain ES:



• Molecule 19: 50S ribosomal protein L22

Chain GS:

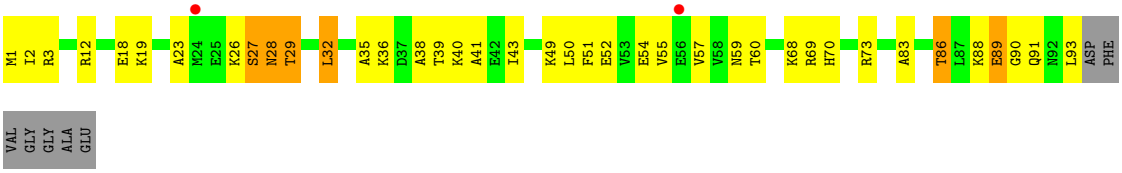


• Molecule 20: 50S ribosomal protein L23

Chain AT:

• Molecule 20: 50S ribosomal protein L23

Chain CT:

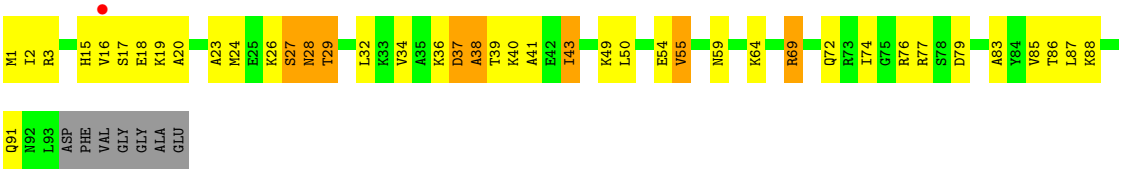


• Molecule 20: 50S ribosomal protein L23

Chain ET:

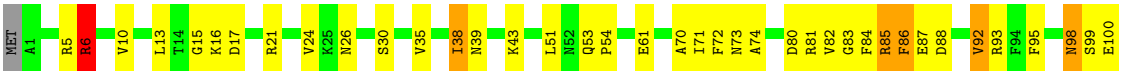
• Molecule 20: 50S ribosomal protein L23

Chain GT:



• Molecule 21: 50S ribosomal protein L24

Chain AU:

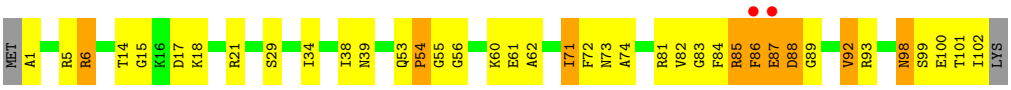


• Molecule 21: 50S ribosomal protein L24

Chain CU:

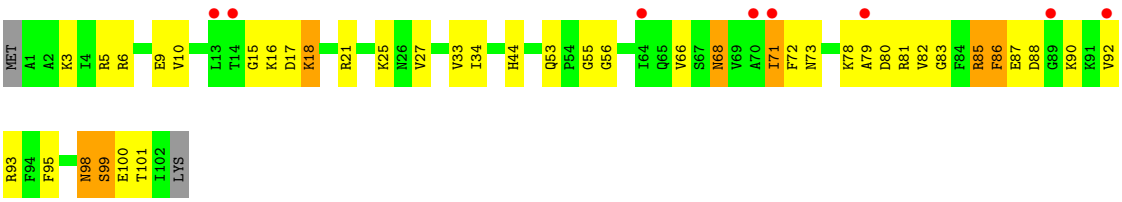
• Molecule 21: 50S ribosomal protein L24

Chain EU:



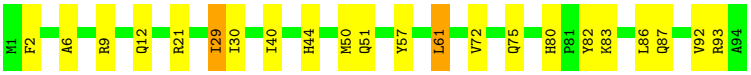
• Molecule 21: 50S ribosomal protein L24

Chain GU:



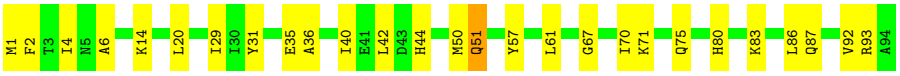
• Molecule 22: 50S ribosomal protein L25

Chain AV:



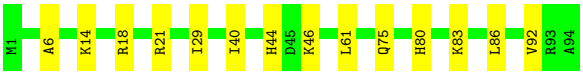
• Molecule 22: 50S ribosomal protein L25

Chain CV:



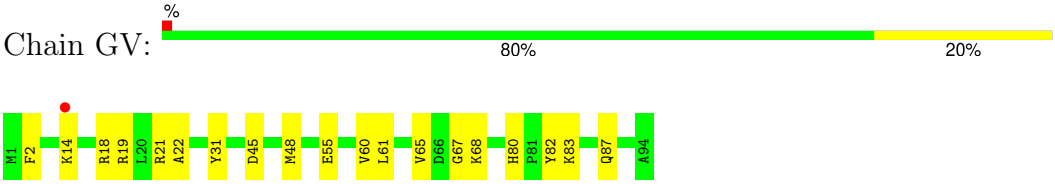
• Molecule 22: 50S ribosomal protein L25

Chain EV:



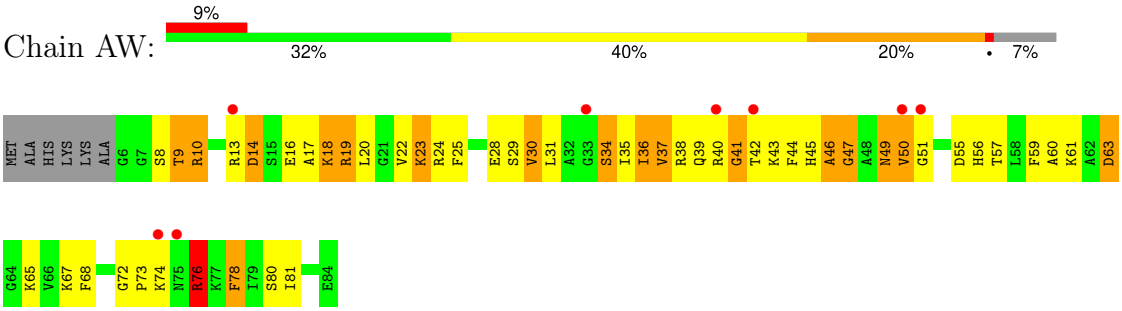
• Molecule 22: 50S ribosomal protein L25

Chain GV:



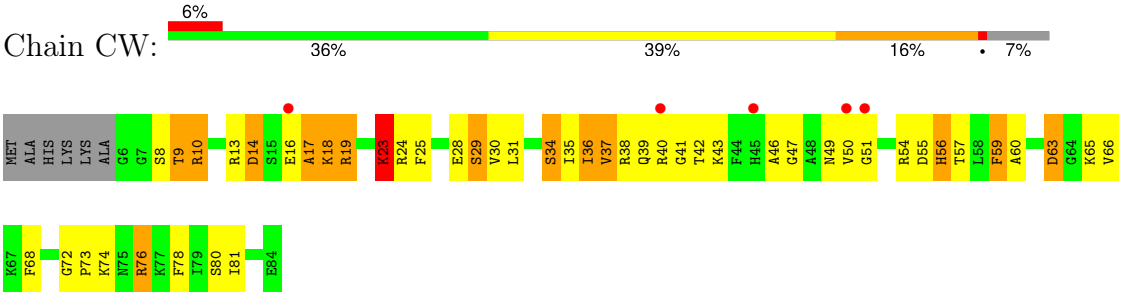
• Molecule 23: 50S ribosomal protein L27

Chain AW:



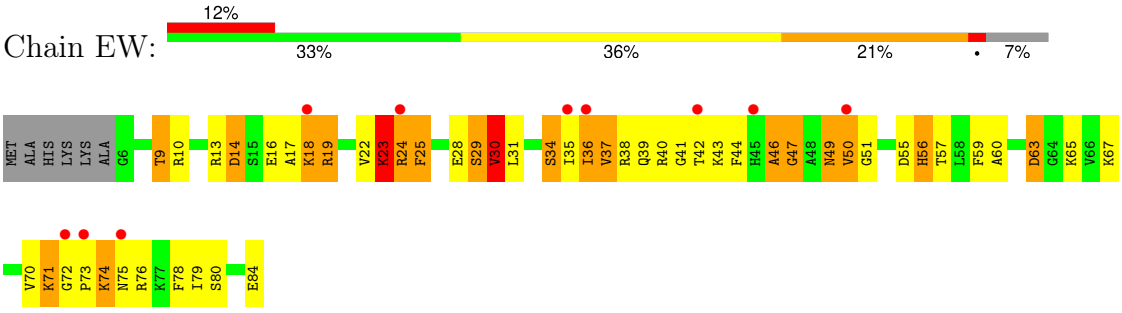
• Molecule 23: 50S ribosomal protein L27

Chain CW:



• Molecule 23: 50S ribosomal protein L27

Chain EW:



• Molecule 23: 50S ribosomal protein L27

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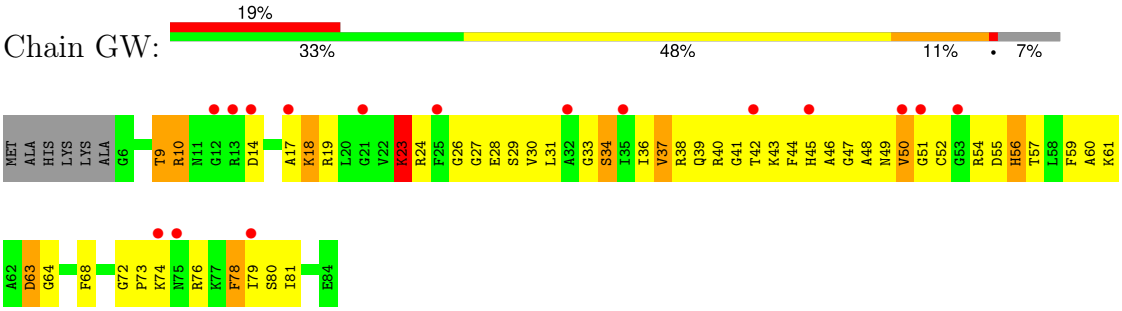
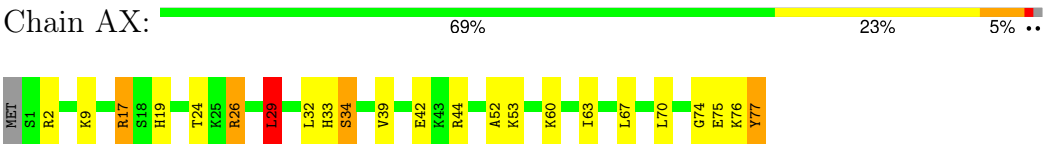


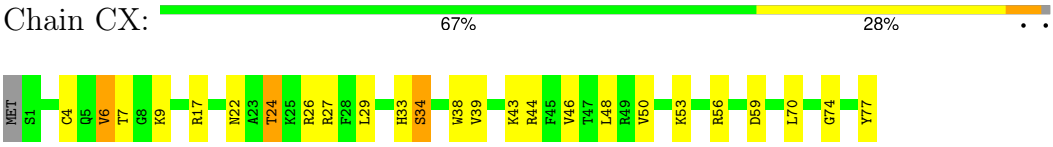
• Molecule 24: 50S ribosomal protein L28

Chain AX:



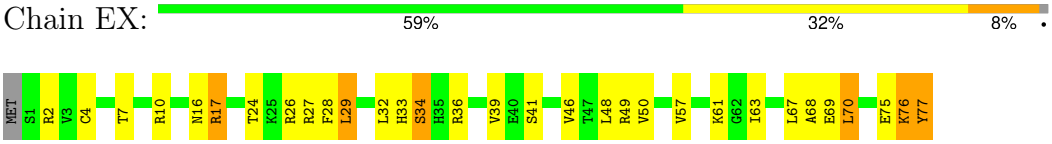
• Molecule 24: 50S ribosomal protein L28

Chain CX:



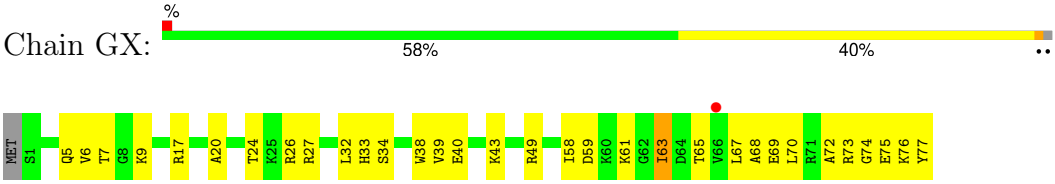
• Molecule 24: 50S ribosomal protein L28

Chain EX:



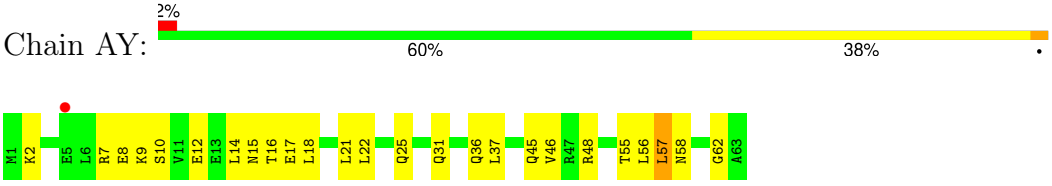
• Molecule 24: 50S ribosomal protein L28

Chain GX:



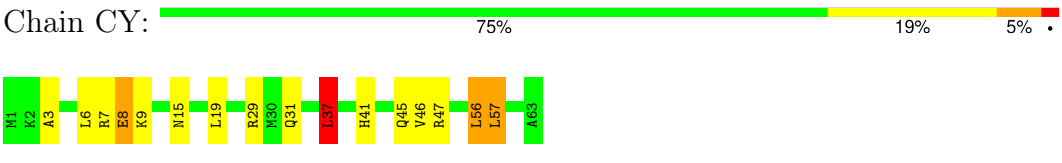
• Molecule 25: 50S ribosomal protein L29

Chain AY:



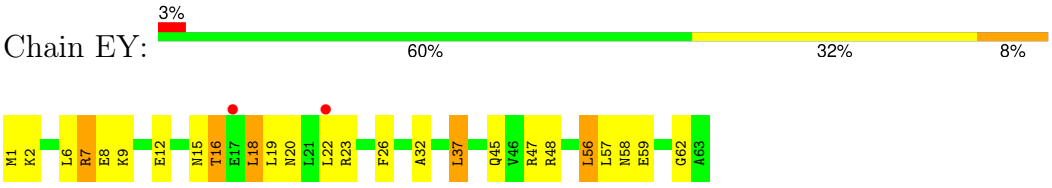
• Molecule 25: 50S ribosomal protein L29

Chain CY:



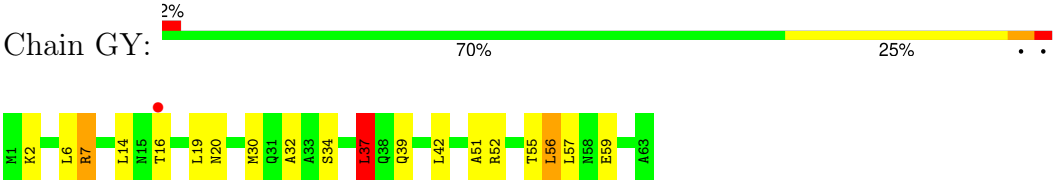
• Molecule 25: 50S ribosomal protein L29

Chain EY:



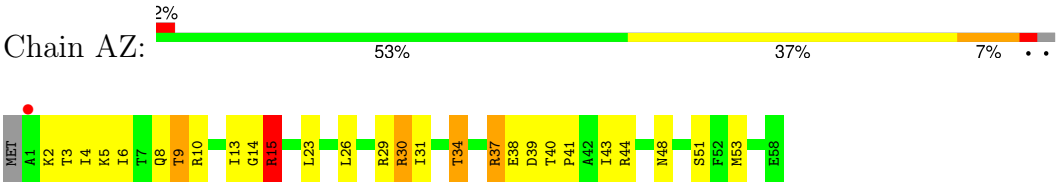
• Molecule 25: 50S ribosomal protein L29

Chain GY:



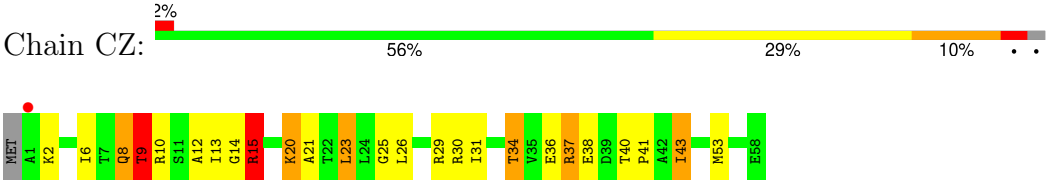
• Molecule 26: 50S ribosomal protein L30

Chain AZ:



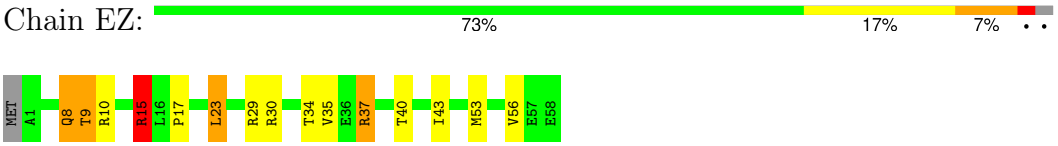
• Molecule 26: 50S ribosomal protein L30

Chain CZ:



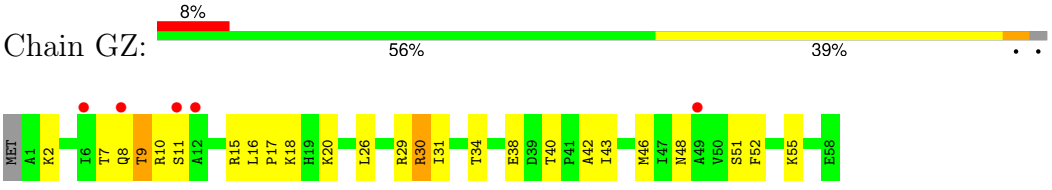
• Molecule 26: 50S ribosomal protein L30

Chain EZ:



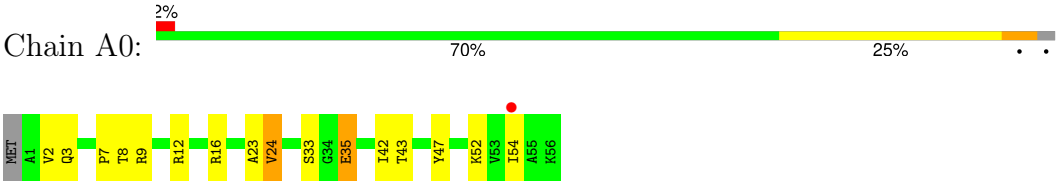
• Molecule 26: 50S ribosomal protein L30

Chain GZ:



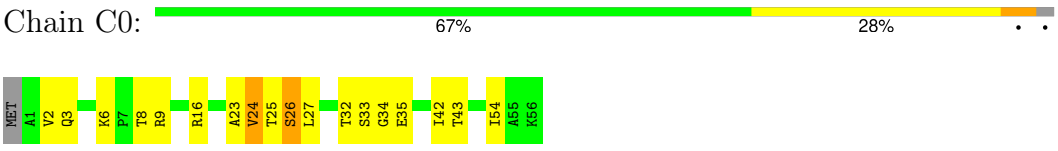
• Molecule 27: 50S ribosomal protein L32

Chain A0:



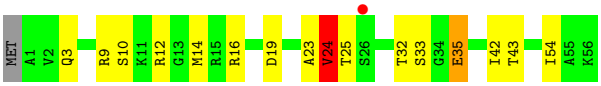
• Molecule 27: 50S ribosomal protein L32

Chain C0:



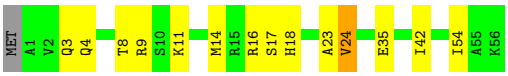
• Molecule 27: 50S ribosomal protein L32

Chain E0:



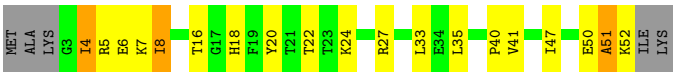
• Molecule 27: 50S ribosomal protein L32

Chain G0:



• Molecule 28: 50S ribosomal protein L33

Chain A1:

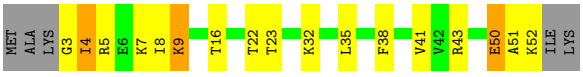


• Molecule 28: 50S ribosomal protein L33

Chain C1:

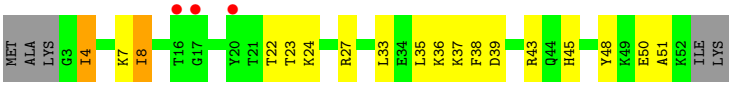
• Molecule 28: 50S ribosomal protein L33

Chain E1:



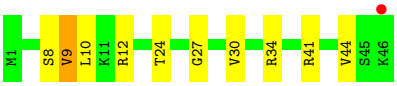
• Molecule 28: 50S ribosomal protein L33

Chain G1:



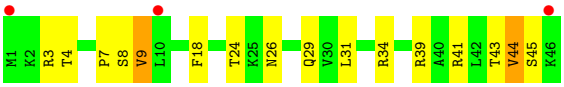
• Molecule 29: 50S ribosomal protein L34

Chain A2:



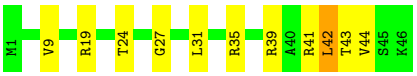
• Molecule 29: 50S ribosomal protein L34

Chain C2:



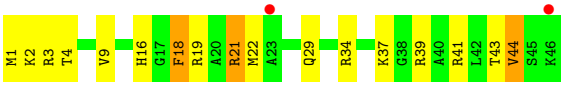
• Molecule 29: 50S ribosomal protein L34

Chain E2:



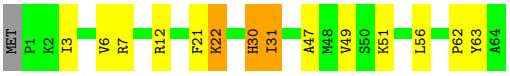
• Molecule 29: 50S ribosomal protein L34

Chain G2:



• Molecule 30: 50S ribosomal protein L35

Chain A3:

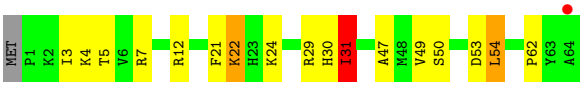


• Molecule 30: 50S ribosomal protein L35

Chain C3:

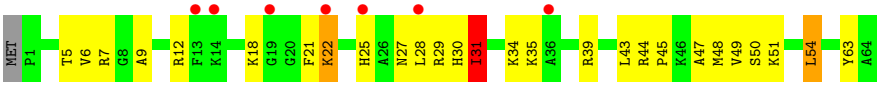
• Molecule 30: 50S ribosomal protein L35

Chain E3:



• Molecule 30: 50S ribosomal protein L35

Chain G3:

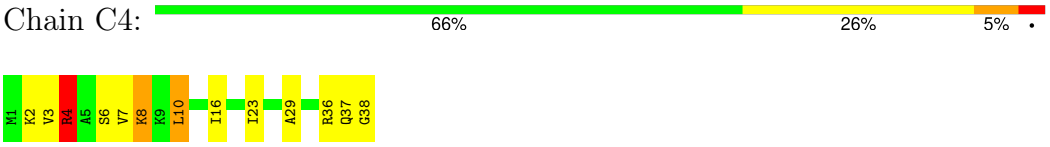


• Molecule 31: 50S ribosomal protein L36

Chain A4:

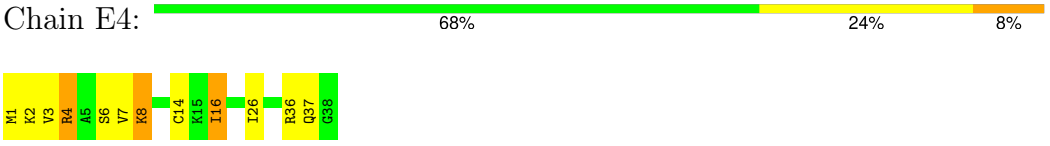
• Molecule 31: 50S ribosomal protein L36

Chain C4:



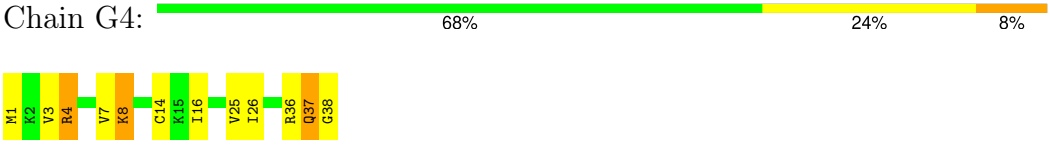
• Molecule 31: 50S ribosomal protein L36

Chain E4:



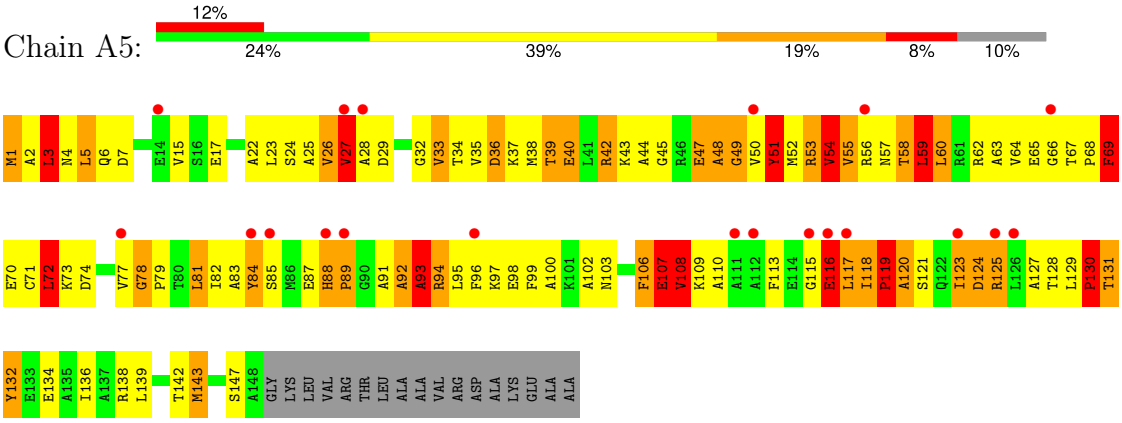
• Molecule 31: 50S ribosomal protein L36

Chain G4:



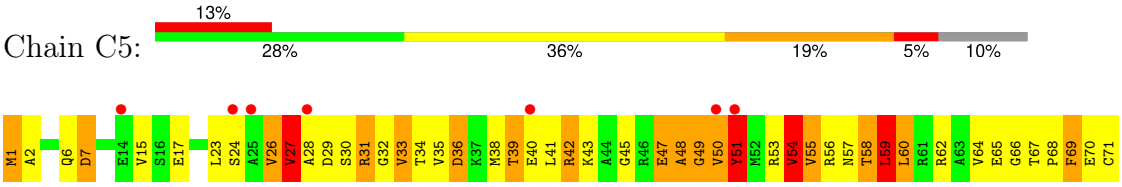
• Molecule 32: 50S ribosomal protein L10

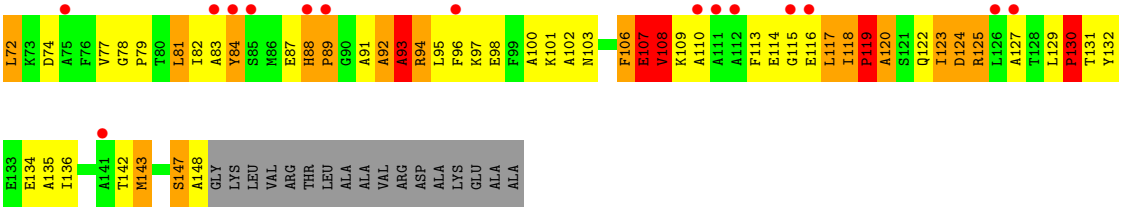
Chain A5:



• Molecule 32: 50S ribosomal protein L10

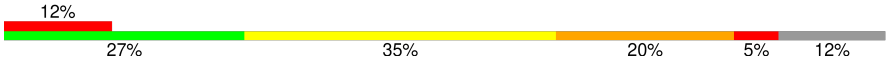
Chain C5:

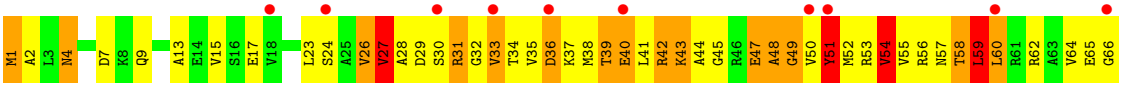


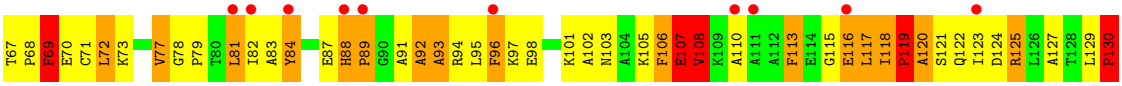


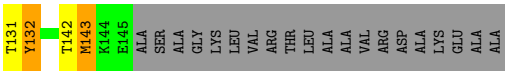
• Molecule 32: 50S ribosomal protein L10

Chain E5:



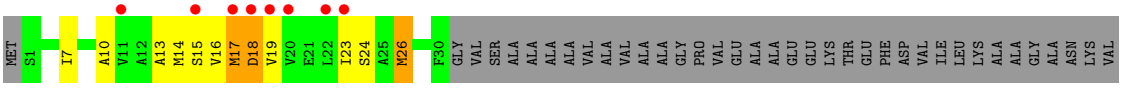






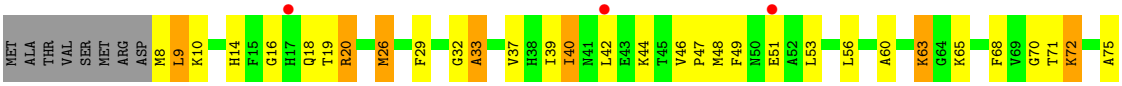
• Molecule 33: 50S ribosomal protein L7/L12

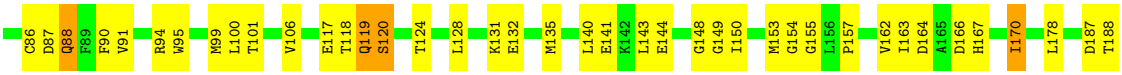
Chain A6:

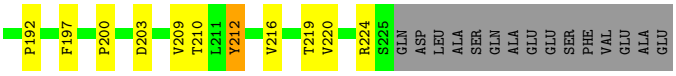


• Molecule 34: 30S ribosomal protein S2

Chain BB:

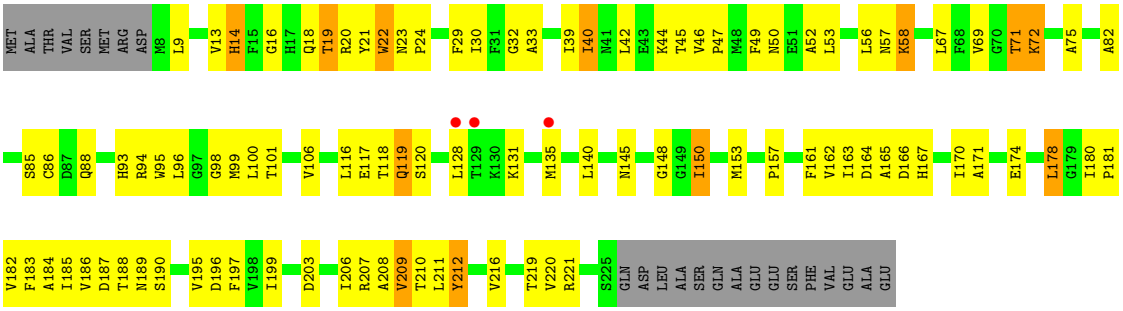


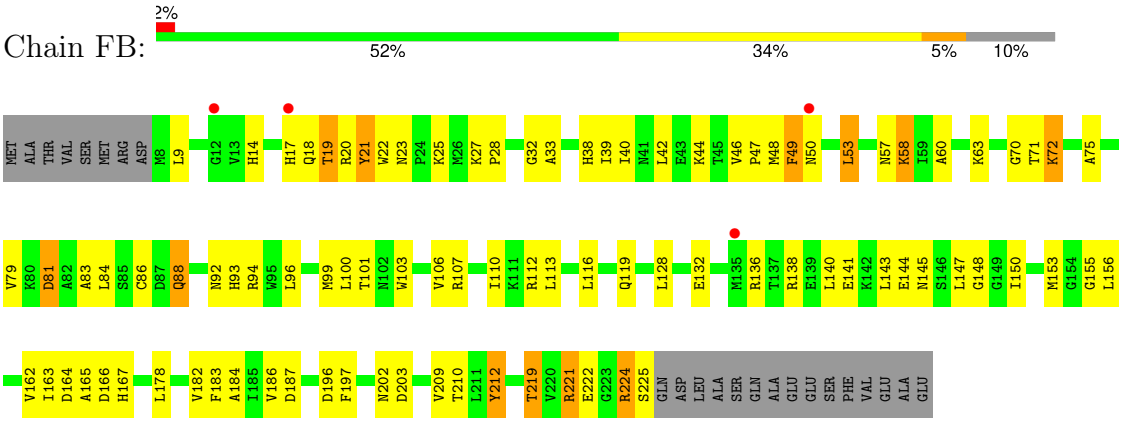




• Molecule 34: 30S ribosomal protein S2

Chain DB:



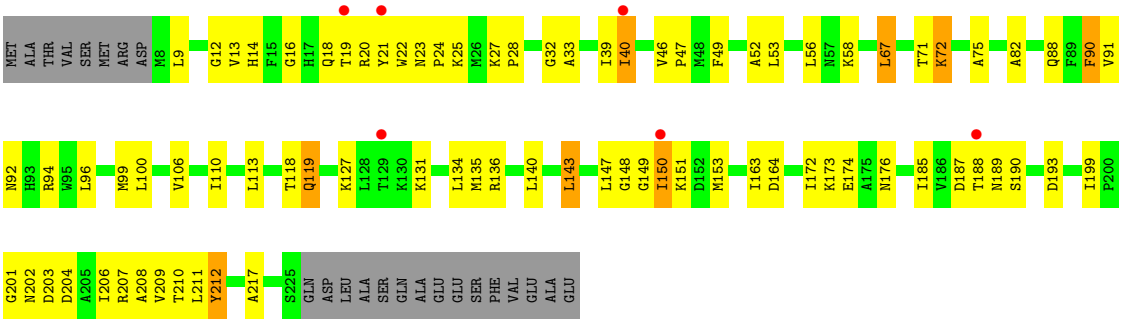


• Molecule 34: 30S ribosomal protein S2

Chain FB:

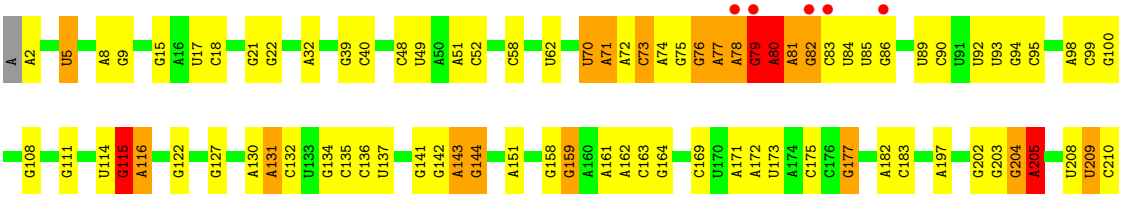
• Molecule 34: 30S ribosomal protein S2

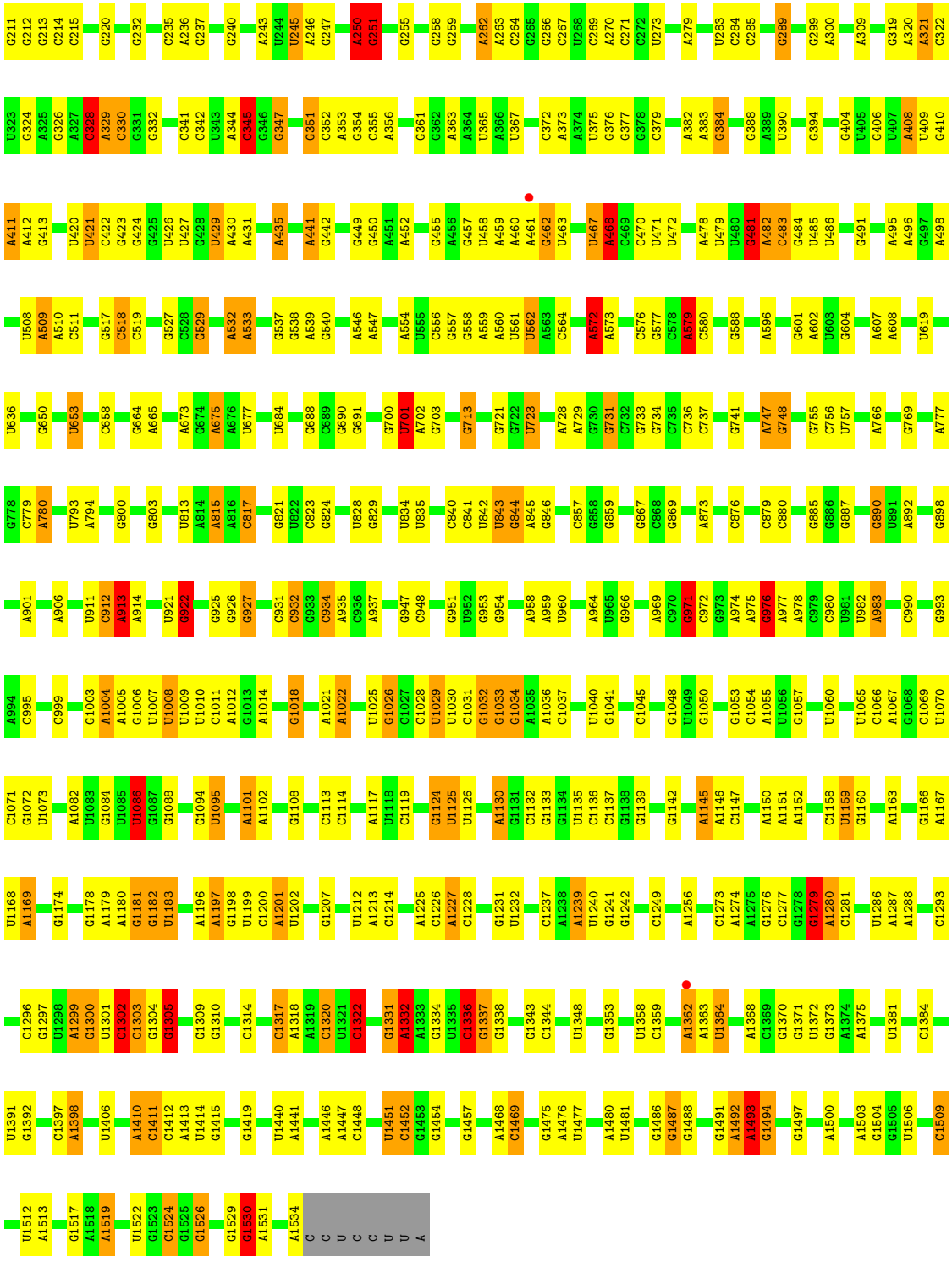
Chain HB:



• Molecule 35: 16S rRNA

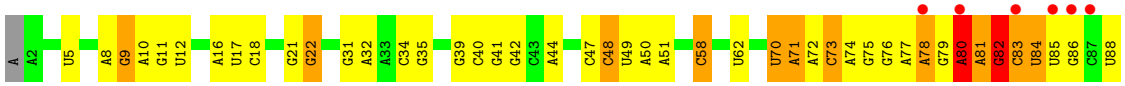
Chain BA:

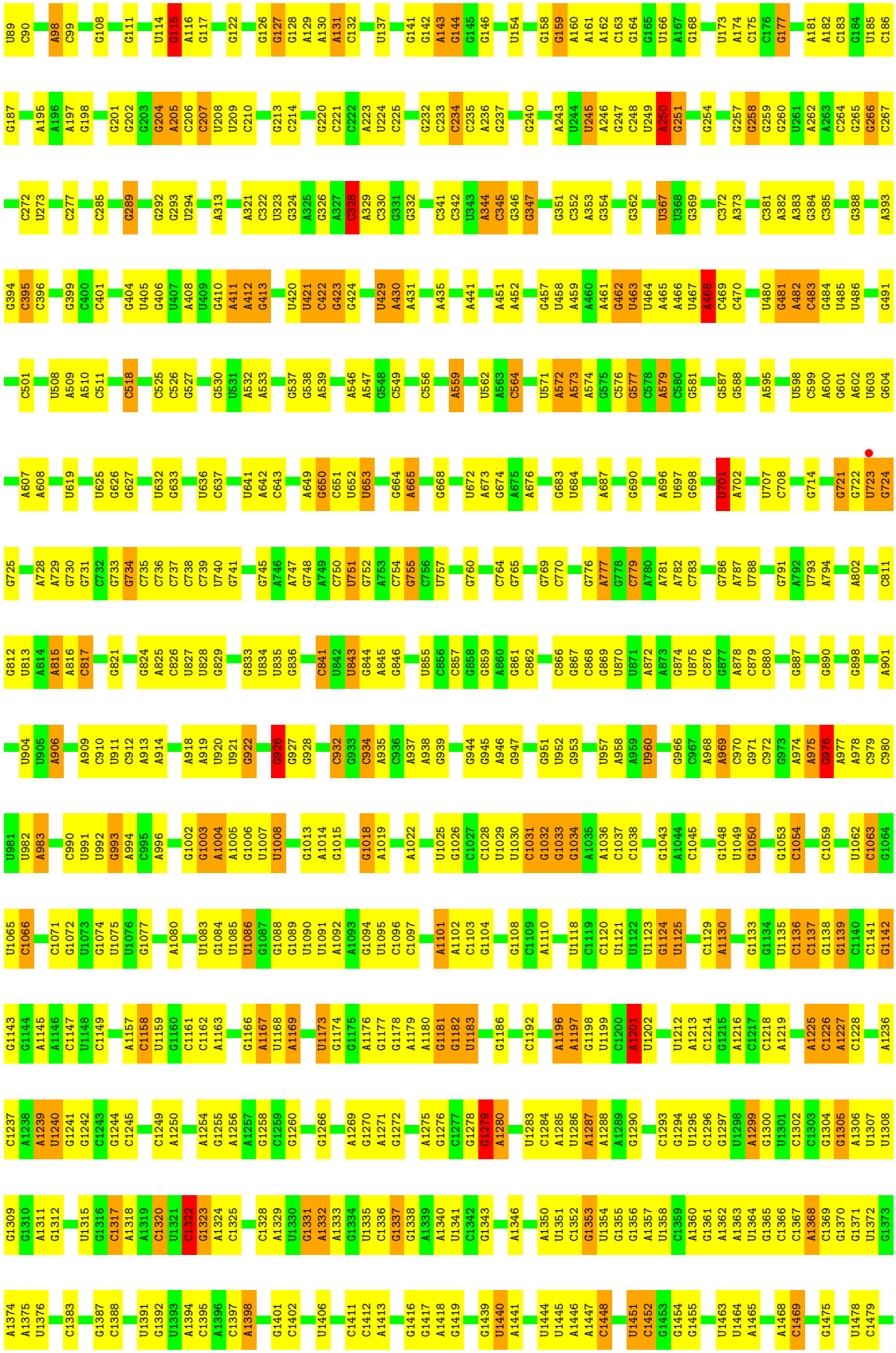




• Molecule 35: 16S rRNA

Chain DA:

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G187 A195 A196 A197 G198 G201 G202 G203 G204 A205 C206 C207 U208 U209 C210 G213 C214 G220 C221 C222 A223 U224 C225 G232 C233 C234 C235 A236 G237 G240 A243 U244 U245 A246 G247 C248 U249 A250 G251 G254 G257 G258 G259 G260 U261 A262 A263 C264 G265 G266 C267
C272 U273 C277 C285 G289 G292 G293 U294 A313 A321 C322 U323 G324 A325 G326 A327 C328 A329 C330 G331 G332 C341 C342 U343 A344 C345 G346 G347 G351 C352 A353 G354 G362 U367 U368 G369 C372 A373 C381 A382 A383 G384 C385 G388 A393
G394 C395 C396 G399 C400 C401 G404 U405 G406 U407 A408 U409 G410 A411 A412 G413 U420 U421 C422 G423 G424 U429 A430 A431 A435 A441 A451 A452 G457 U458 A459 A460 A461 G462 U463 U464 A465 A466 U467 A468 C469 C470 U480 G481 A482 C483 G484 U485 U486 G491
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G1143 G1144 A1145 A1146 C1147 U1148 C1149 A1157 C1158 U1159 G1160 C1161 C1162 A1163 G1166 A1167 U1168 A1169 U1173 G1174 G1175 A1176 G1177 G1178 A1179 A1180 G1181 G1182 U1183 G1186 C1192 A1196 A1197 G1198 U1199 C1200 A1201 U1202 U1212 A1213 C1214 G1215 A1216 C1217 C1218 A1219 A1225 C1226 A1227 C1228 A1236
C1237 A1238 A1239 U1240 G1241 G1242 C1243 G1244 C1245 C1249 A1250 A1254 G1255 A1256 A1257 G1258 C1259 G1260 G1266 A1269 G1270 A1271 G1272 A1275 G1276 C1277 G1278 G1279 A1280 U1283 C1284 A1285 U1286 A1287 A1288 A1289 G1290 C1293 G1294 U1295 C1296 G1297 U1298 A1299 G1300 U1301 C1302 C1303 G1304 G1305 A1306 U1307 U1308
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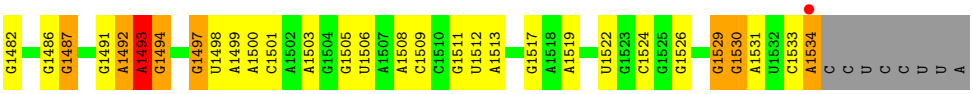
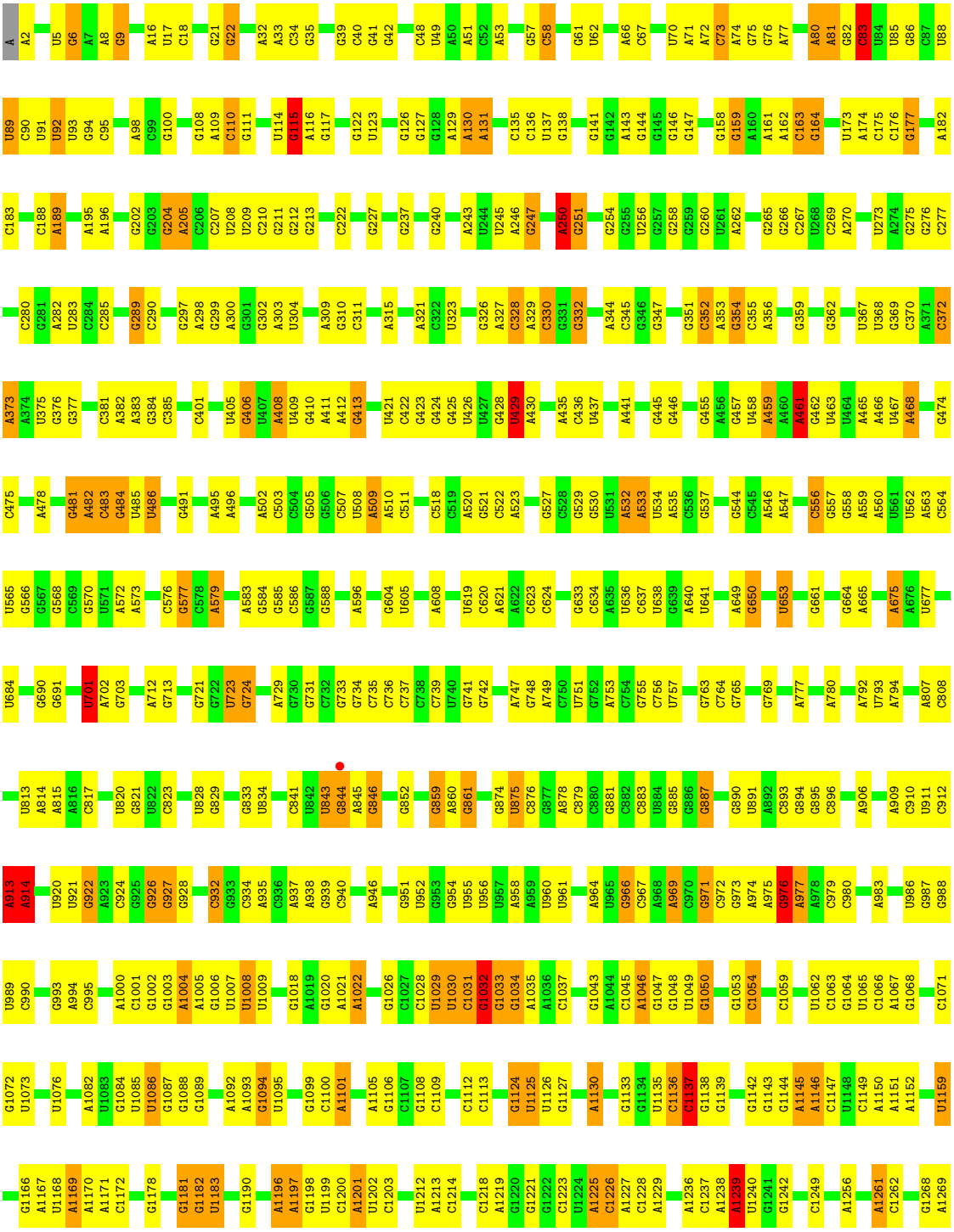
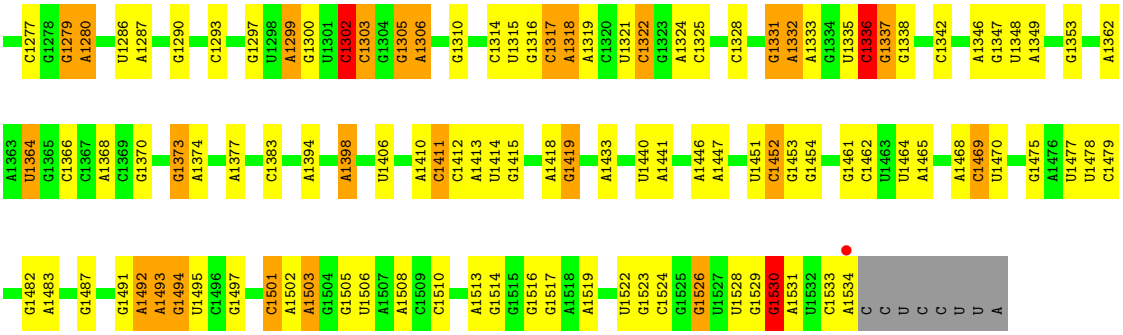


• Molecule 35: 16S rRNA

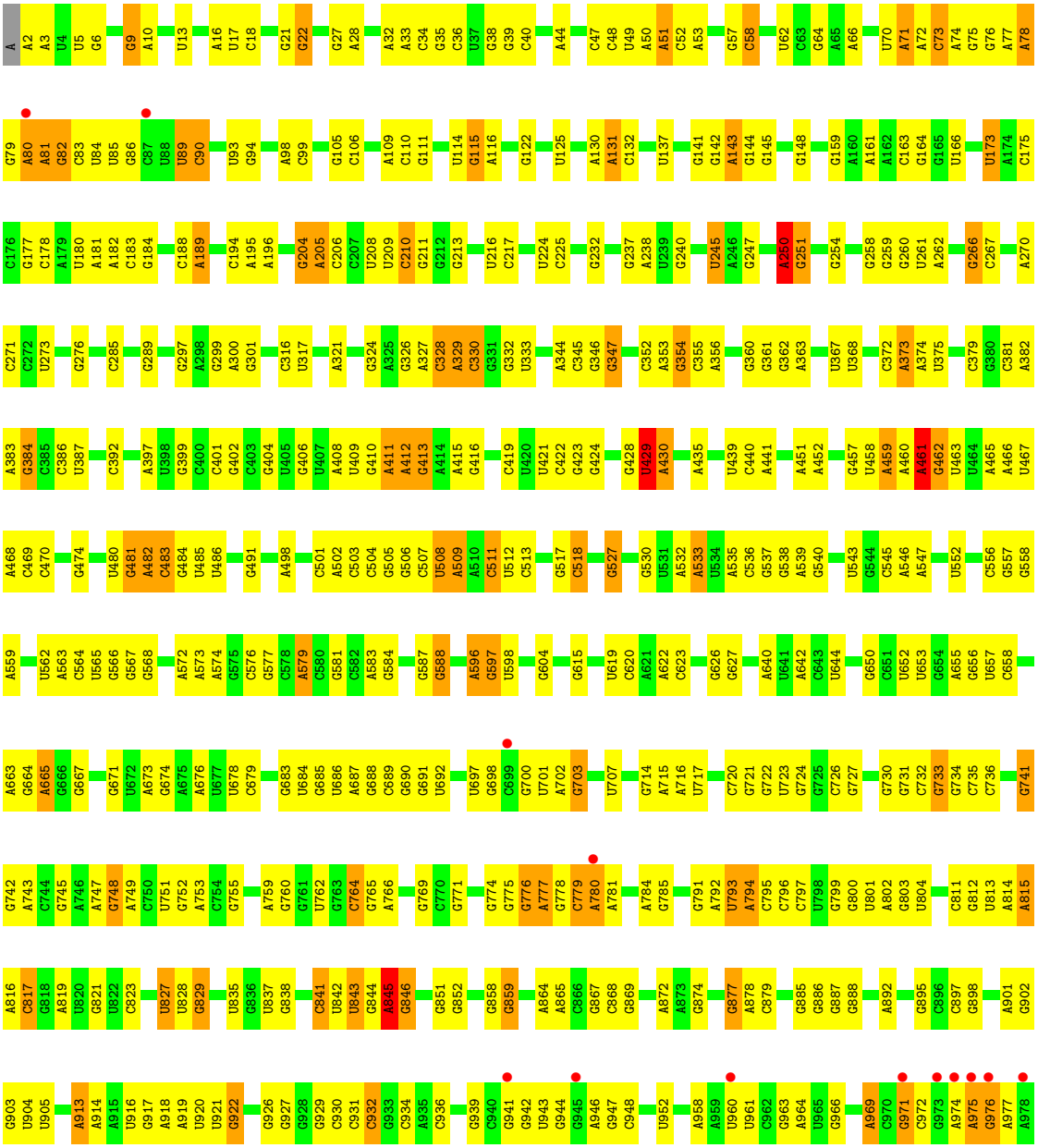
Chain FA:

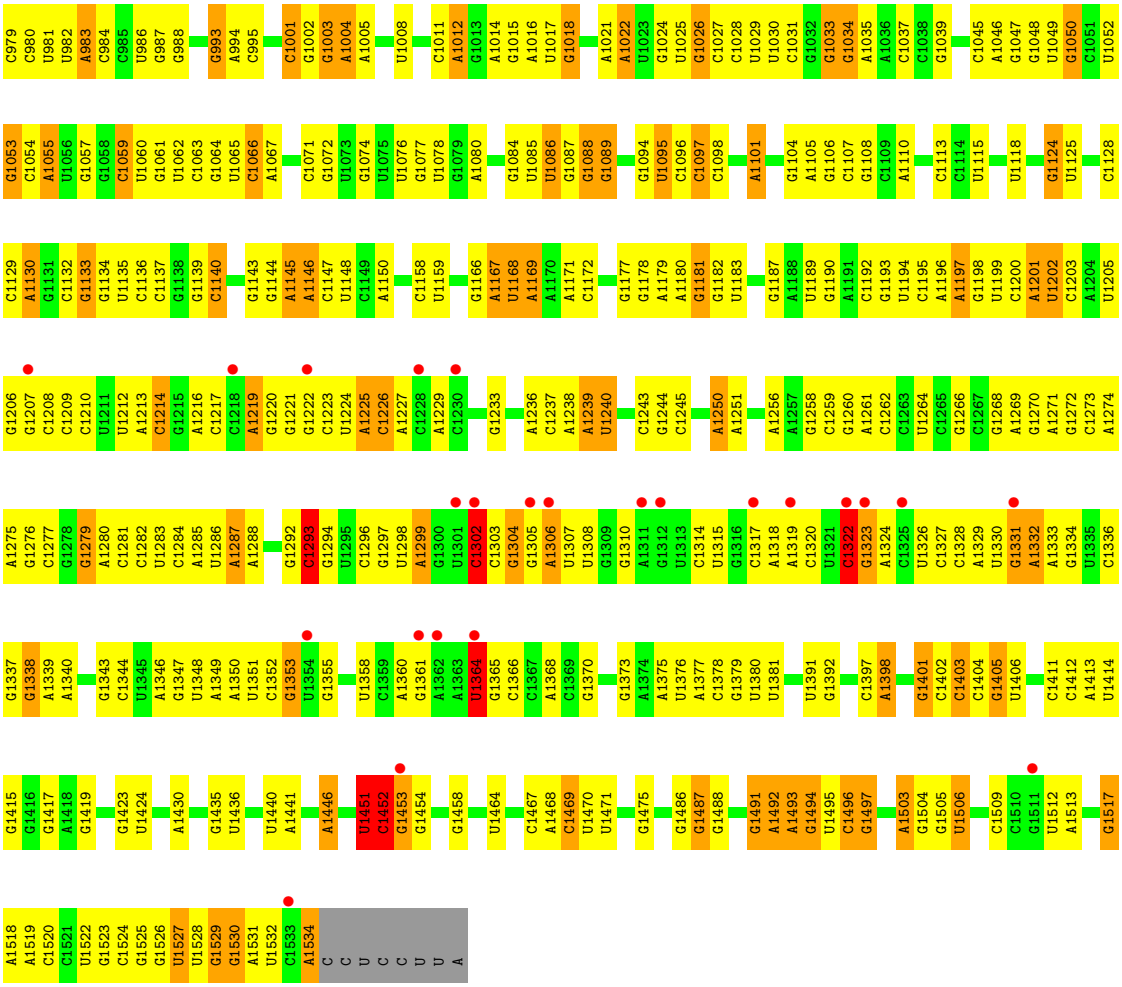




• Molecule 35: 16S rRNA

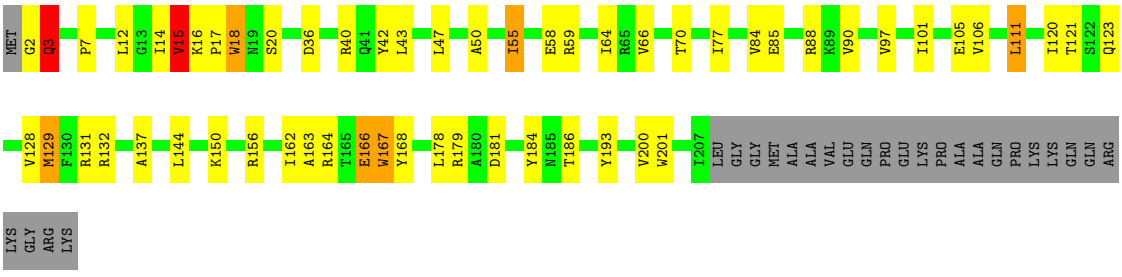
Chain HA:





• Molecule 36: 30S ribosomal protein S3

Chain BC:

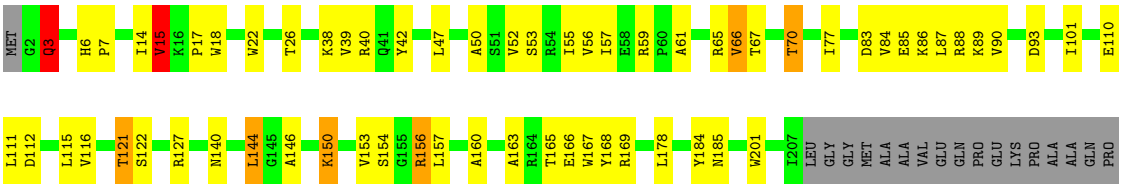


• Molecule 36: 30S ribosomal protein S3

Chain DC:

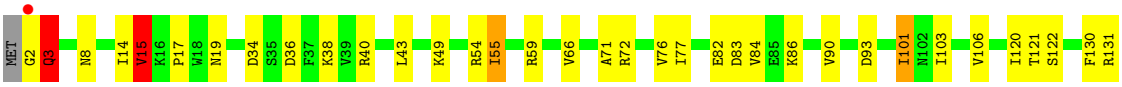
• Molecule 36: 30S ribosomal protein S3

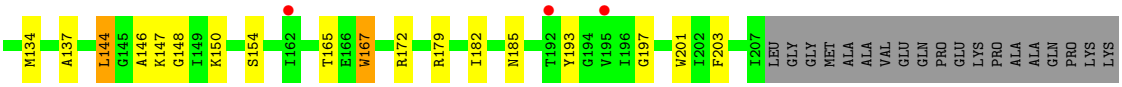
Chain FC:



• Molecule 36: 30S ribosomal protein S3

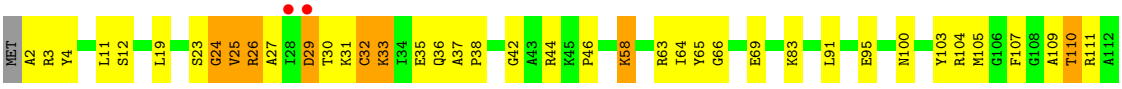
Chain HC:





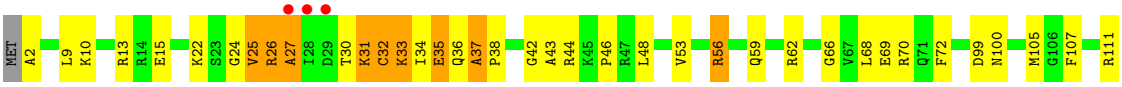
• Molecule 37: 30S ribosomal protein S4

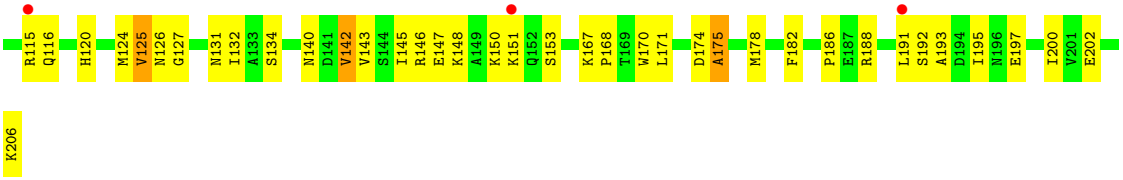
Chain BD:



• Molecule 37: 30S ribosomal protein S4

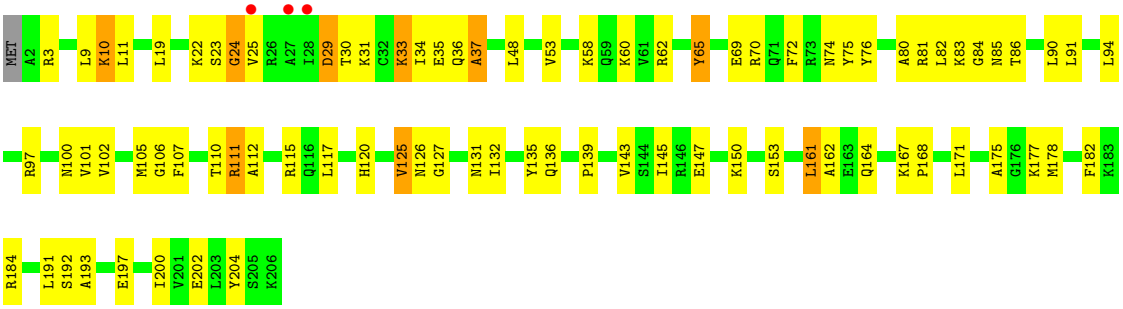
Chain DD:





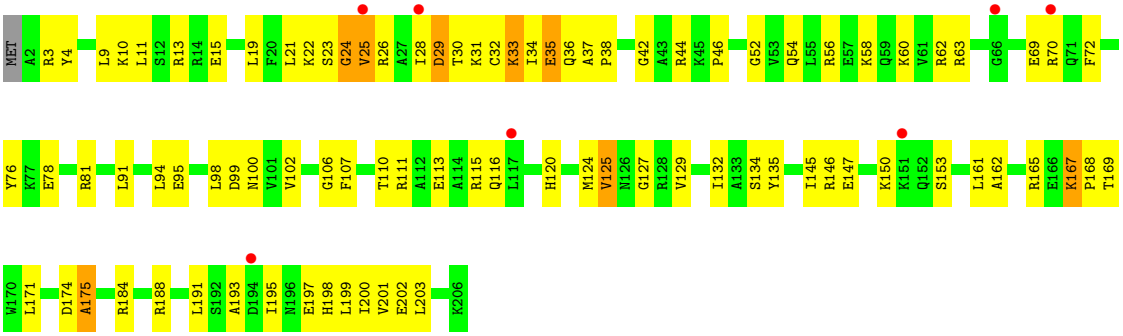
• Molecule 37: 30S ribosomal protein S4

Chain FD:



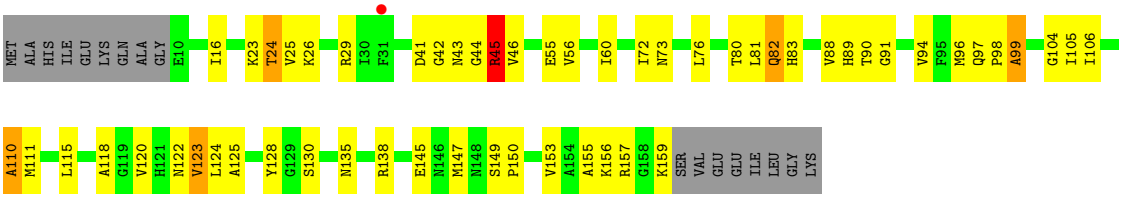
• Molecule 37: 30S ribosomal protein S4

Chain HD:



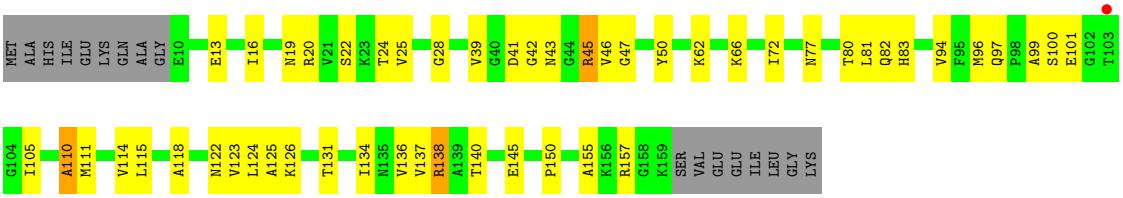
• Molecule 38: 30S ribosomal protein S5

Chain BE:



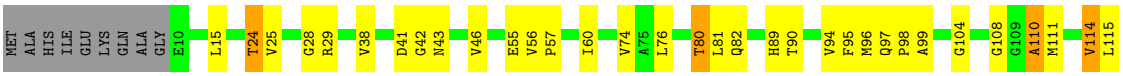
• Molecule 38: 30S ribosomal protein S5

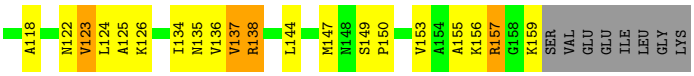
Chain DE:



• Molecule 38: 30S ribosomal protein S5

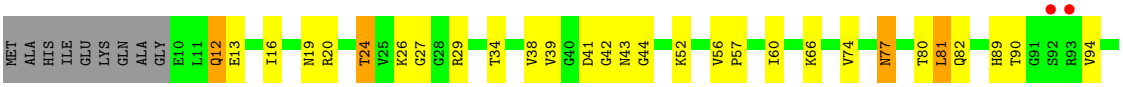
Chain FE:

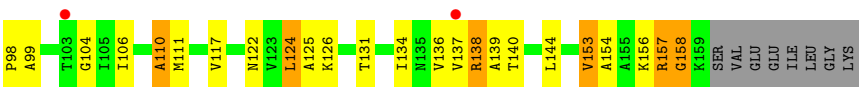




• Molecule 38: 30S ribosomal protein S5

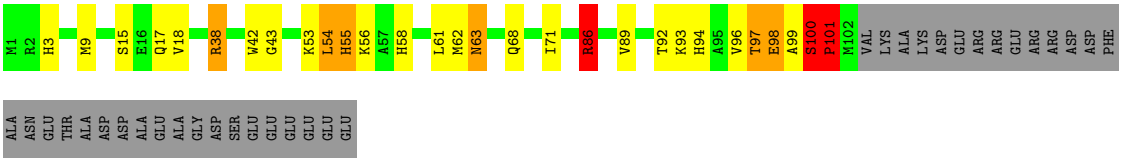
Chain HE:





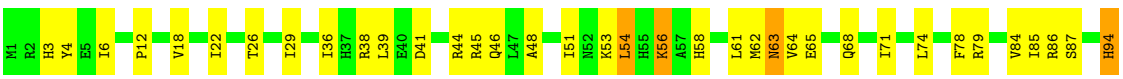
• Molecule 39: 30S ribosomal protein S6

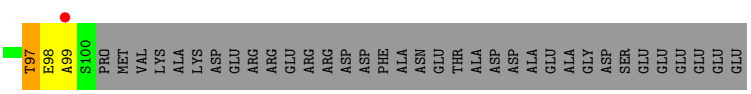
Chain BF:



• Molecule 39: 30S ribosomal protein S6

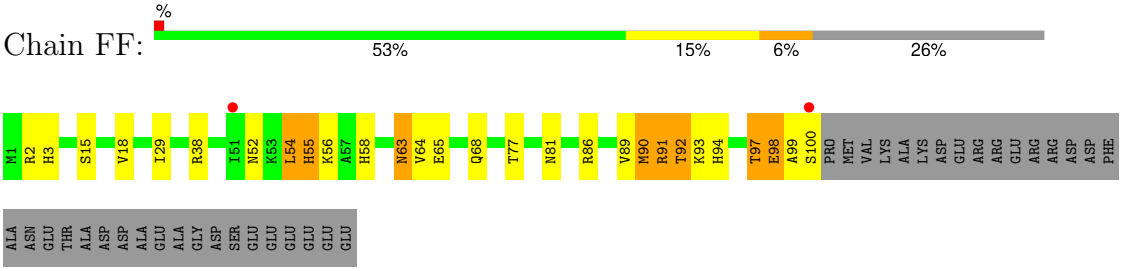
Chain DF:





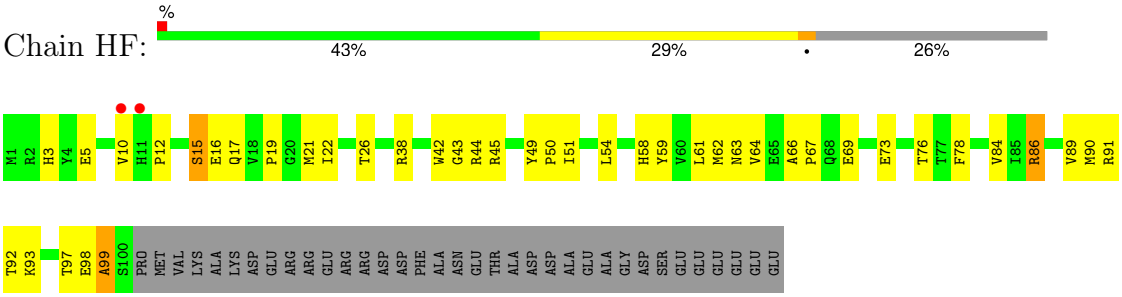
• Molecule 39: 30S ribosomal protein S6

Chain FF:



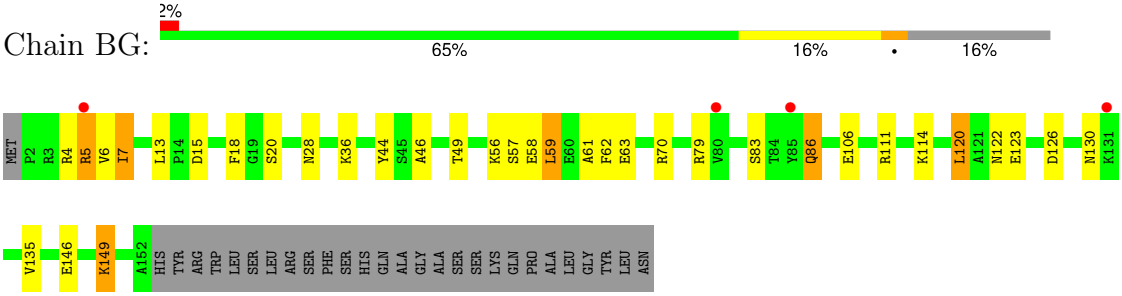
• Molecule 39: 30S ribosomal protein S6

Chain HF:



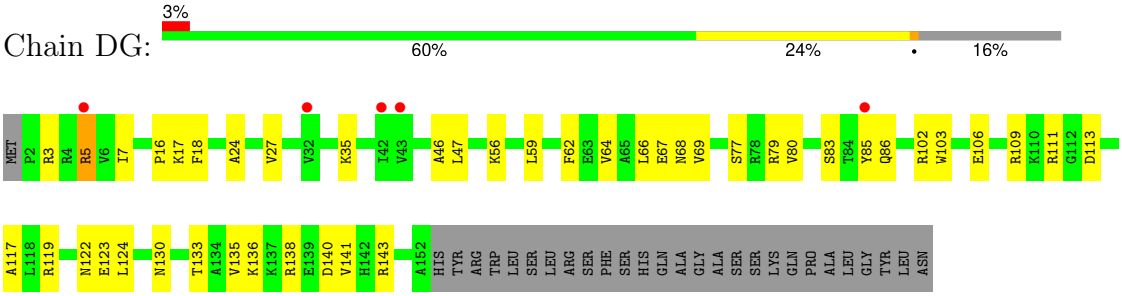
• Molecule 40: 30S ribosomal protein S7

Chain BG:



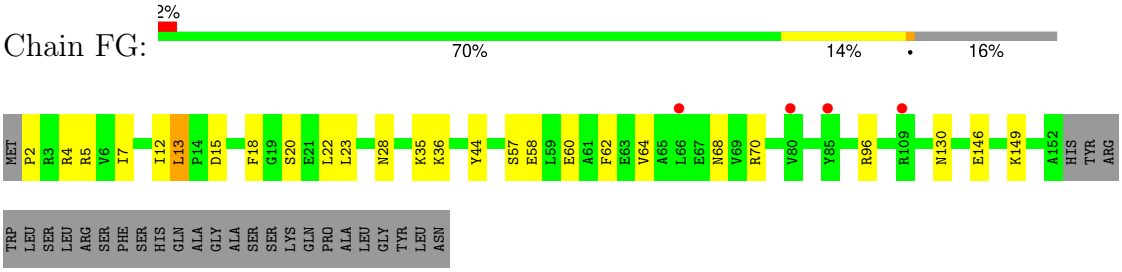
• Molecule 40: 30S ribosomal protein S7

Chain DG:



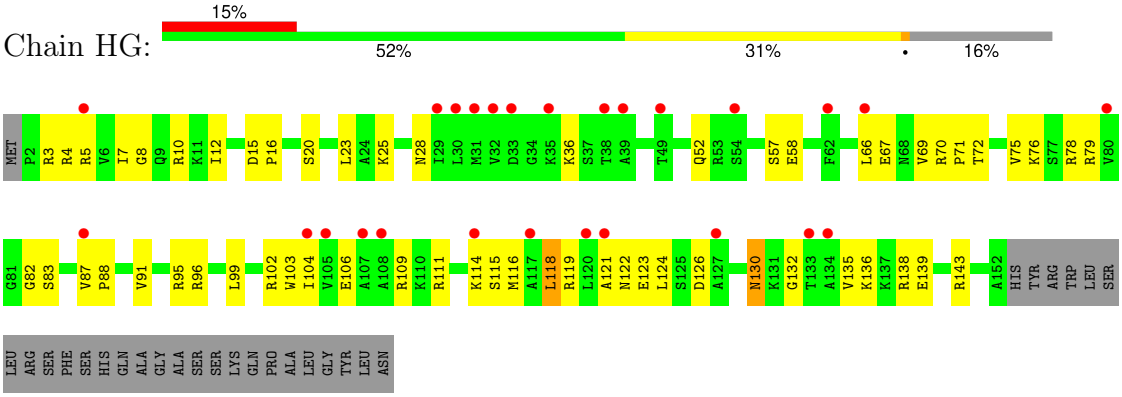
• Molecule 40: 30S ribosomal protein S7

Chain FG:



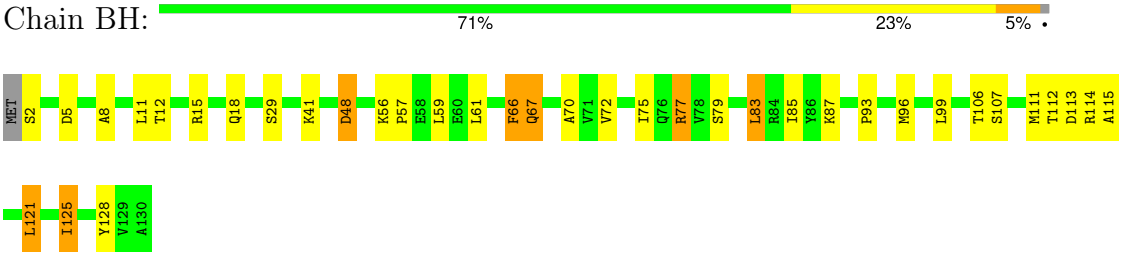
• Molecule 40: 30S ribosomal protein S7

Chain HG:



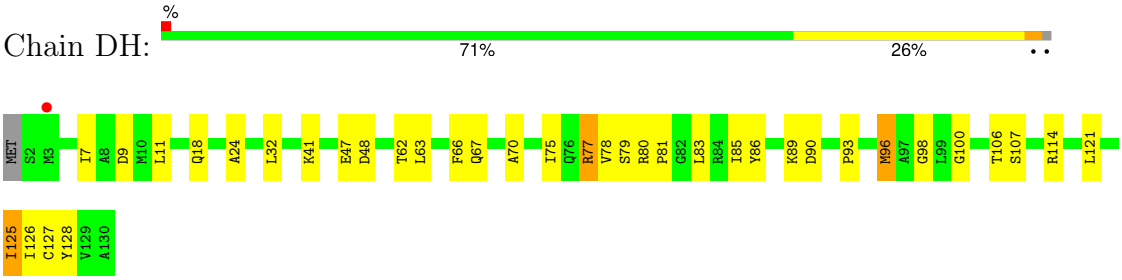
• Molecule 41: 30S ribosomal protein S8

Chain BH:



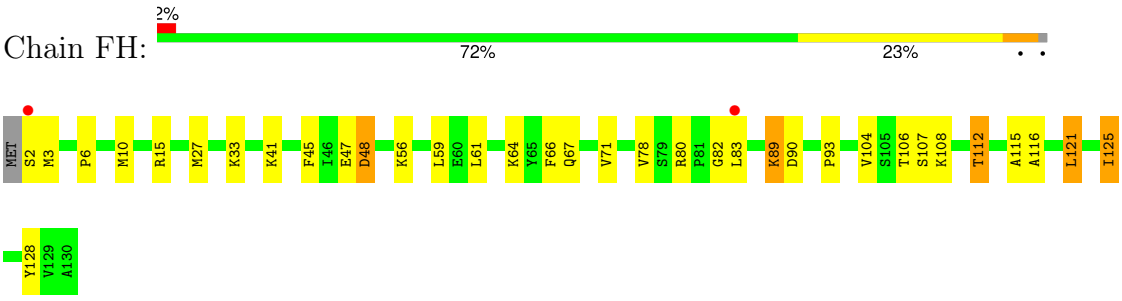
• Molecule 41: 30S ribosomal protein S8

Chain DH:



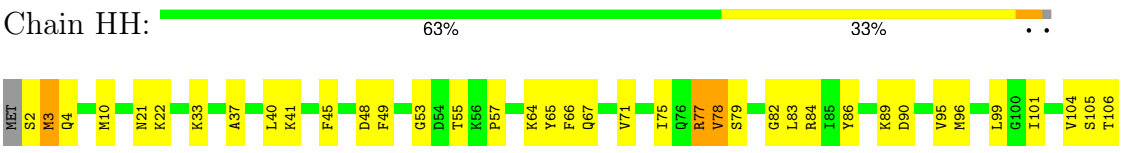
• Molecule 41: 30S ribosomal protein S8

Chain FH:



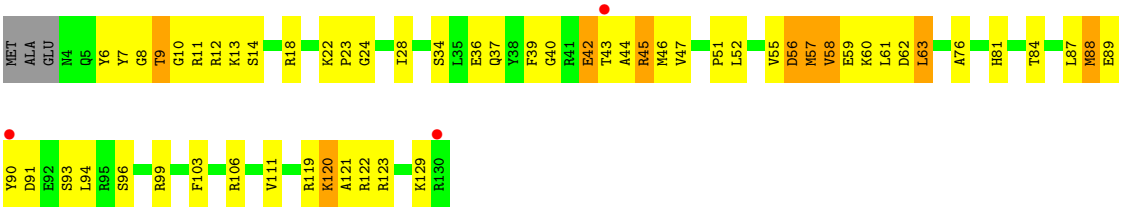
• Molecule 41: 30S ribosomal protein S8

Chain HH:



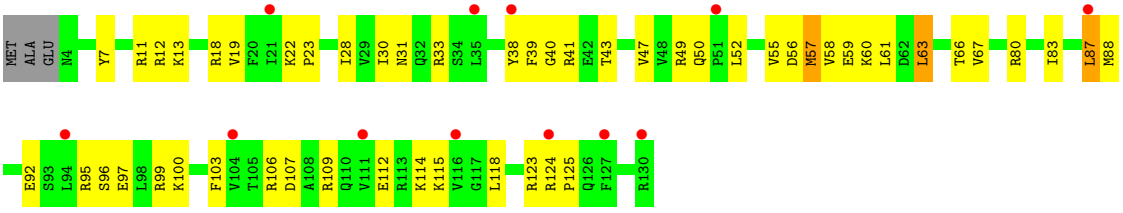
• Molecule 42: 30S ribosomal protein S9

Chain BI:



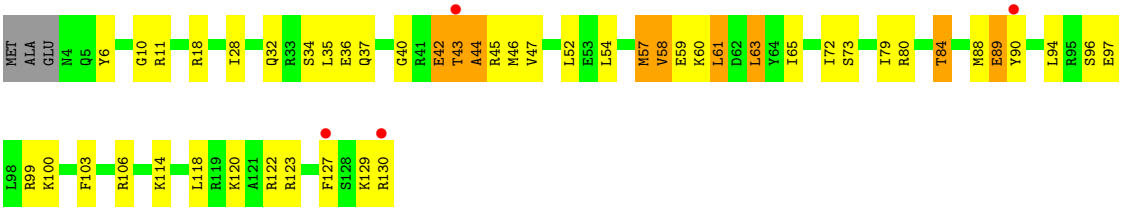
• Molecule 42: 30S ribosomal protein S9

Chain DI:



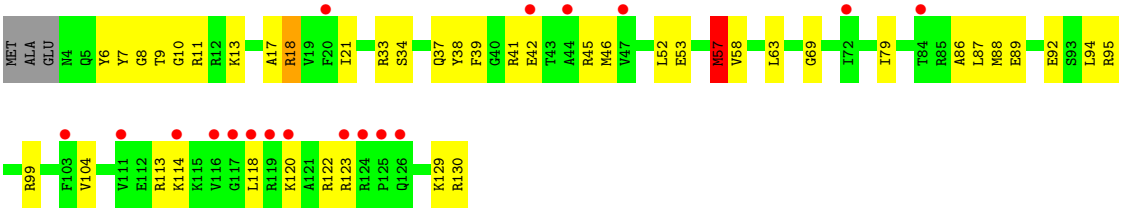
• Molecule 42: 30S ribosomal protein S9

Chain FI:



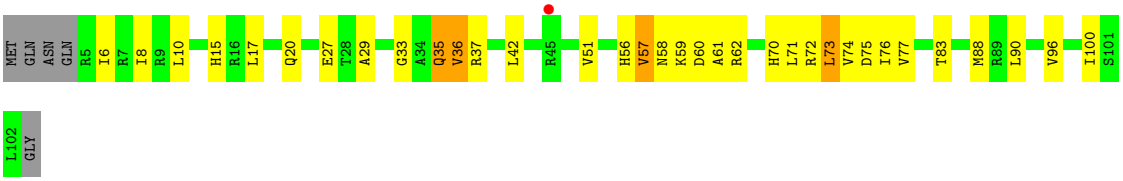
• Molecule 42: 30S ribosomal protein S9

Chain HI:

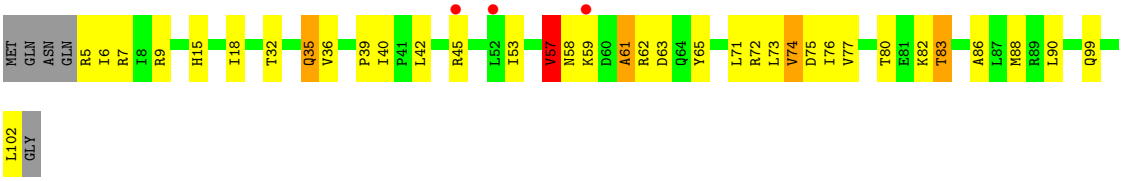


• Molecule 43: 30S ribosomal protein S10

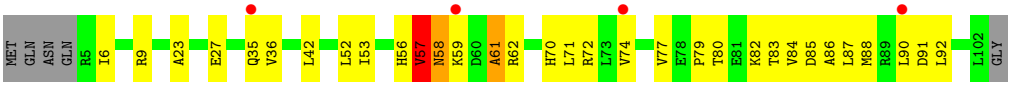
Chain BJ:



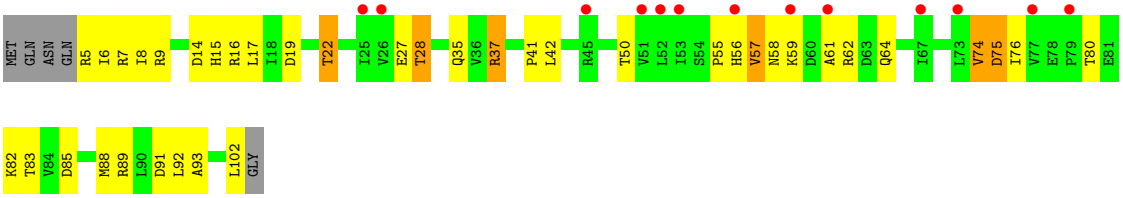
• Molecule 43: 30S ribosomal protein S10



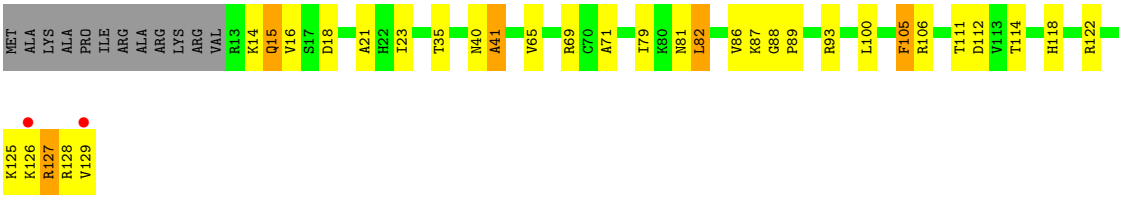
• Molecule 43: 30S ribosomal protein S10



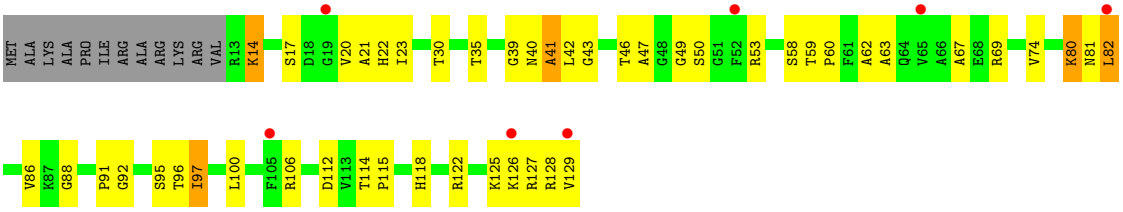
• Molecule 43: 30S ribosomal protein S10

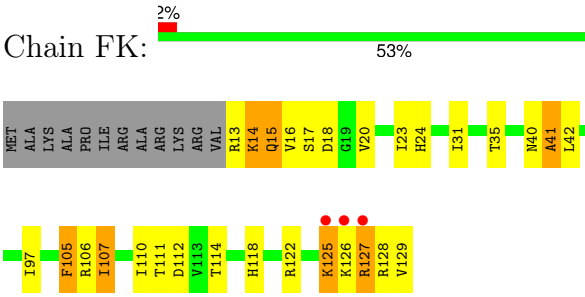


• Molecule 44: 30S ribosomal protein S11



• Molecule 44: 30S ribosomal protein S11



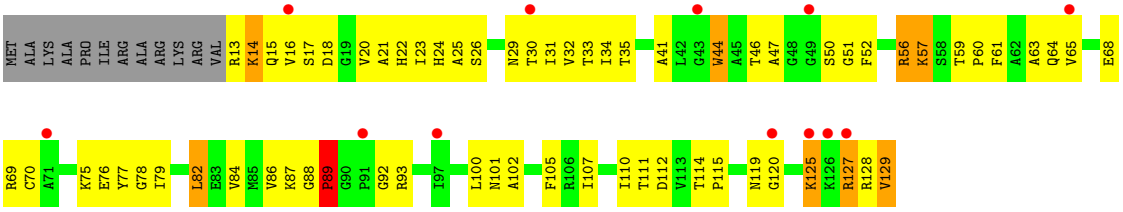


• Molecule 44: 30S ribosomal protein S11

Chain FK:

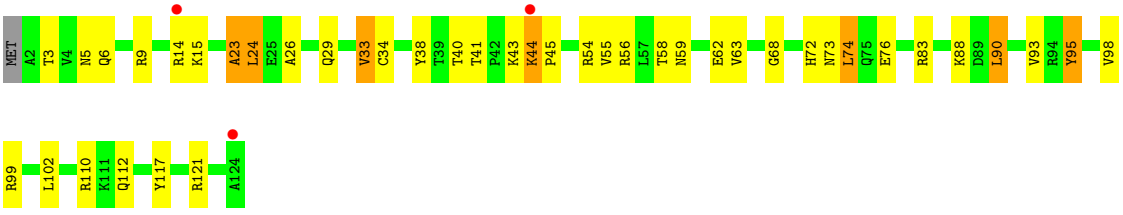
• Molecule 44: 30S ribosomal protein S11

Chain HK:



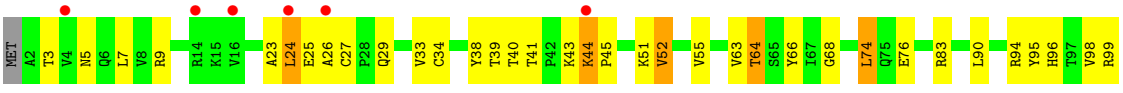
• Molecule 45: 30S ribosomal protein S12

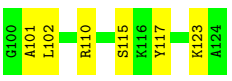
Chain BL:



• Molecule 45: 30S ribosomal protein S12

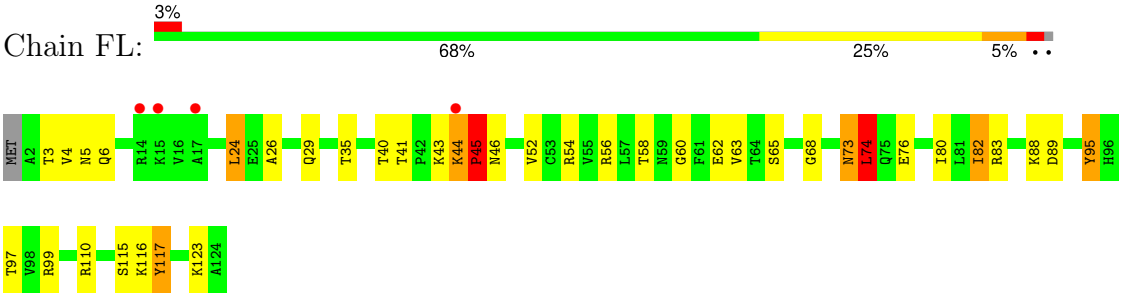
Chain DL:





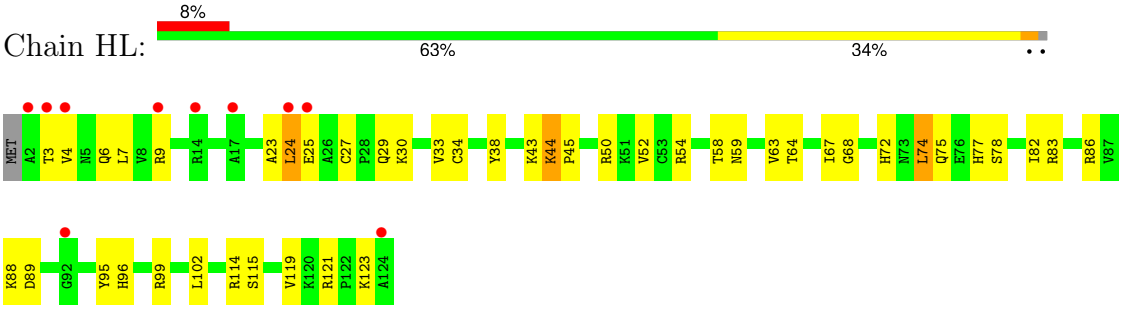
• Molecule 45: 30S ribosomal protein S12

Chain FL:



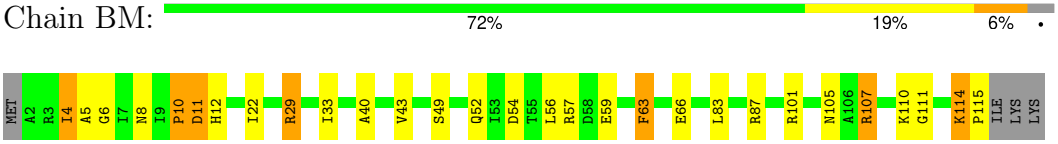
• Molecule 45: 30S ribosomal protein S12

Chain HL:



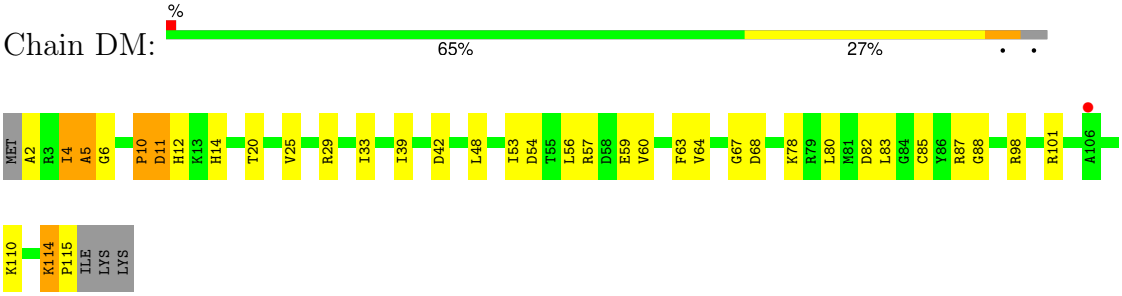
• Molecule 46: 30S ribosomal protein S13

Chain BM:



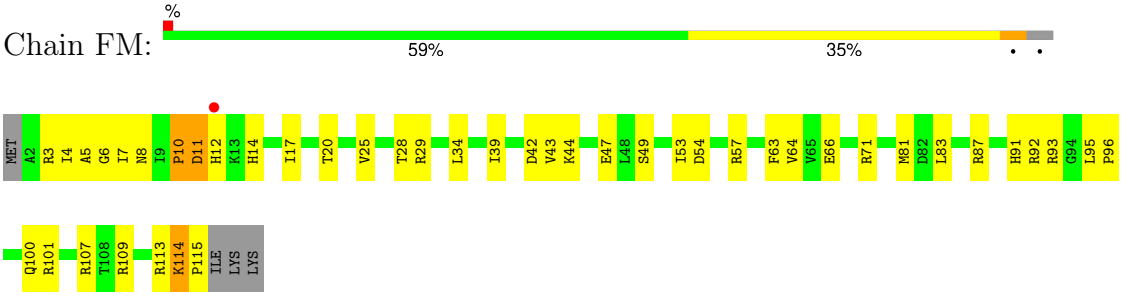
• Molecule 46: 30S ribosomal protein S13

Chain DM:



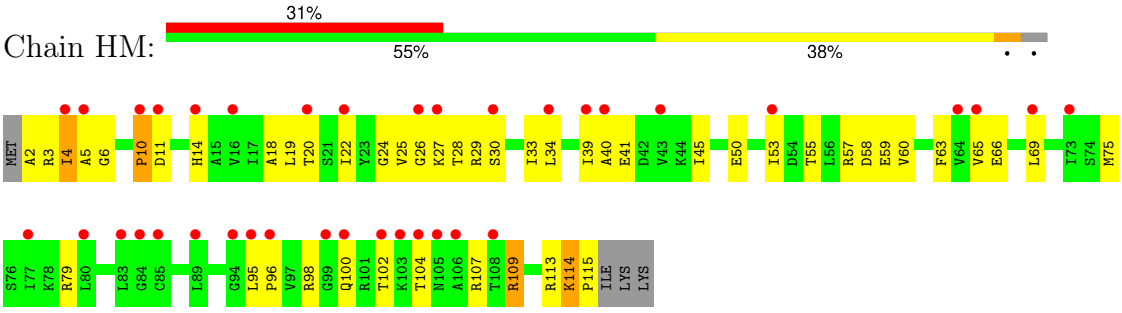
• Molecule 46: 30S ribosomal protein S13

Chain FM:



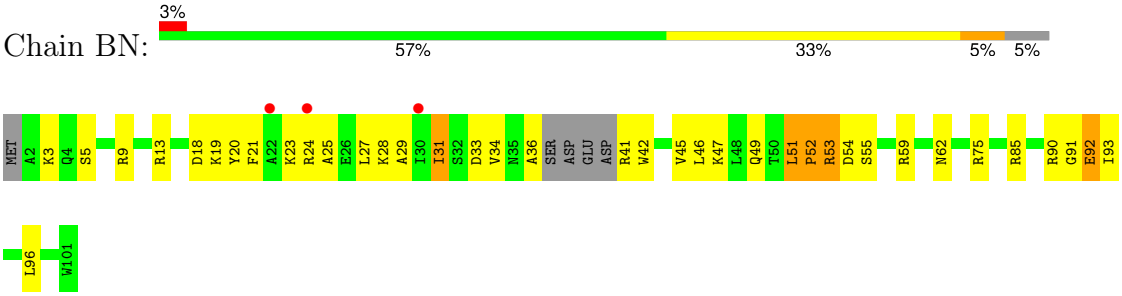
• Molecule 46: 30S ribosomal protein S13

Chain HM:



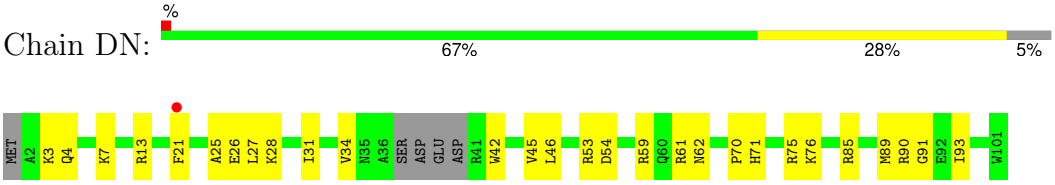
• Molecule 47: 30S ribosomal protein S14

Chain BN:



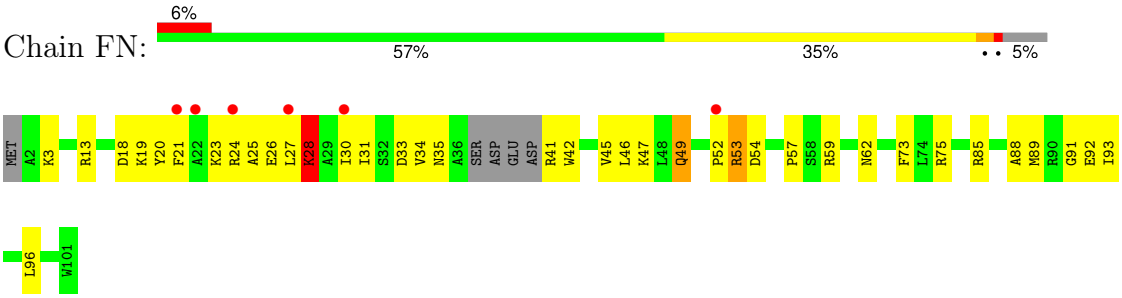
• Molecule 47: 30S ribosomal protein S14

Chain DN:



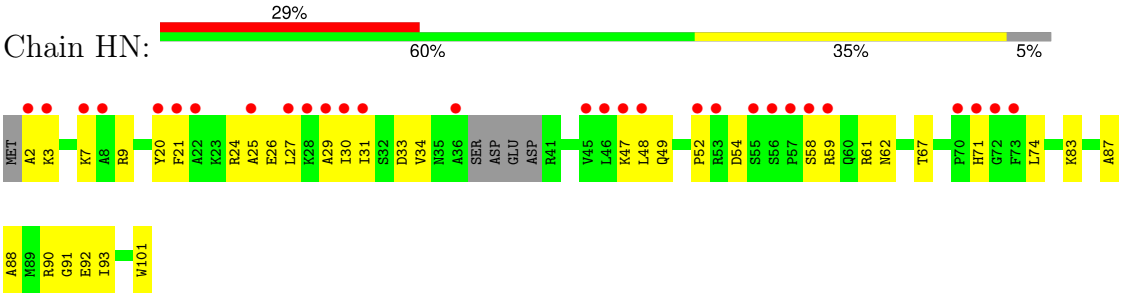
• Molecule 47: 30S ribosomal protein S14

Chain FN:



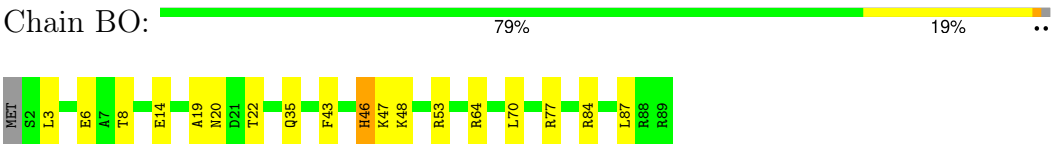
• Molecule 47: 30S ribosomal protein S14

Chain HN:



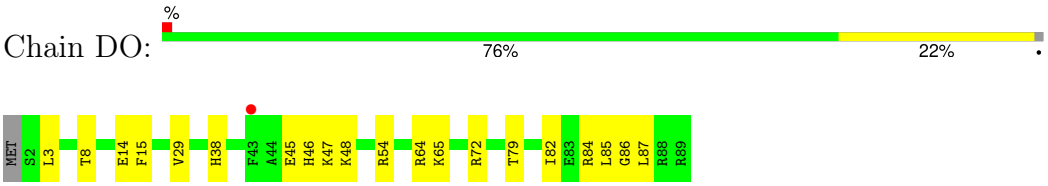
• Molecule 48: 30S ribosomal protein S15

Chain BO:



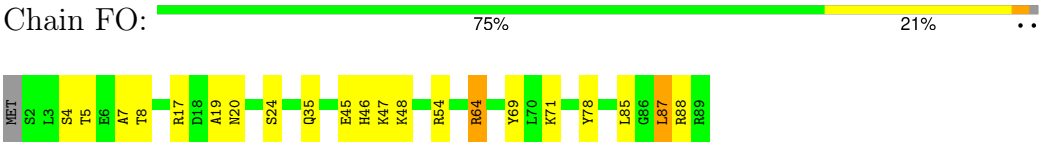
• Molecule 48: 30S ribosomal protein S15

Chain DO:



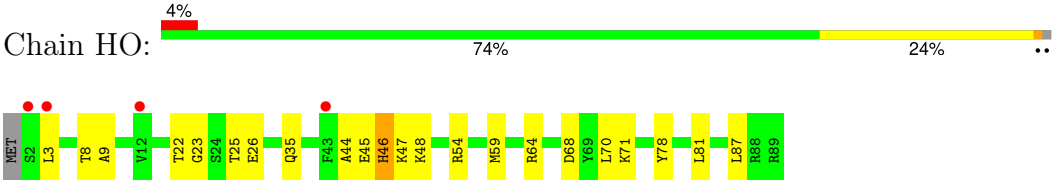
• Molecule 48: 30S ribosomal protein S15

Chain FO:



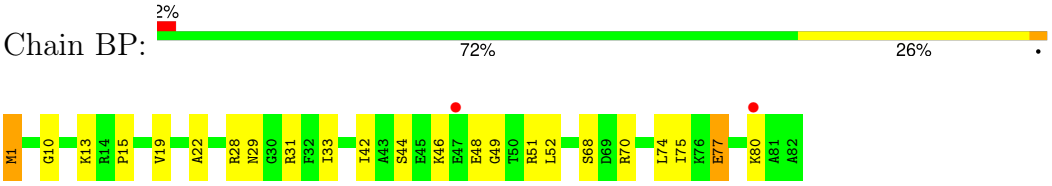
• Molecule 48: 30S ribosomal protein S15

Chain HO:



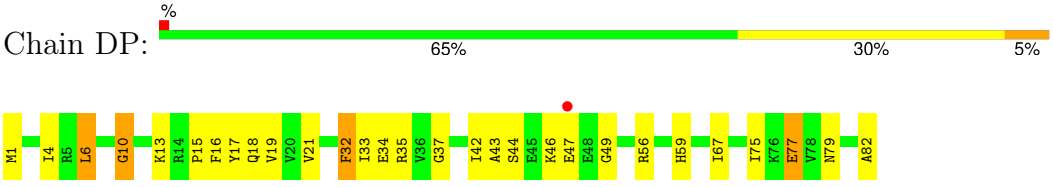
• Molecule 49: 30S ribosomal protein S16

Chain BP:



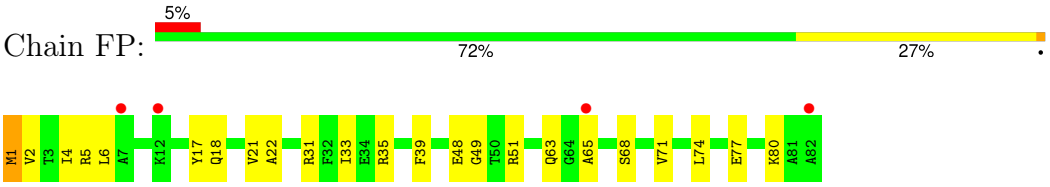
• Molecule 49: 30S ribosomal protein S16

Chain DP:



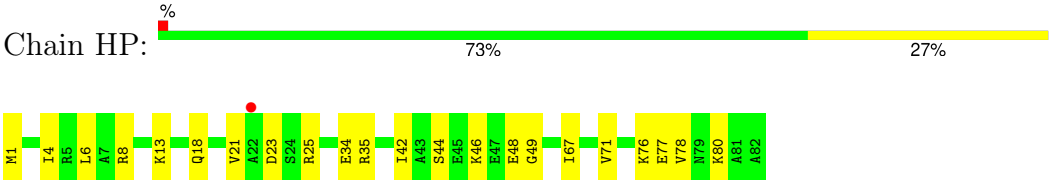
• Molecule 49: 30S ribosomal protein S16

Chain FP:



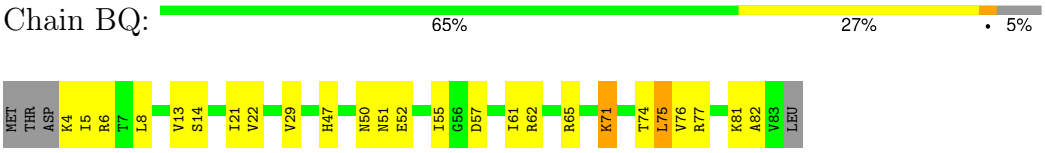
• Molecule 49: 30S ribosomal protein S16

Chain HP:



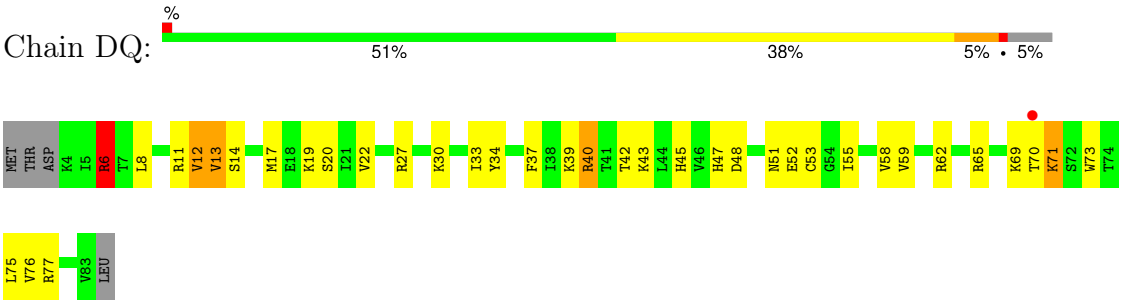
• Molecule 50: 30S ribosomal protein S17

Chain BQ:



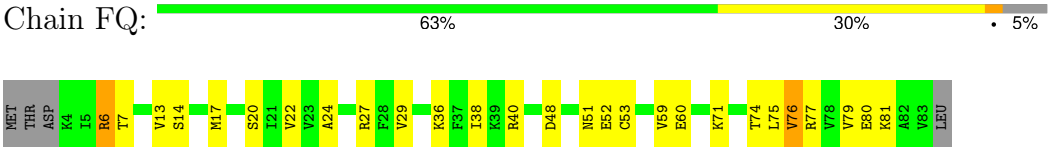
• Molecule 50: 30S ribosomal protein S17

Chain DQ:



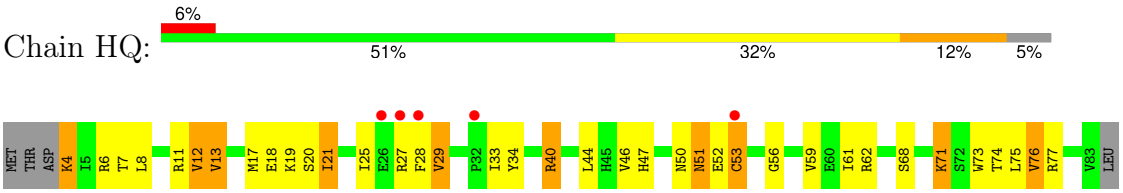
• Molecule 50: 30S ribosomal protein S17

Chain FQ:



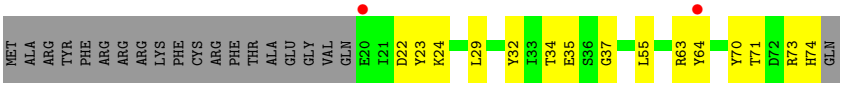
• Molecule 50: 30S ribosomal protein S17

Chain HQ:



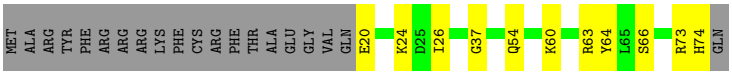
• Molecule 51: 30S ribosomal protein S18

Chain BR:



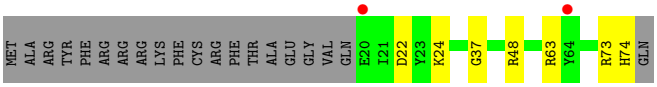
• Molecule 51: 30S ribosomal protein S18

Chain DR:



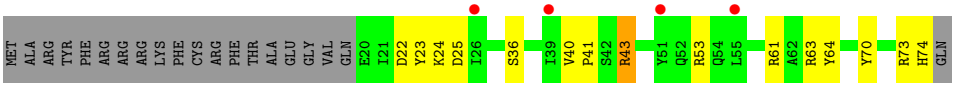
• Molecule 51: 30S ribosomal protein S18

Chain FR:



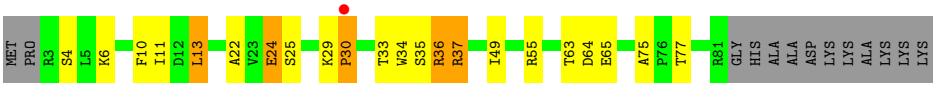
• Molecule 51: 30S ribosomal protein S18

Chain HR:



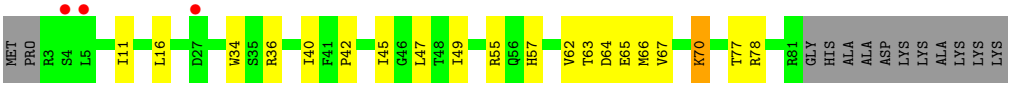
• Molecule 52: 30S ribosomal protein S19

Chain BS:



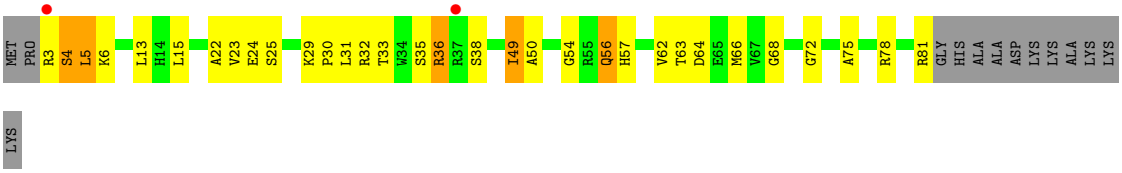
• Molecule 52: 30S ribosomal protein S19

Chain DS:



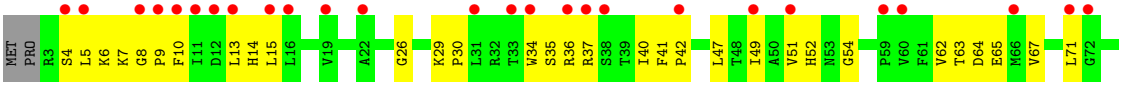
• Molecule 52: 30S ribosomal protein S19

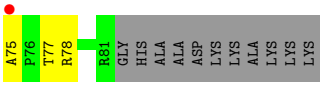
Chain FS:



• Molecule 52: 30S ribosomal protein S19

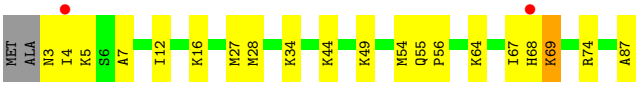
Chain HS:





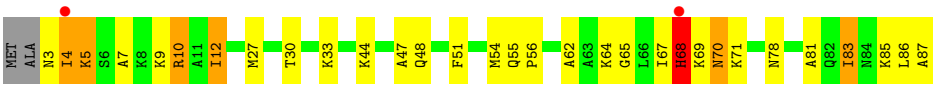
• Molecule 53: 30S ribosomal protein S20

Chain BT:



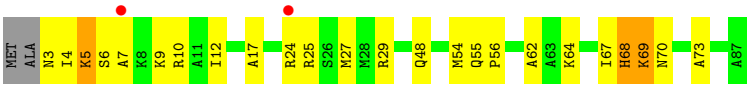
• Molecule 53: 30S ribosomal protein S20

Chain DT:



• Molecule 53: 30S ribosomal protein S20

Chain FT:

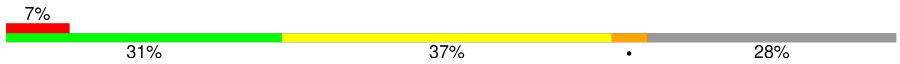


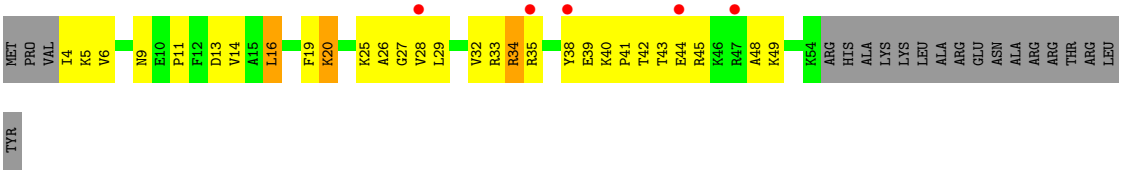
• Molecule 53: 30S ribosomal protein S20

Chain HT:

• Molecule 54: 30S ribosomal protein S21

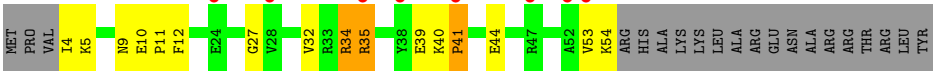
Chain BU:





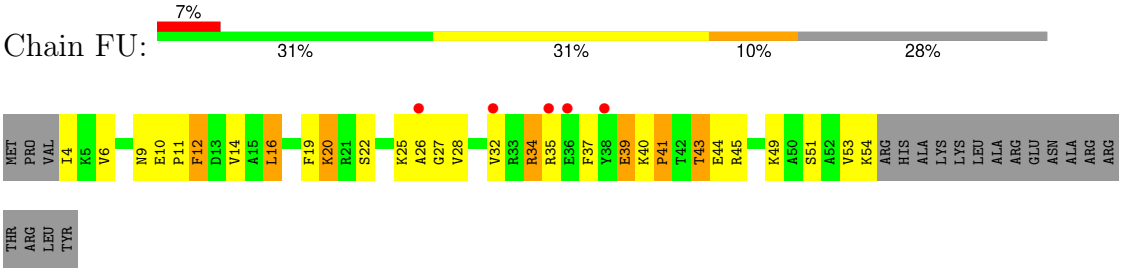
• Molecule 54: 30S ribosomal protein S21

Chain DU:



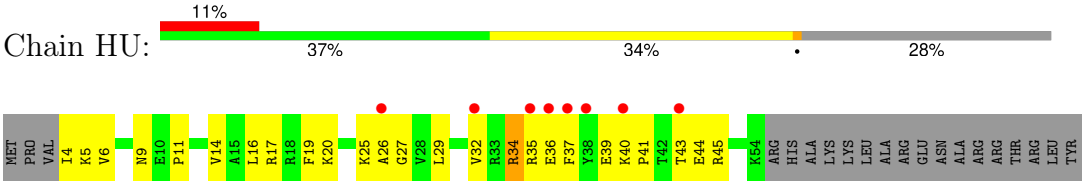
• Molecule 54: 30S ribosomal protein S21

Chain FU:



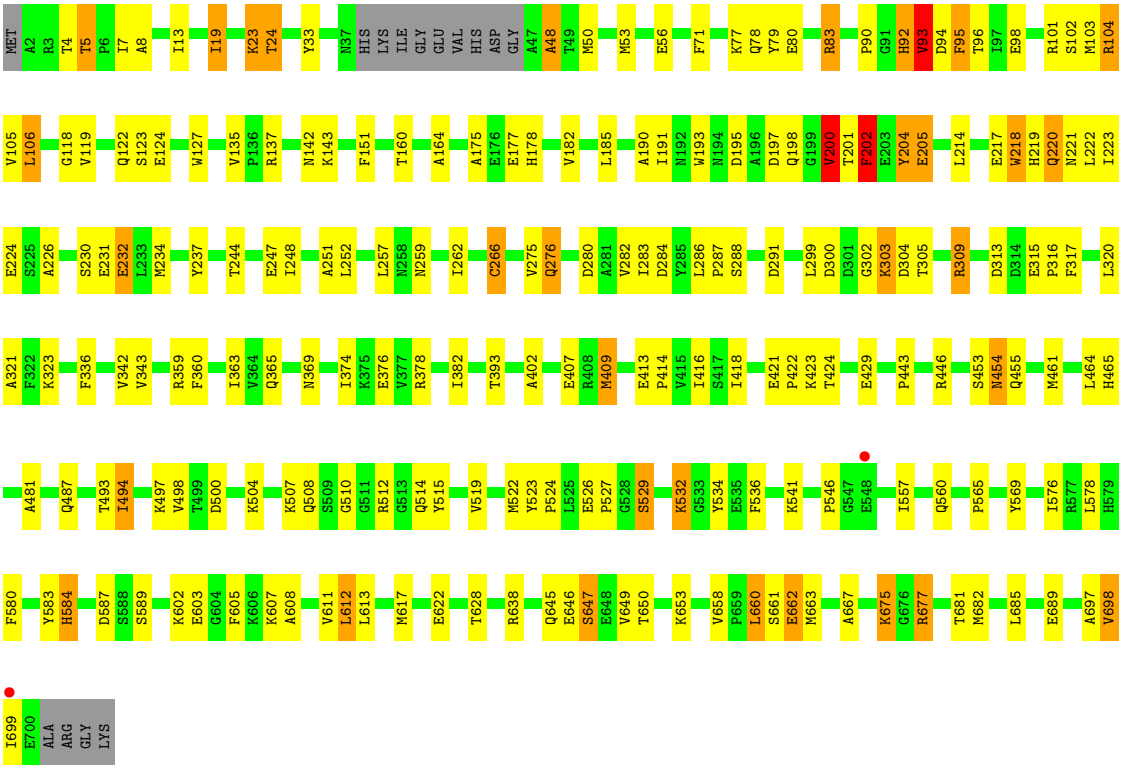
• Molecule 54: 30S ribosomal protein S21

Chain HU:



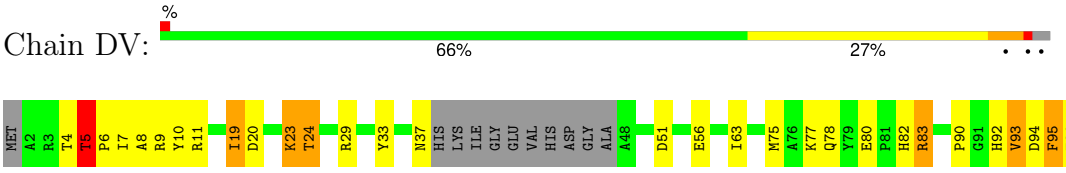
• Molecule 55: Elongation factor G

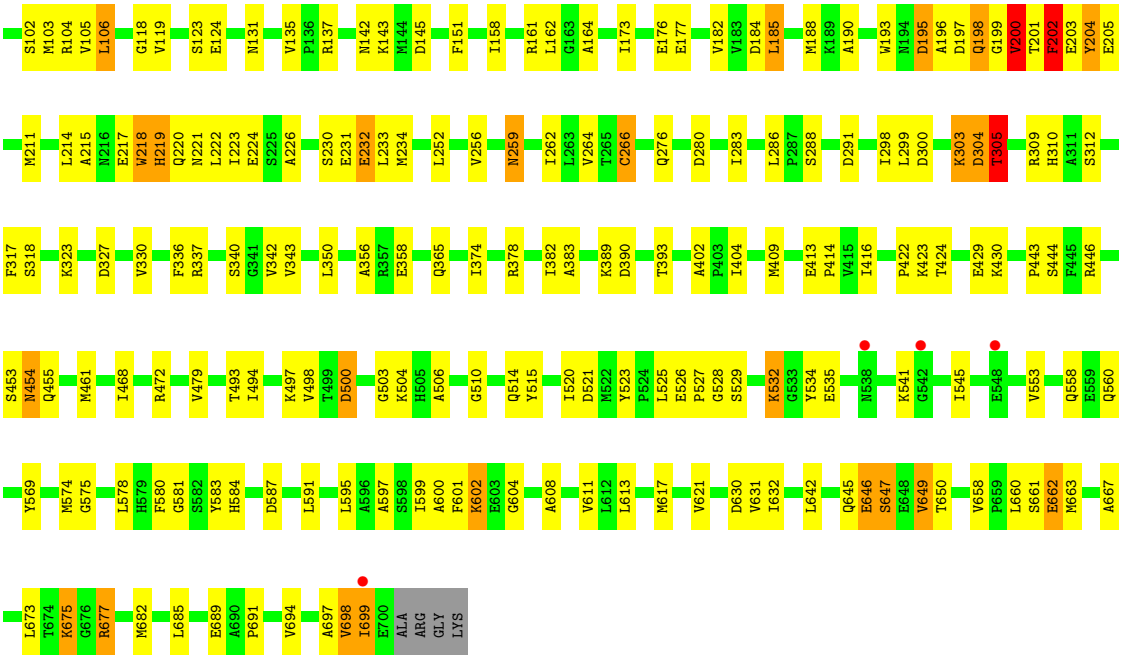
Chain BV:



• Molecule 55: Elongation factor G

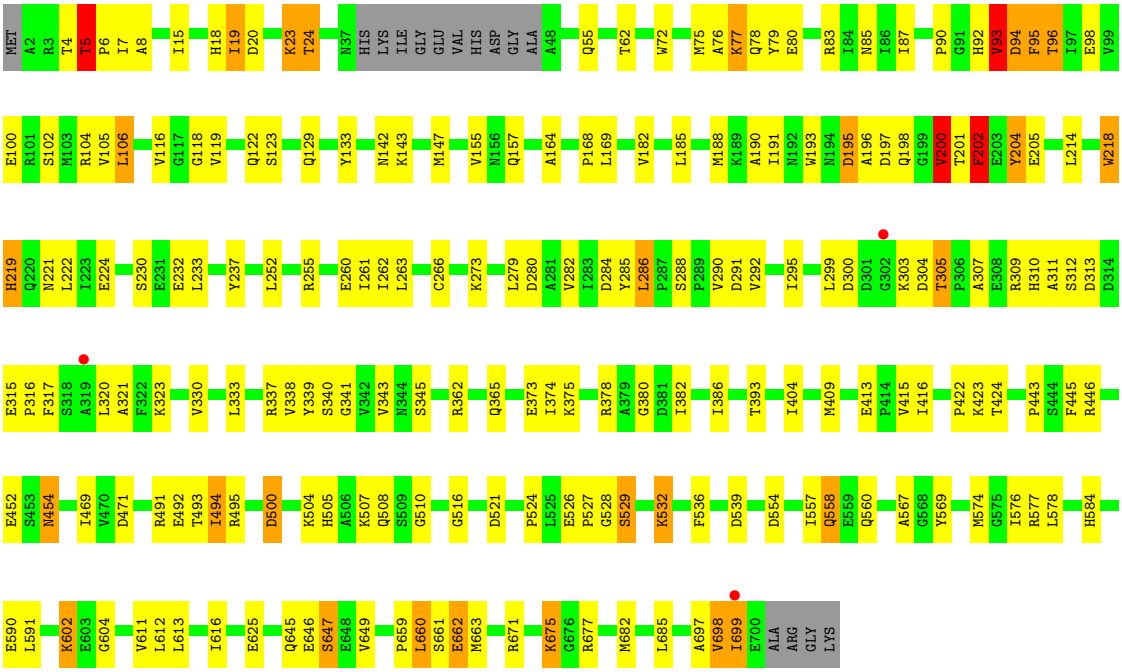
Chain DV:





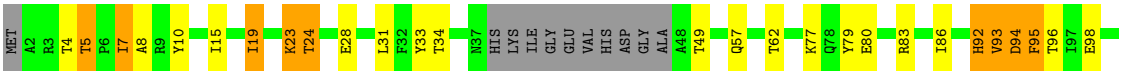
• Molecule 55: Elongation factor G

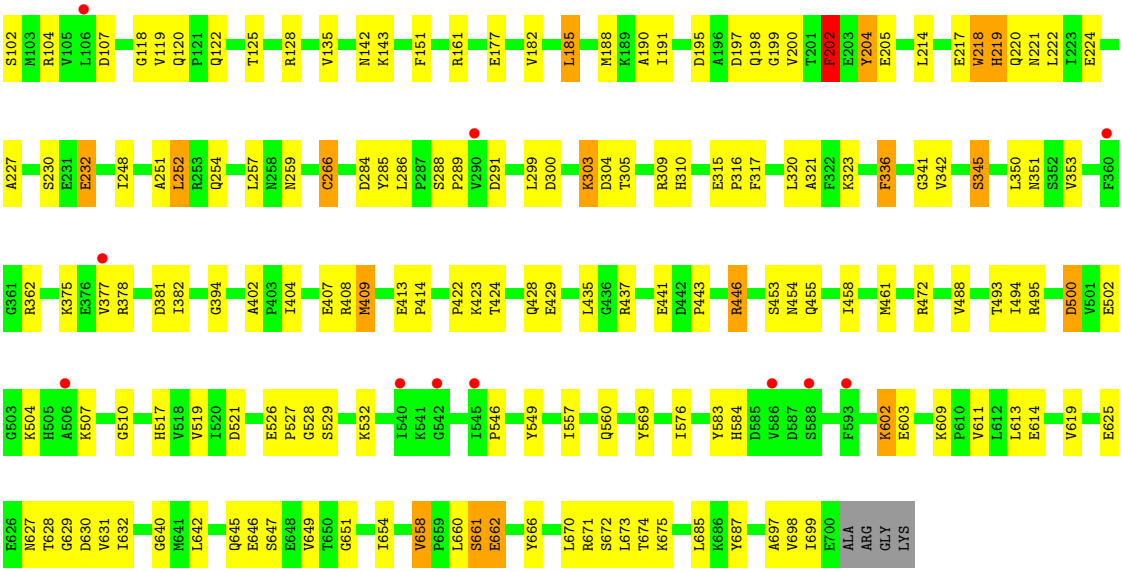
Chain FV:



• Molecule 55: Elongation factor G

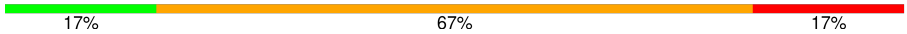
Chain HV:

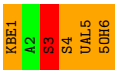




- Molecule 56: Viomycin

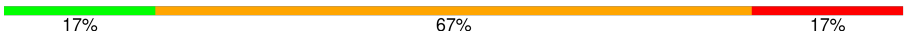
Chain BW:

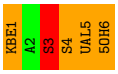




- Molecule 56: Viomycin

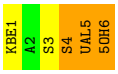
Chain DW:





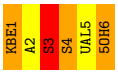
- Molecule 56: Viomycin

Chain FW:



- Molecule 56: Viomycin

Chain HW:



4 Data and refinement statistics (i)

Property	Value	Source
Space group	P 1 21 1	Depositor
Cell constants a, b, c, α, β, γ	361.60Å 361.77Å 433.20Å 90.00° 103.57° 90.00°	Depositor
Resolution (Å)	70.00 – 2.90 70.00 – 2.90	Depositor EDS
% Data completeness (in resolution range)	(Not available) (70.00-2.90) 78.9 (70.00-2.90)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$< I/\sigma(I) >$ [1]	1.35 (at 2.91Å)	Xtriage
Refinement program	PHENIX	Depositor
R, R_{free}	0.223 , 0.272 0.222 , 0.269	Depositor DCC
R_{free} test set	8388 reflections (0.45%)	wwPDB-VP
Wilson B-factor (Å^2)	73.3	Xtriage
Anisotropy	0.160	Xtriage
Bulk solvent k_{sol}(e/Å^3), B_{sol}(Å^2)	0.27 , 19.3	EDS
L-test for twinning[2]	$< \|L\| > = 0.46$, $< L^2 > = 0.28$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o,F_c correlation	0.94	EDS
Total number of atoms	592086	wwPDB-VP
Average B, all atoms (Å^2)	32.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The analyses of the Patterson function reveals a significant off-origin peak that is 29.65 % of the origin peak, indicating pseudo-translational symmetry. The chance of finding a peak of this or larger height randomly in a structure without pseudo-translational symmetry is equal to 1.4952e-03. The detected translational NCS is most likely also responsible for the elevated intensity ratio.*

[1] Intensities estimated from amplitudes.

[2] Theoretical values of $< |L| >$, $< L^2 >$ for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: GCP, KBE, UAL, DPP, MG, 5OH, ZN

The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 5$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	AB	0.66	0/2828	1.10	2/4410 (0.0%)
1	CB	0.53	0/2828	1.02	1/4410 (0.0%)
1	EB	0.63	0/2828	1.15	8/4410 (0.2%)
1	GB	0.75	0/2828	1.13	10/4410 (0.2%)
2	AC	0.54	0/2121	0.79	2/2852 (0.1%)
2	CC	0.46	0/2121	0.72	2/2852 (0.1%)
2	EC	0.52	0/2121	0.76	2/2852 (0.1%)
2	GC	0.46	0/2121	0.74	1/2852 (0.0%)
3	AA	0.81	17/68626 (0.0%)	1.22	304/107056 (0.3%)
3	CA	0.62	4/68626 (0.0%)	1.08	117/107056 (0.1%)
3	EA	0.76	17/68626 (0.0%)	1.22	292/107056 (0.3%)
3	GA	0.64	0/68626	1.14	193/107056 (0.2%)
4	AD	0.57	0/1586	0.77	1/2134 (0.0%)
4	CD	0.51	0/1586	0.75	1/2134 (0.0%)
4	ED	0.55	0/1586	0.74	0/2134
4	GD	0.48	0/1586	0.72	1/2134 (0.0%)
5	AE	0.53	0/1571	0.76	2/2113 (0.1%)
5	CE	0.43	0/1571	0.66	0/2113
5	EE	0.51	0/1571	0.72	0/2113
5	GE	0.54	0/1571	0.75	2/2113 (0.1%)
6	AF	0.49	0/1434	0.71	1/1926 (0.1%)
6	CF	0.48	0/1434	0.70	0/1926
6	EF	0.50	0/1434	0.73	0/1926
6	GF	0.60	0/1434	0.75	0/1926
7	AG	0.55	0/1343	0.73	0/1816
7	CG	0.49	0/1343	0.73	1/1816 (0.1%)
7	EG	0.50	0/1343	0.75	0/1816
7	GG	0.51	0/1343	0.68	0/1816
8	AH	0.53	0/389	0.73	0/523
8	CH	0.61	0/389	0.74	0/523
8	EH	0.50	0/389	0.73	0/523
8	GH	0.55	0/389	0.69	0/523

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
9	AI	0.62	0/1046	0.84	1/1410 (0.1%)
9	CI	0.57	0/1046	0.72	0/1410
9	EI	0.53	0/1046	0.72	0/1410
9	GI	0.71	0/1046	0.80	0/1410
10	AJ	0.63	1/1152 (0.1%)	0.78	0/1551
10	CJ	0.52	1/1152 (0.1%)	0.72	0/1551
10	EJ	0.63	1/1152 (0.1%)	0.78	0/1551
10	GJ	0.48	0/1152	0.71	1/1551 (0.1%)
11	AK	0.65	1/947 (0.1%)	0.77	0/1268
11	CK	0.55	0/947	0.78	0/1268
11	EK	0.53	0/947	0.74	0/1268
11	GK	0.49	0/947	0.77	0/1268
12	AL	0.56	0/1054	0.79	2/1403 (0.1%)
12	CL	0.44	0/1054	0.74	1/1403 (0.1%)
12	EL	0.55	0/1054	0.77	1/1403 (0.1%)
12	GL	0.53	0/1054	0.73	0/1403
13	AM	0.61	0/1093	0.77	0/1460
13	CM	0.47	0/1093	0.67	0/1460
13	EM	0.55	0/1093	0.72	0/1460
13	GM	0.48	0/1093	0.68	0/1460
14	AN	0.51	0/973	0.68	0/1301
14	CN	0.45	0/973	0.64	0/1301
14	EN	0.48	0/973	0.65	0/1301
14	GN	0.45	0/973	0.65	0/1301
15	AO	0.46	0/902	0.70	0/1209
15	CO	0.42	0/902	0.70	0/1209
15	EO	0.44	0/902	0.74	0/1209
15	GO	0.55	0/902	0.82	1/1209 (0.1%)
16	AP	0.52	0/929	0.78	1/1242 (0.1%)
16	CP	0.51	0/929	0.80	0/1242
16	EP	0.55	0/929	0.80	0/1242
16	GP	0.51	0/929	0.81	2/1242 (0.2%)
17	AQ	0.62	0/960	0.71	1/1278 (0.1%)
17	CQ	0.50	0/960	0.67	0/1278
17	EQ	0.58	0/960	0.68	0/1278
17	GQ	0.49	0/960	0.69	1/1278 (0.1%)
18	AR	0.61	1/829 (0.1%)	0.76	0/1107
18	CR	0.50	0/829	0.70	0/1107
18	ER	0.57	1/829 (0.1%)	0.77	0/1107
18	GR	0.55	0/829	0.78	1/1107 (0.1%)
19	AS	0.54	0/864	0.73	0/1156
19	CS	0.46	0/864	0.66	0/1156
19	ES	0.52	0/864	0.75	0/1156

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
19	GS	0.45	0/864	0.75	2/1156 (0.2%)
20	AT	0.54	0/744	0.85	1/994 (0.1%)
20	CT	0.49	0/744	0.74	0/994
20	ET	0.59	0/744	0.87	3/994 (0.3%)
20	GT	0.54	0/744	0.76	0/994
21	AU	0.56	0/787	0.78	0/1051
21	CU	0.47	0/787	0.69	0/1051
21	EU	0.48	0/787	0.79	0/1051
21	GU	0.56	0/787	0.73	0/1051
22	AV	0.48	0/766	0.67	1/1025 (0.1%)
22	CV	0.44	0/766	0.62	0/1025
22	EV	0.49	0/766	0.67	0/1025
22	GV	0.55	0/766	0.70	0/1025
23	AW	0.69	0/603	1.00	1/797 (0.1%)
23	CW	0.63	0/603	0.88	0/797
23	EW	0.69	0/603	0.97	0/797
23	GW	0.63	0/603	0.87	0/797
24	AX	0.50	0/635	0.79	1/848 (0.1%)
24	CX	0.41	0/635	0.71	0/848
24	EX	0.51	0/635	0.78	0/848
24	GX	0.45	0/635	0.68	0/848
25	AY	0.46	0/510	0.75	0/677
25	CY	0.47	0/510	0.74	0/677
25	EY	0.49	0/510	0.81	0/677
25	GY	0.55	0/510	0.75	0/677
26	AZ	0.54	0/453	0.84	1/605 (0.2%)
26	CZ	0.48	0/453	0.80	1/605 (0.2%)
26	EZ	0.50	0/453	0.75	2/605 (0.3%)
26	GZ	0.57	0/453	0.83	0/605
27	A0	0.54	0/450	0.70	0/599
27	C0	0.48	0/450	0.69	0/599
27	E0	0.49	0/450	0.71	1/599 (0.2%)
27	G0	0.43	0/450	0.64	0/599
28	A1	0.53	0/416	0.74	0/554
28	C1	0.49	0/416	0.73	0/554
28	E1	0.49	0/416	0.70	0/554
28	G1	0.54	0/416	0.78	0/554
29	A2	0.53	0/380	0.70	0/498
29	C2	0.46	0/380	0.77	0/498
29	E2	0.51	0/380	0.69	0/498
29	G2	0.48	0/380	0.65	0/498
30	A3	0.53	0/513	0.75	0/676
30	C3	0.41	0/513	0.63	0/676

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
30	E3	0.54	0/513	0.74	0/676
30	G3	0.49	0/513	0.65	0/676
31	A4	0.59	0/303	0.84	0/397
31	C4	0.48	0/303	0.70	0/397
31	E4	0.56	0/303	0.78	1/397 (0.3%)
31	G4	0.50	0/303	0.78	0/397
32	A5	0.74	0/1131	1.32	26/1524 (1.7%)
32	C5	0.70	0/1131	1.31	26/1524 (1.7%)
32	E5	0.69	0/1115	1.33	24/1502 (1.6%)
33	A6	0.59	0/227	0.65	0/304
34	BB	0.49	0/1735	0.71	0/2338
34	DB	0.51	0/1735	0.72	0/2338
34	FB	0.50	0/1735	0.76	0/2338
34	HB	0.56	0/1735	0.73	0/2338
35	BA	0.65	3/36834 (0.0%)	1.14	96/57462 (0.2%)
35	DA	0.60	0/36834	1.06	47/57462 (0.1%)
35	FA	0.62	1/36834 (0.0%)	1.11	98/57462 (0.2%)
35	HA	0.72	2/36834 (0.0%)	1.11	74/57462 (0.1%)
36	BC	0.45	0/1651	0.69	0/2225
36	DC	0.43	0/1651	0.66	0/2225
36	FC	0.46	0/1651	0.70	0/2225
36	HC	0.57	0/1651	0.73	1/2225 (0.0%)
37	BD	0.53	0/1665	0.79	0/2227
37	DD	0.51	0/1665	0.73	0/2227
37	FD	0.52	0/1665	0.69	0/2227
37	HD	0.52	0/1665	0.73	0/2227
38	BE	0.49	0/1118	0.76	0/1504
38	DE	0.46	0/1118	0.71	0/1504
38	FE	0.47	0/1118	0.69	0/1504
38	HE	0.48	0/1118	0.68	0/1504
39	BF	0.50	0/851	0.70	0/1150
39	DF	0.54	0/835	0.75	0/1128
39	FF	0.47	0/835	0.72	0/1128
39	HF	0.56	0/835	0.73	0/1128
40	BG	0.49	0/1195	0.67	0/1602
40	DG	0.52	0/1195	0.69	0/1602
40	FG	0.48	0/1195	0.69	0/1602
40	HG	0.60	0/1195	0.74	1/1602 (0.1%)
41	BH	0.48	0/989	0.65	0/1326
41	DH	0.48	0/989	0.63	0/1326
41	FH	0.44	0/989	0.62	0/1326
41	HH	0.54	0/989	0.77	1/1326 (0.1%)
42	BI	0.54	0/1034	0.81	0/1375

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
42	DI	0.52	0/1034	0.70	0/1375
42	FI	0.54	0/1034	0.77	0/1375
42	HI	0.57	0/1034	0.79	2/1375 (0.1%)
43	BJ	0.54	0/796	0.80	0/1077
43	DJ	0.55	0/796	0.73	0/1077
43	FJ	0.51	0/796	0.74	0/1077
43	HJ	0.59	0/796	0.80	0/1077
44	BK	0.50	0/893	0.74	0/1205
44	DK	0.51	0/893	0.67	0/1205
44	FK	0.50	0/893	0.75	1/1205 (0.1%)
44	HK	0.63	0/893	0.79	0/1205
45	BL	0.54	0/969	0.82	0/1300
45	DL	0.51	0/969	0.79	0/1300
45	FL	0.47	0/969	0.78	0/1300
45	HL	0.47	0/969	0.77	0/1300
46	BM	0.48	0/892	0.70	0/1193
46	DM	0.51	0/892	0.71	0/1193
46	FM	0.42	0/892	0.71	0/1193
46	HM	0.66	0/892	0.80	0/1193
47	BN	0.48	0/785	0.78	0/1043
47	DN	0.47	0/785	0.72	0/1043
47	FN	0.50	0/785	0.80	0/1043
47	HN	0.53	0/785	0.73	0/1043
48	BO	0.44	0/722	0.66	0/964
48	DO	0.44	0/722	0.67	0/964
48	FO	0.42	0/722	0.63	0/964
48	HO	0.56	0/722	0.69	0/964
49	BP	0.48	0/659	0.74	0/884
49	DP	0.45	0/659	0.69	0/884
49	FP	0.48	0/659	0.68	0/884
49	HP	0.46	0/659	0.65	0/884
50	BQ	0.46	0/657	0.73	0/881
50	DQ	0.49	0/657	0.82	2/881 (0.2%)
50	FQ	0.47	0/657	0.68	0/881
50	HQ	0.53	0/657	0.78	0/881
51	BR	0.45	0/462	0.62	0/621
51	DR	0.50	0/462	0.67	0/621
51	FR	0.46	0/462	0.62	0/621
51	HR	0.58	0/462	0.74	1/621 (0.2%)
52	BS	0.47	0/652	0.81	0/877
52	DS	0.50	0/652	0.72	0/877
52	FS	0.46	0/652	0.71	0/877
52	HS	0.67	0/652	0.85	1/877 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
53	BT	0.47	0/671	0.60	0/888
53	DT	0.49	0/671	0.64	0/888
53	FT	0.45	0/671	0.64	0/888
53	HT	0.43	0/671	0.66	0/888
54	BU	0.66	0/430	0.84	0/570
54	DU	0.73	0/430	0.83	0/570
54	FU	0.73	1/430 (0.2%)	0.88	0/570
54	HU	0.68	0/430	0.73	0/570
55	BV	0.46	0/5444	0.67	2/7367 (0.0%)
55	DV	0.45	0/5439	0.65	0/7360
55	FV	0.46	0/5439	0.65	1/7360 (0.0%)
55	HV	0.48	0/5439	0.65	0/7360
56	BW	2.29	1/11 (9.1%)	1.55	0/13
56	DW	2.28	1/11 (9.1%)	1.54	0/13
56	FW	2.37	1/11 (9.1%)	1.57	0/13
56	HW	2.38	1/11 (9.1%)	1.80	0/13
All	All	0.64	55/636829 (0.0%)	1.05	1375/948879 (0.1%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand.A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
2	AC	0	1
2	GC	0	1
4	AD	0	1
4	CD	0	2
4	ED	0	1
4	GD	0	1
10	AJ	0	1
10	GJ	0	1
11	AK	0	1
32	A5	0	1
39	BF	0	1
39	FF	0	1
42	DI	0	1
45	BL	0	1
45	DL	0	1
45	HL	0	1
53	DT	0	1
55	BV	0	1

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Mol	Chain	#Chirality outliers	#Planarity outliers
55	DV	0	1
55	FV	0	1
55	HV	0	1
All	All	0	22

All (55) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
35	HA	753	A	N7-C5	8.68	1.44	1.39
3	EA	528	A	N9-C4	-8.47	1.32	1.37
3	AA	984	A	N9-C4	-8.47	1.32	1.37
35	BA	1362	A	N7-C5	7.96	1.44	1.39
3	AA	528	A	N9-C4	-6.66	1.33	1.37
10	EJ	44	TYR	CD1-CE1	-6.60	1.29	1.39
3	AA	1142	A	N9-C4	-6.58	1.33	1.37
3	EA	984	A	C5-C6	-6.46	1.35	1.41
56	HW	3	SER	C-N	6.38	1.48	1.34
3	EA	1142	A	N9-C4	-6.34	1.34	1.37
3	EA	1785	A	N9-C4	-6.31	1.34	1.37
3	AA	2504	U	C4-O4	6.28	1.28	1.23
35	HA	1517	G	N9-C4	6.21	1.43	1.38
3	AA	1569	A	N9-C4	-6.18	1.34	1.37
3	AA	783	A	N9-C4	-6.17	1.34	1.37
3	EA	783	A	N7-C5	-6.09	1.35	1.39
3	AA	783	A	N3-C4	-5.99	1.31	1.34
3	EA	783	A	N9-C4	-5.97	1.34	1.37
3	EA	783	A	C5-C6	-5.94	1.35	1.41
56	DW	3	SER	C-N	5.86	1.47	1.34
56	FW	3	SER	C-N	5.86	1.47	1.34
3	EA	1936	A	C5-C6	-5.83	1.35	1.41
3	EA	2542	A	N9-C4	-5.82	1.34	1.37
3	CA	1142	A	N9-C4	-5.76	1.34	1.37
3	AA	1073	A	C5-C6	5.74	1.46	1.41
3	EA	2038	G	N7-C5	-5.68	1.35	1.39
3	AA	2504	U	C2-N3	5.68	1.41	1.37
3	CA	528	A	N9-C4	-5.65	1.34	1.37
3	AA	2504	U	N3-C4	5.63	1.43	1.38
10	AJ	44	TYR	CD2-CE2	-5.61	1.30	1.39
35	BA	1362	A	N3-C4	5.52	1.38	1.34
35	FA	461	A	N9-C4	5.45	1.41	1.37
3	AA	528	A	N3-C4	-5.42	1.31	1.34
3	EA	2053	G	N9-C4	-5.41	1.33	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	AR	86	GLN	CB-CG	5.41	1.67	1.52
3	AA	783	A	N7-C5	-5.37	1.36	1.39
3	EA	984	A	N9-C4	-5.36	1.34	1.37
56	BW	3	SER	C-N	5.33	1.46	1.34
3	EA	528	A	N3-C4	-5.31	1.31	1.34
3	AA	1142	A	C5-C6	-5.29	1.36	1.41
11	AK	21	CYS	CB-SG	-5.26	1.73	1.81
54	FU	39	GLU	CD-OE2	5.21	1.31	1.25
3	AA	2053	G	C6-O6	5.18	1.28	1.24
3	CA	984	A	N9-C4	-5.17	1.34	1.37
10	CJ	44	TYR	CD1-CE1	-5.15	1.31	1.39
3	AA	2478	A	N9-C4	-5.12	1.34	1.37
3	EA	2055	C	N1-C6	-5.09	1.34	1.37
3	EA	2060	A	N9-C4	-5.09	1.34	1.37
18	ER	86	GLN	CB-CG	5.07	1.66	1.52
3	EA	203	A	C5-C6	-5.05	1.36	1.41
3	EA	776	G	C6-O6	5.05	1.28	1.24
3	AA	1321	A	N9-C4	5.05	1.40	1.37
3	CA	1088	A	N9-C4	-5.04	1.34	1.37
35	BA	1500	A	N9-C4	-5.02	1.34	1.37
3	AA	783	A	C5-C6	-5.01	1.36	1.41

All (1375) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	AA	1073	A	N1-C6-N6	-20.05	106.57	118.60
3	EA	1936	A	N1-C6-N6	15.79	128.07	118.60
3	AA	1073	A	C5-C6-N6	14.08	134.96	123.70
3	AA	2053	G	N1-C6-O6	13.88	128.23	119.90
3	EA	1936	A	C5-C6-N6	-13.76	112.69	123.70
3	EA	783	A	N1-C6-N6	13.27	126.56	118.60
3	EA	2053	G	N1-C6-O6	13.03	127.72	119.90
3	AA	2504	U	N3-C4-O4	12.99	128.49	119.40
3	EA	834	G	N1-C6-O6	12.28	127.27	119.90
3	AA	984	A	C2-N3-C4	-12.08	104.56	110.60
35	HA	753	A	C4-C5-C6	-11.78	111.11	117.00
3	AA	961	C	O5'-P-OP2	-11.77	95.11	105.70
36	HC	93	ASP	CB-CG-OD2	-11.70	107.77	118.30
3	AA	2053	G	C6-C5-N7	-11.61	123.43	130.40
3	EA	984	A	C2-N3-C4	-11.52	104.84	110.60
3	AA	1073	A	C6-C5-N7	11.43	140.30	132.30
3	AA	2053	G	C5-C6-N1	-11.39	105.80	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	1362	A	C4-C5-C6	-11.37	111.31	117.00
35	BA	1362	A	N1-C6-N6	-11.30	111.82	118.60
3	AA	1073	A	C4-C5-N7	-11.26	105.07	110.70
3	EA	1024	G	N1-C6-O6	11.24	126.64	119.90
3	EA	1936	A	C6-C5-N7	-11.12	124.51	132.30
3	EA	783	A	C4-C5-N7	11.05	116.23	110.70
3	EA	1936	A	C4-C5-N7	11.01	116.20	110.70
35	BA	1362	A	C6-C5-N7	10.79	139.86	132.30
3	AA	783	A	C5-N7-C8	-10.76	98.52	103.90
3	AA	2504	U	C5-C6-N1	10.56	127.98	122.70
3	AA	974	G	C6-C5-N7	-10.54	124.08	130.40
3	EA	1936	A	N9-C4-C5	-10.45	101.62	105.80
3	EA	783	A	C5-N7-C8	-10.34	98.73	103.90
3	CA	2053	G	N1-C6-O6	10.33	126.10	119.90
3	AA	2053	G	C4-C5-C6	10.21	124.92	118.80
3	GA	1866	A	OP1-P-OP2	10.20	134.90	119.60
3	EA	776	G	C5-C6-O6	10.00	134.60	128.60
3	EA	783	A	C6-C5-N7	-9.99	125.31	132.30
35	BA	1362	A	C4-N9-C1'	-9.92	108.45	126.30
35	BA	1362	A	C8-N9-C4	9.88	109.75	105.80
3	AA	974	G	C4-C5-N7	9.85	114.74	110.80
3	EA	2147	A	O4'-C1'-N9	9.85	116.08	108.20
3	AA	2504	U	C6-N1-C2	-9.84	115.09	121.00
3	EA	1024	G	C6-C5-N7	-9.80	124.52	130.40
3	EA	984	A	N1-C6-N6	9.76	124.46	118.60
3	CA	2544	G	N1-C6-O6	9.72	125.73	119.90
50	DQ	6	ARG	NE-CZ-NH1	9.70	125.15	120.30
3	GA	2266	A	C8-N9-C4	-9.69	101.92	105.80
3	AA	783	A	N7-C8-N9	9.61	118.61	113.80
32	A5	92	ALA	C-N-CA	9.60	145.71	121.70
3	CA	1839	G	N1-C6-O6	9.59	125.65	119.90
3	EA	974	G	N7-C8-N9	9.57	117.89	113.10
3	GA	1865	U	OP2-P-O3'	-9.51	84.28	105.20
3	EA	834	G	C5-C6-O6	-9.33	123.00	128.60
3	AA	1534	U	C2-N1-C1'	9.33	128.89	117.70
3	EA	2447	G	O5'-P-OP1	-9.32	97.31	105.70
3	AA	1073	A	C5-N7-C8	9.30	108.55	103.90
35	HA	1517	G	N3-C4-C5	-9.29	123.96	128.60
3	EA	698	C	O5'-P-OP2	-9.27	97.36	105.70
3	EA	2275	C	C6-N1-C2	-9.21	116.62	120.30
3	AA	528	A	C2-N3-C4	-9.16	106.02	110.60
3	GA	1865	U	OP1-P-O3'	-9.16	85.06	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	EA	2402	U	O4'-C1'-N1	9.13	115.51	108.20
32	A5	93	ALA	C-N-CA	9.06	144.36	121.70
3	CA	834	G	N1-C6-O6	9.06	125.34	119.90
32	C5	92	ALA	C-N-CA	9.04	144.30	121.70
35	FA	1530	G	O4'-C1'-N9	9.04	115.43	108.20
35	BA	1362	A	O4'-C1'-N9	8.98	115.39	108.20
32	E5	27	VAL	CG1-CB-CG2	8.97	125.26	110.90
35	FA	1032	G	C4-N9-C1'	8.96	138.15	126.50
35	BA	1362	A	N7-C8-N9	-8.89	109.35	113.80
32	E5	93	ALA	C-N-CA	8.89	143.93	121.70
3	AA	1950	G	N1-C6-O6	8.87	125.22	119.90
3	CA	974	G	C6-C5-N7	-8.80	125.12	130.40
3	AA	465	G	C8-N9-C4	-8.77	102.89	106.40
3	EA	783	A	C5-C6-N6	-8.69	116.75	123.70
3	AA	783	A	C8-N9-C4	-8.66	102.34	105.80
3	EA	528	A	C2-N3-C4	-8.62	106.29	110.60
3	AA	1533	C	N1-C2-O2	8.62	124.07	118.90
3	GA	1196	C	C6-N1-C2	-8.62	116.85	120.30
3	AA	1073	A	N9-C4-C5	8.61	109.25	105.80
3	EA	2824	C	C6-N1-C2	-8.58	116.87	120.30
19	GS	88	ARG	NE-CZ-NH2	8.56	124.58	120.30
3	AA	2074	U	O5'-P-OP2	-8.54	98.02	105.70
3	CA	2326	C	C6-N1-C2	-8.51	116.90	120.30
3	AA	1936	A	C2-N3-C4	-8.50	106.35	110.60
3	AA	2534	A	N1-C6-N6	8.49	123.70	118.60
32	C5	93	ALA	C-N-CA	8.48	142.91	121.70
35	BA	922	G	O5'-P-OP2	-8.45	98.10	105.70
3	AA	974	G	C4-N9-C1'	8.43	137.46	126.50
3	CA	1839	G	C6-C5-N7	-8.41	125.36	130.40
3	AA	1533	C	C2-N1-C1'	8.40	128.04	118.80
3	EA	974	G	C5-N7-C8	-8.37	100.11	104.30
3	EA	2053	G	N3-C2-N2	-8.35	114.06	119.90
3	AA	2572	A	N1-C6-N6	8.34	123.60	118.60
3	GA	2078	C	O5'-P-OP2	-8.33	98.20	105.70
3	AA	1142	A	C2-N3-C4	-8.32	106.44	110.60
3	EA	1943	U	C5-C4-O4	8.30	130.88	125.90
35	HA	1527	U	O5'-P-OP2	-8.30	98.23	105.70
3	EA	974	G	C8-N9-C4	-8.29	103.08	106.40
35	BA	529	G	N1-C6-O6	8.27	124.86	119.90
32	E5	77	VAL	C-N-CA	8.25	139.62	122.30
3	CA	393	C	C6-N1-C2	-8.22	117.01	120.30
32	E5	92	ALA	C-N-CA	8.19	142.17	121.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
32	A5	27	VAL	CG1-CB-CG2	8.18	123.99	110.90
3	EA	2447	G	C5-C6-N1	-8.16	107.42	111.50
3	EA	503	A	C8-N9-C4	-8.14	102.54	105.80
3	AA	586	A	O5'-P-OP1	-8.14	98.37	105.70
3	GA	2307	G	C4-N9-C1'	-8.13	115.93	126.50
35	HA	971	G	O4'-C1'-N9	8.10	114.68	108.20
3	EA	2447	G	C4-C5-C6	8.09	123.65	118.80
32	E5	119	PRO	C-N-CA	8.09	141.91	121.70
3	GA	2107	G	N1-C6-O6	8.09	124.75	119.90
3	CA	783	A	N7-C8-N9	8.08	117.84	113.80
32	C5	119	PRO	C-N-CA	8.07	141.88	121.70
35	DA	328	C	C2-N1-C1'	8.06	127.67	118.80
35	FA	1032	G	C8-N9-C1'	-8.01	116.59	127.00
35	FA	1032	G	N3-C4-N9	8.01	130.81	126.00
3	EA	974	G	C6-C5-N7	-8.01	125.60	130.40
4	AD	151	THR	C-N-CD	8.00	145.21	128.40
35	HA	753	A	C6-C5-N7	7.96	137.87	132.30
3	EA	1936	A	C5-N7-C8	-7.96	99.92	103.90
3	EA	974	G	C4-C5-N7	7.96	113.98	110.80
3	AA	1533	C	C6-N1-C2	-7.94	117.12	120.30
3	GA	200	U	N3-C2-O2	-7.94	116.64	122.20
3	GA	1060	U	O5'-P-OP1	-7.92	98.58	105.70
3	EA	1024	G	C5-C6-O6	-7.91	123.85	128.60
3	CA	783	A	C5-N7-C8	-7.91	99.94	103.90
3	EA	528	A	N1-C6-N6	7.88	123.33	118.60
3	AA	783	A	C4-C5-N7	7.86	114.63	110.70
3	CA	1128	G	O5'-P-OP2	-7.85	98.63	105.70
32	E5	123	ILE	CG1-CB-CG2	7.82	128.61	111.40
15	GO	83	LEU	CA-CB-CG	7.82	133.28	115.30
3	EA	836	G	N1-C6-O6	7.81	124.58	119.90
3	GA	2307	G	C6-C5-N7	7.79	135.07	130.40
32	C5	81	LEU	CB-CG-CD2	7.78	124.22	111.00
3	AA	1478	G	N1-C6-O6	7.76	124.56	119.90
3	EA	542	C	N3-C4-C5	-7.75	118.80	121.90
3	GA	455	C	C6-N1-C2	-7.74	117.20	120.30
35	HA	753	A	C5-C6-N1	7.74	121.57	117.70
3	AA	984	A	N3-C4-C5	7.73	132.21	126.80
3	AA	1795	C	C6-N1-C2	-7.72	117.21	120.30
35	BA	1362	A	C8-N9-C1'	7.72	141.60	127.70
3	EA	2332	C	C6-N1-C2	7.72	123.39	120.30
32	C5	49	GLY	C-N-CA	7.72	141.00	121.70
3	GA	822	G	N3-C4-C5	-7.72	124.74	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	EA	2055	C	C6-N1-C2	7.71	123.39	120.30
3	EA	2053	G	C5-C6-N1	-7.71	107.64	111.50
1	EB	16	G	N1-C6-O6	7.70	124.52	119.90
3	CA	528	A	N1-C6-N6	7.69	123.21	118.60
32	A5	51	TYR	C-N-CA	7.69	140.92	121.70
3	CA	984	A	C2-N3-C4	-7.69	106.76	110.60
3	AA	2053	G	C4-N9-C1'	7.68	136.48	126.50
3	CA	546	U	O4'-C1'-N1	7.66	114.33	108.20
3	GA	822	G	N3-C4-N9	7.66	130.60	126.00
12	CL	82	LEU	CA-CB-CG	7.66	132.91	115.30
3	AA	2053	G	C2-N3-C4	-7.65	108.07	111.90
32	A5	49	GLY	C-N-CA	7.65	140.82	121.70
3	CA	2053	G	N3-C2-N2	-7.64	114.55	119.90
3	AA	783	A	N1-C6-N6	7.63	123.18	118.60
3	AA	2504	U	N3-C4-C5	-7.62	110.03	114.60
3	AA	465	G	N3-C4-C5	-7.62	124.79	128.60
32	A5	123	ILE	CG1-CB-CG2	7.61	128.15	111.40
23	AW	76	ARG	NE-CZ-NH2	7.60	124.10	120.30
3	CA	974	G	C4-C5-N7	7.60	113.84	110.80
3	AA	974	G	C8-N9-C1'	-7.59	117.13	127.00
3	EA	834	G	C6-C5-N7	-7.58	125.85	130.40
32	E5	117	LEU	C-N-CA	7.58	140.65	121.70
3	GA	944	C	C6-N1-C2	7.58	123.33	120.30
3	GA	2146	C	N1-C2-O2	7.57	123.44	118.90
32	A5	119	PRO	C-N-CA	7.55	140.58	121.70
3	CA	974	G	C4-N9-C1'	7.54	136.30	126.50
3	GA	1732	C	C6-N1-C2	-7.53	117.29	120.30
3	AA	783	A	C6-C5-N7	-7.51	127.04	132.30
32	C5	51	TYR	C-N-CA	7.50	140.44	121.70
35	FA	1322	C	C2-N1-C1'	7.49	127.04	118.80
3	CA	783	A	C8-N9-C4	-7.48	102.81	105.80
3	EA	2447	G	N1-C6-O6	7.48	124.39	119.90
3	EA	1355	G	N1-C6-O6	7.47	124.38	119.90
3	EA	2053	G	C2-N3-C4	-7.47	108.16	111.90
3	AA	776	G	C5-C6-O6	7.45	133.07	128.60
3	EA	1799	G	N1-C6-O6	-7.45	115.43	119.90
32	C5	72	LEU	C-N-CA	7.44	140.31	121.70
3	AA	1839	G	N1-C6-O6	7.44	124.36	119.90
32	E5	50	VAL	C-N-CA	7.44	140.29	121.70
3	AA	2146	C	N3-C4-C5	-7.44	118.93	121.90
5	AE	44	ARG	NE-CZ-NH2	7.43	124.02	120.30
3	GA	1509	A	O4'-C1'-N9	7.43	114.15	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	EA	2447	G	C8-N9-C1'	-7.43	117.34	127.00
3	GA	2307	G	C8-N9-C1'	7.43	136.66	127.00
3	EA	2515	C	O5'-P-OP1	-7.43	99.02	105.70
32	C5	39	THR	C-N-CA	7.42	140.25	121.70
3	EA	2503	A	C2-N3-C4	7.39	114.30	110.60
32	A5	72	LEU	C-N-CA	7.38	140.15	121.70
32	E5	72	LEU	C-N-CA	7.38	140.15	121.70
32	E5	108	VAL	CG1-CB-CG2	7.38	122.71	110.90
3	AA	2504	U	C5-C4-O4	-7.37	121.48	125.90
3	CA	528	A	C2-N3-C4	-7.34	106.93	110.60
32	C5	50	VAL	C-N-CA	7.33	140.02	121.70
3	GA	638	G	N1-C6-O6	7.32	124.29	119.90
3	CA	834	G	C6-C5-N7	-7.31	126.02	130.40
35	HA	1517	G	N3-C4-N9	7.31	130.38	126.00
3	AA	1533	C	N3-C2-O2	-7.30	116.79	121.90
32	A5	81	LEU	CB-CG-CD2	7.29	123.40	111.00
35	BA	1362	A	N1-C2-N3	-7.29	125.66	129.30
3	EA	974	G	C4-N9-C1'	7.29	135.97	126.50
3	AA	974	G	C5-N7-C8	-7.28	100.66	104.30
3	GA	2307	G	N1-C6-O6	-7.27	115.54	119.90
35	HA	1322	C	C2-N1-C1'	7.27	126.80	118.80
32	C5	123	ILE	CG1-CB-CG2	7.27	127.39	111.40
3	AA	2053	G	N1-C2-N3	7.26	128.26	123.90
3	AA	1073	A	O5'-P-OP2	7.26	119.41	110.70
3	EA	1452	G	C6-C5-N7	-7.26	126.05	130.40
3	EA	776	G	C5-C6-N1	-7.25	107.88	111.50
32	E5	49	GLY	C-N-CA	7.24	139.80	121.70
3	GA	1840	G	N1-C6-O6	7.24	124.24	119.90
3	AA	1534	U	C6-N1-C1'	-7.23	111.08	121.20
3	AA	1950	G	C6-C5-N7	-7.23	126.06	130.40
3	CA	2053	G	C5-C6-O6	-7.22	124.27	128.60
32	C5	47	GLU	C-N-CA	7.22	139.75	121.70
3	CA	2544	G	C6-C5-N7	-7.21	126.07	130.40
3	AA	2250	G	C6-C5-N7	-7.21	126.07	130.40
3	AA	1142	A	N1-C6-N6	7.21	122.92	118.60
35	FA	1418	A	C8-N9-C4	-7.20	102.92	105.80
35	FA	976	G	C4-C5-N7	-7.20	107.92	110.80
27	E0	19	ASP	CB-CG-OD1	7.19	124.78	118.30
3	CA	2681	C	C6-N1-C2	7.19	123.18	120.30
3	EA	2038	G	N1-C6-O6	7.19	124.21	119.90
3	AA	2501	C	C2-N1-C1'	-7.18	110.90	118.80
3	EA	2250	G	C2-N3-C4	-7.18	108.31	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	EA	776	G	C4-C5-N7	-7.17	107.93	110.80
3	AA	2447	G	O5'-P-OP1	-7.17	99.24	105.70
4	CD	151	THR	C-N-CD	7.17	143.46	128.40
32	C5	27	VAL	CG1-CB-CG2	7.17	122.36	110.90
35	HA	703	G	N3-C4-N9	7.16	130.29	126.00
3	CA	743	A	O5'-P-OP2	-7.16	99.26	105.70
3	AA	2053	G	C8-N9-C1'	-7.14	117.72	127.00
32	E5	81	LEU	CB-CG-CD2	7.13	123.12	111.00
3	AA	776	G	C5-C6-N1	-7.12	107.94	111.50
3	EA	752	A	C5-N7-C8	-7.12	100.34	103.90
32	A5	28	ALA	C-N-CA	7.12	139.50	121.70
3	EA	1024	G	C4-C5-N7	7.12	113.65	110.80
35	FA	1136	C	C2-N1-C1'	7.12	126.63	118.80
35	BA	1086	U	N3-C2-O2	-7.11	117.22	122.20
3	CA	2572	A	N1-C6-N6	7.08	122.85	118.60
3	EA	62	U	N1-C2-O2	7.08	127.75	122.80
35	FA	1370	G	N1-C6-O6	7.07	124.14	119.90
32	C5	54	VAL	CG1-CB-CG2	7.05	122.18	110.90
35	FA	58	C	C6-N1-C2	-7.05	117.48	120.30
3	CA	1378	A	P-O3'-C3'	7.04	128.15	119.70
32	E5	47	GLU	C-N-CA	7.04	139.30	121.70
3	EA	2554	U	O5'-P-OP1	-7.04	99.37	105.70
32	E5	51	TYR	C-N-CA	7.03	139.29	121.70
35	HA	932	C	C6-N1-C2	-7.03	117.49	120.30
32	A5	47	GLU	C-N-CA	7.03	139.28	121.70
35	FA	976	G	C5-C6-O6	7.03	132.82	128.60
3	GA	951	C	C6-N1-C2	-7.02	117.49	120.30
35	FA	1137	C	C6-N1-C2	-7.01	117.50	120.30
35	FA	1322	C	C6-N1-C1'	-7.01	112.39	120.80
32	A5	54	VAL	CG1-CB-CG2	7.00	122.09	110.90
35	DA	328	C	C6-N1-C1'	-6.99	112.41	120.80
2	GC	233	GLY	N-CA-C	-6.99	95.61	113.10
3	AA	2423	U	P-O3'-C3'	6.98	128.08	119.70
3	GA	2144	G	C8-N9-C4	-6.98	103.61	106.40
3	EA	836	G	C5-C6-O6	-6.98	124.41	128.60
3	EA	836	G	C6-C5-N7	-6.97	126.22	130.40
35	HA	1452	C	C6-N1-C2	-6.96	117.51	120.30
2	EC	109	LEU	CA-CB-CG	6.96	131.31	115.30
26	CZ	15	ARG	NE-CZ-NH1	6.95	123.78	120.30
32	E5	28	ALA	C-N-CA	6.95	139.07	121.70
35	HA	741	G	C4-N9-C1'	-6.95	117.47	126.50
3	AA	1935	G	O5'-P-OP2	-6.94	99.45	105.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	EA	2584	U	N3-C4-O4	6.94	124.26	119.40
3	AA	1284	A	O5'-P-OP2	-6.94	99.45	105.70
3	GA	2038	G	N1-C6-O6	6.94	124.06	119.90
3	EA	595	C	N1-C2-O2	-6.93	114.74	118.90
3	AA	2250	G	N1-C6-O6	6.93	124.06	119.90
3	AA	2448	A	N1-C6-N6	6.92	122.75	118.60
32	C5	147	SER	C-N-CA	6.92	139.00	121.70
3	EA	779	U	O5'-P-OP1	-6.92	99.47	105.70
3	EA	187	G	N1-C6-O6	6.91	124.05	119.90
3	AA	2503	A	C5-C6-N6	-6.91	118.17	123.70
35	HA	429	U	O5'-P-OP1	6.91	118.99	110.70
35	BA	971	G	N1-C6-O6	6.91	124.04	119.90
3	AA	802	A	N1-C6-N6	-6.90	114.46	118.60
35	DA	751	U	C2-N1-C1'	6.90	125.98	117.70
3	CA	469	G	N1-C6-O6	6.90	124.04	119.90
3	AA	2061	G	C6-C5-N7	-6.89	126.27	130.40
35	BA	1524	C	O5'-P-OP1	-6.89	99.50	105.70
3	AA	2504	U	C2-N1-C1'	6.88	125.96	117.70
3	AA	984	A	N3-C4-N9	-6.87	121.90	127.40
3	AA	1839	G	C6-C5-N7	-6.86	126.28	130.40
3	EA	1452	G	N7-C8-N9	6.85	116.53	113.10
3	EA	2687	U	C5-C4-O4	6.85	130.01	125.90
3	EA	2764	A	C8-N9-C4	6.85	108.54	105.80
3	EA	1799	G	C5-C6-O6	6.84	132.71	128.60
3	AA	1378	A	P-O3'-C3'	6.84	127.91	119.70
3	AA	783	A	C2-N3-C4	-6.83	107.18	110.60
3	AA	1654	A	O5'-P-OP1	-6.83	99.55	105.70
32	C5	28	ALA	C-N-CA	6.83	138.78	121.70
35	FA	914	A	O5'-P-OP1	-6.83	99.56	105.70
3	EA	2447	G	C4-N9-C1'	6.82	135.36	126.50
3	EA	2544	G	N1-C6-O6	6.82	123.99	119.90
3	AA	974	G	N1-C6-O6	6.81	123.98	119.90
3	AA	1311	G	C8-N9-C4	-6.80	103.68	106.40
3	GA	1795	C	O5'-P-OP2	-6.79	99.59	105.70
3	AA	503	A	C8-N9-C4	-6.76	103.09	105.80
3	EA	783	A	N7-C8-N9	6.76	117.18	113.80
3	AA	974	G	N3-C4-N9	6.76	130.06	126.00
3	AA	12	U	N3-C2-O2	-6.76	117.47	122.20
3	EA	1452	G	C8-N9-C4	-6.76	103.70	106.40
3	GA	2073	C	C6-N1-C2	-6.76	117.60	120.30
3	AA	1192	G	C8-N9-C4	6.75	109.10	106.40
3	CA	834	G	C5-C6-O6	-6.75	124.55	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	HA	1520	C	N1-C2-O2	6.75	122.95	118.90
3	AA	2681	C	C6-N1-C2	6.74	123.00	120.30
3	EA	1452	G	C4-N9-C1'	6.74	135.27	126.50
3	GA	2344	U	C5-C6-N1	6.74	126.07	122.70
3	EA	984	A	C6-C5-N7	-6.73	127.59	132.30
3	CA	1174	U	C2-N1-C1'	6.73	125.77	117.70
3	AA	974	G	N7-C8-N9	6.71	116.46	113.10
35	BA	328	C	N3-C2-O2	-6.71	117.21	121.90
3	EA	2143	C	C6-N1-C2	-6.71	117.62	120.30
3	CA	651	G	N1-C6-O6	6.70	123.92	119.90
3	AA	974	G	N9-C4-C5	-6.70	102.72	105.40
35	BA	328	C	N1-C2-O2	6.69	122.92	118.90
3	CA	974	G	C8-N9-C1'	-6.69	118.30	127.00
3	AA	974	G	C5-C6-O6	-6.69	124.59	128.60
12	AL	19	LEU	CA-CB-CG	6.69	130.68	115.30
32	E5	54	VAL	CG1-CB-CG2	6.68	121.59	110.90
3	EA	812	C	N1-C2-O2	-6.68	114.89	118.90
3	EA	1263	U	N3-C4-C5	-6.66	110.60	114.60
6	AF	94	ARG	NE-CZ-NH1	6.66	123.63	120.30
3	AA	2823	A	C8-N9-C4	-6.65	103.14	105.80
3	AA	2610	C	N3-C2-O2	-6.65	117.25	121.90
3	GA	2266	A	N7-C8-N9	6.64	117.12	113.80
3	CA	2447	G	N1-C6-O6	6.63	123.88	119.90
3	GA	2107	G	C5-C6-O6	-6.63	124.62	128.60
32	C5	40	GLU	C-N-CA	6.61	138.21	121.70
3	EA	2053	G	C5-C6-O6	-6.61	124.64	128.60
3	EA	1962	C	N1-C2-O2	6.59	122.86	118.90
35	FA	1373	G	O5'-P-OP2	-6.59	99.77	105.70
3	GA	970	U	C5-C4-O4	6.59	129.86	125.90
2	AC	233	GLY	N-CA-C	-6.59	96.62	113.10
3	AA	528	A	N1-C6-N6	6.59	122.56	118.60
35	FA	1322	C	O4'-C1'-N1	6.58	113.47	108.20
3	GA	783	A	C8-N9-C4	-6.57	103.17	105.80
3	CA	140	C	C2-N1-C1'	6.57	126.02	118.80
3	EA	203	A	C5-C6-N6	-6.57	118.45	123.70
35	FA	1032	G	N3-C4-C5	-6.56	125.32	128.60
3	GA	1071	G	C8-N9-C4	-6.56	103.78	106.40
3	AA	1815	A	N9-C4-C5	6.56	108.42	105.80
20	ET	7	LEU	CB-CG-CD1	6.56	122.15	111.00
3	GA	1395	A	O4'-C1'-N9	6.55	113.44	108.20
35	FA	108	G	C6-C5-N7	-6.55	126.47	130.40
3	CA	1963	U	C2-N1-C1'	6.54	125.55	117.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	CA	784	G	P-O3'-C3'	6.53	127.54	119.70
35	BA	1530	G	O4'-C1'-N9	6.53	113.42	108.20
3	EA	995	C	O4'-C1'-N1	-6.52	102.98	108.20
3	EA	1142	A	C2-N3-C4	-6.52	107.34	110.60
32	C5	84	TYR	C-N-CA	6.52	137.99	121.70
35	HA	741	G	C8-N9-C1'	6.51	135.46	127.00
35	HA	779	C	C6-N1-C2	-6.51	117.70	120.30
3	EA	1226	A	N1-C6-N6	-6.50	114.70	118.60
35	BA	1305	G	O5'-P-OP1	-6.50	99.85	105.70
3	EA	783	A	N9-C4-C5	-6.50	103.20	105.80
3	GA	1164	C	O4'-C1'-N1	6.50	113.40	108.20
35	HA	1403	C	C6-N1-C2	-6.50	117.70	120.30
3	AA	984	A	N1-C6-N6	6.49	122.49	118.60
35	HA	1322	C	N1-C2-O2	6.48	122.79	118.90
3	CA	1088	A	O4'-C1'-N9	-6.48	103.02	108.20
3	EA	375	G	N1-C6-O6	6.47	123.78	119.90
32	A5	84	TYR	C-N-CA	6.47	137.88	121.70
32	A5	147	SER	C-N-CA	6.46	137.85	121.70
3	AA	2447	G	N1-C6-O6	6.46	123.78	119.90
3	AA	2689	U	C5-C4-O4	6.45	129.77	125.90
42	HI	18	ARG	NE-CZ-NH2	6.45	123.53	120.30
3	CA	1322	A	N1-C6-N6	6.45	122.47	118.60
35	BA	1086	U	N1-C2-O2	6.45	127.31	122.80
32	A5	40	GLU	C-N-CA	6.44	137.81	121.70
3	AA	2146	C	C2-N3-C4	6.43	123.12	119.90
3	AA	1263	U	N3-C4-C5	-6.43	110.74	114.60
3	GA	1128	G	N3-C4-C5	-6.43	125.38	128.60
35	BA	1332	A	C2-N3-C4	-6.42	107.39	110.60
26	EZ	15	ARG	NE-CZ-NH1	6.40	123.50	120.30
3	EA	62	U	N3-C2-O2	-6.40	117.72	122.20
3	EA	430	A	O5'-P-OP1	-6.40	99.94	105.70
35	FA	861	G	C5-C6-O6	-6.40	124.76	128.60
3	AA	404	A	P-O3'-C3'	6.39	127.37	119.70
3	AA	820	A	O5'-P-OP1	-6.39	99.94	105.70
3	AA	670	A	O4'-C1'-N9	-6.39	103.08	108.20
35	DA	926	G	C4-N9-C1'	-6.39	118.19	126.50
3	EA	1263	U	C6-N1-C2	-6.39	117.17	121.00
3	EA	261	G	N3-C4-C5	6.38	131.79	128.60
3	AA	2267	A	C8-N9-C4	-6.37	103.25	105.80
32	E5	53	ARG	C-N-CA	6.37	137.62	121.70
35	BA	995	C	C6-N1-C2	6.36	122.85	120.30
35	FA	108	G	C4-C5-N7	6.36	113.35	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	EA	404	A	N1-C6-N6	6.36	122.42	118.60
32	A5	50	VAL	C-N-CA	6.36	137.60	121.70
3	AA	2551	C	OP2-P-O3'	6.36	119.18	105.20
3	EA	2503	A	C5-C6-N1	6.35	120.88	117.70
41	HH	3	MET	CG-SD-CE	-6.34	90.06	100.20
3	EA	2832	U	O5'-P-OP1	-6.34	100.00	105.70
35	HA	1517	G	C4-N9-C1'	6.34	134.74	126.50
3	AA	2142	A	OP2-P-O3'	6.34	119.14	105.20
4	GD	151	THR	C-N-CD	6.33	141.71	128.40
3	EA	2523	G	N1-C6-O6	6.33	123.70	119.90
3	EA	776	G	N9-C4-C5	6.33	107.93	105.40
5	AE	44	ARG	NE-CZ-NH1	-6.32	117.14	120.30
3	EA	512	G	N1-C6-O6	-6.31	116.11	119.90
3	AA	2754	U	N3-C4-O4	6.31	123.81	119.40
35	FA	1032	G	C6-C5-N7	-6.31	126.62	130.40
35	BA	5	U	N1-C2-O2	6.31	127.21	122.80
35	FA	1530	G	C4-N9-C1'	-6.30	118.30	126.50
3	EA	784	G	P-O3'-C3'	6.30	127.26	119.70
3	AA	1142	A	N3-C4-C5	6.29	131.21	126.80
35	FA	742	G	N1-C6-O6	6.29	123.67	119.90
3	CA	1832	C	C6-N1-C2	-6.28	117.79	120.30
3	GA	986	C	O5'-P-OP2	-6.28	100.05	105.70
3	EA	1936	A	N3-C4-N9	6.27	132.41	127.40
35	HA	330	C	N3-C4-C5	6.27	124.41	121.90
32	A5	108	VAL	CG1-CB-CG2	6.27	120.92	110.90
3	GA	2144	G	N7-C8-N9	6.27	116.23	113.10
3	AA	748	G	O4'-C1'-N9	6.26	113.21	108.20
3	EA	1675	C	C6-N1-C2	-6.26	117.80	120.30
3	EA	2447	G	C6-C5-N7	-6.26	126.65	130.40
3	AA	1125	G	N1-C6-O6	6.25	123.65	119.90
3	AA	2770	G	N1-C6-O6	-6.25	116.15	119.90
55	BV	302	GLY	N-CA-C	-6.25	97.47	113.10
3	GA	1247	A	P-O3'-C3'	6.25	127.20	119.70
3	CA	2423	U	P-O3'-C3'	6.24	127.19	119.70
3	EA	1966	A	O4'-C1'-N9	-6.24	103.21	108.20
3	GA	783	A	N7-C8-N9	6.24	116.92	113.80
32	C5	53	ARG	C-N-CA	6.23	137.28	121.70
35	BA	701	U	P-O3'-C3'	6.23	127.17	119.70
35	DA	115	G	C8-N9-C4	-6.23	103.91	106.40
32	A5	39	THR	C-N-CA	6.22	137.26	121.70
3	EA	1027	A	N1-C6-N6	6.22	122.33	118.60
3	GA	335	C	C5-C6-N1	6.22	124.11	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	GB	30	C	C6-N1-C2	-6.22	117.81	120.30
3	EA	555	G	C8-N9-C4	-6.21	103.91	106.40
3	EA	2406	A	O5'-P-OP1	-6.21	100.11	105.70
3	GA	486	C	C6-N1-C2	6.21	122.78	120.30
3	EA	595	C	N3-C2-O2	6.21	126.25	121.90
3	GA	577	G	C4-N9-C1'	6.21	134.57	126.50
32	A5	60	LEU	CB-CG-CD1	6.21	121.55	111.00
3	CA	2250	G	C2-N3-C4	-6.20	108.80	111.90
35	BA	5	U	N3-C2-O2	-6.19	117.86	122.20
35	BA	1279	G	C4-N9-C1'	6.19	134.54	126.50
3	AA	1839	G	C5-C6-O6	-6.19	124.89	128.60
3	GA	85	G	O5'-P-OP1	-6.18	100.14	105.70
3	GA	1131	G	N3-C4-N9	6.18	129.71	126.00
3	AA	1142	A	C5-N7-C8	-6.18	100.81	103.90
35	HA	1097	C	C6-N1-C2	-6.18	117.83	120.30
3	AA	2250	G	C4-C5-N7	6.18	113.27	110.80
3	GA	1189	A	C5-C6-N6	6.18	128.64	123.70
3	AA	1142	A	C4-C5-N7	6.17	113.79	110.70
3	AA	1950	G	C5-C6-O6	-6.17	124.90	128.60
3	AA	1003	G	O5'-P-OP2	-6.17	100.14	105.70
3	AA	567	U	N1-C2-O2	-6.17	118.48	122.80
32	E5	39	THR	C-N-CA	6.17	137.13	121.70
2	AC	109	LEU	CA-CB-CG	6.17	129.48	115.30
3	EA	2053	G	N3-C4-C5	6.16	131.68	128.60
3	EA	2286	G	N3-C4-C5	6.16	131.68	128.60
35	HA	703	G	N3-C4-C5	-6.16	125.52	128.60
2	CC	12	ARG	NE-CZ-NH1	6.16	123.38	120.30
32	E5	84	TYR	C-N-CA	6.16	137.10	121.70
3	EA	187	G	C5-C6-O6	-6.16	124.91	128.60
3	EA	2381	A	C8-N9-C4	6.16	108.26	105.80
35	DA	1279	G	C8-N9-C4	-6.15	103.94	106.40
32	E5	40	GLU	C-N-CA	6.15	137.08	121.70
35	FA	757	U	N3-C2-O2	6.15	126.51	122.20
3	AA	2592	G	O5'-P-OP2	-6.15	100.17	105.70
35	BA	1069	C	O5'-P-OP1	-6.15	100.17	105.70
3	EA	1814	G	C4-C5-N7	-6.15	108.34	110.80
3	GA	1189	A	N3-C4-N9	-6.14	122.49	127.40
3	EA	1355	G	C6-C5-N7	-6.14	126.72	130.40
3	AA	2505	G	O5'-P-OP2	-6.13	100.18	105.70
3	EA	816	C	C6-N1-C2	6.13	122.75	120.30
35	FA	583	A	N1-C6-N6	-6.13	114.92	118.60
35	DA	751	U	C6-N1-C2	-6.13	117.32	121.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	DA	1322	C	C6-N1-C1'	-6.12	113.45	120.80
3	GA	115	C	C6-N1-C2	-6.12	117.85	120.30
3	CA	2363	G	C8-N9-C4	6.12	108.85	106.40
35	FA	529	G	C5-C6-O6	-6.12	124.93	128.60
3	EA	2061	G	N3-C4-C5	-6.12	125.54	128.60
35	BA	452	A	N1-C6-N6	6.11	122.27	118.60
3	GA	1914	C	C5-C6-N1	6.11	124.06	121.00
3	GA	635	C	N1-C2-O2	6.11	122.57	118.90
3	GA	2336	A	N1-C6-N6	6.11	122.27	118.60
3	AA	2250	G	C5-N7-C8	-6.11	101.25	104.30
35	BA	468	A	C8-N9-C4	-6.10	103.36	105.80
3	GA	1646	C	N1-C2-O2	6.10	122.56	118.90
35	HA	1517	G	C8-N9-C4	-6.10	103.96	106.40
3	GA	1189	A	N1-C6-N6	-6.10	114.94	118.60
3	GA	573	U	N1-C2-O2	6.10	127.07	122.80
3	GA	1157	G	O5'-P-OP2	-6.09	100.22	105.70
35	FA	58	C	C5-C6-N1	6.09	124.05	121.00
3	GA	504	A	O4'-C1'-N9	6.09	113.07	108.20
35	BA	971	G	N3-C2-N2	-6.09	115.64	119.90
3	AA	548	G	C8-N9-C4	-6.08	103.97	106.40
3	AA	2241	A	C8-N9-C4	-6.08	103.37	105.80
3	GA	228	C	O4'-C1'-N1	6.08	113.07	108.20
35	DA	1201	A	P-O3'-C3'	6.08	127.00	119.70
3	CA	1963	U	N3-C2-O2	-6.08	117.94	122.20
35	FA	1261	A	O4'-C1'-N9	6.08	113.06	108.20
3	AA	379	G	N1-C6-O6	6.07	123.54	119.90
35	BA	1370	G	N1-C6-O6	6.07	123.54	119.90
3	EA	268	C	C5-C4-N4	-6.07	115.95	120.20
35	FA	913	A	P-O3'-C3'	6.06	126.98	119.70
3	EA	2283	C	N1-C2-O2	-6.06	115.26	118.90
3	AA	784	G	P-O3'-C3'	6.06	126.97	119.70
3	EA	2250	G	N3-C4-C5	6.06	131.63	128.60
3	AA	784	G	O4'-C1'-N9	-6.06	103.36	108.20
35	HA	877	G	N9-C4-C5	6.05	107.82	105.40
1	EB	99	A	N3-C4-C5	6.05	131.04	126.80
32	A5	59	LEU	C-N-CA	6.05	136.82	121.70
3	GA	1128	G	N3-C4-N9	6.05	129.63	126.00
3	CA	984	A	N3-C4-N9	-6.04	122.56	127.40
35	FA	108	G	N1-C6-O6	6.04	123.53	119.90
3	GA	2467	C	C6-N1-C2	-6.04	117.88	120.30
12	AL	82	LEU	CA-CB-CG	6.03	129.17	115.30
3	CA	503	A	C8-N9-C4	-6.03	103.39	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	EA	1943	U	N3-C4-O4	-6.03	115.18	119.40
3	EA	62	U	C2-N1-C1'	6.03	124.93	117.70
3	EA	1247	A	P-O3'-C3'	6.03	126.93	119.70
35	FA	530	G	C4-N9-C1'	6.02	134.33	126.50
35	DA	82	G	O4'-C1'-N9	6.01	113.01	108.20
3	EA	2261	C	C6-N1-C2	-6.01	117.89	120.30
3	GA	1051	G	C8-N9-C4	-6.01	103.99	106.40
35	HA	780	A	C8-N9-C4	-6.01	103.39	105.80
35	HA	1059	C	C6-N1-C2	-6.01	117.89	120.30
3	AA	1073	A	N7-C8-N9	-6.01	110.80	113.80
32	C5	50	VAL	CG1-CB-CG2	6.01	120.52	110.90
35	BA	330	C	N3-C4-C5	6.01	124.30	121.90
3	CA	140	C	N1-C2-O2	6.00	122.50	118.90
3	AA	2534	A	C4-C5-N7	6.00	113.70	110.70
32	C5	59	LEU	C-N-CA	6.00	136.69	121.70
35	FA	529	G	N1-C6-O6	6.00	123.50	119.90
35	BA	1279	G	C8-N9-C1'	-6.00	119.21	127.00
3	EA	2211	A	P-O3'-C3'	6.00	126.89	119.70
3	GA	2544	G	N1-C6-O6	5.99	123.50	119.90
3	AA	1025	G	P-O3'-C3'	5.99	126.89	119.70
3	AA	1069	A	OP2-P-O3'	5.99	118.37	105.20
3	EA	752	A	N1-C6-N6	5.99	122.19	118.60
35	BA	237	G	N3-C4-C5	5.98	131.59	128.60
3	EA	1887	C	O5'-P-OP1	-5.98	100.31	105.70
35	HA	1496	C	C6-N1-C2	-5.98	117.91	120.30
3	AA	528	A	C5-C6-N1	-5.97	114.71	117.70
35	BA	80	A	O4'-C1'-N9	5.97	112.98	108.20
3	EA	984	A	C5-C6-N1	-5.97	114.71	117.70
3	AA	1328	A	O5'-P-OP2	-5.97	100.33	105.70
3	GA	157	C	C6-N1-C2	-5.97	117.91	120.30
3	AA	2043	C	C6-N1-C2	-5.97	117.91	120.30
3	GA	2502	G	C8-N9-C4	-5.97	104.01	106.40
35	BA	1509	C	C6-N1-C2	-5.96	117.92	120.30
35	BA	529	G	C5-C6-O6	-5.96	125.02	128.60
3	GA	748	G	O4'-C1'-N9	5.96	112.97	108.20
35	DA	751	U	N3-C2-O2	-5.96	118.03	122.20
3	GA	1378	A	P-O3'-C3'	5.95	126.84	119.70
3	GA	2107	G	C4-C5-N7	5.95	113.18	110.80
35	FA	701	U	P-O3'-C3'	5.95	126.84	119.70
35	FA	115	G	P-O3'-C3'	5.94	126.83	119.70
32	A5	53	ARG	C-N-CA	5.94	136.56	121.70
3	EA	404	A	OP2-P-O3'	5.94	118.28	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	HA	1401	G	N3-C4-C5	-5.94	125.63	128.60
3	CA	2146	C	N1-C2-O2	5.94	122.47	118.90
3	AA	2747	G	OP2-P-O3'	5.94	118.26	105.20
32	E5	60	LEU	CB-CG-CD2	5.93	121.09	111.00
35	HA	1364	U	C2-N1-C1'	5.93	124.82	117.70
3	AA	1779	U	N3-C4-O4	-5.93	115.25	119.40
3	AA	2447	G	C5-C6-O6	-5.93	125.04	128.60
3	GA	2107	G	N9-C4-C5	-5.93	103.03	105.40
35	FA	1530	G	C8-N9-C1'	5.93	134.71	127.00
3	AA	2610	C	N1-C2-O2	5.93	122.46	118.90
3	GA	1164	C	C2-N1-C1'	-5.93	112.28	118.80
3	EA	613	A	N7-C8-N9	5.93	116.76	113.80
3	AA	1815	A	C8-N9-C4	-5.93	103.43	105.80
3	GA	2251	G	N1-C6-O6	5.93	123.46	119.90
3	AA	119	A	O5'-P-OP2	-5.92	100.37	105.70
3	EA	2275	C	C5-C6-N1	5.92	123.96	121.00
3	EA	2423	U	P-O3'-C3'	5.92	126.80	119.70
35	FA	976	G	O4'-C1'-N9	5.92	112.93	108.20
3	AA	964	C	O5'-P-OP2	-5.92	100.38	105.70
3	GA	271	G	P-O3'-C3'	5.91	126.80	119.70
35	HA	1322	C	C6-N1-C1'	-5.91	113.71	120.80
3	AA	2554	U	O5'-P-OP1	-5.91	100.38	105.70
3	AA	2715	C	C6-N1-C2	5.91	122.66	120.30
12	EL	82	LEU	CA-CB-CG	5.91	128.89	115.30
3	GA	946	C	O5'-P-OP1	-5.91	100.39	105.70
35	BA	1370	G	C5-C6-N1	-5.90	108.55	111.50
3	CA	1831	G	C8-N9-C4	-5.90	104.04	106.40
32	E5	59	LEU	C-N-CA	5.90	136.46	121.70
3	GA	783	A	C5-N7-C8	-5.90	100.95	103.90
3	EA	2242	G	C8-N9-C4	-5.89	104.04	106.40
35	DA	81	A	O4'-C1'-N9	5.88	112.91	108.20
3	EA	752	A	N7-C8-N9	5.88	116.74	113.80
3	AA	1428	C	O5'-P-OP1	-5.88	100.41	105.70
35	BA	1302	C	P-O3'-C3'	5.88	126.75	119.70
35	FA	503	C	C6-N1-C2	-5.88	117.95	120.30
3	AA	527	C	P-O3'-C3'	5.88	126.75	119.70
3	AA	1094	U	N3-C4-C5	-5.88	111.08	114.60
3	AA	1670	C	N1-C2-O2	-5.88	115.38	118.90
35	HA	877	G	N3-C4-N9	-5.87	122.48	126.00
3	EA	679	C	N1-C2-O2	-5.87	115.38	118.90
3	CA	2486	C	C6-N1-C2	-5.86	117.95	120.30
3	CA	2505	G	C8-N9-C4	-5.86	104.06	106.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	BA	330	C	C6-N1-C2	5.86	122.64	120.30
3	EA	869	G	C5-C6-N1	-5.86	108.57	111.50
3	AA	2448	A	C6-C5-N7	-5.86	128.20	132.30
3	EA	404	A	P-O3'-C3'	5.86	126.73	119.70
35	BA	1201	A	N1-C6-N6	-5.86	115.09	118.60
3	GA	1070	A	O4'-C1'-N9	-5.86	103.52	108.20
3	AA	1837	C	O5'-P-OP1	-5.85	100.43	105.70
3	AA	1069	A	C8-N9-C4	-5.85	103.46	105.80
3	CA	2326	C	C5-C6-N1	5.85	123.92	121.00
3	AA	1509	A	O4'-C1'-N9	5.84	112.87	108.20
3	EA	869	G	N1-C6-O6	5.84	123.41	119.90
3	CA	1731	G	O4'-C1'-N9	5.84	112.87	108.20
3	EA	2044	C	N1-C2-O2	-5.83	115.40	118.90
3	GA	527	C	C2-N1-C1'	5.83	125.21	118.80
3	EA	1533	C	N1-C2-O2	5.83	122.40	118.90
3	GA	1248	G	N9-C4-C5	-5.83	103.07	105.40
3	GA	2482	A	N7-C8-N9	5.83	116.71	113.80
1	GB	119	A	O5'-P-OP2	5.82	117.68	110.70
35	DA	234	C	C6-N1-C2	-5.82	117.97	120.30
35	BA	262	A	O5'-P-OP1	-5.81	100.47	105.70
35	BA	990	C	C6-N1-C2	-5.81	117.97	120.30
3	AA	866	A	N1-C6-N6	5.81	122.09	118.60
35	BA	79	G	P-O3'-C3'	5.81	126.67	119.70
3	EA	752	A	C4-C5-N7	5.81	113.61	110.70
3	EA	2523	G	C5-C6-O6	-5.81	125.11	128.60
1	GB	30	C	C5-C6-N1	5.81	123.90	121.00
3	EA	961	C	O5'-P-OP2	-5.80	100.48	105.70
35	BA	108	G	C4-N9-C1'	5.80	134.04	126.50
3	CA	1839	G	C4-C5-C6	5.80	122.28	118.80
3	AA	1358	G	C8-N9-C4	-5.79	104.08	106.40
35	FA	83	C	C6-N1-C2	-5.79	117.98	120.30
35	HA	984	C	C6-N1-C2	-5.79	117.98	120.30
35	DA	351	G	C4-C5-N7	5.79	113.12	110.80
3	AA	516	C	O5'-P-OP1	-5.79	100.49	105.70
3	EA	2446	G	O5'-P-OP2	-5.79	100.49	105.70
3	GA	1081	U	C5-C6-N1	5.79	125.59	122.70
35	BA	251	G	N1-C6-O6	5.78	123.37	119.90
3	EA	2391	G	N1-C6-O6	-5.78	116.43	119.90
35	HA	245	U	C5-C4-O4	5.78	129.37	125.90
3	EA	1983	G	C8-N9-C4	5.78	108.71	106.40
35	DA	779	C	C6-N1-C2	-5.78	117.99	120.30
3	EA	528	A	C5-N7-C8	-5.77	101.01	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	AA	1645	G	N3-C4-C5	-5.77	125.72	128.60
3	EA	2719	G	N3-C4-C5	5.77	131.49	128.60
3	AA	2241	A	N9-C4-C5	5.77	108.11	105.80
3	GA	4	U	C5-C6-N1	5.76	125.58	122.70
35	DA	926	G	C8-N9-C1'	5.76	134.49	127.00
3	EA	1694	C	C6-N1-C2	-5.76	118.00	120.30
3	EA	792	A	N1-C6-N6	-5.76	115.15	118.60
35	HA	1528	U	C6-N1-C2	5.76	124.45	121.00
3	CA	2000	C	C6-N1-C2	5.75	122.60	120.30
3	CA	2179	C	O4'-C1'-N1	5.75	112.80	108.20
3	EA	1607	C	C6-N1-C2	5.75	122.60	120.30
3	EA	555	G	N9-C4-C5	5.75	107.70	105.40
3	EA	791	C	N3-C2-O2	-5.75	117.88	121.90
35	DA	108	G	C4-C5-N7	5.74	113.10	110.80
3	GA	743	A	O5'-P-OP2	-5.74	100.53	105.70
3	GA	2902	C	P-O3'-C3'	5.74	126.59	119.70
35	DA	351	G	C5-N7-C8	-5.74	101.43	104.30
3	EA	2424	C	C6-N1-C2	5.73	122.59	120.30
3	EA	2211	A	O4'-C1'-N9	-5.73	103.62	108.20
3	GA	1952	A	C8-N9-C4	-5.73	103.51	105.80
3	GA	2612	C	N3-C4-N4	5.73	122.01	118.00
35	BA	844	G	C4-N9-C1'	5.73	133.94	126.50
3	AA	1606	C	C2-N3-C4	-5.72	117.04	119.90
3	CA	1915	U	N3-C2-O2	-5.72	118.20	122.20
32	C5	60	LEU	CB-CG-CD2	5.72	120.72	111.00
3	GA	2710	C	C6-N1-C2	-5.71	118.01	120.30
3	GA	2351	G	N3-C4-N9	5.71	129.43	126.00
3	EA	178	G	C8-N9-C4	5.71	108.68	106.40
3	EA	784	G	C5-C6-O6	-5.71	125.18	128.60
32	A5	117	LEU	C-N-CA	5.71	135.96	121.70
35	BA	529	G	C6-C5-N7	-5.70	126.98	130.40
35	HA	827	U	C5-C6-N1	5.70	125.55	122.70
3	CA	2544	G	C5-C6-O6	-5.70	125.18	128.60
3	AA	1247	A	P-O3'-C3'	5.70	126.54	119.70
35	BA	1279	G	N7-C8-N9	5.70	115.95	113.10
3	AA	1789	A	O5'-P-OP1	-5.70	100.57	105.70
3	GA	784	G	P-O3'-C3'	5.70	126.54	119.70
3	GA	2144	G	C6-C5-N7	-5.70	126.98	130.40
35	HA	932	C	C2-N1-C1'	5.70	125.07	118.80
1	EB	99	A	C2-N3-C4	-5.69	107.75	110.60
35	HA	764	C	C6-N1-C2	-5.69	118.02	120.30
16	GP	50	ARG	CB-CG-CD	5.69	126.40	111.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	AA	1263	U	C6-N1-C2	-5.69	117.59	121.00
32	C5	108	VAL	CG1-CB-CG2	5.69	120.00	110.90
35	FA	584	G	N1-C6-O6	5.69	123.31	119.90
35	FA	1030	U	O4'-C1'-N1	5.69	112.75	108.20
16	GP	113	LEU	CA-CB-CG	5.69	128.38	115.30
35	BA	431	A	C8-N9-C4	5.68	108.07	105.80
35	BA	1279	G	O4'-C1'-N9	-5.68	103.66	108.20
3	EA	1256	G	C4-N9-C1'	5.68	133.89	126.50
35	FA	1032	G	O4'-C1'-N9	5.68	112.74	108.20
3	GA	200	U	C6-N1-C2	-5.68	117.59	121.00
3	AA	2061	G	N3-C4-N9	5.68	129.41	126.00
3	AA	1066	U	N3-C2-O2	-5.67	118.23	122.20
35	HA	1405	G	N3-C4-C5	5.67	131.44	128.60
3	AA	1979	U	C6-N1-C2	-5.67	117.60	121.00
3	CA	972	A	N1-C6-N6	-5.67	115.20	118.60
3	AA	2604	U	N3-C4-O4	-5.67	115.43	119.40
3	EA	834	G	N3-C2-N2	-5.67	115.93	119.90
32	E5	108	VAL	CA-CB-CG1	5.67	119.40	110.90
35	FA	1279	G	N7-C8-N9	5.67	115.93	113.10
35	FA	1528	U	O5'-P-OP2	-5.67	100.60	105.70
3	AA	1088	A	O4'-C1'-N9	-5.67	103.67	108.20
3	AA	2501	C	N3-C4-C5	5.67	124.17	121.90
3	CA	2414	G	N1-C6-O6	5.66	123.30	119.90
3	AA	2271	G	C5-C6-O6	-5.66	125.20	128.60
3	EA	1795	C	O5'-P-OP1	-5.66	100.61	105.70
3	AA	2534	A	C5-N7-C8	-5.66	101.07	103.90
3	EA	545	U	C5-C6-N1	5.66	125.53	122.70
3	GA	460	A	C2-N3-C4	-5.66	107.77	110.60
3	GA	635	C	C2-N1-C1'	5.66	125.03	118.80
3	GA	2646	C	C6-N1-C2	-5.66	118.04	120.30
3	CA	2374	C	C6-N1-C2	5.66	122.56	120.30
3	EA	2146	C	P-O3'-C3'	5.66	126.49	119.70
35	FA	1198	G	O5'-P-OP2	5.66	117.49	110.70
3	EA	1032	A	O5'-P-OP2	-5.65	100.61	105.70
3	EA	690	G	O5'-P-OP1	-5.65	100.62	105.70
35	FA	507	C	C6-N1-C2	-5.65	118.04	120.30
52	HS	65	GLU	N-CA-C	5.65	126.25	111.00
3	EA	989	G	O5'-P-OP1	-5.64	100.62	105.70
3	EA	2616	C	C2-N1-C1'	-5.64	112.59	118.80
3	CA	1999	C	OP2-P-O3'	5.64	117.60	105.20
35	DA	468	A	C8-N9-C4	-5.64	103.55	105.80
3	EA	2250	G	C5-N7-C8	-5.64	101.48	104.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	GA	1236	G	C8-N9-C4	-5.63	104.15	106.40
3	GA	1738	G	N3-C4-C5	-5.63	125.78	128.60
35	FA	429	U	N3-C2-O2	-5.63	118.26	122.20
35	DA	976	G	O4'-C1'-N9	5.63	112.70	108.20
31	E4	14	CYS	CA-CB-SG	-5.63	103.87	114.00
3	AA	2719	G	C5-C6-N1	-5.62	108.69	111.50
3	EA	1314	C	C6-N1-C2	-5.62	118.05	120.30
3	EA	1036	G	N1-C6-O6	5.62	123.27	119.90
3	AA	1534	U	C5-C6-N1	5.62	125.51	122.70
3	EA	1142	A	N3-C4-N9	-5.62	122.91	127.40
3	CA	783	A	C6-C5-N7	-5.62	128.37	132.30
3	AA	1207	C	C6-N1-C2	-5.62	118.05	120.30
3	EA	1256	G	C8-N9-C1'	-5.62	119.70	127.00
3	EA	776	G	C8-N9-C4	-5.61	104.15	106.40
3	GA	2144	G	C4-N9-C1'	5.61	133.80	126.50
3	AA	271	G	OP1-P-O3'	5.61	117.55	105.20
35	FA	108	G	C5-C6-O6	-5.61	125.23	128.60
3	GA	1341	G	N3-C4-C5	-5.61	125.80	128.60
42	HI	18	ARG	NE-CZ-NH1	-5.61	117.50	120.30
35	BA	1493	A	P-O3'-C3'	5.61	126.43	119.70
1	EB	16	G	C5-C6-O6	-5.61	125.23	128.60
35	HA	461	A	O4'-C1'-N9	5.61	112.69	108.20
35	DA	1158	C	C2-N1-C1'	5.61	124.97	118.80
3	AA	2719	G	N1-C6-O6	5.60	123.26	119.90
3	CA	783	A	C4-C5-N7	5.60	113.50	110.70
35	FA	1302	C	N1-C2-N3	-5.60	115.28	119.20
3	GA	2719	G	C5-C6-N1	-5.60	108.70	111.50
3	AA	1157	G	N1-C6-O6	5.60	123.26	119.90
35	FA	1306	A	O5'-P-OP2	5.60	117.42	110.70
3	GA	974	G	O4'-C1'-N9	5.60	112.68	108.20
35	BA	1362	A	C2-N3-C4	5.60	113.40	110.60
3	GA	1730	C	O4'-C1'-N1	5.60	112.68	108.20
35	HA	733	G	N3-C4-N9	-5.60	122.64	126.00
3	AA	1073	A	C4-N9-C1'	-5.59	116.23	126.30
3	EA	2447	G	N1-C2-N3	5.59	127.26	123.90
35	FA	887	G	C4-N9-C1'	-5.59	119.23	126.50
3	AA	1198	U	O5'-P-OP2	-5.59	100.67	105.70
35	BA	1359	C	N1-C2-O2	5.59	122.25	118.90
32	C5	117	LEU	C-N-CA	5.59	135.67	121.70
35	HA	538	G	O5'-P-OP1	-5.59	100.67	105.70
3	CA	984	A	N1-C2-N3	5.58	132.09	129.30
3	EA	2038	G	C5-C6-N1	-5.58	108.71	111.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	AA	209	C	C6-N1-C2	5.58	122.53	120.30
3	AA	626	A	N1-C6-N6	5.58	121.95	118.60
35	FA	1516	G	C8-N9-C4	5.58	108.63	106.40
3	AA	1153	C	N1-C2-O2	-5.58	115.55	118.90
35	FA	1302	C	C6-N1-C2	5.58	122.53	120.30
3	EA	1022	G	N1-C6-O6	-5.57	116.56	119.90
35	BA	1362	A	C5-C6-N1	5.57	120.49	117.70
35	DA	1136	C	C6-N1-C2	-5.57	118.07	120.30
35	HA	733	G	C6-C5-N7	5.57	133.74	130.40
3	AA	2544	G	C6-C5-N7	-5.57	127.06	130.40
3	EA	1142	A	N3-C4-C5	5.57	130.70	126.80
3	EA	2276	G	C2-N3-C4	-5.57	109.12	111.90
3	EA	2747	G	N1-C6-O6	5.57	123.24	119.90
35	FA	1510	C	N1-C2-O2	-5.57	115.56	118.90
3	CA	1025	G	P-O3'-C3'	5.57	126.38	119.70
3	CA	2053	G	C2-N3-C4	-5.56	109.12	111.90
3	GA	864	G	N3-C4-C5	-5.56	125.82	128.60
19	GS	88	ARG	NE-CZ-NH1	-5.56	117.52	120.30
35	BA	1519	A	C4-C5-C6	5.56	119.78	117.00
35	DA	1322	C	C2-N1-C1'	5.56	124.92	118.80
3	GA	2076	U	C2-N1-C1'	5.56	124.38	117.70
3	GA	2502	G	O5'-P-OP2	-5.56	100.69	105.70
3	CA	974	G	N3-C4-N9	5.56	129.34	126.00
1	GB	86	G	O5'-P-OP2	5.56	117.37	110.70
3	GA	1145	C	C6-N1-C2	-5.56	118.08	120.30
3	AA	1509	A	P-O3'-C3'	5.56	126.37	119.70
35	HA	1517	G	C4-C5-C6	5.56	122.14	118.80
3	CA	882	G	P-O3'-C3'	5.56	126.37	119.70
3	EA	836	G	C4-C5-N7	5.56	113.02	110.80
3	EA	203	A	N1-C6-N6	5.55	121.93	118.60
17	GQ	91	ARG	NE-CZ-NH2	5.55	123.08	120.30
3	EA	2326	C	C6-N1-C2	-5.55	118.08	120.30
3	AA	1192	G	N9-C4-C5	-5.55	103.18	105.40
3	GA	2211	A	P-O3'-C3'	5.55	126.36	119.70
35	HA	1086	U	C2-N1-C1'	5.55	124.36	117.70
3	GA	939	G	N1-C6-O6	5.54	123.23	119.90
3	CA	2105	U	C5-C6-N1	5.54	125.47	122.70
3	GA	335	C	C6-N1-C2	-5.54	118.08	120.30
3	EA	2061	G	C6-C5-N7	-5.54	127.08	130.40
3	EA	1006	C	N1-C2-O2	-5.54	115.58	118.90
3	AA	2053	G	N3-C2-N2	-5.54	116.02	119.90
3	CA	834	G	C4-C5-N7	5.54	113.02	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	AA	1125	G	C6-C5-N7	-5.53	127.08	130.40
7	CG	86	LEU	CA-CB-CG	5.53	128.03	115.30
3	EA	2030	A	C4-C5-N7	-5.53	107.93	110.70
3	GA	2482	A	C8-N9-C4	-5.53	103.59	105.80
3	GA	822	G	C4-N9-C1'	5.53	133.69	126.50
40	HG	118	LEU	CB-CG-CD1	-5.53	101.60	111.00
3	EA	2239	G	N1-C6-O6	5.53	123.22	119.90
35	BA	1410	A	N1-C6-N6	-5.53	115.28	118.60
35	DA	80	A	C8-N9-C4	-5.53	103.59	105.80
3	AA	2326	C	C5-C4-N4	-5.53	116.33	120.20
3	AA	984	A	C5-C6-N1	-5.52	114.94	117.70
32	C5	50	VAL	CA-CB-CG1	5.52	119.19	110.90
35	HA	703	G	N3-C2-N2	5.52	123.77	119.90
3	AA	1611	C	N1-C2-O2	-5.52	115.59	118.90
35	BA	237	G	C8-N9-C4	5.52	108.61	106.40
35	FA	1221	G	C8-N9-C4	5.52	108.61	106.40
35	FA	976	G	C4-C5-C6	5.52	122.11	118.80
3	GA	1248	G	N3-C4-N9	5.52	129.31	126.00
35	BA	844	G	C8-N9-C1'	-5.51	119.83	127.00
3	AA	2146	C	C6-N1-C2	-5.51	118.10	120.30
3	EA	1777	U	O5'-P-OP2	-5.51	100.74	105.70
3	EA	2038	G	C6-C5-N7	-5.51	127.09	130.40
35	HA	1219	A	C2-N3-C4	5.51	113.35	110.60
3	CA	1069	A	OP2-P-O3'	5.51	117.32	105.20
35	FA	1342	C	C6-N1-C2	5.51	122.50	120.30
3	GA	2893	A	C8-N9-C4	5.51	108.00	105.80
3	AA	1069	A	O4'-C1'-N9	5.50	112.60	108.20
3	EA	2143	C	P-O3'-C3'	5.50	126.30	119.70
3	EA	2551	C	OP2-P-O3'	5.50	117.31	105.20
3	GA	1087	G	C8-N9-C4	-5.50	104.20	106.40
3	EA	2038	G	C8-N9-C4	-5.50	104.20	106.40
35	BA	351	G	C4-C5-N7	5.50	113.00	110.80
3	EA	2048	G	O5'-P-OP2	-5.50	100.75	105.70
3	EA	2617	U	N3-C2-O2	-5.50	118.35	122.20
35	BA	1359	C	C6-N1-C2	5.50	122.50	120.30
3	EA	338	G	C8-N9-C4	-5.50	104.20	106.40
35	FA	887	G	C8-N9-C1'	5.49	134.14	127.00
35	HA	1304	G	C8-N9-C4	-5.49	104.20	106.40
35	DA	1493	A	P-O3'-C3'	5.49	126.28	119.70
3	AA	55	G	C5-C6-O6	-5.49	125.31	128.60
35	FA	1279	G	C4-N9-C1'	5.48	133.63	126.50
3	AA	29	U	OP2-P-O3'	5.48	117.26	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	DA	70	U	C5-C6-N1	5.48	125.44	122.70
35	DA	82	G	C2-N3-C4	5.48	114.64	111.90
3	GA	459	U	C5-C4-O4	-5.48	122.61	125.90
3	GA	1032	A	O4'-C1'-N9	5.48	112.58	108.20
3	AA	989	G	O4'-C1'-N9	5.48	112.58	108.20
3	AA	2689	U	N3-C4-O4	-5.48	115.57	119.40
35	HA	184	G	N3-C4-C5	-5.47	125.86	128.60
3	CA	130	C	C6-N1-C2	5.47	122.49	120.30
3	EA	1992	G	O4'-C1'-N9	-5.47	103.82	108.20
35	FA	1068	G	C8-N9-C4	-5.47	104.21	106.40
35	FA	1495	U	N3-C2-O2	-5.47	118.37	122.20
3	CA	66	C	C6-N1-C2	-5.47	118.11	120.30
2	CC	140	VAL	N-CA-C	5.47	125.76	111.00
35	BA	913	A	P-O3'-C3'	5.46	126.26	119.70
1	EB	88	C	N1-C2-O2	5.46	122.18	118.90
1	AB	80	U	N1-C2-N3	5.46	118.18	114.90
3	AA	672	C	N1-C2-O2	5.46	122.18	118.90
35	FA	661	G	C8-N9-C4	-5.46	104.22	106.40
3	AA	2439	A	N1-C6-N6	5.46	121.88	118.60
3	AA	2446	G	OP2-P-O3'	5.46	117.21	105.20
3	GA	1601	G	C8-N9-C4	-5.46	104.22	106.40
35	BA	115	G	N3-C4-C5	-5.46	125.87	128.60
3	EA	856	G	N3-C4-C5	-5.45	125.87	128.60
3	EA	1605	C	C6-N1-C2	-5.45	118.12	120.30
35	FA	988	G	C8-N9-C4	-5.45	104.22	106.40
18	GR	83	TYR	CB-CG-CD1	5.45	124.27	121.00
3	AA	1027	A	O4'-C1'-N9	-5.45	103.84	108.20
3	EA	2250	G	N3-C4-N9	-5.45	122.73	126.00
3	AA	2353	G	N1-C6-O6	-5.45	116.63	119.90
3	EA	84	A	N1-C6-N6	-5.45	115.33	118.60
3	GA	1458	U	P-O3'-C3'	5.44	126.23	119.70
3	AA	2544	G	N1-C6-O6	5.44	123.17	119.90
3	CA	1839	G	C4-N9-C1'	5.44	133.57	126.50
3	EA	737	C	N3-C4-N4	5.43	121.81	118.00
3	GA	736	C	C6-N1-C2	5.43	122.47	120.30
3	AA	2244	U	C5-C4-O4	-5.43	122.64	125.90
3	AA	2604	U	C5-C4-O4	5.43	129.16	125.90
3	CA	548	G	C8-N9-C4	-5.43	104.23	106.40
3	GA	939	G	C5-C6-N1	-5.43	108.78	111.50
3	AA	1229	C	C6-N1-C2	5.43	122.47	120.30
3	AA	2282	G	C8-N9-C4	-5.43	104.23	106.40
3	CA	528	A	C5-N7-C8	-5.43	101.19	103.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	DA	272	C	C6-N1-C2	-5.43	118.13	120.30
35	DA	906	A	N1-C6-N6	-5.43	115.34	118.60
3	AA	1430	G	N1-C6-O6	5.42	123.16	119.90
3	AA	2250	G	C2-N3-C4	-5.42	109.19	111.90
35	FA	372	C	C6-N1-C2	5.42	122.47	120.30
3	AA	451	U	O4'-C1'-N1	5.42	112.54	108.20
3	AA	2353	G	C2-N3-C4	5.42	114.61	111.90
35	DA	944	G	N3-C4-C5	5.42	131.31	128.60
3	EA	31	C	O5'-P-OP2	-5.42	100.82	105.70
2	EC	233	GLY	N-CA-C	-5.42	99.56	113.10
3	GA	503	A	P-O3'-C3'	5.42	126.20	119.70
3	GA	577	G	C8-N9-C1'	-5.42	119.96	127.00
3	CA	1573	G	C4-N9-C1'	-5.42	119.46	126.50
3	AA	598	U	OP2-P-O3'	5.41	117.11	105.20
3	CA	1839	G	C5-C6-N1	-5.41	108.80	111.50
3	AA	1759	A	N1-C6-N6	5.41	121.84	118.60
3	CA	271	G	P-O3'-C3'	5.41	126.19	119.70
3	AA	532	A	C8-N9-C4	-5.41	103.64	105.80
3	EA	1458	U	P-O3'-C3'	5.41	126.19	119.70
3	AA	1073	A	C8-N9-C1'	5.40	137.43	127.70
3	AA	2271	G	N1-C6-O6	5.40	123.14	119.90
35	FA	1137	C	N3-C2-O2	-5.40	118.12	121.90
3	EA	268	C	N3-C4-N4	5.40	121.78	118.00
3	EA	542	C	C2-N3-C4	5.40	122.60	119.90
35	FA	735	C	O5'-P-OP2	-5.40	100.84	105.70
3	GA	790	U	C5-C4-O4	5.40	129.14	125.90
3	GA	1194	A	C5-N7-C8	-5.40	101.20	103.90
3	AA	1129	A	O5'-P-OP1	-5.40	100.84	105.70
3	AA	1190	G	C5-N7-C8	-5.40	101.60	104.30
3	EA	2584	U	C5-C4-O4	-5.40	122.66	125.90
35	FA	330	C	C6-N1-C2	5.40	122.46	120.30
32	C5	60	LEU	CB-CG-CD1	5.40	120.17	111.00
3	EA	2504	U	O5'-P-OP1	-5.39	100.84	105.70
35	BA	481	G	C4-N9-C1'	-5.39	119.49	126.50
3	AA	1311	G	N7-C8-N9	5.39	115.80	113.10
3	EA	1934	C	C2-N1-C1'	-5.39	112.87	118.80
35	FA	976	G	N3-C4-C5	-5.39	125.91	128.60
3	CA	2146	C	O4'-C1'-N1	5.39	112.51	108.20
3	GA	864	G	C8-N9-C4	-5.39	104.25	106.40
3	GA	2483	C	C6-N1-C2	-5.39	118.14	120.30
35	HA	250	A	P-O3'-C3'	5.39	126.16	119.70
3	AA	2153	C	O4'-C1'-N1	5.38	112.50	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	EA	528	A	N1-C2-N3	5.38	131.99	129.30
3	EA	1073	A	O5'-P-OP2	5.38	117.16	110.70
35	BA	976	G	C5-C6-O6	5.38	131.83	128.60
35	HA	845	A	O4'-C1'-N9	-5.38	103.90	108.20
3	GA	2146	C	N3-C2-O2	-5.38	118.14	121.90
3	GA	527	C	P-O3'-C3'	5.37	126.15	119.70
3	AA	1950	G	C8-N9-C1'	-5.37	120.02	127.00
3	AA	1420	A	O4'-C1'-N9	5.37	112.50	108.20
3	AA	1970	A	C8-N9-C4	-5.37	103.65	105.80
3	AA	1350	C	C6-N1-C2	5.37	122.45	120.30
35	DA	250	A	P-O3'-C3'	5.37	126.14	119.70
3	EA	2286	G	C2-N3-C4	-5.37	109.22	111.90
3	CA	2456	C	O5'-P-OP2	-5.36	100.87	105.70
3	GA	2423	U	O4'-C1'-N1	-5.36	103.91	108.20
35	BA	1301	U	O5'-P-OP2	-5.36	100.88	105.70
3	EA	236	C	N1-C2-O2	-5.36	115.68	118.90
3	GA	200	U	N1-C2-N3	5.36	118.12	114.90
3	AA	2015	A	N1-C6-N6	-5.36	115.38	118.60
35	BA	1241	G	C5-C6-O6	5.36	131.81	128.60
35	FA	1239	A	O4'-C1'-N9	5.35	112.48	108.20
3	AA	250	G	O5'-P-OP2	-5.35	100.89	105.70
1	EB	88	C	C2-N1-C1'	5.35	124.68	118.80
3	AA	1025	G	C8-N9-C4	-5.35	104.26	106.40
35	BA	328	C	C2-N1-C1'	5.35	124.68	118.80
3	GA	1840	G	C4-N9-C1'	5.35	133.45	126.50
35	HA	527	G	C4-N9-C1'	-5.35	119.55	126.50
3	EA	2265	U	N3-C2-O2	-5.35	118.46	122.20
35	FA	1370	G	C5-C6-N1	-5.35	108.83	111.50
3	AA	2355	G	C8-N9-C4	5.34	108.54	106.40
3	EA	1378	A	P-O3'-C3'	5.34	126.11	119.70
3	GA	1952	A	N9-C4-C5	5.34	107.94	105.80
3	AA	677	A	OP1-P-O3'	5.34	116.95	105.20
3	AA	2723	C	C6-N1-C2	-5.34	118.16	120.30
35	DA	115	G	N3-C4-C5	-5.34	125.93	128.60
3	AA	837	C	N1-C2-O2	-5.34	115.69	118.90
3	GA	1192	G	C4-N9-C1'	5.34	133.44	126.50
3	GA	2429	G	C5-C6-O6	-5.34	125.39	128.60
16	AP	113	LEU	CA-CB-CG	5.34	127.58	115.30
35	BA	844	G	N3-C4-N9	5.34	129.20	126.00
35	HA	1452	C	P-O3'-C3'	5.34	126.11	119.70
3	AA	2608	G	C2-N3-C4	-5.34	109.23	111.90
35	DA	1066	C	C6-N1-C2	-5.34	118.17	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	EA	2687	U	C2-N1-C1'	-5.34	111.30	117.70
3	CA	974	G	N7-C8-N9	5.33	115.77	113.10
5	GE	114	ARG	NE-CZ-NH1	-5.33	117.63	120.30
3	GA	200	U	C2-N1-C1'	5.33	124.10	117.70
3	GA	2423	U	P-O3'-C3'	5.33	126.10	119.70
3	EA	983	A	N1-C6-N6	5.33	121.80	118.60
3	CA	974	G	C5-N7-C8	-5.33	101.64	104.30
3	CA	2250	G	C4-C5-N7	5.33	112.93	110.80
3	EA	542	C	C6-N1-C2	-5.33	118.17	120.30
3	EA	2470	G	N1-C6-O6	-5.33	116.70	119.90
3	AA	548	G	N3-C4-C5	-5.33	125.94	128.60
3	AA	1206	G	N3-C4-C5	-5.32	125.94	128.60
3	AA	2571	U	C2-N1-C1'	-5.32	111.31	117.70
3	AA	2704	C	C6-N1-C2	5.32	122.43	120.30
3	EA	1930	G	C8-N9-C4	5.32	108.53	106.40
35	FA	861	G	N1-C6-O6	5.32	123.09	119.90
3	GA	1830	C	N3-C2-O2	-5.32	118.17	121.90
35	DA	1455	G	C5-C6-O6	-5.32	125.41	128.60
3	EA	184	C	N1-C2-O2	-5.32	115.71	118.90
3	AA	2263	C	N3-C4-C5	-5.32	119.77	121.90
35	FA	1336	C	C2-N1-C1'	5.31	124.64	118.80
35	FA	6	G	O5'-P-OP2	-5.31	100.92	105.70
3	CA	651	G	C6-C5-N7	-5.31	127.22	130.40
3	GA	1131	G	N3-C4-C5	-5.31	125.95	128.60
3	CA	2465	C	OP2-P-O3'	5.31	116.87	105.20
3	AA	84	A	N1-C6-N6	-5.30	115.42	118.60
32	A5	50	VAL	CG1-CB-CG2	5.30	119.39	110.90
35	BA	1526	G	O5'-P-OP1	-5.30	100.93	105.70
3	GA	2154	A	N1-C6-N6	5.30	121.78	118.60
35	HA	1001	C	C6-N1-C2	-5.30	118.18	120.30
35	DA	701	U	P-O3'-C3'	5.30	126.06	119.70
35	FA	250	A	P-O3'-C3'	5.30	126.06	119.70
3	GA	1187	G	N3-C4-N9	5.30	129.18	126.00
35	DA	207	C	C6-N1-C2	-5.30	118.18	120.30
3	EA	2052	A	N1-C6-N6	-5.30	115.42	118.60
3	EA	2614	A	O5'-P-OP2	-5.30	100.93	105.70
35	FA	1043	G	C4-C5-N7	-5.30	108.68	110.80
3	AA	1565	C	C6-N1-C2	-5.30	118.18	120.30
3	EA	2307	G	C5-C6-O6	-5.30	125.42	128.60
32	E5	50	VAL	CG1-CB-CG2	5.30	119.38	110.90
3	AA	1355	G	C8-N9-C4	-5.30	104.28	106.40
35	DA	1448	C	N3-C4-N4	5.30	121.71	118.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	GA	1651	G	N1-C6-O6	5.30	123.08	119.90
35	HA	1293	C	N1-C1'-C2'	-5.30	106.17	112.00
35	BA	976	G	C4-C5-N7	-5.29	108.68	110.80
3	EA	2432	A	O5'-P-OP1	-5.29	100.93	105.70
35	HA	779	C	C5-C6-N1	5.29	123.65	121.00
3	AA	1831	G	C8-N9-C4	-5.29	104.28	106.40
3	GA	1081	U	C5-C4-O4	-5.29	122.72	125.90
3	GA	1438	U	C5-C6-N1	5.29	125.35	122.70
32	A5	131	THR	N-CA-C	-5.29	96.71	111.00
3	EA	2563	U	N3-C4-O4	-5.29	115.70	119.40
3	GA	822	G	C6-C5-N7	-5.29	127.23	130.40
3	GA	2719	G	N1-C6-O6	5.29	123.07	119.90
3	AA	2071	A	OP2-P-O3'	5.29	116.83	105.20
3	AA	2250	G	N7-C8-N9	5.28	115.74	113.10
3	EA	2744	G	OP2-P-O3'	5.28	116.82	105.20
35	FA	110	C	C6-N1-C2	-5.28	118.19	120.30
35	HA	1403	C	N3-C4-C5	-5.28	119.79	121.90
3	GA	4	U	N3-C4-O4	5.28	123.10	119.40
3	AA	2470	G	OP2-P-O3'	5.28	116.82	105.20
3	GA	460	A	C5-C6-N1	-5.28	115.06	117.70
35	HA	771	G	O5'-P-OP2	-5.28	100.95	105.70
3	CA	783	A	N1-C6-N6	5.28	121.77	118.60
3	GA	971	G	N3-C4-C5	-5.28	125.96	128.60
3	GA	742	A	N1-C6-N6	-5.27	115.44	118.60
3	AA	1458	U	P-O3'-C3'	5.27	126.03	119.70
35	BA	572	A	N1-C6-N6	-5.27	115.44	118.60
3	AA	2685	G	C5-C6-N1	-5.27	108.86	111.50
3	AA	518	G	O5'-P-OP1	-5.27	100.96	105.70
3	AA	776	G	C4-N9-C1'	5.27	133.35	126.50
3	AA	1533	C	C5-C6-N1	5.26	123.63	121.00
3	EA	1355	G	C5-C6-N1	-5.26	108.87	111.50
3	AA	1131	G	OP1-P-O3'	5.26	116.78	105.20
35	BA	108	G	C4-C5-N7	5.26	112.91	110.80
3	AA	2501	C	C6-N1-C1'	5.26	127.11	120.80
3	EA	194	G	C2-N3-C4	-5.26	109.27	111.90
3	EA	1936	A	C6-N1-C2	-5.26	115.44	118.60
35	HA	975	A	O4'-C1'-N9	5.26	112.41	108.20
3	AA	1943	U	C5-C4-O4	5.26	129.05	125.90
32	A5	50	VAL	CA-CB-CG1	5.26	118.78	110.90
3	CA	2179	C	C6-N1-C2	-5.26	118.20	120.30
3	AA	1824	G	N9-C4-C5	5.25	107.50	105.40
3	GA	2307	G	O4'-C1'-N9	5.25	112.40	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	GE	114	ARG	NE-CZ-NH2	5.25	122.93	120.30
35	BA	250	A	P-O3'-C3'	5.25	126.00	119.70
35	FA	1201	A	P-O3'-C3'	5.25	126.00	119.70
3	EA	984	A	N1-C2-N3	5.25	131.93	129.30
35	BA	912	C	N3-C4-N4	5.25	121.67	118.00
35	FA	976	G	C5-C6-N1	-5.25	108.88	111.50
3	GA	528	A	C2-N3-C4	-5.25	107.98	110.60
3	EA	974	G	O4'-C1'-N9	5.25	112.40	108.20
3	EA	1069	A	OP2-P-O3'	5.25	116.74	105.20
3	CA	1174	U	N1-C2-O2	5.24	126.47	122.80
20	ET	29	THR	N-CA-C	5.24	125.16	111.00
3	GA	125	A	O4'-C1'-N9	5.24	112.40	108.20
3	GA	226	A	C8-N9-C4	-5.24	103.70	105.80
24	AX	29	LEU	CA-CB-CG	5.24	127.36	115.30
35	FA	969	A	OP1-P-O3'	5.24	116.73	105.20
3	AA	748	G	C4-C5-N7	-5.24	108.70	110.80
3	EA	2797	U	O4'-C1'-N1	5.24	112.39	108.20
3	GA	2523	G	C5-C6-O6	-5.24	125.46	128.60
3	AA	991	C	C6-N1-C2	-5.24	118.20	120.30
35	BA	1057	G	N1-C6-O6	-5.24	116.76	119.90
3	CA	1256	G	C4-N9-C1'	5.24	133.31	126.50
3	CA	1373	A	C8-N9-C4	-5.24	103.71	105.80
3	EA	1024	G	C5-N7-C8	-5.24	101.68	104.30
55	BV	93	VAL	N-CA-C	-5.23	96.87	111.00
35	FA	247	G	N1-C6-O6	-5.23	116.76	119.90
35	FA	577	G	C2-N3-C4	-5.23	109.28	111.90
3	AA	940	G	N1-C6-O6	5.23	123.04	119.90
3	AA	2825	G	N3-C4-N9	5.23	129.14	126.00
3	EA	972	A	O5'-P-OP2	-5.23	100.99	105.70
26	AZ	15	ARG	NE-CZ-NH1	5.23	122.92	120.30
35	HA	776	G	C8-N9-C4	-5.23	104.31	106.40
3	AA	2037	A	N9-C4-C5	5.23	107.89	105.80
3	AA	2618	G	C5-C6-N1	-5.23	108.89	111.50
3	CA	1947	C	C6-N1-C2	5.23	122.39	120.30
35	HA	1304	G	N7-C8-N9	5.23	115.71	113.10
3	EA	2543	G	C4-C5-N7	5.23	112.89	110.80
3	AA	2537	U	C5-C4-O4	5.22	129.03	125.90
3	CA	1509	A	P-O3'-C3'	5.22	125.97	119.70
35	HA	689	C	C6-N1-C2	-5.22	118.21	120.30
35	DA	395	C	C6-N1-C2	-5.22	118.21	120.30
3	AA	1264	A	O5'-P-OP1	-5.22	101.00	105.70
35	BA	1370	G	N3-C2-N2	-5.22	116.25	119.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
35	HA	333	U	O5'-P-OP2	-5.22	101.00	105.70
3	AA	916	G	C6-C5-N7	-5.22	127.27	130.40
17	AQ	63	ARG	NE-CZ-NH2	-5.22	117.69	120.30
3	EA	512	G	O4'-C1'-N9	5.22	112.37	108.20
3	EA	677	A	O5'-P-OP1	-5.22	101.00	105.70
3	EA	855	G	C8-N9-C4	-5.22	104.31	106.40
3	GA	856	G	C8-N9-C1'	-5.22	120.22	127.00
35	BA	1201	A	P-O3'-C3'	5.21	125.96	119.70
3	GA	864	G	C4-N9-C1'	5.21	133.28	126.50
35	BA	134	G	N1-C2-N2	-5.21	111.51	116.20
3	AA	733	G	C8-N9-C4	-5.21	104.32	106.40
3	AA	1446	C	C6-N1-C2	-5.21	118.22	120.30
3	EA	1823	G	C8-N9-C4	-5.20	104.32	106.40
35	FA	1136	C	C6-N1-C1'	-5.20	114.56	120.80
51	HR	43	ARG	NE-CZ-NH2	5.20	122.90	120.30
3	AA	833	A	C8-N9-C4	-5.20	103.72	105.80
3	EA	808	G	O5'-P-OP2	-5.20	101.02	105.70
3	EA	2561	U	N3-C4-O4	5.20	123.04	119.40
3	EA	456	C	C6-N1-C2	-5.20	118.22	120.30
3	EA	1533	C	C2-N1-C1'	5.20	124.52	118.80
3	EA	1786	A	O4'-C1'-N9	5.20	112.36	108.20
3	GA	818	G	N3-C4-N9	5.20	129.12	126.00
35	HA	1302	C	N1-C2-O2	5.20	122.02	118.90
3	AA	404	A	C8-N9-C4	-5.20	103.72	105.80
3	AA	1025	G	N3-C4-C5	-5.20	126.00	128.60
3	GA	1216	G	C8-N9-C4	-5.20	104.32	106.40
35	BA	931	C	C5-C4-N4	5.19	123.83	120.20
35	BA	890	G	O5'-P-OP1	5.19	116.93	110.70
3	EA	534	U	O5'-P-OP1	-5.19	101.03	105.70
3	GA	1193	G	C8-N9-C4	-5.19	104.32	106.40
3	EA	2608	G	OP2-P-O3'	5.19	116.61	105.20
1	EB	30	C	O5'-P-OP1	-5.19	101.03	105.70
3	GA	1780	A	C8-N9-C4	5.19	107.88	105.80
35	HA	596	A	O4'-C1'-N9	-5.19	104.05	108.20
3	AA	2584	U	N3-C4-O4	5.19	123.03	119.40
35	DA	1493	A	O5'-P-OP1	-5.18	101.03	105.70
3	EA	2238	G	C5-C6-O6	-5.18	125.49	128.60
35	BA	326	G	N3-C4-N9	-5.18	122.89	126.00
3	AA	1936	A	N3-C4-C5	5.18	130.43	126.80
3	GA	638	G	N3-C2-N2	-5.18	116.27	119.90
35	BA	52	C	O5'-P-OP2	-5.18	101.04	105.70
35	FA	1279	G	C6-C5-N7	-5.18	127.29	130.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	AA	2534	A	C5-C6-N6	-5.18	119.56	123.70
3	EA	187	G	C6-C5-N7	-5.18	127.29	130.40
35	FA	859	G	N3-C4-C5	-5.18	126.01	128.60
35	HA	733	G	C8-N9-C1'	5.18	133.73	127.00
3	GA	2238	G	C5-C6-O6	-5.17	125.50	128.60
3	GA	2689	U	C5-C4-O4	5.17	129.00	125.90
3	EA	921	C	C6-N1-C2	-5.17	118.23	120.30
3	CA	1963	U	N1-C2-O2	5.17	126.42	122.80
35	DA	1063	C	C6-N1-C2	-5.17	118.23	120.30
3	EA	595	C	C6-N1-C2	5.17	122.37	120.30
3	EA	963	U	N3-C2-O2	5.17	125.82	122.20
3	GA	972	A	N1-C6-N6	-5.17	115.50	118.60
35	BA	351	G	C5-N7-C8	-5.17	101.72	104.30
3	AA	454	A	O5'-P-OP2	-5.17	101.05	105.70
3	EA	271	G	OP1-P-O3'	5.17	116.56	105.20
3	EA	2053	G	C6-C5-N7	-5.17	127.30	130.40
3	AA	119	A	P-O3'-C3'	5.17	125.90	119.70
3	AA	1684	G	N3-C4-C5	-5.16	126.02	128.60
3	EA	2239	G	C6-C5-N7	-5.16	127.31	130.40
35	FA	1501	C	N3-C2-O2	-5.16	118.29	121.90
35	HA	1496	C	C2-N1-C1'	5.16	124.47	118.80
3	GA	1620	G	N3-C4-C5	5.16	131.18	128.60
3	AA	2368	C	C6-N1-C2	5.15	122.36	120.30
3	EA	953	G	O5'-P-OP2	-5.15	101.06	105.70
3	GA	2053	G	N3-C4-C5	5.15	131.18	128.60
26	EZ	15	ARG	NE-CZ-NH2	-5.15	117.72	120.30
3	EA	2265	U	C2-N1-C1'	5.15	123.88	117.70
3	AA	1238	G	O5'-P-OP2	-5.15	101.07	105.70
3	AA	2015	A	N9-C4-C5	5.15	107.86	105.80
32	A5	130	PRO	CA-N-CD	-5.15	104.29	111.50
3	CA	2700	A	N1-C6-N6	5.15	121.69	118.60
3	GA	1900	A	C8-N9-C4	-5.15	103.74	105.80
35	HA	741	G	O4'-C1'-N9	5.15	112.32	108.20
3	AA	776	G	C4-C5-C6	5.14	121.89	118.80
3	AA	2518	A	N1-C6-N6	5.14	121.69	118.60
3	CA	528	A	C5-C6-N1	-5.14	115.13	117.70
3	CA	2723	C	C6-N1-C2	-5.14	118.24	120.30
3	GA	1189	A	N9-C4-C5	5.14	107.86	105.80
3	GA	2069	G	N3-C4-C5	5.14	131.17	128.60
3	GA	2467	C	N3-C2-O2	-5.14	118.30	121.90
44	FK	125	LYS	CD-CE-NZ	5.14	123.53	111.70
3	GA	855	G	N3-C4-C5	-5.14	126.03	128.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	AA	2422	C	N1-C2-O2	5.14	121.98	118.90
35	BA	319	G	C4-N9-C1'	-5.14	119.82	126.50
35	BA	1241	G	N3-C4-N9	-5.14	122.92	126.00
3	EA	2538	C	C6-N1-C2	5.14	122.36	120.30
3	EA	1738	G	C2-N3-C4	5.14	114.47	111.90
3	AA	1395	A	O4'-C1'-N9	5.14	112.31	108.20
35	BA	467	U	P-O3'-C3'	5.14	125.86	119.70
3	EA	984	A	C4-C5-N7	5.14	113.27	110.70
3	GA	2107	G	O4'-C1'-N9	-5.14	104.09	108.20
3	GA	2307	G	C5-C6-O6	5.14	131.68	128.60
3	CA	496	G	N3-C4-C5	5.13	131.17	128.60
3	GA	759	G	N1-C6-O6	5.13	122.98	119.90
35	FA	95	C	C6-N1-C2	-5.13	118.25	120.30
3	GA	2144	G	N3-C4-C5	-5.13	126.03	128.60
3	CA	2580	U	C5-C6-N1	5.13	125.26	122.70
50	DQ	6	ARG	NE-CZ-NH2	-5.13	117.74	120.30
3	GA	1916	A	C8-N9-C4	5.13	107.85	105.80
3	AA	1122	G	N3-C4-N9	-5.12	122.92	126.00
35	FA	1203	C	O5'-P-OP2	-5.12	101.09	105.70
3	EA	2076	U	N3-C2-O2	-5.12	118.61	122.20
35	FA	95	C	N1-C2-O2	5.12	121.97	118.90
35	FA	875	U	O5'-P-OP2	-5.12	101.09	105.70
3	AA	1355	G	N3-C2-N2	-5.12	116.31	119.90
3	AA	1639	C	C6-N1-C2	5.12	122.35	120.30
35	BA	479	U	O4'-C1'-N1	5.12	112.30	108.20
20	ET	7	LEU	CA-CB-CG	5.12	127.08	115.30
3	AA	1659	G	N3-C4-C5	5.12	131.16	128.60
3	AA	1524	G	C8-N9-C4	-5.12	104.35	106.40
3	EA	2546	U	N3-C2-O2	5.12	125.78	122.20
3	AA	1928	A	N1-C6-N6	5.12	121.67	118.60
3	GA	1840	G	C6-C5-N7	-5.11	127.33	130.40
35	FA	530	G	C8-N9-C4	-5.11	104.36	106.40
3	AA	1452	G	C4-C5-N7	5.11	112.84	110.80
35	FA	583	A	N9-C4-C5	5.11	107.84	105.80
35	HA	597	G	C8-N9-C4	-5.11	104.36	106.40
35	DA	1173	U	C5-C6-N1	5.11	125.25	122.70
3	EA	832	U	O5'-P-OP2	5.11	116.83	110.70
3	AA	2443	C	C6-N1-C2	-5.11	118.26	120.30
3	CA	1839	G	C5-C6-O6	-5.11	125.53	128.60
3	CA	2501	C	C2-N1-C1'	-5.11	113.18	118.80
3	EA	2256	G	N3-C4-N9	5.11	129.06	126.00
3	EA	2043	C	C6-N1-C2	5.11	122.34	120.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	CA	1069	A	C8-N9-C4	5.10	107.84	105.80
3	AA	699	A	N1-C6-N6	5.10	121.66	118.60
3	AA	752	A	C2-N3-C4	-5.10	108.05	110.60
35	BA	579	A	OP2-P-O3'	5.10	116.43	105.20
35	BA	869	G	C5-C6-O6	-5.10	125.54	128.60
22	AV	61	LEU	CA-CB-CG	5.10	127.03	115.30
1	GB	97	C	C6-N1-C2	-5.10	118.26	120.30
3	AA	807	U	N3-C4-O4	5.10	122.97	119.40
3	CA	1256	G	C8-N9-C4	-5.10	104.36	106.40
3	GA	2523	G	N1-C6-O6	5.10	122.96	119.90
35	DA	207	C	N3-C2-O2	-5.10	118.33	121.90
3	EA	375	G	C5-C6-N1	-5.10	108.95	111.50
3	EA	951	C	OP2-P-O3'	5.10	116.42	105.20
1	GB	33	G	N1-C6-O6	-5.10	116.84	119.90
3	CA	974	G	N9-C4-C5	-5.10	103.36	105.40
35	DA	313	A	N1-C6-N6	-5.10	115.54	118.60
3	AA	465	G	C4-C5-C6	5.09	121.86	118.80
35	BA	345	C	O5'-P-OP1	-5.09	101.11	105.70
3	CA	433	C	N3-C2-O2	-5.09	118.33	121.90
3	CA	469	G	C5-C6-O6	-5.09	125.54	128.60
3	CA	651	G	C5-C6-O6	-5.09	125.54	128.60
3	EA	855	G	C4-N9-C1'	5.09	133.12	126.50
35	FA	1418	A	N9-C4-C5	5.09	107.84	105.80
3	AA	376	G	C6-C5-N7	-5.09	127.34	130.40
3	AA	984	A	N1-C2-N3	5.09	131.85	129.30
9	AI	79	LEU	CA-CB-CG	5.09	127.01	115.30
35	BA	1322	C	N1-C2-O2	5.09	121.95	118.90
3	GA	546	U	C2-N1-C1'	5.09	123.81	117.70
35	FA	792	A	O4'-C1'-N9	5.09	112.27	108.20
3	CA	2544	G	C4-C5-C6	5.08	121.85	118.80
3	AA	1538	G	N3-C4-C5	5.08	131.14	128.60
3	EA	737	C	N3-C2-O2	5.08	125.46	121.90
3	EA	834	G	C4-C5-C6	5.08	121.85	118.80
3	GA	1071	G	N7-C8-N9	5.08	115.64	113.10
3	AA	2503	A	C5-C6-N1	5.08	120.24	117.70
35	FA	117	G	N1-C6-O6	5.08	122.95	119.90
3	GA	1189	A	C6-C5-N7	5.08	135.86	132.30
35	HA	1306	A	C8-N9-C4	-5.08	103.77	105.80
3	AA	1534	U	N1-C2-O2	5.08	126.35	122.80
35	DA	108	G	C4-N9-C1'	5.08	133.10	126.50
35	FA	852	G	C8-N9-C4	5.08	108.43	106.40
3	EA	1898	U	C5-C4-O4	5.08	128.95	125.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	CA	2581	G	N3-C2-N2	5.08	123.45	119.90
3	EA	1189	A	O5'-P-OP1	-5.08	101.13	105.70
35	FA	1483	A	O5'-P-OP1	-5.08	101.13	105.70
3	GA	836	G	C8-N9-C4	-5.08	104.37	106.40
3	EA	693	A	N1-C6-N6	-5.07	115.56	118.60
1	AB	114	C	C5-C4-N4	-5.07	116.65	120.20
35	BA	205	A	O4'-C1'-N9	-5.07	104.14	108.20
1	CB	61	G	O4'-C1'-N9	5.07	112.26	108.20
3	EA	695	G	N3-C4-N9	-5.07	122.96	126.00
3	EA	2351	G	C8-N9-C4	-5.07	104.37	106.40
10	GJ	25	LEU	CA-CB-CG	5.07	126.96	115.30
35	DA	115	G	P-O3'-C3'	5.07	125.78	119.70
55	FV	93	VAL	N-CA-C	-5.07	97.32	111.00
3	AA	403	U	P-O3'-C3'	5.07	125.78	119.70
3	AA	2455	G	O5'-P-OP2	-5.07	101.14	105.70
3	EA	798	G	N3-C4-C5	5.07	131.13	128.60
3	AA	1983	G	C5-C6-N1	-5.06	108.97	111.50
3	CA	53	A	O5'-P-OP2	5.06	116.78	110.70
3	AA	2198	A	O4'-C1'-N9	5.06	112.25	108.20
3	EA	828	U	O5'-P-OP1	-5.06	101.14	105.70
3	EA	1377	G	C6-C5-N7	-5.06	127.36	130.40
3	EA	503	A	N9-C4-C5	5.06	107.82	105.80
3	EA	1606	C	N3-C2-O2	-5.06	118.36	121.90
3	CA	2022	U	C5-C4-O4	-5.06	122.86	125.90
35	HA	1451	U	C5-C6-N1	5.06	125.23	122.70
3	AA	1779	U	C5-C6-N1	-5.06	120.17	122.70
3	GA	742	A	N9-C4-C5	5.06	107.82	105.80
32	C5	130	PRO	CA-N-CD	-5.06	104.42	111.50
35	BA	1336	C	P-O3'-C3'	5.05	125.76	119.70
3	EA	671	C	C6-N1-C2	-5.05	118.28	120.30
3	AA	2396	G	N1-C6-O6	-5.05	116.87	119.90
3	EA	1008	A	N1-C6-N6	-5.05	115.57	118.60
35	BA	780	A	N1-C6-N6	-5.05	115.57	118.60
3	EA	304	U	C5-C4-O4	5.05	128.93	125.90
3	EA	1051	G	N3-C4-N9	5.05	129.03	126.00
35	FA	1046	A	O4'-C1'-N9	5.05	112.24	108.20
3	CA	2056	G	C6-C5-N7	-5.04	127.37	130.40
35	FA	1526	G	OP2-P-O3'	5.04	116.30	105.20
3	AA	1606	C	P-O3'-C3'	5.04	125.75	119.70
3	CA	2678	C	N1-C2-O2	-5.04	115.87	118.90
35	DA	1279	G	N7-C8-N9	5.04	115.62	113.10
3	EA	1024	G	C4-C5-C6	5.04	121.83	118.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	GA	2685	G	C8-N9-C4	-5.04	104.38	106.40
3	AA	650	C	C6-N1-C2	-5.04	118.28	120.30
3	EA	1991	U	O5'-P-OP1	-5.04	101.16	105.70
3	GA	831	G	N3-C4-C5	5.04	131.12	128.60
3	GA	913	U	C5-C6-N1	5.04	125.22	122.70
3	GA	2251	G	C6-C5-N7	-5.04	127.38	130.40
1	EB	90	C	C6-N1-C2	-5.04	118.28	120.30
35	BA	1279	G	C6-C5-N7	-5.04	127.38	130.40
3	CA	789	A	O5'-P-OP1	-5.04	101.17	105.70
3	EA	783	A	C2-N3-C4	-5.04	108.08	110.60
3	AA	1533	C	C6-N1-C1'	-5.04	114.76	120.80
35	BA	713	G	N3-C4-N9	-5.04	122.98	126.00
3	CA	1174	U	C6-N1-C1'	-5.04	114.15	121.20
35	DA	187	G	C5-C6-N1	-5.04	108.98	111.50
3	EA	1831	G	N1-C6-O6	5.04	122.92	119.90
1	GB	33	G	C4-N9-C1'	-5.04	119.95	126.50
3	AA	2537	U	N1-C2-N3	5.03	117.92	114.90
1	GB	33	G	C6-C5-N7	5.03	133.42	130.40
3	EA	2040	G	O5'-P-OP1	-5.03	101.17	105.70
3	AA	2902	C	P-O3'-C3'	5.03	125.74	119.70
3	GA	818	G	C4-N9-C1'	5.03	133.04	126.50
3	GA	1187	G	C4-N9-C1'	5.03	133.04	126.50
35	HA	1053	G	C4-C5-N7	-5.03	108.79	110.80
3	AA	686	U	C2-N1-C1'	-5.03	111.67	117.70
35	FA	1302	C	O4'-C1'-N1	-5.03	104.18	108.20
3	GA	856	G	C4-N9-C1'	5.03	133.03	126.50
3	EA	1229	C	C6-N1-C2	-5.03	118.29	120.30
3	EA	2754	U	N3-C4-O4	5.03	122.92	119.40
3	GA	1909	C	O4'-C1'-N1	5.02	112.22	108.20
20	AT	29	THR	N-CA-C	5.02	124.56	111.00
3	EA	454	A	OP2-P-O3'	5.02	116.25	105.20
1	GB	75	G	N3-C4-C5	5.02	131.11	128.60
3	EA	695	G	C5-C6-N1	-5.02	108.99	111.50
3	AA	2551	C	O5'-P-OP1	-5.02	101.18	105.70
3	EA	226	A	N1-C6-N6	5.02	121.61	118.60
3	GA	1914	C	C6-N1-C2	-5.02	118.29	120.30
35	HA	1306	A	C2-N3-C4	5.02	113.11	110.60
3	AA	2448	A	C5-C6-N6	-5.02	119.69	123.70
3	AA	1314	C	C2-N1-C1'	5.01	124.32	118.80
3	AA	2278	A	OP2-P-O3'	5.01	116.23	105.20
3	CA	748	G	O4'-C1'-N9	5.01	112.21	108.20
3	EA	1678	A	C8-N9-C4	5.01	107.81	105.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
3	AA	1997	C	O4'-C1'-N1	5.01	112.21	108.20
3	GA	1780	A	N1-C6-N6	5.01	121.61	118.60
3	GA	2743	U	O5'-P-OP2	-5.01	101.19	105.70
1	GB	48	U	O4'-C1'-N1	5.01	112.21	108.20
3	GA	1201	U	C5-C6-N1	5.01	125.20	122.70
3	EA	1292	G	C8-N9-C4	-5.01	104.40	106.40
3	CA	2607	G	N3-C4-C5	-5.00	126.10	128.60
35	HA	1324	A	C4-C5-C6	-5.00	114.50	117.00
35	HA	1520	C	C2-N1-C1'	5.00	124.31	118.80
3	AA	2443	C	N3-C4-N4	5.00	121.50	118.00
3	CA	2146	C	N3-C2-O2	-5.00	118.40	121.90
3	GA	1063	G	C4-N9-C1'	-5.00	120.00	126.50
3	GA	2395	C	C6-N1-C2	5.00	122.30	120.30
3	GA	2645	G	O5'-P-OP1	-5.00	101.20	105.70

There are no chirality outliers.

All (22) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
32	A5	130	PRO	Peptide
2	AC	233	GLY	Peptide
4	AD	9	VAL	Peptide
10	AJ	110	PRO	Peptide
11	AK	71	ARG	Peptide
39	BF	101	PRO	Peptide
45	BL	23	ALA	Peptide
55	BV	218	TRP	Peptide
4	CD	10	GLY	Peptide
4	CD	9	VAL	Peptide
42	DI	40	GLY	Peptide
45	DL	23	ALA	Peptide
53	DT	68	HIS	Peptide
55	DV	218	TRP	Peptide
4	ED	9	VAL	Peptide
39	FF	90	MET	Peptide
55	FV	218	TRP	Peptide
2	GC	233	GLY	Peptide
4	GD	9	VAL	Peptide
10	GJ	110	PRO	Peptide
45	HL	23	ALA	Peptide
55	HV	218	TRP	Peptide

5.2 Too-close contacts (i)

In the following table, the Non-H and H(model) columns list the number of non-hydrogen atoms and hydrogen atoms in the chain respectively. The H(added) column lists the number of hydrogen atoms added and optimized by MolProbity. The Clashes column lists the number of clashes within the asymmetric unit, whereas Symm-Clashes lists symmetry-related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	AB	2529	0	1281	20	0
1	CB	2529	0	1281	30	0
1	EB	2529	0	1281	33	0
1	GB	2529	0	1281	59	0
2	AC	2082	0	2157	52	0
2	CC	2082	0	2157	66	0
2	EC	2082	0	2157	65	0
2	GC	2082	0	2157	68	0
3	AA	61274	0	30819	778	0
3	CA	61274	0	30819	819	0
3	EA	61274	0	30819	734	0
3	GA	61274	0	30817	1239	2
4	AD	1565	0	1616	53	0
4	CD	1565	0	1616	49	0
4	ED	1565	0	1616	49	0
4	GD	1565	0	1616	48	0
5	AE	1552	0	1619	36	0
5	CE	1552	0	1619	44	0
5	EE	1552	0	1619	34	0
5	GE	1552	0	1619	72	0
6	AF	1410	0	1447	41	0
6	CF	1410	0	1447	39	0
6	EF	1410	0	1447	48	0
6	GF	1410	0	1447	57	0
7	AG	1323	0	1374	39	0
7	CG	1323	0	1374	50	0
7	EG	1323	0	1374	43	0
7	GG	1323	0	1374	56	0
8	AH	384	0	405	14	0
8	CH	384	0	405	20	0
8	EH	384	0	405	9	0
8	GH	384	0	405	7	0
9	AI	1032	0	1088	52	0
9	CI	1032	0	1088	38	0
9	EI	1032	0	1088	45	0
9	GI	1032	0	1088	64	0
10	AJ	1129	0	1162	53	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
10	CJ	1129	0	1162	54	0
10	EJ	1129	0	1162	49	0
10	GJ	1129	0	1162	53	0
11	AK	938	0	1012	40	0
11	CK	938	0	1012	38	0
11	EK	938	0	1012	32	0
11	GK	938	0	1012	24	0
12	AL	1045	0	1117	35	0
12	CL	1045	0	1116	36	0
12	EL	1045	0	1117	34	0
12	GL	1045	0	1117	52	0
13	AM	1074	0	1157	26	0
13	CM	1074	0	1157	32	0
13	EM	1074	0	1157	23	0
13	GM	1074	0	1157	26	0
14	AN	960	0	1000	30	0
14	CN	960	0	1000	34	0
14	EN	960	0	1000	24	0
14	GN	960	0	1000	23	0
15	AO	892	0	923	18	0
15	CO	892	0	923	27	0
15	EO	892	0	923	18	0
15	GO	892	0	923	32	0
16	AP	917	0	965	44	0
16	CP	917	0	965	41	0
16	EP	917	0	965	44	0
16	GP	917	0	965	36	0
17	AQ	947	0	1022	52	0
17	CQ	947	0	1022	50	0
17	EQ	947	0	1022	44	0
17	GQ	947	0	1022	56	0
18	AR	816	0	839	35	0
18	CR	816	0	839	36	0
18	ER	816	0	839	34	0
18	GR	816	0	839	46	0
19	AS	857	0	922	29	0
19	CS	857	0	922	18	0
19	ES	857	0	922	20	0
19	GS	857	0	922	29	0
20	AT	738	0	807	35	0
20	CT	738	0	807	26	0
20	ET	738	0	807	33	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
20	GT	738	0	807	29	0
21	AU	779	0	834	27	0
21	CU	779	0	834	12	0
21	EU	779	0	834	23	0
21	GU	779	0	834	29	0
22	AV	753	0	780	13	0
22	CV	753	0	780	17	0
22	EV	753	0	780	10	0
22	GV	753	0	780	13	0
23	AW	596	0	610	77	0
23	CW	596	0	610	62	0
23	EW	596	0	610	74	0
23	GW	596	0	610	60	0
24	AX	625	0	655	17	0
24	CX	625	0	655	14	0
24	EX	625	0	655	21	0
24	GX	625	0	655	18	0
25	AY	509	0	543	13	0
25	CY	509	0	543	9	0
25	EY	509	0	543	16	0
25	GY	509	0	543	11	0
26	AZ	449	0	491	16	0
26	CZ	449	0	491	21	0
26	EZ	449	0	491	10	0
26	GZ	449	0	491	27	0
27	A0	444	0	461	19	0
27	C0	444	0	461	17	0
27	E0	444	0	461	12	0
27	G0	444	0	461	8	0
28	A1	409	0	440	15	0
28	C1	409	0	440	11	0
28	E1	409	0	440	15	0
28	G1	409	0	440	17	0
29	A2	377	0	418	5	0
29	C2	377	0	418	11	0
29	E2	377	0	418	9	0
29	G2	377	0	418	17	0
30	A3	504	0	574	10	0
30	C3	504	0	574	7	0
30	E3	504	0	574	15	0
30	G3	504	0	574	27	0
31	A4	302	0	340	15	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
31	C4	302	0	340	12	0
31	E4	302	0	340	8	0
31	G4	302	0	340	12	0
32	A5	1117	0	1155	122	0
32	C5	1117	0	1155	136	0
32	E5	1101	0	1140	128	0
33	A6	227	0	237	7	0
34	BB	1704	0	1732	54	0
34	DB	1704	0	1732	62	0
34	FB	1704	0	1732	74	0
34	HB	1704	0	1732	58	0
35	BA	32895	0	16553	336	0
35	DA	32895	0	16553	472	0
35	FA	32895	0	16553	401	1
35	HA	32895	0	16552	581	0
36	BC	1624	0	1696	33	0
36	DC	1624	0	1696	41	0
36	FC	1624	0	1696	44	0
36	HC	1624	0	1696	35	0
37	BD	1643	0	1707	69	0
37	DD	1643	0	1707	63	0
37	FD	1643	0	1707	63	0
37	HD	1643	0	1707	73	0
38	BE	1105	0	1148	45	0
38	DE	1105	0	1148	35	0
38	FE	1105	0	1148	36	0
38	HE	1105	0	1148	36	0
39	BF	832	0	824	23	0
39	DF	817	0	808	36	0
39	FF	817	0	808	21	0
39	HF	817	0	808	36	0
40	BG	1181	0	1238	22	0
40	DG	1181	0	1238	30	0
40	FG	1181	0	1238	18	0
40	HG	1181	0	1238	50	0
41	BH	979	0	1031	28	0
41	DH	979	0	1031	25	0
41	FH	979	0	1031	28	0
41	HH	979	0	1031	33	0
42	BI	1022	0	1070	46	0
42	DI	1022	0	1070	39	0
42	FI	1022	0	1070	43	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
42	HI	1022	0	1070	38	0
43	BJ	786	0	828	23	0
43	DJ	786	0	828	28	0
43	FJ	786	0	828	18	1
43	HJ	786	0	828	29	0
44	BK	877	0	887	32	0
44	DK	877	0	887	40	0
44	FK	877	0	887	40	0
44	HK	877	0	887	57	0
45	BL	955	0	1016	36	0
45	DL	955	0	1016	37	0
45	FL	955	0	1016	33	0
45	HL	955	0	1016	41	0
46	BM	883	0	941	20	0
46	DM	883	0	941	33	0
46	FM	883	0	941	33	0
46	HM	883	0	941	39	0
47	BN	774	0	824	25	0
47	DN	774	0	824	31	0
47	FN	774	0	824	27	0
47	HN	774	0	824	28	0
48	BO	714	0	734	8	0
48	DO	714	0	734	13	0
48	FO	714	0	734	12	0
48	HO	714	0	734	18	0
49	BP	649	0	666	13	0
49	DP	649	0	666	17	0
49	FP	649	0	666	15	0
49	HP	649	0	666	12	0
50	BQ	648	0	691	11	0
50	DQ	648	0	691	33	0
50	FQ	648	0	691	23	0
50	HQ	648	0	691	28	0
51	BR	455	0	478	10	0
51	DR	455	0	478	9	0
51	FR	455	0	478	4	0
51	HR	455	0	478	24	0
52	BS	637	0	665	18	0
52	DS	637	0	665	14	0
52	FS	637	0	665	29	0
52	HS	637	0	665	32	0
53	BT	665	0	714	11	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
53	DT	665	0	714	23	0
53	FT	665	0	714	15	0
53	HT	665	0	714	13	0
54	BU	425	0	449	30	0
54	DU	425	0	449	17	0
54	FU	425	0	449	39	0
54	HU	425	0	449	27	0
55	BV	5345	0	5311	117	0
55	DV	5340	0	5306	132	0
55	FV	5340	0	5306	103	0
55	HV	5340	0	5307	116	0
56	BW	48	0	41	5	0
56	DW	48	0	41	5	0
56	FW	48	0	41	3	0
56	HW	48	0	40	6	0
57	A4	1	0	0	0	0
57	AA	136	0	0	0	0
57	AB	4	0	0	0	0
57	AC	1	0	0	0	0
57	AE	1	0	0	0	0
57	BA	40	0	0	0	0
57	BE	1	0	0	0	0
57	BN	1	0	0	0	0
57	BU	1	0	0	0	0
57	BV	1	0	0	0	0
57	C4	1	0	0	0	0
57	CA	136	0	0	0	0
57	CB	4	0	0	0	0
57	CE	1	0	0	0	0
57	CN	1	0	0	0	0
57	DA	43	0	0	0	0
57	DV	1	0	0	0	0
57	EA	137	0	0	0	0
57	EB	4	0	0	0	0
57	ED	1	0	0	0	0
57	EE	1	0	0	0	0
57	FA	39	0	0	0	0
57	FE	1	0	0	0	0
57	FN	2	0	0	0	0
57	FU	1	0	0	0	0
57	FV	1	0	0	0	0
57	GA	136	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
57	GB	4	0	0	0	0
57	GC	2	0	0	0	0
57	GL	1	0	0	0	0
57	HA	41	0	0	0	0
57	HE	1	0	0	0	0
57	HK	1	0	0	0	0
57	HV	1	0	0	0	0
58	A4	1	0	0	0	0
58	C4	1	0	0	0	0
58	E4	1	0	0	0	0
58	G4	1	0	0	0	0
59	BV	32	0	14	1	0
59	DV	32	0	14	2	0
59	FV	32	0	14	2	0
59	HV	32	0	14	1	0
60	A0	2	0	0	0	0
60	A2	1	0	0	0	0
60	A3	1	0	0	0	0
60	A4	1	0	0	0	0
60	AA	614	0	0	102	0
60	AB	18	0	0	1	0
60	AC	6	0	0	1	0
60	AD	4	0	0	0	0
60	AE	1	0	0	0	0
60	AF	1	0	0	0	0
60	AJ	1	0	0	0	0
60	AL	5	0	0	1	0
60	AN	2	0	0	0	0
60	AP	1	0	0	0	0
60	AQ	2	0	0	0	0
60	AS	1	0	0	0	0
60	BA	202	0	0	31	0
60	BL	1	0	0	0	0
60	BN	2	0	0	0	0
60	BT	2	0	0	0	0
60	BV	1	0	0	1	0
60	C0	1	0	0	0	0
60	C2	1	0	0	0	0
60	C3	1	0	0	0	0
60	C4	2	0	0	0	0
60	CA	607	0	0	84	0
60	CB	21	0	0	2	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
60	CC	8	0	0	0	0
60	CD	3	0	0	0	0
60	CE	1	0	0	0	0
60	CJ	2	0	0	1	0
60	CL	5	0	0	0	0
60	CN	2	0	0	0	0
60	CQ	1	0	0	1	0
60	CS	2	0	0	1	0
60	CT	2	0	0	1	0
60	CU	1	0	0	0	0
60	DA	186	0	0	27	0
60	DC	2	0	0	0	0
60	DD	1	0	0	0	0
60	DE	1	0	0	0	0
60	DG	1	0	0	0	0
60	DK	1	0	0	0	0
60	DL	2	0	0	0	0
60	DN	8	0	0	3	0
60	DQ	1	0	0	0	0
60	DT	4	0	0	1	0
60	DU	1	0	0	0	0
60	DV	1	0	0	0	0
60	E0	1	0	0	0	0
60	E2	1	0	0	0	0
60	E3	2	0	0	0	0
60	E4	2	0	0	0	0
60	EA	610	0	0	105	0
60	EB	18	0	0	3	0
60	EC	9	0	0	1	0
60	ED	3	0	0	0	0
60	EE	2	0	0	1	0
60	EL	4	0	0	0	0
60	EN	3	0	0	0	0
60	ER	1	0	0	0	0
60	ET	2	0	0	0	0
60	EV	2	0	0	0	0
60	FA	197	0	0	24	0
60	FC	1	0	0	0	0
60	FE	2	0	0	0	0
60	FN	3	0	0	0	0
60	FT	4	0	0	0	0
60	FU	1	0	0	0	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
60	FV	1	0	0	0	0
60	G2	2	0	0	0	0
60	G3	1	0	0	0	0
60	G4	1	0	0	0	0
60	GA	606	0	0	136	0
60	GB	19	0	0	9	0
60	GC	10	0	0	0	0
60	GD	3	0	0	0	0
60	GE	2	0	0	1	0
60	GJ	1	0	0	0	0
60	GL	4	0	0	1	0
60	GN	4	0	0	0	0
60	GQ	1	0	0	0	0
60	GR	2	0	0	1	0
60	GS	2	0	0	0	0
60	GU	1	0	0	0	0
60	GV	1	0	0	0	0
60	HA	193	0	0	31	0
60	HD	3	0	0	2	0
60	HE	3	0	0	0	0
60	HN	7	0	0	3	0
60	HQ	1	0	0	0	0
60	HT	1	0	0	0	0
60	HV	1	0	0	0	0
All	All	592086	0	404164	11056	2

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 12.

All (11056) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:C5:24:SER:CB	32:C5:116:GLU:HG2	1.46	1.44
32:C5:24:SER:O	32:C5:116:GLU:HB3	1.41	1.16
32:C5:24:SER:HB2	32:C5:116:GLU:CG	1.76	1.14
32:E5:24:SER:HB2	32:E5:116:GLU:HG2	1.27	1.14
3:AA:912:C:OP1	13:AM:8:LYS:NZ	1.79	1.12
32:A5:71:CYS:HB3	32:A5:117:LEU:HD12	1.33	1.10
32:C5:24:SER:HB2	32:C5:116:GLU:HG2	1.10	1.09
32:E5:117:LEU:HD22	32:E5:120:ALA:HA	1.25	1.09
32:E5:117:LEU:CD2	32:E5:120:ALA:HA	1.82	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:E5:26:VAL:HG21	32:E5:115:GLY:H	1.12	1.09
32:E5:26:VAL:CG2	32:E5:115:GLY:H	1.67	1.07
32:E5:24:SER:CB	32:E5:116:GLU:HG2	1.84	1.06
32:A5:26:VAL:HG21	32:A5:115:GLY:H	1.23	1.03
32:C5:24:SER:CB	32:C5:116:GLU:CG	2.35	1.00
32:C5:24:SER:HB3	32:C5:116:GLU:HG2	1.42	1.00
32:A5:3:LEU:O	32:A5:7:ASP:OD1	1.79	1.00
3:CA:1248:G:OP2	5:CE:44:ARG:NH1	1.95	1.00
42:HI:57:MET:N	42:HI:57:MET:SD	2.35	0.99
32:E5:26:VAL:HG21	32:E5:115:GLY:N	1.76	0.99
3:CA:996:A:OP2	17:CQ:91:ARG:NH2	1.95	0.99
3:AA:576:U:OP1	60:AA:3660:HOH:O	1.85	0.95
3:AA:1913:A:N7	55:BV:507:LYS:NZ	2.14	0.95
2:EC:78:GLU:OE1	2:EC:100:ARG:NH1	2.00	0.94
32:A5:117:LEU:CD2	32:A5:120:ALA:HA	1.97	0.94
3:EA:826:U:OP1	60:EA:3694:HOH:O	1.86	0.93
17:EQ:91:ARG:NH1	18:ER:11:GLN:O	2.02	0.93
32:A5:71:CYS:HB3	32:A5:117:LEU:CD1	1.98	0.92
35:DA:1178:G:O6	42:DI:99:ARG:NH2	2.03	0.92
3:AA:1154:G:OP2	17:AQ:57:ARG:NH1	2.03	0.91
32:C5:26:VAL:HG21	32:C5:115:GLY:H	1.33	0.91
32:E5:73:LYS:HG2	32:E5:117:LEU:HD21	1.52	0.91
8:CH:27:ARG:NH2	24:CX:59:ASP:OD1	2.03	0.91
35:BA:1493:A:OP1	56:BW:1:KBE:N	2.03	0.91
32:A5:71:CYS:CB	32:A5:117:LEU:HD12	2.00	0.91
3:EA:883:G:N2	3:EA:892:A:N7	2.18	0.90
3:AA:2279:G:N7	23:AW:10:ARG:NH2	2.20	0.90
3:GA:2306:C:N4	6:GF:38:GLY:O	2.04	0.90
3:CA:1154:G:OP2	17:CQ:57:ARG:NH1	2.05	0.90
1:AB:43:C:O2	6:AF:91:ARG:NH2	2.04	0.90
3:AA:1248:G:OP2	5:AE:44:ARG:NH1	2.03	0.90
32:A5:24:SER:HB2	32:A5:116:GLU:HG2	1.54	0.90
35:BA:1412:C:OP1	45:BL:54:ARG:NH1	2.05	0.90
1:CB:43:C:O2	6:CF:91:ARG:NH2	2.05	0.90
3:GA:2816:G:O3'	14:GN:99:LYS:NZ	2.05	0.90
3:AA:576:U:OP1	60:AA:3661:HOH:O	1.90	0.89
2:EC:5:CYS:SG	2:EC:12:ARG:NH1	2.46	0.89
3:AA:415:A:N7	60:AA:3556:HOH:O	2.04	0.89
32:A5:71:CYS:CB	32:A5:117:LEU:CD1	2.50	0.89
3:EA:1658:C:OP1	60:EA:3798:HOH:O	1.88	0.89
3:GA:2057:G:OP2	60:GA:3484:HOH:O	1.90	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:EA:973:A:OP2	18:ER:81:LYS:NZ	2.06	0.89
21:AU:98:ASN:O	21:AU:100:GLU:N	2.06	0.89
3:AA:1336:A:OP2	20:AT:68:LYS:NZ	2.06	0.88
40:DG:111:ARG:O	40:DG:119:ARG:NH2	2.06	0.88
32:E5:30:SER:O	32:E5:31:ARG:HB2	1.73	0.88
3:GA:504:A:O2'	3:GA:505:A:OP1	1.92	0.88
35:HA:1493:A:OP1	56:HW:1:KBE:N	2.05	0.88
6:GF:134:GLN:O	6:GF:136:ILE:N	2.05	0.88
35:HA:429:U:OP2	37:HD:13:ARG:NH2	2.06	0.88
3:CA:948:C:O2	3:CA:984:A:O2'	1.92	0.87
3:GA:2499:C:OP2	60:GA:3673:HOH:O	1.92	0.87
32:C5:26:VAL:CG2	32:C5:115:GLY:H	1.87	0.87
37:HD:70:ARG:NH2	60:HD:303:HOH:O	2.07	0.87
3:AA:996:A:OP2	17:AQ:91:ARG:NH2	2.07	0.87
35:BA:1178:G:O6	42:BI:99:ARG:NH2	2.08	0.87
3:GA:878:A:N6	3:GA:899:A:O2'	2.07	0.87
3:GA:2448:A:OP2	60:GA:3675:HOH:O	1.92	0.87
52:BS:24:GLU:OE2	52:BS:24:GLU:N	2.07	0.87
35:HA:815:A:N7	35:HA:1509:C:O2'	2.07	0.87
3:GA:1828:G:OP2	60:GA:3729:HOH:O	1.94	0.86
55:HV:309:ARG:NH2	55:HV:402:ALA:O	2.08	0.86
1:EB:43:C:O2	6:EF:91:ARG:NH2	2.09	0.86
32:C5:71:CYS:HB3	32:C5:117:LEU:HD12	1.57	0.86
36:FC:156:ARG:NH1	36:FC:160:ALA:O	2.08	0.86
3:GA:991:C:OP2	60:GA:3588:HOH:O	1.93	0.86
35:FA:1178:G:O6	42:FI:99:ARG:NH2	2.09	0.86
42:BI:57:MET:O	42:BI:59:GLU:N	2.09	0.85
3:AA:1723:G:O6	3:AA:1737:G:O2'	1.94	0.85
32:E5:29:ASP:HA	32:E5:108:VAL:HG11	1.57	0.85
3:GA:1837:C:O2'	3:GA:1927:A:N3	2.06	0.85
35:HA:1288:A:N3	35:HA:1352:C:O2'	2.08	0.85
20:AT:39:THR:O	20:AT:41:ALA:N	2.09	0.85
35:HA:78:A:OP2	35:HA:80:A:N6	2.09	0.85
3:CA:1395:A:OP1	60:CA:3406:HOH:O	1.95	0.85
3:GA:2057:G:OP2	60:GA:3657:HOH:O	1.93	0.85
3:GA:804:A:N6	60:GA:3323:HOH:O	2.09	0.85
3:EA:1509:A:O2'	3:EA:1510:G:OP2	1.95	0.85
35:BA:978:A:OP2	35:BA:1362:A:N6	2.09	0.84
3:EA:733:G:N7	60:EA:3295:HOH:O	2.08	0.84
3:EA:2451:A:OP1	60:EA:3522:HOH:O	1.94	0.84
3:CA:975:A:OP2	60:CA:3582:HOH:O	1.94	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:GA:223:A:N1	3:GA:407:G:O2'	2.11	0.84
26:GZ:11:SER:O	26:GZ:15:ARG:NH1	2.10	0.84
3:AA:981:A:OP1	60:AA:3587:HOH:O	1.95	0.84
3:CA:2308:G:O6	3:CA:2311:A:N6	2.10	0.84
35:DA:362:G:N7	60:DA:1709:HOH:O	2.10	0.84
3:EA:2331:G:O2'	23:EW:39:GLN:O	1.95	0.84
3:AA:1069:A:N3	3:AA:1073:A:N6	2.26	0.84
3:AA:2053:G:N2	3:AA:2616:C:N3	2.24	0.84
3:CA:504:A:O2'	3:CA:505:A:OP1	1.96	0.84
32:C5:30:SER:O	32:C5:31:ARG:HB2	1.78	0.84
35:DA:934:C:OP1	60:DA:1763:HOH:O	1.94	0.84
3:GA:2720:U:OP1	16:GP:52:ARG:NH2	2.11	0.84
35:HA:995:C:N3	35:HA:1046:A:O2'	2.10	0.84
10:EJ:49:ASP:OD1	10:EJ:121:LYS:NZ	2.10	0.84
35:FA:823:C:HO2'	41:FH:2:SER:N	1.76	0.84
3:GA:17:G:OP2	60:GA:3202:HOH:O	1.95	0.84
42:FI:57:MET:O	42:FI:59:GLU:N	2.11	0.83
47:FN:30:ILE:O	47:FN:35:ASN:ND2	2.11	0.83
55:DV:219:HIS:O	55:DV:222:LEU:N	2.11	0.83
3:GA:1369:G:N7	60:GA:3397:HOH:O	2.09	0.83
3:GA:2265:U:OP2	3:GA:2266:A:O2'	1.93	0.83
55:BV:219:HIS:O	55:BV:222:LEU:N	2.11	0.83
35:FA:1505:G:OP1	60:FA:1799:HOH:O	1.97	0.83
3:EA:995:C:O2	10:EJ:3:THR:OG1	1.97	0.83
40:DG:113:ASP:OD2	40:DG:122:ASN:ND2	2.11	0.83
3:GA:2502:G:OP1	60:GA:3487:HOH:O	1.97	0.83
3:CA:990:A:OP2	60:CA:3589:HOH:O	1.96	0.83
35:DA:1129:C:O2'	35:DA:1139:G:N7	2.10	0.83
32:E5:26:VAL:HG11	32:E5:77:VAL:HG13	1.60	0.83
32:E5:73:LYS:HB2	32:E5:117:LEU:HD11	1.61	0.83
34:FB:83:ALA:O	34:FB:88:GLN:NE2	2.11	0.83
35:HA:1064:G:O6	35:HA:1192:C:N4	2.12	0.83
35:HA:1187:G:O2'	42:HI:113:ARG:NH1	2.11	0.83
2:AC:196:ASN:O	2:AC:198:GLU:N	2.12	0.83
3:GA:263:G:O2'	3:GA:429:A:N3	2.12	0.82
32:A5:71:CYS:HA	32:A5:117:LEU:CD1	2.10	0.82
32:A5:77:VAL:C	32:A5:79:PRO:HD2	2.00	0.82
3:GA:1022:G:O2'	3:GA:1025:G:N2	2.12	0.82
3:AA:991:C:OP2	60:AA:3592:HOH:O	1.98	0.82
35:FA:362:G:N7	60:FA:1714:HOH:O	2.12	0.82
35:HA:579:A:O2'	48:HO:54:ARG:NH1	2.10	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:A5:33:VAL:N	32:A5:36:ASP:OD2	2.12	0.82
3:CA:1009:A:OP2	60:CA:3763:HOH:O	1.98	0.82
3:GA:192:C:N3	60:GA:3320:HOH:O	2.12	0.82
3:AA:526:A:OP1	60:AA:3246:HOH:O	1.98	0.82
3:AA:1371:G:N7	60:AA:3397:HOH:O	2.13	0.82
3:AA:1824:G:OP2	60:AA:3650:HOH:O	1.95	0.82
35:HA:33:A:O2'	45:HL:29:GLN:NE2	2.12	0.82
35:HA:913:A:OP1	45:HL:43:LYS:NZ	2.11	0.82
35:BA:324:G:N7	60:BA:1845:HOH:O	2.13	0.82
32:E5:24:SER:O	32:E5:116:GLU:HB3	1.80	0.82
3:AA:504:A:O2'	3:AA:505:A:OP1	1.98	0.81
20:CT:39:THR:O	20:CT:41:ALA:N	2.14	0.81
32:E5:26:VAL:CG2	32:E5:115:GLY:N	2.38	0.81
36:FC:40:ARG:NH1	36:FC:55:ILE:O	2.14	0.81
35:HA:1405:G:N2	35:HA:1518:A:N3	2.27	0.81
3:AA:1647:U:OP2	60:AA:3415:HOH:O	1.98	0.81
32:A5:71:CYS:HA	32:A5:117:LEU:HD13	1.60	0.81
3:GA:2242:G:OP2	60:GA:3497:HOH:O	1.97	0.81
3:GA:2331:G:O2'	23:GW:39:GLN:O	1.98	0.81
35:HA:692:U:O4	44:HK:57:LYS:NZ	2.13	0.81
3:AA:1012:U:OP2	17:AQ:69:ARG:NH1	2.14	0.81
15:AO:34:HIS:O	15:AO:102:ARG:NH1	2.14	0.81
16:AP:50:ARG:HB3	16:AP:57:ALA:H	1.43	0.81
37:BD:100:ASN:OD1	37:BD:111:ARG:NH1	2.13	0.81
35:DA:869:G:OP2	60:DA:1812:HOH:O	1.99	0.81
3:EA:1671:U:O4	60:EA:3716:HOH:O	1.96	0.81
7:EG:1:SER:O	7:EG:3:VAL:N	2.13	0.81
3:CA:84:A:N1	3:CA:98:G:O2'	2.14	0.81
4:CD:91:THR:O	4:CD:93:GLY:N	2.14	0.81
35:HA:581:G:N2	35:HA:760:G:N7	2.28	0.81
52:FS:35:SER:HG	52:FS:38:SER:HG	1.23	0.81
37:DD:27:ALA:O	37:DD:31:LYS:NZ	2.14	0.81
21:GU:73:ASN:ND2	21:GU:80:ASP:OD2	2.14	0.81
3:EA:826:U:O3'	60:EA:3344:HOH:O	1.97	0.80
35:HA:1001:C:O2	35:HA:1039:G:N1	2.13	0.80
3:AA:1268:A:OP1	60:AA:3372:HOH:O	1.99	0.80
32:A5:103:ASN:ND2	32:A5:107:GLU:O	2.13	0.80
3:CA:1509:A:O2'	3:CA:1510:G:OP2	1.99	0.80
3:EA:622:G:OP2	60:EA:3800:HOH:O	1.98	0.80
35:BA:1029:U:O2'	35:BA:1033:G:N2	2.14	0.80
10:EJ:43:GLU:O	10:EJ:45:THR:N	2.14	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:HV:422:PRO:O	55:HV:424:THR:N	2.14	0.80
15:GO:85:LYS:HB2	15:GO:87:ILE:HG12	1.61	0.80
35:HA:961:U:O2	35:HA:1201:A:N6	2.15	0.80
35:HA:988:G:HO2'	35:HA:1015:G:H1	1.26	0.80
35:HA:1229:A:OP2	46:HM:113:ARG:NH1	2.15	0.80
3:AA:1783:A:OP1	60:AA:3688:HOH:O	1.98	0.80
3:CA:946:C:OP2	60:CA:3339:HOH:O	1.98	0.80
3:GA:1011:G:OP2	17:GQ:65:ASN:ND2	2.15	0.80
35:DA:483:C:O2	49:DP:13:LYS:NZ	2.14	0.80
37:HD:197:GLU:O	37:HD:200:ILE:N	2.14	0.80
3:EA:1153:C:OP2	60:EA:3358:HOH:O	2.00	0.80
3:GA:675:A:O5'	60:GA:3323:HOH:O	1.99	0.80
3:GA:1960:A:OP2	60:GA:3453:HOH:O	1.99	0.80
55:BV:93:VAL:O	55:BV:95:PHE:N	2.15	0.79
3:CA:982:C:OP1	60:CA:3562:HOH:O	1.99	0.79
3:AA:2720:U:OP1	16:AP:52:ARG:NH2	2.15	0.79
3:AA:2448:A:OP2	60:AA:3676:HOH:O	2.00	0.79
3:CA:1998:A:OP2	4:CD:141:ARG:NH2	2.15	0.79
3:CA:1782:U:O3'	60:CA:3686:HOH:O	2.00	0.79
3:EA:2352:A:N1	23:EW:30:VAL:HG11	1.97	0.79
3:AA:975:A:OP2	60:AA:3583:HOH:O	2.00	0.79
3:CA:927:A:O2'	26:CZ:38:GLU:OE1	2.01	0.79
35:FA:913:A:OP1	45:FL:43:LYS:NZ	2.14	0.79
3:GA:941:A:O2'	3:GA:1190:G:O3'	2.00	0.79
3:AA:733:G:OP1	60:AA:3293:HOH:O	2.01	0.79
3:AA:945:A:OP2	60:AA:3341:HOH:O	1.98	0.79
3:EA:2057:G:OP2	60:EA:3487:HOH:O	2.00	0.79
32:A5:33:VAL:HG12	32:A5:34:THR:H	1.48	0.79
32:A5:43:LYS:NZ	32:A5:98:GLU:OE1	2.16	0.79
35:BA:964:A:OP1	60:BA:1830:HOH:O	2.01	0.79
35:FA:891:U:OP2	60:FA:1764:HOH:O	1.97	0.79
55:BV:422:PRO:O	55:BV:424:THR:N	2.14	0.79
35:HA:1262:C:N4	35:HA:1273:C:N3	2.30	0.79
11:AK:105:ARG:NH1	11:AK:106:GLU:OE2	2.16	0.79
35:BA:8:A:N6	37:BD:202:GLU:O	2.16	0.79
35:BA:934:C:OP1	60:BA:1767:HOH:O	2.01	0.79
2:CC:196:ASN:O	2:CC:198:GLU:N	2.15	0.79
26:CZ:26:LEU:O	26:CZ:37:ARG:NH1	2.16	0.79
55:DV:93:VAL:O	55:DV:95:PHE:N	2.16	0.79
3:GA:684:G:OP1	29:G2:16:HIS:ND1	2.16	0.79
55:DV:78:GLN:NE2	55:DV:280:ASP:OD2	2.16	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:EA:1054:A:OP1	32:E5:31:ARG:NH2	2.16	0.78
60:GA:3492:HOH:O	5:GE:63:LYS:NZ	2.15	0.78
3:CA:1669:A:OP2	60:CA:3709:HOH:O	2.01	0.78
21:EU:98:ASN:O	21:EU:100:GLU:N	2.17	0.78
32:E5:33:VAL:HG12	32:E5:34:THR:H	1.46	0.78
36:FC:89:LYS:NZ	36:FC:93:ASP:OD1	2.16	0.78
3:GA:1938:A:OP2	60:GA:3715:HOH:O	2.02	0.78
3:AA:579:G:OP1	60:AA:3270:HOH:O	2.01	0.78
35:BA:1197:A:OP1	60:BA:1833:HOH:O	2.01	0.78
32:C5:24:SER:O	32:C5:116:GLU:CB	2.27	0.78
32:C5:33:VAL:HG12	32:C5:34:THR:H	1.47	0.78
13:EM:22:GLN:O	13:EM:24:THR:N	2.17	0.78
32:C5:29:ASP:HA	32:C5:108:VAL:HG11	1.64	0.78
35:DA:880:C:OP1	45:DL:9:ARG:NH1	2.17	0.78
3:EA:2107:G:N1	3:EA:2182:U:O2'	2.15	0.78
55:FV:79:TYR:OH	55:FV:284:ASP:OD1	2.01	0.78
3:GA:1156:A:O4'	17:GQ:50:ARG:NH1	2.15	0.78
35:HA:362:G:N7	60:HA:1711:HOH:O	2.16	0.78
23:EW:41:GLY:O	23:EW:43:LYS:N	2.16	0.78
39:HF:38:ARG:NH1	39:HF:63:ASN:OD1	2.17	0.78
3:CA:981:A:OP1	60:CA:3584:HOH:O	2.01	0.78
3:EA:731:C:OP2	60:EA:3688:HOH:O	2.02	0.78
3:GA:1647:U:OP2	60:GA:3415:HOH:O	2.01	0.78
3:AA:1509:A:O2'	3:AA:1510:G:OP2	2.01	0.78
35:BA:1028:C:N4	35:BA:1029:U:O2	2.17	0.78
35:FA:1468:A:H2'	35:FA:1469:C:H5'	1.66	0.78
3:GA:1772:A:O3'	60:GA:3439:HOH:O	2.02	0.78
35:HA:939:G:O2'	35:HA:1375:A:N3	2.16	0.78
3:AA:946:C:OP2	60:AA:3341:HOH:O	2.02	0.78
4:AD:184:ARG:NH1	16:AP:6:GLN:OE1	2.17	0.78
3:CA:1265:A:OP2	60:CA:3734:HOH:O	2.02	0.78
3:GA:1095:A:N7	55:HV:631:VAL:N	2.31	0.78
35:HA:415:A:N7	60:HA:1718:HOH:O	2.17	0.78
3:AA:1828:G:OP1	60:AA:3451:HOH:O	2.02	0.78
3:GA:839:U:O2'	3:GA:1191:G:N3	2.17	0.78
10:GJ:34:ARG:NH1	10:GJ:39:LYS:O	2.17	0.78
35:BA:1033:G:H2'	35:BA:1034:G:H5'	1.64	0.77
3:GA:410:G:OP2	60:GA:3556:HOH:O	2.02	0.77
25:AY:18:LEU:O	25:AY:22:LEU:N	2.17	0.77
35:BA:21:G:OP1	60:BA:1817:HOH:O	2.01	0.77
37:BD:35:GLU:O	37:BD:37:ALA:N	2.17	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:GA:572:A:OP1	60:GA:3559:HOH:O	2.01	0.77
2:AC:269:ARG:NH2	3:AA:1799:G:OP2	2.16	0.77
23:CW:41:GLY:O	23:CW:43:LYS:N	2.16	0.77
35:DA:289:G:OP2	60:DA:1876:HOH:O	2.03	0.77
3:GA:964:C:O2'	3:GA:2273:A:N3	2.16	0.77
35:BA:1095:U:OP2	60:BA:1860:HOH:O	2.01	0.77
44:FK:125:LYS:O	54:FU:34:ARG:NH2	2.16	0.77
3:GA:1782:U:O2	3:GA:2608:G:O2'	2.02	0.77
42:HI:114:LYS:NZ	42:HI:118:LEU:O	2.17	0.77
2:AC:69:ASN:O	2:AC:71:ASP:N	2.18	0.77
32:A5:91:ALA:C	32:A5:93:ALA:H	1.87	0.77
32:A5:117:LEU:HD23	32:A5:120:ALA:HA	1.65	0.77
35:DA:754:C:OP1	48:DO:72:ARG:NH2	2.18	0.77
3:EA:1664:A:OP2	60:EA:3423:HOH:O	2.01	0.77
35:FA:964:A:OP1	60:FA:1829:HOH:O	2.03	0.77
3:EA:1669:A:OP2	60:EA:3716:HOH:O	2.03	0.77
3:GA:2529:G:OP1	7:GG:174:LYS:NZ	2.16	0.77
37:DD:13:ARG:NH1	37:DD:37:ALA:O	2.17	0.77
3:EA:975:A:OP2	60:EA:3588:HOH:O	2.01	0.77
41:FH:82:GLY:O	50:FQ:36:LYS:NZ	2.17	0.77
3:GA:1062:G:O6	3:GA:1076:C:N4	2.18	0.77
32:A5:71:CYS:CA	32:A5:117:LEU:CD1	2.62	0.77
14:GN:58:ASP:OD2	14:GN:63:ARG:NH2	2.18	0.77
32:A5:35:VAL:HA	32:A5:38:MET:SD	2.24	0.76
3:GA:2011:U:OP1	19:GS:42:LYS:NZ	2.17	0.76
44:HK:26:SER:OG	44:HK:29:ASN:O	2.01	0.76
55:HV:98:GLU:O	55:HV:102:SER:OG	2.01	0.76
3:AA:526:A:OP1	60:AA:3248:HOH:O	2.02	0.76
3:EA:2503:A:OP1	60:EA:3664:HOH:O	2.02	0.76
3:GA:1044:C:O2'	3:GA:1111:A:N1	2.18	0.76
35:HA:1310:G:OP1	46:HM:79:ARG:NH2	2.19	0.76
42:FI:42:GLU:O	42:FI:44:ALA:N	2.18	0.76
3:GA:1270:C:N4	60:GA:3377:HOH:O	2.19	0.76
2:AC:68:ARG:NH2	2:AC:126:GLY:O	2.18	0.76
3:CA:2279:G:N7	23:CW:10:ARG:NH2	2.33	0.76
35:DA:1074:G:O2'	35:DA:1101:A:N1	2.16	0.76
32:E5:73:LYS:CG	32:E5:117:LEU:HD21	2.16	0.76
55:FV:100:GLU:OE2	55:FV:133:TYR:OH	2.03	0.76
35:DA:683:G:N2	44:DK:39:GLY:O	2.18	0.76
3:AA:410:G:OP2	60:AA:3557:HOH:O	2.03	0.76
3:CA:1723:G:O6	3:CA:1737:G:O2'	2.03	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:111:ARG:NH2	15:CO:115:LEU:O	2.19	0.76
49:DP:4:ILE:HG13	49:DP:21:VAL:HG12	1.68	0.76
3:EA:740:C:OP2	60:EA:3690:HOH:O	2.04	0.76
3:AA:1380:G:OP2	60:AA:3740:HOH:O	2.03	0.76
35:FA:1522:U:OP1	44:FK:128:ARG:NH2	2.18	0.76
3:GA:301:G:OP2	21:GU:81:ARG:NH1	2.19	0.76
35:HA:1245:C:O2	35:HA:1292:G:N2	2.18	0.76
38:HE:41:ASP:OD2	38:HE:43:ASN:N	2.19	0.76
3:AA:1186:G:OP2	60:AA:3591:HOH:O	2.04	0.76
35:BA:1522:U:OP1	44:BK:128:ARG:NH2	2.19	0.76
3:CA:2146:C:N4	3:GA:2143:C:O2'	2.18	0.76
3:CA:2589:A:OP1	60:CA:3309:HOH:O	2.04	0.76
34:FB:14:HIS:ND1	34:FB:14:HIS:O	2.19	0.76
3:GA:1938:A:OP2	60:GA:3714:HOH:O	2.04	0.76
35:HA:1027:C:HO2'	35:HA:1034:G:N2	1.84	0.76
38:DE:41:ASP:OD1	38:DE:43:ASN:N	2.19	0.75
46:DM:85:CYS:SG	46:DM:88:GLY:N	2.59	0.75
51:DR:37:GLY:O	51:DR:63:ARG:NH2	2.18	0.75
3:EA:301:G:OP2	21:EU:81:ARG:NH1	2.18	0.75
3:GA:636:G:N1	12:GL:76:GLU:OE2	2.19	0.75
35:HA:781:A:O2'	35:HA:1522:U:O2	2.04	0.75
35:HA:905:U:OP2	60:HA:1757:HOH:O	2.04	0.75
35:DA:1492:A:H2'	35:DA:1493:A:H5'	1.69	0.75
15:GO:108:ASP:OD1	15:GO:111:ARG:NH2	2.18	0.75
2:CC:259:ASN:OD1	2:CC:262:THR:N	2.18	0.75
3:AA:1153:C:OP2	60:AA:3353:HOH:O	2.04	0.75
3:AA:2006:C:OP1	60:AA:3372:HOH:O	2.05	0.75
3:AA:2025:C:OP2	60:AA:3470:HOH:O	2.03	0.75
36:DC:20:SER:OG	36:DC:40:ARG:NH2	2.19	0.75
3:EA:2428:G:OP1	60:EA:3694:HOH:O	2.03	0.75
32:E5:43:LYS:NZ	32:E5:98:GLU:OE1	2.19	0.75
35:HA:1166:G:N1	35:HA:1169:A:OP2	2.18	0.75
35:BA:980:C:OP2	60:BA:1835:HOH:O	2.04	0.75
1:AB:23:G:O6	60:AB:1307:HOH:O	2.05	0.75
36:BC:36:ASP:OD1	36:BC:59:ARG:NH1	2.19	0.75
3:CA:761:A:N7	60:CA:3292:HOH:O	2.18	0.75
3:EA:31:C:OP1	60:EA:3699:HOH:O	2.03	0.75
3:EA:2447:G:N3	60:EA:3678:HOH:O	2.18	0.75
35:FA:1064:G:O2'	35:FA:1190:G:N2	2.19	0.75
45:FL:44:LYS:HB3	45:FL:45:PRO:HD3	1.69	0.75
37:DD:197:GLU:O	37:DD:200:ILE:N	2.20	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:EA:2503:A:OP1	60:EA:3665:HOH:O	2.04	0.75
3:GA:1658:C:OP1	60:GA:3643:HOH:O	2.04	0.75
3:EA:1534:U:O2'	3:EA:1537:G:O6	2.03	0.75
3:EA:1783:A:OP1	60:EA:3691:HOH:O	2.05	0.75
16:EP:50:ARG:HB3	16:EP:57:ALA:H	1.52	0.75
35:FA:1508:A:OP1	60:FA:1799:HOH:O	2.05	0.75
55:HV:93:VAL:O	55:HV:95:PHE:N	2.20	0.75
3:CA:1265:A:OP2	60:CA:3735:HOH:O	2.04	0.75
3:CA:1332:G:OP1	60:CA:3747:HOH:O	2.05	0.75
3:EA:548:G:O2'	3:EA:549:G:N2	2.20	0.75
3:EA:975:A:OP2	60:EA:3585:HOH:O	2.03	0.75
3:EA:2005:A:OP1	60:EA:3381:HOH:O	2.04	0.75
6:EF:1:ALA:O	6:EF:3:LEU:N	2.20	0.75
32:E5:35:VAL:HA	32:E5:38:MET:SD	2.27	0.75
1:GB:95:U:O4	60:GB:1312:HOH:O	2.04	0.75
3:GA:2503:A:OP1	60:GA:3483:HOH:O	2.05	0.75
47:BN:31:ILE:H	47:BN:31:ILE:HD12	1.50	0.74
3:CA:816:C:OP2	60:CA:3362:HOH:O	2.05	0.74
3:CA:1153:C:OP2	60:CA:3352:HOH:O	2.04	0.74
3:EA:2575:C:OP2	60:EA:3706:HOH:O	2.05	0.74
35:HA:1243:C:O2	35:HA:1294:G:N1	2.20	0.74
55:BV:142:ASN:OD1	55:BV:143:LYS:N	2.19	0.74
3:CA:945:A:OP2	60:CA:3339:HOH:O	2.05	0.74
1:GB:23:G:O6	60:GB:1310:HOH:O	2.05	0.74
3:GA:990:A:OP2	60:GA:3588:HOH:O	2.05	0.74
3:CA:2499:C:OP2	60:CA:3672:HOH:O	2.04	0.74
3:EA:572:A:OP2	18:ER:80:ARG:NH2	2.20	0.74
3:EA:1153:C:OP2	60:EA:3359:HOH:O	2.05	0.74
3:EA:2268:A:OP1	60:EA:3508:HOH:O	2.04	0.74
3:GA:980:A:O3'	60:GA:3583:HOH:O	2.04	0.74
3:CA:1106:G:OP1	32:C5:62:ARG:NH2	2.20	0.74
35:HA:1197:A:OP1	60:HA:1825:HOH:O	2.04	0.74
3:CA:1186:G:OP2	60:CA:3591:HOH:O	2.03	0.74
3:EA:2429:G:OP1	60:EA:3694:HOH:O	2.06	0.74
23:EW:36:ILE:O	23:EW:39:GLN:NE2	2.21	0.74
3:GA:372:G:O2'	3:GA:400:G:O6	2.04	0.74
35:HA:1451:U:O2'	35:HA:1452:C:OP2	2.05	0.74
55:HV:219:HIS:O	55:HV:222:LEU:N	2.19	0.74
3:AA:1187:G:OP1	18:AR:85:LYS:NZ	2.19	0.74
42:BI:57:MET:SD	42:BI:58:VAL:N	2.61	0.74
32:C5:77:VAL:C	32:C5:79:PRO:HD2	2.07	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:E5:57:ASN:O	32:E5:59:LEU:N	2.19	0.74
3:CA:468:G:N7	29:C2:39:ARG:NH2	2.36	0.74
3:CA:971:G:OP2	3:CA:974:G:N2	2.21	0.74
32:C5:26:VAL:HG21	32:C5:115:GLY:N	2.02	0.74
35:DA:573:A:OP2	60:DA:1733:HOH:O	2.05	0.74
35:FA:195:A:OP2	60:FA:1875:HOH:O	2.04	0.74
34:FB:182:VAL:N	34:FB:196:ASP:OD2	2.19	0.74
3:AA:1342:A:O2'	3:AA:1344:U:OP2	2.04	0.74
3:AA:2707:U:O2	14:AN:71:ARG:NH1	2.20	0.74
35:DA:510:A:N7	60:DA:1719:HOH:O	2.21	0.74
42:DI:57:MET:O	42:DI:59:GLU:N	2.20	0.74
35:FA:563:A:OP1	60:FA:1732:HOH:O	2.05	0.74
3:GA:214:G:N2	3:GA:216:A:N3	2.36	0.74
4:GD:91:THR:O	4:GD:93:GLY:N	2.21	0.74
3:AA:2503:A:OP1	60:AA:3660:HOH:O	2.04	0.74
3:AA:2579:C:OP1	60:AA:3536:HOH:O	2.05	0.74
3:CA:740:C:OP2	60:CA:3685:HOH:O	2.06	0.74
3:CA:862:G:OP2	60:CA:3712:HOH:O	2.05	0.74
14:CN:117:ASP:O	14:CN:119:SER:N	2.21	0.74
35:FA:1050:G:O6	60:FA:1778:HOH:O	2.06	0.74
3:GA:161:A:H3'	3:GA:162:U:H5"	1.69	0.74
21:GU:98:ASN:O	21:GU:100:GLU:N	2.21	0.74
35:HA:869:G:N7	60:HA:1815:HOH:O	2.21	0.74
4:AD:91:THR:O	4:AD:93:GLY:N	2.21	0.74
31:A4:11:CYS:SG	31:A4:14:CYS:N	2.60	0.74
15:CO:34:HIS:O	15:CO:102:ARG:NH1	2.21	0.74
14:EN:98:LEU:HB3	27:E0:42:ILE:HD11	1.69	0.74
35:FA:579:A:O2'	48:FO:54:ARG:NH1	2.21	0.74
55:FV:219:HIS:O	55:FV:222:LEU:N	2.21	0.74
1:GB:59:A:N7	60:GB:1307:HOH:O	2.21	0.74
3:GA:945:A:OP2	60:GA:3341:HOH:O	2.06	0.74
35:BA:560:A:OP2	60:BA:1734:HOH:O	2.05	0.73
3:EA:1664:A:OP1	60:EA:3426:HOH:O	2.05	0.73
32:E5:71:CYS:HA	32:E5:117:LEU:CD1	2.18	0.73
55:FV:92:HIS:O	55:FV:122:GLN:NE2	2.20	0.73
32:A5:131:THR:O	32:A5:134:GLU:N	2.20	0.73
3:CA:450:G:OP2	60:CA:3240:HOH:O	2.06	0.73
35:DA:1505:G:OP2	60:DA:1860:HOH:O	2.05	0.73
35:FA:1505:G:OP1	60:FA:1800:HOH:O	2.06	0.73
35:BA:533:A:OP1	60:BA:1847:HOH:O	2.05	0.73
10:CJ:36:LEU:O	10:CJ:121:LYS:NZ	2.21	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:C5:129:LEU:O	32:C5:131:THR:N	2.20	0.73
56:DW:3:SER:OG	56:DW:4:SER:N	2.22	0.73
16:GP:4:ILE:O	16:GP:6:GLN:N	2.22	0.73
35:HA:411:A:OP1	37:HD:26:ARG:NH2	2.21	0.73
35:HA:1134:G:N2	35:HA:1140:C:N3	2.36	0.73
50:HQ:4:LYS:N	50:HQ:4:LYS:HZ2	1.85	0.73
3:AA:1970:A:OP2	60:AA:3466:HOH:O	2.07	0.73
3:AA:2331:G:O2'	23:AW:39:GLN:O	2.04	0.73
32:A5:57:ASN:O	32:A5:59:LEU:N	2.21	0.73
35:BA:1524:C:OP1	44:BK:125:LYS:NZ	2.20	0.73
3:EA:2499:C:OP2	60:EA:3679:HOH:O	2.07	0.73
3:AA:572:A:OP2	18:AR:80:ARG:NH2	2.21	0.73
32:C5:71:CYS:CB	32:C5:117:LEU:HD12	2.18	0.73
3:EA:2582:G:OP2	60:EA:3700:HOH:O	2.04	0.73
3:AA:1998:A:OP2	4:AD:141:ARG:NH2	2.21	0.73
3:EA:802:A:OP1	60:EA:3328:HOH:O	2.04	0.73
35:HA:483:C:O2	49:HP:13:LYS:NZ	2.21	0.73
3:AA:2592:G:OP1	60:AA:3459:HOH:O	2.06	0.73
10:AJ:43:GLU:O	10:AJ:45:THR:N	2.22	0.73
32:E5:71:CYS:HB3	32:E5:117:LEU:HD12	1.71	0.73
3:GA:761:A:N7	60:GA:3292:HOH:O	2.20	0.73
34:HB:135:MET:N	34:HB:135:MET:SD	2.62	0.73
3:EA:1998:A:OP2	4:ED:141:ARG:NH2	2.21	0.73
3:GA:29:U:OP2	60:GA:3207:HOH:O	2.07	0.73
3:GA:1798:U:OP2	2:GC:270:ARG:NH2	2.21	0.73
35:HA:674:G:N2	35:HA:717:U:O2	2.22	0.73
35:HA:903:G:N7	60:HA:1759:HOH:O	2.21	0.73
3:EA:1799:G:OP2	2:EC:269:ARG:NH2	2.22	0.73
10:EJ:41:LYS:NZ	10:EJ:52:ASP:OD1	2.21	0.73
42:HI:92:GLU:OE1	42:HI:95:ARG:NH2	2.21	0.73
3:AA:1439:A:OP2	60:AA:3623:HOH:O	2.07	0.73
32:A5:1:MET:SD	32:A5:2:ALA:N	2.58	0.73
48:DO:14:GLU:O	48:DO:84:ARG:NH2	2.21	0.73
35:FA:2:A:O3'	37:FD:83:LYS:NZ	2.21	0.73
7:AG:22:VAL:HG12	7:AG:36:LEU:CD1	2.19	0.72
32:C5:36:ASP:O	32:C5:39:THR:OG1	2.07	0.72
10:EJ:4:PHE:N	10:EJ:44:TYR:OH	2.22	0.72
47:FN:91:GLY:O	47:FN:93:ILE:N	2.22	0.72
3:AA:2056:G:OP2	60:AA:3481:HOH:O	2.06	0.72
3:CA:1013:C:OP2	60:CA:3593:HOH:O	2.07	0.72
3:EA:2522:U:O2'	3:EA:2647:U:OP1	2.06	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:EA:2640:G:OP1	10:EJ:96:ARG:NH1	2.21	0.72
54:HU:44:GLU:OE2	54:HU:45:ARG:NH1	2.22	0.72
3:CA:2331:G:O2'	23:CW:39:GLN:O	2.02	0.72
35:DA:935:A:O2'	35:DA:1383:C:N3	2.23	0.72
35:FA:1228:C:OP1	46:FM:107:ARG:NH2	2.22	0.72
3:GA:613:A:N6	3:GA:617:G:N3	2.37	0.72
35:HA:652:U:O4	35:HA:752:G:O2'	2.06	0.72
35:HA:892:A:OP2	60:HA:1758:HOH:O	2.07	0.72
3:CA:530:G:O4'	60:CA:3652:HOH:O	2.05	0.72
3:EA:730:A:OP2	60:EA:3688:HOH:O	2.08	0.72
2:EC:69:ASN:O	2:EC:71:ASP:N	2.23	0.72
3:GA:1154:G:OP2	17:GQ:57:ARG:NH1	2.21	0.72
3:GA:2252:G:OP1	60:GA:3502:HOH:O	2.06	0.72
3:EA:1253:A:OP1	17:EQ:32:ARG:NH1	2.21	0.72
3:EA:962:G:OP1	60:EA:3356:HOH:O	2.07	0.72
3:GA:514:A:N3	3:GA:581:C:O2'	2.21	0.72
3:GA:1342:A:OP2	60:GA:3797:HOH:O	2.06	0.72
3:CA:2873:A:OP1	60:CA:3784:HOH:O	2.08	0.72
3:EA:1106:G:OP1	32:E5:62:ARG:NH2	2.22	0.72
25:EY:15:ASN:O	25:EY:19:LEU:N	2.22	0.72
35:FA:1126:U:O4	43:FJ:9:ARG:NH1	2.23	0.72
35:FA:1242:G:O2'	60:FA:1790:HOH:O	2.02	0.72
1:GB:60:C:OP2	60:GB:1309:HOH:O	2.07	0.72
42:BI:56:ASP:O	42:BI:60:LYS:NZ	2.19	0.72
3:CA:1153:C:OP2	60:CA:3351:HOH:O	2.08	0.72
15:CO:57:ALA:O	15:CO:59:ALA:N	2.22	0.72
35:DA:857:C:OP2	60:DA:1811:HOH:O	2.06	0.72
47:FN:20:TYR:O	47:FN:24:ARG:N	2.23	0.72
3:GA:120:U:OP1	60:GA:3215:HOH:O	2.07	0.72
39:HF:90:MET:SD	51:HR:61:ARG:NE	2.63	0.72
46:HM:57:ARG:HA	46:HM:60:VAL:HG12	1.71	0.72
32:A5:106:PHE:O	32:A5:108:VAL:N	2.23	0.72
3:EA:1325:U:OP1	60:EA:3384:HOH:O	2.08	0.72
3:GA:1095:A:C5	55:HV:628:THR:HA	2.25	0.72
3:AA:990:A:OP2	60:AA:3590:HOH:O	2.06	0.72
3:CA:954:G:OP2	13:CM:16:ARG:NH2	2.22	0.72
3:CA:962:G:OP1	60:CA:3349:HOH:O	2.08	0.72
47:DN:7:LYS:NZ	60:DN:204:HOH:O	2.21	0.72
44:FK:88:GLY:O	44:FK:93:ARG:NH1	2.23	0.72
3:GA:453:A:OP2	60:GA:3240:HOH:O	2.07	0.72
3:GA:576:U:H2'	3:GA:577:G:C8	2.24	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:GA:975:A:OP2	60:GA:3579:HOH:O	2.08	0.72
35:BA:892:A:OP2	60:BA:1764:HOH:O	2.08	0.71
32:E5:24:SER:HB3	32:E5:116:GLU:HG2	1.72	0.71
55:FV:313:ASP:OD2	55:FV:378:ARG:NH1	2.23	0.71
2:GC:110:LYS:NZ	2:GC:113:ASP:OD1	2.21	0.71
20:GT:39:THR:O	20:GT:41:ALA:N	2.23	0.71
3:AA:2478:A:OP2	31:A4:2:LYS:NZ	2.23	0.71
35:BA:1468:A:H2'	35:BA:1469:C:H5'	1.72	0.71
3:EA:2324:U:H3'	3:EA:2325:G:H5"	1.71	0.71
55:FV:98:GLU:O	55:FV:102:SER:OG	2.04	0.71
1:GB:7:G:O2'	15:GO:38:GLN:OE1	2.06	0.71
3:GA:193:U:OP2	60:GA:3742:HOH:O	2.07	0.71
46:DM:14:HIS:ND1	46:DM:42:ASP:O	2.23	0.71
3:EA:818:G:OP2	60:EA:3577:HOH:O	2.08	0.71
35:FA:1492:A:H2'	35:FA:1493:A:H5'	1.73	0.71
3:GA:219:A:N3	3:GA:234:U:O2'	2.20	0.71
9:GI:112:LYS:NZ	9:GI:115:ASP:OD2	2.23	0.71
44:BK:126:LYS:O	54:BU:34:ARG:NE	2.24	0.71
3:CA:450:G:OP2	60:CA:3238:HOH:O	2.07	0.71
3:CA:2062:A:OP2	60:CA:3487:HOH:O	2.06	0.71
3:CA:2615:U:OP1	60:CA:3735:HOH:O	2.08	0.71
2:CC:69:ASN:O	2:CC:71:ASP:N	2.23	0.71
32:C5:117:LEU:HD22	32:C5:120:ALA:HA	1.71	0.71
55:DV:142:ASN:OD1	55:DV:143:LYS:N	2.23	0.71
7:GG:106:LEU:O	7:GG:151:ARG:NH2	2.24	0.71
35:HA:1505:G:OP2	60:HA:1866:HOH:O	2.06	0.71
52:HS:36:ARG:NH2	52:HS:75:ALA:O	2.23	0.71
3:AA:2057:G:OP2	60:AA:3481:HOH:O	2.08	0.71
3:EA:1022:G:O2'	3:EA:1024:G:O6	2.06	0.71
3:EA:1376:C:OP1	60:EA:3398:HOH:O	2.09	0.71
23:EW:19:ARG:HA	23:EW:34:SER:HA	1.72	0.71
4:GD:86:GLU:OE1	4:GD:86:GLU:N	2.24	0.71
1:CB:116:G:H4'	15:CO:54:VAL:HG22	1.73	0.71
35:DA:1468:A:H2'	35:DA:1469:C:H5'	1.71	0.71
3:EA:762:U:OP1	60:EA:3689:HOH:O	2.07	0.71
3:EA:2013:A:N3	19:ES:88:ARG:NH1	2.39	0.71
9:GI:73:PRO:O	9:GI:112:LYS:NZ	2.23	0.71
3:AA:621:A:OP2	60:AA:3291:HOH:O	2.08	0.71
3:CA:1837:C:O2'	3:CA:1927:A:N3	2.22	0.71
3:EA:254:G:N7	30:E3:4:LYS:NZ	2.37	0.71
60:FA:1879:HOH:O	45:FL:110:ARG:NH2	2.23	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:GA:2062:A:OP1	60:GA:3492:HOH:O	2.08	0.71
3:AA:1993:U:H4'	4:AD:133:THR:HG21	1.73	0.71
3:CA:217:A:OP2	60:CA:3225:HOH:O	2.07	0.71
35:FA:1149:C:OP1	42:FI:11:ARG:NH1	2.24	0.71
2:AC:49:THR:OG1	3:AA:1805:A:N3	2.24	0.71
3:AA:1010:A:OP2	60:AA:3768:HOH:O	2.08	0.71
3:CA:143:C:O2'	20:CT:3:ARG:NH1	2.24	0.71
3:CA:2096:C:O2	40:HG:52:GLN:NE2	2.24	0.71
32:C5:24:SER:CA	32:C5:116:GLU:HG2	2.21	0.71
35:DA:1015:G:O2'	47:DN:53:ARG:NH1	2.23	0.71
3:EA:198:C:OP2	60:EA:3751:HOH:O	2.08	0.71
6:EF:114:ARG:NH2	6:EF:115:GLY:O	2.24	0.71
3:GA:574:A:OP1	60:GA:3563:HOH:O	2.07	0.71
3:AA:2584:U:O4	60:AA:3698:HOH:O	2.08	0.71
36:BC:16:LYS:NZ	36:BC:181:ASP:OD1	2.23	0.71
39:DF:68:GLN:HA	39:DF:71:ILE:HG22	1.72	0.71
3:EA:1327:A:OP2	60:EA:3610:HOH:O	2.07	0.71
3:AA:963:U:OP1	60:AA:3350:HOH:O	2.08	0.70
3:EA:819:A:OP2	3:EA:1187:G:N2	2.21	0.70
3:EA:948:C:O2	3:EA:984:A:O2'	2.08	0.70
20:ET:9:LYS:O	20:ET:12:ARG:NH1	2.24	0.70
35:FA:1147:C:O2	42:FI:18:ARG:NH1	2.24	0.70
3:AA:161:A:H3'	3:AA:162:U:H5"	1.72	0.70
3:CA:965:C:OP2	60:CA:3331:HOH:O	2.08	0.70
3:CA:965:C:OP2	60:CA:3334:HOH:O	2.09	0.70
15:CO:67:ASN:O	15:CO:69:ASP:N	2.25	0.70
3:EA:1618:A:OP2	60:EA:3417:HOH:O	2.09	0.70
3:EA:1828:G:OP1	60:EA:3456:HOH:O	2.09	0.70
3:GA:774:G:OP1	2:GC:47:ARG:NH2	2.22	0.70
3:GA:2593:U:O4	60:GA:3770:HOH:O	2.09	0.70
35:HA:195:A:OP2	60:HA:1872:HOH:O	2.09	0.70
35:HA:404:G:O2'	35:HA:498:A:N1	2.21	0.70
3:CA:2324:U:H3'	3:CA:2325:G:H5"	1.72	0.70
9:CI:58:ILE:O	9:CI:59:THR:OG1	2.09	0.70
36:DC:85:GLU:OE1	36:DC:88:ARG:NH1	2.23	0.70
3:EA:2279:G:N7	23:EW:10:ARG:NH2	2.39	0.70
2:EC:196:ASN:O	2:EC:198:GLU:N	2.23	0.70
3:GA:32:C:N4	60:GA:3212:HOH:O	2.22	0.70
3:GA:196:A:O3'	60:GA:3744:HOH:O	2.08	0.70
3:GA:807:U:OP2	12:GL:41:ARG:NH1	2.24	0.70
3:GA:876:C:N3	3:GA:901:C:N4	2.37	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:GA:1269:A:OP2	60:GA:3379:HOH:O	2.08	0.70
3:GA:2405:G:O2'	3:GA:2411:A:N6	2.24	0.70
16:AP:5:LYS:NZ	16:AP:9:GLN:OE1	2.23	0.70
32:C5:33:VAL:N	32:C5:36:ASP:OD2	2.24	0.70
35:DA:159:G:N2	35:DA:162:A:OP2	2.25	0.70
38:DE:25:VAL:N	38:DE:28:GLY:O	2.21	0.70
3:GA:223:A:O2'	3:GA:420:C:O2	2.10	0.70
3:CA:1604:C:OP2	60:CA:3400:HOH:O	2.09	0.70
35:DA:161:A:N1	35:DA:347:G:O2'	2.23	0.70
35:DA:1254:A:N7	43:DJ:45:ARG:NH1	2.39	0.70
38:DE:41:ASP:OD1	38:DE:42:GLY:N	2.24	0.70
47:DN:4:GLN:NE2	60:DN:202:HOH:O	2.23	0.70
3:EA:1269:A:OP2	60:EA:3380:HOH:O	2.09	0.70
3:GA:1030:C:OP2	13:GM:127:LYS:NZ	2.24	0.70
35:HA:1468:A:H2'	35:HA:1469:C:H5'	1.72	0.70
35:BA:462:G:N2	35:BA:470:C:N3	2.39	0.70
3:CA:1993:U:H4'	4:CD:133:THR:HG21	1.74	0.70
43:DJ:88:MET:O	43:DJ:90:LEU:N	2.24	0.70
3:EA:2022:U:OP1	60:EA:3657:HOH:O	2.08	0.70
3:AA:2353:G:H1'	23:AW:30:VAL:HG12	1.72	0.70
35:BA:1504:G:N3	60:BA:1869:HOH:O	2.23	0.70
3:EA:810:U:OP1	60:EA:3332:HOH:O	2.09	0.70
32:E5:26:VAL:HG11	32:E5:77:VAL:CG1	2.22	0.70
3:GA:597:G:O2'	12:GL:11:GLY:O	2.09	0.70
12:GL:93:ASN:OD1	12:GL:94:THR:N	2.24	0.70
3:AA:1938:A:OP2	60:AA:3720:HOH:O	2.09	0.70
3:CA:1380:G:N2	3:CA:1570:A:N1	2.40	0.70
32:C5:1:MET:SD	32:C5:2:ALA:N	2.64	0.70
32:C5:26:VAL:HG11	32:C5:77:VAL:CG1	2.22	0.70
3:EA:272:A:HO2'	3:EA:273:G:H8	1.39	0.70
3:EA:991:C:OP2	60:EA:3596:HOH:O	2.09	0.70
3:EA:1968:G:OP1	60:EA:3464:HOH:O	2.09	0.70
3:GA:810:U:OP1	60:GA:3329:HOH:O	2.08	0.70
35:HA:545:C:H5'	37:HD:69:GLU:HG2	1.74	0.70
37:HD:15:GLU:OE2	37:HD:56:ARG:NH2	2.25	0.70
26:AZ:8:GLN:O	26:AZ:10:ARG:N	2.25	0.70
35:FA:964:A:OP1	60:FA:1827:HOH:O	2.08	0.70
48:FO:46:HIS:O	48:FO:48:LYS:N	2.25	0.70
3:GA:979:A:OP2	60:GA:3586:HOH:O	2.08	0.70
5:GE:170:ARG:NH2	5:GE:176:ASP:OD2	2.25	0.70
3:AA:981:A:OP1	60:AA:3585:HOH:O	2.08	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1304:G:OP2	60:BA:1792:HOH:O	2.10	0.70
54:BU:44:GLU:OE2	54:BU:45:ARG:NH1	2.25	0.70
32:C5:30:SER:O	32:C5:31:ARG:CB	2.38	0.70
3:EA:1787:A:OP1	60:EA:3737:HOH:O	2.09	0.70
35:HA:501:C:OP2	45:HL:121:ARG:NH1	2.25	0.70
3:AA:1604:C:OP1	60:AA:3402:HOH:O	2.09	0.69
3:CA:1203:U:O2'	12:CL:4:ASN:OD1	2.10	0.69
3:EA:2448:A:OP2	60:EA:3679:HOH:O	2.09	0.69
53:FT:69:LYS:NZ	53:FT:70:ASN:OD1	2.19	0.69
18:GR:46:GLU:OE1	18:GR:46:GLU:N	2.24	0.69
3:AA:1776:G:OP2	60:AA:3447:HOH:O	2.09	0.69
3:AA:2324:U:H3'	3:AA:2325:G:H5"	1.74	0.69
3:AA:2588:G:OP2	60:AA:3537:HOH:O	2.10	0.69
6:AF:116:LEU:N	6:AF:176:PHE:O	2.24	0.69
35:BA:1492:A:H2'	35:BA:1493:A:H5'	1.73	0.69
3:CA:622:G:OP2	60:CA:3794:HOH:O	2.08	0.69
3:EA:2138:G:N3	3:EA:2154:A:N6	2.38	0.69
37:FD:70:ARG:O	37:FD:74:ASN:ND2	2.25	0.69
3:GA:948:C:O2	3:GA:984:A:O2'	2.10	0.69
3:GA:1007:C:OP1	10:GJ:37:ARG:NH2	2.25	0.69
3:GA:1780:A:OP1	60:GA:3680:HOH:O	2.10	0.69
17:GQ:91:ARG:HH21	17:GQ:93:ILE:HG12	1.57	0.69
47:BN:91:GLY:O	47:BN:93:ILE:N	2.23	0.69
3:CA:2051:A:OP1	60:CA:3479:HOH:O	2.09	0.69
3:CA:2588:G:OP2	60:CA:3537:HOH:O	2.11	0.69
7:CG:84:LYS:HG3	7:CG:132:LEU:H	1.56	0.69
35:FA:684:U:O2'	44:FK:40:ASN:O	2.10	0.69
3:GA:571:U:OP1	18:GR:80:ARG:NH2	2.24	0.69
3:GA:2268:A:OP2	60:GA:3508:HOH:O	2.09	0.69
35:HA:416:G:OP2	60:HA:1715:HOH:O	2.10	0.69
23:AW:30:VAL:O	23:AW:30:VAL:HG13	1.92	0.69
32:C5:116:GLU:HG3	32:C5:117:LEU:H	1.56	0.69
13:EM:66:ARG:NH1	13:EM:104:GLU:OE1	2.25	0.69
5:GE:111:GLU:OE1	5:GE:115:GLN:NE2	2.26	0.69
3:AA:512:G:N7	60:AA:3757:HOH:O	2.25	0.69
3:AA:1124:G:OP2	60:AA:3601:HOH:O	2.10	0.69
3:AA:2091:C:O2	24:AX:33:HIS:NE2	2.26	0.69
39:DF:79:ARG:NH2	39:DF:87:SER:OG	2.25	0.69
53:DT:3:ASN:O	53:DT:5:LYS:N	2.25	0.69
3:EA:996:A:OP2	17:EQ:91:ARG:NH2	2.26	0.69
35:FA:177:G:OP2	53:FT:64:LYS:NZ	2.25	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:GA:30:G:O2'	3:GA:1214:A:N3	2.25	0.69
3:GA:746:U:O4	60:GA:3304:HOH:O	2.08	0.69
3:EA:1154:G:OP2	17:EQ:57:ARG:NH1	2.26	0.69
32:E5:94:ARG:O	32:E5:97:LYS:N	2.26	0.69
45:FL:44:LYS:CB	45:FL:45:PRO:HD3	2.23	0.69
3:GA:583:G:N7	60:GA:3285:HOH:O	2.24	0.69
3:GA:605:G:OP1	5:GE:99:LYS:NZ	2.26	0.69
35:DA:928:G:O2'	35:DA:1533:C:OP1	2.10	0.69
18:ER:46:GLU:N	18:ER:46:GLU:OE1	2.25	0.69
55:FV:93:VAL:O	55:FV:95:PHE:N	2.24	0.69
3:GA:1001:A:OP2	60:GA:3722:HOH:O	2.10	0.69
36:HC:49:LYS:O	36:HC:72:ARG:NH2	2.26	0.69
3:AA:587:C:OP2	12:AL:21:ARG:NH1	2.25	0.69
3:AA:1332:G:OP1	60:AA:3751:HOH:O	2.10	0.69
3:AA:1936:A:N6	3:AA:1963:U:O2	2.26	0.69
35:BA:483:C:O2	49:BP:13:LYS:NZ	2.26	0.69
16:CP:50:ARG:HB3	16:CP:57:ALA:H	1.58	0.69
35:DA:8:A:N6	37:DD:202:GLU:O	2.26	0.69
3:EA:2270:A:OP2	60:EA:3512:HOH:O	2.10	0.69
3:EA:2574:G:OP1	60:EA:3706:HOH:O	2.09	0.69
3:GA:1187:G:OP1	18:GR:85:LYS:NZ	2.26	0.69
3:GA:472:A:N7	60:GA:3241:HOH:O	2.25	0.69
3:GA:1334:G:OP2	60:GA:3387:HOH:O	2.11	0.69
35:HA:261:U:OP2	53:HT:74:ARG:NH2	2.25	0.69
55:HV:8:ALA:O	55:HV:288:SER:OG	2.08	0.69
3:AA:971:G:OP2	3:AA:974:G:N2	2.25	0.69
4:AD:149:ASN:OD1	4:AD:150:GLN:N	2.26	0.69
37:BD:30:THR:HB	37:BD:31:LYS:HZ2	1.58	0.69
3:CA:1676:A:OP2	60:CA:3750:HOH:O	2.11	0.69
26:CZ:12:ALA:O	26:CZ:20:LYS:NZ	2.24	0.69
3:EA:1799:G:O2'	2:EC:179:GLU:OE2	2.04	0.69
17:EQ:91:ARG:HE	17:EQ:93:ILE:CG2	2.05	0.69
3:GA:2421:G:OP1	28:G1:7:LYS:NZ	2.25	0.69
49:HP:42:ILE:O	49:HP:44:SER:N	2.26	0.69
20:CT:54:GLU:CG	20:CT:88:LYS:HB2	2.24	0.68
3:EA:923:G:H1'	23:EW:23:LYS:HD3	1.75	0.68
3:EA:962:G:OP2	60:EA:3355:HOH:O	2.11	0.68
3:EA:1010:A:OP2	60:EA:3770:HOH:O	2.10	0.68
37:FD:22:LYS:O	37:FD:24:GLY:N	2.25	0.68
3:GA:1333:G:OP2	60:GA:3386:HOH:O	2.10	0.68
3:GA:2849:U:O4	16:GP:20:ARG:NH1	2.27	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:GC:69:ASN:O	2:GC:71:ASP:N	2.26	0.68
2:GC:196:ASN:O	2:GC:198:GLU:N	2.24	0.68
35:HA:1110:A:OP2	60:HA:1852:HOH:O	2.11	0.68
32:A5:25:ALA:O	32:A5:26:VAL:HG13	1.94	0.68
3:CA:161:A:H3'	3:CA:162:U:H5"	1.74	0.68
32:C5:57:ASN:O	32:C5:59:LEU:N	2.25	0.68
35:DA:951:G:O2'	35:DA:970:C:O2'	2.03	0.68
32:E5:106:PHE:O	32:E5:108:VAL:N	2.26	0.68
35:FA:135:C:N3	49:FP:1:MET:N	2.31	0.68
35:FA:1130:A:OP1	42:FI:18:ARG:NH2	2.26	0.68
3:GA:2579:C:OP1	60:GA:3535:HOH:O	2.12	0.68
3:GA:2611:C:OP2	60:GA:3535:HOH:O	2.11	0.68
15:GO:31:THR:O	15:GO:102:ARG:NH1	2.27	0.68
35:HA:803:G:OP1	60:HA:1750:HOH:O	2.11	0.68
48:HO:45:GLU:CG	48:HO:46:HIS:H	2.07	0.68
3:AA:1658:C:OP1	60:AA:3646:HOH:O	2.11	0.68
16:CP:50:ARG:HG3	16:CP:57:ALA:O	1.93	0.68
16:EP:4:ILE:O	16:EP:6:GLN:N	2.26	0.68
3:GA:666:A:H4'	12:GL:48:ARG:HE	1.57	0.68
41:HH:22:LYS:O	41:HH:65:TYR:OH	2.10	0.68
3:AA:2269:G:OP1	60:AA:3503:HOH:O	2.11	0.68
3:AA:2615:U:OP1	60:AA:3737:HOH:O	2.12	0.68
13:AM:66:ARG:NH1	13:AM:104:GLU:OE1	2.26	0.68
37:BD:29:ASP:O	37:BD:31:LYS:NZ	2.27	0.68
32:C5:116:GLU:CG	32:C5:117:LEU:H	2.06	0.68
3:EA:2061:G:OP2	60:EA:3492:HOH:O	2.10	0.68
3:GA:1332:G:OP1	60:GA:3746:HOH:O	2.11	0.68
3:CA:963:U:OP1	60:CA:3348:HOH:O	2.10	0.68
3:CA:1780:A:OP1	60:CA:3679:HOH:O	2.12	0.68
5:CE:170:ARG:NH2	5:CE:176:ASP:OD2	2.26	0.68
35:DA:1166:G:N2	35:DA:1169:A:OP2	2.26	0.68
3:EA:1223:G:N7	18:ER:71:LYS:NZ	2.42	0.68
35:FA:413:G:O2'	35:FA:428:G:N2	2.26	0.68
35:FA:1229:A:OP2	46:FM:113:ARG:NH1	2.25	0.68
3:GA:2275:C:O2'	13:GM:83:GLY:O	2.12	0.68
2:AC:176:ARG:NH2	3:AA:1820:U:OP1	2.27	0.68
3:AA:324:A:N6	3:AA:338:G:O2'	2.27	0.68
29:C2:43:THR:O	29:C2:45:SER:N	2.26	0.68
3:GA:2211:A:O2'	3:GA:2212:A:OP1	2.07	0.68
39:HF:15:SER:O	39:HF:17:GLN:N	2.27	0.68
12:AL:93:ASN:O	12:AL:95:LEU:N	2.27	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:79:G:O2'	35:BA:80:A:O5'	2.08	0.68
35:BA:100:G:OP2	60:BA:1875:HOH:O	2.11	0.68
55:DV:80:GLU:N	55:DV:80:GLU:OE2	2.25	0.68
10:GJ:6:ALA:HB3	10:GJ:45:THR:HG21	1.75	0.68
3:CA:370:G:O2'	3:CA:424:G:OP1	2.12	0.68
17:CQ:32:ARG:NH1	60:CQ:201:HOH:O	2.27	0.68
3:EA:827:U:OP1	60:EA:3693:HOH:O	2.11	0.68
45:FL:68:GLY:O	45:FL:99:ARG:NH1	2.25	0.68
13:GM:22:GLN:O	13:GM:24:THR:N	2.26	0.68
3:AA:948:C:O2	3:AA:984:A:O2'	2.12	0.68
3:EA:2056:G:OP2	60:EA:3487:HOH:O	2.10	0.68
15:GO:58:ILE:O	15:GO:61:GLN:NE2	2.27	0.68
3:AA:301:G:OP2	21:AU:81:ARG:NH1	2.26	0.68
35:BA:159:G:N2	35:BA:162:A:OP2	2.27	0.68
3:CA:572:A:OP2	18:CR:80:ARG:NH2	2.27	0.68
17:CQ:63:ARG:NH1	17:CQ:95:ALA:O	2.26	0.68
32:C5:103:ASN:ND2	32:C5:107:GLU:O	2.27	0.68
19:ES:73:LYS:HB3	19:ES:106:VAL:HB	1.76	0.68
3:GA:793:A:OP2	3:GA:2071:A:O2'	2.11	0.68
3:AA:120:U:OP1	60:AA:3220:HOH:O	2.12	0.67
3:AA:2247:A:OP1	60:AA:3499:HOH:O	2.11	0.67
3:AA:2588:G:OP2	60:AA:3539:HOH:O	2.11	0.67
3:CA:2269:G:OP1	60:CA:3503:HOH:O	2.12	0.67
3:GA:944:C:OP2	60:GA:3262:HOH:O	2.12	0.67
1:AB:73:A:C4	1:AB:104:A:C2	2.82	0.67
38:FE:80:THR:OG1	38:FE:81:LEU:N	2.25	0.67
3:GA:922:C:O2	23:GW:19:ARG:NH1	2.25	0.67
3:CA:1245:G:OP1	12:CL:13:LYS:NZ	2.23	0.67
3:CA:1658:C:OP1	60:CA:3643:HOH:O	2.11	0.67
19:CS:25:ARG:NH1	60:CS:202:HOH:O	2.27	0.67
3:EA:560:C:O2	17:EQ:47:ARG:NH1	2.25	0.67
3:EA:2419:U:O4	60:EA:3809:HOH:O	2.11	0.67
34:FB:60:ALA:O	34:FB:224:ARG:NH1	2.26	0.67
3:AA:42:A:C2'	3:AA:43:G:H5'	2.25	0.67
32:A5:26:VAL:O	32:A5:27:VAL:HB	1.93	0.67
3:CA:2711:A:OP2	60:CA:3543:HOH:O	2.12	0.67
8:CH:10:ALA:O	8:CH:12:LEU:N	2.22	0.67
11:AK:76:VAL:HB	16:AP:72:VAL:HG22	1.76	0.67
3:CA:2499:C:OP1	60:CA:3675:HOH:O	2.13	0.67
3:GA:19:A:OP1	17:GQ:22:GLY:N	2.27	0.67
18:GR:79:ARG:O	60:GR:201:HOH:O	2.12	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:100:ILE:HB	9:AI:139:VAL:HA	1.75	0.67
10:AJ:4:PHE:N	10:AJ:44:TYR:OH	2.28	0.67
3:CA:301:G:OP2	21:CU:81:ARG:NH1	2.27	0.67
2:EC:52:HIS:ND1	60:EC:304:HOH:O	2.18	0.67
35:FA:1433:A:OP2	60:FA:1836:HOH:O	2.12	0.67
3:AA:2592:G:OP1	60:AA:3458:HOH:O	2.12	0.67
32:C5:91:ALA:C	32:C5:93:ALA:H	1.97	0.67
39:DF:97:THR:O	39:DF:98:GLU:HG2	1.95	0.67
3:EA:2134:A:O2'	3:EA:2156:G:N2	2.27	0.67
51:FR:73:ARG:O	51:FR:74:HIS:ND1	2.28	0.67
3:GA:2091:C:O2	24:GX:33:HIS:NE2	2.28	0.67
40:HG:126:ASP:OD1	40:HG:132:GLY:N	2.28	0.67
1:AB:79:G:O2'	3:AA:861:A:N3	2.27	0.67
35:BA:1198:G:OP2	60:BA:1833:HOH:O	2.12	0.67
3:CA:795:C:OP2	60:CA:3312:HOH:O	2.11	0.67
24:CX:70:LEU:O	24:CX:74:GLY:N	2.27	0.67
3:GA:15:G:OP2	60:GA:3543:HOH:O	2.13	0.67
3:GA:909:A:OP1	60:GA:3709:HOH:O	2.13	0.67
35:HA:835:U:OP1	51:HR:53:ARG:NH1	2.26	0.67
48:BO:46:HIS:O	48:BO:48:LYS:N	2.28	0.67
3:CA:1054:A:OP1	32:C5:31:ARG:NH2	2.27	0.67
3:CA:1342:A:O2'	3:CA:1344:U:OP2	2.11	0.67
3:EA:1676:A:OP2	60:EA:3759:HOH:O	2.13	0.67
3:GA:1665:A:OP2	60:GA:3421:HOH:O	2.12	0.67
3:CA:2343:U:O2'	3:CA:2373:G:O2'	2.11	0.67
35:DA:559:A:OP2	60:DA:1830:HOH:O	2.13	0.67
2:EC:110:LYS:NZ	2:EC:113:ASP:OD1	2.19	0.67
12:GL:99:ASN:OD1	60:GL:302:HOH:O	2.13	0.67
35:HA:10:A:OP2	38:HE:131:THR:OG1	2.10	0.67
11:AK:18:ARG:HB2	11:AK:45:GLU:HB2	1.77	0.66
46:BM:29:ARG:CZ	46:BM:63:PHE:HB2	2.25	0.66
3:CA:572:A:OP1	60:CA:3559:HOH:O	2.13	0.66
35:DA:937:A:OP2	60:DA:1769:HOH:O	2.13	0.66
3:EA:982:C:O3'	60:EA:3564:HOH:O	2.12	0.66
35:BA:427:U:O4	60:BA:1720:HOH:O	2.08	0.66
47:BN:49:GLN:OE1	47:BN:49:GLN:N	2.28	0.66
3:CA:1798:U:OP2	2:CC:270:ARG:NH2	2.27	0.66
3:CA:2139:U:O2'	3:CA:2152:G:O6	2.13	0.66
35:DA:1219:A:H5'	47:DN:53:ARG:NH1	2.10	0.66
3:EA:784:G:OP2	60:EA:3314:HOH:O	2.12	0.66
3:EA:1439:A:OP2	60:EA:3628:HOH:O	2.13	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:C1:3:GLY:O	28:C1:5:ARG:N	2.27	0.66
35:DA:779:C:O2'	44:DK:122:ARG:NH1	2.28	0.66
2:EC:43:ASN:OD1	2:EC:44:ASN:N	2.27	0.66
3:GA:1187:G:OP1	60:GA:3363:HOH:O	2.12	0.66
35:HA:1050:G:N2	35:HA:1208:C:O2	2.27	0.66
35:BA:111:G:O6	35:BA:330:C:N4	2.28	0.66
3:CA:526:A:OP1	60:CA:3248:HOH:O	2.13	0.66
32:C5:106:PHE:O	32:C5:108:VAL:N	2.28	0.66
35:DA:1007:U:H2'	35:DA:1008:U:H5'	1.78	0.66
3:EA:1678:A:OP2	60:EA:3441:HOH:O	2.12	0.66
14:EN:73:ASN:HA	14:EN:76:VAL:CG1	2.26	0.66
3:GA:428:A:OP2	60:GA:3226:HOH:O	2.12	0.66
3:GA:819:A:OP2	3:GA:1187:G:N2	2.28	0.66
3:GA:1828:G:OP2	60:GA:3728:HOH:O	2.13	0.66
37:HD:62:ARG:NH1	37:HD:69:GLU:OE2	2.29	0.66
3:AA:1670:C:OP1	60:AA:3431:HOH:O	2.14	0.66
35:BA:572:A:OP1	60:BA:1739:HOH:O	2.13	0.66
32:C5:117:LEU:CD2	32:C5:120:ALA:HA	2.26	0.66
3:GA:1604:C:OP2	60:GA:3405:HOH:O	2.13	0.66
35:HA:1011:C:H2'	35:HA:1012:A:H5'	1.78	0.66
32:A5:24:SER:CB	32:A5:116:GLU:HG2	2.24	0.66
43:DJ:5:ARG:HB3	43:DJ:77:VAL:HA	1.78	0.66
34:FB:81:ASP:O	34:FB:84:LEU:N	2.28	0.66
3:GA:675:A:O4'	60:GA:3323:HOH:O	2.14	0.66
3:GA:1072:C:N4	3:GA:1097:U:O5'	2.28	0.66
3:GA:1338:G:O2'	3:GA:1393:A:N1	2.29	0.66
3:AA:1679:A:OP2	60:AA:3436:HOH:O	2.13	0.66
20:CT:26:LYS:O	20:CT:27:SER:OG	2.14	0.66
3:GA:1378:A:O2'	3:GA:1380:G:N7	2.27	0.66
38:HE:140:THR:O	38:HE:144:LEU:N	2.26	0.66
35:BA:404:G:O6	37:BD:2:ALA:N	2.28	0.66
42:BI:42:GLU:O	42:BI:45:ARG:NH1	2.29	0.66
3:CA:1565:C:H5"	2:CC:17:LYS:HE3	1.78	0.66
5:CE:150:THR:HG21	5:CE:153:LEU:HA	1.77	0.66
32:C5:26:VAL:CG1	32:C5:77:VAL:HG11	2.26	0.66
44:DK:126:LYS:O	54:DU:34:ARG:NH1	2.28	0.66
3:EA:621:A:OP2	60:EA:3799:HOH:O	2.13	0.66
32:E5:73:LYS:CB	32:E5:117:LEU:HD21	2.25	0.66
35:FA:8:A:N6	37:FD:202:GLU:O	2.29	0.66
35:FA:1031:C:O2'	35:FA:1032:G:N3	2.29	0.66
35:FA:1197:A:OP2	60:FA:1781:HOH:O	2.14	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:FI:84:THR:HG21	42:FI:103:PHE:HB3	1.76	0.66
46:HM:57:ARG:HA	46:HM:60:VAL:CG1	2.26	0.66
3:AA:1789:A:OP1	60:AA:3772:HOH:O	2.13	0.66
11:AK:71:ARG:HB3	11:AK:72:PRO:HD3	1.78	0.66
12:AL:93:ASN:OD1	12:AL:94:THR:N	2.28	0.66
15:AO:76:LYS:NZ	15:AO:80:GLU:OE1	2.29	0.66
35:BA:175:C:O2'	35:BA:1447:A:N1	2.26	0.66
3:CA:2707:U:O4	60:CA:3671:HOH:O	2.12	0.66
3:GA:809:G:OP2	60:GA:3255:HOH:O	2.13	0.66
3:GA:1197:G:H2'	3:GA:1198:U:C6	2.31	0.66
3:GA:1636:U:OP2	60:GA:3641:HOH:O	2.13	0.66
30:G3:49:VAL:HG23	30:G3:54:LEU:HD11	1.78	0.66
34:HB:164:ASP:OD1	34:HB:190:SER:OG	2.14	0.66
3:AA:363:G:H2'	3:AA:364:C:C6	2.31	0.66
1:CB:87:U:H3'	1:CB:88:C:H5'	1.78	0.66
3:CA:2588:G:OP1	60:CA:3310:HOH:O	2.13	0.66
16:CP:4:ILE:O	16:CP:6:GLN:N	2.29	0.66
3:EA:878:A:N6	3:EA:899:A:O2'	2.28	0.66
7:EG:174:LYS:O	7:EG:176:LYS:N	2.29	0.66
32:E5:30:SER:O	32:E5:31:ARG:CB	2.44	0.66
3:GA:1620:G:OP2	60:GA:3634:HOH:O	2.13	0.66
3:GA:2683:C:O2	11:GK:70:ARG:NH2	2.29	0.66
55:HV:310:HIS:N	55:HV:315:GLU:OE1	2.29	0.66
34:BB:88:GLN:HE22	34:BB:220:VAL:HG23	1.60	0.65
35:DA:21:G:OP1	60:DA:1808:HOH:O	2.14	0.65
3:EA:2268:A:OP1	60:EA:3507:HOH:O	2.14	0.65
3:EA:2352:A:C2	23:EW:30:VAL:HG11	2.30	0.65
3:EA:2353:G:H1'	23:EW:30:VAL:HG13	1.78	0.65
32:E5:1:MET:SD	32:E5:2:ALA:N	2.63	0.65
55:FV:660:LEU:O	55:FV:662:GLU:N	2.29	0.65
9:GI:123:ALA:HA	9:GI:126:ARG:NH2	2.11	0.65
35:HA:1250:A:OP1	42:HI:69:GLY:N	2.28	0.65
3:AA:2611:C:OP2	60:AA:3535:HOH:O	2.14	0.65
35:BA:151:A:OP2	35:BA:169:C:N4	2.28	0.65
12:CL:93:ASN:OD1	12:CL:94:THR:N	2.29	0.65
17:CQ:91:ARG:HH11	18:CR:11:GLN:N	1.94	0.65
35:DA:817:C:OP2	60:DA:1736:HOH:O	2.13	0.65
3:EA:576:U:OP1	60:EA:3664:HOH:O	2.14	0.65
35:FA:1007:U:H2'	35:FA:1008:U:H5'	1.77	0.65
3:GA:2593:U:O4	60:GA:3788:HOH:O	2.12	0.65
35:HA:111:G:O6	35:HA:330:C:N4	2.29	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:HA:1077:G:N2	35:HA:1080:A:OP2	2.30	0.65
3:AA:2142:A:H4'	3:AA:2143:C:OP2	1.96	0.65
32:A5:39:THR:HA	32:A5:42:ARG:HD2	1.78	0.65
3:CA:994:C:O2'	3:CA:996:A:OP1	2.11	0.65
3:GA:1338:G:O2'	20:GT:18:GLU:OE1	2.06	0.65
3:GA:1912:A:N3	35:HA:1494:G:N2	2.44	0.65
14:AN:98:LEU:HB3	27:A0:42:ILE:HD11	1.79	0.65
23:AW:37:VAL:HG12	23:AW:38:ARG:H	1.61	0.65
35:DA:574:A:OP2	60:DA:1733:HOH:O	2.13	0.65
55:DV:309:ARG:NH2	55:DV:402:ALA:O	2.30	0.65
3:EA:856:G:H1'	23:EW:23:LYS:HB3	1.78	0.65
3:GA:2022:U:O5'	60:GA:3649:HOH:O	2.12	0.65
35:DA:1137:C:O2	35:DA:1138:G:N2	2.29	0.65
35:FA:159:G:N2	35:FA:162:A:OP2	2.30	0.65
55:FV:142:ASN:OD1	55:FV:143:LYS:N	2.29	0.65
10:AJ:6:ALA:HB3	10:AJ:45:THR:HG21	1.78	0.65
14:AN:118:ARG:O	14:AN:120:GLU:N	2.30	0.65
35:BA:1181:G:O2'	35:BA:1182:G:C8	2.49	0.65
3:CA:2346:A:H3'	3:CA:2347:C:C5'	2.27	0.65
55:DV:23:LYS:O	55:DV:24:THR:OG1	2.14	0.65
55:DV:660:LEU:O	55:DV:662:GLU:N	2.28	0.65
3:EA:1156:A:OP2	60:EA:3361:HOH:O	2.14	0.65
3:EA:1313:U:OP1	60:EA:3389:HOH:O	2.14	0.65
5:EE:51:GLU:OE2	5:EE:88:ARG:NH1	2.27	0.65
31:E4:36:ARG:HG2	31:E4:37:GLN:H	1.61	0.65
3:GA:27:G:O2'	3:GA:28:A:OP2	2.13	0.65
3:GA:943:A:OP2	60:GA:3776:HOH:O	2.14	0.65
3:GA:1067:A:H2'	3:GA:1068:G:H8	1.61	0.65
3:GA:1095:A:C6	55:HV:628:THR:HA	2.32	0.65
13:GM:30:SER:O	13:GM:133:LYS:N	2.30	0.65
55:HV:500:ASP:N	55:HV:521:ASP:OD1	2.29	0.65
3:AA:999:U:OP2	60:AA:3354:HOH:O	2.15	0.65
59:BV:801:GCP:O3G	60:BV:901:HOH:O	2.13	0.65
14:EN:30:ARG:NH1	14:EN:74:GLU:OE1	2.29	0.65
23:EW:37:VAL:HG12	23:EW:38:ARG:H	1.61	0.65
37:HD:100:ASN:OD1	37:HD:111:ARG:NH1	2.30	0.65
32:A5:117:LEU:HD22	32:A5:120:ALA:HA	1.75	0.65
35:DA:1498:U:O3'	60:DA:1859:HOH:O	2.14	0.65
3:EA:2394:C:OP1	30:E3:29:ARG:NH2	2.29	0.65
55:FV:80:GLU:N	55:FV:80:GLU:OE2	2.29	0.65
3:GA:987:C:O2'	3:GA:1000:A:N3	2.26	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:HA:1194:U:OP2	35:HA:1195:C:N4	2.28	0.65
35:HA:1504:G:OP1	60:HA:1793:HOH:O	2.13	0.65
37:BD:66:GLY:O	37:BD:115:ARG:NH2	2.30	0.65
3:CA:2711:A:OP1	60:CA:3541:HOH:O	2.14	0.65
35:DA:684:U:O2'	44:DK:40:ASN:O	2.15	0.65
55:DV:203:GLU:O	55:DV:205:GLU:N	2.30	0.65
56:DW:3:SER:O	56:DW:5:UAL:N	2.30	0.65
1:GB:99:A:O3'	60:GB:1315:HOH:O	2.13	0.65
3:GA:2332:C:H4'	3:GA:2336:A:C6	2.31	0.65
35:BA:1299:A:H2'	35:BA:1299:A:N3	2.12	0.65
3:CA:1774:C:OP2	60:CA:3730:HOH:O	2.14	0.65
3:EA:2271:G:O6	60:EA:3510:HOH:O	2.14	0.65
35:FA:608:A:O5'	60:FA:1851:HOH:O	2.15	0.65
35:FA:1303:C:OP1	60:FA:1790:HOH:O	2.14	0.65
37:HD:147:GLU:HA	37:HD:150:LYS:HB2	1.79	0.65
35:DA:1108:G:O6	60:DA:1854:HOH:O	2.10	0.64
3:EA:1256:G:OP2	60:EA:3272:HOH:O	2.15	0.64
3:EA:1263:U:OP1	27:E0:12:ARG:NH1	2.29	0.64
35:FA:749:A:O2'	48:FO:20:ASN:OD1	2.14	0.64
35:FA:814:A:OP2	60:FA:1755:HOH:O	2.14	0.64
3:GA:262:A:N3	3:GA:430:A:O2'	2.27	0.64
5:AE:58:LYS:NZ	5:AE:70:SER:O	2.31	0.64
35:DA:405:U:O4	37:DD:2:ALA:N	2.30	0.64
3:EA:456:C:O2	20:ET:73:ARG:NH1	2.30	0.64
3:EA:2269:G:OP1	60:EA:3507:HOH:O	2.13	0.64
3:GA:1647:U:OP2	60:GA:3414:HOH:O	2.14	0.64
35:HA:1027:C:O2'	35:HA:1034:G:N2	2.30	0.64
2:AC:43:ASN:OD1	2:AC:44:ASN:N	2.30	0.64
3:CA:597:G:O2'	12:CL:11:GLY:O	2.10	0.64
3:CA:1664:A:OP2	60:CA:3420:HOH:O	2.15	0.64
17:CQ:91:ARG:NH1	18:CR:11:GLN:O	2.31	0.64
3:EA:161:A:H3'	3:EA:162:U:H5"	1.77	0.64
17:EQ:65:ASN:OD1	17:EQ:69:ARG:NH2	2.30	0.64
32:E5:37:LYS:HE3	32:E5:41:LEU:HD11	1.80	0.64
35:FA:351:G:OP1	53:FT:3:ASN:N	2.31	0.64
3:GA:2324:U:H3'	3:GA:2325:G:H5"	1.79	0.64
3:GA:2595:G:O6	2:GC:238:ASN:ND2	2.30	0.64
3:GA:2600:A:N6	60:GA:3769:HOH:O	2.30	0.64
3:AA:1669:A:OP2	60:AA:3712:HOH:O	2.15	0.64
55:BV:78:GLN:NE2	55:BV:280:ASP:OD2	2.29	0.64
3:CA:1983:G:N2	60:CA:3718:HOH:O	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CW:18:LYS:HA	23:CW:36:ILE:HG13	1.80	0.64
3:EA:931:U:OP1	26:EZ:29:ARG:NH1	2.30	0.64
32:E5:56:ARG:O	32:E5:57:ASN:ND2	2.30	0.64
40:FG:28:ASN:OD1	40:FG:36:LYS:NZ	2.30	0.64
47:FN:21:PHE:HA	47:FN:25:ALA:HB3	1.79	0.64
3:GA:2429:G:OP2	60:GA:3339:HOH:O	2.15	0.64
47:HN:20:TYR:O	47:HN:24:ARG:N	2.30	0.64
9:AI:73:PRO:O	9:AI:112:LYS:NZ	2.31	0.64
19:AS:18:ARG:O	19:AS:19:LEU:HB2	1.98	0.64
32:C5:39:THR:HA	32:C5:42:ARG:HD2	1.79	0.64
32:C5:129:LEU:HB3	32:C5:130:PRO:HD2	1.80	0.64
32:E5:116:GLU:HG3	32:E5:117:LEU:H	1.62	0.64
35:FA:1166:G:N1	35:FA:1169:A:OP2	2.31	0.64
2:AC:179:GLU:OE2	3:AA:1799:G:O2'	2.07	0.64
7:AG:1:SER:O	7:AG:3:VAL:N	2.31	0.64
7:AG:38:ASP:N	7:AG:38:ASP:OD1	2.29	0.64
21:AU:73:ASN:ND2	21:AU:80:ASP:OD2	2.31	0.64
32:A5:129:LEU:O	32:A5:131:THR:N	2.26	0.64
23:CW:37:VAL:HG12	23:CW:38:ARG:H	1.62	0.64
32:C5:27:VAL:HG13	32:C5:83:ALA:HB3	1.79	0.64
3:EA:810:U:OP1	60:EA:3333:HOH:O	2.14	0.64
3:EA:1107:G:H4'	32:E5:81:LEU:HA	1.78	0.64
23:EW:35:ILE:O	23:EW:37:VAL:N	2.30	0.64
35:HA:1026:G:H2'	35:HA:1027:C:H5'	1.78	0.64
3:CA:1107:G:H5"	32:C5:58:THR:CG2	2.27	0.64
3:CA:1187:G:H5"	18:CR:83:TYR:CE2	2.32	0.64
14:CN:117:ASP:OD1	14:CN:118:ARG:N	2.30	0.64
17:CQ:91:ARG:HE	17:CQ:93:ILE:CG2	2.10	0.64
35:DA:324:G:O6	60:DA:1836:HOH:O	2.09	0.64
3:EA:1187:G:OP1	18:ER:85:LYS:NZ	2.30	0.64
35:FA:1299:A:H2'	35:FA:1299:A:N3	2.12	0.64
55:FV:554:ASP:OD1	55:FV:558:GLN:NE2	2.30	0.64
3:GA:300:A:N6	60:GA:3546:HOH:O	2.29	0.64
23:GW:51:GLY:HA3	23:GW:59:PHE:CZ	2.33	0.64
20:AT:32:LEU:H	20:AT:83:ALA:HB3	1.63	0.64
35:DA:237:G:H5"	50:DQ:27:ARG:HH22	1.61	0.64
35:FA:1492:A:C2'	35:FA:1493:A:H5'	2.27	0.64
15:GO:79:ALA:O	15:GO:83:LEU:N	2.26	0.64
19:GS:18:ARG:O	19:GS:20:VAL:N	2.24	0.64
35:HA:254:G:O3'	50:HQ:71:LYS:NZ	2.29	0.64
35:HA:958:A:N6	52:HS:77:THR:O	2.31	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:HA:986:U:O2	35:HA:1220:G:N2	2.30	0.64
40:HG:130:ASN:HD22	40:HG:135:VAL:HG21	1.62	0.64
52:HS:36:ARG:HG3	52:HS:51:VAL:HG11	1.79	0.64
3:AA:1968:G:OP1	60:AA:3459:HOH:O	2.15	0.64
35:BA:1297:G:O2'	40:BG:114:LYS:NZ	2.30	0.64
3:CA:568:U:OP1	12:CL:36:LYS:NZ	2.25	0.64
3:CA:784:G:O2'	3:CA:785:G:OP2	2.13	0.64
55:DV:211:MET:O	55:DV:215:ALA:N	2.23	0.64
3:GA:927:A:O2'	26:GZ:38:GLU:OE1	2.14	0.64
35:HA:1306:A:H1'	35:HA:1332:A:C4	2.32	0.64
54:BU:14:VAL:HG13	54:BU:16:LEU:HG	1.80	0.64
3:EA:1993:U:H4'	4:ED:133:THR:HG21	1.78	0.64
17:EQ:63:ARG:NH1	17:EQ:95:ALA:O	2.31	0.64
3:GA:137:U:C5	3:GA:140:C:H1'	2.33	0.64
3:AA:1199:U:H5'	17:AQ:4:LYS:HE3	1.79	0.63
9:AI:108:ILE:O	9:AI:111:THR:OG1	2.17	0.63
3:CA:32:C:OP2	60:CA:3689:HOH:O	2.14	0.63
32:E5:39:THR:HA	32:E5:42:ARG:HD2	1.80	0.63
35:FA:1524:C:P	44:FK:125:LYS:NZ	2.71	0.63
46:HM:114:LYS:HB2	46:HM:115:PRO:HD3	1.80	0.63
3:AA:1482:G:H1'	3:AA:1509:A:H61	1.62	0.63
23:AW:35:ILE:O	23:AW:37:VAL:N	2.31	0.63
41:BH:77:ARG:NE	41:BH:79:SER:O	2.31	0.63
3:CA:616:A:H4'	5:CE:101:TYR:CE2	2.33	0.63
3:CA:885:C:C2	3:CA:892:A:C2	2.85	0.63
44:DK:35:THR:OG1	44:DK:41:ALA:N	2.31	0.63
12:EL:93:ASN:OD1	12:EL:94:THR:N	2.31	0.63
37:FD:58:LYS:NZ	37:FD:69:GLU:OE2	2.32	0.63
42:FI:94:LEU:O	42:FI:96:SER:N	2.29	0.63
3:GA:962:G:O5'	60:GA:3351:HOH:O	2.15	0.63
3:GA:1094:U:H2'	3:GA:1096:A:OP2	1.98	0.63
3:GA:2353:G:O2'	23:GW:31:LEU:HD21	1.98	0.63
37:HD:29:ASP:O	37:HD:31:LYS:NZ	2.23	0.63
10:AJ:44:TYR:HB2	17:AQ:63:ARG:HB3	1.79	0.63
34:BB:140:LEU:O	34:BB:144:GLU:N	2.27	0.63
3:EA:802:A:O3'	60:EA:3323:HOH:O	2.15	0.63
23:EW:39:GLN:HB2	23:EW:41:GLY:O	1.98	0.63
35:HA:62:U:O2'	35:HA:379:C:O2	2.15	0.63
35:HA:533:A:O2'	35:HA:535:A:OP2	2.14	0.63
35:HA:1417:G:O6	60:HA:1787:HOH:O	2.15	0.63
35:DA:1033:G:H2'	35:DA:1034:G:H5'	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:EA:2542:A:OP2	60:EA:3534:HOH:O	2.16	0.63
32:E5:24:SER:HB2	32:E5:116:GLU:CG	2.16	0.63
42:FI:42:GLU:C	42:FI:44:ALA:H	2.00	0.63
7:GG:7:PRO:O	7:GG:68:ARG:NH1	2.30	0.63
35:HA:517:G:N2	35:HA:530:G:OP1	2.32	0.63
1:AB:87:U:H3'	1:AB:88:C:H5'	1.80	0.63
51:DR:20:GLU:O	51:DR:54:GLN:NE2	2.32	0.63
44:FK:88:GLY:H	44:FK:114:THR:HG22	1.63	0.63
56:FW:1:KBE:O	56:FW:1:KBE:N	2.22	0.63
3:GA:858:G:O2'	3:GA:2268:A:N3	2.26	0.63
23:GW:18:LYS:N	23:GW:36:ILE:HG13	2.12	0.63
35:HA:687:A:N1	35:HA:700:G:O2'	2.21	0.63
40:HG:118:LEU:O	40:HG:122:ASN:N	2.30	0.63
50:HQ:19:LYS:O	50:HQ:47:HIS:ND1	2.31	0.63
35:BA:1095:U:OP2	60:BA:1861:HOH:O	2.15	0.63
3:CA:218:A:OP2	60:CA:3226:HOH:O	2.15	0.63
3:CA:396:G:OP2	24:CX:9:LYS:NZ	2.29	0.63
3:EA:1378:A:O2'	3:EA:1380:G:N7	2.19	0.63
35:FA:88:U:H2'	35:FA:89:U:C6	2.33	0.63
55:HV:188:MET:HE3	55:HV:218:TRP:CD1	2.33	0.63
3:AA:1617:C:OP1	60:AA:3416:HOH:O	2.15	0.63
1:EB:87:U:H3'	1:EB:88:C:H5'	1.79	0.63
10:EJ:6:ALA:HB3	10:EJ:45:THR:HG21	1.80	0.63
14:EN:58:ASP:OD2	14:EN:63:ARG:NH2	2.32	0.63
38:FE:24:THR:HA	38:FE:29:ARG:HA	1.81	0.63
46:FM:8:ASN:ND2	46:FM:66:GLU:OE2	2.32	0.63
3:GA:806:C:OP2	12:GL:41:ARG:NE	2.24	0.63
35:HA:9:G:OP2	38:HE:126:LYS:NZ	2.29	0.63
2:AC:49:THR:HG21	3:AA:1813:G:H1'	1.81	0.63
3:AA:2346:A:H3'	3:AA:2347:C:C5'	2.29	0.63
32:A5:26:VAL:HG21	32:A5:115:GLY:N	2.06	0.63
44:BK:93:ARG:NH2	44:BK:112:ASP:OD2	2.32	0.63
48:DO:82:ILE:O	48:DO:86:GLY:N	2.32	0.63
55:DV:222:LEU:O	55:DV:226:ALA:N	2.29	0.63
32:E5:58:THR:HB	32:E5:82:ILE:HB	1.81	0.63
35:FA:846:G:OP1	51:FR:48:ARG:NH1	2.32	0.63
3:GA:946:C:OP1	60:GA:3343:HOH:O	2.15	0.63
3:GA:976:G:H4'	3:GA:1156:A:N7	2.13	0.63
3:GA:2136:G:N2	3:GA:2155:U:O4	2.32	0.63
16:AP:50:ARG:HG3	16:AP:57:ALA:O	1.97	0.63
36:BC:85:GLU:OE2	36:BC:88:ARG:NH1	2.30	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BE:115:LEU:HD23	38:BE:123:VAL:HG21	1.80	0.63
3:CA:2529:G:H5'	7:CG:174:LYS:HG3	1.79	0.63
3:EA:2346:A:H3'	3:EA:2347:C:C5'	2.28	0.63
42:FI:57:MET:O	42:FI:60:LYS:N	2.29	0.63
46:HM:95:LEU:HB3	46:HM:96:PRO:HD2	1.81	0.63
3:CA:1842:G:O2'	2:CC:250:GLN:NE2	2.32	0.62
17:CQ:63:ARG:HH22	17:CQ:96:ASP:N	1.96	0.62
3:EA:517:C:OP2	27:E0:9:ARG:NH2	2.32	0.62
44:FK:24:HIS:HB3	44:FK:31:ILE:HG13	1.81	0.62
16:GP:50:ARG:HG3	16:GP:57:ALA:O	1.98	0.62
48:HO:46:HIS:O	48:HO:48:LYS:N	2.32	0.62
3:AA:546:U:O2'	3:AA:547:A:H4'	1.99	0.62
3:AA:1385:A:H1'	3:AA:1386:C:C6	2.34	0.62
35:BA:1166:G:N1	35:BA:1169:A:OP2	2.33	0.62
3:CA:995:C:OP2	17:CQ:52:ARG:NH1	2.31	0.62
20:CT:57:VAL:O	20:CT:86:THR:OG1	2.16	0.62
36:DC:156:ARG:NH1	36:DC:193:TYR:O	2.32	0.62
35:FA:88:U:H2'	35:FA:89:U:C5	2.33	0.62
10:GJ:36:LEU:O	10:GJ:121:LYS:NZ	2.24	0.62
35:HA:1492:A:H2'	35:HA:1493:A:H5'	1.79	0.62
3:AA:81:G:HO2'	3:AA:295:G:HO2'	1.47	0.62
3:AA:2499:C:O2	60:AA:3523:HOH:O	2.13	0.62
3:CA:751:A:OP1	60:CA:3306:HOH:O	2.16	0.62
3:CA:2867:G:O2'	3:CA:2868:A:OP2	2.16	0.62
15:CO:89:ASP:HA	15:CO:116:GLN:HB3	1.81	0.62
20:CT:32:LEU:H	20:CT:83:ALA:HB3	1.64	0.62
39:DF:38:ARG:NH1	39:DF:63:ASN:OD1	2.32	0.62
44:DK:17:SER:O	44:DK:80:LYS:N	2.31	0.62
3:EA:1654:A:O2'	4:ED:118:PHE:CG	2.51	0.62
3:EA:2780:G:OP2	10:EJ:120:ARG:NE	2.31	0.62
3:GA:221:A:N1	3:GA:265:A:O2'	2.32	0.62
3:GA:447:A:OP2	60:GA:3212:HOH:O	2.15	0.62
3:GA:2346:A:H3'	3:GA:2347:C:C5'	2.29	0.62
4:GD:151:THR:HG22	4:GD:152:PRO:HD3	1.82	0.62
40:HG:70:ARG:HG2	40:HG:96:ARG:HD3	1.81	0.62
3:GA:1073:A:H3'	3:GA:1074:G:H5"	1.80	0.62
21:GU:86:PHE:CE1	21:GU:90:LYS:HB2	2.35	0.62
3:AA:42:A:H2'	3:AA:43:G:H5'	1.80	0.62
16:AP:4:ILE:O	16:AP:6:GLN:N	2.31	0.62
9:CI:80:LYS:HG3	9:CI:86:LYS:HA	1.82	0.62
3:EA:2210:U:H4'	3:EA:2211:A:H5'	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:EA:2484:G:OP1	13:EM:44:ARG:NH2	2.32	0.62
60:EA:3798:HOH:O	4:ED:140:HIS:NE2	2.31	0.62
5:EE:170:ARG:NH2	5:EE:176:ASP:OD2	2.31	0.62
3:GA:945:A:N7	60:GA:3260:HOH:O	2.30	0.62
9:GI:29:GLN:NE2	55:HV:651:GLY:O	2.29	0.62
3:AA:1359:A:OP1	60:AA:3607:HOH:O	2.16	0.62
35:BA:1130:A:OP1	42:BI:18:ARG:NH2	2.33	0.62
35:HA:254:G:OP1	50:HQ:68:SER:OG	2.13	0.62
3:AA:1024:G:N7	60:AA:3700:HOH:O	2.31	0.62
3:EA:2849:U:O4	16:EP:20:ARG:NH1	2.32	0.62
32:E5:31:ARG:CB	32:E5:108:VAL:HG22	2.29	0.62
37:FD:150:LYS:NZ	37:FD:177:LYS:O	2.28	0.62
3:GA:571:U:C4	3:GA:2030:A:C6	2.88	0.62
3:GA:971:G:OP2	3:GA:974:G:N2	2.32	0.62
3:GA:2062:A:OP1	60:GA:3490:HOH:O	2.16	0.62
5:GE:176:ASP:OD1	5:GE:179:SER:N	2.25	0.62
8:GH:3:VAL:HG12	8:GH:38:PRO:HA	1.82	0.62
36:HC:71:ALA:HA	36:HC:106:VAL:HG22	1.82	0.62
34:BB:87:ASP:OD2	34:BB:224:ARG:NH1	2.33	0.62
38:BE:99:ALA:O	38:BE:122:ASN:ND2	2.33	0.62
21:EU:15:GLY:O	21:EU:17:ASP:N	2.32	0.62
23:EW:9:THR:OG1	23:EW:10:ARG:N	2.33	0.62
34:FB:70:GLY:HA2	34:FB:163:ILE:HG22	1.82	0.62
36:FC:42:TYR:CE2	36:FC:90:VAL:HG21	2.35	0.62
3:GA:1262:A:OP2	19:GS:99:ARG:NH2	2.32	0.62
10:GJ:32:LEU:O	10:GJ:36:LEU:N	2.32	0.62
21:AU:15:GLY:O	21:AU:17:ASP:N	2.32	0.62
33:A6:18:ASP:OD1	33:A6:18:ASP:N	2.32	0.62
35:FA:946:A:O2'	35:FA:1333:A:N3	2.28	0.62
7:GG:17:LYS:O	7:GG:19:ASN:N	2.33	0.62
3:AA:784:G:O2'	3:AA:785:G:OP2	2.15	0.62
14:AN:73:ASN:HA	14:AN:76:VAL:HG12	1.81	0.62
55:BV:23:LYS:O	55:BV:24:THR:OG1	2.17	0.62
3:CA:1813:G:H1'	2:CC:49:THR:HG21	1.80	0.62
35:DA:142:G:H3'	35:DA:143:A:H8	1.65	0.62
35:DA:652:U:O4	35:DA:752:G:O2'	2.17	0.62
35:DA:880:C:OP1	45:DL:9:ARG:NH2	2.32	0.62
35:DA:1255:G:O2'	35:DA:1258:G:N3	2.26	0.62
3:EA:784:G:OP2	60:EA:3313:HOH:O	2.16	0.62
3:EA:1824:G:N3	2:EC:251:THR:HG21	2.15	0.62
9:EI:58:ILE:HA	9:EI:68:PHE:HB2	1.81	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:FA:951:G:OP2	46:FM:101:ARG:NH2	2.33	0.62
3:GA:1394:U:H4'	3:GA:1603:A:H4'	1.82	0.62
36:HC:19:ASN:OD1	36:HC:54:ARG:NE	2.33	0.62
35:BA:1033:G:C2'	35:BA:1034:G:H5'	2.30	0.61
55:BV:190:ALA:N	55:BV:205:GLU:O	2.33	0.61
3:CA:1179:G:H2'	3:CA:1180:U:O4'	2.00	0.61
35:DA:518:C:H2'	35:DA:530:G:C8	2.35	0.61
37:DD:48:LEU:HD21	37:DD:53:VAL:N	2.15	0.61
42:DI:56:ASP:O	42:DI:60:LYS:NZ	2.32	0.61
3:EA:633:A:OP1	12:EL:68:SER:OG	2.17	0.61
3:EA:839:U:O2'	3:EA:1191:G:N3	2.33	0.61
15:EO:105:ALA:O	15:EO:107:ALA:N	2.33	0.61
17:EQ:91:ARG:HE	17:EQ:93:ILE:HG23	1.65	0.61
20:ET:3:ARG:NH2	20:ET:42:GLU:OE2	2.32	0.61
3:GA:636:G:O2'	3:GA:638:G:O2'	2.13	0.61
3:AA:370:G:O2'	3:AA:424:G:OP1	2.15	0.61
3:AA:856:G:H21	23:AW:19:ARG:NH1	1.97	0.61
3:CA:1913:A:N7	35:DA:1494:G:H5'	2.14	0.61
32:C5:24:SER:HB2	32:C5:116:GLU:HG3	1.77	0.61
35:DA:1499:A:OP2	60:DA:1861:HOH:O	2.16	0.61
34:DB:16:GLY:HA3	34:DB:40:ILE:HG23	1.82	0.61
37:DD:99:ASP:OD1	37:DD:100:ASN:N	2.32	0.61
3:EA:1688:U:O2'	3:EA:1700:A:N7	2.29	0.61
35:FA:405:U:OP1	35:FA:406:G:O2'	2.08	0.61
35:FA:585:G:N3	35:FA:879:C:H4'	2.15	0.61
3:GA:587:C:OP2	12:GL:21:ARG:NH1	2.32	0.61
35:HA:180:U:O4	60:HA:1873:HOH:O	2.14	0.61
40:HG:102:ARG:O	40:HG:106:GLU:N	2.32	0.61
3:AA:163:C:O2'	3:AA:164:C:O5'	2.17	0.61
3:AA:2780:G:OP2	10:AJ:120:ARG:NE	2.33	0.61
9:AI:100:ILE:HG22	9:AI:101:SER:N	2.15	0.61
9:AI:131:THR:O	9:AI:134:SER:OG	2.16	0.61
44:BK:88:GLY:H	44:BK:114:THR:HG22	1.65	0.61
55:BV:222:LEU:O	55:BV:226:ALA:N	2.31	0.61
55:BV:455:GLN:NE2	55:BV:487:GLN:OE1	2.32	0.61
3:EA:1095:A:N6	55:FV:625:GLU:OE2	2.33	0.61
55:FV:23:LYS:O	55:FV:24:THR:OG1	2.17	0.61
3:GA:2522:U:O2'	3:GA:2647:U:OP1	2.16	0.61
7:GG:38:ASP:OD2	7:GG:63:GLN:NE2	2.33	0.61
35:HA:1306:A:H2'	35:HA:1307:U:O4'	2.00	0.61
34:HB:187:ASP:OD1	34:HB:188:THR:N	2.28	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:C5:26:VAL:HG11	32:C5:77:VAL:HG13	1.80	0.61
3:EA:2720:U:OP1	16:EP:52:ARG:NH2	2.34	0.61
12:EL:81:ASP:O	12:EL:83:ALA:N	2.31	0.61
55:FV:645:GLN:O	55:FV:647:SER:N	2.32	0.61
3:GA:504:A:HO2'	3:GA:505:A:P	2.19	0.61
3:GA:1095:A:H1'	55:HV:632:ILE:CG1	2.30	0.61
2:AC:57:HIS:CD2	3:AA:1567:G:H5'	2.35	0.61
3:AA:1759:A:HO2'	3:AA:2714:G:HO2'	1.47	0.61
3:AA:2478:A:P	31:A4:2:LYS:HZ1	2.23	0.61
35:BA:554:A:H5'	45:BL:26:ALA:HB1	1.83	0.61
3:CA:1107:G:H4'	32:C5:81:LEU:HA	1.83	0.61
3:CA:2015:A:C2	27:C0:2:VAL:HG22	2.36	0.61
3:CA:2683:C:O2	11:CK:70:ARG:NH2	2.33	0.61
32:C5:24:SER:C	32:C5:116:GLU:HG2	2.20	0.61
3:EA:555:G:O2'	3:EA:556:A:OP2	2.14	0.61
13:EM:73:ILE:HG21	13:EM:91:TYR:CZ	2.36	0.61
3:GA:2444:G:OP2	60:GA:3494:HOH:O	2.16	0.61
44:HK:93:ARG:NH2	44:HK:112:ASP:OD2	2.33	0.61
3:AA:923:G:H1'	23:AW:23:LYS:HD3	1.81	0.61
10:AJ:6:ALA:CB	10:AJ:45:THR:HG21	2.31	0.61
42:BI:57:MET:O	42:BI:60:LYS:N	2.31	0.61
20:CT:29:THR:OG1	20:CT:86:THR:N	2.33	0.61
47:DN:91:GLY:O	47:DN:93:ILE:N	2.31	0.61
3:EA:2311:A:N3	6:EF:84:ILE:HD11	2.15	0.61
3:GA:1077:A:O2'	9:GI:133:ARG:HD3	2.00	0.61
46:HM:3:ARG:HG2	46:HM:10:PRO:HD2	1.82	0.61
55:HV:80:GLU:N	55:HV:80:GLU:OE2	2.32	0.61
3:CA:1342:A:OP2	60:CA:3702:HOH:O	2.16	0.61
4:CD:151:THR:HG22	4:CD:152:PRO:HD3	1.81	0.61
17:EQ:87:VAL:HG12	17:EQ:89:ILE:HG23	1.81	0.61
20:ET:39:THR:O	20:ET:41:ALA:N	2.33	0.61
34:FB:20:ARG:O	34:FB:22:TRP:N	2.33	0.61
55:FV:188:MET:HE3	55:FV:218:TRP:NE1	2.15	0.61
3:GA:1439:A:OP2	60:GA:3623:HOH:O	2.16	0.61
3:GA:2557:G:H2'	3:GA:2558:C:C6	2.36	0.61
9:GI:76:ALA:O	9:GI:78:LEU:N	2.34	0.61
42:HI:6:TYR:HB3	42:HI:89:GLU:HB2	1.82	0.61
3:AA:819:A:OP2	3:AA:1187:G:N2	2.23	0.61
3:AA:2011:U:OP2	19:AS:16:LYS:NZ	2.31	0.61
35:BA:823:C:HO2'	41:BH:2:SER:N	1.98	0.61
32:E5:26:VAL:CG1	32:E5:77:VAL:CG1	2.78	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:GA:1080:A:O2'	9:GI:126:ARG:NE	2.29	0.61
3:GA:2088:A:N6	3:GA:2230:G:O6	2.34	0.61
3:GA:2500:U:O3'	60:GA:3660:HOH:O	2.16	0.61
2:GC:68:ARG:O	2:GC:188:ARG:NH2	2.33	0.61
20:GT:29:THR:OG1	20:GT:86:THR:N	2.34	0.61
35:HA:598:U:H4'	41:HH:86:TYR:CG	2.35	0.61
44:HK:56:ARG:HD3	44:HK:56:ARG:N	2.16	0.61
3:AA:616:A:H4'	5:AE:101:TYR:CE2	2.36	0.61
16:AP:50:ARG:CB	16:AP:57:ALA:H	2.11	0.61
3:CA:1799:G:O2'	2:CC:179:GLU:OE2	2.07	0.61
44:DK:125:LYS:O	54:DU:34:ARG:NH2	2.34	0.61
32:E5:27:VAL:HG13	32:E5:83:ALA:HB3	1.83	0.61
3:GA:194:G:OP2	60:GA:3743:HOH:O	2.16	0.61
34:HB:99:MET:HA	34:HB:106:VAL:HG21	1.83	0.61
47:HN:91:GLY:O	47:HN:93:ILE:N	2.31	0.61
55:HV:645:GLN:O	55:HV:647:SER:N	2.34	0.61
3:CA:14:A:OP2	60:CA:3544:HOH:O	2.16	0.61
3:EA:1517:G:C2	3:EA:1732:C:N3	2.68	0.61
3:GA:1003:G:N2	3:GA:1153:C:C2	2.69	0.61
3:GA:1776:G:OP2	60:GA:3445:HOH:O	2.16	0.61
3:GA:1993:U:H4'	4:GD:133:THR:HG21	1.81	0.61
5:GE:23:PHE:CD1	5:GE:111:GLU:HG3	2.36	0.61
38:HE:110:ALA:O	38:HE:111:MET:HB3	2.00	0.61
3:AA:1828:G:OP2	60:AA:3791:HOH:O	2.16	0.60
21:AU:38:ILE:CG2	21:AU:39:ASN:N	2.64	0.60
31:A4:36:ARG:HG2	31:A4:37:GLN:H	1.66	0.60
55:BV:177:GLU:N	55:BV:177:GLU:OE1	2.32	0.60
3:CA:1913:A:H62	35:DA:1493:A:H2'	1.65	0.60
35:DA:770:C:O5'	60:DA:1750:HOH:O	2.16	0.60
37:DD:188:ARG:NE	37:DD:197:GLU:OE2	2.34	0.60
12:EL:93:ASN:O	12:EL:95:LEU:N	2.34	0.60
3:GA:1864:U:O3'	3:GA:2409:G:N2	2.33	0.60
5:GE:15:SER:N	5:GE:197:GLU:OE2	2.33	0.60
37:BD:27:ALA:HA	37:BD:31:LYS:HZ1	1.66	0.60
38:BE:41:ASP:OD1	38:BE:43:ASN:N	2.33	0.60
3:CA:1064:C:C5'	9:CI:89:SER:HB3	2.31	0.60
17:CQ:105:PHE:O	17:CQ:108:LEU:N	2.33	0.60
50:DQ:6:ARG:HH11	50:DQ:6:ARG:HG2	1.65	0.60
3:EA:1776:G:OP2	60:EA:3449:HOH:O	2.16	0.60
6:EF:59:ILE:HD12	6:EF:137:PHE:CG	2.37	0.60
35:FA:966:G:O2'	42:FI:130:ARG:OXT	2.12	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:GI:82:ALA:HB1	9:GI:108:ILE:HD11	1.82	0.60
35:HA:930:C:N4	60:HA:1821:HOH:O	2.33	0.60
39:HF:10:VAL:HG21	39:HF:21:MET:SD	2.42	0.60
23:AW:55:ASP:O	23:AW:57:THR:N	2.34	0.60
35:BA:1305:G:N2	35:BA:1331:G:O2'	2.34	0.60
37:BD:95:GLU:OE2	37:BD:104:ARG:NE	2.31	0.60
55:BV:660:LEU:O	55:BV:662:GLU:N	2.34	0.60
3:CA:983:A:C6	3:CA:984:A:C2	2.89	0.60
3:EA:324:A:N6	3:EA:338:G:O2'	2.33	0.60
3:EA:1068:G:O6	3:EA:1069:A:N6	2.34	0.60
3:EA:1913:A:N7	55:FV:507:LYS:NZ	2.46	0.60
37:FD:19:LEU:HD11	37:FD:60:LYS:HG3	1.82	0.60
3:GA:517:C:OP2	27:G0:9:ARG:NH2	2.34	0.60
3:GA:2107:G:H1	3:GA:2182:U:H2'	1.67	0.60
35:HA:568:G:O2'	35:HA:574:A:N1	2.31	0.60
55:HV:92:HIS:O	55:HV:122:GLN:NE2	2.33	0.60
3:CA:2364:C:OP1	23:CW:54:ARG:HD3	2.01	0.60
13:CM:22:GLN:O	13:CM:24:THR:N	2.35	0.60
23:CW:19:ARG:HA	23:CW:34:SER:HA	1.83	0.60
28:C1:24:LYS:NZ	28:C1:51:ALA:O	2.32	0.60
35:DA:1147:C:O2	42:DI:18:ARG:NH1	2.34	0.60
53:DT:65:GLY:HA2	53:DT:68:HIS:CD2	2.36	0.60
35:FA:1468:A:C2'	35:FA:1469:C:H5'	2.30	0.60
45:FL:4:VAL:HG23	50:FQ:36:LYS:HE2	1.83	0.60
3:GA:1820:U:OP1	2:GC:176:ARG:NH2	2.34	0.60
35:HA:946:A:HO2'	35:HA:1333:A:C2'	2.13	0.60
3:AA:947:A:HO2'	3:AA:984:A:H2	1.50	0.60
3:AA:963:U:OP2	60:AA:3352:HOH:O	2.16	0.60
35:BA:1296:C:O3'	35:BA:1302:C:N4	2.34	0.60
5:EE:63:LYS:NZ	60:EE:402:HOH:O	2.31	0.60
16:EP:4:ILE:HG22	16:EP:5:LYS:H	1.64	0.60
32:E5:71:CYS:CB	32:E5:117:LEU:HD12	2.31	0.60
42:FI:57:MET:SD	42:FI:58:VAL:N	2.74	0.60
3:GA:819:A:C4	3:GA:1189:A:C2	2.89	0.60
25:GY:16:THR:O	25:GY:20:ASN:ND2	2.35	0.60
35:HA:815:A:O2'	35:HA:1526:G:N2	2.30	0.60
45:HL:44:LYS:CB	45:HL:45:PRO:HD3	2.31	0.60
38:BE:80:THR:OG1	38:BE:81:LEU:N	2.34	0.60
3:CA:138:U:H5'	3:CA:139:U:H5"	1.84	0.60
8:EH:43:ASN:OD1	8:EH:43:ASN:N	2.34	0.60
37:FD:80:ALA:HA	37:FD:86:THR:HG23	1.84	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:FL:56:ARG:NH2	45:FL:60:GLY:O	2.34	0.60
3:GA:324:A:N6	3:GA:338:G:O2'	2.34	0.60
3:GA:1619:G:N7	60:GA:3632:HOH:O	2.32	0.60
3:AA:830:G:OP2	60:AA:3348:HOH:O	2.17	0.60
35:BA:1025:U:H5"	35:BA:1026:G:H5'	1.82	0.60
35:BA:1492:A:C2'	35:BA:1493:A:H5'	2.31	0.60
38:BE:111:MET:CE	38:BE:125:ALA:HB1	2.31	0.60
39:BF:98:GLU:HG3	39:BF:99:ALA:N	2.16	0.60
55:BV:221:ASN:HA	55:BV:224:GLU:HB3	1.84	0.60
3:CA:450:G:O6	60:CA:3243:HOH:O	2.12	0.60
4:CD:149:ASN:OD1	4:CD:150:GLN:N	2.34	0.60
23:CW:9:THR:OG1	23:CW:10:ARG:N	2.34	0.60
23:CW:73:PRO:HG2	23:CW:76:ARG:HD2	1.84	0.60
35:DA:572:A:OP1	60:DA:1732:HOH:O	2.16	0.60
43:DJ:9:ARG:N	43:DJ:99:GLN:O	2.34	0.60
3:EA:61:C:H2'	3:EA:62:U:H5'	1.83	0.60
3:EA:1818:U:OP2	2:EC:155:ARG:NH1	2.34	0.60
28:E1:22:THR:OG1	28:E1:23:THR:N	2.32	0.60
38:FE:110:ALA:O	38:FE:111:MET:HB3	2.02	0.60
55:FV:362:ARG:NH2	55:FV:373:GLU:OE2	2.30	0.60
1:GB:63:C:N4	60:GB:1302:HOH:O	2.35	0.60
3:GA:126:A:C6	3:GA:127:A:N1	2.70	0.60
3:GA:1846:G:N2	3:GA:1895:C:C2	2.70	0.60
34:HB:82:ALA:O	34:HB:88:GLN:NE2	2.34	0.60
45:HL:63:VAL:HG21	45:HL:95:TYR:HE2	1.66	0.60
47:HN:67:THR:O	60:HN:203:HOH:O	2.15	0.60
3:CA:2800:A:H3'	3:CA:2801:G:C5'	2.32	0.60
7:CG:84:LYS:HG3	7:CG:132:LEU:N	2.17	0.60
10:CJ:2:LYS:O	10:CJ:2:LYS:NZ	2.35	0.60
50:DQ:48:ASP:OD2	50:DQ:52:GLU:N	2.35	0.60
26:EZ:8:GLN:O	26:EZ:10:ARG:N	2.33	0.60
3:GA:470:A:N6	20:GT:72:GLN:OE1	2.34	0.60
3:GA:2140:G:N7	3:GA:2152:G:N3	2.50	0.60
3:GA:2683:C:N3	3:GA:2727:A:O2'	2.35	0.60
9:GI:60:VAL:HG22	9:GI:66:PHE:CD2	2.37	0.60
10:GJ:17:VAL:HG23	10:GJ:137:PRO:HB2	1.81	0.60
35:HA:1331:G:O2'	35:HA:1332:A:OP2	2.19	0.60
36:HC:40:ARG:NH1	47:HN:92:GLU:OE2	2.34	0.60
3:AA:511:U:OP2	60:AA:3758:HOH:O	2.15	0.60
3:AA:1248:G:N7	5:AE:46:GLN:NE2	2.48	0.60
15:AO:105:ALA:O	15:AO:107:ALA:N	2.34	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BH:18:GLN:NE2	41:BH:70:ALA:HB1	2.17	0.60
3:CA:219:A:N3	3:CA:234:U:O2'	2.31	0.60
3:CA:912:C:OP1	13:CM:8:LYS:NZ	2.21	0.60
32:C5:35:VAL:HA	32:C5:38:MET:SD	2.42	0.60
35:DA:1197:A:OP2	60:DA:1773:HOH:O	2.16	0.60
3:EA:1509:A:HO2'	3:EA:1510:G:P	2.23	0.60
23:EW:37:VAL:HG13	23:EW:56:HIS:HB2	1.84	0.60
35:FA:1181:G:O2'	35:FA:1182:G:C8	2.55	0.60
34:FB:132:GLU:OE2	34:FB:136:ARG:NH1	2.35	0.60
42:FI:6:TYR:CG	42:FI:89:GLU:HB2	2.37	0.60
17:GQ:63:ARG:NH2	17:GQ:92:LYS:O	2.34	0.60
35:HA:598:U:H4'	41:HH:86:TYR:CD2	2.37	0.60
23:AW:9:THR:OG1	23:AW:10:ARG:N	2.31	0.60
32:A5:29:ASP:HA	32:A5:108:VAL:HG11	1.82	0.60
3:CA:210:C:OP1	29:C2:29:GLN:NE2	2.35	0.60
55:DV:124:GLU:OE2	55:DV:677:ARG:NH1	2.35	0.60
3:EA:272:A:O2'	3:EA:273:G:O5'	2.20	0.60
3:EA:790:U:OP2	60:EA:3748:HOH:O	2.16	0.60
36:FC:3:GLN:OE1	36:FC:3:GLN:N	2.35	0.60
55:FV:295:ILE:HG13	55:FV:339:TYR:CD2	2.36	0.60
3:GA:1070:A:N1	9:GI:8:VAL:HG22	2.17	0.60
3:GA:1332:G:O5'	60:GA:3386:HOH:O	2.16	0.60
3:GA:1613:G:O2'	29:G2:3:ARG:NH2	2.34	0.60
3:GA:1968:G:OP1	60:GA:3462:HOH:O	2.16	0.60
3:GA:2742:G:OP1	31:G4:36:ARG:NH1	2.32	0.60
9:GI:122:GLU:O	9:GI:126:ARG:NH1	2.34	0.60
52:HS:29:LYS:HB3	52:HS:30:PRO:HD2	1.84	0.60
3:AA:276:U:O2'	3:AA:278:A:N7	2.34	0.59
3:AA:2353:G:N3	23:AW:30:VAL:CG1	2.65	0.59
43:BJ:57:VAL:HG12	43:BJ:58:ASN:H	1.67	0.59
32:C5:24:SER:C	32:C5:116:GLU:HB3	2.18	0.59
34:DB:49:PHE:O	34:DB:53:LEU:N	2.35	0.59
37:DD:100:ASN:OD1	37:DD:111:ARG:NH1	2.35	0.59
3:GA:1172:C:C5	3:GA:1173:U:H1'	2.37	0.59
35:HA:299:G:O6	60:HA:1833:HOH:O	2.10	0.59
39:HF:15:SER:C	39:HF:17:GLN:H	2.04	0.59
3:AA:370:G:OP2	60:AA:3552:HOH:O	2.16	0.59
9:AI:93:ASN:ND2	9:AI:135:MET:O	2.36	0.59
45:BL:56:ARG:NH1	45:BL:62:GLU:OE1	2.35	0.59
3:EA:2588:G:OP2	60:EA:3541:HOH:O	2.16	0.59
35:HA:1343:G:H1'	42:HI:123:ARG:CZ	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AA:2800:A:H3'	3:AA:2801:G:C5'	2.32	0.59
9:AI:92:PRO:O	9:AI:94:LYS:N	2.36	0.59
35:BA:1317:C:OP2	47:BN:28:LYS:NZ	2.35	0.59
35:BA:1397:C:O2'	35:BA:1398:A:OP1	2.20	0.59
3:CA:998:C:OP2	17:CQ:57:ARG:NH2	2.35	0.59
3:CA:1217:U:OP2	17:CQ:14:LYS:NZ	2.34	0.59
5:CE:176:ASP:CG	5:CE:179:SER:HG	2.06	0.59
14:CN:33:ILE:HD11	14:CN:118:ARG:HD3	1.83	0.59
35:DA:201:G:N2	35:DA:469:C:O2	2.34	0.59
3:GA:1509:A:H1'	3:GA:1510:G:OP2	2.02	0.59
48:HO:45:GLU:HG3	48:HO:46:HIS:H	1.66	0.59
55:HV:321:ALA:O	55:HV:394:GLY:N	2.32	0.59
17:AQ:63:ARG:NH1	17:AQ:95:ALA:O	2.35	0.59
35:BA:843:U:N3	35:BA:844:G:O6	2.36	0.59
40:BG:63:GLU:OE1	40:BG:70:ARG:NH1	2.35	0.59
42:BI:94:LEU:O	42:BI:96:SER:N	2.33	0.59
43:BJ:88:MET:O	43:BJ:90:LEU:N	2.30	0.59
45:BL:44:LYS:CB	45:BL:45:PRO:HD3	2.32	0.59
35:DA:951:G:OP2	46:DM:101:ARG:NH2	2.36	0.59
35:DA:1110:A:OP2	60:DA:1851:HOH:O	2.17	0.59
55:DV:217:GLU:O	55:DV:220:GLN:N	2.36	0.59
3:EA:125:A:OP2	29:E2:19:ARG:NH2	2.35	0.59
3:EA:2711:A:OP2	60:EA:3545:HOH:O	2.16	0.59
23:EW:39:GLN:HG3	23:EW:56:HIS:HB3	1.84	0.59
3:GA:451:U:O3'	5:GE:47:LYS:NZ	2.36	0.59
3:GA:1070:A:H5'	3:GA:1072:C:OP2	2.03	0.59
3:GA:2066:C:OP1	60:GA:3504:HOH:O	2.16	0.59
4:GD:39:ASP:OD1	4:GD:40:LEU:N	2.36	0.59
55:HV:546:PRO:HD3	55:HV:583:TYR:CE2	2.37	0.59
16:AP:50:ARG:HB3	16:AP:57:ALA:N	2.17	0.59
40:BG:4:ARG:HG3	40:BG:5:ARG:N	2.16	0.59
42:BI:45:ARG:HE	42:BI:46:MET:H	1.50	0.59
55:BV:80:GLU:OE2	55:BV:80:GLU:N	2.33	0.59
55:BV:200:VAL:O	55:BV:201:THR:OG1	2.21	0.59
3:CA:1654:A:O2'	4:CD:118:PHE:CG	2.54	0.59
39:DF:46:GLN:HA	39:DF:56:LYS:HG2	1.83	0.59
16:GP:50:ARG:HG2	16:GP:57:ALA:N	2.16	0.59
45:HL:83:ARG:N	45:HL:96:HIS:O	2.34	0.59
2:AC:256:THR:OG1	3:AA:1803:A:O3'	2.19	0.59
3:AA:1262:A:OP2	19:AS:99:ARG:NH2	2.35	0.59
3:AA:1930:G:O2'	3:AA:1968:G:O6	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CA:2269:G:O2'	23:CW:18:LYS:HG2	2.02	0.59
20:CT:54:GLU:HG3	20:CT:88:LYS:HB2	1.83	0.59
31:C4:36:ARG:HG2	31:C4:37:GLN:H	1.68	0.59
32:C5:26:VAL:CG2	32:C5:115:GLY:N	2.61	0.59
35:DA:323:U:OP2	60:DA:1834:HOH:O	2.17	0.59
3:GA:243:U:OP1	30:G3:5:THR:OG1	2.10	0.59
3:GA:2390:U:O5'	30:G3:34:LYS:NZ	2.33	0.59
24:GX:5:GLN:OE1	24:GX:49:ARG:N	2.34	0.59
36:HC:8:ASN:HD22	47:HN:90:ARG:HA	1.66	0.59
38:HE:41:ASP:OD2	38:HE:42:GLY:N	2.36	0.59
3:AA:983:A:C6	3:AA:984:A:C2	2.90	0.59
3:AA:1106:G:OP1	32:A5:62:ARG:NH2	2.35	0.59
3:AA:1131:G:OP1	10:AJ:82:GLY:HA2	2.02	0.59
3:AA:1338:G:O2'	20:AT:18:GLU:OE1	2.20	0.59
35:DA:735:C:H5'	51:DR:60:LYS:HD3	1.85	0.59
3:EA:2592:G:OP1	60:EA:3464:HOH:O	2.16	0.59
2:EC:255:LYS:O	2:EC:257:ARG:N	2.36	0.59
10:EJ:80:HIS:O	10:EJ:82:GLY:N	2.35	0.59
32:E5:117:LEU:HD22	32:E5:120:ALA:CA	2.17	0.59
35:FA:382:A:H2'	35:FA:383:A:C8	2.38	0.59
37:FD:197:GLU:O	37:FD:200:ILE:N	2.36	0.59
55:FV:219:HIS:CE1	55:FV:221:ASN:HB2	2.37	0.59
3:GA:1064:C:N4	3:GA:1065:U:O4	2.36	0.59
15:AO:89:ASP:HA	15:AO:116:GLN:HB3	1.84	0.59
32:A5:27:VAL:HG13	32:A5:83:ALA:HB3	1.83	0.59
3:CA:859:G:O2'	3:CA:916:G:O6	2.11	0.59
7:CG:1:SER:O	7:CG:3:VAL:N	2.36	0.59
35:DA:723:U:O2	35:DA:855:U:O2'	2.19	0.59
38:DE:19:ASN:OD1	38:DE:20:ARG:N	2.36	0.59
2:EC:254:LYS:O	2:EC:256:THR:N	2.35	0.59
3:GA:1253:A:N7	60:GA:3328:HOH:O	2.32	0.59
3:GA:1354:A:OP1	2:GC:35:LYS:NZ	2.36	0.59
3:GA:2134:A:N6	3:GA:2156:G:O2'	2.36	0.59
35:HA:1451:U:HO2'	35:HA:1452:C:P	2.26	0.59
37:HD:188:ARG:NH1	37:HD:191:LEU:O	2.35	0.59
3:AA:480:A:OP2	21:AU:43:LYS:NZ	2.34	0.59
3:AA:635:C:OP2	12:AL:126:ARG:NH1	2.35	0.59
23:AW:51:GLY:HA3	23:AW:59:PHE:CE1	2.38	0.59
14:CN:98:LEU:HB3	27:C0:42:ILE:HD11	1.85	0.59
32:C5:17:GLU:HA	32:C5:88:HIS:CE1	2.37	0.59
35:DA:1492:A:C2'	35:DA:1493:A:H5'	2.33	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:E5:54:VAL:O	32:E5:56:ARG:N	2.36	0.59
3:AA:1359:A:OP1	60:AA:3610:HOH:O	2.17	0.59
14:AN:98:LEU:O	14:AN:112:TYR:N	2.34	0.59
3:CA:2352:A:N1	23:CW:30:VAL:HG11	2.18	0.59
10:CJ:4:PHE:N	10:CJ:44:TYR:OH	2.36	0.59
3:EA:994:C:O2'	3:EA:996:A:OP1	2.17	0.59
3:EA:1076:C:O2'	9:EI:92:PRO:HB3	2.03	0.59
3:EA:1784:A:N6	60:EA:3686:HOH:O	2.35	0.59
35:FA:1033:G:C2'	35:FA:1034:G:H5'	2.32	0.59
35:FA:1526:G:P	54:FU:39:GLU:HG2	2.42	0.59
3:GA:2106:U:N3	3:GA:2107:G:N7	2.51	0.59
6:GF:1:ALA:HB3	6:GF:4:HIS:HB2	1.84	0.59
35:HA:1492:A:C2'	35:HA:1493:A:H5'	2.33	0.59
55:HV:441:GLU:OE1	55:HV:472:ARG:NH2	2.35	0.59
17:AQ:84:LYS:O	17:AQ:86:SER:N	2.36	0.58
53:BT:3:ASN:O	53:BT:5:LYS:N	2.36	0.58
32:C5:71:CYS:HB3	32:C5:117:LEU:CD1	2.33	0.58
35:DA:975:A:N1	43:DJ:62:ARG:NH2	2.50	0.58
34:DB:182:VAL:N	34:DB:196:ASP:OD2	2.36	0.58
42:DI:22:LYS:HG3	42:DI:23:PRO:HD2	1.84	0.58
51:DR:73:ARG:O	51:DR:74:HIS:ND1	2.36	0.58
3:EA:586:A:N1	3:EA:809:G:O2'	2.23	0.58
3:EA:2615:U:C2	27:E0:3:GLN:HA	2.38	0.58
2:EC:79:ARG:NH2	2:EC:81:GLU:OE2	2.36	0.58
15:EO:2:ASP:OD1	15:EO:3:LYS:N	2.36	0.58
24:EX:4:CYS:SG	24:EX:7:THR:OG1	2.58	0.58
32:E5:103:ASN:ND2	32:E5:107:GLU:O	2.36	0.58
32:E5:117:LEU:CD2	32:E5:120:ALA:CA	2.72	0.58
52:FS:3:ARG:O	52:FS:4:SER:OG	2.18	0.58
3:GA:1361:G:OP2	60:GA:3607:HOH:O	2.16	0.58
6:GF:27:VAL:O	6:GF:29:ARG:NH1	2.36	0.58
35:HA:429:U:P	37:HD:13:ARG:HH22	2.26	0.58
23:AW:51:GLY:HA3	23:AW:59:PHE:CZ	2.38	0.58
36:BC:7:PRO:HG2	36:BC:184:TYR:CG	2.38	0.58
11:CK:71:ARG:HB2	11:CK:105:ARG:NH2	2.18	0.58
22:CV:4:ILE:HD11	22:CV:50:MET:CE	2.33	0.58
11:EK:78:ARG:NH1	16:EP:70:GLU:OE2	2.36	0.58
52:FS:4:SER:O	52:FS:6:LYS:N	2.31	0.58
3:GA:644:A:N1	3:GA:2369:A:H1'	2.18	0.58
3:GA:1013:C:OP2	60:GA:3593:HOH:O	2.16	0.58
3:GA:1315:C:OP2	60:GA:3746:HOH:O	2.16	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:GL:93:ASN:O	12:GL:95:LEU:N	2.36	0.58
3:AA:1654:A:O2'	4:AD:118:PHE:CG	2.55	0.58
37:BD:32:CYS:SG	37:BD:33:LYS:N	2.75	0.58
38:BE:82:GLN:HG2	38:BE:150:PRO:HD3	1.85	0.58
3:CA:1313:U:OP1	60:CA:3383:HOH:O	2.17	0.58
35:DA:1361:G:C5	35:DA:1362:A:N7	2.71	0.58
37:DD:9:LEU:HD21	37:DD:22:LYS:HG3	1.84	0.58
55:DV:105:VAL:O	55:DV:337:ARG:NH1	2.37	0.58
3:EA:1080:A:H1'	9:EI:127:SER:HA	1.84	0.58
14:EN:73:ASN:HA	14:EN:76:VAL:HG12	1.85	0.58
35:FA:1290:G:OP1	40:FG:35:LYS:NZ	2.36	0.58
37:FD:65:TYR:O	37:FD:115:ARG:NH1	2.30	0.58
35:HA:816:A:N7	60:HA:1755:HOH:O	2.32	0.58
54:HU:40:LYS:N	54:HU:41:PRO:CD	2.66	0.58
3:AA:800:A:OP1	60:AA:3320:HOH:O	2.17	0.58
3:AA:802:A:OP1	60:AA:3326:HOH:O	2.17	0.58
3:AA:1076:C:H1'	9:AI:93:ASN:HB3	1.86	0.58
5:AE:168:ASP:OD2	5:AE:170:ARG:NH2	2.36	0.58
32:A5:45:GLY:HA2	32:A5:49:GLY:HA2	1.85	0.58
35:BA:259:G:OP2	60:BA:1701:HOH:O	2.17	0.58
55:BV:219:HIS:CE1	55:BV:221:ASN:HB2	2.38	0.58
3:CA:265:A:H4'	3:CA:266:G:OP1	2.03	0.58
7:CG:169:ARG:NH1	31:C4:29:ALA:O	2.36	0.58
11:CK:76:VAL:HB	16:CP:72:VAL:HG22	1.85	0.58
35:DA:1534:A:N6	54:DU:44:GLU:OE1	2.36	0.58
36:DC:111:LEU:HD21	36:DC:144:LEU:HB2	1.85	0.58
50:DQ:27:ARG:NH2	50:DQ:42:THR:OG1	2.35	0.58
3:EA:85:G:OP1	21:EU:6:ARG:N	2.35	0.58
4:ED:118:PHE:HD1	4:ED:119:ALA:H	1.49	0.58
3:GA:811:U:H2'	12:GL:21:ARG:HA	1.86	0.58
3:GA:1919:A:H2	35:HA:1495:U:HO2'	1.50	0.58
26:GZ:8:GLN:NE2	26:GZ:29:ARG:O	2.36	0.58
35:HA:1250:A:N3	35:HA:1370:G:O2'	2.35	0.58
50:HQ:52:GLU:HG2	50:HQ:53:CYS:H	1.67	0.58
32:A5:15:VAL:HG22	32:A5:66:GLY:HA3	1.84	0.58
38:BE:41:ASP:OD1	38:BE:42:GLY:N	2.37	0.58
1:CB:51:G:C6	1:CB:52:A:C6	2.92	0.58
17:CQ:93:ILE:O	17:CQ:96:ASP:N	2.32	0.58
32:C5:45:GLY:HA2	32:C5:49:GLY:HA2	1.86	0.58
36:DC:3:GLN:OE1	36:DC:3:GLN:N	2.36	0.58
37:DD:132:ILE:HG22	37:DD:134:SER:H	1.67	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DG:64:VAL:O	40:DG:68:ASN:ND2	2.37	0.58
2:EC:16:VAL:N	2:EC:203:VAL:HG12	2.17	0.58
35:FA:1366:C:O2'	43:FJ:62:ARG:NH2	2.36	0.58
55:FV:188:MET:HE3	55:FV:218:TRP:CD1	2.38	0.58
20:GT:26:LYS:O	20:GT:27:SER:OG	2.20	0.58
2:AC:16:VAL:N	2:AC:203:VAL:HG12	2.17	0.58
3:AA:1938:A:OP2	60:AA:3718:HOH:O	2.16	0.58
13:AM:41:LEU:HD11	13:AM:126:ILE:HD13	1.85	0.58
20:AT:35:ALA:HB3	20:AT:38:ALA:HB2	1.85	0.58
35:BA:756:C:HO2'	41:BH:2:SER:N	2.02	0.58
35:BA:867:G:O2'	35:BA:873:A:N1	2.30	0.58
48:BO:14:GLU:O	48:BO:84:ARG:NH2	2.35	0.58
21:CU:37:GLY:N	21:CU:61:GLU:OE2	2.34	0.58
35:DA:17:U:H2'	35:DA:18:C:C6	2.37	0.58
55:DV:358:GLU:OE2	55:DV:390:ASP:N	2.37	0.58
35:FA:729:A:N1	35:FA:764:C:O2'	2.31	0.58
40:FG:57:SER:OG	40:FG:58:GLU:N	2.37	0.58
47:FN:19:LYS:O	47:FN:23:LYS:HD3	2.01	0.58
1:GB:82:U:H5"	26:GZ:16:LEU:HD11	1.85	0.58
3:GA:252:G:N2	3:GA:253:C:H1'	2.18	0.58
19:GS:88:ARG:HH21	19:GS:88:ARG:CG	2.16	0.58
4:CD:118:PHE:HD1	4:CD:119:ALA:H	1.51	0.58
4:CD:148:GLN:N	4:CD:148:GLN:OE1	2.36	0.58
35:DA:595:A:N6	35:DA:641:U:O2'	2.36	0.58
35:DA:890:G:O2'	35:DA:906:A:N6	2.37	0.58
44:DK:128:ARG:HG3	54:DU:34:ARG:NH2	2.18	0.58
46:DM:114:LYS:HB3	46:DM:115:PRO:HD3	1.86	0.58
11:EK:13:ASN:O	11:EK:15:GLY:N	2.35	0.58
32:E5:33:VAL:N	32:E5:36:ASP:OD2	2.35	0.58
3:GA:307:G:N2	3:GA:310:A:OP2	2.35	0.58
3:GA:322:A:H5'	3:GA:340:A:H1'	1.83	0.58
3:GA:742:A:H2'	3:GA:743:A:C8	2.38	0.58
3:GA:2233:U:H2'	3:GA:2234:G:C8	2.38	0.58
14:GN:29:VAL:HG11	14:GN:75:ILE:HG23	1.84	0.58
40:HG:28:ASN:OD1	40:HG:36:LYS:NZ	2.37	0.58
32:C5:56:ARG:O	32:C5:57:ASN:ND2	2.36	0.58
54:DU:35:ARG:HB3	54:DU:40:LYS:HZ3	1.69	0.58
3:GA:2237:G:O2'	3:GA:2239:G:N7	2.33	0.58
3:GA:2331:G:O2'	3:GA:2336:A:N1	2.37	0.58
6:GF:11:VAL:HG22	6:GF:172:PHE:CZ	2.39	0.58
35:HA:536:C:OP1	60:HA:1880:HOH:O	2.17	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:37:PHE:O	9:AI:41:PHE:HB3	2.04	0.58
35:BA:1007:U:H2'	35:BA:1008:U:H5'	1.85	0.58
3:CA:2552:U:OP2	60:CA:3428:HOH:O	2.17	0.58
35:DA:117:G:OP2	60:DA:1874:HOH:O	2.17	0.58
45:DL:44:LYS:CB	45:DL:45:PRO:HD3	2.34	0.58
45:DL:44:LYS:HB2	45:DL:45:PRO:HD3	1.84	0.58
3:EA:528:A:C2	3:EA:2043:C:H4'	2.39	0.58
3:EA:846:U:O2'	3:EA:847:U:O5'	2.20	0.58
35:FA:17:U:H2'	35:FA:18:C:C6	2.39	0.58
9:GI:79:LEU:HA	9:GI:83:ALA:HB3	1.85	0.58
35:HA:981:U:O4'	60:HA:1772:HOH:O	2.17	0.58
37:HD:78:GLU:OE1	37:HD:81:ARG:NE	2.28	0.58
46:HM:20:THR:HA	46:HM:25:VAL:HG23	1.86	0.58
53:HT:82:GLN:HA	53:HT:85:LYS:HG2	1.85	0.58
55:HV:23:LYS:O	55:HV:24:THR:OG1	2.17	0.58
20:AT:54:GLU:HG3	20:AT:88:LYS:HB2	1.86	0.58
3:CA:1613:G:O2'	29:C2:3:ARG:NH2	2.34	0.58
10:CJ:64:VAL:HG22	10:CJ:68:LYS:HB2	1.86	0.58
10:CJ:81:ILE:HG13	10:CJ:82:GLY:N	2.19	0.58
30:E3:50:SER:OG	30:E3:53:ASP:OD2	2.21	0.58
3:GA:577:G:O2'	3:GA:1254:A:OP1	2.21	0.58
3:GA:1019:U:C5	3:GA:1144:A:C2	2.92	0.58
7:GG:162:ARG:CZ	7:GG:168:VAL:HG11	2.33	0.58
16:GP:50:ARG:HB3	16:GP:57:ALA:H	1.67	0.58
20:GT:54:GLU:N	20:GT:54:GLU:OE2	2.37	0.58
35:HA:775:G:N2	35:HA:804:U:O4	2.36	0.58
35:HA:1128:C:O2'	35:HA:1147:C:N3	2.37	0.58
55:HV:62:THR:OG1	59:HV:801:GCP:O1G	2.22	0.58
3:AA:1076:C:H2'	3:AA:1077:A:O4'	2.03	0.57
36:BC:129:MET:HB3	36:BC:132:ARG:HG3	1.84	0.57
42:BI:34:SER:HB3	42:BI:37:GLN:CG	2.34	0.57
34:DB:117:GLU:HA	34:DB:120:SER:HB2	1.85	0.57
55:DV:230:SER:OG	55:DV:232:GLU:OE1	2.21	0.57
3:EA:1315:C:OP2	60:EA:3754:HOH:O	2.17	0.57
3:EA:1648:U:OP1	60:EA:3385:HOH:O	2.17	0.57
32:E5:31:ARG:O	32:E5:108:VAL:CG2	2.51	0.57
35:FA:352:C:N3	35:FA:356:A:N6	2.52	0.57
35:FA:995:C:N3	35:FA:1046:A:O2'	2.28	0.57
35:FA:1182:G:H4'	35:FA:1183:U:C5'	2.34	0.57
1:GB:14:U:OP2	1:GB:70:C:O2'	2.21	0.57
3:GA:265:A:N1	3:GA:427:U:O2'	2.33	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:GA:2600:A:N6	60:GA:3788:HOH:O	2.28	0.57
19:GS:14:ALA:O	19:GS:17:VAL:N	2.37	0.57
35:HA:1329:A:OP1	46:HM:26:GLY:N	2.37	0.57
34:HB:90:PHE:H	34:HB:149:GLY:HA3	1.69	0.57
3:AA:27:G:O2'	3:AA:28:A:OP2	2.19	0.57
3:CA:42:A:C2'	3:CA:43:G:H5'	2.33	0.57
3:CA:1326:U:HO2'	3:CA:2010:G:HO2'	1.53	0.57
9:CI:11:GLN:OE1	9:CI:11:GLN:N	2.37	0.57
35:DA:1025:U:H5"	35:DA:1026:G:H5'	1.86	0.57
35:DA:1468:A:C2'	35:DA:1469:C:H5'	2.34	0.57
3:EA:2757:A:N1	7:EG:66:THR:HG21	2.19	0.57
6:EF:118:ALA:O	6:EF:166:ARG:NH1	2.36	0.57
9:EI:70:THR:OG1	9:EI:71:LYS:N	2.36	0.57
32:E5:31:ARG:HB3	32:E5:108:VAL:HG22	1.86	0.57
35:FA:1297:G:H5'	35:FA:1302:C:N4	2.20	0.57
55:FV:500:ASP:N	55:FV:521:ASP:OD1	2.37	0.57
1:GB:99:A:C5	1:GB:100:G:C8	2.92	0.57
3:GA:231:A:C6	3:GA:232:G:C6	2.92	0.57
5:GE:158:PHE:HA	5:GE:169:VAL:HG21	1.86	0.57
34:HB:52:ALA:HB3	34:HB:199:ILE:HD11	1.86	0.57
3:AA:1386:C:H2'	3:AA:1387:A:C8	2.39	0.57
3:AA:2548:U:O2	11:AK:23:LYS:NZ	2.37	0.57
17:AQ:63:ARG:HH22	17:AQ:95:ALA:C	2.08	0.57
51:BR:73:ARG:O	51:BR:74:HIS:ND1	2.38	0.57
55:BV:98:GLU:O	55:BV:102:SER:OG	2.07	0.57
55:BV:645:GLN:O	55:BV:647:SER:N	2.37	0.57
3:CA:45:G:N2	3:CA:433:C:O2	2.31	0.57
10:CJ:6:ALA:HB3	10:CJ:45:THR:HG21	1.85	0.57
55:DV:190:ALA:N	55:DV:205:GLU:O	2.38	0.57
3:EA:2612:C:OP2	60:EA:3538:HOH:O	2.17	0.57
25:EY:16:THR:O	25:EY:20:ASN:ND2	2.38	0.57
35:FA:1310:G:OP2	46:FM:87:ARG:NH2	2.35	0.57
42:FI:44:ALA:HB1	42:FI:47:VAL:HG13	1.85	0.57
3:GA:822:G:H2'	3:GA:823:C:H6	1.69	0.57
3:GA:1782:U:C6	3:GA:2609:U:C5	2.92	0.57
3:AA:31:C:OP1	60:AA:3695:HOH:O	2.18	0.57
23:AW:39:GLN:HG2	23:AW:41:GLY:H	1.69	0.57
42:BI:6:TYR:CD1	42:BI:89:GLU:HB2	2.40	0.57
2:CC:203:VAL:O	2:CC:205:GLY:N	2.36	0.57
32:C5:24:SER:C	32:C5:116:GLU:CB	2.73	0.57
41:DH:77:ARG:NE	41:DH:79:SER:O	2.38	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:EF:147:ARG:HG3	6:EF:149:ARG:H	1.67	0.57
17:EQ:91:ARG:HH11	18:ER:11:GLN:N	2.01	0.57
23:EW:30:VAL:CG2	23:EW:30:VAL:O	2.52	0.57
35:FA:1033:G:H2'	35:FA:1034:G:H5'	1.86	0.57
47:FN:54:ASP:OD1	47:FN:59:ARG:NH1	2.37	0.57
55:FV:697:ALA:O	55:FV:699:ILE:N	2.36	0.57
35:HA:920:U:H2'	35:HA:921:U:C6	2.40	0.57
16:AP:63:ILE:HA	16:AP:68:GLY:HA2	1.85	0.57
37:BD:31:LYS:HD3	37:BD:31:LYS:N	2.20	0.57
38:BE:24:THR:HA	38:BE:29:ARG:HA	1.87	0.57
38:BE:110:ALA:O	38:BE:111:MET:HB3	2.04	0.57
3:CA:1535:A:H4'	3:CA:1536:C:OP2	2.05	0.57
3:CA:1812:U:O4'	2:CC:44:ASN:ND2	2.37	0.57
3:CA:2780:G:OP2	10:CJ:120:ARG:NE	2.38	0.57
7:CG:84:LYS:N	7:CG:84:LYS:HD2	2.19	0.57
55:DV:75:MET:SD	55:DV:202:PHE:HZ	2.26	0.57
19:ES:12:SER:O	19:ES:101:SER:OG	2.23	0.57
32:E5:23:LEU:HA	32:E5:118:ILE:HD11	1.84	0.57
35:FA:675:A:H1'	44:FK:118:HIS:CD2	2.40	0.57
3:GA:1203:U:OP2	3:GA:1204:A:O2'	2.20	0.57
3:GA:2025:C:OP2	60:GA:3470:HOH:O	2.17	0.57
6:GF:79:ARG:HB3	6:GF:82:TYR:CE2	2.39	0.57
35:HA:558:G:OP1	60:HA:1833:HOH:O	2.18	0.57
35:HA:1348:U:H4'	42:HI:122:ARG:HG3	1.85	0.57
34:HB:14:HIS:ND1	34:HB:14:HIS:O	2.38	0.57
53:HT:62:ALA:HA	53:HT:67:ILE:HG22	1.86	0.57
32:A5:3:LEU:CD1	32:A5:5:LEU:HG	2.35	0.57
37:BD:30:THR:HB	37:BD:31:LYS:NZ	2.19	0.57
55:BV:220:GLN:O	55:BV:224:GLU:N	2.37	0.57
15:CO:58:ILE:HD11	15:CO:81:ARG:HH22	1.69	0.57
35:DA:82:G:H2'	35:DA:82:G:N3	2.18	0.57
35:DA:776:G:N2	35:DA:802:A:OP2	2.36	0.57
3:EA:526:A:OP1	60:EA:3245:HOH:O	2.18	0.57
26:EZ:8:GLN:O	26:EZ:9:THR:HG22	2.04	0.57
35:FA:1182:G:H4'	35:FA:1183:U:H5"	1.87	0.57
3:GA:1455:G:OP2	60:GA:3408:HOH:O	2.17	0.57
16:GP:50:ARG:CG	16:GP:57:ALA:O	2.52	0.57
35:HA:237:G:H4'	50:HQ:27:ARG:HH12	1.69	0.57
2:AC:77:VAL:HG23	2:AC:111:ALA:HA	1.85	0.57
3:AA:2517:C:C6	3:AA:2542:A:N7	2.72	0.57
23:AW:76:ARG:HH21	23:AW:76:ARG:CG	2.17	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BL:33:VAL:HG21	55:BV:429:GLU:HG3	1.87	0.57
3:CA:992:C:H4'	18:CR:74:ILE:HD13	1.87	0.57
32:C5:48:ALA:HB3	32:C5:51:TYR:HB3	1.86	0.57
32:C5:95:LEU:H	32:C5:95:LEU:HD22	1.69	0.57
3:EA:646:U:C4	3:EA:2368:C:H1'	2.39	0.57
3:GA:1041:G:N2	3:GA:1114:C:N3	2.51	0.57
3:GA:1346:G:N2	3:GA:1600:C:O2	2.30	0.57
3:GA:1654:A:O2'	4:GD:118:PHE:CG	2.57	0.57
3:GA:1813:G:H1'	2:GC:49:THR:HG21	1.85	0.57
10:GJ:43:GLU:O	10:GJ:45:THR:N	2.37	0.57
3:AA:422:A:C2	3:AA:423:A:C4	2.92	0.57
4:AD:118:PHE:HD1	4:AD:119:ALA:H	1.49	0.57
16:AP:58:PHE:CD1	16:AP:75:THR:HG22	2.40	0.57
35:BA:1082:A:OP1	38:BE:23:LYS:NZ	2.37	0.57
3:CA:2674:G:H4'	11:CK:30:ARG:HG3	1.86	0.57
32:C5:47:GLU:HG2	32:C5:95:LEU:HD21	1.86	0.57
28:E1:50:GLU:OE2	28:E1:52:LYS:NZ	2.38	0.57
35:FA:723:U:H2'	54:FU:49:LYS:CE	2.33	0.57
3:GA:528:A:C2	3:GA:2043:C:H4'	2.40	0.57
3:GA:659:G:O2'	5:GE:30:GLN:NE2	2.38	0.57
39:HF:51:ILE:HD11	39:HF:86:ARG:HG2	1.87	0.57
3:AA:1936:A:H2	3:AA:1943:U:C5	2.23	0.57
20:AT:19:LYS:O	20:AT:23:ALA:N	2.35	0.57
23:AW:28:GLU:HB3	23:AW:31:LEU:HD21	1.86	0.57
1:CB:23:G:OP2	60:CB:1310:HOH:O	2.18	0.57
3:CA:2101:A:C2	3:CA:2102:G:C2	2.93	0.57
3:CA:2785:C:O2'	4:CD:67:HIS:ND1	2.35	0.57
34:DB:49:PHE:CD1	34:DB:50:ASN:N	2.73	0.57
36:DC:40:ARG:HE	36:DC:57:ILE:HD12	1.70	0.57
43:DJ:71:LEU:O	43:DJ:72:ARG:NH1	2.38	0.57
20:ET:32:LEU:H	20:ET:83:ALA:HB3	1.70	0.57
3:GA:1095:A:H1'	55:HV:632:ILE:HB	1.86	0.57
35:HA:983:A:OP1	47:HN:9:ARG:NH1	2.33	0.57
40:HG:69:VAL:HA	40:HG:135:VAL:HG12	1.86	0.57
42:HI:41:ARG:N	42:HI:45:ARG:HB3	2.20	0.57
3:AA:1187:G:OP2	60:AA:3361:HOH:O	2.18	0.57
3:AA:2742:G:OP1	31:A4:36:ARG:NH1	2.38	0.57
52:BS:29:LYS:HB3	52:BS:30:PRO:HD2	1.87	0.57
7:CG:23:ILE:HG21	7:CG:71:LEU:HD11	1.87	0.57
35:DA:740:U:OP1	48:DO:38:HIS:NE2	2.32	0.57
35:DA:1002:G:N2	35:DA:1038:C:O2	2.36	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:EG:68:ARG:NH2	7:EG:72:ASN:HD22	2.03	0.57
1:GB:4:C:N3	1:GB:116:G:N2	2.52	0.57
3:GA:1031:G:N2	31:G4:38:GLY:OXT	2.38	0.57
3:GA:1072:C:H42	3:GA:1097:U:H5'	1.68	0.57
3:GA:1268:A:C2	3:GA:2013:A:C4	2.93	0.57
3:GA:2005:A:OP1	60:GA:3379:HOH:O	2.17	0.57
7:GG:38:ASP:N	7:GG:38:ASP:OD1	2.38	0.57
43:HJ:14:ASP:OD2	43:HJ:17:LEU:N	2.38	0.57
35:BA:1239:A:H62	35:BA:1299:A:N6	2.03	0.56
40:BG:28:ASN:OD1	40:BG:36:LYS:NZ	2.38	0.56
49:BP:28:ARG:NH2	49:BP:29:ASN:OD1	2.38	0.56
1:CB:73:A:C4	1:CB:104:A:C2	2.93	0.56
3:CA:635:C:P	12:CL:126:ARG:NH1	2.78	0.56
38:DE:115:LEU:HD23	38:DE:123:VAL:HG21	1.87	0.56
3:GA:349:U:H2'	3:GA:350:G:H8	1.70	0.56
3:GA:967:U:O4	60:GA:3336:HOH:O	2.13	0.56
4:GD:33:ARG:NH1	4:GD:53:GLY:O	2.38	0.56
3:AA:673:C:OP1	5:AE:49:ARG:NH2	2.36	0.56
3:AA:1353:A:C8	3:AA:1378:A:N6	2.73	0.56
3:AA:1738:G:HO2'	3:AA:1739:A:P	2.27	0.56
32:A5:132:TYR:CZ	33:A6:23:ILE:HD11	2.40	0.56
55:BV:219:HIS:NE2	55:BV:221:ASN:HB2	2.19	0.56
16:CP:19:PHE:N	16:CP:19:PHE:CD1	2.72	0.56
18:CR:58:VAL:HG13	18:CR:102:SER:HB2	1.88	0.56
18:ER:49:ILE:HG22	18:ER:54:VAL:HG13	1.87	0.56
35:FA:481:G:O2'	35:FA:482:A:O5'	2.23	0.56
34:FB:86:CYS:HB2	34:FB:88:GLN:HG3	1.85	0.56
18:GR:83:TYR:HD1	18:GR:84:ARG:N	2.03	0.56
34:HB:173:LYS:HA	34:HB:176:ASN:HD22	1.70	0.56
5:AE:150:THR:HG21	5:AE:153:LEU:HA	1.87	0.56
9:AI:100:ILE:HD11	9:AI:137:LEU:HG	1.87	0.56
17:AQ:81:GLY:O	17:AQ:85:ALA:N	2.37	0.56
32:A5:56:ARG:O	32:A5:57:ASN:ND2	2.39	0.56
34:BB:166:ASP:OD1	34:BB:167:HIS:N	2.38	0.56
35:BA:375:U:C4	35:BA:376:G:N7	2.73	0.56
54:BU:9:ASN:HB2	54:BU:11:PRO:HD2	1.87	0.56
3:CA:548:G:O2'	3:CA:549:G:N2	2.38	0.56
3:CA:1534:U:H3'	3:CA:1536:C:C5	2.40	0.56
3:CA:1673:G:OP1	60:CA:3428:HOH:O	2.18	0.56
3:CA:2154:A:H3'	3:CA:2155:U:H4'	1.88	0.56
3:CA:2574:G:OP1	60:CA:3700:HOH:O	2.17	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:CF:11:VAL:H	6:CF:14:LYS:HG2	1.70	0.56
16:CP:58:PHE:CD1	16:CP:75:THR:HG22	2.41	0.56
42:DI:23:PRO:HA	42:DI:61:LEU:HG	1.87	0.56
3:EA:846:U:HO2'	3:EA:847:U:P	2.28	0.56
3:EA:992:C:H4'	18:ER:74:ILE:HD13	1.87	0.56
3:EA:996:A:H4'	17:EQ:91:ARG:HG2	1.86	0.56
3:EA:1568:G:OP1	2:EC:62:ARG:NH1	2.38	0.56
3:EA:2005:A:OP1	60:EA:3380:HOH:O	2.17	0.56
7:EG:155:PRO:O	7:EG:171:LYS:N	2.39	0.56
9:EI:125:THR:O	9:EI:128:ILE:N	2.37	0.56
23:EW:39:GLN:HG3	23:EW:40:ARG:H	1.70	0.56
38:FE:90:THR:HB	38:FE:135:ASN:ND2	2.19	0.56
38:FE:115:LEU:HD23	38:FE:123:VAL:HG21	1.87	0.56
39:FF:2:ARG:NH2	39:FF:68:GLN:OE1	2.38	0.56
47:FN:49:GLN:N	47:FN:49:GLN:OE1	2.38	0.56
3:GA:600:G:OP1	5:GE:24:ASN:ND2	2.38	0.56
3:GA:1070:A:H2'	3:GA:1072:C:H5	1.69	0.56
3:GA:1385:A:H1'	3:GA:1386:C:C6	2.40	0.56
3:GA:2312:U:O2	6:GF:36:ASN:ND2	2.38	0.56
5:GE:196:VAL:HA	5:GE:199:MET:HB3	1.86	0.56
20:GT:15:HIS:O	20:GT:17:SER:N	2.39	0.56
21:GU:86:PHE:CE1	21:GU:92:VAL:HG22	2.41	0.56
23:GW:19:ARG:HA	23:GW:34:SER:HA	1.86	0.56
31:G4:36:ARG:HG2	31:G4:37:GLN:N	2.19	0.56
35:HA:1268:G:H1'	35:HA:1327:C:H5'	1.88	0.56
40:HG:79:ARG:NH1	40:HG:82:GLY:O	2.39	0.56
3:AA:1107:G:H5"	32:A5:58:THR:CG2	2.36	0.56
4:AD:118:PHE:O	4:AD:120:GLY:N	2.36	0.56
35:BA:664:G:H22	35:BA:741:G:H1	1.53	0.56
3:CA:995:C:H42	10:CJ:2:LYS:HB2	1.71	0.56
3:CA:1252:G:C2	3:CA:1253:A:C2	2.93	0.56
3:CA:2011:U:OP2	19:CS:16:LYS:NZ	2.39	0.56
1:EB:116:G:H4'	15:EO:54:VAL:HG12	1.87	0.56
12:EL:74:THR:HG22	12:EL:107:PHE:HB2	1.88	0.56
20:ET:59:ASN:O	20:ET:83:ALA:O	2.24	0.56
54:FU:11:PRO:O	54:FU:12:PHE:HB2	2.05	0.56
3:GA:239:C:HO2'	3:GA:621:A:H2	1.54	0.56
3:GA:340:A:O2'	5:GE:162:ARG:NH1	2.38	0.56
3:GA:1149:G:H2'	3:GA:1150:C:C6	2.39	0.56
35:HA:843:U:H2'	35:HA:844:G:H5'	1.87	0.56
35:HA:1293:C:H2'	35:HA:1294:G:H8	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:HA:1496:C:C5	35:HA:1497:G:C5	2.94	0.56
34:HB:150:ILE:O	34:HB:153:MET:N	2.34	0.56
40:HG:16:PRO:HB2	42:HI:46:MET:SD	2.46	0.56
1:AB:55:U:O3'	6:AF:23:SER:OG	2.21	0.56
55:BV:164:ALA:HB1	55:BV:262:ILE:HD11	1.88	0.56
3:CA:2387:U:P	23:CW:54:ARG:HH22	2.27	0.56
4:CD:11:MET:HA	4:CD:24:VAL:O	2.05	0.56
45:DL:40:THR:OG1	45:DL:41:THR:N	2.38	0.56
55:DV:220:GLN:O	55:DV:224:GLU:N	2.36	0.56
3:EA:1107:G:H5"	32:E5:58:THR:CG2	2.35	0.56
3:EA:1288:G:C4	3:EA:1327:A:C2	2.94	0.56
3:EA:2275:C:O2'	13:EM:83:GLY:O	2.20	0.56
3:GA:31:C:N4	60:GA:3212:HOH:O	2.38	0.56
3:GA:321:U:O2'	3:GA:340:A:N3	2.38	0.56
3:GA:1187:G:OP2	60:GA:3364:HOH:O	2.18	0.56
3:GA:2627:G:O3'	60:GA:3246:HOH:O	2.18	0.56
10:GJ:49:ASP:OD1	10:GJ:121:LYS:NZ	2.38	0.56
16:GP:58:PHE:HD1	16:GP:75:THR:HG22	1.70	0.56
21:GU:25:LYS:N	21:GU:34:ILE:O	2.39	0.56
35:HA:1049:U:H4'	35:HA:1050:G:H5'	1.87	0.56
37:HD:198:HIS:O	37:HD:202:GLU:N	2.36	0.56
3:AA:1773:A:N7	3:AA:1829:A:H1'	2.20	0.56
15:AO:2:ASP:OD1	15:AO:3:LYS:N	2.39	0.56
17:AQ:105:PHE:O	17:AQ:108:LEU:N	2.38	0.56
3:CA:122:G:O6	60:CA:3215:HOH:O	2.16	0.56
3:CA:1458:U:H4'	3:CA:1459:G:O5'	2.04	0.56
3:CA:2576:G:O2'	3:CA:2579:C:OP2	2.22	0.56
46:DM:114:LYS:CB	46:DM:115:PRO:HD3	2.35	0.56
55:DV:98:GLU:O	55:DV:102:SER:OG	2.16	0.56
4:ED:149:ASN:OD1	4:ED:150:GLN:N	2.39	0.56
35:FA:753:A:OP1	48:FO:69:TYR:OH	2.23	0.56
35:FA:1084:G:C5	35:FA:1085:U:C4	2.94	0.56
3:GA:1070:A:H2'	3:GA:1072:C:C5	2.40	0.56
3:GA:1654:A:H2'	3:GA:1655:A:H8	1.69	0.56
14:GN:103:ARG:NH2	14:GN:106:ASP:OD2	2.39	0.56
15:GO:85:LYS:CB	15:GO:87:ILE:HG12	2.33	0.56
35:HA:1452:C:O2'	35:HA:1453:G:OP1	2.19	0.56
3:AA:1019:U:H3	3:AA:1142:A:H62	1.53	0.56
3:AA:2331:G:O2'	3:AA:2336:A:N1	2.38	0.56
23:AW:18:LYS:HG3	23:AW:19:ARG:N	2.21	0.56
35:BA:757:U:O2'	35:BA:879:C:O2	2.19	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1457:G:OP1	53:BT:34:LYS:NZ	2.35	0.56
42:BI:10:GLY:HA2	42:BI:81:HIS:CD2	2.41	0.56
35:DA:34:C:O4'	45:DL:29:GLN:NE2	2.39	0.56
35:DA:833:G:H2'	35:DA:834:U:O4'	2.05	0.56
3:EA:102:U:C4	25:EY:2:LYS:HB2	2.40	0.56
15:EO:49:VAL:HG21	15:EO:82:ALA:HA	1.87	0.56
32:E5:118:ILE:HB	32:E5:119:PRO:CD	2.36	0.56
43:FJ:71:LEU:O	43:FJ:72:ARG:NH1	2.38	0.56
54:FU:12:PHE:CZ	54:FU:16:LEU:HD21	2.40	0.56
1:GB:24:G:H4'	1:GB:25:U:C5	2.41	0.56
3:GA:248:G:N3	3:GA:2431:U:H4'	2.19	0.56
14:GN:117:ASP:OD1	14:GN:118:ARG:N	2.39	0.56
19:GS:18:ARG:HG3	19:GS:76:VAL:CG2	2.36	0.56
36:HC:71:ALA:HA	36:HC:106:VAL:CG2	2.35	0.56
3:AA:283:G:C2	3:AA:284:U:H1'	2.41	0.56
9:AI:135:MET:HB3	9:AI:137:LEU:HD22	1.88	0.56
20:AT:59:ASN:O	20:AT:83:ALA:O	2.24	0.56
34:BB:32:GLY:HA3	34:BB:39:ILE:H	1.70	0.56
55:BV:248:ILE:O	55:BV:251:ALA:N	2.39	0.56
3:CA:119:A:O3'	60:CA:3218:HOH:O	2.18	0.56
3:EA:1313:U:H2'	3:EA:1610:A:C2	2.41	0.56
4:ED:16:THR:OG1	4:ED:18:ASP:OD1	2.17	0.56
15:EO:82:ALA:O	15:EO:85:LYS:N	2.39	0.56
3:GA:372:G:N2	3:GA:401:A:OP2	2.37	0.56
3:GA:564:C:O4'	17:GQ:36:GLN:NE2	2.38	0.56
3:GA:2482:A:C4	3:GA:2483:C:C5	2.94	0.56
35:HA:1239:A:H4'	35:HA:1240:U:H5"	1.88	0.56
3:AA:76:C:O2'	25:AY:55:THR:OG1	2.16	0.56
3:AA:2015:A:C2	27:A0:2:VAL:HG22	2.41	0.56
3:AA:2680:U:H5'	4:AD:194:PRO:HA	1.88	0.56
35:BA:71:A:N1	35:BA:99:C:O2'	2.37	0.56
35:BA:299:G:H2'	35:BA:300:A:C8	2.40	0.56
35:BA:779:C:O2'	44:BK:122:ARG:NH1	2.39	0.56
35:BA:1147:C:O2	42:BI:18:ARG:NH1	2.39	0.56
11:CK:10:VAL:HG21	11:CK:17:ARG:H	1.70	0.56
35:DA:537:G:OP1	45:DL:110:ARG:NH2	2.39	0.56
35:DA:926:G:N2	35:DA:1505:G:H2'	2.21	0.56
35:DA:978:A:HO2'	35:DA:1322:C:H5	1.54	0.56
45:DL:83:ARG:HH11	45:DL:83:ARG:HG2	1.70	0.56
9:EI:19:PRO:HG2	9:EI:22:PRO:HD2	1.88	0.56
17:EQ:93:ILE:O	17:EQ:96:ASP:N	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:ET:29:THR:OG1	20:ET:86:THR:N	2.36	0.56
54:FU:40:LYS:N	54:FU:41:PRO:CD	2.69	0.56
3:GA:1214:A:O2'	60:GA:3691:HOH:O	2.13	0.56
6:AF:151:LEU:HD12	6:AF:152:ASP:N	2.21	0.56
12:AL:85:VAL:CG2	12:AL:94:THR:HG22	2.36	0.56
35:BA:1414:U:O2	35:BA:1487:G:N2	2.39	0.56
3:CA:751:A:C6	3:CA:789:A:C5	2.94	0.56
3:CA:1843:C:O2'	2:CC:253:GLY:O	2.13	0.56
23:CW:35:ILE:O	23:CW:37:VAL:N	2.39	0.56
35:DA:1157:A:H5'	35:DA:1158:C:C6	2.41	0.56
34:DB:95:TRP:NE1	34:DB:171:ALA:HB2	2.21	0.56
41:DH:18:GLN:NE2	41:DH:70:ALA:HB1	2.21	0.56
3:EA:1064:C:N4	3:EA:1070:A:OP1	2.39	0.56
3:EA:1262:A:OP2	19:ES:99:ARG:NH2	2.39	0.56
23:EW:16:GLU:O	23:EW:17:ALA:HB3	2.06	0.56
42:FI:35:LEU:O	42:FI:40:GLY:N	2.39	0.56
35:HA:81:A:H5'	35:HA:90:C:N4	2.21	0.56
35:HA:125:U:C2	35:HA:237:G:N2	2.74	0.56
35:HA:734:G:H21	51:HR:64:TYR:HE1	1.54	0.56
34:HB:22:TRP:CZ3	34:HB:24:PRO:HA	2.41	0.56
3:AA:686:U:H2'	3:AA:788:A:N1	2.21	0.55
3:AA:2502:G:OP2	60:AA:3487:HOH:O	2.18	0.55
35:BA:932:C:H5'	40:BG:4:ARG:HE	1.71	0.55
35:BA:1530:G:H2'	35:BA:1531:A:C8	2.41	0.55
3:CA:83:A:O2'	3:CA:103:A:N6	2.39	0.55
3:CA:1385:A:H1'	3:CA:1386:C:C6	2.41	0.55
2:CC:36:ASN:ND2	2:CC:85:ASN:OD1	2.39	0.55
4:CD:35:THR:N	4:CD:49:GLN:O	2.37	0.55
21:CU:15:GLY:O	21:CU:17:ASP:N	2.39	0.55
35:DA:1129:C:O2	35:DA:1130:A:N6	2.37	0.55
38:DE:110:ALA:O	38:DE:111:MET:HB3	2.06	0.55
42:DI:112:GLU:OE2	42:DI:115:LYS:NZ	2.31	0.55
3:EA:460:A:OP1	29:E2:41:ARG:NH1	2.38	0.55
3:EA:612:G:O2'	3:EA:613:A:C8	2.59	0.55
4:ED:33:ARG:NH1	4:ED:53:GLY:O	2.39	0.55
20:ET:1:MET:SD	20:ET:49:LYS:NZ	2.75	0.55
35:FA:100:G:OP2	60:FA:1873:HOH:O	2.18	0.55
35:FA:315:A:OP2	60:FA:1708:HOH:O	2.18	0.55
3:GA:323:C:OP1	3:GA:338:G:N2	2.39	0.55
3:GA:1140:C:OP2	10:GJ:68:LYS:NZ	2.38	0.55
3:GA:1853:A:N1	3:GA:2087:G:H1'	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:GA:1958:C:OP1	60:GA:3717:HOH:O	2.18	0.55
26:GZ:16:LEU:HB3	26:GZ:17:PRO:HD2	1.87	0.55
35:HA:673:A:N3	35:HA:734:G:N2	2.54	0.55
40:HG:15:ASP:HB2	40:HG:23:LEU:HB2	1.88	0.55
3:AA:85:G:OP2	21:AU:6:ARG:HG3	2.06	0.55
3:AA:100:U:H4'	3:AA:101:A:O5'	2.06	0.55
3:AA:1324:G:C4	3:AA:1328:A:N6	2.74	0.55
3:AA:1378:A:O2'	3:AA:1380:G:N7	2.27	0.55
3:AA:1786:A:H1'	3:AA:1938:A:N6	2.22	0.55
35:BA:58:C:O2'	35:BA:388:G:N7	2.24	0.55
44:BK:89:PRO:HB3	54:BU:29:LEU:HD22	1.87	0.55
3:CA:241:A:O2'	30:C3:2:LYS:NZ	2.38	0.55
3:CA:2543:G:C6	3:CA:2544:G:C6	2.94	0.55
11:CK:10:VAL:HG11	11:CK:16:ALA:HB3	1.88	0.55
34:DB:185:ILE:HA	34:DB:199:ILE:HB	1.87	0.55
3:EA:42:A:C2'	3:EA:43:G:H5'	2.35	0.55
4:ED:118:PHE:O	4:ED:120:GLY:N	2.38	0.55
16:EP:58:PHE:CD1	16:EP:75:THR:HG22	2.41	0.55
20:ET:19:LYS:O	20:ET:23:ALA:N	2.39	0.55
35:FA:1530:G:H2'	35:FA:1531:A:C8	2.41	0.55
44:FK:93:ARG:NH2	44:FK:112:ASP:OD2	2.36	0.55
54:FU:9:ASN:HB2	54:FU:11:PRO:HD2	1.88	0.55
3:GA:651:G:OP1	30:G3:18:LYS:N	2.37	0.55
3:GA:2252:G:O3'	60:GA:3504:HOH:O	2.17	0.55
3:GA:2314:A:OP1	6:GF:87:LYS:NZ	2.39	0.55
10:GJ:53:TYR:CE1	10:GJ:121:LYS:HG2	2.41	0.55
23:GW:18:LYS:HA	23:GW:36:ILE:HG13	1.87	0.55
35:HA:1261:A:N6	35:HA:1274:A:O2'	2.35	0.55
10:AJ:81:ILE:HG13	10:AJ:82:GLY:N	2.21	0.55
16:AP:33:GLU:HB2	16:AP:38:ARG:HH11	1.71	0.55
35:BA:1152:A:OP1	43:BJ:70:HIS:ND1	2.40	0.55
46:BM:8:ASN:ND2	46:BM:66:GLU:OE2	2.39	0.55
55:BV:92:HIS:O	55:BV:122:GLN:NE2	2.40	0.55
3:CA:819:A:C4	3:CA:1189:A:C2	2.93	0.55
7:CG:84:LYS:HG2	7:CG:85:LYS:N	2.21	0.55
18:CR:49:ILE:HG22	18:CR:54:VAL:HG13	1.87	0.55
35:DA:1492:A:O3'	56:DW:1:KBE:NZ	2.39	0.55
3:EA:364:C:H2'	3:EA:365:U:C6	2.41	0.55
13:EM:106:ASP:O	13:EM:108:VAL:N	2.37	0.55
35:HA:626:G:OP1	49:HP:35:ARG:NH2	2.39	0.55
40:HG:67:GLU:HG3	40:HG:70:ARG:CZ	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AA:1107:G:H4'	32:A5:81:LEU:HA	1.88	0.55
11:AK:121:GLU:OE1	16:AP:62:LYS:NZ	2.37	0.55
14:AN:30:ARG:NH1	14:AN:74:GLU:OE1	2.40	0.55
35:BA:93:U:H2'	35:BA:94:G:H5"	1.88	0.55
36:BC:3:GLN:OE1	36:BC:3:GLN:N	2.39	0.55
52:BS:36:ARG:NH2	52:BS:75:ALA:O	2.39	0.55
36:DC:154:SER:CB	36:DC:165:THR:HG22	2.37	0.55
6:EF:59:ILE:HD11	6:EF:140:ILE:CD1	2.36	0.55
35:FA:623:C:C4	35:FA:624:C:C5	2.95	0.55
49:FP:6:LEU:HD12	49:FP:17:TYR:CB	2.36	0.55
3:GA:646:U:N3	3:GA:2368:C:H1'	2.21	0.55
3:GA:655:A:H4'	3:GA:656:G:OP1	2.07	0.55
3:GA:1027:A:C6	3:GA:1126:A:C4	2.95	0.55
3:GA:2415:G:C6	3:GA:2416:C:C4	2.95	0.55
30:G3:27:ASN:O	30:G3:35:LYS:NZ	2.39	0.55
35:HA:1034:G:N2	35:HA:1035:A:N7	2.54	0.55
37:HD:4:TYR:CZ	37:HD:11:LEU:HD11	2.41	0.55
44:HK:13:ARG:N	44:HK:76:GLU:HB3	2.20	0.55
2:AC:68:ARG:CD	2:AC:103:ILE:HD11	2.37	0.55
3:AA:1482:G:C6	3:AA:1508:A:C2	2.94	0.55
3:AA:1676:A:OP2	60:AA:3754:HOH:O	2.18	0.55
35:BA:579:A:H2'	35:BA:580:C:C6	2.42	0.55
37:BD:58:LYS:HB2	37:BD:200:ILE:HG13	1.86	0.55
54:BU:25:LYS:NZ	54:BU:26:ALA:HB2	2.20	0.55
3:CA:422:A:C2	3:CA:423:A:C4	2.95	0.55
3:CA:2037:A:C6	3:CA:2038:G:C6	2.95	0.55
35:DA:177:G:OP2	53:DT:64:LYS:NZ	2.32	0.55
39:DF:48:ALA:H	51:DR:66:SER:HG	1.52	0.55
3:EA:299:A:OP2	60:EA:3551:HOH:O	2.18	0.55
41:FH:10:MET:HE2	41:FH:33:LYS:HD3	1.87	0.55
1:GB:83:G:H4'	26:GZ:52:PHE:CG	2.41	0.55
3:GA:41:C:H2'	3:GA:42:A:O4'	2.05	0.55
3:GA:663:G:N2	3:GA:939:G:O3'	2.40	0.55
3:GA:1082:U:N3	3:GA:1083:U:O2	2.40	0.55
3:GA:1778:U:H2'	3:GA:1784:A:H62	1.71	0.55
3:GA:2021:C:P	27:G0:8:THR:HG21	2.47	0.55
35:HA:844:G:C3'	35:HA:845:A:H5"	2.37	0.55
42:HI:99:ARG:HG3	42:HI:104:VAL:HG22	1.89	0.55
2:AC:14:HIS:O	2:AC:203:VAL:HG11	2.05	0.55
10:AJ:17:VAL:HG23	10:AJ:139:VAL:HA	1.88	0.55
32:A5:23:LEU:HG	32:A5:24:SER:N	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:1277:C:HO2'	35:BA:1279:G:H8	1.55	0.55
3:CA:2347:C:O2'	28:C1:20:TYR:OH	2.11	0.55
2:CC:28:PRO:HG2	2:CC:33:LEU:HD11	1.88	0.55
2:CC:43:ASN:OD1	2:CC:44:ASN:N	2.35	0.55
6:CF:132:ARG:O	6:CF:133:GLU:HB3	2.07	0.55
15:CO:31:THR:O	15:CO:102:ARG:NH1	2.40	0.55
23:CW:37:VAL:HG13	23:CW:55:ASP:C	2.27	0.55
23:CW:55:ASP:O	23:CW:57:THR:N	2.40	0.55
29:C2:34:ARG:NH1	29:C2:41:ARG:O	2.40	0.55
34:DB:187:ASP:HB2	34:DB:203:ASP:HB3	1.89	0.55
42:DI:114:LYS:NZ	42:DI:118:LEU:O	2.33	0.55
50:DQ:6:ARG:HH11	50:DQ:6:ARG:CG	2.20	0.55
3:EA:1996:C:OP1	11:EK:31:ARG:NE	2.40	0.55
3:EA:2144:G:N2	3:EA:2149:U:O2'	2.40	0.55
19:ES:14:ALA:O	19:ES:17:VAL:N	2.39	0.55
44:FK:111:THR:HA	54:FU:4:ILE:O	2.07	0.55
3:GA:955:U:OP1	13:GM:86:LYS:NZ	2.32	0.55
3:GA:979:A:N7	60:GA:3582:HOH:O	2.32	0.55
35:HA:1016:A:O2'	35:HA:1217:C:O2	2.25	0.55
44:HK:24:HIS:HB2	44:HK:87:LYS:HD2	1.88	0.55
50:HQ:12:VAL:O	50:HQ:13:VAL:HG22	2.07	0.55
3:AA:1458:U:H4'	3:AA:1459:G:O5'	2.07	0.55
35:BA:1004:A:O2'	35:BA:1036:A:N1	2.32	0.55
35:BA:1468:A:C2'	35:BA:1469:C:H5'	2.37	0.55
48:BO:19:ALA:O	48:BO:20:ASN:HB2	2.07	0.55
3:CA:864:G:OP1	13:CM:22:GLN:NE2	2.39	0.55
3:CA:2331:G:O2'	3:CA:2336:A:N1	2.39	0.55
3:CA:2637:U:OP1	4:CD:83:ARG:NH2	2.38	0.55
26:CZ:40:THR:CG2	26:CZ:43:ILE:HG23	2.37	0.55
32:C5:23:LEU:HG	32:C5:24:SER:N	2.22	0.55
32:C5:122:GLN:CG	32:C5:123:ILE:H	2.18	0.55
35:DA:843:U:H2'	35:DA:844:G:H5'	1.89	0.55
3:EA:865:C:N3	3:EA:908:C:N4	2.55	0.55
10:EJ:81:ILE:HG23	10:EJ:82:GLY:N	2.21	0.55
35:FA:196:A:OP2	60:FA:1877:HOH:O	2.18	0.55
55:FV:422:PRO:O	55:FV:424:THR:N	2.40	0.55
3:GA:635:C:OP1	12:GL:126:ARG:NH1	2.40	0.55
3:GA:818:G:OP2	60:GA:3568:HOH:O	2.18	0.55
3:GA:1383:A:N7	3:GA:1384:A:C6	2.75	0.55
40:HG:114:LYS:HD3	40:HG:118:LEU:CD1	2.36	0.55
3:AA:811:U:C4	12:AL:21:ARG:NH2	2.75	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:AX:32:LEU:O	24:AX:33:HIS:ND1	2.39	0.55
35:BA:1021:A:H2'	35:BA:1022:A:H5'	1.89	0.55
39:BF:42:TRP:CZ2	39:BF:101:PRO:HD3	2.42	0.55
4:CD:33:ARG:NH2	4:CD:74:GLU:O	2.39	0.55
13:CM:106:ASP:O	13:CM:108:VAL:N	2.39	0.55
34:DB:46:VAL:HB	34:DB:47:PRO:HD3	1.89	0.55
37:DD:151:LYS:N	37:DD:178:MET:SD	2.80	0.55
55:DV:526:GLU:O	55:DV:528:GLY:N	2.40	0.55
34:FB:32:GLY:HA3	34:FB:39:ILE:H	1.71	0.55
39:FF:38:ARG:HB3	39:FF:63:ASN:HB2	1.88	0.55
3:GA:1309:G:OP1	29:G2:9:VAL:HG13	2.07	0.55
3:GA:2264:C:C5	3:GA:2265:U:C4	2.95	0.55
21:GU:15:GLY:O	21:GU:17:ASP:N	2.39	0.55
35:HA:976:G:OP2	35:HA:1358:U:O2'	2.25	0.55
46:HM:14:HIS:O	46:HM:18:ALA:N	2.36	0.55
3:AA:277:G:O2'	3:AA:278:A:OP2	2.25	0.55
3:AA:2335:A:C6	3:AA:2337:G:H1'	2.42	0.55
22:AV:80:HIS:HD2	22:AV:83:LYS:N	2.05	0.55
35:BA:158:G:H2'	35:BA:159:G:H5'	1.88	0.55
35:BA:558:G:OP1	60:BA:1842:HOH:O	2.18	0.55
45:BL:34:CYS:HA	45:BL:55:VAL:HA	1.89	0.55
3:CA:1242:U:H2'	3:CA:1243:C:C6	2.42	0.55
4:CD:13:ARG:NH1	11:CK:73:ASP:O	2.40	0.55
7:CG:38:ASP:OD1	7:CG:38:ASP:N	2.39	0.55
35:DA:904:U:O4	60:DA:1758:HOH:O	2.15	0.55
3:EA:784:G:O2'	3:EA:785:G:OP2	2.16	0.55
10:EJ:44:TYR:HB2	17:EQ:63:ARG:HB3	1.88	0.55
3:GA:411:G:OP2	3:GA:2406:A:O2'	2.24	0.55
3:GA:858:G:N2	3:GA:919:U:O4	2.40	0.55
3:GA:871:U:C2	3:GA:907:G:C6	2.95	0.55
3:GA:962:G:H21	3:GA:2250:G:H1	1.53	0.55
3:GA:2800:A:H3'	3:GA:2801:G:C5'	2.37	0.55
25:GY:51:ALA:O	25:GY:55:THR:OG1	2.19	0.55
35:HA:1266:G:O2'	35:HA:1268:G:N7	2.29	0.55
34:HB:147:LEU:O	34:HB:151:LYS:NZ	2.36	0.55
3:AA:299:A:OP1	60:AA:3548:HOH:O	2.18	0.55
3:AA:910:A:N6	3:AA:2277:G:O2'	2.36	0.55
41:BH:93:PRO:HG3	41:BH:125:ILE:HD12	1.89	0.55
3:CA:442:G:O4'	5:CE:41:GLN:NE2	2.40	0.55
3:CA:654:A:H3'	3:CA:654:A:N3	2.22	0.55
16:CP:50:ARG:CG	16:CP:57:ALA:O	2.54	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:CP:63:ILE:HA	16:CP:68:GLY:HA2	1.88	0.55
35:DA:1290:G:OP1	40:DG:35:LYS:NZ	2.40	0.55
43:DJ:57:VAL:HG13	43:DJ:58:ASN:N	2.22	0.55
3:EA:1485:U:H2'	3:EA:1486:U:H6	1.71	0.55
3:EA:2152:G:H2'	3:EA:2153:C:H5'	1.89	0.55
35:FA:111:G:O6	35:FA:330:C:N4	2.40	0.55
38:FE:104:GLY:CA	38:FE:122:ASN:HA	2.37	0.55
47:FN:25:ALA:O	47:FN:28:LYS:HG3	2.07	0.55
1:GB:82:U:H5"	26:GZ:16:LEU:CD1	2.37	0.55
3:GA:1073:A:OP1	3:GA:1074:G:N2	2.39	0.55
3:GA:2793:C:H2'	3:GA:2794:C:C6	2.42	0.55
26:GZ:7:THR:OG1	26:GZ:55:LYS:O	2.23	0.55
35:HA:811:C:N4	35:HA:812:G:O6	2.40	0.55
2:AC:251:THR:HG21	3:AA:1824:G:N3	2.21	0.54
3:AA:1754:A:H4'	16:AP:102:ARG:NH2	2.22	0.54
4:AD:106:LYS:HB3	4:AD:206:ALA:HB3	1.89	0.54
11:AK:43:ILE:CD1	11:AK:52:VAL:HB	2.37	0.54
11:AK:107:LEU:O	11:AK:109:SER:N	2.38	0.54
18:AR:39:LEU:O	18:AR:49:ILE:HG23	2.07	0.54
32:A5:43:LYS:HZ3	32:A5:98:GLU:HB2	1.71	0.54
38:BE:106:ILE:HD11	38:BE:124:LEU:HD22	1.89	0.54
39:BF:53:LYS:O	39:BF:54:LEU:HB3	2.06	0.54
3:CA:742:A:H2'	3:CA:743:A:C8	2.42	0.54
26:CZ:8:GLN:O	26:CZ:10:ARG:N	2.38	0.54
49:DP:21:VAL:HG22	49:DP:34:GLU:O	2.07	0.54
49:DP:43:ALA:HB1	49:DP:46:LYS:HE2	1.88	0.54
3:EA:856:G:H21	23:EW:19:ARG:HH22	1.55	0.54
36:FC:168:TYR:OH	38:FE:55:GLU:OE1	2.22	0.54
3:GA:225:C:N4	3:GA:230:G:H1	2.05	0.54
3:GA:2292:U:N3	3:GA:2293:G:N7	2.55	0.54
12:GL:61:LEU:O	30:G3:12:ARG:NH2	2.39	0.54
37:HD:188:ARG:NH2	37:HD:197:GLU:OE2	2.39	0.54
3:AA:227:A:O2'	3:AA:2407:A:O2'	2.19	0.54
3:AA:265:A:H4'	3:AA:266:G:OP1	2.07	0.54
3:AA:2681:C:OP2	4:AD:114:LYS:NZ	2.33	0.54
32:A5:44:ALA:O	32:A5:49:GLY:N	2.40	0.54
32:A5:64:VAL:O	32:A5:68:PRO:HD2	2.06	0.54
35:BA:135:C:N3	49:BP:1:MET:N	2.43	0.54
35:BA:1452:C:O2'	35:FA:83:C:OP1	2.24	0.54
46:BM:56:LEU:O	46:BM:59:GLU:N	2.38	0.54
3:CA:85:G:O2'	3:CA:103:A:N1	2.35	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CA:443:A:C6	5:CE:40:ARG:HD3	2.42	0.54
3:CA:2006:C:O2'	3:CA:2823:A:N3	2.40	0.54
16:CP:88:ARG:O	16:CP:112:ARG:N	2.39	0.54
34:DB:86:CYS:SG	34:DB:88:GLN:NE2	2.80	0.54
7:EG:104:LEU:HB2	7:EG:112:VAL:HG21	1.89	0.54
20:ET:67:VAL:HA	20:ET:76:ARG:HA	1.88	0.54
34:FB:99:MET:HA	34:FB:106:VAL:HG21	1.88	0.54
34:FB:187:ASP:HB2	34:FB:203:ASP:HB3	1.89	0.54
36:FC:150:LYS:HB3	36:FC:169:ARG:HG2	1.88	0.54
38:FE:136:VAL:O	38:FE:138:ARG:N	2.40	0.54
1:GB:2:G:N2	1:GB:119:A:O3'	2.40	0.54
3:GA:587:C:N3	12:GL:33:ARG:NH2	2.50	0.54
3:GA:659:G:C2'	5:GE:30:GLN:HE22	2.20	0.54
3:GA:942:G:H4'	3:GA:1190:G:H5'	1.88	0.54
4:GD:151:THR:CG2	4:GD:152:PRO:HD3	2.37	0.54
30:G3:51:LYS:HA	30:G3:54:LEU:HD22	1.88	0.54
3:AA:1936:A:N6	3:AA:1963:U:H3	2.05	0.54
35:BA:1181:G:O2'	35:BA:1182:G:N7	2.40	0.54
37:BD:192:SER:OG	37:BD:193:ALA:N	2.40	0.54
55:BV:313:ASP:OD2	55:BV:378:ARG:NH1	2.40	0.54
3:CA:96:C:H4'	25:CY:41:HIS:CE1	2.42	0.54
3:CA:728:G:H4'	2:CC:12:ARG:HD3	1.89	0.54
2:CC:12:ARG:HH11	2:CC:12:ARG:CG	2.20	0.54
20:CT:19:LYS:O	20:CT:23:ALA:N	2.39	0.54
23:EW:19:ARG:NH2	23:EW:22:VAL:HG21	2.22	0.54
40:FG:15:ASP:OD1	40:FG:44:TYR:OH	2.25	0.54
46:FM:3:ARG:CD	46:FM:7:ILE:HD12	2.37	0.54
49:FP:4:ILE:HG13	49:FP:21:VAL:HG12	1.90	0.54
3:GA:445:C:H4'	3:GA:1248:G:O6	2.07	0.54
3:GA:664:G:H4'	3:GA:941:A:OP1	2.07	0.54
3:GA:959:A:C6	3:GA:960:A:C6	2.94	0.54
3:GA:1534:U:O2'	3:GA:1537:G:O6	2.16	0.54
2:GC:68:ARG:NE	2:GC:128:THR:OG1	2.41	0.54
4:GD:186:LEU:HD11	16:GP:3:ILE:HD11	1.90	0.54
44:HK:60:PRO:HB3	44:HK:92:GLY:CA	2.37	0.54
48:HO:45:GLU:HG3	48:HO:46:HIS:N	2.22	0.54
3:AA:1772:A:N1	3:AA:1980:G:C6	2.76	0.54
3:AA:2636:C:HO2'	4:AD:45:TYR:HH	1.53	0.54
25:AY:56:LEU:O	25:AY:58:ASN:N	2.39	0.54
35:BA:619:U:H3	37:BD:131:ASN:HB3	1.72	0.54
40:BG:57:SER:OG	40:BG:58:GLU:N	2.40	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:BV:522:MET:HE1	55:BV:605:PHE:HA	1.89	0.54
3:CA:1567:G:C8	2:CC:82:TYR:CE2	2.96	0.54
3:CA:2800:A:C2	3:CA:2895:G:H1'	2.42	0.54
8:CH:45:GLU:HA	8:CH:48:GLU:HB3	1.88	0.54
14:CN:58:ASP:OD2	14:CN:63:ARG:NH2	2.39	0.54
16:CP:50:ARG:CD	16:CP:51:ASN:N	2.71	0.54
34:DB:49:PHE:HA	34:DB:52:ALA:HB3	1.90	0.54
54:DU:9:ASN:HB2	54:DU:11:PRO:HD2	1.89	0.54
55:DV:526:GLU:OE1	55:DV:526:GLU:N	2.41	0.54
3:EA:1843:C:H5'	2:EC:250:GLN:OE1	2.08	0.54
22:EV:75:GLN:HB2	22:EV:92:VAL:HG23	1.88	0.54
35:FA:429:U:H5'	37:FD:9:LEU:HG	1.89	0.54
35:FA:920:U:H2'	35:FA:921:U:C6	2.43	0.54
34:FB:163:ILE:HG23	34:FB:164:ASP:N	2.23	0.54
34:FB:221:ARG:NH1	34:FB:222:GLU:HB2	2.23	0.54
37:FD:30:THR:HG22	37:FD:31:LYS:H	1.72	0.54
37:FD:161:LEU:HD13	37:FD:164:GLN:HB3	1.89	0.54
3:GA:1938:A:OP2	60:GA:3716:HOH:O	2.19	0.54
12:GL:85:VAL:CG2	12:GL:94:THR:HG22	2.37	0.54
18:GR:77:PHE:HE1	18:GR:79:ARG:HA	1.72	0.54
35:HA:1033:G:C2'	35:HA:1034:G:H5'	2.37	0.54
40:HG:57:SER:OG	40:HG:58:GLU:N	2.41	0.54
46:HM:96:PRO:HD3	46:HM:102:THR:CG2	2.38	0.54
3:AA:2355:G:H4'	23:AW:20:LEU:HD13	1.88	0.54
16:AP:50:ARG:CG	16:AP:57:ALA:O	2.55	0.54
26:AZ:5:LYS:H	26:AZ:5:LYS:HD2	1.72	0.54
28:A1:8:ILE:HD11	28:A1:24:LYS:N	2.21	0.54
32:A5:60:LEU:O	32:A5:64:VAL:HB	2.08	0.54
32:A5:129:LEU:HB3	32:A5:130:PRO:HD2	1.89	0.54
38:BE:96:MET:CE	38:BE:115:LEU:HD11	2.38	0.54
3:CA:546:U:O2'	3:CA:547:A:H4'	2.07	0.54
3:CA:1779:U:H5	3:CA:1784:A:N7	2.06	0.54
35:DA:429:U:OP2	37:DD:13:ARG:NH2	2.40	0.54
32:E5:23:LEU:H	32:E5:87:GLU:HB2	1.73	0.54
35:FA:1021:A:C2'	35:FA:1022:A:H5'	2.38	0.54
45:FL:44:LYS:CB	45:FL:45:PRO:CD	2.86	0.54
55:FV:495:ARG:HD2	55:FV:611:VAL:HB	1.90	0.54
1:GB:29:A:H2'	1:GB:30:C:C6	2.43	0.54
3:GA:975:A:C2	3:GA:990:A:C8	2.95	0.54
3:GA:1000:A:N6	3:GA:1155:A:C8	2.76	0.54
3:GA:2134:A:HO2'	3:GA:2135:A:H8	1.55	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:HG:66:LEU:HA	40:HG:104:ILE:HD11	1.88	0.54
3:AA:163:C:O2'	3:AA:164:C:P	2.65	0.54
3:AA:834:G:C6	3:AA:835:C:C4	2.95	0.54
3:AA:2415:G:H4'	12:AL:66:PHE:HB2	1.90	0.54
3:AA:2698:U:H2'	3:AA:2699:C:H6	1.72	0.54
32:A5:54:VAL:HA	32:A5:84:TYR:O	2.07	0.54
35:BA:135:C:H2'	35:BA:136:C:H5'	1.87	0.54
45:BL:68:GLY:O	45:BL:99:ARG:NH1	2.40	0.54
3:CA:1288:G:C4	3:CA:1327:A:C2	2.96	0.54
3:CA:2211:A:O2'	3:CA:2212:A:OP1	2.23	0.54
35:DA:755:G:OP2	48:DO:65:LYS:NZ	2.39	0.54
3:EA:1936:A:H61	3:EA:1963:U:H3	1.55	0.54
3:EA:2138:G:N2	3:EA:2150:C:N3	2.56	0.54
7:EG:37:ASN:OD1	7:EG:37:ASN:N	2.40	0.54
9:EI:83:ALA:HB1	9:EI:100:ILE:HD11	1.90	0.54
3:GA:42:A:H1'	3:GA:438:G:H22	1.73	0.54
10:GJ:32:LEU:O	10:GJ:36:LEU:HB2	2.07	0.54
17:GQ:105:PHE:O	17:GQ:108:LEU:N	2.40	0.54
28:G1:35:LEU:HD21	28:G1:37:LYS:HD2	1.88	0.54
35:HA:980:C:O2	60:HA:1772:HOH:O	2.16	0.54
35:HA:1129:C:O4'	35:HA:1146:A:N6	2.36	0.54
3:AA:189:G:O6	3:AA:205:G:O2'	2.19	0.54
3:AA:855:G:H1'	23:AW:23:LYS:HE3	1.89	0.54
4:AD:107:VAL:CG2	4:AD:203:VAL:HG23	2.37	0.54
18:AR:49:ILE:HB	18:AR:51:VAL:O	2.08	0.54
19:AS:73:LYS:HB3	19:AS:106:VAL:HB	1.90	0.54
32:A5:58:THR:HB	32:A5:82:ILE:HB	1.89	0.54
32:C5:39:THR:HA	32:C5:42:ARG:HH11	1.72	0.54
35:DA:577:G:OP1	60:DA:1752:HOH:O	2.18	0.54
50:DQ:17:MET:SD	50:DQ:20:SER:OG	2.49	0.54
15:EO:51:ALA:HB3	15:EO:78:VAL:HG13	1.90	0.54
16:EP:63:ILE:HA	16:EP:68:GLY:HA2	1.88	0.54
17:EQ:63:ARG:HH22	17:EQ:96:ASP:N	2.06	0.54
24:EX:39:VAL:O	24:EX:41:SER:N	2.39	0.54
34:FB:57:ASN:HB2	34:FB:219:THR:HG23	1.90	0.54
46:FM:11:ASP:OD1	46:FM:12:HIS:N	2.39	0.54
53:FT:5:LYS:HD3	53:FT:6:SER:N	2.23	0.54
3:GA:1865:U:C4	3:GA:1875:G:C2	2.96	0.54
6:GF:71:LYS:NZ	6:GF:80:GLN:OE1	2.32	0.54
3:AA:2757:A:N1	7:AG:66:THR:HG21	2.21	0.54
13:AM:33:LEU:HD22	13:AM:128:THR:HB	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CA:315:G:H2'	3:CA:316:C:C6	2.43	0.54
3:CA:1080:A:H1'	9:CI:127:SER:HA	1.90	0.54
10:CJ:118:MET:HA	10:CJ:121:LYS:HE2	1.90	0.54
24:CX:4:CYS:SG	24:CX:7:THR:OG1	2.62	0.54
32:C5:71:CYS:CB	32:C5:117:LEU:CD1	2.86	0.54
35:DA:131:A:H2'	35:DA:132:C:C6	2.43	0.54
3:EA:2356:U:H5"	23:EW:16:GLU:HG2	1.90	0.54
7:EG:38:ASP:N	7:EG:38:ASP:OD1	2.41	0.54
26:EZ:40:THR:HG23	26:EZ:43:ILE:H	1.73	0.54
35:FA:875:U:O2'	41:FH:15:ARG:NH1	2.41	0.54
44:FK:35:THR:OG1	44:FK:40:ASN:N	2.41	0.54
3:GA:820:A:H2'	3:GA:821:A:O4'	2.07	0.54
3:GA:2210:U:H4'	3:GA:2211:A:H5'	1.90	0.54
2:GC:38:LYS:NZ	2:GC:57:HIS:O	2.25	0.54
16:GP:63:ILE:HA	16:GP:68:GLY:HA2	1.89	0.54
17:GQ:82:LEU:HA	17:GQ:85:ALA:HB3	1.90	0.54
39:HF:98:GLU:HG3	39:HF:99:ALA:N	2.23	0.54
3:AA:84:A:P	21:AU:5:ARG:NH2	2.81	0.54
3:AA:396:G:OP2	24:AX:9:LYS:NZ	2.40	0.54
18:AR:49:ILE:HG22	18:AR:54:VAL:HG13	1.89	0.54
20:AT:32:LEU:N	20:AT:83:ALA:HB3	2.21	0.54
32:A5:4:ASN:O	32:A5:6:GLN:N	2.41	0.54
35:BA:1182:G:H4'	35:BA:1183:U:C5'	2.37	0.54
3:CA:163:C:O2'	3:CA:164:C:O5'	2.22	0.54
3:CA:250:G:OP2	30:C3:12:ARG:NH1	2.40	0.54
3:CA:545:U:H2'	3:CA:546:U:O3'	2.07	0.54
3:CA:602:A:N3	3:CA:655:A:C2	2.75	0.54
3:CA:1418:G:N1	3:CA:1579:A:OP2	2.34	0.54
3:CA:1789:A:OP2	2:CC:220:ARG:NH1	2.40	0.54
3:CA:2297:A:N1	3:CA:2321:U:H5	2.05	0.54
3:CA:2425:A:H5"	3:CA:2427:C:O4'	2.08	0.54
16:CP:50:ARG:HG2	16:CP:57:ALA:N	2.23	0.54
32:C5:131:THR:O	32:C5:134:GLU:N	2.40	0.54
1:EB:90:C:H5'	13:EM:18:ARG:HG2	1.89	0.54
23:EW:37:VAL:HG13	23:EW:55:ASP:C	2.28	0.54
38:FE:111:MET:CE	38:FE:125:ALA:HB1	2.38	0.54
42:FI:34:SER:HB3	42:FI:37:GLN:CG	2.38	0.54
56:FW:5:UAL:O	56:FW:6:5OH:NP	2.41	0.54
3:GA:42:A:C2	3:GA:43:G:N7	2.76	0.54
2:GC:71:ASP:OD2	2:GC:188:ARG:NH1	2.41	0.54
16:GP:50:ARG:CB	16:GP:57:ALA:H	2.21	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:HA:727:G:H4'	35:HA:741:G:H22	1.72	0.54
35:HA:1053:G:N7	35:HA:1199:U:H3'	2.22	0.54
35:HA:1468:A:C2'	35:HA:1469:C:H5'	2.38	0.54
48:HO:45:GLU:CG	48:HO:46:HIS:N	2.71	0.54
3:AA:443:A:N7	5:AE:40:ARG:HD3	2.21	0.54
3:AA:877:A:C2	3:AA:899:A:C2	2.95	0.54
3:AA:2552:U:O4	60:AA:3711:HOH:O	2.19	0.54
11:AK:70:ARG:HD3	11:AK:76:VAL:HG22	1.90	0.54
34:BB:209:VAL:HG23	34:BB:210:THR:H	1.72	0.54
3:CA:1568:G:OP1	2:CC:62:ARG:NH1	2.40	0.54
12:CL:93:ASN:O	12:CL:95:LEU:N	2.41	0.54
35:DA:277:C:OP1	50:DQ:43:LYS:NZ	2.41	0.54
37:DD:147:GLU:HA	37:DD:150:LYS:HD2	1.90	0.54
43:DJ:32:THR:HG21	43:DJ:86:ALA:CB	2.38	0.54
3:EA:1843:C:O2'	2:EC:253:GLY:O	2.16	0.54
24:EX:57:VAL:O	24:EX:61:LYS:N	2.41	0.54
34:FB:100:LEU:HD23	34:FB:178:LEU:HD23	1.90	0.54
37:FD:34:ILE:O	37:FD:35:GLU:HB3	2.07	0.54
55:FV:190:ALA:N	55:FV:205:GLU:O	2.40	0.54
3:GA:445:C:N4	3:GA:446:G:O6	2.40	0.54
3:GA:816:C:OP1	3:GA:1185:G:O2'	2.26	0.54
3:GA:974:G:O5'	18:GR:78:ARG:NH1	2.41	0.54
3:GA:2266:A:H5'	3:GA:2267:A:C5	2.43	0.54
3:GA:2766:A:C2	3:GA:2767:C:C6	2.96	0.54
26:GZ:17:PRO:HA	26:GZ:20:LYS:HE2	1.90	0.54
4:AD:120:GLY:HA2	4:AD:162:ALA:CB	2.38	0.53
16:AP:4:ILE:HG22	16:AP:5:LYS:H	1.72	0.53
17:AQ:91:ARG:NH1	18:AR:10:LYS:HB3	2.23	0.53
20:AT:50:LEU:C	20:AT:52:GLU:H	2.11	0.53
21:AU:38:ILE:HG22	21:AU:39:ASN:H	1.73	0.53
23:AW:63:ASP:OD1	23:AW:63:ASP:N	2.35	0.53
35:BA:351:G:OP1	53:BT:3:ASN:ND2	2.40	0.53
38:BE:104:GLY:CA	38:BE:122:ASN:HA	2.38	0.53
38:BE:104:GLY:HA3	38:BE:122:ASN:HA	1.90	0.53
45:BL:43:LYS:HG2	45:BL:44:LYS:HG3	1.90	0.53
1:CB:23:G:O6	60:CB:1311:HOH:O	2.18	0.53
3:CA:64:A:H2'	3:CA:65:U:C6	2.43	0.53
3:CA:565:C:H2'	3:CA:566:U:O4'	2.09	0.53
10:CJ:43:GLU:O	10:CJ:45:THR:N	2.41	0.53
13:CM:73:ILE:HG21	13:CM:91:TYR:CZ	2.43	0.53
15:CO:105:ALA:O	15:CO:107:ALA:N	2.40	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DN:4:GLN:OE1	60:DN:203:HOH:O	2.17	0.53
55:DV:188:MET:HE3	55:DV:218:TRP:NE1	2.23	0.53
3:EA:2156:G:H2'	3:EA:2157:G:H21	1.72	0.53
1:EB:23:G:N7	60:EB:1310:HOH:O	2.33	0.53
4:ED:33:ARG:NH2	4:ED:74:GLU:O	2.41	0.53
5:EE:119:ILE:O	5:EE:119:ILE:HG12	2.07	0.53
9:EI:23:VAL:HB	9:EI:27:LEU:HD23	1.90	0.53
47:FN:18:ASP:OD1	47:FN:19:LYS:N	2.41	0.53
3:GA:1019:U:OP1	3:GA:1035:U:O2'	2.17	0.53
3:GA:1095:A:C8	55:HV:631:VAL:N	2.76	0.53
3:GA:2867:G:O2'	3:GA:2868:A:OP2	2.26	0.53
7:GG:104:LEU:HB2	7:GG:112:VAL:HG21	1.89	0.53
34:HB:67:LEU:HD12	34:HB:153:MET:CE	2.37	0.53
43:HJ:56:HIS:CD2	43:HJ:57:VAL:HG23	2.43	0.53
52:HS:36:ARG:NH1	52:HS:52:HIS:O	2.40	0.53
3:AA:1080:A:H1'	9:AI:127:SER:HA	1.91	0.53
3:AA:1187:G:H5"	18:AR:83:TYR:CE2	2.43	0.53
3:AA:1535:A:H4'	3:AA:1536:C:OP2	2.08	0.53
7:AG:84:LYS:HG3	7:AG:132:LEU:H	1.73	0.53
9:AI:98:GLY:HA3	9:AI:137:LEU:HB3	1.90	0.53
12:AL:77:ILE:CD1	12:AL:108:ALA:HB1	2.38	0.53
21:AU:21:ARG:CZ	21:AU:72:PHE:CE2	2.90	0.53
34:BB:14:HIS:ND1	34:BB:14:HIS:O	2.42	0.53
3:CA:1378:A:H4'	3:CA:1379:U:OP1	2.08	0.53
9:CI:87:SER:OG	9:CI:88:GLY:N	2.37	0.53
32:C5:26:VAL:HG11	32:C5:77:VAL:HG11	1.88	0.53
35:DA:31:G:O2'	35:DA:48:C:N4	2.42	0.53
35:DA:202:G:HO2'	35:DA:468:A:H8	1.55	0.53
35:DA:1013:G:N2	35:DA:1015:G:H3'	2.22	0.53
35:DA:1147:C:O2'	42:DI:18:ARG:NH1	2.41	0.53
3:EA:163:C:O2'	3:EA:164:C:P	2.67	0.53
16:EP:50:ARG:HG3	16:EP:57:ALA:O	2.07	0.53
3:GA:2415:G:H4'	12:GL:66:PHE:HB2	1.91	0.53
2:GC:256:THR:OG1	2:GC:256:THR:O	2.25	0.53
5:GE:41:GLN:NE2	5:GE:43:THR:HG21	2.23	0.53
35:HA:1530:G:H2'	35:HA:1531:A:C8	2.44	0.53
36:HC:15:VAL:HG11	36:HC:179:ARG:HA	1.91	0.53
36:HC:83:ASP:HA	36:HC:86:LYS:HG2	1.90	0.53
3:AA:1069:A:C4	3:AA:1073:A:N7	2.77	0.53
9:AI:116:MET:SD	9:AI:124:MET:HE2	2.48	0.53
23:AW:37:VAL:HB	23:AW:38:ARG:HH11	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:857:C:OP2	60:BA:1822:HOH:O	2.18	0.53
36:BC:42:TYR:CE2	36:BC:90:VAL:HG21	2.43	0.53
3:CA:528:A:C2	3:CA:2043:C:H4'	2.44	0.53
3:CA:923:G:N3	23:CW:23:LYS:HE2	2.22	0.53
3:CA:947:A:HO2'	3:CA:984:A:H2	1.55	0.53
3:CA:2588:G:OP2	60:CA:3540:HOH:O	2.19	0.53
35:DA:564:C:H5'	50:DQ:34:TYR:CE1	2.43	0.53
37:DD:197:GLU:O	37:DD:200:ILE:HG22	2.09	0.53
3:EA:322:A:H5'	3:EA:340:A:H1'	1.90	0.53
6:EF:110:ILE:O	6:EF:112:ASP:N	2.40	0.53
12:EL:111:ILE:HD12	12:EL:111:ILE:N	2.24	0.53
23:EW:17:ALA:HB1	23:EW:36:ILE:HA	1.89	0.53
37:FD:147:GLU:HA	37:FD:150:LYS:HB2	1.91	0.53
46:FM:20:THR:HA	46:FM:25:VAL:HG23	1.91	0.53
1:GB:31:C:H4'	6:GF:25:MET:SD	2.48	0.53
3:GA:2207:C:H2'	3:GA:2208:C:C6	2.44	0.53
20:GT:19:LYS:O	20:GT:23:ALA:N	2.40	0.53
35:HA:429:U:P	37:HD:13:ARG:NH2	2.80	0.53
37:HD:13:ARG:NH2	37:HD:32:CYS:O	2.40	0.53
45:HL:68:GLY:O	45:HL:99:ARG:NH1	2.36	0.53
45:HL:114:ARG:HB3	45:HL:119:VAL:HB	1.89	0.53
51:HR:41:PRO:HG3	51:HR:43:ARG:CZ	2.38	0.53
55:HV:142:ASN:OD1	55:HV:143:LYS:N	2.42	0.53
3:AA:299:A:OP2	60:AA:3546:HOH:O	2.18	0.53
3:AA:954:G:OP2	13:AM:16:ARG:NH2	2.42	0.53
35:BA:684:U:O2'	44:BK:40:ASN:O	2.26	0.53
37:BD:165:ARG:O	37:BD:167:LYS:N	2.40	0.53
40:BG:15:ASP:OD1	40:BG:44:TYR:OH	2.22	0.53
45:BL:110:ARG:NH1	45:BL:112:GLN:O	2.41	0.53
55:BV:382:ILE:HD12	55:BV:382:ILE:O	2.09	0.53
8:CH:13:GLY:HA3	35:HA:1294:G:H4'	1.88	0.53
14:CN:92:GLY:HA2	14:CN:94:TYR:CE1	2.43	0.53
17:CQ:84:LYS:O	17:CQ:86:SER:N	2.41	0.53
35:DA:71:A:N1	35:DA:99:C:O2'	2.40	0.53
46:DM:54:ASP:HB2	46:DM:57:ARG:HB3	1.89	0.53
3:EA:942:G:OP1	60:EA:3783:HOH:O	2.17	0.53
20:ET:54:GLU:HG3	20:ET:88:LYS:HB2	1.91	0.53
35:FA:207:C:O2	35:FA:212:G:N2	2.41	0.53
37:FD:125:VAL:O	37:FD:127:GLY:N	2.40	0.53
40:FG:4:ARG:HG3	40:FG:5:ARG:N	2.23	0.53
45:FL:74:LEU:HD11	45:FL:80:ILE:HG21	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:GA:654:A:N3	3:GA:654:A:H5'	2.24	0.53
2:GC:16:VAL:N	2:GC:203:VAL:HG12	2.23	0.53
10:GJ:39:LYS:HA	10:GJ:43:GLU:HB2	1.91	0.53
23:GW:29:SER:OG	23:GW:30:VAL:N	2.40	0.53
24:GX:70:LEU:O	24:GX:74:GLY:N	2.41	0.53
3:AA:2016:U:H1'	27:A0:2:VAL:HG11	1.89	0.53
11:CK:19:VAL:HG21	11:CK:41:ILE:HD13	1.91	0.53
13:CM:54:THR:O	13:CM:56:ALA:N	2.39	0.53
32:C5:71:CYS:HA	32:C5:117:LEU:CD1	2.38	0.53
35:DA:1004:A:H2'	35:DA:1005:A:O4'	2.09	0.53
35:DA:1309:G:C6	35:DA:1329:A:C6	2.96	0.53
37:DD:32:CYS:SG	37:DD:33:LYS:N	2.81	0.53
16:EP:50:ARG:HB3	16:EP:57:ALA:N	2.20	0.53
23:EW:55:ASP:O	23:EW:57:THR:N	2.41	0.53
32:E5:81:LEU:HD23	32:E5:82:ILE:N	2.24	0.53
36:FC:6:HIS:ND1	47:FN:89:MET:HB3	2.23	0.53
1:GB:48:U:OP1	15:GO:98:GLN:N	2.40	0.53
3:GA:812:C:H1'	3:GA:1250:G:C2	2.44	0.53
3:GA:2199:A:C4	3:GA:2225:A:C2	2.96	0.53
6:GF:1:ALA:HB1	6:GF:97:GLU:HG2	1.90	0.53
14:GN:29:VAL:HG11	14:GN:75:ILE:CG2	2.39	0.53
26:GZ:17:PRO:HA	26:GZ:20:LYS:CE	2.38	0.53
35:HA:324:G:OP2	60:HA:1838:HOH:O	2.18	0.53
35:HA:1239:A:H5"	40:HG:119:ARG:HH12	1.74	0.53
38:HE:154:ALA:O	38:HE:158:GLY:N	2.41	0.53
3:AA:674:G:H1'	5:AE:69:ARG:HE	1.72	0.53
3:AA:2547:A:H2'	3:AA:2548:U:C6	2.43	0.53
6:AF:103:ILE:HG23	6:AF:175:PRO:HD3	1.90	0.53
23:AW:13:ARG:HG2	23:AW:14:ASP:H	1.74	0.53
47:BN:20:TYR:O	47:BN:24:ARG:N	2.42	0.53
3:CA:79:C:O2'	3:CA:346:A:N3	2.33	0.53
3:CA:2037:A:N6	3:CA:2038:G:O6	2.42	0.53
3:CA:2336:A:N6	23:CW:40:ARG:HB3	2.23	0.53
2:CC:16:VAL:N	2:CC:203:VAL:HG12	2.23	0.53
7:CG:8:VAL:HG22	7:CG:9:VAL:H	1.73	0.53
16:CP:4:ILE:HG22	16:CP:5:LYS:H	1.72	0.53
40:DG:67:GLU:O	44:HK:14:LYS:NZ	2.32	0.53
43:DJ:80:THR:HB	43:DJ:83:THR:HB	1.90	0.53
3:EA:1248:G:C5	5:EE:46:GLN:NE2	2.76	0.53
3:EA:1248:G:N7	5:EE:46:GLN:NE2	2.57	0.53
6:EF:124:ARG:O	6:EF:126:ASN:ND2	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:EN:44:LEU:HD23	14:EN:113:ILE:HD13	1.89	0.53
35:FA:723:U:O2'	35:FA:724:G:OP1	2.22	0.53
35:FA:1452:C:H4'	35:FA:1453:G:O5'	2.08	0.53
39:FF:18:VAL:HG21	39:FF:58:HIS:CD2	2.44	0.53
42:FI:40:GLY:HA2	42:FI:45:ARG:HB3	1.91	0.53
45:FL:40:THR:OG1	45:FL:41:THR:N	2.39	0.53
45:FL:44:LYS:HB3	45:FL:45:PRO:CD	2.35	0.53
3:GA:923:G:N3	23:GW:23:LYS:HD2	2.24	0.53
23:GW:37:VAL:HG13	23:GW:56:HIS:HB2	1.90	0.53
23:GW:41:GLY:O	23:GW:43:LYS:N	2.34	0.53
35:HA:936:C:OP1	60:HA:1770:HOH:O	2.18	0.53
39:HF:43:GLY:HA2	39:HF:58:HIS:CE1	2.42	0.53
45:HL:44:LYS:HB2	45:HL:45:PRO:HD3	1.89	0.53
3:AA:565:C:O3'	60:AA:3328:HOH:O	2.18	0.53
3:AA:1397:U:OP2	3:AA:1398:C:N4	2.34	0.53
3:AA:1715:G:N2	3:AA:1744:A:OP2	2.36	0.53
12:AL:103:ILE:N	60:AL:203:HOH:O	2.30	0.53
32:A5:36:ASP:O	32:A5:39:THR:OG1	2.26	0.53
37:BD:25:VAL:HG12	37:BD:26:ARG:N	2.24	0.53
43:BJ:71:LEU:O	43:BJ:72:ARG:NH1	2.39	0.53
54:BU:40:LYS:N	54:BU:41:PRO:CD	2.72	0.53
55:BV:79:TYR:OH	55:BV:284:ASP:OD1	2.16	0.53
3:CA:2102:G:N2	3:CA:2188:U:H3	2.07	0.53
5:CE:118:LEU:HD23	5:CE:186:VAL:HG13	1.91	0.53
14:CN:12:ARG:CZ	14:CN:20:MET:HE1	2.38	0.53
35:DA:1031:C:HO2'	35:DA:1032:G:N2	2.06	0.53
47:DN:21:PHE:HA	47:DN:25:ALA:HB3	1.90	0.53
3:EA:528:A:C2	3:EA:2042:A:H2'	2.42	0.53
3:EA:818:G:N7	3:EA:1187:G:C6	2.76	0.53
3:EA:1737:G:H5"	3:EA:1738:G:OP2	2.08	0.53
3:EA:2575:C:OP2	60:EA:3707:HOH:O	2.18	0.53
1:EB:100:G:OP2	60:EB:1314:HOH:O	2.18	0.53
24:EX:63:ILE:HG22	24:EX:67:LEU:HD23	1.91	0.53
35:FA:260:G:N2	35:FA:265:G:N7	2.57	0.53
35:FA:890:G:O2'	35:FA:906:A:N6	2.41	0.53
3:GA:1378:A:H4'	3:GA:1379:U:OP1	2.08	0.53
19:GS:88:ARG:HH21	19:GS:88:ARG:HG3	1.73	0.53
3:AA:2526:G:N3	31:A4:1:MET:N	2.57	0.53
35:BA:677:U:H3	35:BA:713:G:H22	1.56	0.53
36:BC:77:ILE:HA	36:BC:84:VAL:HG23	1.91	0.53
15:CO:78:VAL:O	15:CO:82:ALA:N	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:690:G:O6	44:DK:53:ARG:NH2	2.41	0.53
35:DA:834:U:C2	35:DA:835:U:C5	2.97	0.53
35:DA:1315:U:O2'	35:DA:1360:A:N3	2.34	0.53
55:DV:75:MET:SD	55:DV:193:TRP:HH2	2.32	0.53
3:EA:315:G:H2'	3:EA:316:C:C6	2.44	0.53
3:EA:1913:A:O2'	56:FW:4:SER:N	2.36	0.53
3:EA:2880:C:O2'	14:EN:92:GLY:O	2.22	0.53
35:FA:243:A:C2	35:FA:246:A:C8	2.97	0.53
35:FA:484:G:N7	35:FA:486:U:H1'	2.24	0.53
3:GA:947:A:C2	3:GA:948:C:C2	2.96	0.53
3:GA:2030:A:C2	3:GA:2499:C:H5"	2.44	0.53
7:GG:104:LEU:HD12	7:GG:112:VAL:HG21	1.91	0.53
9:GI:70:THR:OG1	9:GI:71:LYS:N	2.41	0.53
34:HB:94:ARG:NH1	34:HB:96:LEU:HA	2.24	0.53
40:HG:72:THR:O	40:HG:91:VAL:HG12	2.09	0.53
50:HQ:76:VAL:HG23	50:HQ:77:ARG:H	1.74	0.53
52:HS:34:TRP:HA	52:HS:51:VAL:HG13	1.91	0.53
3:AA:1069:A:C5	3:AA:1073:A:N7	2.77	0.53
3:AA:1263:U:OP1	27:A0:12:ARG:NH1	2.41	0.53
16:AP:50:ARG:CD	16:AP:51:ASN:N	2.72	0.53
17:AQ:81:GLY:HA2	17:AQ:116:LEU:CD1	2.38	0.53
32:A5:129:LEU:C	32:A5:131:THR:H	2.10	0.53
42:BI:91:ASP:N	42:BI:91:ASP:OD1	2.40	0.53
46:BM:107:ARG:O	46:BM:111:GLY:N	2.41	0.53
3:CA:2016:U:H1'	27:C0:2:VAL:HG11	1.91	0.53
6:CF:118:ALA:O	6:CF:166:ARG:NH1	2.40	0.53
3:EA:833:A:OP2	12:EL:39:LYS:NZ	2.42	0.53
1:EB:41:G:N7	6:EF:68:LYS:NZ	2.56	0.53
1:EB:94:A:OP2	60:EB:1312:HOH:O	2.19	0.53
6:EF:128:SER:HA	6:EF:154:THR:HA	1.91	0.53
35:FA:297:G:N2	35:FA:300:A:OP2	2.41	0.53
3:GA:1131:G:OP1	10:GJ:82:GLY:HA2	2.09	0.53
3:GA:2639:A:C2	3:GA:2778:A:C8	2.97	0.53
23:GW:18:LYS:CA	23:GW:36:ILE:HG13	2.39	0.53
35:HA:1401:G:H2'	35:HA:1402:C:O4'	2.08	0.53
3:AA:1001:A:OP2	60:AA:3725:HOH:O	2.18	0.53
15:AO:31:THR:HG22	15:AO:34:HIS:H	1.74	0.53
35:BA:958:A:N6	52:BS:77:THR:O	2.41	0.53
35:BA:1242:G:N3	60:BA:1793:HOH:O	2.34	0.53
35:BA:1279:G:N3	35:BA:1279:G:H2'	2.23	0.53
38:BE:150:PRO:HA	38:BE:153:VAL:HG13	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CB:90:C:H6	1:CB:90:C:H5"	1.74	0.53
3:CA:443:A:C5	5:CE:40:ARG:HD3	2.43	0.53
3:CA:1012:U:OP2	17:CQ:69:ARG:NH1	2.41	0.53
3:CA:2757:A:N1	7:CG:66:THR:HG21	2.23	0.53
4:CD:62:LYS:HB2	4:CD:63:PRO:HD3	1.90	0.53
11:CK:98:ARG:HA	11:CK:118:LEU:CD2	2.39	0.53
35:DA:98:A:H2'	35:DA:99:C:C6	2.44	0.53
35:DA:757:U:O2'	35:DA:879:C:O2	2.23	0.53
53:DT:44:LYS:CB	53:DT:87:ALA:HB2	2.39	0.53
3:EA:1153:C:N4	3:EA:1154:G:C6	2.76	0.53
3:EA:1536:C:H1'	3:EA:1537:G:N2	2.24	0.53
6:EF:125:GLY:O	6:EF:157:THR:OG1	2.20	0.53
7:EG:151:ARG:HH11	7:EG:151:ARG:HG2	1.74	0.53
14:EN:98:LEU:HB3	27:E0:42:ILE:CD1	2.38	0.53
35:FA:91:U:H2'	35:FA:92:U:C6	2.44	0.53
34:FB:53:LEU:HD21	34:FB:212:TYR:HE1	1.73	0.53
3:GA:225:C:N4	3:GA:231:A:C2	2.76	0.53
3:GA:671:C:H41	12:GL:41:ARG:H	1.55	0.53
3:GA:971:G:H2'	3:GA:972:A:O4'	2.09	0.53
3:GA:1172:C:C4	3:GA:1173:U:H1'	2.44	0.53
3:GA:2313:C:H5"	6:GF:87:LYS:HD3	1.89	0.53
6:GF:110:ILE:HG12	6:GF:136:ILE:HG21	1.91	0.53
35:HA:720:C:OP1	51:HR:43:ARG:NH1	2.39	0.53
38:HE:122:ASN:N	38:HE:122:ASN:OD1	2.41	0.53
44:HK:107:ILE:HD13	54:HU:14:VAL:HA	1.91	0.53
55:HV:230:SER:OG	55:HV:232:GLU:OE1	2.27	0.53
55:HV:660:LEU:O	55:HV:662:GLU:N	2.38	0.53
3:AA:273:G:N2	3:AA:365:U:C2	2.77	0.52
3:AA:1394:U:H4'	3:AA:1603:A:H4'	1.92	0.52
23:AW:37:VAL:HG13	23:AW:55:ASP:C	2.29	0.52
35:BA:951:G:OP2	46:BM:101:ARG:NH2	2.42	0.52
41:BH:106:THR:HG21	41:BH:121:LEU:HD22	1.92	0.52
3:CA:271:G:H4'	3:CA:272:A:OP1	2.08	0.52
4:CD:151:THR:CG2	4:CD:152:PRO:HD3	2.39	0.52
9:CI:23:VAL:HB	9:CI:27:LEU:HB2	1.91	0.52
10:CJ:111:LYS:N	60:CJ:201:HOH:O	2.39	0.52
23:CW:39:GLN:CG	23:CW:41:GLY:O	2.57	0.52
32:C5:43:LYS:NZ	32:C5:98:GLU:OE1	2.38	0.52
35:DA:213:G:C8	35:DA:214:C:C5	2.97	0.52
45:DL:98:VAL:HG13	45:DL:101:ALA:HB3	1.91	0.52
3:EA:994:C:H3'	17:EQ:53:LYS:HE2	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:EA:1913:A:N7	35:FA:1494:G:H4'	2.24	0.52
35:FA:211:G:C2	35:FA:212:G:H1'	2.44	0.52
35:FA:1021:A:H2'	35:FA:1022:A:H5'	1.90	0.52
36:FC:17:PRO:O	36:FC:18:TRP:HB2	2.09	0.52
50:FQ:14:SER:HB3	50:FQ:22:VAL:CG1	2.39	0.52
3:GA:1668:A:O2'	3:GA:1674:G:N7	2.32	0.52
3:GA:1913:A:N7	55:HV:507:LYS:NZ	2.56	0.52
10:GJ:74:TYR:HB2	10:GJ:87:ALA:O	2.10	0.52
23:GW:37:VAL:HG12	23:GW:38:ARG:H	1.74	0.52
35:HA:717:U:O2'	35:HA:734:G:O4'	2.26	0.52
35:HA:1206:G:H2'	35:HA:1207:G:O4'	2.09	0.52
47:HN:54:ASP:OD1	47:HN:59:ARG:NH1	2.41	0.52
3:AA:2092:U:H4'	3:AA:2093:G:O5'	2.09	0.52
3:AA:2297:A:N1	3:AA:2321:U:H5	2.07	0.52
10:AJ:39:LYS:HA	10:AJ:43:GLU:HG3	1.91	0.52
14:AN:73:ASN:HA	14:AN:76:VAL:CG1	2.39	0.52
35:BA:197:A:N1	35:BA:220:G:O2'	2.35	0.52
44:BK:21:ALA:HB2	44:BK:82:LEU:CD1	2.40	0.52
51:BR:32:TYR:CG	51:BR:55:LEU:HD21	2.44	0.52
3:CA:1107:G:OP1	32:C5:59:LEU:N	2.42	0.52
7:CG:84:LYS:HG2	7:CG:85:LYS:H	1.74	0.52
14:CN:73:ASN:HA	14:CN:76:VAL:CG1	2.39	0.52
20:CT:54:GLU:OE1	20:CT:54:GLU:N	2.43	0.52
35:DA:243:A:C5	35:DA:245:U:C4	2.97	0.52
47:DN:26:GLU:HG2	47:DN:27:LEU:HD12	1.91	0.52
55:DV:358:GLU:OE1	55:DV:389:LYS:N	2.40	0.52
2:EC:14:HIS:O	2:EC:203:VAL:HG11	2.09	0.52
5:EE:149:ILE:O	5:EE:188:MET:HA	2.10	0.52
32:E5:117:LEU:HD23	32:E5:120:ALA:HA	1.83	0.52
35:FA:1085:U:OP1	60:FA:1862:HOH:O	2.19	0.52
35:FA:1279:G:H2'	35:FA:1279:G:N3	2.24	0.52
3:GA:666:A:H4'	12:GL:48:ARG:NE	2.24	0.52
3:GA:1130:U:C2	3:GA:2025:C:H5"	2.44	0.52
3:GA:2316:G:O2'	6:GF:124:ARG:NH2	2.42	0.52
3:GA:2444:G:OP1	5:GE:62:GLN:NE2	2.37	0.52
35:HA:1314:C:H2'	35:HA:1315:U:C6	2.44	0.52
39:HF:38:ARG:HB3	39:HF:63:ASN:HB2	1.91	0.52
42:HI:129:LYS:HG3	42:HI:130:ARG:H	1.75	0.52
3:AA:384:A:H2'	3:AA:385:C:H5'	1.90	0.52
3:AA:1203:U:O2'	12:AL:4:ASN:OD1	2.28	0.52
3:AA:1779:U:H5	3:AA:1784:A:N7	2.06	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AA:2016:U:H1'	27:A0:2:VAL:CG1	2.40	0.52
26:AZ:6:ILE:O	26:AZ:34:THR:HA	2.10	0.52
28:A1:33:LEU:N	28:A1:51:ALA:HB3	2.25	0.52
32:A5:81:LEU:HD23	32:A5:82:ILE:N	2.24	0.52
39:BF:68:GLN:HA	39:BF:71:ILE:HG22	1.91	0.52
41:BH:12:THR:HG22	41:BH:15:ARG:HH22	1.73	0.52
41:BH:125:ILE:HD11	41:BH:128:TYR:CE1	2.44	0.52
3:CA:1050:A:C2	3:CA:2751:G:C4	2.98	0.52
3:CA:1262:A:OP2	19:CS:99:ARG:NH2	2.42	0.52
3:CA:1450:G:C6	3:CA:1451:C:N4	2.78	0.52
25:CY:31:GLN:HG2	25:CY:37:LEU:H	1.73	0.52
35:DA:1007:U:C2'	35:DA:1008:U:H5'	2.39	0.52
36:DC:47:LEU:HB3	36:DC:50:ALA:HB3	1.89	0.52
40:DG:135:VAL:O	40:DG:138:ARG:N	2.42	0.52
3:EA:1332:G:OP1	60:EA:3754:HOH:O	2.19	0.52
6:EF:69:ALA:N	6:EF:82:TYR:O	2.39	0.52
9:EI:101:SER:OG	9:EI:102:ARG:N	2.42	0.52
32:E5:17:GLU:HA	32:E5:88:HIS:CE1	2.44	0.52
35:FA:303:A:C5	35:FA:304:U:C5	2.97	0.52
34:FB:20:ARG:HA	34:FB:20:ARG:NH1	2.24	0.52
42:FI:36:GLU:HA	42:FI:40:GLY:CA	2.39	0.52
44:FK:67:ALA:O	44:FK:71:ALA:N	2.41	0.52
55:FV:193:TRP:HB2	55:FV:273:LYS:HD3	1.91	0.52
3:GA:228:C:H5"	3:GA:229:C:C6	2.45	0.52
3:GA:1130:U:N3	3:GA:2025:C:H5"	2.25	0.52
35:HA:958:A:N1	52:HS:54:GLY:HA3	2.23	0.52
35:HA:1095:U:OP2	60:HA:1857:HOH:O	2.19	0.52
34:HB:71:THR:HG22	34:HB:72:LYS:H	1.73	0.52
45:HL:77:HIS:NE2	55:HV:428:GLN:OE1	2.42	0.52
55:HV:625:GLU:HA	55:HV:628:THR:HG23	1.91	0.52
3:AA:1288:G:C4	3:AA:1327:A:C2	2.98	0.52
3:AA:2134:A:HO2'	3:AA:2135:A:H8	1.55	0.52
10:AJ:32:LEU:HD22	10:AJ:54:ILE:HD12	1.90	0.52
11:AK:10:VAL:HG11	11:AK:16:ALA:HB3	1.90	0.52
21:AU:35:VAL:HB	21:AU:38:ILE:HG21	1.90	0.52
9:CI:56:VAL:HA	9:CI:71:LYS:HZ1	1.74	0.52
26:CZ:15:ARG:HH11	26:CZ:15:ARG:CG	2.22	0.52
35:DA:462:G:N2	35:DA:470:C:N3	2.53	0.52
43:DJ:53:ILE:HG13	47:DN:85:ARG:NE	2.23	0.52
3:EA:483:A:O2'	21:EU:56:GLY:HA2	2.10	0.52
5:EE:15:SER:N	5:EE:197:GLU:OE2	2.42	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:EQ:84:LYS:O	17:EQ:86:SER:N	2.43	0.52
34:FB:94:ARG:HG3	34:FB:96:LEU:HD23	1.91	0.52
45:FL:56:ARG:NH1	45:FL:62:GLU:OE1	2.43	0.52
3:GA:251:A:C5	3:GA:252:G:H1'	2.45	0.52
3:GA:2536:G:C6	3:GA:2537:U:C4	2.97	0.52
3:GA:2574:G:OP1	60:GA:3700:HOH:O	2.19	0.52
13:GM:2:LEU:HD23	13:GM:69:PRO:HD3	1.91	0.52
35:HA:776:G:N2	35:HA:802:A:OP2	2.42	0.52
37:HD:107:PHE:CD1	37:HD:145:ILE:HD11	2.45	0.52
39:HF:61:LEU:HD21	51:HR:24:LYS:HZ3	1.74	0.52
51:HR:63:ARG:HB3	51:HR:70:TYR:CZ	2.44	0.52
10:AJ:55:ILE:HD11	10:AJ:130:HIS:CG	2.44	0.52
20:AT:89:GLU:O	20:AT:91:GLN:N	2.41	0.52
23:AW:46:ALA:HB3	23:AW:80:SER:HB3	1.91	0.52
31:A4:7:VAL:O	31:A4:35:GLN:NE2	2.42	0.52
32:A5:118:ILE:HB	32:A5:119:PRO:CD	2.40	0.52
44:BK:125:LYS:O	54:BU:34:ARG:NE	2.41	0.52
47:BN:54:ASP:OD1	47:BN:59:ARG:NH1	2.43	0.52
3:CA:1060:U:H3	3:CA:1088:A:H2	1.56	0.52
3:CA:2615:U:C2	27:C0:3:GLN:HA	2.44	0.52
15:CO:111:ARG:HG2	15:CO:117:PHE:CZ	2.45	0.52
35:DA:293:G:C6	35:DA:294:U:C4	2.98	0.52
34:DB:209:VAL:HG23	34:DB:210:THR:H	1.74	0.52
37:DD:188:ARG:NH1	37:DD:191:LEU:O	2.43	0.52
43:DJ:15:HIS:HA	43:DJ:18:ILE:HG22	1.92	0.52
55:DV:497:LYS:HG2	55:DV:523:TYR:HB2	1.91	0.52
2:EC:245:THR:O	2:EC:247:TRP:N	2.43	0.52
16:EP:50:ARG:CG	16:EP:57:ALA:O	2.58	0.52
3:GA:1061:U:H1'	3:GA:1070:A:O4'	2.09	0.52
5:GE:146:VAL:HA	5:GE:185:LYS:O	2.10	0.52
10:GJ:80:HIS:O	10:GJ:82:GLY:N	2.43	0.52
24:GX:58:ILE:HG23	24:GX:63:ILE:HA	1.91	0.52
35:HA:727:G:N2	35:HA:730:G:OP2	2.36	0.52
35:HA:1087:G:H2'	35:HA:1088:G:H8	1.75	0.52
20:AT:44:LYS:HG3	20:AT:55:VAL:HG11	1.90	0.52
34:BB:86:CYS:HB2	34:BB:88:GLN:NE2	2.25	0.52
35:BA:81:A:H2'	35:BA:82:G:H5"	1.91	0.52
38:BE:96:MET:HE2	38:BE:115:LEU:HD11	1.91	0.52
51:BR:37:GLY:O	51:BR:63:ARG:NH2	2.40	0.52
1:CB:39:A:O2'	1:CB:46:A:N1	2.34	0.52
3:CA:250:G:C6	3:CA:251:A:C6	2.97	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CA:973:A:O4'	3:CA:1188:U:C6	2.63	0.52
3:CA:2533:U:OP1	3:CA:2665:A:O2'	2.23	0.52
12:CL:81:ASP:O	12:CL:83:ALA:N	2.39	0.52
14:CN:118:ARG:O	14:CN:120:GLU:N	2.43	0.52
23:CW:63:ASP:N	23:CW:63:ASP:OD1	2.41	0.52
46:DM:4:ILE:O	46:DM:6:GLY:N	2.39	0.52
3:EA:630:G:N2	3:EA:633:A:OP2	2.42	0.52
13:EM:47:GLU:OE2	13:EM:51:ARG:NH2	2.42	0.52
14:EN:117:ASP:OD1	14:EN:118:ARG:N	2.41	0.52
16:EP:33:GLU:HB3	16:EP:36:LYS:HG2	1.92	0.52
17:EQ:91:ARG:HH21	17:EQ:93:ILE:HG21	1.74	0.52
3:GA:585:G:OP2	17:GQ:5:ARG:NH2	2.42	0.52
3:GA:659:G:H2'	5:GE:30:GLN:HE22	1.75	0.52
3:GA:674:G:H1'	5:GE:69:ARG:HD2	1.92	0.52
3:GA:863:A:H2'	3:GA:864:G:C8	2.44	0.52
3:GA:1063:G:C2	3:GA:1064:C:H1'	2.44	0.52
3:GA:1266:G:OP2	27:G0:16:ARG:NE	2.42	0.52
19:GS:54:ALA:HB1	19:GS:107:VAL:HG12	1.91	0.52
23:GW:72:GLY:N	23:GW:73:PRO:CD	2.73	0.52
24:GX:63:ILE:O	24:GX:67:LEU:HD13	2.09	0.52
35:HA:452:A:H62	35:HA:480:U:H3	1.58	0.52
35:HA:687:A:N3	35:HA:688:G:H1'	2.25	0.52
35:HA:730:G:O2'	35:HA:814:A:N6	2.43	0.52
35:HA:1391:U:H2'	35:HA:1392:G:C8	2.45	0.52
7:AG:83:THR:HA	7:AG:84:LYS:CE	2.39	0.52
11:AK:80:ASP:HB2	16:AP:67:GLU:HG3	1.90	0.52
20:AT:50:LEU:H	20:AT:50:LEU:HD12	1.74	0.52
20:AT:69:ARG:CG	20:AT:70:HIS:H	2.23	0.52
3:CA:79:C:C4	3:CA:80:G:N7	2.78	0.52
3:CA:1805:A:N3	2:CC:49:THR:OG1	2.42	0.52
10:CJ:16:TYR:HB3	10:CJ:140:LEU:HD12	1.90	0.52
23:CW:54:ARG:HG3	23:CW:55:ASP:N	2.23	0.52
35:DA:204:G:H3'	35:DA:205:A:C5'	2.39	0.52
35:DA:1317:C:OP2	47:DN:28:LYS:NZ	2.43	0.52
35:DA:1331:G:O2'	35:DA:1332:A:OP2	2.26	0.52
34:DB:166:ASP:OD1	34:DB:167:HIS:N	2.43	0.52
55:DV:131:ASN:OD1	55:DV:137:ARG:NH1	2.38	0.52
3:EA:1421:G:C2	3:EA:1422:G:C8	2.97	0.52
3:EA:2262:U:OP1	3:EA:2387:U:O2'	2.16	0.52
3:EA:2423:U:O2'	3:EA:2424:C:OP2	2.26	0.52
35:FA:33:A:H2'	35:FA:34:C:C6	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:FB:166:ASP:OD1	34:FB:167:HIS:N	2.42	0.52
47:FN:42:TRP:CD1	47:FN:45:VAL:HG13	2.45	0.52
3:GA:571:U:C4	3:GA:575:A:C5	2.97	0.52
3:GA:640:C:H2'	3:GA:641:U:C6	2.45	0.52
3:GA:996:A:C8	18:GR:10:LYS:HE2	2.45	0.52
3:GA:1022:G:N7	3:GA:1140:C:N4	2.57	0.52
3:GA:2489:U:O2'	3:GA:2518:A:N6	2.42	0.52
3:GA:2776:A:C2	3:GA:2778:A:C4	2.98	0.52
10:GJ:81:ILE:HG13	10:GJ:82:GLY:N	2.24	0.52
13:GM:69:PRO:HB3	13:GM:92:TRP:HB3	1.92	0.52
23:GW:51:GLY:HA3	23:GW:59:PHE:CE1	2.44	0.52
35:HA:82:G:H22	35:HA:89:U:H4'	1.75	0.52
35:HA:1166:G:C6	35:HA:1168:U:H5"	2.44	0.52
35:HA:1304:G:O2'	35:HA:1333:A:N6	2.42	0.52
35:HA:1512:U:H2'	35:HA:1513:A:C8	2.45	0.52
34:HB:185:ILE:HD11	34:HB:212:TYR:CD2	2.45	0.52
50:HQ:50:ASN:O	50:HQ:52:GLU:N	2.43	0.52
53:HT:69:LYS:HB2	53:HT:69:LYS:NZ	2.25	0.52
55:HV:248:ILE:O	55:HV:251:ALA:N	2.42	0.52
3:AA:2211:A:O2'	3:AA:2212:A:OP1	2.25	0.52
3:AA:2425:A:H5"	3:AA:2427:C:O4'	2.09	0.52
9:AI:87:SER:OG	9:AI:88:GLY:N	2.43	0.52
13:AM:8:LYS:HE3	13:AM:9:PHE:CE2	2.45	0.52
21:AU:82:VAL:HG12	21:AU:83:GLY:N	2.25	0.52
35:BA:815:A:N7	35:BA:1509:C:O2'	2.37	0.52
54:BU:39:GLU:OE1	54:BU:42:THR:OG1	2.26	0.52
55:BV:104:ARG:NH2	55:BV:407:GLU:HB3	2.25	0.52
3:CA:1266:G:N2	3:CA:2012:G:H2'	2.24	0.52
3:CA:2680:U:H5'	4:CD:194:PRO:HA	1.92	0.52
4:CD:71:ALA:O	4:CD:73:VAL:N	2.41	0.52
37:DD:124:MET:HG3	37:DD:146:ARG:HG2	1.92	0.52
3:EA:819:A:C4	3:EA:1189:A:C2	2.98	0.52
3:EA:946:C:OP2	60:EA:3347:HOH:O	2.19	0.52
3:EA:1277:G:C5'	14:EN:20:MET:HE2	2.39	0.52
9:EI:11:GLN:N	9:EI:11:GLN:OE1	2.43	0.52
9:EI:120:ASP:HB3	9:EI:123:ALA:HB2	1.92	0.52
1:GB:20:G:O6	60:GB:1302:HOH:O	2.18	0.52
3:GA:414:C:H1'	3:GA:1864:U:H1'	1.91	0.52
3:GA:2267:A:OP2	60:GA:3506:HOH:O	2.19	0.52
3:GA:2513:A:O3'	4:GD:159:LYS:NZ	2.42	0.52
3:GA:2537:U:H2'	3:GA:2538:C:C6	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:GF:65:LEU:HB3	6:GF:87:LYS:O	2.09	0.52
15:GO:5:SER:O	15:GO:8:ILE:HG22	2.10	0.52
16:GP:4:ILE:HG22	16:GP:8:GLU:HG3	1.92	0.52
26:GZ:40:THR:HG23	26:GZ:43:ILE:H	1.75	0.52
30:G3:21:PHE:HB2	30:G3:49:VAL:HG21	1.91	0.52
35:HA:1207:G:H2'	35:HA:1208:C:O4'	2.10	0.52
3:AA:2502:G:H5'	3:AA:2503:A:H5"	1.92	0.52
13:AM:73:ILE:HG21	13:AM:91:TYR:CZ	2.45	0.52
15:AO:36:TYR:N	15:AO:36:TYR:CD1	2.78	0.52
32:A5:71:CYS:CA	32:A5:117:LEU:HD13	2.31	0.52
35:BA:546:A:P	37:BD:69:GLU:HB2	2.49	0.52
35:BA:1040:U:H2'	35:BA:1041:G:C8	2.45	0.52
36:BC:14:ILE:O	36:BC:15:VAL:HG22	2.10	0.52
41:BH:106:THR:HG22	41:BH:107:SER:N	2.25	0.52
47:BN:27:LEU:C	47:BN:31:ILE:HD13	2.30	0.52
3:CA:419:U:H2'	3:CA:420:C:C6	2.44	0.52
11:CK:61:VAL:HG22	11:CK:87:LEU:HD11	1.91	0.52
11:CK:108:ARG:NH1	11:CK:113:MET:SD	2.83	0.52
16:CP:20:ARG:N	16:CP:23:ASP:OD2	2.43	0.52
34:DB:163:ILE:HG23	34:DB:164:ASP:H	1.75	0.52
53:DT:62:ALA:HA	53:DT:67:ILE:HG23	1.92	0.52
3:EA:616:A:H4'	5:EE:101:TYR:CE2	2.45	0.52
4:ED:91:THR:HG23	4:ED:92:VAL:H	1.75	0.52
18:ER:39:LEU:O	18:ER:49:ILE:HG23	2.10	0.52
35:FA:373:A:C4	35:FA:482:A:N7	2.78	0.52
3:GA:1975:G:C6	3:GA:1976:U:N3	2.78	0.52
9:GI:78:LEU:HB3	9:GI:105:LEU:CD2	2.39	0.52
16:GP:5:LYS:NZ	16:GP:9:GLN:OE1	2.43	0.52
21:GU:86:PHE:HD2	21:GU:88:ASP:HB3	1.75	0.52
35:HA:482:A:C2	35:HA:483:C:H1'	2.44	0.52
35:HA:1236:A:H1'	35:HA:1333:A:N1	2.24	0.52
3:AA:38:A:O2'	5:AE:43:THR:HA	2.09	0.52
3:AA:411:G:OP2	3:AA:2406:A:O2'	2.25	0.52
3:AA:1328:A:H2'	3:AA:1330:C:C5	2.45	0.52
6:AF:132:ARG:O	6:AF:133:GLU:HB3	2.10	0.52
11:AK:19:VAL:CG1	11:AK:41:ILE:HG12	2.40	0.52
17:AQ:31:TYR:O	17:AQ:34:ALA:N	2.42	0.52
35:BA:114:U:O2'	35:BA:115:G:H5'	2.10	0.52
35:BA:1309:G:C6	35:BA:1310:G:C5	2.98	0.52
42:BI:84:THR:HG21	42:BI:103:PHE:HB3	1.92	0.52
55:BV:217:GLU:O	55:BV:220:GLN:N	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:BV:603:GLU:OE2	55:BV:607:LYS:NZ	2.38	0.52
7:CG:84:LYS:CG	7:CG:132:LEU:H	2.20	0.52
8:CH:4:ILE:HD12	8:CH:43:ASN:HB3	1.91	0.52
12:CL:77:ILE:CD1	12:CL:108:ALA:HB1	2.40	0.52
20:CT:59:ASN:O	20:CT:83:ALA:O	2.28	0.52
32:C5:24:SER:HB3	32:C5:116:GLU:CG	2.19	0.52
32:C5:58:THR:HB	32:C5:82:ILE:HB	1.92	0.52
35:DA:195:A:OP2	60:DA:1867:HOH:O	2.19	0.52
35:DA:198:G:C5	35:DA:220:G:C2	2.98	0.52
35:DA:707:U:H4'	44:DK:22:HIS:CG	2.45	0.52
36:DC:90:VAL:HA	36:DC:93:ASP:HB3	1.92	0.52
42:DI:57:MET:O	42:DI:60:LYS:N	2.42	0.52
53:DT:67:ILE:HD11	53:DT:71:LYS:HE3	1.91	0.52
3:EA:370:G:OP2	60:EA:3559:HOH:O	2.19	0.52
3:EA:2415:G:H4'	12:EL:66:PHE:HB2	1.91	0.52
1:EB:90:C:H6	1:EB:90:C:H5"	1.74	0.52
5:EE:76:PRO:HA	5:EE:82:GLY:HA3	1.92	0.52
10:EJ:6:ALA:CB	10:EJ:45:THR:HG21	2.40	0.52
16:EP:24:THR:O	16:EP:24:THR:OG1	2.28	0.52
25:EY:56:LEU:O	25:EY:58:ASN:N	2.41	0.52
35:FA:254:G:O3'	50:FQ:71:LYS:NZ	2.43	0.52
35:FA:269:C:H2'	35:FA:270:A:C8	2.45	0.52
35:FA:664:G:H22	35:FA:741:G:H1	1.57	0.52
35:FA:1328:C:H5"	46:FM:28:THR:HG21	1.92	0.52
36:FC:150:LYS:HG3	36:FC:201:TRP:CE3	2.45	0.52
43:FJ:35:GLN:HG2	43:FJ:77:VAL:HG23	1.92	0.52
3:GA:869:G:C6	3:GA:909:A:C6	2.98	0.52
3:GA:2345:G:H5'	3:GA:2347:C:H5'	1.91	0.52
3:GA:2897:U:H2'	3:GA:2898:U:C6	2.44	0.52
2:GC:16:VAL:N	2:GC:203:VAL:CG1	2.73	0.52
2:GC:77:VAL:HA	2:GC:93:VAL:HA	1.92	0.52
35:HA:460:A:H2'	35:HA:460:A:N3	2.25	0.52
35:HA:615:G:C2	35:HA:626:G:C5	2.98	0.52
44:HK:29:ASN:OD1	44:HK:57:LYS:HB2	2.10	0.52
44:HK:82:LEU:HD21	44:HK:100:LEU:HD21	1.92	0.52
3:AA:460:A:C2	3:AA:470:A:C4	2.99	0.51
3:AA:945:A:C5	3:AA:2448:A:C2	2.98	0.51
3:AA:2232:C:P	24:AX:26:ARG:HH22	2.32	0.51
17:AQ:63:ARG:HH12	17:AQ:96:ASP:CA	2.22	0.51
23:AW:8:SER:O	23:AW:9:THR:HG22	2.10	0.51
31:A4:3:VAL:HG23	31:A4:4:ARG:H	1.74	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:17:U:H2'	35:BA:18:C:C6	2.44	0.51
39:BF:98:GLU:CG	39:BF:99:ALA:N	2.72	0.51
17:CQ:91:ARG:HE	17:CQ:93:ILE:HG21	1.75	0.51
32:C5:81:LEU:HD23	32:C5:82:ILE:N	2.24	0.51
35:DA:79:G:H3'	35:DA:80:A:H8	1.75	0.51
35:DA:815:A:N7	35:DA:1509:C:O2'	2.34	0.51
3:EA:1309:G:OP1	29:E2:9:VAL:HG13	2.11	0.51
3:EA:1667:G:O2'	3:EA:1991:U:O4	2.19	0.51
3:EA:2502:G:H5'	3:EA:2503:A:H5"	1.92	0.51
3:EA:2707:U:O2	14:EN:71:ARG:NH1	2.41	0.51
15:EO:24:THR:HG22	15:EO:42:PRO:HD3	1.91	0.51
24:EX:69:GLU:O	24:EX:70:LEU:CB	2.56	0.51
30:E3:31:ILE:O	30:E3:31:ILE:CG1	2.58	0.51
35:FA:1524:C:P	44:FK:125:LYS:HZ2	2.32	0.51
36:FC:150:LYS:HB3	36:FC:169:ARG:CG	2.40	0.51
55:FV:119:VAL:O	55:FV:123:SER:OG	2.27	0.51
3:GA:287:G:H2'	3:GA:288:U:C6	2.45	0.51
3:GA:639:U:H2'	3:GA:640:C:C6	2.45	0.51
3:GA:817:C:N4	60:GA:3567:HOH:O	2.35	0.51
3:GA:920:A:OP1	26:GZ:18:LYS:CE	2.58	0.51
4:GD:149:ASN:OD1	4:GD:150:GLN:N	2.42	0.51
7:GG:23:ILE:HG21	7:GG:71:LEU:HD11	1.92	0.51
11:GK:13:ASN:O	11:GK:15:GLY:N	2.41	0.51
16:GP:33:GLU:OE2	16:GP:38:ARG:NH1	2.42	0.51
23:GW:55:ASP:O	23:GW:57:THR:N	2.43	0.51
41:HH:75:ILE:HG13	41:HH:128:TYR:O	2.10	0.51
47:HN:47:LYS:C	47:HN:49:GLN:H	2.12	0.51
3:AA:729:G:H2'	3:AA:1775:U:H1'	1.91	0.51
3:AA:1332:G:OP1	60:AA:3749:HOH:O	2.18	0.51
3:AA:1776:G:OP2	60:AA:3445:HOH:O	2.19	0.51
3:AA:2053:G:H1	3:AA:2616:C:H42	1.57	0.51
10:AJ:81:ILE:CG1	10:AJ:82:GLY:N	2.74	0.51
32:A5:43:LYS:NZ	32:A5:98:GLU:HB2	2.24	0.51
39:BF:63:ASN:ND2	39:BF:96:VAL:HG22	2.25	0.51
45:BL:24:LEU:O	45:BL:26:ALA:N	2.42	0.51
3:CA:1280:G:N2	3:CA:1291:C:C2	2.78	0.51
6:CF:59:ILE:HD11	6:CF:140:ILE:HD11	1.91	0.51
9:CI:73:PRO:HG2	9:CI:112:LYS:HG2	1.92	0.51
9:CI:96:LYS:HG3	9:CI:136:GLY:HA3	1.91	0.51
10:CJ:64:VAL:HG11	10:CJ:69:ARG:HB2	1.91	0.51
10:CJ:80:HIS:O	10:CJ:82:GLY:N	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:C5:26:VAL:CG1	32:C5:77:VAL:CG1	2.85	0.51
35:DA:158:G:H2'	35:DA:159:G:H5'	1.92	0.51
35:DA:980:C:C4'	47:DN:59:ARG:HE	2.23	0.51
34:DB:82:ALA:O	34:DB:85:SER:OG	2.20	0.51
42:DI:18:ARG:HB2	42:DI:66:THR:HB	1.92	0.51
49:DP:79:ASN:ND2	49:DP:82:ALA:O	2.37	0.51
54:DU:35:ARG:HE	54:DU:40:LYS:NZ	2.08	0.51
3:EA:2526:G:N3	31:E4:1:MET:N	2.58	0.51
2:EC:68:ARG:NH2	2:EC:126:GLY:O	2.43	0.51
21:EU:93:ARG:O	21:EU:102:ILE:N	2.41	0.51
35:FA:93:U:H2'	35:FA:94:G:H5"	1.93	0.51
35:FA:1199:U:OP1	60:FA:1830:HOH:O	2.19	0.51
34:FB:163:ILE:HG23	34:FB:164:ASP:H	1.74	0.51
42:FI:36:GLU:HA	42:FI:40:GLY:HA3	1.92	0.51
44:FK:16:VAL:O	44:FK:18:ASP:N	2.41	0.51
3:GA:784:G:O2'	3:GA:785:G:OP2	2.25	0.51
3:GA:2265:U:H4'	13:GM:13:HIS:CE1	2.44	0.51
10:GJ:30:THR:HG22	10:GJ:31:GLU:N	2.26	0.51
19:GS:9:HIS:O	19:GS:11:ARG:NH1	2.42	0.51
35:HA:588:G:H1'	41:HH:3:MET:HE2	1.91	0.51
35:HA:1034:G:C2	35:HA:1035:A:N7	2.78	0.51
37:HD:26:ARG:HD3	37:HD:31:LYS:HE3	1.92	0.51
3:AA:489:G:N7	19:AS:49:LYS:NZ	2.58	0.51
3:AA:2313:C:H5"	6:AF:87:LYS:HD3	1.92	0.51
20:AT:29:THR:OG1	20:AT:86:THR:N	2.43	0.51
35:BA:690:G:H2'	35:BA:691:G:O4'	2.10	0.51
55:BV:48:ALA:HB2	55:BV:369:ASN:CG	2.30	0.51
3:CA:855:G:N3	23:CW:23:LYS:HD3	2.24	0.51
3:CA:1009:A:OP2	60:CA:3762:HOH:O	2.18	0.51
3:CA:2394:C:OP1	30:C3:29:ARG:NH2	2.43	0.51
10:CJ:44:TYR:O	10:CJ:44:TYR:CD1	2.64	0.51
11:CK:78:ARG:NH1	16:CP:70:GLU:OE2	2.44	0.51
35:DA:254:G:O3'	50:DQ:71:LYS:NZ	2.43	0.51
35:DA:1395:C:HO2'	35:DA:1401:G:HO2'	1.52	0.51
46:DM:14:HIS:HB3	46:DM:42:ASP:HA	1.92	0.51
55:DV:493:THR:HG22	55:DV:613:LEU:HD21	1.93	0.51
3:EA:1084:A:N6	3:EA:1085:A:N1	2.58	0.51
3:EA:1613:G:C2	3:EA:1619:G:C5	2.97	0.51
12:EL:40:SER:OG	12:EL:41:ARG:N	2.41	0.51
21:EU:98:ASN:ND2	21:EU:100:GLU:OE1	2.43	0.51
27:E0:33:SER:OG	27:E0:35:GLU:HG3	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:FD:65:TYR:CE2	37:FD:94:LEU:HB3	2.46	0.51
49:FP:18:GLN:HG3	49:FP:35:ARG:HD2	1.93	0.51
1:GB:41:G:OP1	1:GB:43:C:N4	2.43	0.51
3:GA:1014:A:C6	3:GA:1015:U:C4	2.99	0.51
3:GA:1195:G:C2	3:GA:1196:C:C5	2.98	0.51
3:GA:2290:G:N2	3:GA:2342:C:O2	2.43	0.51
6:GF:107:VAL:HB	6:GF:108:PRO:HD3	1.92	0.51
7:GG:63:GLN:O	7:GG:66:THR:OG1	2.26	0.51
9:GI:122:GLU:HG2	9:GI:126:ARG:HH12	1.75	0.51
15:GO:111:ARG:O	15:GO:113:ALA:N	2.43	0.51
35:HA:988:G:H1'	35:HA:1015:G:H22	1.75	0.51
35:HA:1060:U:O2'	43:HJ:58:ASN:OD1	2.27	0.51
34:HB:32:GLY:HA3	34:HB:39:ILE:O	2.10	0.51
44:HK:111:THR:HB	54:HU:5:LYS:HB3	1.92	0.51
47:HN:88:ALA:HB2	47:HN:93:ILE:HD12	1.92	0.51
3:AA:750:A:OP1	3:AA:1615:C:N4	2.40	0.51
3:AA:1647:U:OP2	60:AA:3417:HOH:O	2.19	0.51
3:AA:2387:U:O2'	23:AW:38:ARG:NH2	2.43	0.51
7:AG:84:LYS:HB3	7:AG:132:LEU:O	2.09	0.51
7:AG:96:ALA:HB3	7:AG:103:ASN:HB2	1.93	0.51
18:AR:39:LEU:HA	18:AR:49:ILE:HG21	1.92	0.51
23:AW:16:GLU:O	23:AW:17:ALA:HB3	2.10	0.51
32:A5:94:ARG:O	32:A5:97:LYS:N	2.43	0.51
42:BI:52:LEU:HB3	42:BI:57:MET:HB3	1.92	0.51
49:BP:44:SER:O	49:BP:46:LYS:N	2.44	0.51
3:CA:1439:A:C2	3:CA:1553:A:C4	2.98	0.51
32:C5:54:VAL:HG22	32:C5:83:ALA:HB1	1.92	0.51
35:DA:197:A:C6	35:DA:221:C:H4'	2.45	0.51
35:DA:687:A:O2'	35:DA:701:U:O4	2.16	0.51
35:DA:880:C:OP1	45:DL:9:ARG:CZ	2.59	0.51
3:EA:1774:C:OP1	60:EA:3444:HOH:O	2.19	0.51
7:EG:117:PRO:N	7:EG:120:ILE:HD11	2.26	0.51
3:GA:2400:G:C5	3:GA:2401:U:C4	2.98	0.51
3:GA:2615:U:C2	27:G0:3:GLN:HA	2.45	0.51
35:BA:410:G:OP1	37:BD:26:ARG:NH1	2.39	0.51
3:CA:1150:C:H2'	3:CA:1151:A:O5'	2.11	0.51
16:CP:58:PHE:HD1	16:CP:75:THR:HG22	1.74	0.51
19:CS:20:VAL:HG11	19:CS:44:ALA:HA	1.91	0.51
35:DA:815:A:N1	35:DA:1529:G:O2'	2.33	0.51
35:DA:1101:A:H5"	34:DB:170:ILE:HD11	1.92	0.51
48:DO:46:HIS:O	48:DO:48:LYS:N	2.39	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:EA:250:G:OP2	30:E3:12:ARG:NH1	2.44	0.51
3:EA:271:G:H4'	3:EA:272:A:OP1	2.10	0.51
3:EA:2331:G:O2'	3:EA:2336:A:N1	2.43	0.51
39:FF:98:GLU:HG3	39:FF:99:ALA:N	2.25	0.51
50:FQ:80:GLU:HG2	50:FQ:81:LYS:N	2.26	0.51
3:GA:645:C:H2'	3:GA:647:G:C8	2.45	0.51
3:GA:954:G:C2	3:GA:964:C:O2	2.63	0.51
3:GA:1267:U:C5	3:GA:2012:G:N2	2.79	0.51
3:GA:2276:G:C2	3:GA:2277:G:C8	2.98	0.51
3:GA:2344:U:O2'	28:G1:36:LYS:O	2.21	0.51
2:GC:79:ARG:HE	2:GC:92:LEU:HD23	1.75	0.51
5:GE:29:HIS:CG	12:GL:8:PRO:HA	2.45	0.51
13:GM:106:ASP:O	13:GM:108:VAL:N	2.38	0.51
16:GP:4:ILE:HG22	16:GP:5:LYS:H	1.75	0.51
16:GP:58:PHE:CD1	16:GP:75:THR:HG22	2.46	0.51
25:GY:30:MET:O	25:GY:34:SER:N	2.40	0.51
38:HE:89:HIS:HB3	38:HE:139:ALA:HB2	1.92	0.51
43:HJ:5:ARG:HG3	43:HJ:6:ILE:HG13	1.93	0.51
3:AA:26:G:C6	3:AA:27:G:N1	2.79	0.51
3:AA:748:G:P	19:AS:88:ARG:NH2	2.83	0.51
4:AD:62:LYS:HB2	4:AD:63:PRO:HD3	1.93	0.51
5:AE:148:ILE:HA	5:AE:187:VAL:HB	1.93	0.51
22:AV:44:HIS:HE1	22:AV:86:LEU:H	1.59	0.51
22:AV:51:GLN:OE1	22:AV:57:TYR:OH	2.28	0.51
32:A5:25:ALA:HB3	32:A5:85:SER:OG	2.09	0.51
35:BA:971:G:O6	35:BA:1364:U:O2'	2.26	0.51
36:BC:168:TYR:OH	38:BE:55:GLU:OE1	2.25	0.51
3:CA:142:A:C2	20:CT:2:ILE:HG23	2.46	0.51
3:CA:1363:C:O2'	3:CA:1809:A:N3	2.39	0.51
3:CA:2365:G:H4'	23:CW:59:PHE:CE2	2.45	0.51
6:CF:10:GLU:O	6:CF:12:VAL:N	2.44	0.51
8:CH:3:VAL:HA	8:CH:39:ALA:HB2	1.92	0.51
15:CO:51:ALA:HB3	15:CO:78:VAL:HG13	1.93	0.51
17:CQ:91:ARG:HH21	17:CQ:93:ILE:HG21	1.74	0.51
22:CV:75:GLN:HB2	22:CV:92:VAL:CG2	2.41	0.51
28:C1:22:THR:OG1	28:C1:23:THR:N	2.43	0.51
39:DF:71:ILE:HA	39:DF:74:LEU:HB2	1.92	0.51
44:DK:81:ASN:HD22	44:DK:106:ARG:HB3	1.75	0.51
55:DV:221:ASN:HA	55:DV:224:GLU:HB3	1.93	0.51
3:EA:802:A:C5	3:EA:803:U:C4	2.99	0.51
3:EA:1353:A:C8	3:EA:1378:A:N6	2.78	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:EA:1437:C:H2'	3:EA:1438:U:C6	2.46	0.51
3:EA:1567:G:H5'	2:EC:57:HIS:CD2	2.45	0.51
3:EA:1869:G:H3'	3:EA:1870:C:H5"	1.93	0.51
35:FA:1152:A:OP1	43:FJ:70:HIS:ND1	2.43	0.51
35:FA:1524:C:P	44:FK:125:LYS:HZ3	2.34	0.51
40:FG:146:GLU:HG2	40:FG:149:LYS:HE3	1.92	0.51
42:FI:28:ILE:HG13	42:FI:63:LEU:HD21	1.92	0.51
3:GA:33:C:O2'	3:GA:446:G:N2	2.42	0.51
3:GA:222:A:H3'	3:GA:421:C:H5'	1.93	0.51
3:GA:852:U:H2'	3:GA:853:C:C6	2.46	0.51
3:GA:1568:G:OP1	2:GC:62:ARG:NH1	2.44	0.51
19:GS:59:GLU:HA	19:GS:64:ALA:HA	1.93	0.51
35:HA:131:A:H2'	35:HA:132:C:C6	2.46	0.51
35:HA:1074:G:O2'	35:HA:1101:A:N1	2.37	0.51
35:HA:1292:G:H5"	42:HI:41:ARG:NH1	2.25	0.51
35:HA:1333:A:C5	35:HA:1334:G:H1'	2.46	0.51
2:AC:255:LYS:O	2:AC:257:ARG:N	2.43	0.51
3:AA:974:G:H8	3:AA:990:A:H62	1.58	0.51
3:AA:1437:C:H2'	3:AA:1438:U:C6	2.46	0.51
3:AA:1750:G:O2'	3:AA:2860:A:N1	2.37	0.51
10:AJ:39:LYS:HA	10:AJ:43:GLU:HB2	1.91	0.51
14:AN:52:ILE:HB	14:AN:94:TYR:CD2	2.46	0.51
22:AV:9:ARG:NH2	22:AV:12:GLN:HA	2.26	0.51
32:A5:25:ALA:O	32:A5:116:GLU:OE1	2.28	0.51
37:BD:107:PHE:N	37:BD:107:PHE:CD1	2.76	0.51
7:CG:165:ASP:OD1	7:CG:165:ASP:N	2.42	0.51
14:CN:98:LEU:CB	27:C0:42:ILE:HD11	2.41	0.51
35:DA:9:G:OP2	38:DE:126:LYS:NZ	2.40	0.51
35:DA:976:G:C2	35:DA:1363:A:C2	2.99	0.51
35:DA:1391:U:H2'	35:DA:1392:G:C8	2.45	0.51
52:DS:63:THR:HG22	52:DS:64:ASP:N	2.25	0.51
55:DV:195:ASP:OD1	55:DV:196:ALA:N	2.43	0.51
3:EA:532:A:N7	3:EA:2021:C:O2'	2.32	0.51
3:EA:1076:C:H2'	3:EA:1077:A:O4'	2.10	0.51
3:EA:1813:G:H1'	2:EC:49:THR:HG21	1.92	0.51
4:ED:62:LYS:HB2	4:ED:63:PRO:HD3	1.93	0.51
7:EG:112:VAL:HG23	7:EG:113:ASP:N	2.25	0.51
16:EP:105:LYS:HA	16:EP:108:ARG:HD2	1.92	0.51
34:FB:143:LEU:O	34:FB:147:LEU:N	2.37	0.51
37:FD:65:TYR:N	37:FD:65:TYR:CD1	2.79	0.51
45:FL:63:VAL:HG21	45:FL:95:TYR:CE1	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:FV:191:ILE:HG21	55:FV:193:TRP:CZ2	2.45	0.51
3:GA:583:G:C6	3:GA:584:C:C4	2.99	0.51
3:GA:863:A:C2	3:GA:864:G:C4	2.98	0.51
3:GA:1300:G:H4'	3:GA:1301:A:H5'	1.93	0.51
3:GA:2418:A:H3'	60:GA:3800:HOH:O	2.11	0.51
4:GD:33:ARG:NH2	4:GD:74:GLU:O	2.43	0.51
12:GL:48:ARG:HH12	30:G3:6:VAL:HG23	1.75	0.51
35:HA:579:A:H61	35:HA:762:U:H3	1.58	0.51
35:HA:1329:A:H4'	46:HM:24:GLY:O	2.11	0.51
39:HF:50:PRO:HD2	51:HR:74:HIS:CG	2.46	0.51
3:AA:2039:U:H2'	3:AA:2040:G:C8	2.45	0.51
3:AA:2314:A:OP1	6:AF:87:LYS:NZ	2.44	0.51
3:AA:2354:C:H4'	23:AW:31:LEU:HD22	1.92	0.51
3:AA:2579:C:OP1	60:AA:3534:HOH:O	2.17	0.51
11:AK:13:ASN:O	11:AK:15:GLY:N	2.43	0.51
12:AL:91:ASP:OD1	12:AL:92:LEU:N	2.43	0.51
34:BB:153:MET:O	34:BB:155:GLY:N	2.44	0.51
35:BA:1273:C:H2'	35:BA:1274:A:O4'	2.11	0.51
45:BL:44:LYS:HB2	45:BL:45:PRO:HD3	1.92	0.51
3:CA:27:G:O2'	3:CA:28:A:OP2	2.29	0.51
3:CA:2804:U:H2'	3:CA:2805:C:C6	2.46	0.51
2:CC:16:VAL:N	2:CC:203:VAL:CG1	2.74	0.51
4:CD:186:LEU:CD2	16:CP:7:LEU:HD21	2.41	0.51
17:CQ:27:ARG:HA	17:CQ:33:VAL:HG12	1.90	0.51
18:CR:38:VAL:HG11	18:CR:59:ILE:HG13	1.93	0.51
22:CV:2:PHE:HB3	22:CV:50:MET:HE1	1.91	0.51
22:CV:44:HIS:HE1	22:CV:86:LEU:H	1.59	0.51
23:CW:23:LYS:CG	23:CW:24:ARG:N	2.74	0.51
35:DA:224:U:H2'	35:DA:225:C:C6	2.45	0.51
35:DA:874:G:C5	35:DA:875:U:C5	2.99	0.51
35:DA:1219:A:H5'	47:DN:53:ARG:CZ	2.41	0.51
34:DB:9:LEU:HD12	34:DB:42:LEU:HD13	1.93	0.51
34:DB:71:THR:HG22	34:DB:72:LYS:H	1.76	0.51
36:DC:8:ASN:HD22	47:DN:90:ARG:HA	1.76	0.51
38:DE:72:ILE:HD11	38:DE:145:GLU:CD	2.31	0.51
39:DF:68:GLN:CA	39:DF:71:ILE:HG22	2.40	0.51
3:EA:570:G:OP1	60:EA:3767:HOH:O	2.20	0.51
5:EE:148:ILE:HA	5:EE:187:VAL:HB	1.93	0.51
7:EG:137:LYS:O	7:EG:140:ILE:HG22	2.11	0.51
24:EX:77:TYR:C	24:EX:77:TYR:CD1	2.82	0.51
35:FA:885:G:O2'	35:FA:914:A:N1	2.36	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:FC:42:TYR:HE2	36:FC:90:VAL:HG21	1.75	0.51
37:FD:48:LEU:HD21	37:FD:53:VAL:N	2.26	0.51
38:FE:104:GLY:HA3	38:FE:122:ASN:HA	1.93	0.51
39:FF:91:ARG:O	39:FF:92:THR:OG1	2.27	0.51
1:GB:87:U:H3'	1:GB:88:C:H5'	1.92	0.51
3:GA:1019:U:H5	3:GA:1142:A:N6	2.08	0.51
3:GA:1059:G:H2'	3:GA:1060:U:C5	2.45	0.51
35:HA:823:C:O2	41:HH:2:SER:N	2.44	0.51
38:HE:38:VAL:HG12	38:HE:117:VAL:HG21	1.92	0.51
39:HF:78:PHE:CD1	39:HF:84:VAL:HG11	2.45	0.51
55:HV:493:THR:HG22	55:HV:613:LEU:HD21	1.92	0.51
2:AC:61:TYR:CE2	3:AA:1816:C:C5	2.98	0.51
6:AF:71:LYS:HD3	6:AF:72:SER:N	2.26	0.51
16:AP:33:GLU:CD	16:AP:34:GLY:N	2.63	0.51
17:AQ:65:ASN:OD1	17:AQ:69:ARG:NH2	2.42	0.51
35:BA:289:G:O5'	60:BA:1888:HOH:O	2.19	0.51
35:BA:309:A:O2'	35:BA:607:A:N1	2.40	0.51
35:BA:1468:A:H2'	35:BA:1469:C:C5'	2.40	0.51
36:BC:164:ARG:NH1	36:BC:166:GLU:OE1	2.44	0.51
44:BK:16:VAL:CG1	44:BK:79:ILE:HG12	2.40	0.51
46:BM:4:ILE:O	46:BM:6:GLY:N	2.44	0.51
3:CA:1251:C:C6	17:CQ:5:ARG:NH1	2.79	0.51
6:CF:21:TYR:CE2	6:CF:27:VAL:HA	2.45	0.51
6:CF:110:ILE:O	6:CF:112:ASP:N	2.44	0.51
9:CI:106:GLN:HG2	9:CI:107:GLU:N	2.26	0.51
11:CK:113:MET:SD	11:CK:116:ILE:HD11	2.51	0.51
21:CU:98:ASN:ND2	21:CU:100:GLU:OE1	2.44	0.51
40:DG:133:THR:HA	40:DG:136:LYS:HB3	1.93	0.51
3:EA:42:A:H2'	3:EA:43:G:H5'	1.91	0.51
3:EA:945:A:C4	3:EA:2448:A:C2	2.99	0.51
10:EJ:39:LYS:HA	10:EJ:43:GLU:HG3	1.93	0.51
18:ER:68:ARG:HD3	18:ER:92:TRP:CE2	2.45	0.51
19:ES:13:SER:O	19:ES:14:ALA:CB	2.59	0.51
23:EW:9:THR:HG23	23:EW:10:ARG:HD3	1.91	0.51
35:FA:401:C:O2'	35:FA:621:A:N3	2.35	0.51
35:FA:1336:C:H4'	35:FA:1337:G:H5'	1.92	0.51
37:FD:25:VAL:HA	37:FD:161:LEU:HG	1.92	0.51
3:GA:571:U:H3'	18:GR:80:ARG:NH2	2.25	0.51
3:GA:851:C:O2'	26:GZ:42:ALA:O	2.21	0.51
3:GA:954:G:H5"	13:GM:13:HIS:ND1	2.26	0.51
3:GA:1006:C:C2	3:GA:1138:G:N2	2.79	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:GA:1485:U:H2'	3:GA:1486:U:C6	2.46	0.51
3:GA:2757:A:N1	7:GG:66:THR:HG21	2.26	0.51
4:GD:148:GLN:OE1	4:GD:148:GLN:N	2.44	0.51
7:GG:84:LYS:HB2	7:GG:132:LEU:H	1.76	0.51
35:HA:161:A:N1	35:HA:347:G:O2'	2.36	0.51
35:HA:481:G:O2'	35:HA:482:A:C8	2.63	0.51
35:HA:715:A:N6	35:HA:716:A:N6	2.58	0.51
35:HA:1268:G:N2	35:HA:1327:C:O4'	2.44	0.51
9:AI:36:GLU:HB3	9:AI:66:PHE:CE1	2.46	0.51
20:AT:50:LEU:O	20:AT:52:GLU:N	2.42	0.51
34:BB:94:ARG:NH1	34:BB:95:TRP:O	2.43	0.51
55:BV:191:ILE:HG23	55:BV:202:PHE:CE1	2.46	0.51
3:CA:1084:A:H5'	32:C5:55:VAL:HG13	1.91	0.51
3:CA:1668:A:O2'	3:CA:1674:G:N7	2.44	0.51
3:CA:1732:C:O2'	3:CA:1733:G:H5'	2.11	0.51
3:CA:2502:G:H5'	3:CA:2503:A:H5"	1.93	0.51
4:CD:14:ILE:HD11	4:CD:178:VAL:CG1	2.41	0.51
13:CM:71:LYS:HD3	13:CM:95:LEU:HD13	1.92	0.51
2:EC:77:VAL:O	2:EC:77:VAL:HG22	2.11	0.51
11:EK:4:GLU:OE2	11:EK:23:LYS:NZ	2.42	0.51
11:EK:9:ASN:O	11:EK:83:ALA:HA	2.11	0.51
18:ER:66:HIS:CD2	18:ER:94:THR:HG22	2.46	0.51
23:EW:30:VAL:HA	23:EW:60:ALA:HB3	1.93	0.51
32:E5:95:LEU:H	32:E5:95:LEU:HD22	1.75	0.51
3:GA:248:G:C2	3:GA:2431:U:H4'	2.45	0.51
3:GA:1072:C:N4	3:GA:1097:U:C5'	2.73	0.51
3:GA:2782:G:C2	3:GA:2783:U:C6	2.99	0.51
2:GC:68:ARG:NH2	2:GC:126:GLY:O	2.43	0.51
6:GF:117:SER:O	6:GF:127:TYR:OH	2.28	0.51
6:GF:134:GLN:HG3	6:GF:140:ILE:HD13	1.93	0.51
42:HI:87:LEU:HB3	42:HI:94:LEU:CD1	2.40	0.51
3:AA:141:G:N1	20:AT:1:MET:O	2.44	0.50
3:AA:592:A:HO2'	30:A3:63:TYR:HH	1.59	0.50
3:AA:1300:G:H4'	3:AA:1301:A:H5'	1.92	0.50
3:AA:1738:G:O2'	3:AA:1739:A:O5'	2.25	0.50
4:AD:151:THR:HG22	4:AD:152:PRO:HD3	1.92	0.50
9:AI:109:ALA:HB2	9:AI:128:ILE:HG13	1.93	0.50
19:AS:20:VAL:HG11	19:AS:44:ALA:HA	1.93	0.50
28:A1:4:ILE:HG23	28:A1:5:ARG:H	1.76	0.50
35:BA:177:G:OP2	53:BT:64:LYS:NZ	2.44	0.50
35:BA:701:U:H5"	35:BA:703:G:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CA:532:A:N7	3:CA:2021:C:O2'	2.33	0.50
7:CG:22:VAL:HG12	7:CG:36:LEU:CD1	2.41	0.50
8:CH:9:VAL:HG12	8:CH:10:ALA:H	1.75	0.50
9:CI:71:LYS:N	9:CI:71:LYS:HD2	2.27	0.50
13:CM:8:LYS:HE3	13:CM:9:PHE:CE2	2.45	0.50
23:CW:72:GLY:N	23:CW:73:PRO:CD	2.74	0.50
35:DA:867:G:H2'	35:DA:868:C:C6	2.46	0.50
34:DB:186:VAL:N	34:DB:199:ILE:O	2.44	0.50
38:DE:46:VAL:CG2	38:DE:118:ALA:HA	2.41	0.50
3:EA:855:G:H1'	23:EW:23:LYS:HE3	1.93	0.50
3:EA:1026:G:OP1	60:EA:3704:HOH:O	2.19	0.50
4:ED:184:ARG:NH1	16:EP:6:GLN:OE1	2.44	0.50
20:ET:35:ALA:HB3	20:ET:38:ALA:HB2	1.92	0.50
28:E1:3:GLY:O	28:E1:5:ARG:N	2.45	0.50
31:E4:3:VAL:HG23	31:E4:4:ARG:H	1.75	0.50
35:FA:110:C:N4	35:FA:111:G:C6	2.79	0.50
35:FA:1477:U:H2'	35:FA:1478:U:C6	2.46	0.50
3:GA:909:A:C6	3:GA:912:C:C2	2.98	0.50
3:GA:2415:G:C5	3:GA:2416:C:C5	2.99	0.50
3:GA:2661:G:H5'	55:HV:19:ILE:HG13	1.93	0.50
2:GC:246:PRO:HG2	2:GC:247:TRP:CZ3	2.46	0.50
13:GM:17:ASN:O	13:GM:17:ASN:ND2	2.43	0.50
35:HA:17:U:H2'	35:HA:18:C:C6	2.45	0.50
34:HB:67:LEU:HD21	34:HB:91:VAL:HG23	1.93	0.50
34:HB:172:ILE:HG22	34:HB:176:ASN:HD21	1.76	0.50
34:HB:207:ARG:HG3	34:HB:208:ALA:N	2.26	0.50
50:HQ:19:LYS:N	50:HQ:51:ASN:OD1	2.42	0.50
2:AC:256:THR:CG2	3:AA:1797:G:O2'	2.59	0.50
3:AA:391:A:C6	3:AA:411:G:C2	3.00	0.50
3:AA:2094:A:C2	3:AA:2196:C:C2	2.99	0.50
3:AA:2329:U:H2'	3:AA:2330:G:C8	2.47	0.50
19:AS:13:SER:O	19:AS:14:ALA:CB	2.60	0.50
19:AS:86:MET:HB2	19:AS:96:ILE:HG21	1.92	0.50
35:BA:840:C:N4	35:BA:842:U:O2'	2.44	0.50
35:BA:999:C:H42	35:BA:1041:G:H1	1.59	0.50
35:BA:1007:U:C2'	35:BA:1008:U:H5'	2.41	0.50
35:BA:1053:G:HO2'	35:BA:1199:U:H5	1.58	0.50
3:CA:594:U:H2'	3:CA:595:C:C6	2.46	0.50
3:CA:2204:G:OP2	2:CC:146:LYS:NZ	2.40	0.50
3:CA:2800:A:H3'	3:CA:2801:G:H5"	1.93	0.50
4:CD:120:GLY:HA2	4:CD:162:ALA:CB	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:CO:52:SER:HB2	15:CO:54:VAL:HG12	1.94	0.50
26:CZ:21:ALA:O	26:CZ:25:GLY:N	2.43	0.50
32:C5:142:THR:OG1	32:C5:143:MET:N	2.44	0.50
35:DA:111:G:O6	35:DA:330:C:N4	2.44	0.50
35:DA:738:C:H2'	35:DA:739:C:C6	2.46	0.50
40:DG:16:PRO:HG3	42:DI:43:THR:HG23	1.93	0.50
55:DV:11:ARG:HE	55:DV:283:ILE:HA	1.77	0.50
3:EA:2800:A:H3'	3:EA:2801:G:C5'	2.41	0.50
16:EP:108:ARG:NH1	35:FA:1464:U:OP2	2.42	0.50
35:FA:1410:A:H2'	35:FA:1411:C:C6	2.47	0.50
51:FR:37:GLY:O	51:FR:63:ARG:NH2	2.44	0.50
3:GA:974:G:C4	3:GA:1186:G:C2	2.99	0.50
3:GA:2529:G:H5'	7:GG:174:LYS:HD2	1.93	0.50
9:GI:32:VAL:HG12	9:GI:33:ASN:H	1.76	0.50
35:HA:142:G:H3'	35:HA:143:A:H8	1.75	0.50
38:HE:24:THR:HA	38:HE:29:ARG:HA	1.92	0.50
43:HJ:57:VAL:HG12	43:HJ:58:ASN:N	2.26	0.50
3:AA:565:C:H2'	3:AA:566:U:O4'	2.11	0.50
3:AA:2571:U:O2'	4:AD:151:THR:CG2	2.60	0.50
11:AK:9:ASN:O	11:AK:83:ALA:HA	2.11	0.50
14:AN:96:ARG:NH2	14:AN:114:GLU:OE1	2.44	0.50
42:BI:89:GLU:OE1	42:BI:90:TYR:CD1	2.65	0.50
3:CA:83:A:H2'	3:CA:84:A:N7	2.26	0.50
3:CA:404:A:O2'	3:CA:405:U:OP2	2.23	0.50
11:CK:80:ASP:OD1	16:CP:61:ARG:NH1	2.45	0.50
15:CO:31:THR:HG22	15:CO:34:HIS:H	1.75	0.50
32:C5:123:ILE:HG12	32:C5:124:ASP:N	2.26	0.50
35:DA:816:A:OP1	35:DA:1526:G:O2'	2.21	0.50
35:DA:982:U:H4'	35:DA:983:A:C5'	2.41	0.50
35:DA:1033:G:C2'	35:DA:1034:G:H5'	2.40	0.50
35:DA:1163:A:C6	35:DA:1174:G:C6	2.99	0.50
3:EA:100:U:H4'	3:EA:101:A:O5'	2.11	0.50
3:EA:126:A:O5'	29:E2:19:ARG:HG3	2.10	0.50
3:EA:2146:C:H4'	3:EA:2147:A:OP1	2.12	0.50
10:EJ:30:THR:HG22	10:EJ:31:GLU:N	2.26	0.50
23:EW:37:VAL:HB	23:EW:38:ARG:HH11	1.76	0.50
35:FA:80:A:N1	35:FA:81:A:C2	2.79	0.50
35:FA:202:G:HO2'	35:FA:468:A:H8	1.56	0.50
34:FB:93:HIS:ND1	34:FB:145:ASN:O	2.44	0.50
45:FL:24:LEU:O	45:FL:26:ALA:N	2.44	0.50
49:FP:6:LEU:HD12	49:FP:17:TYR:HB3	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:FQ:76:VAL:HG22	50:FQ:77:ARG:HG3	1.92	0.50
1:GB:83:G:H4'	26:GZ:52:PHE:CD1	2.45	0.50
3:GA:918:A:C2	3:GA:919:U:H1'	2.47	0.50
3:GA:1039:A:H2'	3:GA:1040:A:O4'	2.11	0.50
3:GA:1064:C:C4	3:GA:1065:U:C5	2.99	0.50
3:GA:1847:A:H2'	3:GA:1847:A:N3	2.26	0.50
3:GA:2265:U:N3	3:GA:2266:A:C6	2.80	0.50
5:GE:29:HIS:O	5:GE:32:VAL:HG22	2.11	0.50
8:GH:27:ARG:HH22	24:GX:59:ASP:HA	1.76	0.50
11:GK:78:ARG:NH1	16:GP:70:GLU:OE2	2.44	0.50
16:GP:15:ASP:N	16:GP:15:ASP:OD1	2.43	0.50
20:GT:76:ARG:NH2	20:GT:79:ASP:OD1	2.44	0.50
22:GV:80:HIS:CD2	22:GV:83:LYS:HG3	2.45	0.50
35:HA:324:G:N7	60:HA:1837:HOH:O	2.35	0.50
35:HA:888:G:O2'	35:HA:1488:G:O2'	2.20	0.50
37:HD:62:ARG:HG2	37:HD:72:PHE:CD2	2.45	0.50
39:HF:10:VAL:HG21	39:HF:21:MET:CE	2.41	0.50
40:HG:126:ASP:O	40:HG:130:ASN:N	2.44	0.50
46:HM:33:ILE:HD13	46:HM:59:GLU:HB3	1.93	0.50
47:HN:61:ARG:NH1	60:HN:201:HOH:O	2.44	0.50
3:AA:1654:A:H2'	3:AA:1655:A:H8	1.77	0.50
3:AA:2803:G:H2'	3:AA:2804:U:C6	2.45	0.50
4:AD:193:VAL:HG21	4:AD:201:LEU:HD21	1.93	0.50
32:A5:68:PRO:HA	32:A5:72:LEU:HD11	1.94	0.50
37:BD:26:ARG:C	37:BD:26:ARG:HD3	2.32	0.50
39:BF:38:ARG:NH1	39:BF:63:ASN:OD1	2.44	0.50
40:BG:63:GLU:OE1	40:BG:70:ARG:NH2	2.45	0.50
44:BK:81:ASN:HB3	44:BK:106:ARG:HB3	1.92	0.50
50:BQ:47:HIS:HB2	50:BQ:71:LYS:HE2	1.93	0.50
1:CB:42:C:OP2	6:CF:63:LYS:NZ	2.45	0.50
5:CE:148:ILE:HA	5:CE:187:VAL:HB	1.94	0.50
23:CW:39:GLN:HG2	23:CW:40:ARG:N	2.25	0.50
32:C5:54:VAL:HA	32:C5:84:TYR:O	2.11	0.50
35:DA:696:A:N3	35:DA:786:G:O2'	2.42	0.50
37:DD:44:ARG:C	37:DD:46:PRO:HD3	2.32	0.50
42:DI:92:GLU:OE2	42:DI:95:ARG:NH2	2.33	0.50
55:DV:185:LEU:HD13	55:DV:222:LEU:HD13	1.94	0.50
3:EA:451:U:C2	3:EA:453:A:N7	2.79	0.50
3:EA:1171:G:C6	3:EA:1172:C:N4	2.79	0.50
3:EA:2038:G:H2'	3:EA:2039:U:O4'	2.11	0.50
2:EC:244:VAL:HG12	2:EC:250:GLN:HA	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:EE:128:ALA:O	5:EE:130:LYS:N	2.42	0.50
6:EF:132:ARG:O	6:EF:133:GLU:HB3	2.12	0.50
8:EH:40:THR:OG1	8:EH:43:ASN:OD1	2.30	0.50
16:EP:92:ARG:O	16:EP:93:LYS:CB	2.59	0.50
23:EW:47:GLY:H	23:EW:80:SER:HB3	1.77	0.50
55:FV:310:HIS:O	55:FV:312:SER:N	2.44	0.50
3:GA:348:A:H2'	3:GA:349:U:O4'	2.11	0.50
3:GA:878:A:N6	3:GA:899:A:HO2'	2.08	0.50
4:GD:46:ARG:NH2	4:GD:86:GLU:H	2.09	0.50
5:GE:151:GLY:O	5:GE:195:GLN:NE2	2.45	0.50
6:GF:37:MET:HE3	6:GF:151:LEU:HB3	1.93	0.50
6:GF:72:SER:HB3	6:GF:80:GLN:NE2	2.27	0.50
6:GF:105:ILE:HB	6:GF:138:PRO:HG2	1.93	0.50
22:GV:65:VAL:HG13	22:GV:68:LYS:HD2	1.93	0.50
35:HA:769:G:H4'	35:HA:1513:A:H4'	1.92	0.50
35:HA:1115:U:H1'	47:HN:101:TRP:HA	1.93	0.50
35:HA:1365:G:C2	35:HA:1366:C:C2	2.99	0.50
36:HC:77:ILE:HA	36:HC:84:VAL:HG23	1.94	0.50
40:HG:116:MET:HA	40:HG:119:ARG:HD2	1.92	0.50
47:HN:29:ALA:HA	47:HN:33:ASP:HB2	1.91	0.50
55:HV:557:ILE:HG21	55:HV:576:ILE:HD12	1.93	0.50
3:AA:846:U:HO2'	3:AA:847:U:P	2.34	0.50
3:AA:1084:A:H5'	32:A5:55:VAL:HG13	1.93	0.50
3:AA:2211:A:O2'	3:AA:2212:A:P	2.70	0.50
3:AA:2636:C:O2'	4:AD:45:TYR:OH	2.25	0.50
24:AX:70:LEU:O	24:AX:75:GLU:N	2.45	0.50
38:BE:153:VAL:O	38:BE:157:ARG:N	2.44	0.50
55:BV:95:PHE:CZ	55:BV:464:LEU:HD22	2.47	0.50
3:CA:363:G:H2'	3:CA:364:C:C6	2.47	0.50
3:CA:1382:G:O3'	3:CA:1573:G:N2	2.43	0.50
3:CA:2105:U:H2'	3:CA:2106:U:H5"	1.93	0.50
3:CA:2595:G:O6	2:CC:238:ASN:ND2	2.33	0.50
11:CK:107:LEU:O	11:CK:109:SER:N	2.40	0.50
35:DA:1005:A:H2'	35:DA:1006:G:O4'	2.11	0.50
43:DJ:40:ILE:HD12	43:DJ:73:LEU:HD23	1.93	0.50
1:EB:98:G:H1	22:EV:14:LYS:HB2	1.77	0.50
7:EG:120:ILE:HD13	7:EG:120:ILE:H	1.77	0.50
7:EG:155:PRO:O	7:EG:170:THR:HA	2.10	0.50
11:EK:80:ASP:OD1	16:EP:61:ARG:NH1	2.42	0.50
35:FA:1306:A:N6	35:FA:1331:G:H1'	2.27	0.50
50:FQ:48:ASP:OD2	50:FQ:52:GLU:N	2.45	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:FV:801:GCP:O2A	59:FV:801:GCP:O2B	2.28	0.50
3:GA:384:A:H2'	3:GA:385:C:H5'	1.93	0.50
3:GA:653:U:H3'	3:GA:654:A:C5'	2.42	0.50
3:GA:1353:A:C8	3:GA:1378:A:N6	2.80	0.50
35:HA:1014:A:H2	35:HA:1219:A:N3	2.09	0.50
35:HA:1053:G:N7	35:HA:1200:C:H5"	2.27	0.50
35:HA:1285:A:N1	35:HA:1355:G:H5'	2.27	0.50
3:AA:1533:C:H2'	3:AA:1534:U:C6	2.46	0.50
3:AA:1753:G:OP1	16:AP:92:ARG:NE	2.38	0.50
3:AA:2074:U:H2'	3:AA:2075:U:C6	2.46	0.50
4:AD:148:GLN:OE1	4:AD:148:GLN:N	2.45	0.50
8:AH:41:LYS:HA	8:AH:44:ILE:HG12	1.93	0.50
16:AP:91:VAL:O	16:AP:92:ARG:HG2	2.12	0.50
17:AQ:91:ARG:HE	17:AQ:93:ILE:CG2	2.25	0.50
17:AQ:94:LEU:C	17:AQ:96:ASP:H	2.14	0.50
18:AR:61:ALA:HB2	18:AR:98:ILE:HA	1.92	0.50
29:A2:27:GLY:O	29:A2:30:VAL:HB	2.11	0.50
3:CA:995:C:N4	10:CJ:2:LYS:HB2	2.26	0.50
3:CA:1076:C:H2'	3:CA:1077:A:O4'	2.11	0.50
3:CA:2092:U:H4'	3:CA:2093:G:O5'	2.10	0.50
3:CA:2745:C:C4	3:CA:2746:U:C4	3.00	0.50
2:CC:123:ILE:H	2:CC:123:ILE:HD12	1.77	0.50
7:CG:86:LEU:HB3	7:CG:162:ARG:O	2.11	0.50
7:CG:162:ARG:HB3	7:CG:166:GLU:HG2	1.94	0.50
12:CL:26:GLY:C	12:CL:27:LEU:HD12	2.32	0.50
35:DA:1276:G:N2	35:DA:1283:U:O4'	2.44	0.50
3:EA:532:A:C8	3:EA:2021:C:C6	3.00	0.50
3:EA:565:C:H2'	3:EA:566:U:O4'	2.12	0.50
23:EW:29:SER:C	23:EW:30:VAL:HG12	2.31	0.50
32:E5:29:ASP:HA	32:E5:108:VAL:CG1	2.34	0.50
35:FA:53:A:C2	35:FA:359:G:C2	2.99	0.50
36:FC:65:ARG:O	36:FC:66:VAL:HB	2.11	0.50
1:GB:81:G:C6	1:GB:96:G:C6	2.99	0.50
3:GA:374:A:N6	3:GA:400:G:O2'	2.44	0.50
3:GA:453:A:OP1	60:GA:3238:HOH:O	2.20	0.50
3:GA:1067:A:C4	3:GA:1068:G:N7	2.80	0.50
3:GA:1252:G:C2	17:GQ:32:ARG:HG2	2.47	0.50
3:GA:2307:G:N1	3:GA:2311:A:H2'	2.26	0.50
15:GO:106:LEU:HA	15:GO:109:ALA:HB3	1.94	0.50
35:HA:697:U:H2'	35:HA:698:G:H5'	1.94	0.50
47:HN:7:LYS:NZ	60:HN:207:HOH:O	2.43	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:HR:41:PRO:HB2	51:HR:43:ARG:HG2	1.94	0.50
55:HV:453:SER:O	55:HV:455:GLN:N	2.45	0.50
55:HV:640:GLY:HA3	55:HV:658:VAL:HG13	1.94	0.50
3:AA:322:A:H5'	3:AA:340:A:H1'	1.94	0.50
3:AA:2286:G:O6	28:A1:22:THR:OG1	2.24	0.50
3:AA:2352:A:C6	23:AW:30:VAL:HG11	2.47	0.50
10:AJ:21:THR:HG22	10:AJ:22:GLY:N	2.27	0.50
13:AM:20:LEU:HD22	13:AM:20:LEU:N	2.26	0.50
26:AZ:41:PRO:HA	26:AZ:44:ARG:HB3	1.93	0.50
29:A2:34:ARG:NH1	29:A2:41:ARG:O	2.45	0.50
35:BA:537:G:OP1	45:BL:110:ARG:NH2	2.42	0.50
35:BA:673:A:H4'	39:BF:86:ARG:HD2	1.93	0.50
35:BA:1331:G:HO2'	35:BA:1332:A:P	2.34	0.50
52:BS:63:THR:HG22	52:BS:64:ASP:N	2.26	0.50
55:BV:536:PHE:CZ	55:BV:578:LEU:HD23	2.47	0.50
3:CA:726:G:O2'	3:CA:727:A:OP2	2.24	0.50
6:CF:103:ILE:HG23	6:CF:175:PRO:HD3	1.93	0.50
10:CJ:81:ILE:CG1	10:CJ:82:GLY:N	2.75	0.50
35:DA:49:U:O2'	35:DA:50:A:H2'	2.11	0.50
35:DA:619:U:H3	37:DD:131:ASN:HB3	1.77	0.50
40:DG:102:ARG:O	40:DG:106:GLU:N	2.43	0.50
40:DG:111:ARG:HE	40:DG:123:GLU:HG2	1.77	0.50
44:DK:30:THR:O	44:DK:47:ALA:N	2.43	0.50
53:DT:51:PHE:CD1	53:DT:51:PHE:C	2.84	0.50
53:DT:81:ALA:O	53:DT:85:LYS:HG2	2.11	0.50
3:EA:654:A:H3'	3:EA:654:A:N3	2.26	0.50
3:EA:792:A:N3	3:EA:2072:C:O2'	2.38	0.50
3:EA:1548:A:H2'	3:EA:1549:A:C8	2.47	0.50
32:E5:91:ALA:HB3	32:E5:130:PRO:HB3	1.93	0.50
35:FA:328:C:H2'	35:FA:328:C:O2	2.11	0.50
35:FA:921:U:H2'	35:FA:922:G:O4'	2.12	0.50
35:FA:928:G:O2'	35:FA:1533:C:OP1	2.27	0.50
37:FD:80:ALA:HA	37:FD:86:THR:CG2	2.42	0.50
46:FM:3:ARG:HD3	46:FM:7:ILE:HD12	1.94	0.50
55:FV:452:GLU:OE1	55:FV:491:ARG:NH1	2.44	0.50
3:GA:953:G:N2	3:GA:965:C:N3	2.59	0.50
3:GA:1224:U:H4'	18:GR:88:GLY:O	2.12	0.50
3:GA:1594:U:H2'	3:GA:1595:C:C6	2.47	0.50
3:GA:2885:G:H2'	3:GA:2886:A:O4'	2.12	0.50
2:GC:12:ARG:HG2	2:GC:12:ARG:HH11	1.77	0.50
7:GG:32:LEU:HD13	7:GG:32:LEU:N	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:GJ:25:LEU:HD22	10:GJ:26:GLY:N	2.26	0.50
11:GK:1:MET:SD	11:GK:67:LYS:HD3	2.52	0.50
11:GK:61:VAL:CG2	11:GK:87:LEU:HD11	2.42	0.50
25:GY:16:THR:HA	25:GY:19:LEU:HB3	1.93	0.50
31:G4:7:VAL:HG23	31:G4:8:LYS:H	1.76	0.50
35:HA:402:G:O2'	35:HA:620:C:N3	2.45	0.50
35:HA:877:G:H21	41:HH:2:SER:N	2.10	0.50
35:HA:1414:U:H2'	35:HA:1415:G:H8	1.76	0.50
34:HB:23:ASN:H	34:HB:189:ASN:HA	1.76	0.50
37:HD:70:ARG:NH1	60:HD:302:HOH:O	2.45	0.50
3:AA:223:A:C5	3:AA:422:A:C8	3.00	0.50
3:AA:1179:G:H2'	3:AA:1180:U:O4'	2.12	0.50
3:AA:2109:U:H2'	3:AA:2110:G:H5'	1.93	0.50
7:AG:16:VAL:HG21	7:AG:44:HIS:CD2	2.46	0.50
22:AV:2:PHE:HB3	22:AV:50:MET:HE1	1.94	0.50
35:BA:142:G:H3'	35:BA:143:A:H8	1.77	0.50
35:BA:409:U:OP1	37:BD:24:GLY:HA3	2.11	0.50
35:BA:1228:C:OP2	46:BM:110:LYS:NZ	2.45	0.50
46:BM:11:ASP:CG	46:BM:12:HIS:H	2.15	0.50
3:CA:1142:A:N3	3:CA:1144:A:C8	2.80	0.50
3:CA:2146:C:OP1	3:GA:2146:C:N4	2.45	0.50
2:CC:103:ILE:HG13	2:CC:104:LEU:N	2.27	0.50
20:CT:60:THR:OG1	60:CT:202:HOH:O	2.19	0.50
35:DA:979:C:H1'	35:DA:1317:C:N4	2.27	0.50
35:DA:1463:U:H2'	35:DA:1464:U:C6	2.46	0.50
34:DB:216:VAL:HA	34:DB:219:THR:HG22	1.94	0.50
43:DJ:53:ILE:HG22	43:DJ:61:ALA:HB1	1.94	0.50
45:DL:33:VAL:HG21	55:DV:429:GLU:HG3	1.93	0.50
49:DP:21:VAL:HG23	49:DP:33:ILE:HB	1.94	0.50
55:DV:19:ILE:CD1	55:DV:92:HIS:H	2.25	0.50
3:EA:183:C:O2'	3:EA:432:A:N3	2.36	0.50
3:EA:1356:G:C6	3:EA:1357:C:C4	3.00	0.50
25:EY:56:LEU:HA	25:EY:59:GLU:HG2	1.94	0.50
26:EZ:35:VAL:HG22	26:EZ:37:ARG:HE	1.77	0.50
32:E5:51:TYR:CD1	32:E5:52:MET:HG2	2.47	0.50
35:FA:690:G:H2'	35:FA:691:G:O4'	2.11	0.50
38:FE:155:ALA:HB1	41:FH:66:PHE:HZ	1.77	0.50
55:FV:337:ARG:HA	55:FV:382:ILE:HG22	1.93	0.50
55:FV:493:THR:HG22	55:FV:613:LEU:HD21	1.92	0.50
3:GA:468:G:N7	29:G2:39:ARG:NH2	2.60	0.50
3:GA:729:G:H2'	3:GA:1775:U:H1'	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:GA:857:G:N1	3:GA:858:G:C6	2.80	0.50
3:GA:1072:C:N4	3:GA:1097:U:P	2.85	0.50
3:GA:1088:A:O2'	3:GA:1089:A:OP2	2.26	0.50
3:GA:2472:G:C8	3:GA:2475:C:N4	2.80	0.50
2:GC:255:LYS:O	2:GC:257:ARG:N	2.45	0.50
21:GU:5:ARG:HE	21:GU:93:ARG:NH1	2.09	0.50
35:HA:1063:C:H5	35:HA:1064:G:HO2'	1.59	0.50
35:HA:1495:U:H2'	35:HA:1496:C:O2	2.12	0.50
34:HB:20:ARG:O	34:HB:22:TRP:N	2.44	0.50
46:HM:25:VAL:HB	46:HM:29:ARG:HD3	1.93	0.50
3:AA:118:A:N3	3:AA:178:G:H1'	2.27	0.50
3:AA:1533:C:C2	3:AA:1534:U:C4	2.99	0.50
7:AG:73:SER:O	7:AG:77:GLY:N	2.45	0.50
17:AQ:94:LEU:C	17:AQ:96:ASP:N	2.64	0.50
35:BA:158:G:H2'	35:BA:159:G:C5'	2.42	0.50
35:BA:947:G:C6	35:BA:948:C:C4	3.00	0.50
3:CA:163:C:O2'	3:CA:164:C:P	2.70	0.50
3:CA:749:A:C6	3:CA:1618:A:C2	3.00	0.50
3:CA:910:A:N6	3:CA:2277:G:O2'	2.44	0.50
3:CA:2347:C:H2'	3:CA:2348:U:C6	2.47	0.50
3:CA:2618:G:C6	3:CA:2619:C:C4	3.00	0.50
7:CG:63:GLN:O	7:CG:66:THR:OG1	2.30	0.50
10:CJ:73:VAL:HB	10:CJ:75:TYR:CE1	2.47	0.50
35:DA:429:U:P	37:DD:13:ARG:HH22	2.35	0.50
35:DA:1244:G:C6	35:DA:1294:G:C6	3.00	0.50
45:DL:76:GLU:HG3	55:DV:454:ASN:CB	2.42	0.50
45:DL:110:ARG:NH1	45:DL:117:TYR:CE2	2.80	0.50
3:EA:645:C:O2	3:EA:645:C:O2'	2.19	0.50
3:EA:954:G:C5	3:EA:955:U:C5	3.00	0.50
3:EA:1187:G:H5"	18:ER:83:TYR:CE2	2.47	0.50
16:EP:104:GLY:O	16:EP:106:ALA:N	2.42	0.50
35:FA:568:G:N2	35:FA:883:C:C2	2.79	0.50
35:FA:619:U:H3	37:FD:131:ASN:HB3	1.75	0.50
35:FA:1005:A:H2'	35:FA:1006:G:O4'	2.12	0.50
35:FA:1053:G:N7	35:FA:1200:C:H5"	2.27	0.50
38:FE:41:ASP:OD1	38:FE:43:ASN:N	2.44	0.50
44:FK:81:ASN:HB2	44:FK:106:ARG:O	2.12	0.50
1:GB:49:C:OP1	15:GO:102:ARG:N	2.41	0.50
3:GA:635:C:N4	3:GA:636:G:C6	2.80	0.50
3:GA:875:G:H1	3:GA:902:C:H42	1.60	0.50
3:GA:910:A:OP1	60:GA:3710:HOH:O	2.17	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:GA:2340:A:H2'	3:GA:2341:G:H8	1.77	0.50
3:GA:2698:U:H2'	3:GA:2699:C:C6	2.46	0.50
3:GA:2751:G:H4'	7:GG:3:VAL:CG1	2.42	0.50
10:GJ:58:ASN:N	10:GJ:127:GLY:O	2.36	0.50
18:GR:83:TYR:C	18:GR:83:TYR:CD1	2.86	0.50
35:HA:1223:C:C5	35:HA:1224:U:H5	2.29	0.50
34:HB:52:ALA:CB	34:HB:199:ILE:HD11	2.42	0.50
55:HV:93:VAL:HG22	55:HV:94:ASP:H	1.77	0.50
3:AA:27:G:N2	3:AA:512:G:H1'	2.26	0.49
3:AA:443:A:C5	5:AE:40:ARG:HD3	2.47	0.49
3:AA:2043:C:OP1	3:AA:2777:G:O2'	2.24	0.49
13:AM:53:MET:HE3	13:AM:63:ILE:HD13	1.94	0.49
23:AW:49:ASN:HA	23:AW:61:LYS:HB2	1.94	0.49
26:AZ:26:LEU:O	26:AZ:37:ARG:NH1	2.44	0.49
37:BD:58:LYS:CB	37:BD:200:ILE:HG13	2.42	0.49
3:CA:1176:U:H2'	3:CA:1177:G:C8	2.47	0.49
3:CA:1847:A:H2'	3:CA:1847:A:N3	2.27	0.49
3:CA:2563:U:H1'	3:CA:2566:A:N6	2.27	0.49
16:CP:4:ILE:HG22	16:CP:8:GLU:HG3	1.93	0.49
19:CS:13:SER:O	19:CS:14:ALA:HB3	2.12	0.49
26:CZ:8:GLN:O	26:CZ:9:THR:HG22	2.12	0.49
35:DA:736:C:H2'	35:DA:737:C:C6	2.47	0.49
35:DA:811:C:O2'	35:DA:901:A:N1	2.39	0.49
34:DB:67:LEU:HD12	34:DB:157:PRO:HG2	1.94	0.49
36:DC:58:GLU:OE2	36:DC:65:ARG:HD2	2.12	0.49
37:DD:66:GLY:O	37:DD:115:ARG:NH2	2.44	0.49
40:DG:47:LEU:HD12	40:DG:124:LEU:HD11	1.94	0.49
6:EF:73:VAL:HG22	6:EF:78:ILE:HD11	1.94	0.49
32:E5:31:ARG:C	32:E5:108:VAL:HG21	2.33	0.49
35:FA:1062:U:H2'	35:FA:1063:C:C6	2.47	0.49
41:FH:106:THR:HG21	41:FH:121:LEU:HD13	1.93	0.49
1:GB:65:U:C4	1:GB:108:A:N3	2.80	0.49
3:GA:794:A:H2'	3:GA:795:C:C6	2.47	0.49
3:GA:1010:A:H5'	17:GQ:61:ILE:CG2	2.42	0.49
3:GA:1026:G:H2'	3:GA:1027:A:C8	2.46	0.49
3:GA:2292:U:C2	3:GA:2293:G:C8	3.00	0.49
3:GA:2352:A:H2'	3:GA:2353:G:O4'	2.12	0.49
3:GA:2354:C:H4'	23:GW:31:LEU:HD13	1.93	0.49
3:GA:2578:G:N2	4:GD:130:GLN:OE1	2.45	0.49
6:GF:130:GLY:HA2	6:GF:152:ASP:CB	2.42	0.49
23:GW:26:GLY:O	23:GW:28:GLU:N	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:GW:30:VAL:HB	23:GW:59:PHE:CD2	2.48	0.49
35:HA:428:G:O4'	35:HA:430:A:C8	2.64	0.49
35:HA:781:A:H4'	35:HA:1522:U:O2'	2.12	0.49
35:HA:829:G:OP1	34:HB:27:LYS:NZ	2.45	0.49
35:HA:1269:A:H1'	35:HA:1326:U:H1'	1.94	0.49
34:HB:32:GLY:HA3	34:HB:39:ILE:H	1.77	0.49
52:HS:36:ARG:HD2	52:HS:51:VAL:HG11	1.94	0.49
3:AA:1315:C:OP2	60:AA:3749:HOH:O	2.18	0.49
3:AA:2701:U:H3'	3:AA:2702:G:C5'	2.42	0.49
3:AA:2867:G:O2'	3:AA:2868:A:OP2	2.28	0.49
17:AQ:93:ILE:O	17:AQ:96:ASP:N	2.39	0.49
35:BA:79:G:HO2'	35:BA:80:A:P	2.32	0.49
35:BA:330:C:O2	60:BA:1890:HOH:O	2.16	0.49
35:BA:390:U:O3'	49:BP:28:ARG:NH1	2.45	0.49
41:BH:12:THR:HG22	41:BH:15:ARG:HH12	1.76	0.49
47:BN:42:TRP:O	47:BN:45:VAL:HG22	2.12	0.49
47:BN:90:ARG:HB2	47:BN:92:GLU:HG3	1.93	0.49
3:CA:1187:G:OP2	60:CA:3360:HOH:O	2.19	0.49
3:CA:1300:G:H4'	3:CA:1301:A:H5'	1.94	0.49
3:CA:1760:C:H2'	3:CA:1761:C:O4'	2.12	0.49
3:CA:1839:G:C6	3:CA:1840:G:N7	2.80	0.49
13:CM:35:ALA:HB2	13:CM:102:LEU:HD21	1.93	0.49
20:CT:50:LEU:H	20:CT:50:LEU:HD12	1.77	0.49
35:DA:676:A:H4'	44:DK:115:PRO:HB3	1.95	0.49
35:DA:1320:C:OP1	52:DS:70:LYS:NZ	2.26	0.49
40:DG:77:SER:HA	40:DG:86:GLN:HA	1.94	0.49
41:DH:47:GLU:HB3	41:DH:62:THR:HB	1.94	0.49
45:DL:7:LEU:HD23	50:DQ:34:TYR:HE1	1.77	0.49
3:EA:580:U:H2'	3:EA:581:C:H6	1.77	0.49
3:EA:600:G:N2	3:EA:605:G:O3'	2.45	0.49
3:EA:2134:A:H2'	3:EA:2156:G:N2	2.27	0.49
20:ET:50:LEU:H	20:ET:50:LEU:HD12	1.77	0.49
23:EW:37:VAL:HA	23:EW:39:GLN:HG2	1.94	0.49
32:E5:31:ARG:C	32:E5:108:VAL:CG2	2.80	0.49
35:FA:1314:C:OP2	52:FS:6:LYS:CD	2.60	0.49
54:FU:12:PHE:CE2	54:FU:16:LEU:HD11	2.46	0.49
54:FU:53:VAL:HG13	54:FU:54:LYS:N	2.27	0.49
55:FV:393:THR:HG21	55:FV:443:PRO:HD3	1.95	0.49
3:GA:570:G:OP1	60:GA:3757:HOH:O	2.19	0.49
3:GA:630:G:OP2	30:G3:22:LYS:NZ	2.44	0.49
3:GA:783:A:OP2	60:GA:3311:HOH:O	2.19	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:GA:1060:U:OP1	9:GI:75:ALA:CB	2.60	0.49
3:GA:1218:G:C2	3:GA:1232:G:C5	3.00	0.49
3:GA:1256:G:O2'	5:GE:77:ILE:HD11	2.12	0.49
11:GK:52:VAL:HG13	11:GK:95:ILE:HD11	1.94	0.49
15:GO:80:GLU:HA	15:GO:83:LEU:HD12	1.94	0.49
35:HA:655:A:H2	35:HA:751:U:H3	1.60	0.49
35:HA:1004:A:H5'	35:HA:1024:G:N2	2.27	0.49
35:HA:1071:C:H2'	35:HA:1072:G:H8	1.77	0.49
38:HE:13:GLU:CB	38:HE:39:VAL:HG12	2.43	0.49
3:AA:1022:G:C5	3:AA:1140:C:C4	3.00	0.49
3:AA:1778:U:H2'	3:AA:1784:A:N6	2.27	0.49
10:AJ:44:TYR:O	10:AJ:45:THR:HB	2.11	0.49
20:AT:54:GLU:CG	20:AT:88:LYS:HB2	2.42	0.49
32:A5:95:LEU:HD22	32:A5:95:LEU:H	1.77	0.49
34:BB:44:LYS:O	34:BB:48:MET:HG2	2.13	0.49
34:BB:141:GLU:HA	34:BB:144:GLU:HB2	1.95	0.49
35:BA:953:G:C6	35:BA:954:G:C4	3.00	0.49
37:BD:147:GLU:OE2	20:CT:91:GLN:NE2	2.45	0.49
3:CA:833:A:H2'	3:CA:834:G:C8	2.47	0.49
3:CA:1913:A:C2	55:DV:591:LEU:HD12	2.47	0.49
4:CD:1:MET:HG2	4:CD:205:PRO:HG3	1.95	0.49
5:CE:149:ILE:HG23	5:CE:188:MET:HG3	1.95	0.49
9:CI:14:ALA:HB3	9:CI:50:LYS:HA	1.92	0.49
19:CS:13:SER:O	19:CS:14:ALA:CB	2.60	0.49
22:CV:4:ILE:HD11	22:CV:50:MET:SD	2.53	0.49
32:C5:94:ARG:O	32:C5:97:LYS:N	2.44	0.49
35:DA:1351:U:C2	35:DA:1352:C:C5	3.00	0.49
37:DD:38:PRO:HD2	37:DD:42:GLY:HA2	1.94	0.49
39:DF:38:ARG:HB3	39:DF:63:ASN:HB2	1.94	0.49
39:DF:53:LYS:O	39:DF:54:LEU:HB3	2.12	0.49
39:DF:86:ARG:HH21	51:DR:64:TYR:HB3	1.77	0.49
3:EA:163:C:O2'	3:EA:164:C:OP2	2.28	0.49
3:EA:2800:A:H3'	3:EA:2801:G:H5"	1.95	0.49
6:EF:118:ALA:HB1	6:EF:166:ARG:HD3	1.94	0.49
11:EK:10:VAL:HG21	11:EK:16:ALA:HB3	1.95	0.49
13:EM:34:LYS:HD2	13:EM:131:VAL:HG11	1.93	0.49
16:EP:58:PHE:HD1	16:EP:75:THR:HG22	1.77	0.49
17:EQ:63:ARG:HH12	17:EQ:96:ASP:CA	2.24	0.49
19:ES:24:ILE:HD11	19:ES:36:LEU:CD2	2.42	0.49
27:E0:42:ILE:HG22	27:E0:43:THR:O	2.12	0.49
32:E5:129:LEU:O	32:E5:131:THR:N	2.46	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:FA:636:U:C5'	50:FQ:6:ARG:HE	2.26	0.49
37:FD:19:LEU:HD11	37:FD:60:LYS:CG	2.42	0.49
37:FD:76:TYR:HA	37:FD:90:LEU:HD13	1.94	0.49
43:FJ:53:ILE:HG12	43:FJ:61:ALA:HB1	1.93	0.49
44:FK:82:LEU:HD11	44:FK:105:PHE:CD2	2.48	0.49
46:FM:81:MET:O	46:FM:92:ARG:NH2	2.46	0.49
3:GA:38:A:H1'	5:GE:43:THR:HA	1.94	0.49
3:GA:2378:A:C5	3:GA:2379:G:H1'	2.46	0.49
2:GC:244:VAL:HG12	2:GC:250:GLN:HA	1.94	0.49
15:GO:14:ALA:O	15:GO:18:LEU:N	2.34	0.49
37:HD:76:TYR:HE2	37:HD:201:VAL:HG13	1.77	0.49
39:HF:45:ARG:HB3	39:HF:59:TYR:CE1	2.47	0.49
43:HJ:57:VAL:HG12	43:HJ:58:ASN:H	1.76	0.49
44:HK:107:ILE:CD1	54:HU:14:VAL:HA	2.42	0.49
46:HM:27:LYS:HA	46:HM:30:SER:HB3	1.93	0.49
47:HN:21:PHE:CD1	47:HN:25:ALA:HB3	2.48	0.49
47:HN:67:THR:HG23	47:HN:83:LYS:HG3	1.95	0.49
3:AA:139:U:O2'	20:AT:1:MET:HA	2.12	0.49
3:AA:747:U:O2'	19:AS:88:ARG:NH2	2.45	0.49
32:A5:138:ARG:NH2	33:A6:26:MET:HA	2.27	0.49
34:BB:70:GLY:HA2	34:BB:163:ILE:HG22	1.94	0.49
34:BB:99:MET:HA	34:BB:106:VAL:HG21	1.94	0.49
45:BL:83:ARG:HG2	45:BL:83:ARG:HH11	1.77	0.49
52:BS:33:THR:HB	52:BS:35:SER:H	1.77	0.49
3:CA:48:G:N1	3:CA:177:G:OP2	2.37	0.49
3:CA:635:C:OP2	12:CL:126:ARG:NH1	2.45	0.49
3:CA:794:A:H2'	3:CA:795:C:C6	2.47	0.49
3:CA:823:C:H2'	3:CA:824:U:O4'	2.12	0.49
3:CA:1057:A:C6	3:CA:1086:A:C2	3.01	0.49
3:CA:1730:C:H4'	3:CA:1730:C:OP1	2.12	0.49
3:CA:2268:A:OP1	60:CA:3503:HOH:O	2.19	0.49
11:CK:13:ASN:OD1	11:CK:98:ARG:N	2.43	0.49
35:DA:577:G:H1'	35:DA:816:A:N3	2.27	0.49
35:DA:1260:G:O2'	35:DA:1275:A:N6	2.43	0.49
49:DP:46:LYS:HG3	49:DP:47:GLU:N	2.27	0.49
55:DV:188:MET:HE3	55:DV:218:TRP:CD1	2.47	0.49
3:EA:1364:G:OP2	24:EX:49:ARG:NH2	2.46	0.49
3:EA:2588:G:OP1	60:EA:3793:HOH:O	2.19	0.49
22:EV:44:HIS:HE1	22:EV:86:LEU:H	1.59	0.49
26:EZ:15:ARG:HH11	26:EZ:15:ARG:CG	2.26	0.49
35:FA:843:U:H2'	35:FA:844:G:H5'	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:FA:1331:G:O2'	35:FA:1332:A:P	2.69	0.49
3:GA:438:G:H2'	3:GA:439:A:C8	2.46	0.49
3:GA:504:A:H3'	3:GA:505:A:H5'	1.95	0.49
3:GA:573:U:H3	3:GA:2031:A:P	2.35	0.49
3:GA:685:A:C2	3:GA:689:A:C6	3.00	0.49
3:GA:818:G:H3'	3:GA:1187:G:H22	1.77	0.49
3:GA:1196:C:H2'	3:GA:1197:G:C8	2.46	0.49
3:GA:1223:G:P	18:GR:68:ARG:HH11	2.35	0.49
3:GA:2265:U:H2'	3:GA:2266:A:N7	2.27	0.49
35:HA:964:A:OP1	60:HA:1822:HOH:O	2.20	0.49
35:HA:1033:G:H2'	35:HA:1034:G:H5'	1.94	0.49
36:HC:154:SER:CB	36:HC:165:THR:HG22	2.41	0.49
51:HR:22:ASP:HB3	51:HR:25:ASP:HB2	1.94	0.49
54:HU:35:ARG:HE	54:HU:40:LYS:HD3	1.78	0.49
55:HV:251:ALA:O	55:HV:254:GLN:HB3	2.12	0.49
3:AA:564:C:O2	3:AA:578:G:N2	2.46	0.49
3:AA:856:G:H21	23:AW:19:ARG:HH12	1.58	0.49
3:AA:1475:G:O2'	3:AA:1514:G:O6	2.30	0.49
3:AA:2330:G:C2	3:AA:2386:A:C2	3.01	0.49
3:AA:2504:U:O5'	3:AA:2504:U:H6	1.94	0.49
4:AD:38:LYS:NZ	4:AD:81:GLU:OE1	2.26	0.49
6:AF:79:ARG:HB3	6:AF:82:TYR:CZ	2.48	0.49
13:AM:35:ALA:O	13:AM:36:VAL:HB	2.11	0.49
17:AQ:63:ARG:NH1	17:AQ:96:ASP:HA	2.27	0.49
23:AW:76:ARG:HH21	23:AW:76:ARG:HG2	1.76	0.49
26:AZ:30:ARG:HB3	26:AZ:30:ARG:HH11	1.76	0.49
32:A5:3:LEU:HD12	32:A5:5:LEU:H	1.76	0.49
35:BA:21:G:OP1	60:BA:1819:HOH:O	2.20	0.49
3:CA:1019:U:H3	3:CA:1142:A:H62	1.61	0.49
3:CA:1084:A:C6	3:CA:1085:A:C6	3.00	0.49
3:CA:1141:U:H4'	3:CA:1142:A:O4'	2.13	0.49
3:CA:1731:G:O2'	3:CA:1732:C:O5'	2.29	0.49
3:CA:2313:C:H5"	6:CF:87:LYS:HD3	1.94	0.49
14:CN:2:ARG:HA	14:CN:5:LYS:HD2	1.94	0.49
14:CN:48:VAL:O	14:CN:51:LEU:N	2.45	0.49
35:DA:636:U:H5"	50:DQ:6:ARG:NH1	2.27	0.49
35:DA:1149:C:O2'	35:DA:1280:A:N1	2.41	0.49
34:DB:150:ILE:O	34:DB:153:MET:N	2.45	0.49
37:DD:125:VAL:O	37:DD:127:GLY:N	2.44	0.49
44:DK:14:LYS:HD2	40:HG:130:ASN:OD1	2.13	0.49
17:EQ:4:LYS:HG3	17:EQ:5:ARG:H	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:ET:34:VAL:HG23	20:ET:34:VAL:O	2.12	0.49
34:FB:132:GLU:HG2	34:FB:132:GLU:O	2.13	0.49
52:FS:36:ARG:HB3	52:FS:72:GLY:CA	2.43	0.49
3:GA:483:A:C8	21:GU:44:HIS:HD2	2.30	0.49
3:GA:948:C:H1'	3:GA:984:A:N3	2.28	0.49
3:GA:963:U:OP2	60:GA:3352:HOH:O	2.19	0.49
3:GA:983:A:C8	3:GA:984:A:N7	2.81	0.49
3:GA:1068:G:H2'	3:GA:1068:G:N3	2.27	0.49
3:GA:1140:C:O4'	3:GA:1143:A:C2	2.66	0.49
3:GA:1869:G:H3'	3:GA:1870:C:H5"	1.95	0.49
3:GA:2758:A:H2'	3:GA:2759:G:H5'	1.95	0.49
12:GL:110:VAL:HG11	12:GL:135:ILE:HD11	1.94	0.49
37:HD:30:THR:HG22	37:HD:31:LYS:H	1.77	0.49
39:HF:42:TRP:HB2	39:HF:59:TYR:HB2	1.94	0.49
46:HM:63:PHE:CE1	46:HM:69:LEU:HD13	2.48	0.49
3:AA:250:G:C6	3:AA:251:A:C6	3.01	0.49
3:AA:308:G:O2'	3:AA:329:G:N2	2.46	0.49
3:AA:1614:A:N1	19:AS:93:ALA:HB2	2.27	0.49
4:AD:91:THR:O	4:AD:91:THR:OG1	2.28	0.49
15:AO:51:ALA:HB3	15:AO:78:VAL:HG13	1.94	0.49
32:A5:4:ASN:C	32:A5:6:GLN:H	2.16	0.49
35:BA:972:C:OP1	43:BJ:59:LYS:NZ	2.29	0.49
38:BE:155:ALA:HB1	41:BH:66:PHE:CE2	2.47	0.49
53:BT:68:HIS:HB3	53:BT:69:LYS:HZ2	1.78	0.49
55:BV:416:ILE:HG12	55:BV:667:ALA:HB3	1.94	0.49
1:CB:32:U:H2'	1:CB:33:G:O4'	2.12	0.49
3:CA:221:A:N1	3:CA:265:A:O2'	2.41	0.49
3:CA:1252:G:C2	17:CQ:32:ARG:HG2	2.47	0.49
3:CA:1386:C:H2'	3:CA:1387:A:C8	2.47	0.49
3:CA:1952:A:C6	3:CA:1953:A:N1	2.80	0.49
3:CA:2204:G:C5	3:CA:2221:G:C2	3.01	0.49
8:CH:23:ALA:O	8:CH:27:ARG:N	2.37	0.49
10:CJ:88:THR:HG23	10:CJ:91:GLU:H	1.77	0.49
27:C0:32:THR:HG22	27:C0:33:SER:N	2.28	0.49
35:DA:1355:G:C4	35:DA:1368:A:C2	3.00	0.49
52:DS:45:ILE:HA	52:DS:62:VAL:CG1	2.42	0.49
3:EA:287:G:H2'	3:EA:288:U:C6	2.47	0.49
3:EA:527:C:H4'	3:EA:528:A:O5'	2.12	0.49
17:EQ:82:LEU:HD12	17:EQ:112:ALA:HB2	1.94	0.49
32:E5:26:VAL:CG1	32:E5:77:VAL:HG11	2.41	0.49
35:FA:1314:C:H2'	35:FA:1315:U:C6	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:FM:114:LYS:H	46:FM:115:PRO:CD	2.25	0.49
3:GA:577:G:H2'	3:GA:578:G:C8	2.48	0.49
3:GA:1535:A:H4'	3:GA:1536:C:OP2	2.13	0.49
3:GA:1713:A:C5	3:GA:1716:U:H1'	2.48	0.49
3:GA:2353:G:O2'	23:GW:31:LEU:HD11	2.11	0.49
20:GT:37:ASP:OD1	20:GT:37:ASP:N	2.46	0.49
35:HA:276:G:H5"	50:HQ:17:MET:HE1	1.94	0.49
35:HA:892:A:O2'	35:HA:1415:G:H4'	2.13	0.49
35:HA:1026:G:H2'	35:HA:1027:C:C5'	2.40	0.49
35:HA:1209:C:C2	35:HA:1210:C:C5	3.01	0.49
2:AC:256:THR:OG1	2:AC:256:THR:O	2.28	0.49
3:AA:1808:A:O2'	24:AX:2:ARG:NH1	2.45	0.49
3:AA:2343:U:O2'	3:AA:2373:G:O2'	2.28	0.49
3:AA:2533:U:OP1	3:AA:2665:A:O2'	2.20	0.49
4:AD:68:PHE:C	4:AD:73:VAL:HG12	2.33	0.49
5:AE:112:LEU:HD13	5:AE:186:VAL:HG11	1.94	0.49
7:AG:15:ASP:O	7:AG:16:VAL:HG13	2.12	0.49
9:AI:48:ILE:HG13	9:AI:49:GLU:H	1.77	0.49
35:BA:932:C:H4'	40:BG:4:ARG:HH21	1.77	0.49
47:BN:20:TYR:O	47:BN:23:LYS:HB3	2.12	0.49
52:BS:10:PHE:C	52:BS:10:PHE:CD1	2.85	0.49
2:CC:77:VAL:HA	2:CC:93:VAL:HA	1.95	0.49
18:CR:49:ILE:HD12	18:CR:52:PRO:HA	1.95	0.49
32:C5:74:ASP:HA	32:C5:77:VAL:HG23	1.94	0.49
35:DA:404:G:O6	37:DD:2:ALA:N	2.45	0.49
35:DA:791:G:N2	35:DA:1497:G:O3'	2.45	0.49
35:DA:1284:C:C2	35:DA:1285:A:N7	2.81	0.49
35:DA:1352:C:H2'	35:DA:1353:G:C8	2.47	0.49
38:DE:16:ILE:HG23	38:DE:110:ALA:HB2	1.93	0.49
42:DI:96:SER:O	42:DI:99:ARG:HB3	2.12	0.49
55:DV:393:THR:HG21	55:DV:443:PRO:HD3	1.94	0.49
3:EA:1024:G:H8	3:EA:1024:G:O5'	1.96	0.49
3:EA:1654:A:H2'	3:EA:1655:A:H8	1.76	0.49
4:ED:11:MET:HE1	4:ED:192:ALA:HA	1.93	0.49
4:ED:106:LYS:O	4:ED:107:VAL:HB	2.12	0.49
11:EK:51:LYS:HG2	11:EK:95:ILE:CD1	2.43	0.49
22:EV:75:GLN:HB2	22:EV:92:VAL:CG2	2.43	0.49
53:FT:5:LYS:HD2	53:FT:7:ALA:H	1.77	0.49
3:GA:547:A:H5"	3:GA:548:G:C8	2.47	0.49
3:GA:565:C:H2'	3:GA:566:U:O4'	2.12	0.49
3:GA:648:G:C2	3:GA:649:G:N7	2.81	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:GA:863:A:H2'	3:GA:864:G:H8	1.77	0.49
3:GA:2482:A:C5	3:GA:2483:C:C5	3.01	0.49
3:GA:2591:C:O3'	60:GA:3459:HOH:O	2.20	0.49
5:GE:119:ILE:HG13	5:GE:119:ILE:O	2.12	0.49
14:GN:73:ASN:HA	14:GN:76:VAL:HG12	1.94	0.49
35:HA:667:G:OP1	35:HA:732:C:O2'	2.22	0.49
35:HA:676:A:H5"	44:HK:115:PRO:HB3	1.95	0.49
35:HA:1220:G:OP1	52:HS:37:ARG:NE	2.45	0.49
34:HB:163:ILE:HG23	34:HB:164:ASP:H	1.77	0.49
3:AA:107:G:H2'	3:AA:108:G:H8	1.78	0.49
3:AA:923:G:H1'	23:AW:23:LYS:CD	2.43	0.49
3:AA:2016:U:H2'	3:AA:2017:U:C6	2.48	0.49
3:AA:2421:G:N7	30:A3:30:HIS:HD2	2.10	0.49
3:AA:2683:C:O2	11:AK:70:ARG:NH2	2.38	0.49
4:AD:151:THR:CG2	4:AD:152:PRO:HD3	2.42	0.49
9:AI:123:ALA:HA	9:AI:126:ARG:CZ	2.43	0.49
18:AR:49:ILE:HD12	18:AR:52:PRO:HA	1.95	0.49
41:BH:41:LYS:HD3	41:BH:48:ASP:HB2	1.94	0.49
54:BU:20:LYS:HE2	54:BU:20:LYS:HA	1.95	0.49
3:CA:183:C:O2'	3:CA:432:A:N3	2.41	0.49
3:CA:1183:U:H2'	3:CA:1184:U:C6	2.48	0.49
3:CA:1309:G:OP1	29:C2:9:VAL:HG13	2.13	0.49
3:CA:1864:U:O3'	3:CA:2409:G:N2	2.46	0.49
11:CK:80:ASP:HB2	16:CP:67:GLU:HG3	1.95	0.49
35:DA:1083:U:H5"	35:DA:1086:U:H5	1.78	0.49
35:DA:1101:A:H61	34:DB:101:THR:HG21	1.78	0.49
35:DA:1451:U:O2'	35:DA:1452:C:OP1	2.23	0.49
37:DD:30:THR:HB	37:DD:31:LYS:HD2	1.94	0.49
3:EA:545:U:O5'	3:EA:545:U:H6	1.96	0.49
3:EA:1186:G:OP2	60:EA:3596:HOH:O	2.19	0.49
3:EA:2297:A:N1	3:EA:2321:U:H5	2.10	0.49
5:EE:149:ILE:CD1	5:EE:172:ALA:HA	2.42	0.49
9:EI:12:VAL:HG23	9:EI:13:ALA:H	1.77	0.49
35:FA:311:C:OP1	49:FP:31:ARG:NH1	2.45	0.49
35:FA:895:G:C6	35:FA:896:C:C4	3.01	0.49
35:FA:1239:A:H62	35:FA:1299:A:N6	2.10	0.49
55:FV:536:PHE:CZ	55:FV:578:LEU:HD23	2.47	0.49
3:GA:210:C:OP1	29:G2:29:GLN:NE2	2.41	0.49
3:GA:271:G:H4'	3:GA:272:A:OP1	2.13	0.49
3:GA:571:U:O2	3:GA:2030:A:O2'	2.25	0.49
3:GA:834:G:H1'	3:GA:2358:A:N3	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:GA:1073:A:N7	3:GA:1074:G:N3	2.60	0.49
3:GA:2400:G:C6	3:GA:2401:U:N3	2.81	0.49
18:GR:58:VAL:HG13	18:GR:102:SER:HB2	1.95	0.49
23:GW:68:PHE:CD1	23:GW:79:ILE:HG12	2.47	0.49
35:HA:1299:A:H2'	35:HA:1299:A:N3	2.28	0.49
35:HA:1346:A:N7	40:HG:10:ARG:NH2	2.60	0.49
35:HA:1350:A:N7	42:HI:120:LYS:NZ	2.61	0.49
34:HB:172:ILE:O	34:HB:176:ASN:ND2	2.45	0.49
34:HB:187:ASP:HB2	34:HB:203:ASP:HB3	1.95	0.49
50:HQ:20:SER:HB2	50:HQ:71:LYS:HZ1	1.78	0.49
52:HS:41:PHE:HB3	52:HS:42:PRO:CD	2.43	0.49
54:HU:17:ARG:HG3	54:HU:19:PHE:HB3	1.93	0.49
55:HV:309:ARG:CZ	55:HV:404:ILE:HD13	2.43	0.49
55:HV:345:SER:N	55:HV:375:LYS:O	2.44	0.49
3:AA:654:A:H3'	3:AA:654:A:N3	2.26	0.49
3:AA:1572:A:OP2	60:AA:3618:HOH:O	2.19	0.49
32:A5:4:ASN:C	32:A5:6:GLN:N	2.66	0.49
32:A5:51:TYR:C	32:A5:51:TYR:CD1	2.86	0.49
35:BA:455:G:C2	35:BA:478:A:C2	3.00	0.49
35:BA:1012:A:C2	35:BA:1018:G:C2	3.01	0.49
35:BA:1084:G:OP1	35:BA:1086:U:C2	2.66	0.49
35:BA:1125:U:O2	35:BA:1126:U:O2'	2.26	0.49
35:BA:1179:A:H2'	35:BA:1180:A:O4'	2.12	0.49
35:BA:1526:G:OP1	54:BU:39:GLU:CG	2.60	0.49
42:BI:88:MET:SD	42:BI:89:GLU:N	2.86	0.49
43:BJ:29:ALA:HB3	43:BJ:36:VAL:CG2	2.43	0.49
3:CA:1131:G:OP1	10:CJ:82:GLY:HA2	2.13	0.49
3:CA:2209:G:C2	3:CA:2216:G:C2	3.00	0.49
8:CH:38:PRO:HB2	8:CH:40:THR:HG23	1.94	0.49
11:CK:121:GLU:OE2	16:CP:65:ASN:ND2	2.46	0.49
25:CY:15:ASN:O	25:CY:19:LEU:N	2.43	0.49
35:DA:237:G:H5"	50:DQ:27:ARG:NH2	2.28	0.49
35:DA:1500:A:H5"	35:DA:1508:A:H5"	1.95	0.49
37:DD:72:PHE:CE2	37:DD:200:ILE:HD11	2.47	0.49
46:DM:114:LYS:CB	46:DM:115:PRO:CD	2.91	0.49
55:DV:177:GLU:N	55:DV:177:GLU:OE1	2.46	0.49
3:EA:84:A:H62	3:EA:101:A:H2	1.59	0.49
3:EA:1292:G:H2'	3:EA:1293:C:H6	1.78	0.49
3:EA:2867:G:O2'	3:EA:2868:A:OP2	2.31	0.49
2:EC:75:ALA:HB2	2:EC:95:TYR:CD1	2.47	0.49
6:EF:7:TYR:O	6:EF:12:VAL:HG12	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:EJ:44:TYR:CD1	10:EJ:44:TYR:C	2.86	0.49
30:E3:3:ILE:HG21	30:E3:62:PRO:HG3	1.95	0.49
35:FA:110:C:C4	35:FA:111:G:C5	3.00	0.49
35:FA:146:G:N2	35:FA:147:G:H1'	2.28	0.49
35:FA:309:A:C2	35:FA:310:G:N7	2.81	0.49
35:FA:1464:U:H2'	35:FA:1465:A:H8	1.78	0.49
36:FC:87:LEU:HA	36:FC:90:VAL:HG22	1.93	0.49
39:FF:55:HIS:O	39:FF:56:LYS:HB2	2.12	0.49
40:FG:18:PHE:CE1	40:FG:58:GLU:HG2	2.48	0.49
1:GB:11:C:O2'	1:GB:15:A:N6	2.46	0.49
3:GA:220:G:N2	60:GA:3226:HOH:O	2.41	0.49
3:GA:479:A:N3	3:GA:481:G:H5"	2.27	0.49
3:GA:568:U:O2'	3:GA:570:G:N7	2.36	0.49
3:GA:627:A:N6	12:GL:112:LEU:O	2.45	0.49
3:GA:997:G:C6	3:GA:998:C:C4	3.01	0.49
3:GA:1285:A:H2'	3:GA:1286:A:H5'	1.95	0.49
4:GD:121:THR:O	4:GD:122:VAL:HB	2.12	0.49
6:GF:107:VAL:N	6:GF:108:PRO:CD	2.76	0.49
14:GN:79:LEU:O	14:GN:80:PHE:HB2	2.13	0.49
15:GO:53:THR:HA	15:GO:59:ALA:HB2	1.95	0.49
18:GR:39:LEU:O	18:GR:49:ILE:HG23	2.13	0.49
35:HA:502:A:H2'	35:HA:503:C:O4'	2.12	0.49
35:HA:658:C:H1'	48:HO:22:THR:HG21	1.94	0.49
7:AG:112:VAL:HG23	7:AG:113:ASP:N	2.28	0.49
8:AH:9:VAL:O	8:AH:13:GLY:N	2.46	0.49
13:AM:34:LYS:HD2	13:AM:131:VAL:HG11	1.95	0.49
20:AT:34:VAL:O	20:AT:34:VAL:CG2	2.61	0.49
35:BA:898:G:N2	35:BA:901:A:OP2	2.46	0.49
35:BA:1010:U:H2'	35:BA:1011:C:C6	2.48	0.49
35:BA:1028:C:C4	35:BA:1029:U:H1'	2.48	0.49
42:BI:6:TYR:CG	42:BI:89:GLU:HB2	2.48	0.49
53:BT:5:LYS:HD2	53:BT:7:ALA:H	1.78	0.49
3:CA:945:A:C4	3:CA:2448:A:C2	3.01	0.49
3:CA:1027:A:C6	3:CA:1126:A:C4	3.00	0.49
3:CA:2685:G:OP1	11:CK:78:ARG:NH2	2.46	0.49
10:CJ:49:ASP:OD1	10:CJ:121:LYS:NZ	2.43	0.49
32:C5:102:ALA:O	32:C5:107:GLU:HB2	2.13	0.49
35:DA:1228:C:P	46:DM:110:LYS:NZ	2.86	0.49
55:DV:145:ASP:C	55:DV:176:GLU:HA	2.33	0.49
3:EA:1300:G:H4'	3:EA:1301:A:H5'	1.94	0.49
3:EA:2681:C:OP2	4:ED:114:LYS:NZ	2.32	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:EW:72:GLY:N	23:EW:73:PRO:CD	2.76	0.49
32:E5:88:HIS:CB	32:E5:89:PRO:CD	2.90	0.49
35:FA:368:U:C6	55:FV:362:ARG:HD3	2.48	0.49
36:FC:154:SER:CB	36:FC:165:THR:HG22	2.43	0.49
3:GA:819:A:C6	3:GA:820:A:C5	3.01	0.49
6:GF:103:ILE:HG23	6:GF:175:PRO:HD3	1.95	0.49
7:GG:84:LYS:HD2	7:GG:84:LYS:N	2.27	0.49
21:GU:86:PHE:HE1	21:GU:92:VAL:HG13	1.78	0.49
35:HA:546:A:P	37:HD:69:GLU:HB2	2.52	0.49
35:HA:583:A:C2	35:HA:584:G:H1'	2.48	0.49
35:HA:1205:U:H2'	35:HA:1206:G:C8	2.48	0.49
55:HV:119:VAL:HB	55:HV:161:ARG:HD2	1.94	0.49
55:HV:190:ALA:N	55:HV:205:GLU:O	2.45	0.49
55:HV:697:ALA:O	55:HV:699:ILE:N	2.46	0.49
3:AA:749:A:C6	3:AA:1618:A:C2	3.01	0.48
3:AA:1869:G:H3'	3:AA:1870:C:H5"	1.94	0.48
3:AA:2393:U:H5'	12:AL:60:ARG:O	2.13	0.48
6:AF:79:ARG:HB3	6:AF:82:TYR:CE1	2.48	0.48
11:AK:30:ARG:NH1	11:AK:32:TYR:O	2.45	0.48
23:AW:23:LYS:HE2	23:AW:24:ARG:H	1.78	0.48
32:A5:39:THR:HA	32:A5:42:ARG:CD	2.43	0.48
34:BB:100:LEU:HD23	34:BB:178:LEU:HD23	1.95	0.48
34:BB:153:MET:SD	34:BB:157:PRO:HG3	2.53	0.48
3:CA:451:U:C2	3:CA:453:A:N7	2.81	0.48
3:CA:1068:G:C3'	3:CA:1069:A:H5"	2.44	0.48
3:CA:1171:G:C6	3:CA:1172:C:N4	2.81	0.48
3:CA:1536:C:H1'	3:CA:1537:G:N2	2.28	0.48
3:CA:1676:A:H2'	3:CA:1677:A:O4'	2.13	0.48
3:CA:1915:U:H2'	3:CA:1916:A:O4'	2.13	0.48
6:CF:107:VAL:N	6:CF:108:PRO:CD	2.76	0.48
10:CJ:30:THR:HG22	10:CJ:31:GLU:N	2.28	0.48
13:CM:96:ILE:HD11	13:CM:126:ILE:HD11	1.94	0.48
15:CO:31:THR:HG23	15:CO:32:PRO:HD2	1.95	0.48
27:C0:24:VAL:O	27:C0:25:THR:OG1	2.28	0.48
27:C0:42:ILE:HG22	27:C0:43:THR:O	2.13	0.48
35:DA:668:G:HO2'	48:DO:46:HIS:CG	2.29	0.48
35:DA:1123:U:O2'	43:DJ:39:PRO:O	2.31	0.48
36:DC:123:GLN:HB3	36:DC:128:VAL:HG11	1.95	0.48
36:DC:140:ASN:HA	36:DC:143:ARG:HB2	1.95	0.48
37:DD:25:VAL:HG12	37:DD:26:ARG:N	2.28	0.48
55:DV:304:ASP:O	55:DV:305:THR:HG22	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:EA:1350:C:C4	3:EA:1351:C:C5	3.01	0.48
3:EA:1794:A:H2'	3:EA:1795:C:C6	2.48	0.48
3:EA:2017:U:H5"	3:EA:2018:G:P	2.52	0.48
3:EA:2346:A:H3'	3:EA:2347:C:H5"	1.94	0.48
9:EI:23:VAL:CG2	9:EI:27:LEU:HD23	2.43	0.48
11:EK:105:ARG:NH2	11:EK:106:GLU:OE2	2.37	0.48
20:ET:29:THR:HB	20:ET:86:THR:HA	1.94	0.48
23:EW:70:VAL:C	23:EW:71:LYS:HD2	2.33	0.48
35:FA:1092:A:N6	35:FA:1093:A:C6	2.81	0.48
38:FE:41:ASP:OD1	38:FE:42:GLY:N	2.46	0.48
3:GA:171:U:H2'	3:GA:172:A:C8	2.48	0.48
3:GA:247:G:C8	3:GA:249:C:C6	3.00	0.48
3:GA:997:G:O2'	3:GA:998:C:H5'	2.12	0.48
3:GA:1077:A:H2	3:GA:1088:A:N7	2.11	0.48
3:GA:1193:G:H2'	3:GA:1194:A:H8	1.78	0.48
3:GA:1248:G:O6	5:GE:46:GLN:NE2	2.46	0.48
3:GA:1359:A:C6	3:GA:1360:G:C4	3.01	0.48
3:GA:1376:C:OP1	60:GA:3392:HOH:O	2.19	0.48
3:GA:1893:C:C5	3:GA:1894:C:C5	3.01	0.48
3:GA:1930:G:N2	3:GA:1969:A:O5'	2.46	0.48
3:GA:2025:C:H2'	3:GA:2026:U:C6	2.48	0.48
3:GA:2332:C:C4'	3:GA:2336:A:C6	2.96	0.48
6:GF:124:ARG:O	6:GF:126:ASN:ND2	2.46	0.48
7:GG:83:THR:HA	7:GG:84:LYS:CE	2.43	0.48
9:GI:74:PRO:O	9:GI:77:VAL:HG23	2.12	0.48
15:GO:2:ASP:OD1	15:GO:3:LYS:N	2.46	0.48
24:GX:70:LEU:HD23	24:GX:73:ARG:HH11	1.78	0.48
26:GZ:29:ARG:CB	26:GZ:30:ARG:HE	2.25	0.48
35:HA:683:G:H1	35:HA:707:U:H3	1.58	0.48
35:HA:1053:G:O2'	35:HA:1199:U:OP2	2.31	0.48
55:HV:488:VAL:HG21	55:HV:661:SER:HB3	1.95	0.48
3:AA:221:A:N1	3:AA:265:A:O2'	2.45	0.48
3:AA:1219:U:OP2	17:AQ:18:LYS:NZ	2.46	0.48
3:AA:1327:A:N6	3:AA:1328:A:C2	2.81	0.48
23:AW:39:GLN:HG2	23:AW:40:ARG:N	2.28	0.48
36:BC:150:LYS:HG3	36:BC:201:TRP:CE3	2.49	0.48
37:BD:147:GLU:HA	37:BD:150:LYS:HB2	1.94	0.48
55:BV:200:VAL:HG23	55:BV:201:THR:N	2.28	0.48
1:CB:90:C:H5'	13:CM:18:ARG:HG2	1.95	0.48
3:CA:954:G:O2'	3:CA:2274:A:N1	2.43	0.48
3:CA:2108:A:N6	3:CA:2182:U:OP1	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CA:2657:A:O3'	7:CG:159:LYS:NZ	2.46	0.48
2:CC:16:VAL:H	2:CC:203:VAL:HG12	1.77	0.48
5:CE:161:ALA:HA	5:CE:164:LEU:HB2	1.94	0.48
16:CP:72:VAL:HG23	16:CP:72:VAL:O	2.13	0.48
32:C5:29:ASP:HA	32:C5:108:VAL:CG1	2.41	0.48
35:DA:201:G:H21	35:DA:469:C:H1'	1.77	0.48
35:DA:769:G:H4'	35:DA:1513:A:H4'	1.96	0.48
34:DB:94:ARG:HG3	34:DB:96:LEU:HD23	1.95	0.48
37:DD:15:GLU:OE2	37:DD:56:ARG:NH2	2.46	0.48
3:EA:137:U:C5	3:EA:140:C:H1'	2.48	0.48
3:EA:1354:A:OP1	2:EC:35:LYS:NZ	2.43	0.48
3:EA:1509:A:O2'	3:EA:1510:G:P	2.71	0.48
1:EB:78:A:N6	1:EB:98:G:O2'	2.44	0.48
16:EP:31:VAL:HG22	16:EP:38:ARG:HG2	1.95	0.48
35:FA:459:A:N6	35:FA:474:G:O6	2.47	0.48
40:FG:70:ARG:HG3	40:FG:96:ARG:HG2	1.93	0.48
41:FH:41:LYS:HD3	41:FH:48:ASP:HA	1.96	0.48
43:FJ:57:VAL:HG13	43:FJ:58:ASN:N	2.28	0.48
3:GA:307:G:H22	3:GA:310:A:P	2.35	0.48
3:GA:952:G:H2'	3:GA:953:G:O5'	2.13	0.48
3:GA:957:C:C4	3:GA:959:A:C4	3.01	0.48
3:GA:1746:A:H2'	3:GA:1747:U:C6	2.48	0.48
5:GE:147:LEU:HD12	5:GE:186:VAL:HG23	1.95	0.48
6:GF:1:ALA:CB	6:GF:97:GLU:HG2	2.42	0.48
10:GJ:55:ILE:HD11	10:GJ:57:LEU:HD21	1.95	0.48
17:GQ:13:HIS:O	17:GQ:16:ILE:N	2.43	0.48
19:GS:6:LYS:HB2	19:GS:103:ILE:O	2.13	0.48
23:GW:9:THR:HG23	23:GW:10:ARG:HD3	1.96	0.48
35:HA:110:C:N4	35:HA:111:G:C6	2.82	0.48
35:HA:563:A:HO2'	35:HA:567:G:H8	1.59	0.48
35:HA:1062:U:H2'	35:HA:1063:C:C6	2.47	0.48
42:HI:34:SER:HB3	42:HI:37:GLN:HG2	1.94	0.48
43:HJ:59:LYS:O	43:HJ:62:ARG:NH1	2.46	0.48
55:HV:632:ILE:HD12	55:HV:642:LEU:CD2	2.44	0.48
3:AA:301:G:H1'	3:AA:302:C:C6	2.48	0.48
3:AA:1485:U:H2'	3:AA:1486:U:C6	2.48	0.48
3:AA:2230:G:O3'	24:AX:29:LEU:HD23	2.14	0.48
21:AU:85:ARG:HD3	21:AU:86:PHE:N	2.28	0.48
24:AX:67:LEU:HD23	24:AX:70:LEU:HD12	1.96	0.48
35:BA:1276:G:H2'	35:BA:1277:C:O4'	2.13	0.48
42:BI:119:ARG:HH21	42:BI:123:ARG:CZ	2.26	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BJ:15:HIS:C	43:BJ:17:LEU:H	2.16	0.48
55:BV:191:ILE:HG21	55:BV:193:TRP:CZ2	2.47	0.48
3:CA:1813:G:H1'	2:CC:49:THR:CG2	2.44	0.48
3:CA:2543:G:H2'	3:CA:2544:G:C8	2.47	0.48
8:CH:9:VAL:HG12	8:CH:10:ALA:N	2.29	0.48
8:CH:23:ALA:O	8:CH:27:ARG:HG2	2.12	0.48
32:C5:127:ALA:O	32:C5:129:LEU:N	2.45	0.48
36:DC:135:LYS:NZ	36:DC:139:GLN:OE1	2.40	0.48
41:DH:79:SER:HA	41:DH:85:ILE:HG12	1.95	0.48
44:DK:46:THR:O	44:DK:50:SER:OG	2.28	0.48
55:DV:337:ARG:HA	55:DV:382:ILE:HG22	1.94	0.48
55:DV:422:PRO:O	55:DV:424:THR:N	2.46	0.48
4:ED:110:THR:HG23	4:ED:171:THR:HG22	1.95	0.48
9:EI:79:LEU:HA	9:EI:83:ALA:CB	2.42	0.48
11:EK:71:ARG:CG	11:EK:105:ARG:NH2	2.77	0.48
35:FA:677:U:H3	35:FA:713:G:H22	1.60	0.48
35:FA:922:G:HO2'	35:FA:1398:A:H2	1.61	0.48
45:FL:3:THR:HG22	45:FL:5:ASN:H	1.77	0.48
52:FS:15:LEU:HD13	52:FS:33:THR:HG21	1.95	0.48
52:FS:63:THR:HG22	52:FS:64:ASP:N	2.28	0.48
3:GA:161:A:C3'	3:GA:162:U:H5"	2.41	0.48
3:GA:1076:C:H2'	3:GA:1077:A:O4'	2.13	0.48
3:GA:1157:G:C6	3:GA:1158:C:C4	3.01	0.48
3:GA:1450:G:N2	3:GA:1452:G:O6	2.42	0.48
3:GA:1527:G:N2	3:GA:1544:A:C8	2.82	0.48
3:GA:2047:C:O2'	3:GA:2823:A:N1	2.37	0.48
3:GA:2194:U:C4	3:GA:2195:U:C5	3.01	0.48
3:GA:2386:A:C2	23:GW:38:ARG:HD2	2.49	0.48
17:GQ:81:GLY:HA2	17:GQ:116:LEU:CD1	2.43	0.48
17:GQ:94:LEU:HD11	18:GR:4:VAL:HG11	1.94	0.48
35:HA:474:G:OP1	49:HP:76:LYS:HD2	2.13	0.48
35:HA:864:A:N1	35:HA:917:G:O2'	2.30	0.48
37:HD:99:ASP:OD1	37:HD:100:ASN:N	2.45	0.48
39:HF:22:ILE:O	39:HF:26:THR:OG1	2.18	0.48
3:AA:528:A:C2	3:AA:2043:C:H4'	2.49	0.48
3:AA:580:U:H2'	3:AA:581:C:H6	1.79	0.48
3:AA:973:A:P	18:AR:81:LYS:HZ3	2.37	0.48
3:AA:1022:G:C6	3:AA:1140:C:C4	3.01	0.48
3:AA:1268:A:OP1	60:AA:3373:HOH:O	2.20	0.48
3:AA:1996:C:OP1	11:AK:31:ARG:NE	2.46	0.48
6:AF:64:PRO:HA	6:AF:88:VAL:HG22	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:110:ILE:O	6:AF:112:ASP:N	2.46	0.48
7:AG:118:ALA:O	7:AG:120:ILE:N	2.41	0.48
9:AI:135:MET:HB3	9:AI:137:LEU:CD2	2.43	0.48
16:AP:105:LYS:HA	16:AP:108:ARG:HD2	1.95	0.48
23:AW:44:PHE:HD1	23:AW:45:HIS:CE1	2.31	0.48
35:BA:320:A:H2'	35:BA:321:A:O4'	2.12	0.48
35:BA:322:C:OP2	35:BA:328:C:N4	2.47	0.48
37:BD:35:GLU:O	37:BD:38:PRO:HD3	2.13	0.48
38:BE:46:VAL:O	38:BE:72:ILE:N	2.39	0.48
39:BF:38:ARG:HG2	39:BF:63:ASN:HB2	1.95	0.48
47:BN:53:ARG:HH21	52:BS:37:ARG:NH2	2.11	0.48
52:BS:22:ALA:HA	52:BS:25:SER:HB3	1.95	0.48
54:BU:34:ARG:CZ	54:BU:35:ARG:HD2	2.43	0.48
55:BV:584:HIS:HB2	55:BV:587:ASP:HB2	1.94	0.48
3:CA:100:U:H4'	3:CA:101:A:O5'	2.13	0.48
3:CA:974:G:C4	3:CA:1186:G:C2	3.01	0.48
3:CA:1326:U:O2'	3:CA:2010:G:O2'	2.22	0.48
35:DA:235:C:H2'	35:DA:236:A:C8	2.48	0.48
35:DA:921:U:H2'	35:DA:922:G:O4'	2.13	0.48
35:DA:1083:U:H5"	35:DA:1086:U:C5	2.47	0.48
39:DF:86:ARG:NH2	51:DR:64:TYR:HB3	2.28	0.48
40:DG:79:ARG:HA	40:DG:83:SER:O	2.13	0.48
43:DJ:35:GLN:HG2	43:DJ:77:VAL:HB	1.95	0.48
44:DK:17:SER:HB3	40:HG:138:ARG:HH12	1.78	0.48
45:DL:99:ARG:HB2	45:DL:117:TYR:HA	1.95	0.48
53:DT:67:ILE:HD11	53:DT:71:LYS:CD	2.44	0.48
3:EA:1174:U:H2'	3:EA:1176:U:H1'	1.96	0.48
6:EF:66:ILE:HD13	6:EF:66:ILE:H	1.79	0.48
6:EF:175:PRO:O	6:EF:176:PHE:CG	2.66	0.48
20:ET:29:THR:CB	20:ET:86:THR:HA	2.44	0.48
23:EW:13:ARG:HG2	23:EW:14:ASP:H	1.79	0.48
32:E5:88:HIS:CB	32:E5:89:PRO:HD3	2.43	0.48
55:FV:307:ALA:HB1	55:FV:404:ILE:HG21	1.95	0.48
3:GA:409:G:C2	3:GA:410:G:C4	3.01	0.48
3:GA:1187:G:H5"	18:GR:83:TYR:CE2	2.48	0.48
3:GA:1803:A:O3'	2:GC:256:THR:OG1	2.27	0.48
3:GA:2024:G:C2	3:GA:2025:C:C2	3.01	0.48
3:GA:2484:G:C2	3:GA:2485:G:C8	3.01	0.48
5:GE:25:GLU:OE1	12:GL:7:SER:OG	2.22	0.48
10:GJ:17:VAL:HG13	10:GJ:57:LEU:CD2	2.44	0.48
14:GN:73:ASN:HA	14:GN:76:VAL:CG1	2.42	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:HA:270:A:H2'	35:HA:271:C:C6	2.49	0.48
35:HA:690:G:H2'	35:HA:691:G:O4'	2.14	0.48
35:HA:1061:G:H4'	43:HJ:58:ASN:ND2	2.28	0.48
37:HD:22:LYS:O	37:HD:24:GLY:N	2.46	0.48
38:HE:56:VAL:O	38:HE:60:ILE:HG13	2.14	0.48
50:HQ:7:THR:OG1	50:HQ:8:LEU:N	2.46	0.48
2:AC:265:PHE:N	2:AC:265:PHE:CD1	2.82	0.48
3:AA:1474:U:H2'	3:AA:1475:G:H5'	1.95	0.48
3:AA:2015:A:C2	27:A0:2:VAL:CG2	2.96	0.48
7:AG:23:ILE:HG21	7:AG:71:LEU:HD11	1.95	0.48
24:AX:70:LEU:O	24:AX:74:GLY:N	2.46	0.48
26:AZ:38:GLU:O	26:AZ:43:ILE:HG12	2.13	0.48
34:BB:131:LYS:NZ	35:BA:1159:U:OP1	2.46	0.48
35:BA:983:A:C2'	35:BA:983:A:N3	2.76	0.48
37:BD:147:GLU:HA	37:BD:150:LYS:HD2	1.96	0.48
44:BK:111:THR:HA	54:BU:4:ILE:O	2.14	0.48
47:BN:9:ARG:O	47:BN:13:ARG:HG3	2.14	0.48
3:CA:947:A:O2'	3:CA:984:A:H2	1.96	0.48
3:CA:959:A:N6	13:CM:82:MET:CE	2.76	0.48
3:CA:1727:C:H2'	3:CA:1728:C:O4'	2.14	0.48
3:CA:2079:U:O2'	24:CX:22:ASN:OD1	2.32	0.48
3:CA:2483:C:N3	13:CM:123:LYS:NZ	2.51	0.48
3:CA:2556:C:H2'	3:CA:2557:G:O4'	2.13	0.48
9:CI:52:LEU:HB3	9:CI:53:PRO:HD2	1.93	0.48
15:CO:5:SER:HA	15:CO:8:ILE:HG22	1.96	0.48
16:CP:92:ARG:CG	16:CP:92:ARG:O	2.62	0.48
18:CR:49:ILE:HB	18:CR:51:VAL:O	2.14	0.48
22:CV:6:ALA:HB1	22:CV:40:ILE:CG2	2.43	0.48
23:CW:23:LYS:HD2	23:CW:24:ARG:H	1.79	0.48
32:C5:93:ALA:HB3	32:C5:95:LEU:HD23	1.96	0.48
35:DA:367:U:C6	35:DA:394:G:N2	2.82	0.48
35:DA:546:A:P	37:DD:69:GLU:HB2	2.53	0.48
35:DA:1225:A:H2'	35:DA:1226:C:C5	2.49	0.48
38:DE:25:VAL:O	38:DE:28:GLY:N	2.41	0.48
45:DL:24:LEU:HG	45:DL:25:GLU:H	1.78	0.48
3:EA:973:A:O4'	3:EA:1188:U:C6	2.66	0.48
3:EA:1224:U:H4'	18:ER:88:GLY:O	2.13	0.48
3:EA:1256:G:O2'	5:EE:77:ILE:HD11	2.14	0.48
3:EA:1808:A:O2'	24:EX:2:ARG:NH1	2.47	0.48
2:EC:80:LEU:HD21	2:EC:109:LEU:HB2	1.95	0.48
6:EF:43:ILE:CG2	6:EF:78:ILE:HG22	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:EJ:81:ILE:CG2	10:EJ:82:GLY:N	2.77	0.48
17:EQ:4:LYS:HG3	17:EQ:5:ARG:N	2.28	0.48
28:E1:8:ILE:HD11	28:E1:51:ALA:HA	1.96	0.48
32:E5:71:CYS:CA	32:E5:117:LEU:CD1	2.90	0.48
32:E5:127:ALA:O	32:E5:129:LEU:N	2.47	0.48
34:FB:167:HIS:ND1	34:FB:167:HIS:O	2.45	0.48
42:FI:47:VAL:O	42:FI:80:ARG:HG2	2.13	0.48
3:GA:371:A:N1	3:GA:401:A:H5"	2.28	0.48
3:GA:468:G:OP2	29:G2:37:LYS:NZ	2.33	0.48
3:GA:565:C:H4'	3:GA:1253:A:N6	2.28	0.48
3:GA:974:G:O5'	18:GR:78:ARG:CZ	2.61	0.48
3:GA:1570:A:C6	3:GA:1571:A:C6	3.02	0.48
3:GA:2371:G:C2	3:GA:2372:U:C6	3.01	0.48
2:GC:195:GLY:O	2:GC:197:ALA:N	2.46	0.48
4:GD:193:VAL:HB	4:GD:194:PRO:HD2	1.95	0.48
11:GK:24:VAL:HG12	11:GK:30:ARG:HD2	1.96	0.48
23:GW:30:VAL:O	23:GW:59:PHE:HB2	2.14	0.48
35:HA:21:G:H2'	35:HA:22:G:C8	2.49	0.48
35:HA:181:A:N7	60:HA:1874:HOH:O	2.34	0.48
36:HC:34:ASP:O	36:HC:38:LYS:N	2.44	0.48
37:HD:38:PRO:HD2	37:HD:42:GLY:CA	2.43	0.48
41:HH:89:LYS:HG3	41:HH:90:ASP:N	2.29	0.48
43:HJ:8:ILE:HB	43:HJ:74:VAL:HB	1.95	0.48
3:AA:11:C:C3'	3:AA:12:U:H5'	2.44	0.48
3:AA:479:A:C2	3:AA:480:A:C4	3.01	0.48
3:AA:770:G:H5"	29:A2:10:LEU:HD23	1.95	0.48
10:AJ:32:LEU:CD2	10:AJ:54:ILE:HD12	2.44	0.48
11:AK:24:VAL:HG13	11:AK:33:ALA:HB2	1.95	0.48
12:AL:19:LEU:HB2	12:AL:27:LEU:HB3	1.94	0.48
13:AM:1:MET:O	13:AM:2:LEU:CB	2.62	0.48
32:A5:51:TYR:HD1	32:A5:52:MET:N	2.12	0.48
35:BA:394:G:O2'	55:BV:359:ARG:NH1	2.46	0.48
35:BA:1305:G:H22	35:BA:1331:G:C2'	2.26	0.48
3:CA:1067:A:N3	55:DV:645:GLN:NE2	2.61	0.48
3:CA:1786:A:H1'	3:CA:1938:A:N6	2.28	0.48
2:CC:195:GLY:O	2:CC:197:ALA:N	2.46	0.48
6:CF:50:ASP:OD1	6:CF:50:ASP:N	2.45	0.48
14:CN:92:GLY:HA2	14:CN:94:TYR:HE1	1.78	0.48
17:CQ:86:SER:O	18:CR:51:VAL:HA	2.14	0.48
32:C5:30:SER:O	32:C5:108:VAL:HG13	2.14	0.48
35:DA:636:U:H2'	35:DA:637:C:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1018:G:C6	35:DA:1019:A:C6	3.02	0.48
35:DA:1071:C:H2'	35:DA:1072:G:H8	1.78	0.48
35:DA:1118:U:OP1	42:DI:11:ARG:NE	2.46	0.48
35:DA:1278:G:H4'	35:DA:1279:G:C8	2.49	0.48
35:DA:1343:G:H1'	42:DI:123:ARG:CZ	2.43	0.48
34:DB:162:VAL:HG22	34:DB:184:ALA:HB2	1.96	0.48
38:DE:62:LYS:O	38:DE:66:LYS:HG2	2.13	0.48
53:DT:44:LYS:HB3	53:DT:87:ALA:HB2	1.96	0.48
54:DU:35:ARG:HB3	54:DU:40:LYS:NZ	2.28	0.48
55:DV:105:VAL:HG23	55:DV:106:LEU:N	2.28	0.48
1:EB:89:U:H3'	1:EB:90:C:C5'	2.44	0.48
11:EK:61:VAL:HG11	11:EK:112:PHE:CZ	2.48	0.48
17:EQ:60:TRP:HA	17:EQ:63:ARG:HE	1.79	0.48
17:EQ:78:PHE:CZ	17:EQ:82:LEU:HD11	2.49	0.48
32:E5:54:VAL:HG22	32:E5:83:ALA:HB1	1.94	0.48
35:FA:505:G:H5'	35:FA:534:U:H2'	1.96	0.48
35:FA:537:G:OP1	60:FA:1879:HOH:O	2.20	0.48
35:FA:1419:G:C5	35:FA:1482:G:N2	2.82	0.48
3:GA:109:C:H4'	3:GA:348:A:H4'	1.96	0.48
3:GA:571:U:P	18:GR:80:ARG:HH12	2.37	0.48
3:GA:860:U:C5	3:GA:916:G:N2	2.82	0.48
3:GA:962:G:P	60:GA:3351:HOH:O	2.72	0.48
3:GA:2352:A:H61	23:GW:30:VAL:HG21	1.78	0.48
15:GO:80:GLU:HA	15:GO:83:LEU:CG	2.43	0.48
35:HA:216:U:H2'	35:HA:217:C:C6	2.49	0.48
35:HA:504:C:OP1	60:HA:1878:HOH:O	2.20	0.48
35:HA:946:A:O2'	35:HA:1334:G:H5'	2.13	0.48
35:HA:1003:G:H21	35:HA:1005:A:H5'	1.78	0.48
39:HF:5:GLU:OE2	51:HR:23:TYR:OH	2.22	0.48
44:HK:16:VAL:O	44:HK:18:ASP:N	2.45	0.48
44:HK:68:GLU:C	44:HK:70:CYS:H	2.16	0.48
47:HN:20:TYR:HE2	47:HN:52:PRO:HG2	1.79	0.48
3:AA:1107:G:H5"	32:A5:58:THR:HG23	1.94	0.48
3:AA:1135:C:N4	3:AA:1139:G:C6	2.82	0.48
3:AA:1199:U:H5'	17:AQ:4:LYS:CE	2.42	0.48
5:AE:164:LEU:HB3	5:AE:167:VAL:CG1	2.44	0.48
10:AJ:43:GLU:O	10:AJ:45:THR:HG22	2.13	0.48
16:AP:19:PHE:N	16:AP:19:PHE:CD1	2.82	0.48
25:AY:8:GLU:O	25:AY:12:GLU:HB2	2.12	0.48
38:BE:105:ILE:HA	38:BE:123:VAL:HG23	1.95	0.48
55:BV:221:ASN:HA	55:BV:224:GLU:CB	2.43	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CA:42:A:H2'	3:CA:43:G:H5'	1.94	0.48
3:CA:500:G:N1	3:CA:503:A:OP2	2.43	0.48
3:CA:783:A:C2	3:CA:785:G:H1'	2.47	0.48
3:CA:1838:C:H4'	3:CA:1839:G:N7	2.29	0.48
3:CA:2318:G:C6	3:CA:2319:G:C6	3.01	0.48
4:CD:174:SER:OG	4:CD:175:LEU:N	2.47	0.48
5:CE:178:VAL:O	5:CE:182:ALA:N	2.45	0.48
10:CJ:44:TYR:CD2	17:CQ:59:LEU:HD22	2.49	0.48
23:CW:24:ARG:NH1	23:CW:25:PHE:O	2.46	0.48
23:CW:37:VAL:HG13	23:CW:56:HIS:HB2	1.96	0.48
32:C5:32:GLY:HA2	32:C5:108:VAL:HG21	1.95	0.48
32:C5:110:ALA:CB	32:C5:113:PHE:CE2	2.97	0.48
35:DA:834:U:H2'	35:DA:835:U:C6	2.48	0.48
35:DA:1526:G:OP2	54:DU:39:GLU:HB3	2.13	0.48
54:DU:40:LYS:N	54:DU:41:PRO:CD	2.77	0.48
55:DV:317:PHE:CE1	55:DV:343:VAL:CG2	2.97	0.48
3:EA:136:G:O6	3:EA:142:A:N6	2.47	0.48
3:EA:668:A:H2'	3:EA:670:A:H62	1.76	0.48
3:EA:999:U:C5	3:EA:1154:G:C5	3.01	0.48
3:EA:1430:G:H2'	3:EA:1431:A:O4'	2.14	0.48
3:EA:1485:U:H2'	3:EA:1486:U:C6	2.49	0.48
3:EA:2520:C:C6	3:EA:2567:G:H1'	2.49	0.48
8:EH:31:VAL:HB	8:EH:32:PRO:CD	2.43	0.48
12:EL:77:ILE:CD1	12:EL:108:ALA:HB1	2.43	0.48
16:EP:13:LYS:NZ	16:EP:80:VAL:HG12	2.29	0.48
23:EW:9:THR:CG2	23:EW:10:ARG:HD3	2.42	0.48
35:FA:1523:G:O3'	44:FK:125:LYS:NZ	2.46	0.48
34:FB:71:THR:HG22	34:FB:72:LYS:H	1.78	0.48
34:FB:156:LEU:HD23	34:FB:156:LEU:H	1.78	0.48
55:FV:20:ASP:N	59:FV:801:GCP:H3B1	2.28	0.48
55:FV:382:ILE:O	55:FV:382:ILE:HD12	2.14	0.48
55:FV:698:VAL:O	55:FV:699:ILE:HD12	2.14	0.48
3:GA:37:C:O2'	5:GE:45:ALA:HA	2.13	0.48
3:GA:994:C:H3'	17:GQ:53:LYS:HE2	1.96	0.48
3:GA:1138:G:C5	3:GA:1139:G:H1'	2.48	0.48
3:GA:1192:G:H2'	3:GA:1193:G:H8	1.79	0.48
3:GA:1801:A:N7	2:GC:261:ARG:NH2	2.62	0.48
3:GA:2057:G:O6	60:GA:3485:HOH:O	2.17	0.48
3:GA:2336:A:N6	23:GW:40:ARG:HB3	2.28	0.48
3:GA:2392:A:C2	12:GL:55:MET:HE3	2.48	0.48
6:GF:28:PRO:HB3	6:GF:159:ALA:HB2	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:GJ:38:GLY:HA2	10:GJ:51:GLY:HA2	1.95	0.48
20:GT:28:ASN:O	20:GT:29:THR:HG22	2.13	0.48
20:GT:34:VAL:HG23	20:GT:34:VAL:O	2.13	0.48
35:HA:439:U:C5	35:HA:440:C:C5	3.02	0.48
35:HA:811:C:O2'	35:HA:901:A:N1	2.47	0.48
35:HA:819:A:N7	35:HA:1529:G:N1	2.61	0.48
37:HD:116:GLN:OE1	37:HD:120:HIS:NE2	2.46	0.48
38:HE:19:ASN:OD1	38:HE:20:ARG:N	2.46	0.48
42:HI:120:LYS:CG	42:HI:123:ARG:HB3	2.44	0.48
2:AC:225:ASN:HB3	2:AC:226:PRO:HD2	1.96	0.48
3:AA:983:A:N6	3:AA:984:A:N1	2.62	0.48
3:AA:2405:G:O2'	3:AA:2406:A:OP1	2.26	0.48
3:AA:2747:G:O2'	7:AG:66:THR:HG22	2.14	0.48
23:AW:9:THR:HG23	23:AW:10:ARG:HD3	1.95	0.48
35:BA:71:A:H8	35:BA:71:A:H5'	1.79	0.48
38:BE:45:ARG:HA	38:BE:72:ILE:O	2.14	0.48
42:BI:55:VAL:HG11	42:BI:94:LEU:HD23	1.95	0.48
46:BM:11:ASP:OD1	46:BM:12:HIS:N	2.36	0.48
54:BU:38:TYR:C	54:BU:41:PRO:HD2	2.34	0.48
55:BV:230:SER:OG	55:BV:232:GLU:OE1	2.31	0.48
3:CA:608:A:H2'	3:CA:609:A:C8	2.49	0.48
3:CA:627:A:C6	3:CA:637:A:C8	3.01	0.48
3:CA:1328:A:H2'	3:CA:1330:C:C5	2.49	0.48
9:CI:58:ILE:HG22	9:CI:59:THR:H	1.79	0.48
9:CI:58:ILE:HG22	9:CI:59:THR:N	2.29	0.48
28:C1:8:ILE:HG12	28:C1:51:ALA:HA	1.96	0.48
50:DQ:12:VAL:O	50:DQ:13:VAL:HB	2.14	0.48
50:DQ:59:VAL:CG1	50:DQ:75:LEU:CD1	2.92	0.48
50:DQ:76:VAL:HG23	50:DQ:77:ARG:N	2.29	0.48
55:DV:5:THR:HG23	55:DV:6:PRO:HD3	1.94	0.48
3:EA:638:G:C5	3:EA:651:G:C2	3.02	0.48
3:EA:2849:U:H4'	3:EA:2868:A:C2	2.49	0.48
10:EJ:73:VAL:HG23	10:EJ:74:TYR:H	1.78	0.48
11:EK:16:ALA:O	11:EK:17:ARG:HB2	2.14	0.48
34:FB:63:LYS:HA	34:FB:224:ARG:HD3	1.96	0.48
37:FD:25:VAL:HG13	37:FD:161:LEU:HD23	1.96	0.48
37:FD:65:TYR:N	37:FD:65:TYR:HD1	2.12	0.48
46:FM:29:ARG:NH2	46:FM:63:PHE:HB2	2.28	0.48
55:FV:96:THR:HG22	55:FV:129:GLN:HE22	1.79	0.48
3:GA:255:A:H2'	3:GA:256:A:O4'	2.13	0.48
3:GA:442:G:O4'	5:GE:41:GLN:NE2	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:GA:2093:G:N7	3:GA:2225:A:H2'	2.28	0.48
3:GA:2300:C:H2'	3:GA:2301:C:C6	2.49	0.48
4:GD:118:PHE:HD1	4:GD:119:ALA:H	1.60	0.48
5:GE:29:HIS:CE1	12:GL:8:PRO:HB3	2.49	0.48
23:GW:28:GLU:O	23:GW:31:LEU:HG	2.14	0.48
24:GX:76:LYS:HG3	24:GX:77:TYR:H	1.79	0.48
29:G2:34:ARG:NH1	29:G2:39:ARG:HD3	2.29	0.48
35:HA:952:U:H5'	35:HA:972:C:N4	2.28	0.48
35:HA:1064:G:C8	35:HA:1066:C:C2	3.01	0.48
47:HN:61:ARG:NH2	47:HN:71:HIS:CE1	2.81	0.48
55:HV:627:ASN:ND2	55:HV:674:THR:HA	2.29	0.48
3:AA:995:C:O2	10:AJ:3:THR:HG23	2.13	0.48
3:AA:1277:G:C5'	14:AN:20:MET:HE2	2.44	0.48
3:AA:1348:C:H2'	3:AA:1349:C:H5'	1.96	0.48
3:AA:1730:C:OP1	3:AA:1730:C:H4'	2.12	0.48
3:AA:2406:A:C2	12:AL:69:ARG:NH2	2.82	0.48
5:AE:32:VAL:HG23	5:AE:178:VAL:HG12	1.95	0.48
6:AF:69:ALA:N	6:AF:82:TYR:O	2.47	0.48
9:AI:14:ALA:HB3	9:AI:51:GLY:H	1.79	0.48
34:BB:163:ILE:HG23	34:BB:164:ASP:N	2.29	0.48
35:BA:203:G:N2	35:BA:215:C:C2	2.82	0.48
35:BA:1413:A:C2	35:BA:1488:G:C2	3.01	0.48
36:BC:47:LEU:HB3	36:BC:50:ALA:HB3	1.94	0.48
41:BH:18:GLN:NE2	41:BH:72:VAL:H	2.12	0.48
44:BK:16:VAL:HG13	44:BK:79:ILE:HG12	1.96	0.48
44:BK:23:ILE:HG13	44:BK:86:VAL:HA	1.96	0.48
3:CA:2564:A:C2	3:CA:2647:U:H4'	2.49	0.48
6:CF:143:ASP:OD1	46:DM:67:GLY:HA3	2.14	0.48
10:CJ:44:TYR:HB2	17:CQ:63:ARG:HB3	1.95	0.48
23:CW:23:LYS:O	23:CW:66:VAL:HB	2.13	0.48
25:CY:3:ALA:HA	25:CY:6:LEU:CB	2.44	0.48
32:C5:43:LYS:NZ	32:C5:98:GLU:HB2	2.29	0.48
32:C5:51:TYR:CD1	32:C5:51:TYR:C	2.88	0.48
32:C5:64:VAL:O	32:C5:68:PRO:HD2	2.13	0.48
32:C5:93:ALA:HA	32:C5:130:PRO:CG	2.44	0.48
35:DA:264:C:H4'	50:DQ:65:ARG:HD2	1.96	0.48
35:DA:673:A:H2'	35:DA:674:G:C8	2.49	0.48
43:DJ:53:ILE:HD11	47:DN:85:ARG:CZ	2.43	0.48
45:DL:63:VAL:HG21	45:DL:95:TYR:CE1	2.49	0.48
1:EB:74:U:O2	22:EV:29:ILE:HD13	2.14	0.48
6:EF:147:ARG:HG3	6:EF:149:ARG:N	2.29	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:FA:1028:C:H42	35:FA:1033:G:H1	1.61	0.48
34:FB:14:HIS:O	34:FB:14:HIS:CG	2.65	0.48
34:FB:162:VAL:HG22	34:FB:184:ALA:HB2	1.96	0.48
38:FE:156:LYS:O	38:FE:159:LYS:NZ	2.46	0.48
39:FF:3:HIS:O	39:FF:92:THR:OG1	2.32	0.48
41:FH:41:LYS:HD3	41:FH:48:ASP:HB2	1.95	0.48
53:FT:68:HIS:C	53:FT:69:LYS:CG	2.81	0.48
54:FU:10:GLU:HG2	54:FU:11:PRO:HD3	1.96	0.48
3:GA:109:C:C5'	3:GA:348:A:H4'	2.44	0.48
3:GA:600:G:H5"	5:GE:27:LEU:HD22	1.96	0.48
3:GA:995:C:O5'	17:GQ:53:LYS:HD3	2.14	0.48
3:GA:2742:G:P	31:G4:36:ARG:HH11	2.37	0.48
4:GD:142:VAL:HB	4:GD:143:PRO:HD2	1.95	0.48
10:GJ:12:LYS:O	10:GJ:13:ARG:HB2	2.13	0.48
17:GQ:60:TRP:CE2	17:GQ:93:ILE:HB	2.49	0.48
21:GU:82:VAL:HG12	21:GU:83:GLY:N	2.29	0.48
23:GW:49:ASN:OD1	23:GW:80:SER:HA	2.14	0.48
25:GY:2:LYS:HG3	25:GY:52:ARG:HD3	1.95	0.48
35:HA:38:G:N2	35:HA:397:A:C4	2.81	0.48
35:HA:401:C:OP2	37:HD:70:ARG:HD3	2.14	0.48
35:HA:664:G:OP1	51:HR:53:ARG:NE	2.41	0.48
38:HE:157:ARG:CZ	41:HH:45:PHE:CZ	2.97	0.48
3:AA:1069:A:C1'	3:AA:1073:A:H62	2.27	0.48
3:AA:1327:A:H2'	3:AA:1328:A:O4'	2.14	0.48
3:AA:1474:U:C2'	3:AA:1475:G:H5'	2.44	0.48
3:AA:2022:U:OP1	60:AA:3656:HOH:O	2.20	0.48
3:AA:2346:A:H3'	3:AA:2347:C:H5"	1.95	0.48
7:AG:30:GLY:O	7:AG:32:LEU:N	2.38	0.48
7:AG:84:LYS:HG3	7:AG:132:LEU:N	2.28	0.48
9:AI:40:ALA:O	9:AI:43:ALA:HB3	2.14	0.48
12:AL:81:ASP:O	12:AL:83:ALA:N	2.41	0.48
23:AW:18:LYS:CG	23:AW:19:ARG:N	2.77	0.48
32:A5:110:ALA:HB1	32:A5:113:PHE:CE1	2.49	0.48
35:BA:411:A:C5	35:BA:429:U:C5	3.02	0.48
35:BA:1021:A:C2'	35:BA:1022:A:H5'	2.44	0.48
35:BA:1182:G:H4'	35:BA:1183:U:H5"	1.96	0.48
35:BA:1314:C:H41	52:BS:4:SER:HA	1.79	0.48
37:BD:4:TYR:CZ	37:BD:11:LEU:HD11	2.48	0.48
43:BJ:29:ALA:O	43:BJ:33:GLY:N	2.47	0.48
44:BK:71:ALA:HB1	44:BK:105:PHE:HE2	1.79	0.48
55:BV:4:THR:CG2	55:BV:378:ARG:CZ	2.92	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:BV:93:VAL:HG13	55:BV:94:ASP:N	2.29	0.48
5:CE:148:ILE:HB	5:CE:169:VAL:HG12	1.95	0.48
13:CM:2:LEU:CD1	13:CM:69:PRO:HD2	2.44	0.48
16:CP:33:GLU:OE2	35:DA:345:C:O3'	2.32	0.48
18:CR:64:VAL:O	18:CR:65:ALA:HB3	2.14	0.48
21:CU:82:VAL:HG12	21:CU:83:GLY:N	2.28	0.48
26:CZ:40:THR:HG23	26:CZ:43:ILE:HG23	1.96	0.48
35:DA:204:G:H3'	35:DA:205:A:H5"	1.96	0.48
55:DV:33:TYR:CE2	55:DV:276:GLN:HG3	2.49	0.48
3:EA:100:U:C2	3:EA:101:A:N6	2.81	0.48
3:EA:1093:G:O2'	3:EA:1098:A:N6	2.44	0.48
3:EA:2287:A:C4	3:EA:2289:G:N7	2.82	0.48
5:EE:161:ALA:HA	5:EE:164:LEU:HD23	1.96	0.48
5:EE:188:MET:HE3	5:EE:196:VAL:HG21	1.96	0.48
28:E1:8:ILE:HG12	28:E1:51:ALA:HA	1.95	0.48
34:FB:9:LEU:HD23	34:FB:9:LEU:O	2.13	0.48
36:FC:150:LYS:HD3	36:FC:201:TRP:CD2	2.49	0.48
39:FF:64:VAL:HG12	39:FF:65:GLU:N	2.29	0.48
41:FH:106:THR:HG21	41:FH:121:LEU:HD22	1.96	0.48
3:GA:163:C:O2'	3:GA:164:C:O5'	2.30	0.48
3:GA:897:C:H2'	3:GA:898:C:C6	2.49	0.48
3:GA:1071:G:C8	3:GA:1089:A:C6	3.02	0.48
3:GA:2056:G:OP2	60:GA:3484:HOH:O	2.20	0.48
3:GA:2204:G:C5	3:GA:2221:G:C2	3.02	0.48
7:GG:112:VAL:HG23	7:GG:113:ASP:N	2.29	0.48
9:GI:83:ALA:CB	9:GI:105:LEU:HD21	2.43	0.48
23:GW:30:VAL:HB	23:GW:59:PHE:HD2	1.79	0.48
23:GW:39:GLN:NE2	23:GW:43:LYS:O	2.45	0.48
35:HA:6:G:O6	38:HE:99:ALA:HB1	2.13	0.48
35:HA:328:C:H4'	35:HA:329:A:H5"	1.94	0.48
35:HA:726:C:O3'	35:HA:742:G:N2	2.41	0.48
35:HA:1219:A:H2'	35:HA:1220:G:C8	2.49	0.48
35:HA:1347:G:N7	42:HI:13:LYS:HE3	2.28	0.48
35:HA:1494:G:C6	35:HA:1495:U:C4	3.02	0.48
36:HC:147:LYS:HB2	36:HC:203:PHE:CE2	2.49	0.48
42:HI:129:LYS:HG3	42:HI:130:ARG:N	2.29	0.48
44:HK:21:ALA:HA	44:HK:35:THR:CG2	2.44	0.48
44:HK:33:THR:HA	44:HK:44:TRP:HD1	1.79	0.48
49:HP:18:GLN:NE2	49:HP:35:ARG:NE	2.61	0.48
50:HQ:28:PHE:O	50:HQ:29:VAL:HG13	2.14	0.48
52:HS:47:LEU:HB2	52:HS:62:VAL:HG21	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AA:391:A:C5	3:AA:411:G:C2	3.02	0.47
3:AA:748:G:OP1	19:AS:88:ARG:NH2	2.45	0.47
3:AA:1607:C:H4'	3:AA:1608:A:O5'	2.13	0.47
6:AF:134:GLN:O	6:AF:136:ILE:N	2.47	0.47
9:AI:60:VAL:HG22	9:AI:66:PHE:HB3	1.95	0.47
10:AJ:44:TYR:CD1	17:AQ:63:ARG:HG2	2.49	0.47
14:AN:12:ARG:CZ	14:AN:20:MET:HE1	2.43	0.47
19:AS:24:ILE:HD11	19:AS:36:LEU:HD13	1.96	0.47
23:AW:47:GLY:H	23:AW:80:SER:HB3	1.79	0.47
32:A5:15:VAL:HG22	32:A5:66:GLY:CA	2.44	0.47
32:A5:110:ALA:HB1	32:A5:113:PHE:CZ	2.49	0.47
35:BA:471:U:H2'	35:BA:472:U:H6	1.79	0.47
3:CA:27:G:N2	3:CA:512:G:H1'	2.29	0.47
3:CA:191:A:O2'	3:CA:678:C:O2	2.31	0.47
3:CA:682:G:H5'	29:C2:26:ASN:ND2	2.29	0.47
3:CA:1031:G:H4'	31:C4:6:SER:HB2	1.96	0.47
3:CA:1059:G:N2	9:CI:127:SER:O	2.44	0.47
3:CA:1789:A:OP1	60:CA:3768:HOH:O	2.20	0.47
3:CA:2146:C:P	3:GA:2146:C:H42	2.37	0.47
3:CA:2522:U:O2'	3:CA:2647:U:OP1	2.17	0.47
35:DA:21:G:H2'	35:DA:22:G:C8	2.49	0.47
35:DA:587:G:N2	35:DA:755:G:C5	2.82	0.47
3:EA:545:U:H2'	3:EA:546:U:O3'	2.14	0.47
3:EA:846:U:O2'	3:EA:847:U:P	2.72	0.47
4:ED:49:GLN:NE2	4:ED:79:LEU:HD13	2.29	0.47
35:FA:41:G:H2'	35:FA:42:G:C8	2.49	0.47
35:FA:461:A:H3'	35:FA:461:A:N3	2.29	0.47
45:FL:82:ILE:HD11	45:FL:95:TYR:HB2	1.95	0.47
54:FU:4:ILE:N	54:FU:19:PHE:CE1	2.81	0.47
3:GA:297:G:H2'	3:GA:298:G:O4'	2.13	0.47
3:GA:557:C:C2	3:GA:558:U:C5	3.02	0.47
3:GA:619:G:P	3:GA:620:G:H22	2.36	0.47
3:GA:648:G:H5'	3:GA:2352:A:H5'	1.96	0.47
3:GA:1482:G:C8	3:GA:1483:G:C8	3.02	0.47
7:GG:22:VAL:HG12	7:GG:36:LEU:HD11	1.96	0.47
11:GK:108:ARG:HD2	11:GK:116:ILE:HD13	1.95	0.47
22:GV:14:LYS:HE3	22:GV:18:ARG:NH2	2.29	0.47
35:HA:1095:U:H2'	35:HA:1096:C:O4'	2.14	0.47
35:HA:1107:C:C4	35:HA:1108:G:N7	2.82	0.47
3:AA:555:G:O2'	3:AA:556:A:OP2	2.31	0.47
3:AA:630:G:N2	3:AA:633:A:OP2	2.37	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AA:1778:U:H2'	3:AA:1784:A:H62	1.78	0.47
19:AS:24:ILE:HG22	19:AS:71:VAL:HG11	1.95	0.47
34:BB:163:ILE:HG23	34:BB:164:ASP:H	1.77	0.47
51:BR:71:THR:HG23	51:BR:74:HIS:H	1.79	0.47
55:BV:658:VAL:CG2	55:BV:663:MET:SD	3.03	0.47
1:CB:74:U:O2	22:CV:29:ILE:HD13	2.14	0.47
1:CB:116:G:C4'	15:CO:54:VAL:HG22	2.43	0.47
3:CA:222:A:N6	3:CA:231:A:C2	2.82	0.47
3:CA:255:A:H2'	3:CA:256:A:O4'	2.14	0.47
3:CA:792:A:C6	3:CA:2440:C:C6	3.02	0.47
3:CA:1378:A:C4	3:CA:1380:G:N7	2.83	0.47
3:CA:1838:C:H4'	3:CA:1839:G:C8	2.48	0.47
3:CA:2134:A:H5"	3:CA:2135:A:C8	2.49	0.47
2:CC:142:ASN:HA	2:CC:153:LEU:O	2.14	0.47
6:CF:116:LEU:HD23	6:CF:175:PRO:HB2	1.96	0.47
13:CM:28:PHE:N	13:CM:104:GLU:OE2	2.46	0.47
15:CO:75:GLY:HA2	15:CO:106:LEU:HD13	1.95	0.47
17:CQ:4:LYS:HG3	17:CQ:5:ARG:H	1.79	0.47
18:CR:46:GLU:OE1	18:CR:46:GLU:N	2.42	0.47
35:DA:158:G:H2'	35:DA:159:G:C5'	2.45	0.47
35:DA:250:A:H4'	35:DA:251:G:O5'	2.15	0.47
37:DD:140:ASN:N	37:DD:182:PHE:O	2.45	0.47
38:DE:82:GLN:HG2	38:DE:150:PRO:HD3	1.95	0.47
44:DK:58:SER:O	44:DK:91:PRO:HG2	2.13	0.47
52:DS:42:PRO:HA	52:DS:67:VAL:HG13	1.96	0.47
3:EA:226:A:C6	3:EA:227:A:C6	3.02	0.47
3:EA:653:U:H3'	3:EA:654:A:C5'	2.44	0.47
3:EA:1301:A:C8	3:EA:1303:G:C8	3.02	0.47
3:EA:1450:G:C6	3:EA:1451:C:N4	2.82	0.47
3:EA:1831:G:H2'	3:EA:1832:C:C6	2.49	0.47
36:FC:156:ARG:H	36:FC:163:ALA:HA	1.78	0.47
39:FF:55:HIS:ND1	39:FF:55:HIS:N	2.62	0.47
45:FL:116:LYS:C	45:FL:117:TYR:HD1	2.17	0.47
47:FN:45:VAL:HG23	47:FN:46:LEU:H	1.79	0.47
52:FS:36:ARG:NH2	52:FS:75:ALA:O	2.47	0.47
55:FV:164:ALA:HB1	55:FV:262:ILE:CD1	2.44	0.47
55:FV:345:SER:N	55:FV:375:LYS:O	2.47	0.47
1:GB:20:G:C2	1:GB:64:G:C2	3.01	0.47
3:GA:217:A:H2'	3:GA:218:A:O4'	2.14	0.47
3:GA:265:A:H4'	3:GA:266:G:OP1	2.12	0.47
3:GA:444:C:O2'	5:GE:44:ARG:HD3	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:GA:1779:U:H5	3:GA:1784:A:N7	2.12	0.47
3:GA:1913:A:C5	55:HV:507:LYS:NZ	2.82	0.47
3:GA:2821:A:H2'	3:GA:2822:G:O4'	2.14	0.47
4:GD:186:LEU:HD11	16:GP:3:ILE:CD1	2.44	0.47
9:GI:78:LEU:CD1	9:GI:128:ILE:HG23	2.44	0.47
10:GJ:73:VAL:HG23	10:GJ:74:TYR:H	1.78	0.47
11:GK:108:ARG:NH1	11:GK:113:MET:SD	2.88	0.47
16:GP:38:ARG:NH1	35:HA:346:G:H4'	2.29	0.47
23:GW:45:HIS:HB2	23:GW:50:VAL:HA	1.94	0.47
26:GZ:29:ARG:HB3	26:GZ:30:ARG:HH21	1.78	0.47
35:HA:1492:A:C6	35:HA:1493:A:C6	3.02	0.47
34:HB:46:VAL:HB	34:HB:47:PRO:HD3	1.96	0.47
40:HG:4:ARG:HG3	40:HG:5:ARG:N	2.29	0.47
42:HI:33:ARG:HB3	42:HI:37:GLN:HB2	1.95	0.47
55:HV:221:ASN:HA	55:HV:224:GLU:HB3	1.96	0.47
55:HV:353:VAL:HG21	55:HV:408:ARG:HH11	1.79	0.47
3:AA:999:U:OP2	60:AA:3355:HOH:O	2.20	0.47
3:AA:1031:G:H4'	31:A4:6:SER:HB2	1.95	0.47
3:AA:1760:C:H2'	3:AA:1761:C:O4'	2.14	0.47
3:AA:2862:G:C5	3:AA:2863:C:C5	3.02	0.47
6:AF:5:ASP:OD1	6:AF:8:LYS:NZ	2.46	0.47
12:AL:82:LEU:CD1	12:AL:116:VAL:HG23	2.44	0.47
13:AM:106:ASP:O	13:AM:108:VAL:N	2.44	0.47
32:A5:23:LEU:H	32:A5:87:GLU:HB2	1.80	0.47
32:A5:88:HIS:CB	32:A5:89:PRO:HD3	2.44	0.47
34:BB:20:ARG:NH1	34:BB:20:ARG:HA	2.29	0.47
34:BB:46:VAL:HB	34:BB:47:PRO:HD3	1.96	0.47
35:BA:1048:G:H5"	47:BN:3:LYS:HG3	1.96	0.47
35:BA:1067:A:N1	35:BA:1108:G:O2'	2.39	0.47
35:BA:1303:C:OP1	60:BA:1794:HOH:O	2.19	0.47
37:BD:197:GLU:O	37:BD:200:ILE:N	2.47	0.47
45:BL:24:LEU:HB2	45:BL:59:ASN:ND2	2.29	0.47
55:BV:309:ARG:NH2	55:BV:402:ALA:O	2.48	0.47
3:CA:1883:U:O4	3:CA:1884:G:N1	2.47	0.47
3:CA:2093:G:O2'	3:CA:2198:A:N1	2.34	0.47
3:CA:2539:C:C4	3:CA:2540:C:C5	3.01	0.47
7:CG:84:LYS:NZ	7:CG:133:LYS:HG2	2.29	0.47
17:CQ:81:GLY:O	17:CQ:85:ALA:N	2.44	0.47
19:CS:15:GLN:O	19:CS:19:LEU:HD13	2.14	0.47
32:C5:7:ASP:N	32:C5:7:ASP:OD1	2.47	0.47
35:DA:1241:G:C2	35:DA:1242:G:N7	2.82	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DC:150:LYS:HG3	36:DC:201:TRP:CE3	2.49	0.47
38:DE:122:ASN:OD1	38:DE:122:ASN:N	2.46	0.47
40:DG:103:TRP:CH2	40:DG:141:VAL:HG21	2.48	0.47
50:DQ:11:ARG:HA	50:DQ:58:VAL:HA	1.97	0.47
3:EA:478:A:C6	3:EA:480:A:C6	3.02	0.47
21:EU:82:VAL:HG12	21:EU:83:GLY:N	2.29	0.47
35:FA:723:U:O2'	35:FA:724:G:P	2.73	0.47
36:FC:53:SER:HB2	36:FC:115:LEU:HG	1.95	0.47
37:FD:105:MET:SD	37:FD:143:VAL:CG1	3.03	0.47
49:FP:6:LEU:CD1	49:FP:17:TYR:HB3	2.44	0.47
55:FV:616:ILE:HA	55:FV:659:PRO:HA	1.96	0.47
3:GA:182:A:C2	3:GA:183:C:C2	3.02	0.47
3:GA:563:A:C6	3:GA:2018:G:C5	3.02	0.47
3:GA:811:U:OP2	12:GL:29:LYS:N	2.44	0.47
3:GA:952:G:C6	3:GA:966:G:C6	3.01	0.47
3:GA:1039:A:C6	3:GA:1040:A:C5	3.03	0.47
3:GA:1095:A:H1'	55:HV:632:ILE:HG13	1.97	0.47
3:GA:1197:G:H2'	3:GA:1198:U:H6	1.77	0.47
2:GC:42:ARG:NH2	2:GC:48:ILE:HD11	2.28	0.47
7:GG:6:ALA:HB1	7:GG:7:PRO:HD2	1.96	0.47
12:GL:88:GLY:O	12:GL:120:VAL:HG13	2.13	0.47
35:HA:363:A:P	45:HL:58:THR:HG21	2.53	0.47
35:HA:459:A:H2'	35:HA:460:A:H5'	1.96	0.47
35:HA:1375:A:C2	35:HA:1376:U:C2	3.02	0.47
37:HD:32:CYS:SG	37:HD:33:LYS:N	2.88	0.47
41:HH:41:LYS:HD2	41:HH:48:ASP:HB2	1.96	0.47
3:AA:995:C:N4	10:AJ:2:LYS:HB3	2.29	0.47
3:AA:1992:G:OP1	60:AA:3419:HOH:O	2.20	0.47
3:AA:2335:A:C5	3:AA:2337:G:C4	3.02	0.47
3:AA:2839:G:N2	3:AA:2880:C:C4	2.82	0.47
28:A1:16:THR:HG21	28:A1:41:VAL:HG13	1.97	0.47
32:A5:100:ALA:HB2	32:A5:125:ARG:HE	1.79	0.47
36:BC:131:ARG:NH2	36:BC:166:GLU:OE2	2.47	0.47
37:BD:174:ASP:OD1	37:BD:176:GLY:N	2.48	0.47
44:BK:35:THR:OG1	44:BK:40:ASN:N	2.47	0.47
51:BR:23:TYR:CE1	51:BR:24:LYS:HG3	2.49	0.47
55:BV:151:PHE:CE1	55:BV:266:CYS:HB3	2.50	0.47
3:CA:780:G:H2'	3:CA:782:A:N7	2.30	0.47
3:CA:1747:U:H2'	3:CA:1748:C:C6	2.49	0.47
5:CE:46:GLN:HG3	5:CE:87:ALA:HB3	1.97	0.47
14:CN:103:ARG:HD3	14:CN:110:MET:HE3	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:CX:53:LYS:HA	24:CX:56:ARG:HG3	1.96	0.47
32:C5:59:LEU:HD23	32:C5:62:ARG:HE	1.79	0.47
35:DA:982:U:H4'	35:DA:983:A:O5'	2.14	0.47
40:DG:109:ARG:O	40:DG:119:ARG:NH2	2.40	0.47
44:DK:22:HIS:CD2	44:DK:35:THR:HG22	2.49	0.47
50:DQ:33:ILE:HB	50:DQ:34:TYR:CD2	2.50	0.47
52:DS:11:ILE:HD12	52:DS:16:LEU:HD13	1.96	0.47
55:DV:256:VAL:O	55:DV:259:ASN:N	2.45	0.47
3:EA:555:G:HO2'	3:EA:556:A:P	2.34	0.47
4:ED:99:GLU:HG3	4:ED:100:LEU:N	2.30	0.47
24:EX:69:GLU:O	24:EX:70:LEU:HB3	2.14	0.47
35:FA:875:U:C4	35:FA:876:C:C5	3.02	0.47
42:FI:129:LYS:HG3	42:FI:130:ARG:HG2	1.95	0.47
45:FL:4:VAL:HG23	50:FQ:36:LYS:CE	2.44	0.47
3:GA:84:A:H62	3:GA:101:A:H2	1.63	0.47
3:GA:783:A:H8	3:GA:784:G:H5"	1.78	0.47
3:GA:1095:A:H1'	55:HV:632:ILE:CB	2.44	0.47
3:GA:1190:G:H2'	3:GA:1191:G:C8	2.49	0.47
3:GA:2212:A:C2	3:GA:2214:C:N4	2.82	0.47
5:GE:28:VAL:HG23	5:GE:32:VAL:HG13	1.97	0.47
9:GI:75:ALA:HA	9:GI:112:LYS:HE2	1.96	0.47
18:GR:68:ARG:HD3	18:GR:92:TRP:CE2	2.49	0.47
35:HA:1405:G:H1	35:HA:1496:C:H5	1.61	0.47
2:AC:84:PRO:HG3	3:AA:1567:G:H2'	1.95	0.47
3:AA:587:C:P	12:AL:21:ARG:NH1	2.88	0.47
3:AA:1010:A:OP2	60:AA:3766:HOH:O	2.20	0.47
3:AA:1817:G:H2'	3:AA:1818:U:H5'	1.97	0.47
3:AA:2793:C:H2'	3:AA:2794:C:C6	2.50	0.47
14:AN:103:ARG:HD3	14:AN:110:MET:HE3	1.95	0.47
18:AR:68:ARG:HD3	18:AR:92:TRP:CZ2	2.49	0.47
19:AS:63:GLY:O	19:AS:64:ALA:CB	2.62	0.47
24:AX:39:VAL:HG22	24:AX:44:ARG:O	2.14	0.47
26:AZ:48:ASN:O	26:AZ:51:SER:OG	2.27	0.47
32:A5:123:ILE:HG12	32:A5:124:ASP:N	2.30	0.47
35:BA:982:U:H4'	35:BA:983:A:C5'	2.44	0.47
35:BA:982:U:C5	35:BA:983:A:N6	2.83	0.47
55:BV:493:THR:HG22	55:BV:613:LEU:HD21	1.97	0.47
3:CA:545:U:H3'	3:CA:546:U:H4'	1.96	0.47
3:CA:855:G:H21	23:CW:23:LYS:HG2	1.79	0.47
3:CA:1178:C:H3'	3:CA:1179:G:H8	1.79	0.47
3:CA:1370:C:H2'	3:CA:1371:G:O4'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CA:1392:A:C6	3:CA:1393:A:C6	3.02	0.47
3:CA:1509:A:C4	3:CA:1510:G:C8	3.03	0.47
3:CA:2326:C:H3'	3:CA:2326:C:C6	2.49	0.47
3:CA:2758:A:H2'	3:CA:2759:G:H5'	1.96	0.47
5:CE:23:PHE:CE1	12:CL:2:ARG:NH2	2.83	0.47
11:CK:19:VAL:HG23	11:CK:43:ILE:HA	1.96	0.47
14:CN:37:THR:HG22	14:CN:110:MET:HE1	1.97	0.47
20:CT:35:ALA:HB3	20:CT:38:ALA:HB2	1.96	0.47
23:CW:30:VAL:HA	23:CW:60:ALA:HB3	1.94	0.47
23:CW:37:VAL:HG11	23:CW:55:ASP:HB2	1.96	0.47
32:C5:15:VAL:HG22	32:C5:66:GLY:HA3	1.96	0.47
35:DA:35:G:O2'	45:DL:115:SER:O	2.29	0.47
35:DA:714:G:N3	35:DA:777:A:H1'	2.30	0.47
38:DE:134:ILE:H	38:DE:134:ILE:HD12	1.79	0.47
55:DV:75:MET:SD	55:DV:202:PHE:CZ	3.08	0.47
55:DV:119:VAL:HB	55:DV:161:ARG:HD2	1.96	0.47
5:EE:175:ILE:HD11	5:EE:180:LEU:HD21	1.96	0.47
10:EJ:12:LYS:O	10:EJ:13:ARG:CB	2.63	0.47
13:EM:35:ALA:HB2	13:EM:102:LEU:HD21	1.96	0.47
16:EP:50:ARG:O	16:EP:51:ASN:HB2	2.15	0.47
18:ER:49:ILE:HD12	18:ER:53:PHE:H	1.78	0.47
32:E5:73:LYS:HB2	32:E5:117:LEU:HD21	1.97	0.47
35:FA:126:G:OP1	35:FA:605:U:O2'	2.29	0.47
35:FA:893:C:C4	35:FA:894:G:N7	2.82	0.47
41:FH:3:MET:CE	41:FH:6:PRO:HA	2.44	0.47
45:FL:76:GLU:HG3	55:FV:454:ASN:CB	2.45	0.47
55:FV:224:GLU:HG3	55:FV:237:TYR:CE2	2.49	0.47
55:FV:365:GLN:HB2	55:FV:374:ILE:HD11	1.96	0.47
3:GA:132:G:N2	3:GA:148:U:C2	2.82	0.47
3:GA:1071:G:C8	3:GA:1089:A:N1	2.82	0.47
3:GA:1178:C:N4	3:GA:1179:G:O6	2.48	0.47
3:GA:1195:G:H2'	3:GA:1196:C:H6	1.79	0.47
3:GA:1252:G:O2'	3:GA:1253:A:C8	2.68	0.47
3:GA:1860:G:N2	3:GA:1882:U:O2	2.38	0.47
3:GA:2423:U:O2'	3:GA:2424:C:OP2	2.30	0.47
2:GC:57:HIS:CD2	2:GC:58:LYS:H	2.33	0.47
6:GF:142:TYR:CE2	46:HM:75:MET:HG2	2.49	0.47
9:GI:16:MET:HB3	9:GI:19:PRO:HG3	1.97	0.47
11:GK:80:ASP:HB2	16:GP:67:GLU:HG3	1.96	0.47
16:GP:47:ILE:HA	16:GP:96:LEU:HB2	1.97	0.47
23:GW:18:LYS:HD2	23:GW:36:ILE:HD11	1.95	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:HF:90:MET:HG2	39:HF:91:ARG:N	2.29	0.47
42:HI:94:LEU:HD12	42:HI:95:ARG:N	2.29	0.47
53:HT:25:ARG:NH1	53:HT:66:LEU:HD11	2.30	0.47
2:AC:232:GLY:H	2:AC:241:LYS:HE3	1.79	0.47
3:AA:725:G:C6	3:AA:726:G:N1	2.82	0.47
3:AA:1509:A:HO2'	3:AA:1510:G:P	2.35	0.47
3:AA:2678:C:H2'	3:AA:2679:A:O4'	2.14	0.47
3:AA:2902:C:C2'	3:AA:2903:U:O5'	2.63	0.47
9:AI:19:PRO:CG	9:AI:23:VAL:HG23	2.45	0.47
9:AI:100:ILE:HD13	9:AI:137:LEU:HD12	1.96	0.47
13:AM:22:GLN:O	13:AM:24:THR:N	2.48	0.47
23:AW:18:LYS:HA	23:AW:36:ILE:HG13	1.95	0.47
27:A0:42:ILE:H	27:A0:42:ILE:HD12	1.80	0.47
35:BA:1028:C:N4	35:BA:1034:G:C2	2.82	0.47
37:BD:150:LYS:O	37:BD:152:GLN:NE2	2.47	0.47
50:BQ:76:VAL:HG23	50:BQ:77:ARG:H	1.79	0.47
55:BV:79:TYR:CD2	55:BV:283:ILE:HD11	2.50	0.47
55:BV:557:ILE:HG21	55:BV:576:ILE:HD12	1.97	0.47
3:CA:571:U:C4	3:CA:2030:A:C6	3.03	0.47
3:CA:1124:G:H1'	31:C4:38:GLY:OXT	2.14	0.47
4:CD:110:THR:HG23	4:CD:171:THR:HG22	1.96	0.47
35:DA:401:C:OP2	37:DD:70:ARG:HD3	2.14	0.47
35:DA:1118:U:H5'	42:DI:106:ARG:HD2	1.95	0.47
35:DA:1287:A:C6	35:DA:1288:A:C6	3.02	0.47
42:DI:39:PHE:O	42:DI:41:ARG:N	2.47	0.47
3:EA:415:A:C2	3:EA:2409:G:C2	3.03	0.47
3:EA:892:A:H2'	3:EA:893:C:C5	2.50	0.47
3:EA:1607:C:H4'	3:EA:1608:A:O5'	2.14	0.47
2:EC:16:VAL:HB	2:EC:203:VAL:HG12	1.97	0.47
2:EC:28:PRO:HG2	2:EC:33:LEU:HD11	1.96	0.47
9:EI:85:ILE:HD13	9:EI:98:GLY:CA	2.44	0.47
10:EJ:3:THR:HB	10:EJ:44:TYR:OH	2.15	0.47
35:FA:401:C:OP2	37:FD:70:ARG:HD3	2.13	0.47
35:FA:521:G:C2	35:FA:522:C:C6	3.03	0.47
35:FA:1181:G:O2'	35:FA:1182:G:N7	2.48	0.47
34:FB:57:ASN:HB2	34:FB:219:THR:CG2	2.45	0.47
37:FD:100:ASN:OD1	37:FD:111:ARG:NH1	2.34	0.47
39:FF:97:THR:O	39:FF:98:GLU:HG2	2.14	0.47
45:FL:5:ASN:HB2	50:FQ:36:LYS:HE3	1.97	0.47
3:GA:181:A:H2'	3:GA:182:A:C8	2.50	0.47
3:GA:557:C:H2'	3:GA:558:U:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:GA:571:U:C5	3:GA:575:A:C6	3.02	0.47
3:GA:1139:G:P	10:GJ:72:LYS:NZ	2.88	0.47
3:GA:1151:A:OP1	60:GA:3356:HOH:O	2.20	0.47
3:GA:1656:C:OP1	4:GD:141:ARG:NH1	2.39	0.47
4:GD:142:VAL:HB	4:GD:143:PRO:CD	2.44	0.47
14:GN:58:ASP:OD1	14:GN:59:SER:N	2.48	0.47
17:GQ:35:PHE:CE1	17:GQ:39:ILE:HD11	2.50	0.47
30:G3:50:SER:O	30:G3:54:LEU:HD13	2.14	0.47
35:HA:1198:G:N2	43:HJ:55:PRO:HG2	2.29	0.47
37:HD:91:LEU:HA	37:HD:94:LEU:HB2	1.96	0.47
41:HH:77:ARG:NE	41:HH:79:SER:O	2.47	0.47
1:AB:29:A:H2'	1:AB:30:C:C6	2.50	0.47
3:AA:451:U:C2	3:AA:453:A:N7	2.83	0.47
3:AA:747:U:C2'	19:AS:88:ARG:NH2	2.78	0.47
3:AA:996:A:H4'	17:AQ:91:ARG:NE	2.29	0.47
3:AA:1090:A:C2	3:AA:1102:C:H1'	2.50	0.47
3:AA:1814:G:C6	3:AA:1815:A:N6	2.82	0.47
3:AA:2889:C:N4	3:AA:2890:G:C6	2.83	0.47
4:AD:174:SER:OG	4:AD:175:LEU:N	2.46	0.47
7:AG:22:VAL:HG23	7:AG:22:VAL:O	2.14	0.47
7:AG:123:GLU:HG2	7:AG:124:CYS:N	2.30	0.47
9:AI:14:ALA:HB1	9:AI:45:THR:HG23	1.97	0.47
22:AV:80:HIS:HD2	22:AV:83:LYS:H	1.62	0.47
34:BB:9:LEU:O	34:BB:9:LEU:HD23	2.15	0.47
34:BB:56:LEU:HD23	34:BB:220:VAL:CG1	2.44	0.47
34:BB:90:PHE:CD1	34:BB:149:GLY:HA3	2.50	0.47
41:BH:11:LEU:CD2	41:BH:75:ILE:HD11	2.45	0.47
43:BJ:6:ILE:HB	43:BJ:76:ILE:HB	1.96	0.47
43:BJ:57:VAL:HG12	43:BJ:58:ASN:N	2.28	0.47
47:BN:21:PHE:HA	47:BN:25:ALA:HB3	1.95	0.47
51:BR:22:ASP:OD1	51:BR:24:LYS:NZ	2.45	0.47
55:BV:453:SER:O	55:BV:455:GLN:N	2.48	0.47
55:BV:698:VAL:O	55:BV:699:ILE:HD12	2.15	0.47
3:CA:118:A:OP2	60:CA:3804:HOH:O	2.20	0.47
3:CA:684:G:C2	3:CA:794:A:C2	3.03	0.47
3:CA:907:G:C6	3:CA:908:C:C4	3.03	0.47
3:CA:983:A:N6	3:CA:984:A:C2	2.82	0.47
3:CA:1182:G:H2'	3:CA:1183:U:O4'	2.15	0.47
3:CA:1486:U:H2'	3:CA:1487:U:C6	2.50	0.47
3:CA:1654:A:H2'	3:CA:1655:A:H8	1.79	0.47
3:CA:2006:C:N4	60:CA:3779:HOH:O	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CA:2547:A:C8	3:CA:2566:A:C8	3.03	0.47
3:CA:2854:G:C6	3:CA:2855:C:C4	3.02	0.47
3:CA:2880:C:O2'	14:CN:92:GLY:O	2.24	0.47
4:CD:178:VAL:N	4:CD:188:LEU:O	2.45	0.47
5:CE:154:ASP:N	5:CE:154:ASP:OD1	2.47	0.47
10:CJ:43:GLU:O	10:CJ:44:TYR:C	2.53	0.47
14:CN:94:TYR:N	14:CN:94:TYR:CD1	2.83	0.47
21:CU:64:ILE:HG12	21:CU:65:GLN:N	2.30	0.47
29:C2:44:VAL:HG12	29:C2:44:VAL:O	2.15	0.47
32:C5:60:LEU:O	32:C5:64:VAL:HB	2.14	0.47
35:DA:207:C:H2'	35:DA:208:U:C5	2.50	0.47
35:DA:264:C:N4	35:DA:265:G:C6	2.82	0.47
35:DA:872:A:C5	35:DA:874:G:C8	3.02	0.47
35:DA:957:U:H1'	35:DA:960:U:C4	2.50	0.47
35:DA:972:C:P	43:DJ:59:LYS:HD3	2.55	0.47
35:DA:976:G:H2'	35:DA:1362:A:C2	2.48	0.47
35:DA:1225:A:C2	35:DA:1226:C:C4	3.02	0.47
35:DA:1356:G:H2'	35:DA:1357:A:C8	2.50	0.47
37:DD:30:THR:HG22	37:DD:31:LYS:H	1.79	0.47
43:DJ:32:THR:HG23	43:DJ:83:THR:HA	1.96	0.47
46:DM:78:LYS:O	46:DM:82:ASP:N	2.47	0.47
48:DO:29:VAL:HG12	48:DO:85:LEU:CD2	2.44	0.47
50:DQ:14:SER:HB3	50:DQ:22:VAL:CG1	2.45	0.47
56:DW:5:UAL:O	56:DW:6:5OH:NP	2.47	0.47
3:EA:511:U:OP2	60:EA:3761:HOH:O	2.20	0.47
3:EA:929:U:H4'	26:EZ:37:ARG:HH12	1.80	0.47
3:EA:1198:U:O3'	17:EQ:4:LYS:HE3	2.15	0.47
3:EA:2053:G:H1	3:EA:2616:C:H42	1.62	0.47
4:ED:91:THR:O	4:ED:92:VAL:C	2.52	0.47
7:EG:162:ARG:CZ	7:EG:168:VAL:HG21	2.45	0.47
11:EK:98:ARG:HA	11:EK:118:LEU:CD2	2.45	0.47
18:ER:64:VAL:N	18:ER:95:ASP:O	2.44	0.47
21:EU:1:ALA:HB1	21:EU:84:PHE:CE2	2.49	0.47
23:EW:46:ALA:HB3	23:EW:79:ILE:O	2.14	0.47
32:E5:88:HIS:HB3	32:E5:89:PRO:HD3	1.96	0.47
32:E5:142:THR:OG1	32:E5:143:MET:N	2.48	0.47
35:FA:16:A:C6	35:FA:17:U:C5	3.03	0.47
35:FA:175:C:O2'	35:FA:1447:A:N1	2.45	0.47
35:FA:972:C:P	43:FJ:59:LYS:HD3	2.55	0.47
35:FA:1142:G:C6	35:FA:1143:G:H1'	2.50	0.47
41:FH:80:ARG:CZ	41:FH:83:LEU:HD13	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:FI:114:LYS:NZ	42:FI:118:LEU:O	2.44	0.47
49:FP:22:ALA:HA	49:FP:33:ILE:HG13	1.95	0.47
55:FV:105:VAL:HG23	55:FV:106:LEU:N	2.30	0.47
3:GA:12:U:O2	3:GA:12:U:H2'	2.15	0.47
3:GA:126:A:C4	29:G2:18:PHE:CD2	3.02	0.47
3:GA:175:G:H2'	3:GA:176:A:O4'	2.15	0.47
3:GA:586:A:N1	3:GA:809:G:O2'	2.32	0.47
3:GA:629:G:H5"	3:GA:650:C:O2'	2.14	0.47
3:GA:644:A:H2'	3:GA:645:C:O4'	2.15	0.47
3:GA:954:G:H4'	13:GM:13:HIS:CE1	2.50	0.47
3:GA:1022:G:C5	3:GA:1140:C:N4	2.83	0.47
3:GA:1060:U:OP1	9:GI:75:ALA:HB2	2.15	0.47
3:GA:1181:U:H2'	3:GA:1182:G:H8	1.79	0.47
3:GA:1794:A:H2'	3:GA:1795:C:C6	2.50	0.47
3:GA:1930:G:O2'	3:GA:1968:G:N1	2.47	0.47
3:GA:2199:A:H3'	3:GA:2200:C:C6	2.50	0.47
3:GA:2211:A:H5"	3:GA:2211:A:N3	2.30	0.47
3:GA:2455:G:C6	3:GA:2456:C:N4	2.82	0.47
3:GA:2502:G:H5'	3:GA:2503:A:H5"	1.97	0.47
3:GA:2526:G:C6	3:GA:2527:C:C4	3.03	0.47
3:GA:2687:U:H2'	3:GA:2688:G:O4'	2.14	0.47
3:GA:2800:A:H3'	3:GA:2801:G:H5"	1.96	0.47
5:GE:178:VAL:O	5:GE:182:ALA:N	2.47	0.47
7:GG:84:LYS:HG2	7:GG:85:LYS:N	2.30	0.47
9:GI:11:GLN:NE2	9:GI:55:PRO:HA	2.29	0.47
16:GP:102:ARG:O	16:GP:103:THR:HG22	2.15	0.47
18:GR:83:TYR:HD1	18:GR:83:TYR:C	2.18	0.47
31:G4:36:ARG:CG	31:G4:37:GLN:N	2.78	0.47
35:HA:111:G:C6	35:HA:330:C:N4	2.83	0.47
35:HA:1025:U:H5"	35:HA:1026:G:H5'	1.97	0.47
35:HA:1216:A:H2'	35:HA:1217:C:C6	2.50	0.47
35:HA:1258:G:H2'	35:HA:1259:C:C6	2.50	0.47
34:HB:100:LEU:HB3	34:HB:174:GLU:CG	2.45	0.47
36:HC:106:VAL:HG23	36:HC:106:VAL:O	2.15	0.47
37:HD:26:ARG:HH11	37:HD:31:LYS:HE2	1.79	0.47
38:HE:104:GLY:HA2	38:HE:122:ASN:HA	1.97	0.47
38:HE:111:MET:CE	38:HE:125:ALA:HB1	2.44	0.47
39:HF:73:GLU:O	39:HF:76:THR:OG1	2.29	0.47
46:HM:3:ARG:HA	46:HM:10:PRO:CD	2.45	0.47
50:HQ:27:ARG:HG2	50:HQ:40:ARG:O	2.14	0.47
55:HV:93:VAL:HG11	55:HV:671:ARG:NH2	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:HV:185:LEU:HB2	55:HV:188:MET:HE1	1.96	0.47
3:AA:478:A:C6	3:AA:480:A:C6	3.03	0.47
3:AA:479:A:H4'	3:AA:480:A:OP1	2.15	0.47
3:AA:947:A:O2'	3:AA:984:A:H2	1.98	0.47
3:AA:1939:U:O2	3:AA:1967:C:H4'	2.15	0.47
3:AA:1958:C:OP1	60:AA:3722:HOH:O	2.20	0.47
3:AA:2425:A:C5'	3:AA:2427:C:O4'	2.62	0.47
7:AG:104:LEU:HB2	7:AG:112:VAL:HG21	1.96	0.47
10:AJ:84:ILE:O	10:AJ:84:ILE:HG23	2.15	0.47
12:AL:23:ILE:HD12	18:AR:84:ARG:CZ	2.45	0.47
37:BD:11:LEU:HG	37:BD:63:ARG:NH1	2.29	0.47
45:BL:99:ARG:HB2	45:BL:117:TYR:HA	1.96	0.47
53:BT:3:ASN:C	53:BT:5:LYS:H	2.17	0.47
55:BV:105:VAL:HG23	55:BV:106:LEU:N	2.30	0.47
3:CA:118:A:C8	3:CA:119:A:C8	3.03	0.47
3:CA:123:G:N2	3:CA:129:C:C2	2.83	0.47
3:CA:284:U:H2'	3:CA:285:G:C8	2.50	0.47
3:CA:635:C:O2'	3:CA:639:U:OP1	2.33	0.47
3:CA:780:G:H21	3:CA:783:A:H62	1.63	0.47
3:CA:1206:G:C6	3:CA:1207:C:C4	3.03	0.47
3:CA:1638:C:H4'	3:CA:2710:C:O2	2.13	0.47
3:CA:2548:U:O2	11:CK:23:LYS:NZ	2.48	0.47
7:CG:101:VAL:HG12	7:CG:115:GLN:HA	1.96	0.47
15:CO:36:TYR:CD1	15:CO:36:TYR:N	2.83	0.47
32:C5:88:HIS:CB	32:C5:89:PRO:HD3	2.43	0.47
35:DA:481:G:H5"	35:DA:481:G:C8	2.50	0.47
40:DG:80:VAL:HB	40:DG:85:TYR:CD2	2.49	0.47
42:DI:49:ARG:O	42:DI:52:LEU:N	2.47	0.47
44:DK:128:ARG:CG	54:DU:34:ARG:NH2	2.77	0.47
3:EA:183:C:N4	3:EA:213:A:H61	2.12	0.47
3:EA:587:C:O2'	12:EL:19:LEU:HD22	2.15	0.47
3:EA:855:G:N3	23:EW:23:LYS:HE3	2.29	0.47
3:EA:958:U:O4'	13:EM:14:LYS:NZ	2.42	0.47
1:EB:24:G:C6	1:EB:56:G:C2	3.03	0.47
4:ED:73:VAL:HG23	4:ED:74:GLU:H	1.80	0.47
10:EJ:44:TYR:HA	17:EQ:59:LEU:CD2	2.44	0.47
15:EO:34:HIS:CD2	15:EO:54:VAL:HG23	2.50	0.47
27:E0:24:VAL:O	27:E0:25:THR:OG1	2.28	0.47
32:E5:59:LEU:HD23	32:E5:62:ARG:NE	2.30	0.47
35:FA:1331:G:O2'	35:FA:1332:A:OP2	2.27	0.47
47:FN:41:ARG:HG3	47:FN:42:TRP:CE3	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
51:FR:22:ASP:OD1	51:FR:24:LYS:HE3	2.15	0.47
3:GA:1288:G:C4	3:GA:1327:A:C2	3.03	0.47
3:GA:1403:A:H2'	3:GA:1404:C:C6	2.50	0.47
3:GA:2276:G:N3	3:GA:2277:G:C8	2.83	0.47
7:GG:32:LEU:N	7:GG:32:LEU:CD1	2.78	0.47
9:GI:83:ALA:HB2	9:GI:105:LEU:CD2	2.45	0.47
12:GL:81:ASP:O	12:GL:83:ALA:N	2.42	0.47
13:GM:34:LYS:HD3	22:GV:82:TYR:HA	1.97	0.47
19:GS:7:HIS:HB2	19:GS:50:VAL:HG22	1.96	0.47
19:GS:13:SER:O	19:GS:14:ALA:CB	2.63	0.47
23:GW:17:ALA:O	23:GW:18:LYS:HB2	2.15	0.47
23:GW:33:GLY:O	23:GW:34:SER:HB3	2.15	0.47
35:HA:374:A:H5"	35:HA:452:A:C2	2.49	0.47
35:HA:716:A:C6	35:HA:717:U:N3	2.83	0.47
35:HA:1171:A:H2'	35:HA:1172:C:C6	2.50	0.47
35:HA:1377:A:N6	40:HG:7:ILE:HD11	2.29	0.47
37:HD:168:PRO:HB2	37:HD:171:LEU:HG	1.97	0.47
39:HF:92:THR:HG22	39:HF:93:LYS:N	2.30	0.47
55:HV:177:GLU:OE1	55:HV:177:GLU:N	2.44	0.47
3:AA:856:G:O2'	23:AW:22:VAL:HG23	2.14	0.47
3:AA:2355:G:H4'	23:AW:20:LEU:CD1	2.44	0.47
4:AD:169:ARG:O	4:AD:170:VAL:HG13	2.15	0.47
10:AJ:12:LYS:O	10:AJ:13:ARG:HB2	2.15	0.47
12:AL:19:LEU:C	12:AL:19:LEU:HD23	2.35	0.47
23:AW:72:GLY:N	23:AW:73:PRO:CD	2.78	0.47
34:BB:16:GLY:HA3	34:BB:40:ILE:HG23	1.97	0.47
34:BB:49:PHE:CD1	34:BB:49:PHE:C	2.87	0.47
35:BA:235:C:H2'	35:BA:236:A:C8	2.50	0.47
35:BA:972:C:P	43:BJ:59:LYS:HD3	2.55	0.47
37:BD:139:PRO:HB3	37:BD:184:ARG:HA	1.96	0.47
42:BI:84:THR:HG21	42:BI:103:PHE:CB	2.45	0.47
3:CA:518:G:H2'	3:CA:519:U:C6	2.50	0.47
3:CA:686:U:H2'	3:CA:788:A:N1	2.30	0.47
3:CA:923:G:O2'	23:CW:24:ARG:O	2.29	0.47
3:CA:975:A:C2	3:CA:990:A:C8	3.02	0.47
3:CA:1061:U:H1'	3:CA:1070:A:O4'	2.14	0.47
3:CA:1090:A:C2	3:CA:1102:C:H1'	2.50	0.47
3:CA:1252:G:N3	3:CA:1253:A:C2	2.83	0.47
3:CA:1439:A:C2	3:CA:1553:A:C5	3.03	0.47
3:CA:1731:G:N3	3:CA:1733:G:N7	2.63	0.47
3:CA:2583:G:OP2	60:CA:3696:HOH:O	2.20	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:CK:5:GLN:O	11:CK:6:THR:HB	2.15	0.47
13:CM:2:LEU:HD12	13:CM:69:PRO:HD2	1.96	0.47
14:CN:73:ASN:HA	14:CN:76:VAL:HG12	1.97	0.47
35:DA:724:G:C2	35:DA:725:G:C8	3.03	0.47
34:DB:98:GLY:HA2	34:DB:101:THR:HG22	1.97	0.47
36:DC:6:HIS:ND1	47:DN:89:MET:HB3	2.29	0.47
36:DC:22:TRP:HB3	36:DC:59:ARG:H	1.80	0.47
36:DC:151:VAL:HG12	36:DC:200:VAL:HG13	1.95	0.47
3:EA:460:A:C2	3:EA:470:A:C4	3.02	0.47
3:EA:1582:C:O2'	3:EA:1585:C:N3	2.44	0.47
3:EA:1869:G:N2	3:EA:1871:A:H8	2.13	0.47
3:EA:2063:C:O2	3:EA:2450:A:N1	2.48	0.47
3:EA:2340:A:H5'	1:EB:41:G:N2	2.30	0.47
3:EA:2557:G:H2'	3:EA:2558:C:C6	2.49	0.47
2:EC:172:THR:HG22	2:EC:182:LYS:HG2	1.95	0.47
7:EG:102:ILE:HG13	7:EG:116:LEU:HD11	1.96	0.47
7:EG:104:LEU:HB2	7:EG:112:VAL:CG2	2.45	0.47
12:EL:62:PRO:HG2	30:E3:24:LYS:HB3	1.96	0.47
14:EN:85:PRO:HA	14:EN:88:ALA:HB2	1.97	0.47
32:E5:39:THR:HA	32:E5:42:ARG:CD	2.45	0.47
35:FA:1348:U:H4'	42:FI:122:ARG:HG3	1.96	0.47
39:FF:15:SER:OG	39:FF:58:HIS:ND1	2.46	0.47
54:FU:25:LYS:O	54:FU:27:GLY:N	2.48	0.47
55:FV:494:ILE:HD11	55:FV:524:PRO:N	2.30	0.47
1:GB:78:A:OP2	22:GV:14:LYS:NZ	2.43	0.47
3:GA:144:A:O4'	20:GT:3:ARG:NH1	2.46	0.47
3:GA:683:U:O3'	29:G2:21:ARG:NH1	2.46	0.47
3:GA:817:C:C4	3:GA:818:G:C5	3.02	0.47
3:GA:2185:U:H2'	3:GA:2186:G:C8	2.50	0.47
3:GA:2547:A:C2	3:GA:2562:U:C2	3.03	0.47
5:GE:46:GLN:HB3	5:GE:86:ALA:HB1	1.97	0.47
6:GF:131:VAL:HG22	6:GF:151:LEU:H	1.80	0.47
15:GO:49:VAL:HG12	15:GO:50:ALA:N	2.30	0.47
19:GS:63:GLY:O	19:GS:64:ALA:CB	2.62	0.47
21:GU:3:LYS:HD3	21:GU:82:VAL:HB	1.97	0.47
35:HA:792:A:H4'	35:HA:793:U:O5'	2.15	0.47
35:HA:1014:A:N7	35:HA:1015:G:C6	2.83	0.47
35:HA:1223:C:P	52:HS:78:ARG:NH1	2.88	0.47
35:HA:1327:C:N4	35:HA:1328:C:H41	2.13	0.47
37:HD:9:LEU:HD21	37:HD:22:LYS:HG3	1.97	0.47
52:HS:51:VAL:HG12	52:HS:52:HIS:N	2.30	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:HV:320:LEU:HD23	55:HV:321:ALA:N	2.30	0.47
2:AC:246:PRO:HG2	2:AC:247:TRP:CZ3	2.50	0.47
3:AA:419:U:H2'	3:AA:420:C:C6	2.50	0.47
3:AA:983:A:N6	3:AA:984:A:C2	2.82	0.47
3:AA:1198:U:O3'	17:AQ:4:LYS:HE3	2.15	0.47
6:AF:10:GLU:O	6:AF:12:VAL:N	2.44	0.47
17:AQ:63:ARG:HH22	17:AQ:96:ASP:N	2.12	0.47
34:BB:88:GLN:HE22	34:BB:220:VAL:CG2	2.27	0.47
35:BA:937:A:OP2	60:BA:1772:HOH:O	2.20	0.47
35:BA:1468:A:C2'	35:BA:1469:C:C5'	2.93	0.47
36:BC:42:TYR:CD2	36:BC:43:LEU:HD12	2.50	0.47
40:BG:4:ARG:O	40:BG:6:VAL:N	2.47	0.47
45:BL:33:VAL:HG23	45:BL:56:ARG:HB3	1.96	0.47
47:BN:20:TYR:HB2	47:BN:55:SER:OG	2.15	0.47
47:BN:33:ASP:O	47:BN:41:ARG:NE	2.48	0.47
1:CB:58:A:N7	1:CB:59:A:N7	2.63	0.47
3:CA:2233:U:H2'	3:CA:2234:G:C8	2.50	0.47
10:CJ:64:VAL:HG13	10:CJ:65:THR:N	2.30	0.47
13:CM:13:HIS:O	13:CM:14:LYS:HB2	2.15	0.47
16:CP:28:LYS:HD3	16:CP:39:LEU:HD23	1.97	0.47
16:CP:50:ARG:CB	16:CP:57:ALA:H	2.25	0.47
17:CQ:91:ARG:HD3	18:CR:11:GLN:HB2	1.97	0.47
23:CW:49:ASN:OD1	23:CW:80:SER:HA	2.14	0.47
24:CX:6:VAL:HG12	24:CX:50:VAL:HG22	1.97	0.47
32:C5:26:VAL:O	32:C5:27:VAL:HB	2.15	0.47
32:C5:129:LEU:CB	32:C5:130:PRO:HD2	2.44	0.47
35:DA:322:C:H5	35:DA:328:C:C5	2.33	0.47
35:DA:674:G:H21	44:DK:118:HIS:HB2	1.79	0.47
35:DA:866:C:H4'	35:DA:919:A:H5'	1.97	0.47
35:DA:1090:U:H2'	35:DA:1091:U:C6	2.50	0.47
35:DA:1118:U:C5'	42:DI:106:ARG:HD2	2.44	0.47
50:DQ:39:LYS:O	50:DQ:40:ARG:HD3	2.15	0.47
55:DV:553:VAL:HG23	55:DV:597:ALA:HB2	1.97	0.47
3:EA:864:G:O6	60:EA:3721:HOH:O	2.18	0.47
3:EA:1172:C:N4	3:EA:1173:U:O2	2.48	0.47
23:EW:29:SER:OG	23:EW:30:VAL:HG12	2.15	0.47
35:FA:739:C:OP1	39:FF:68:GLN:NE2	2.45	0.47
34:FB:46:VAL:HB	34:FB:47:PRO:HD3	1.96	0.47
36:FC:14:ILE:O	36:FC:15:VAL:HG22	2.15	0.47
54:FU:25:LYS:C	54:FU:27:GLY:H	2.18	0.47
3:GA:278:A:H2'	3:GA:278:A:N3	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:GA:479:A:H4'	3:GA:480:A:OP1	2.15	0.47
3:GA:654:A:N3	3:GA:654:A:H3'	2.30	0.47
3:GA:819:A:N1	3:GA:820:A:C4	2.83	0.47
3:GA:901:C:H3'	3:GA:902:C:C5	2.50	0.47
3:GA:1218:G:N1	3:GA:1232:G:N7	2.62	0.47
6:GF:134:GLN:HE21	6:GF:140:ILE:HG21	1.80	0.47
17:GQ:91:ARG:HH21	17:GQ:93:ILE:CG1	2.26	0.47
28:G1:39:ASP:O	28:G1:43:ARG:HA	2.15	0.47
29:G2:18:PHE:O	29:G2:22:MET:N	2.45	0.47
35:HA:1076:U:OP1	34:HB:173:LYS:NZ	2.36	0.47
35:HA:1143:G:H2'	35:HA:1144:G:H8	1.80	0.47
35:HA:1319:A:H5"	52:HS:4:SER:HB2	1.97	0.47
35:HA:1493:A:OP2	56:HW:6:5OH:NQ	2.48	0.47
37:HD:125:VAL:O	37:HD:127:GLY:N	2.47	0.47
39:HF:61:LEU:HD22	51:HR:24:LYS:HD3	1.97	0.47
41:HH:106:THR:HG21	41:HH:121:LEU:HD22	1.97	0.47
43:HJ:6:ILE:HB	43:HJ:76:ILE:HB	1.96	0.47
47:HN:2:ALA:N	47:HN:67:THR:O	2.48	0.47
47:HN:27:LEU:HD23	47:HN:30:ILE:HB	1.97	0.47
3:AA:84:A:N1	3:AA:98:G:O2'	2.30	0.46
3:AA:517:C:OP2	27:A0:9:ARG:NH2	2.48	0.46
3:AA:523:C:H5"	3:AA:540:C:O2'	2.15	0.46
3:AA:657:U:H2'	3:AA:658:U:C6	2.50	0.46
3:AA:1509:A:C4	3:AA:1510:G:C8	3.04	0.46
9:AI:120:ASP:O	9:AI:123:ALA:N	2.46	0.46
20:AT:54:GLU:OE1	20:AT:54:GLU:N	2.48	0.46
23:AW:9:THR:HG23	23:AW:10:ARG:N	2.30	0.46
23:AW:9:THR:CG2	23:AW:10:ARG:HD3	2.44	0.46
23:AW:28:GLU:O	23:AW:30:VAL:N	2.48	0.46
30:A3:21:PHE:O	30:A3:22:LYS:O	2.33	0.46
35:BA:1060:U:C5	36:BC:2:GLY:HA3	2.50	0.46
44:BK:112:ASP:CB	54:BU:20:LYS:HE3	2.46	0.46
55:BV:19:ILE:CD1	55:BV:92:HIS:H	2.28	0.46
3:CA:172:A:H2'	3:CA:173:A:C8	2.50	0.46
3:CA:1063:G:H2'	3:CA:1064:C:O4'	2.15	0.46
3:CA:1387:A:H5'	3:CA:1469:A:H1'	1.96	0.46
3:CA:1779:U:C5	3:CA:1784:A:N7	2.83	0.46
3:CA:2844:G:C2'	3:CA:2845:U:H5'	2.45	0.46
13:CM:68:PHE:CD1	13:CM:68:PHE:C	2.88	0.46
35:DA:421:U:H5'	35:DA:422:C:C5	2.49	0.46
38:DE:45:ARG:HA	38:DE:72:ILE:O	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:DE:155:ALA:HB1	41:DH:66:PHE:CZ	2.50	0.46
39:DF:3:HIS:CD2	39:DF:94:HIS:HA	2.50	0.46
39:DF:51:ILE:HG23	39:DF:85:ILE:HD12	1.97	0.46
40:DG:62:PHE:O	40:DG:66:LEU:N	2.42	0.46
40:DG:140:ASP:O	40:DG:143:ARG:HB3	2.15	0.46
49:DP:56:ARG:NH2	49:DP:59:HIS:CE1	2.84	0.46
53:DT:67:ILE:HD11	53:DT:71:LYS:CE	2.45	0.46
55:DV:691:PRO:O	55:DV:694:VAL:HB	2.15	0.46
3:EA:138:U:H5'	3:EA:139:U:H5"	1.97	0.46
3:EA:485:C:C2	3:EA:496:G:C2	3.03	0.46
3:EA:2547:A:H2'	3:EA:2548:U:C6	2.50	0.46
3:EA:2747:G:O2'	7:EG:66:THR:HG22	2.14	0.46
3:EA:2823:A:C5	3:EA:2824:C:C5	3.03	0.46
3:EA:2880:C:H1'	14:EN:92:GLY:H	1.80	0.46
2:EC:140:VAL:HA	2:EC:190:THR:O	2.15	0.46
6:EF:79:ARG:O	6:EF:82:TYR:HB2	2.14	0.46
13:EM:46:ILE:HD12	13:EM:47:GLU:N	2.29	0.46
17:EQ:4:LYS:NZ	17:EQ:7:VAL:HG22	2.30	0.46
20:ET:54:GLU:CG	20:ET:88:LYS:HB2	2.46	0.46
21:EU:85:ARG:HD2	21:EU:87:GLU:N	2.30	0.46
32:E5:93:ALA:CA	32:E5:130:PRO:HG2	2.44	0.46
35:FA:204:G:H3'	35:FA:205:A:C5'	2.45	0.46
35:FA:977:A:O2'	35:FA:979:C:OP2	2.24	0.46
37:FD:139:PRO:HA	37:FD:182:PHE:HD2	1.81	0.46
39:FF:92:THR:HG22	39:FF:93:LYS:N	2.31	0.46
46:FM:49:SER:O	46:FM:53:ILE:N	2.45	0.46
54:FU:4:ILE:HD13	54:FU:20:LYS:NZ	2.30	0.46
54:FU:12:PHE:CD2	54:FU:16:LEU:HD11	2.50	0.46
55:FV:663:MET:HG2	55:FV:682:MET:SD	2.55	0.46
1:GB:13:G:H2'	1:GB:69:G:N2	2.30	0.46
3:GA:32:C:N4	3:GA:446:G:O2'	2.47	0.46
3:GA:783:A:H2'	3:GA:784:G:H4'	1.97	0.46
3:GA:869:G:O4'	13:GM:8:LYS:NZ	2.45	0.46
3:GA:1050:A:C2	3:GA:2751:G:C5	3.03	0.46
3:GA:1092:C:C2'	3:GA:1093:G:H5'	2.45	0.46
3:GA:1805:A:N3	2:GC:49:THR:OG1	2.48	0.46
3:GA:2571:U:O2'	4:GD:151:THR:CG2	2.63	0.46
5:GE:108:ILE:HD11	5:GE:180:LEU:HB3	1.95	0.46
6:GF:133:GLU:HG3	6:GF:148:VAL:HB	1.96	0.46
9:GI:4:VAL:HG13	9:GI:7:TYR:CE1	2.50	0.46
9:GI:14:ALA:HB2	9:GI:54:ILE:HD12	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:GM:20:LEU:N	13:GM:20:LEU:HD22	2.30	0.46
20:GT:55:VAL:HA	20:GT:87:LEU:HA	1.97	0.46
27:G0:11:LYS:HA	27:G0:14:MET:HE2	1.97	0.46
35:HA:658:C:O4'	48:HO:22:THR:OG1	2.31	0.46
36:HC:36:ASP:OD1	36:HC:59:ARG:NH1	2.46	0.46
40:HG:75:VAL:HA	40:HG:88:PRO:HA	1.97	0.46
40:HG:143:ARG:HD2	44:HK:52:PHE:HZ	1.79	0.46
41:HH:10:MET:CE	41:HH:33:LYS:HA	2.45	0.46
2:AC:67:LYS:HG2	2:AC:150:GLY:HA2	1.97	0.46
2:AC:175:LEU:HD23	3:AA:1799:G:C5	2.49	0.46
3:AA:747:U:H2'	19:AS:88:ARG:NH2	2.30	0.46
6:AF:131:VAL:HG22	6:AF:151:LEU:H	1.80	0.46
17:AQ:91:ARG:HH21	17:AQ:93:ILE:HD13	1.80	0.46
18:AR:64:VAL:HG21	18:AR:97:LYS:HB2	1.97	0.46
32:A5:60:LEU:HD23	32:A5:78:GLY:HA3	1.97	0.46
34:BB:32:GLY:O	34:BB:33:ALA:CB	2.64	0.46
34:BB:101:THR:HG21	35:BA:1101:A:H61	1.80	0.46
41:BH:112:THR:HG22	41:BH:114:ARG:H	1.80	0.46
42:BI:57:MET:SD	42:BI:58:VAL:CA	3.03	0.46
55:BV:219:HIS:C	55:BV:221:ASN:N	2.68	0.46
3:CA:2134:A:H2'	3:CA:2135:A:C8	2.49	0.46
3:CA:2698:U:H2'	3:CA:2699:C:C6	2.51	0.46
3:CA:2897:U:H2'	3:CA:2898:U:C6	2.50	0.46
2:CC:80:LEU:HD11	2:CC:109:LEU:HD13	1.96	0.46
6:CF:79:ARG:HB3	6:CF:82:TYR:CE2	2.50	0.46
17:CQ:63:ARG:HH12	17:CQ:96:ASP:CA	2.28	0.46
28:C1:16:THR:HB	28:C1:41:VAL:HG11	1.97	0.46
32:C5:136:ILE:H	32:C5:136:ILE:HD12	1.80	0.46
35:DA:322:C:H41	35:DA:328:C:H6	1.63	0.46
35:DA:721:G:H4'	35:DA:722:G:O4'	2.16	0.46
35:DA:920:U:H2'	35:DA:921:U:C6	2.51	0.46
35:DA:1266:G:N2	35:DA:1269:A:OP2	2.39	0.46
34:DB:23:ASN:ND2	34:DB:190:SER:O	2.49	0.46
37:DD:44:ARG:O	37:DD:46:PRO:HD3	2.15	0.46
45:DL:38:TYR:HB2	45:DL:52:VAL:HG23	1.97	0.46
55:DV:9:ARG:NH1	55:DV:80:GLU:HG3	2.30	0.46
3:EA:2230:G:O3'	24:EX:29:LEU:HD23	2.15	0.46
3:EA:2352:A:C6	3:EA:2366:A:C4	3.03	0.46
2:EC:93:VAL:CG1	2:EC:94:LEU:N	2.78	0.46
6:EF:121:PHE:CE1	6:EF:127:TYR:HD1	2.33	0.46
17:EQ:94:LEU:C	17:EQ:96:ASP:H	2.18	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:ES:2:GLU:HA	19:ES:108:SER:HB3	1.98	0.46
32:E5:116:GLU:CG	32:E5:117:LEU:H	2.26	0.46
35:FA:159:G:N1	35:FA:163:C:N4	2.63	0.46
35:FA:1000:A:H2'	35:FA:1001:C:C6	2.50	0.46
44:FK:16:VAL:CG1	44:FK:79:ILE:HG12	2.45	0.46
45:FL:76:GLU:HG3	55:FV:454:ASN:HB2	1.98	0.46
48:FO:4:SER:O	48:FO:7:ALA:N	2.48	0.46
3:GA:126:A:C5	29:G2:18:PHE:CD2	3.03	0.46
3:GA:242:G:H5"	30:G3:63:TYR:CE2	2.50	0.46
3:GA:563:A:C6	3:GA:2018:G:C4	3.03	0.46
3:GA:1778:U:H2'	3:GA:1784:A:N6	2.30	0.46
3:GA:1792:G:O2'	3:GA:1830:C:OP1	2.30	0.46
3:GA:2297:A:N1	3:GA:2321:U:C5	2.83	0.46
3:GA:2349:G:OP1	30:G3:44:ARG:NH2	2.40	0.46
3:GA:2448:A:OP1	60:GA:3677:HOH:O	2.20	0.46
3:GA:2636:C:H2'	3:GA:2637:U:C6	2.49	0.46
2:GC:114:GLN:O	2:GC:124:LYS:NZ	2.42	0.46
17:GQ:85:ALA:HA	17:GQ:115:ALA:HB2	1.96	0.46
23:GW:30:VAL:HA	23:GW:60:ALA:HB3	1.97	0.46
28:G1:37:LYS:HB2	28:G1:48:TYR:CD1	2.50	0.46
35:HA:181:A:H1'	35:HA:194:C:N4	2.29	0.46
35:HA:686:U:O4	35:HA:703:G:O2'	2.25	0.46
35:HA:1028:C:C2	35:HA:1034:G:H1'	2.50	0.46
35:HA:1221:G:H4'	52:HS:77:THR:HG21	1.96	0.46
34:HB:118:THR:O	34:HB:119:GLN:HB2	2.15	0.46
37:HD:124:MET:HA	37:HD:129:VAL:HA	1.96	0.46
48:HO:3:LEU:HB3	48:HO:8:THR:HG22	1.97	0.46
1:AB:51:G:OP2	15:AO:64:TYR:HD2	1.98	0.46
2:AC:255:LYS:NZ	3:AA:1844:C:O3'	2.43	0.46
4:AD:148:GLN:HB2	4:AD:152:PRO:HG2	1.96	0.46
13:AM:46:ILE:HD13	13:AM:47:GLU:N	2.30	0.46
15:AO:15:ARG:NE	15:AO:93:ASP:OD2	2.44	0.46
18:AR:68:ARG:HD3	18:AR:92:TRP:CE2	2.50	0.46
20:AT:61:LEU:C	20:AT:61:LEU:HD12	2.35	0.46
21:AU:38:ILE:CG2	21:AU:39:ASN:H	2.28	0.46
25:AY:56:LEU:O	25:AY:57:LEU:HB3	2.14	0.46
32:A5:54:VAL:HG22	32:A5:83:ALA:HB1	1.97	0.46
32:A5:127:ALA:O	32:A5:129:LEU:N	2.48	0.46
35:BA:77:A:H2	35:BA:92:U:C2	2.33	0.46
38:BE:89:HIS:CE1	38:BE:90:THR:HG1	2.33	0.46
42:BI:34:SER:HB3	42:BI:37:GLN:HG2	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:CB:81:G:C6	1:CB:82:U:C4	3.04	0.46
3:CA:341:C:H2'	3:CA:342:A:O4'	2.15	0.46
3:CA:709:U:H2'	3:CA:710:U:O4'	2.15	0.46
3:CA:1609:A:C2	3:CA:1616:A:C8	3.04	0.46
3:CA:1731:G:N2	3:CA:1734:G:C6	2.84	0.46
3:CA:2364:C:H4'	23:CW:55:ASP:OD1	2.15	0.46
3:CA:2376:A:H2'	3:CA:2377:A:O4'	2.15	0.46
15:CO:110:ALA:HA	15:CO:113:ALA:HB3	1.97	0.46
35:DA:945:G:C6	35:DA:1337:G:C5	3.04	0.46
35:DA:1284:C:C6	35:DA:1285:A:C8	3.02	0.46
35:DA:1299:A:N3	35:DA:1299:A:H2'	2.31	0.46
37:DD:36:GLN:O	37:DD:36:GLN:HG2	2.15	0.46
37:DD:62:ARG:HH21	37:DD:68:LEU:HA	1.81	0.46
38:DE:83:HIS:CG	41:DH:96:MET:CE	2.98	0.46
45:DL:7:LEU:HD23	50:DQ:34:TYR:CE1	2.50	0.46
55:DV:310:HIS:O	55:DV:312:SER:N	2.48	0.46
3:EA:923:G:H1'	23:EW:23:LYS:CD	2.43	0.46
3:EA:1474:U:C4	3:EA:1475:G:N1	2.83	0.46
3:EA:1727:C:H2'	3:EA:1728:C:O4'	2.14	0.46
3:EA:2636:C:H2'	3:EA:2637:U:C6	2.50	0.46
3:EA:2755:C:O2'	3:EA:2756:U:H2'	2.16	0.46
4:ED:70:LYS:O	4:ED:71:ALA:HB3	2.15	0.46
9:EI:14:ALA:HB2	9:EI:54:ILE:HD11	1.96	0.46
9:EI:27:LEU:HD13	9:EI:34:ILE:CD1	2.46	0.46
18:ER:49:ILE:HB	18:ER:51:VAL:O	2.15	0.46
20:ET:24:MET:HE3	20:ET:29:THR:HG21	1.98	0.46
35:FA:114:U:O2'	35:FA:115:G:H5'	2.16	0.46
35:FA:250:A:H4'	35:FA:251:G:O5'	2.15	0.46
35:FA:756:C:HO2'	41:FH:2:SER:N	2.13	0.46
35:FA:946:A:C2	35:FA:1236:A:C2	3.03	0.46
34:FB:70:GLY:HA2	34:FB:163:ILE:CG2	2.45	0.46
36:FC:66:VAL:HG12	36:FC:67:THR:N	2.29	0.46
38:FE:94:VAL:HG21	38:FE:111:MET:SD	2.55	0.46
3:GA:163:C:O2'	3:GA:164:C:P	2.74	0.46
3:GA:528:A:H2'	3:GA:2042:A:N1	2.29	0.46
3:GA:602:A:N3	3:GA:655:A:C2	2.83	0.46
3:GA:822:G:C4	3:GA:823:C:C5	3.03	0.46
3:GA:866:A:C8	3:GA:914:G:C2	3.03	0.46
3:GA:1804:C:OP1	2:GC:256:THR:OG1	2.33	0.46
3:GA:2264:C:C4	3:GA:2265:U:C4	3.04	0.46
5:GE:5:LEU:HD22	5:GE:10:SER:HB3	1.95	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:GE:128:ALA:O	5:GE:130:LYS:N	2.46	0.46
13:GM:132:THR:O	13:GM:134:THR:OG1	2.33	0.46
15:GO:39:VAL:HB	15:GO:49:VAL:HB	1.97	0.46
23:GW:28:GLU:HG2	23:GW:29:SER:N	2.30	0.46
23:GW:40:ARG:HG3	23:GW:56:HIS:CD2	2.50	0.46
23:GW:63:ASP:OD1	23:GW:63:ASP:N	2.49	0.46
35:HA:114:U:O2'	35:HA:115:G:H5'	2.15	0.46
35:HA:451:A:C2	35:HA:480:U:C4	3.03	0.46
35:HA:539:A:N6	35:HA:540:G:O6	2.48	0.46
35:HA:588:G:H1'	41:HH:3:MET:CE	2.45	0.46
35:HA:842:U:O2'	35:HA:846:G:O6	2.33	0.46
35:HA:878:A:H2'	35:HA:879:C:O4'	2.15	0.46
35:HA:1021:A:C2	35:HA:1022:A:N7	2.83	0.46
3:AA:1784:A:O3'	60:AA:3446:HOH:O	2.21	0.46
3:AA:2059:A:OP2	60:AA:3271:HOH:O	2.20	0.46
6:AF:39:VAL:HG13	6:AF:40:GLY:N	2.31	0.46
10:AJ:37:ARG:HA	10:AJ:118:MET:CE	2.45	0.46
21:AU:73:ASN:HA	21:AU:95:PHE:CE2	2.50	0.46
24:AX:39:VAL:HG21	24:AX:42:GLU:HB2	1.96	0.46
32:A5:110:ALA:O	32:A5:113:PHE:N	2.46	0.46
35:BA:426:U:H5"	37:BD:37:ALA:CB	2.45	0.46
35:BA:815:A:H4'	35:BA:817:C:C4	2.50	0.46
35:BA:983:A:N3	35:BA:983:A:H2'	2.30	0.46
37:BD:30:THR:HG22	37:BD:31:LYS:HD3	1.96	0.46
37:BD:110:THR:HG23	37:BD:113:GLU:H	1.79	0.46
43:BJ:100:ILE:O	43:BJ:100:ILE:HG13	2.15	0.46
53:BT:44:LYS:HB3	53:BT:87:ALA:HB1	1.96	0.46
3:CA:443:A:C5	5:CE:40:ARG:CD	2.98	0.46
3:CA:580:U:H2'	3:CA:581:C:H6	1.80	0.46
3:CA:878:A:C2	3:CA:900:A:C4	3.03	0.46
3:CA:945:A:N7	60:CA:3262:HOH:O	2.35	0.46
3:CA:2902:C:O2'	3:CA:2903:U:OP1	2.28	0.46
7:CG:85:LYS:HG2	7:CG:131:VAL:HB	1.97	0.46
8:CH:3:VAL:HA	8:CH:39:ALA:CB	2.46	0.46
12:CL:106:GLU:C	12:CL:107:PHE:CD1	2.89	0.46
29:C2:31:LEU:HD21	29:C2:43:THR:HG21	1.96	0.46
32:C5:24:SER:C	32:C5:116:GLU:CG	2.83	0.46
35:DA:751:U:H2'	35:DA:751:U:O2	2.14	0.46
50:DQ:76:VAL:HG23	50:DQ:77:ARG:H	1.80	0.46
55:DV:514:GLN:HA	55:DV:587:ASP:O	2.15	0.46
55:DV:691:PRO:HB2	55:DV:694:VAL:HG23	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:EA:518:G:H4'	19:ES:18:ARG:NH1	2.31	0.46
3:EA:570:G:C4	3:EA:2030:A:N7	2.84	0.46
3:EA:742:A:H2'	3:EA:743:A:C8	2.50	0.46
3:EA:1077:A:H4'	9:EI:93:ASN:HB3	1.97	0.46
3:EA:1456:G:C6	3:EA:1457:U:C4	3.03	0.46
3:EA:2684:U:C4	3:EA:2685:G:N7	2.83	0.46
32:E5:23:LEU:HA	32:E5:118:ILE:CD1	2.45	0.46
35:FA:426:U:P	37:FD:33:LYS:HZ3	2.39	0.46
35:FA:579:A:C2	35:FA:763:G:C2	3.03	0.46
35:FA:1526:G:OP2	54:FU:39:GLU:HG2	2.16	0.46
38:FE:95:PHE:CE1	38:FE:97:GLN:HG2	2.51	0.46
44:FK:24:HIS:CB	44:FK:31:ILE:HG13	2.45	0.46
55:FV:529:SER:OG	55:FV:532:LYS:NZ	2.22	0.46
1:GB:73:A:C5	1:GB:104:A:C2	3.03	0.46
3:GA:277:G:C2'	3:GA:278:A:OP2	2.63	0.46
3:GA:1075:C:C4	3:GA:1076:C:N4	2.84	0.46
3:GA:2018:G:C2	3:GA:2019:A:C4	3.04	0.46
3:GA:2019:A:H4'	17:GQ:33:VAL:HG21	1.97	0.46
3:GA:2660:A:N7	55:HV:672:SER:HA	2.30	0.46
18:GR:48:LYS:HD2	18:GR:49:ILE:C	2.36	0.46
19:GS:76:VAL:HG12	19:GS:103:ILE:HA	1.97	0.46
20:GT:83:ALA:HB1	20:GT:85:VAL:HG23	1.98	0.46
30:G3:30:HIS:ND1	30:G3:31:ILE:HG22	2.31	0.46
31:G4:7:VAL:HG23	31:G4:8:LYS:N	2.30	0.46
35:HA:148:G:N2	35:HA:175:C:O2	2.48	0.46
35:HA:1053:G:N7	35:HA:1200:C:C5'	2.79	0.46
35:HA:1266:G:N2	35:HA:1269:A:OP2	2.48	0.46
34:HB:202:ASN:OD1	34:HB:204:ASP:N	2.48	0.46
34:HB:207:ARG:HB2	34:HB:211:LEU:HD13	1.97	0.46
36:HC:82:GLU:O	36:HC:86:LYS:N	2.43	0.46
37:HD:25:VAL:HG23	37:HD:26:ARG:H	1.80	0.46
39:HF:66:ALA:HB1	39:HF:67:PRO:HD2	1.96	0.46
42:HI:38:TYR:CD2	42:HI:39:PHE:CD2	3.03	0.46
3:AA:1057:A:C6	3:AA:1086:A:C2	3.04	0.46
3:AA:1079:C:O2	9:AI:130:GLY:HA3	2.15	0.46
3:AA:1392:A:N6	3:AA:1393:A:N6	2.63	0.46
3:AA:2144:G:H3'	3:AA:2144:G:N3	2.30	0.46
3:AA:2365:G:H4'	23:AW:59:PHE:CZ	2.51	0.46
3:AA:2649:C:H2'	3:AA:2650:U:C6	2.50	0.46
3:AA:2897:U:H2'	3:AA:2898:U:C6	2.51	0.46
6:AF:147:ARG:HG3	6:AF:148:VAL:N	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:57:VAL:HG23	9:AI:71:LYS:CE	2.46	0.46
16:AP:72:VAL:O	16:AP:72:VAL:HG23	2.15	0.46
18:AR:66:HIS:CG	18:AR:94:THR:HG22	2.49	0.46
35:BA:579:A:H2'	35:BA:580:C:H6	1.80	0.46
35:BA:675:A:H1'	44:BK:118:HIS:CD2	2.51	0.46
35:BA:1331:G:O2'	35:BA:1332:A:P	2.73	0.46
35:BA:1494:G:O5'	56:BW:3:SER:OG	2.33	0.46
36:BC:59:ARG:HA	36:BC:64:ILE:HA	1.97	0.46
37:BD:105:MET:SD	37:BD:143:VAL:HG22	2.55	0.46
55:BV:218:TRP:N	55:BV:218:TRP:CD1	2.83	0.46
55:BV:546:PRO:HD3	55:BV:583:TYR:CE2	2.50	0.46
1:CB:116:G:H2'	1:CB:117:G:C8	2.49	0.46
3:CA:277:G:O2'	3:CA:278:A:OP2	2.29	0.46
3:CA:1360:G:OP1	60:CA:3606:HOH:O	2.21	0.46
3:CA:2015:A:C2	27:C0:2:VAL:CG2	2.98	0.46
3:CA:2478:A:P	31:C4:2:LYS:HZ1	2.38	0.46
10:CJ:39:LYS:HA	10:CJ:43:GLU:HG3	1.97	0.46
13:CM:132:THR:HG22	13:CM:133:LYS:H	1.80	0.46
32:C5:110:ALA:HB1	32:C5:113:PHE:CZ	2.50	0.46
35:DA:481:G:O2'	35:DA:482:A:C8	2.65	0.46
35:DA:1179:A:H2'	35:DA:1180:A:O4'	2.16	0.46
35:DA:1305:G:H22	35:DA:1331:G:C2'	2.28	0.46
35:DA:1309:G:OP1	46:DM:87:ARG:NH2	2.48	0.46
34:DB:163:ILE:HG23	34:DB:164:ASP:N	2.31	0.46
36:DC:159:GLY:HA2	36:DC:193:TYR:CE1	2.51	0.46
37:DD:132:ILE:HG22	37:DD:134:SER:N	2.29	0.46
49:DP:32:PHE:N	49:DP:32:PHE:CD1	2.84	0.46
53:DT:30:THR:HA	53:DT:33:LYS:HG3	1.97	0.46
3:EA:443:A:N7	5:EE:40:ARG:HD3	2.31	0.46
3:EA:1088:A:HO2'	3:EA:1089:A:P	2.38	0.46
3:EA:1385:A:H1'	3:EA:1386:C:C6	2.50	0.46
3:EA:2395:C:H2'	3:EA:2396:G:O4'	2.16	0.46
3:EA:2517:C:C6	3:EA:2542:A:N7	2.83	0.46
3:EA:2595:G:N2	3:EA:2598:A:OP2	2.44	0.46
2:EC:68:ARG:O	2:EC:188:ARG:NH2	2.48	0.46
6:EF:131:VAL:HG21	6:EF:151:LEU:HG	1.98	0.46
8:EH:21:VAL:CG2	8:EH:25:TYR:CD2	2.98	0.46
8:EH:25:TYR:HE1	8:EH:29:PHE:HD2	1.62	0.46
11:EK:19:VAL:CG1	11:EK:41:ILE:HG12	2.45	0.46
11:EK:104:THR:HB	11:EK:106:GLU:OE1	2.16	0.46
17:EQ:86:SER:O	18:ER:51:VAL:HA	2.14	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:ET:27:SER:O	20:ET:28:ASN:ND2	2.48	0.46
32:E5:110:ALA:O	32:E5:113:PHE:N	2.43	0.46
35:FA:91:U:H2'	35:FA:92:U:H6	1.80	0.46
35:FA:951:G:C6	35:FA:952:U:C4	3.03	0.46
35:FA:1277:C:HO2'	35:FA:1279:G:H8	1.58	0.46
36:FC:47:LEU:HB3	36:FC:50:ALA:HB3	1.98	0.46
41:FH:41:LYS:HD3	41:FH:48:ASP:CB	2.44	0.46
43:FJ:82:LYS:O	43:FJ:86:ALA:N	2.42	0.46
55:FV:557:ILE:HG21	55:FV:576:ILE:HD12	1.97	0.46
1:GB:111:U:H2'	1:GB:112:G:C8	2.50	0.46
3:GA:60:G:HO2'	3:GA:62:U:P	2.37	0.46
3:GA:600:G:H1'	5:GE:100:MET:HG2	1.97	0.46
3:GA:747:U:C4	3:GA:2613:U:C5	3.04	0.46
3:GA:2265:U:OP2	3:GA:2266:A:C2'	2.64	0.46
2:GC:77:VAL:HG23	2:GC:77:VAL:O	2.15	0.46
35:HA:383:A:C5	35:HA:384:G:H1'	2.50	0.46
35:HA:428:G:C5	35:HA:430:A:C6	3.04	0.46
35:HA:921:U:H2'	35:HA:922:G:O4'	2.16	0.46
35:HA:1296:C:H4'	35:HA:1302:C:N3	2.29	0.46
35:HA:1375:A:C6	35:HA:1376:U:C4	3.03	0.46
44:HK:22:HIS:CD2	44:HK:35:THR:HG21	2.50	0.46
45:HL:44:LYS:HB3	45:HL:45:PRO:HD3	1.96	0.46
52:HS:15:LEU:HD22	52:HS:35:SER:HB3	1.97	0.46
54:HU:17:ARG:CZ	54:HU:20:LYS:HE3	2.45	0.46
3:AA:247:G:H4'	3:AA:386:G:C5	2.51	0.46
3:AA:1569:A:N6	3:AA:1570:A:C6	2.84	0.46
3:AA:1936:A:N6	3:AA:1963:U:C2	2.84	0.46
3:AA:1936:A:C2	3:AA:1943:U:C5	3.03	0.46
3:AA:2701:U:H3'	3:AA:2702:G:H5"	1.96	0.46
4:AD:86:GLU:CD	4:AD:86:GLU:N	2.69	0.46
4:AD:193:VAL:HB	4:AD:194:PRO:HD2	1.98	0.46
8:AH:8:LYS:O	8:AH:9:VAL:HB	2.15	0.46
8:AH:31:VAL:HB	8:AH:32:PRO:CD	2.45	0.46
11:AK:24:VAL:CG1	11:AK:30:ARG:HD3	2.45	0.46
11:AK:72:PRO:O	11:AK:74:GLY:N	2.43	0.46
35:BA:1060:U:C4	36:BC:2:GLY:N	2.84	0.46
42:BI:22:LYS:HG3	42:BI:23:PRO:HD2	1.97	0.46
3:CA:372:G:O2'	3:CA:400:G:O6	2.25	0.46
3:CA:2286:G:P	28:C1:29:LYS:HE2	2.55	0.46
3:CA:2393:U:H5'	12:CL:60:ARG:O	2.15	0.46
10:CJ:44:TYR:HA	17:CQ:59:LEU:HD21	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:CW:40:ARG:HG3	23:CW:56:HIS:CD2	2.50	0.46
25:CY:45:GLN:O	25:CY:46:VAL:HB	2.16	0.46
26:CZ:36:GLU:C	26:CZ:37:ARG:HD2	2.36	0.46
35:DA:587:G:C2	35:DA:755:G:C6	3.03	0.46
35:DA:1084:G:C5	35:DA:1085:U:C4	3.04	0.46
35:DA:1371:G:C6	35:DA:1372:U:C4	3.03	0.46
34:DB:131:LYS:O	34:DB:135:MET:HB3	2.15	0.46
37:DD:126:ASN:OD1	37:DD:142:VAL:N	2.40	0.46
46:DM:20:THR:HA	46:DM:25:VAL:HG23	1.98	0.46
55:DV:309:ARG:CZ	55:DV:404:ILE:HD13	2.46	0.46
55:DV:382:ILE:HD12	55:DV:382:ILE:O	2.15	0.46
3:EA:601:C:O2'	3:EA:605:G:OP1	2.32	0.46
3:EA:636:G:C6	12:EL:111:ILE:HD11	2.51	0.46
3:EA:1060:U:H4'	3:EA:1061:U:C5'	2.45	0.46
3:EA:1564:C:H2'	3:EA:1565:C:C6	2.51	0.46
3:EA:1786:A:H1'	3:EA:1938:A:N6	2.31	0.46
3:EA:2819:G:H2'	3:EA:2821:A:N7	2.30	0.46
2:EC:91:ALA:HB3	2:EC:103:ILE:HG22	1.98	0.46
19:ES:29:VAL:HG23	19:ES:30:SER:N	2.31	0.46
25:EY:18:LEU:HD12	25:EY:22:LEU:HB2	1.98	0.46
32:E5:4:ASN:O	32:E5:7:ASP:N	2.47	0.46
35:FA:41:G:C2	35:FA:42:G:C4	3.03	0.46
35:FA:649:A:H2'	35:FA:650:G:O4'	2.15	0.46
35:FA:1305:G:H22	35:FA:1331:G:H2'	1.81	0.46
37:FD:29:ASP:OD1	37:FD:30:THR:N	2.42	0.46
42:FI:6:TYR:CE2	42:FI:89:GLU:OE2	2.69	0.46
47:FN:88:ALA:HB1	47:FN:96:LEU:CD2	2.46	0.46
55:FV:221:ASN:HA	55:FV:224:GLU:HB3	1.96	0.46
3:GA:372:G:O5'	24:GX:61:LYS:NZ	2.48	0.46
3:GA:640:C:H2'	3:GA:641:U:H6	1.80	0.46
3:GA:1607:C:H4'	3:GA:1608:A:O5'	2.15	0.46
3:GA:2137:U:O4	3:GA:2155:U:O2'	2.34	0.46
8:GH:31:VAL:HB	8:GH:32:PRO:CD	2.45	0.46
20:GT:54:GLU:HG3	20:GT:88:LYS:HB2	1.97	0.46
22:GV:45:ASP:HA	22:GV:48:MET:HB2	1.96	0.46
35:HA:963:G:N2	35:HA:964:A:H1'	2.31	0.46
35:HA:1057:G:H4'	36:HC:197:GLY:N	2.30	0.46
40:HG:71:PRO:HG3	40:HG:103:TRP:CH2	2.50	0.46
46:HM:98:ARG:HB2	46:HM:100:GLN:OE1	2.16	0.46
52:HS:40:ILE:HD11	52:HS:71:LEU:HG	1.98	0.46
2:AC:75:ALA:HB2	2:AC:95:TYR:HA	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AA:923:G:N3	23:AW:23:LYS:HD2	2.31	0.46
3:AA:1478:G:C2	3:AA:1479:G:N7	2.83	0.46
3:AA:2436:G:C2	3:AA:2437:G:C8	3.04	0.46
12:AL:68:SER:O	12:AL:69:ARG:HB3	2.15	0.46
17:AQ:91:ARG:HH21	17:AQ:93:ILE:HG21	1.81	0.46
18:AR:49:ILE:HG22	18:AR:53:PHE:C	2.36	0.46
20:AT:69:ARG:CD	20:AT:70:HIS:H	2.28	0.46
23:AW:60:ALA:HA	23:AW:81:ILE:HD12	1.97	0.46
28:A1:4:ILE:HD11	28:A1:27:ARG:HB2	1.97	0.46
32:A5:15:VAL:HG21	32:A5:66:GLY:HA2	1.96	0.46
32:A5:77:VAL:O	32:A5:79:PRO:HD2	2.13	0.46
34:BB:9:LEU:HB2	34:BB:42:LEU:HD13	1.98	0.46
35:BA:450:G:N7	35:BA:481:G:O6	2.48	0.46
36:BC:156:ARG:H	36:BC:163:ALA:HA	1.81	0.46
38:BE:44:GLY:H	38:BE:76:LEU:HD12	1.81	0.46
41:BH:29:SER:HB3	41:BH:57:PRO:HB2	1.98	0.46
49:BP:22:ALA:HA	49:BP:33:ILE:HG13	1.96	0.46
53:BT:28:MET:SD	53:BT:67:ILE:HD13	2.55	0.46
55:BV:231:GLU:HA	55:BV:234:MET:HG2	1.98	0.46
3:CA:82:U:H2'	3:CA:83:A:O4'	2.15	0.46
3:CA:672:C:C2	3:CA:809:G:N2	2.83	0.46
3:CA:1045:C:C3'	3:CA:1046:A:H5'	2.46	0.46
3:CA:1088:A:HO2'	3:CA:1089:A:P	2.38	0.46
3:CA:1230:A:C5	3:CA:1231:U:C4	3.04	0.46
3:CA:2134:A:H3'	3:CA:2135:A:H5"	1.98	0.46
3:CA:2619:C:N4	60:CA:3666:HOH:O	2.35	0.46
3:CA:2660:A:H5'	55:DV:675:LYS:HD2	1.97	0.46
2:CC:77:VAL:HG23	2:CC:77:VAL:O	2.14	0.46
5:CE:23:PHE:HB2	5:CE:111:GLU:HG2	1.97	0.46
9:CI:20:SER:H	9:CI:21:PRO:CD	2.28	0.46
9:CI:123:ALA:HA	9:CI:126:ARG:CZ	2.44	0.46
10:CJ:38:GLY:O	10:CJ:43:GLU:HB2	2.14	0.46
11:CK:15:GLY:O	11:CK:46:ALA:HA	2.16	0.46
11:CK:70:ARG:HD3	11:CK:76:VAL:HG22	1.98	0.46
16:CP:108:ARG:NH1	35:DA:1464:U:OP2	2.40	0.46
19:CS:69:LEU:HG	19:CS:107:VAL:CG2	2.46	0.46
25:CY:56:LEU:O	25:CY:57:LEU:HB3	2.15	0.46
35:DA:764:C:H2'	35:DA:765:G:O4'	2.15	0.46
35:DA:1237:C:O2'	35:DA:1335:U:O4'	2.31	0.46
38:DE:80:THR:OG1	38:DE:81:LEU:N	2.49	0.46
44:DK:47:ALA:HB1	44:DK:62:ALA:HB1	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:DN:45:VAL:HG23	47:DN:46:LEU:H	1.81	0.46
50:DQ:12:VAL:HG12	50:DQ:13:VAL:N	2.30	0.46
55:DV:602:LYS:O	55:DV:604:GLY:N	2.44	0.46
3:EA:136:G:C6	3:EA:142:A:N6	2.84	0.46
3:EA:626:A:C2	12:EL:78:ARG:HD3	2.51	0.46
3:EA:1064:C:H4'	9:EI:90:GLY:N	2.31	0.46
3:EA:1312:U:H4'	3:EA:1313:U:O5'	2.15	0.46
3:EA:1847:A:N3	3:EA:1847:A:H2'	2.30	0.46
13:EM:41:LEU:CD1	13:EM:96:ILE:HD13	2.46	0.46
17:EQ:91:ARG:HH21	17:EQ:93:ILE:HD13	1.81	0.46
19:ES:63:GLY:O	19:ES:64:ALA:CB	2.63	0.46
20:ET:70:HIS:HB3	20:ET:73:ARG:O	2.15	0.46
25:EY:8:GLU:O	25:EY:12:GLU:HB2	2.16	0.46
32:E5:48:ALA:HB3	32:E5:51:TYR:HB3	1.98	0.46
35:FA:533:A:HO2'	35:FA:535:A:P	2.35	0.46
35:FA:976:G:H2'	35:FA:1362:A:N1	2.31	0.46
37:FD:147:GLU:HA	37:FD:150:LYS:HD2	1.97	0.46
39:FF:99:ALA:O	39:FF:100:SER:CB	2.63	0.46
3:GA:60:G:O2'	3:GA:62:U:OP2	2.31	0.46
3:GA:869:G:C2	3:GA:870:U:H1'	2.51	0.46
3:GA:996:A:P	18:GR:10:LYS:HD3	2.55	0.46
3:GA:1544:A:C6	3:GA:1545:A:C6	3.03	0.46
3:GA:2432:A:N1	24:GX:20:ALA:HA	2.31	0.46
4:GD:86:GLU:OE1	4:GD:86:GLU:CA	2.63	0.46
9:GI:116:MET:SD	9:GI:124:MET:HG2	2.56	0.46
21:GU:78:LYS:HG2	21:GU:79:ALA:H	1.80	0.46
28:G1:8:ILE:HD11	28:G1:24:LYS:HG2	1.98	0.46
35:HA:93:U:H2'	35:HA:94:G:H5"	1.98	0.46
35:HA:451:A:H2	35:HA:480:U:C4	2.34	0.46
35:HA:655:A:H2'	35:HA:656:G:C8	2.50	0.46
35:HA:780:A:C8	35:HA:800:G:C6	3.04	0.46
35:HA:791:G:C5	35:HA:792:A:N7	2.84	0.46
35:HA:993:G:O2'	35:HA:994:A:N7	2.49	0.46
35:HA:1194:U:H5'	38:HE:27:GLY:HA2	1.97	0.46
35:HA:1306:A:N3	35:HA:1332:A:H1'	2.30	0.46
35:HA:1340:A:O2'	42:HI:129:LYS:NZ	2.33	0.46
37:HD:52:GLY:O	37:HD:56:ARG:HG2	2.16	0.46
44:HK:24:HIS:CB	44:HK:87:LYS:HD2	2.46	0.46
3:AA:11:C:H2'	3:AA:12:U:H5'	1.98	0.46
3:AA:118:A:C8	3:AA:119:A:C8	3.04	0.46
3:AA:593:U:H2'	3:AA:594:U:C6	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AA:959:A:H62	13:AM:82:MET:CE	2.28	0.46
3:AA:2210:U:H4'	3:AA:2211:A:H5'	1.97	0.46
3:AA:2318:G:C6	3:AA:2319:G:C6	3.03	0.46
8:AH:21:VAL:CG2	8:AH:25:TYR:CD2	2.98	0.46
9:AI:61:TYR:N	9:AI:61:TYR:CD1	2.82	0.46
11:AK:99:ILE:HG21	11:AK:119:ALA:HB2	1.98	0.46
16:AP:50:ARG:HG2	16:AP:57:ALA:N	2.30	0.46
39:BF:42:TRP:CE2	39:BF:101:PRO:HD3	2.51	0.46
45:BL:72:HIS:ND1	45:BL:73:ASN:O	2.41	0.46
3:CA:247:G:N7	3:CA:249:C:C2	2.84	0.46
3:CA:788:A:H3'	3:CA:790:U:C5	2.50	0.46
3:CA:862:G:P	60:CA:3711:HOH:O	2.73	0.46
3:CA:1382:G:H4'	3:CA:1573:G:C2	2.51	0.46
5:CE:5:LEU:HD11	5:CE:12:LEU:HB2	1.98	0.46
5:CE:137:LYS:O	5:CE:141:MET:N	2.44	0.46
11:CK:35:VAL:HG12	11:CK:36:GLY:N	2.30	0.46
19:CS:4:ILE:HG13	19:CS:5:ALA:N	2.30	0.46
19:CS:63:GLY:O	19:CS:64:ALA:CB	2.64	0.46
35:DA:234:C:H2'	35:DA:235:C:C6	2.51	0.46
35:DA:1120:C:H2'	35:DA:1121:U:C6	2.51	0.46
35:DA:1271:A:C4	35:DA:1272:G:C8	3.04	0.46
35:DA:1295:U:C4	35:DA:1296:C:N4	2.84	0.46
34:DB:183:PHE:CE2	34:DB:197:PHE:CD2	3.03	0.46
34:DB:184:ALA:HB3	34:DB:195:VAL:HG11	1.97	0.46
39:DF:29:ILE:HD13	39:DF:36:ILE:HG22	1.98	0.46
53:DT:7:ALA:O	53:DT:10:ARG:HB2	2.16	0.46
53:DT:62:ALA:HA	53:DT:67:ILE:CG2	2.46	0.46
3:EA:24:G:H1'	19:ES:77:ASP:HB3	1.98	0.46
3:EA:82:U:H3	3:EA:104:A:H61	1.64	0.46
3:EA:479:A:N3	3:EA:481:G:H5"	2.31	0.46
3:EA:855:G:C2	23:EW:23:LYS:HD2	2.51	0.46
3:EA:936:A:H2'	3:EA:937:C:C6	2.50	0.46
3:EA:2459:A:C2	3:EA:2460:U:H1'	2.51	0.46
3:EA:2715:C:C4	3:EA:2716:C:C5	3.04	0.46
7:EG:88:LEU:HD11	7:EG:95:ALA:HB2	1.96	0.46
32:E5:54:VAL:HA	32:E5:84:TYR:O	2.16	0.46
32:E5:102:ALA:O	32:E5:107:GLU:HB2	2.16	0.46
35:FA:289:G:C6	35:FA:290:C:N4	2.84	0.46
34:FB:49:PHE:C	34:FB:49:PHE:CD1	2.89	0.46
44:FK:87:LYS:HA	44:FK:114:THR:HG22	1.97	0.46
53:FT:62:ALA:HA	53:FT:67:ILE:HG22	1.97	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:FV:78:GLN:NE2	55:FV:280:ASP:OD2	2.49	0.46
1:GB:111:U:H2'	1:GB:112:G:H8	1.80	0.46
3:GA:528:A:C2	3:GA:2042:A:H2'	2.51	0.46
3:GA:587:C:C2	12:GL:33:ARG:NH2	2.84	0.46
3:GA:836:G:C6	3:GA:837:C:N3	2.84	0.46
3:GA:995:C:H42	10:GJ:2:LYS:HB3	1.81	0.46
3:GA:1110:G:O2'	3:GA:1111:A:H8	1.99	0.46
3:GA:1194:A:N3	3:GA:1195:G:C8	2.84	0.46
3:GA:1801:A:C8	2:GC:261:ARG:NH2	2.84	0.46
3:GA:1808:A:N1	24:GX:27:ARG:HD2	2.31	0.46
3:GA:1936:A:C2	3:GA:1945:G:C4	3.04	0.46
3:GA:2336:A:C6	23:GW:40:ARG:HB3	2.50	0.46
3:GA:2354:C:C4'	23:GW:31:LEU:HD13	2.46	0.46
3:GA:2362:C:OP1	30:G3:39:ARG:NE	2.45	0.46
3:GA:2715:C:C4	3:GA:2716:C:C5	3.03	0.46
6:GF:141:ASP:O	6:GF:145:VAL:HG13	2.15	0.46
7:GG:123:GLU:HG2	7:GG:124:CYS:N	2.31	0.46
12:GL:29:LYS:HG2	12:GL:30:THR:N	2.30	0.46
16:GP:3:ILE:C	16:GP:4:ILE:O	2.54	0.46
31:G4:14:CYS:HB3	31:G4:25:VAL:HG13	1.98	0.46
35:HA:864:A:H4'	38:HE:90:THR:HG23	1.98	0.46
35:HA:1210:C:H4'	35:HA:1214:C:C4	2.51	0.46
35:HA:1276:G:N3	35:HA:1282:C:O2'	2.40	0.46
35:HA:1381:U:H1'	40:HG:78:ARG:O	2.16	0.46
36:HC:14:ILE:O	36:HC:15:VAL:HG22	2.16	0.46
44:HK:60:PRO:HB3	44:HK:92:GLY:N	2.31	0.46
54:HU:14:VAL:HG23	54:HU:16:LEU:CD2	2.46	0.46
55:HV:342:VAL:HG22	55:HV:378:ARG:HD2	1.98	0.46
3:AA:1838:C:H4'	3:AA:1839:G:C8	2.51	0.46
5:AE:44:ARG:HH21	5:AE:44:ARG:HG3	1.80	0.46
16:AP:21:PRO:HD3	16:AP:49:ILE:HD12	1.98	0.46
19:AS:18:ARG:HG3	19:AS:76:VAL:HG13	1.98	0.46
26:AZ:3:THR:HA	26:AZ:37:ARG:O	2.16	0.46
34:BB:32:GLY:HA2	34:BB:39:ILE:HB	1.98	0.46
35:BA:111:G:C6	35:BA:330:C:N4	2.84	0.46
35:BA:283:U:C4	35:BA:284:C:C4	3.03	0.46
35:BA:420:U:C2'	35:BA:421:U:H5"	2.46	0.46
3:CA:655:A:H4'	3:CA:656:G:OP1	2.16	0.46
3:CA:1563:U:H2'	3:CA:1564:C:C6	2.51	0.46
3:CA:2035:G:OP1	3:CA:2036:C:N4	2.48	0.46
3:CA:2038:G:C6	3:CA:2039:U:C4	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CA:2063:C:O2	3:CA:2450:A:N1	2.48	0.46
3:CA:2423:U:H6	3:CA:2423:U:H5'	1.81	0.46
4:CD:99:GLU:HG3	4:CD:100:LEU:N	2.30	0.46
35:DA:595:A:C2	35:DA:641:U:C2	3.04	0.46
35:DA:1062:U:H2'	35:DA:1063:C:C6	2.51	0.46
35:DA:1118:U:OP1	42:DI:106:ARG:NE	2.49	0.46
35:DA:1287:A:N6	35:DA:1288:A:N6	2.63	0.46
35:DA:1412:C:H2'	35:DA:1413:A:C8	2.50	0.46
45:DL:43:LYS:HG2	45:DL:44:LYS:N	2.30	0.46
49:DP:18:GLN:HG3	49:DP:35:ARG:HD2	1.97	0.46
53:DT:3:ASN:C	53:DT:5:LYS:H	2.18	0.46
55:DV:545:ILE:HD11	55:DV:581:GLY:HA3	1.97	0.46
3:EA:1747:U:H2'	3:EA:1748:C:C6	2.51	0.46
3:EA:2016:U:H2'	3:EA:2017:U:C6	2.50	0.46
3:EA:2071:A:H2'	3:EA:2072:C:C6	2.51	0.46
3:EA:2142:A:N7	3:EA:2147:A:C2	2.84	0.46
3:EA:2194:U:C4	3:EA:2195:U:C5	3.04	0.46
3:EA:2281:A:O2'	3:EA:2282:G:H5'	2.16	0.46
3:EA:2352:A:C6	23:EW:30:VAL:HG11	2.49	0.46
3:EA:2652:C:C4	3:EA:2653:U:C4	3.04	0.46
2:EC:68:ARG:CD	2:EC:103:ILE:HD11	2.46	0.46
16:EP:50:ARG:CD	16:EP:56:SER:HB3	2.46	0.46
22:EV:80:HIS:CD2	22:EV:83:LYS:HB2	2.51	0.46
35:FA:282:A:C8	35:FA:283:U:C5	3.04	0.46
35:FA:376:G:H4'	49:FP:5:ARG:HD2	1.98	0.46
43:FJ:6:ILE:HD11	43:FJ:79:PRO:HB3	1.97	0.46
54:FU:25:LYS:C	54:FU:27:GLY:N	2.69	0.46
55:FV:87:ILE:HD12	55:FV:106:LEU:HD23	1.97	0.46
1:GB:106:G:C2	1:GB:107:G:H1'	2.50	0.46
3:GA:478:A:C6	3:GA:480:A:C6	3.04	0.46
3:GA:635:C:C4	3:GA:636:G:C5	3.03	0.46
3:GA:845:A:C6	3:GA:847:U:C5	3.03	0.46
3:GA:952:G:C2'	3:GA:953:G:O5'	2.64	0.46
3:GA:1095:A:C8	55:HV:629:GLY:C	2.89	0.46
3:GA:1181:U:H2'	3:GA:1182:G:C8	2.51	0.46
3:GA:2314:A:H1'	6:GF:154:THR:HG21	1.97	0.46
3:GA:2611:C:OP2	60:GA:3537:HOH:O	2.21	0.46
9:GI:96:LYS:HG3	9:GI:135:MET:HE2	1.98	0.46
18:GR:79:ARG:O	18:GR:80:ARG:HG2	2.16	0.46
19:GS:77:ASP:O	19:GS:102:HIS:N	2.34	0.46
23:GW:37:VAL:HB	23:GW:38:ARG:HH11	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:HA:841:C:N3	35:HA:843:U:C5	2.84	0.46
35:HA:1014:A:C2	35:HA:1219:A:N3	2.83	0.46
36:HC:144:LEU:H	36:HC:144:LEU:HD22	1.81	0.46
44:HK:79:ILE:HB	44:HK:105:PHE:CE1	2.51	0.46
55:HV:342:VAL:HG21	55:HV:378:ARG:NH1	2.30	0.46
55:HV:414:PRO:HA	55:HV:461:MET:SD	2.55	0.46
3:AA:627:A:C6	3:AA:637:A:C8	3.04	0.46
3:AA:1248:G:C5	5:AE:46:GLN:NE2	2.84	0.46
3:AA:1542:U:H2'	3:AA:1543:G:O4'	2.16	0.46
3:AA:2326:C:H4'	3:AA:2327:A:OP1	2.16	0.46
7:AG:23:ILE:H	7:AG:23:ILE:HD12	1.81	0.46
8:AH:40:THR:C	8:AH:42:LYS:H	2.19	0.46
9:AI:137:LEU:HD23	9:AI:137:LEU:H	1.81	0.46
12:AL:61:LEU:O	30:A3:12:ARG:HD3	2.16	0.46
14:AN:70:THR:HB	14:AN:75:ILE:CD1	2.46	0.46
20:AT:29:THR:HB	20:AT:86:THR:HG22	1.98	0.46
28:A1:8:ILE:HG21	28:A1:51:ALA:HA	1.98	0.46
34:BB:65:LYS:HD2	34:BB:153:MET:HG2	1.97	0.46
35:BA:250:A:H4'	35:BA:251:G:O5'	2.16	0.46
35:BA:471:U:H2'	35:BA:472:U:C6	2.51	0.46
36:BC:120:ILE:HD11	36:BC:137:ALA:HB2	1.98	0.46
3:CA:145:C:H2'	3:CA:146:A:H8	1.81	0.46
3:CA:204:A:OP1	3:CA:206:U:H1'	2.16	0.46
3:CA:438:G:H2'	3:CA:439:A:C8	2.51	0.46
3:CA:546:U:H2'	3:CA:547:A:C4'	2.45	0.46
3:CA:1403:A:C2	3:CA:1404:C:C2	3.03	0.46
3:CA:1758:U:C5	3:CA:2696:U:H5'	2.51	0.46
3:CA:2103:C:H2'	3:CA:2104:C:H5"	1.97	0.46
3:CA:2571:U:O2'	4:CD:151:THR:CG2	2.64	0.46
3:CA:2741:A:O3'	31:C4:36:ARG:NH1	2.49	0.46
5:CE:58:LYS:NZ	5:CE:70:SER:O	2.50	0.46
12:CL:132:ARG:HG3	12:CL:142:ILE:HD12	1.98	0.46
23:CW:72:GLY:N	23:CW:73:PRO:HD2	2.31	0.46
26:CZ:6:ILE:O	26:CZ:34:THR:HA	2.16	0.46
26:CZ:36:GLU:O	26:CZ:37:ARG:HD2	2.16	0.46
35:DA:72:A:H3'	35:DA:73:C:H5"	1.98	0.46
35:DA:324:G:N2	35:DA:326:G:H3'	2.31	0.46
35:DA:898:G:N2	35:DA:901:A:OP2	2.43	0.46
35:DA:1228:C:OP1	46:DM:110:LYS:NZ	2.48	0.46
37:DD:26:ARG:O	37:DD:27:ALA:HB2	2.16	0.46
39:DF:44:ARG:HA	39:DF:58:HIS:HA	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:DG:113:ASP:HB2	40:DG:119:ARG:HG2	1.98	0.46
53:DT:4:ILE:O	53:DT:4:ILE:HG22	2.16	0.46
3:EA:370:G:O2'	3:EA:424:G:OP1	2.29	0.46
3:EA:1131:G:OP1	10:EJ:82:GLY:HA2	2.15	0.46
3:EA:1877:A:H2'	3:EA:1878:G:O4'	2.16	0.46
10:EJ:49:ASP:OD2	10:EJ:121:LYS:HE2	2.16	0.46
14:EN:83:LEU:HA	14:EN:86:ARG:HB3	1.98	0.46
18:ER:66:HIS:CG	18:ER:94:THR:HG22	2.51	0.46
32:E5:31:ARG:O	32:E5:108:VAL:HG22	2.16	0.46
35:FA:436:C:H2'	35:FA:437:U:C6	2.52	0.46
35:FA:1143:G:C2	35:FA:1144:G:C8	3.03	0.46
37:FD:91:LEU:HA	37:FD:94:LEU:HB2	1.98	0.46
46:FM:95:LEU:HB3	46:FM:96:PRO:HD2	1.97	0.46
53:FT:55:GLN:N	53:FT:56:PRO:HD2	2.31	0.46
55:FV:309:ARG:NE	55:FV:316:PRO:HG2	2.30	0.46
3:GA:186:G:H2'	3:GA:187:G:H8	1.81	0.46
3:GA:575:A:C2	3:GA:576:U:C5	3.04	0.46
3:GA:821:A:H5"	3:GA:822:G:O5'	2.16	0.46
3:GA:833:A:OP2	12:GL:39:LYS:NZ	2.43	0.46
3:GA:837:C:N4	3:GA:941:A:N6	2.64	0.46
3:GA:1359:A:C5	3:GA:1360:G:C8	3.04	0.46
3:GA:1370:C:O2'	3:GA:1811:G:O2'	2.33	0.46
3:GA:1655:A:H5'	4:GD:118:PHE:CD1	2.51	0.46
3:GA:1913:A:N7	35:HA:1494:G:H4'	2.30	0.46
3:GA:2336:A:C5	23:GW:40:ARG:HD3	2.51	0.46
3:GA:2365:G:OP1	23:GW:54:ARG:N	2.42	0.46
3:GA:2657:A:O2'	7:GG:159:LYS:NZ	2.45	0.46
3:GA:2659:G:P	7:GG:157:LYS:HZ2	2.38	0.46
2:GC:14:HIS:O	2:GC:203:VAL:HG11	2.16	0.46
4:GD:62:LYS:HB2	4:GD:63:PRO:HD3	1.97	0.46
12:GL:46:VAL:HB	12:GL:50:PHE:HD2	1.80	0.46
18:GR:66:HIS:CG	18:GR:94:THR:HG22	2.51	0.46
35:HA:259:G:N2	35:HA:260:G:H1'	2.31	0.46
35:HA:386:C:N4	35:HA:387:U:C4	2.84	0.46
35:HA:1244:G:H2'	35:HA:1245:C:C6	2.51	0.46
35:HA:1331:G:O2'	35:HA:1332:A:P	2.75	0.46
34:HB:46:VAL:O	34:HB:49:PHE:CD2	2.69	0.46
41:HH:64:LYS:HB3	41:HH:71:VAL:HG21	1.98	0.46
41:HH:112:THR:HG22	41:HH:114:ARG:H	1.81	0.46
43:HJ:50:THR:CG2	43:HJ:64:GLN:HG2	2.46	0.46
6:AF:107:VAL:HG11	6:AF:116:LEU:HD21	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:12:LYS:O	10:AJ:13:ARG:CB	2.64	0.45
17:AQ:4:LYS:NZ	17:AQ:7:VAL:HG11	2.31	0.45
23:AW:19:ARG:CZ	23:AW:22:VAL:HB	2.46	0.45
23:AW:30:VAL:HG23	23:AW:60:ALA:O	2.15	0.45
35:BA:653:U:H5'	41:BH:56:LYS:HE2	1.98	0.45
35:BA:1126:U:C2	35:BA:1281:C:C5	3.03	0.45
35:BA:1410:A:H2'	35:BA:1411:C:C6	2.50	0.45
40:BG:59:LEU:O	40:BG:62:PHE:HB3	2.16	0.45
55:BV:127:TRP:CH2	55:BV:137:ARG:HD2	2.51	0.45
55:BV:421:GLU:O	55:BV:481:ALA:HB1	2.17	0.45
55:BV:497:LYS:HG2	55:BV:523:TYR:HB2	1.98	0.45
3:CA:2328:A:H2'	3:CA:2329:U:C6	2.51	0.45
5:CE:18:THR:HG22	5:CE:106:LYS:HE2	1.98	0.45
5:CE:146:VAL:HA	5:CE:185:LYS:O	2.15	0.45
6:CF:34:THR:HG22	6:CF:89:THR:HA	1.98	0.45
7:CG:164:ALA:N	7:CG:166:GLU:HG3	2.31	0.45
12:CL:68:SER:O	12:CL:69:ARG:HB3	2.16	0.45
16:CP:64:SER:OG	16:CP:65:ASN:ND2	2.49	0.45
18:CR:39:LEU:HA	18:CR:49:ILE:HG21	1.97	0.45
32:C5:39:THR:HA	32:C5:42:ARG:CD	2.45	0.45
32:C5:127:ALA:C	32:C5:129:LEU:N	2.70	0.45
35:DA:322:C:OP2	35:DA:328:C:N4	2.49	0.45
34:DB:32:GLY:HA3	34:DB:39:ILE:HB	1.98	0.45
37:DD:146:ARG:HB3	37:DD:148:LYS:HG2	1.98	0.45
47:DN:31:ILE:HD12	47:DN:31:ILE:N	2.31	0.45
3:EA:139:U:O2'	20:ET:1:MET:HA	2.17	0.45
3:EA:246:C:H2'	3:EA:247:G:H5'	1.98	0.45
3:EA:921:C:H2'	3:EA:922:C:H6	1.81	0.45
3:EA:929:U:H4'	26:EZ:37:ARG:HH22	1.81	0.45
3:EA:1544:A:C6	3:EA:1545:A:C6	3.04	0.45
3:EA:2329:U:H2'	3:EA:2330:G:C8	2.51	0.45
1:EB:44:G:N2	1:EB:48:U:C2	2.84	0.45
2:EC:16:VAL:N	2:EC:203:VAL:CG1	2.79	0.45
4:ED:15:PHE:CD1	16:EP:78:PRO:HD2	2.50	0.45
28:E1:16:THR:HB	28:E1:41:VAL:HG11	1.98	0.45
32:E5:60:LEU:HA	32:E5:64:VAL:HG23	1.98	0.45
32:E5:64:VAL:O	32:E5:68:PRO:HD2	2.17	0.45
35:FA:332:G:OP2	53:FT:4:ILE:HA	2.16	0.45
35:FA:1319:A:P	52:FS:5:LEU:HD11	2.56	0.45
40:FG:57:SER:CB	40:FG:60:GLU:OE2	2.65	0.45
46:FM:10:PRO:O	46:FM:11:ASP:CB	2.63	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:GA:29:U:O4'	17:GQ:10:ARG:NH2	2.46	0.45
3:GA:278:A:C2	3:GA:362:A:C8	3.03	0.45
3:GA:614:A:H5"	3:GA:616:A:C6	2.50	0.45
3:GA:846:U:O2'	3:GA:847:U:O5'	2.34	0.45
3:GA:923:G:N3	23:GW:23:LYS:CD	2.80	0.45
3:GA:983:A:C5	3:GA:984:A:N7	2.84	0.45
3:GA:1076:C:H4'	9:GI:93:ASN:ND2	2.31	0.45
3:GA:2674:G:H4'	11:GK:30:ARG:HG3	1.97	0.45
9:GI:102:ARG:H	9:GI:140:GLU:HB2	1.81	0.45
21:GU:78:LYS:HG2	21:GU:79:ALA:N	2.31	0.45
35:HA:565:U:OP2	35:HA:566:G:O2'	2.18	0.45
35:HA:930:C:N4	35:HA:931:C:N4	2.64	0.45
35:HA:1105:A:H2'	35:HA:1106:G:H8	1.81	0.45
35:HA:1344:C:H1'	35:HA:1349:A:H4'	1.98	0.45
38:HE:153:VAL:HB	38:HE:156:LYS:HE2	1.97	0.45
44:HK:34:ILE:CD1	44:HK:70:CYS:SG	3.04	0.45
46:HM:75:MET:O	46:HM:79:ARG:N	2.36	0.45
48:HO:35:GLN:HB3	48:HO:59:MET:HE1	1.98	0.45
55:HV:151:PHE:CE1	55:HV:266:CYS:HB3	2.51	0.45
6:AF:30:VAL:CG1	6:AF:96:TRP:CH2	2.99	0.45
10:AJ:80:HIS:O	10:AJ:82:GLY:N	2.50	0.45
20:AT:29:THR:CB	20:AT:86:THR:H	2.29	0.45
23:AW:19:ARG:C	23:AW:19:ARG:CD	2.85	0.45
34:BB:60:ALA:HB2	34:BB:220:VAL:HG12	1.99	0.45
35:BA:1119:C:OP2	42:BI:11:ARG:NH2	2.49	0.45
35:BA:1277:C:O2'	35:BA:1279:G:H8	1.98	0.45
37:BD:125:VAL:O	37:BD:127:GLY:N	2.47	0.45
3:CA:141:G:H5"	3:CA:142:A:C5	2.51	0.45
3:CA:686:U:H2'	3:CA:788:A:C2	2.50	0.45
3:CA:824:U:O2'	3:CA:2358:A:N7	2.41	0.45
3:CA:1144:A:C6	3:CA:1145:C:C4	3.05	0.45
3:CA:1797:G:O3'	2:CC:255:LYS:O	2.35	0.45
3:CA:2311:A:H2	6:CF:43:ILE:HG21	1.80	0.45
3:CA:2844:G:C5	3:CA:2845:U:C5	3.04	0.45
4:CD:102:ALA:HA	4:CD:180:VAL:HG11	1.98	0.45
6:CF:131:VAL:CG2	6:CF:132:ARG:N	2.79	0.45
7:CG:9:VAL:HA	7:CG:47:ASN:O	2.16	0.45
23:CW:23:LYS:HG3	23:CW:24:ARG:N	2.31	0.45
26:CZ:23:LEU:HD21	26:CZ:53:MET:SD	2.56	0.45
35:DA:234:C:H2'	35:DA:235:C:H6	1.81	0.45
35:DA:926:G:C6	35:DA:1505:G:C5	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:DB:57:ASN:OD1	34:DB:220:VAL:HA	2.17	0.45
36:DC:7:PRO:HG2	36:DC:184:TYR:CG	2.50	0.45
55:DV:97:ILE:HB	55:DV:444:SER:HB3	1.97	0.45
55:DV:196:ALA:O	55:DV:198:GLN:N	2.49	0.45
9:EI:83:ALA:HB1	9:EI:100:ILE:CD1	2.45	0.45
9:EI:120:ASP:O	9:EI:123:ALA:N	2.48	0.45
11:EK:18:ARG:H	11:EK:45:GLU:HB2	1.81	0.45
23:EW:51:GLY:HA3	23:EW:59:PHE:CE1	2.52	0.45
32:E5:15:VAL:HG21	32:E5:66:GLY:HA2	1.98	0.45
35:FA:188:C:H2'	35:FA:189:A:O4'	2.16	0.45
35:FA:932:C:H5'	40:FG:4:ARG:HE	1.81	0.45
35:FA:994:A:N1	35:FA:1047:G:H4'	2.31	0.45
35:FA:1126:U:O2	35:FA:1280:A:H2'	2.16	0.45
35:FA:1347:G:HO2'	35:FA:1373:G:H1	1.64	0.45
44:FK:126:LYS:O	54:FU:34:ARG:CZ	2.64	0.45
49:FP:68:SER:HB2	49:FP:71:VAL:H	1.81	0.45
3:GA:306:U:O2'	3:GA:1211:C:OP1	2.28	0.45
3:GA:643:A:C5	3:GA:644:A:N7	2.84	0.45
3:GA:646:U:H3'	3:GA:647:G:H5"	1.98	0.45
3:GA:878:A:H3'	3:GA:879:G:H8	1.81	0.45
3:GA:2521:C:C4	3:GA:2522:U:C4	3.05	0.45
60:GA:3363:HOH:O	18:GR:85:LYS:NZ	2.47	0.45
6:GF:132:ARG:O	6:GF:133:GLU:HB3	2.16	0.45
9:GI:18:ASN:N	9:GI:19:PRO:CD	2.79	0.45
17:GQ:4:LYS:HG3	17:GQ:5:ARG:H	1.80	0.45
17:GQ:20:ALA:HA	17:GQ:23:TYR:CE2	2.52	0.45
35:HA:505:G:C6	35:HA:535:A:C2	3.04	0.45
35:HA:657:U:H1'	48:HO:23:GLY:HA2	1.98	0.45
35:HA:751:U:O2'	48:HO:25:THR:OG1	2.32	0.45
35:HA:1306:A:N6	35:HA:1330:U:N3	2.65	0.45
34:HB:25:LYS:HE2	34:HB:193:ASP:OD1	2.16	0.45
34:HB:113:LEU:HD13	34:HB:143:LEU:CD1	2.46	0.45
36:HC:150:LYS:HG3	36:HC:201:TRP:CE3	2.51	0.45
43:HJ:14:ASP:OD2	43:HJ:17:LEU:HB3	2.16	0.45
45:HL:7:LEU:HB3	50:HQ:34:TYR:CD2	2.51	0.45
50:HQ:74:THR:HG22	50:HQ:75:LEU:N	2.31	0.45
54:HU:41:PRO:O	54:HU:45:ARG:N	2.41	0.45
55:HV:443:PRO:O	55:HV:446:ARG:NH2	2.44	0.45
1:AB:37:C:C5	1:AB:38:C:C4	3.04	0.45
3:AA:1088:A:HO2'	3:AA:1089:A:P	2.39	0.45
3:AA:1313:U:H2'	3:AA:1610:A:C2	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AA:2862:G:C6	3:AA:2863:C:C4	3.04	0.45
5:AE:187:VAL:O	5:AE:188:MET:HB3	2.16	0.45
12:AL:85:VAL:HG22	12:AL:94:THR:HG22	1.98	0.45
15:AO:43:ASN:O	15:AO:45:SER:N	2.50	0.45
34:BB:132:GLU:HA	34:BB:135:MET:HB3	1.97	0.45
35:BA:481:G:O2'	35:BA:482:A:C8	2.66	0.45
46:BM:29:ARG:NH1	46:BM:63:PHE:HB2	2.31	0.45
52:BS:10:PHE:HE1	52:BS:37:ARG:HD2	1.82	0.45
54:BU:45:ARG:HA	54:BU:48:ALA:HB3	1.97	0.45
55:BV:48:ALA:HB2	55:BV:369:ASN:OD1	2.17	0.45
1:CB:35:C:H2'	1:CB:36:C:O4'	2.16	0.45
3:CA:26:G:C6	3:CA:27:G:N1	2.85	0.45
3:CA:783:A:H8	3:CA:784:G:H5"	1.81	0.45
3:CA:1681:G:O2'	3:CA:1762:A:N3	2.36	0.45
3:CA:2291:U:O2'	3:CA:2374:C:O2	2.26	0.45
2:CC:33:LEU:CD2	2:CC:62:ARG:HD3	2.47	0.45
8:CH:40:THR:C	8:CH:42:LYS:H	2.18	0.45
12:CL:77:ILE:HD12	12:CL:77:ILE:N	2.32	0.45
13:CM:96:ILE:HD11	13:CM:126:ILE:CD1	2.45	0.45
25:CY:3:ALA:HA	25:CY:6:LEU:HB3	1.98	0.45
32:C5:33:VAL:HG12	32:C5:34:THR:N	2.24	0.45
35:DA:79:G:H2'	35:DA:80:A:O5'	2.16	0.45
35:DA:707:U:H2'	35:DA:708:C:C6	2.52	0.45
35:DA:1305:G:N2	35:DA:1331:G:O2'	2.49	0.45
35:DA:1363:A:C8	35:DA:1365:G:C8	3.04	0.45
35:DA:1444:U:H2'	35:DA:1445:U:C6	2.51	0.45
38:DE:94:VAL:CG2	38:DE:111:MET:SD	3.04	0.45
39:DF:38:ARG:HE	39:DF:97:THR:HA	1.81	0.45
3:EA:27:G:O2'	3:EA:28:A:OP2	2.32	0.45
3:EA:311:A:C8	3:EA:332:A:N7	2.84	0.45
3:EA:2478:A:P	31:E4:2:LYS:HZ1	2.40	0.45
1:EB:48:U:P	15:EO:30:ARG:HH22	2.39	0.45
6:EF:30:VAL:CG1	6:EF:96:TRP:CH2	2.99	0.45
6:EF:121:PHE:CE1	6:EF:127:TYR:CD1	3.04	0.45
11:EK:24:VAL:HG13	11:EK:33:ALA:HB2	1.98	0.45
14:EN:38:LEU:HB3	14:EN:39:PRO:HD3	1.98	0.45
16:EP:19:PHE:HZ	16:EP:83:ILE:HG12	1.82	0.45
17:EQ:90:ASP:HA	18:ER:11:GLN:HE22	1.82	0.45
20:ET:54:GLU:N	20:ET:54:GLU:OE1	2.50	0.45
35:FA:35:G:N3	45:FL:115:SER:OG	2.49	0.45
35:FA:174:A:C5	35:FA:175:C:C5	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:FA:354:G:C2	35:FA:355:C:C6	3.04	0.45
35:FA:986:U:H2'	35:FA:987:G:O4'	2.16	0.45
35:FA:1059:C:O3'	47:FN:85:ARG:NH2	2.49	0.45
34:FB:21:TYR:N	34:FB:21:TYR:CD1	2.82	0.45
36:FC:153:VAL:HG23	36:FC:157:LEU:HD21	1.97	0.45
39:FF:90:MET:HG2	39:FF:91:ARG:N	2.31	0.45
50:FQ:17:MET:SD	50:FQ:20:SER:OG	2.62	0.45
52:FS:5:LEU:C	52:FS:6:LYS:HG3	2.37	0.45
55:FV:338:VAL:O	55:FV:380:GLY:N	2.45	0.45
3:GA:230:G:C4	3:GA:231:A:C8	3.04	0.45
3:GA:953:G:N2	3:GA:965:C:C2	2.85	0.45
3:GA:1351:C:C2	3:GA:1381:G:N1	2.85	0.45
3:GA:1930:G:H22	3:GA:1969:A:P	2.39	0.45
3:GA:2227:A:H5"	2:GC:260:LYS:HD3	1.98	0.45
3:GA:2301:C:N3	3:GA:2316:G:N2	2.64	0.45
7:GG:84:LYS:HB3	7:GG:132:LEU:O	2.16	0.45
10:GJ:118:MET:HA	10:GJ:121:LYS:HE2	1.97	0.45
13:GM:28:PHE:N	13:GM:104:GLU:OE2	2.46	0.45
17:GQ:6:GLY:HA2	17:GQ:9:ALA:HB3	1.98	0.45
17:GQ:91:ARG:NH1	18:GR:11:GLN:O	2.49	0.45
19:GS:36:LEU:HD21	19:GS:47:VAL:HG12	1.98	0.45
21:GU:27:VAL:HA	21:GU:33:VAL:HG12	1.96	0.45
23:GW:31:LEU:N	23:GW:31:LEU:HD23	2.30	0.45
23:GW:39:GLN:HG2	23:GW:40:ARG:N	2.32	0.45
23:GW:44:PHE:HB3	23:GW:78:PHE:CD1	2.51	0.45
24:GX:40:GLU:O	24:GX:43:LYS:HD2	2.17	0.45
25:GY:32:ALA:HA	25:GY:37:LEU:HB3	1.99	0.45
35:HA:109:A:H2'	35:HA:326:G:N2	2.30	0.45
35:HA:947:G:O4'	35:HA:1333:A:O2'	2.20	0.45
35:HA:1243:C:H2'	35:HA:1244:G:C8	2.51	0.45
42:HI:7:TYR:HE2	42:HI:9:THR:HG1	1.63	0.45
44:HK:24:HIS:CG	44:HK:25:ALA:N	2.84	0.45
48:HO:26:GLU:HG2	48:HO:81:LEU:HD22	1.98	0.45
3:AA:751:A:C6	3:AA:789:A:C5	3.04	0.45
3:AA:938:G:OP2	30:A3:51:LYS:NZ	2.33	0.45
3:AA:1171:G:C6	3:AA:1172:C:C4	3.04	0.45
3:AA:1593:A:H2'	3:AA:1594:U:O4'	2.17	0.45
3:AA:1686:C:C2	3:AA:1703:G:C2	3.05	0.45
3:AA:2108:A:C2'	3:AA:2109:U:O5'	2.65	0.45
3:AA:2478:A:H2'	3:AA:2479:U:H5'	1.98	0.45
3:AA:2698:U:H2'	3:AA:2699:C:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:119:ILE:HG13	5:AE:119:ILE:O	2.16	0.45
7:AG:163:TYR:O	7:AG:164:ALA:HB2	2.16	0.45
11:AK:10:VAL:HG21	11:AK:17:ARG:H	1.81	0.45
11:AK:13:ASN:O	11:AK:14:SER:OG	2.29	0.45
11:AK:98:ARG:HA	11:AK:118:LEU:HD23	1.97	0.45
12:AL:132:ARG:HG3	12:AL:142:ILE:HD12	1.98	0.45
17:AQ:4:LYS:NZ	17:AQ:7:VAL:CG1	2.79	0.45
28:A1:33:LEU:N	28:A1:51:ALA:CB	2.80	0.45
35:BA:460:A:H2	35:BA:462:G:C8	2.34	0.45
35:BA:913:A:OP1	45:BL:88:LYS:NZ	2.45	0.45
55:BV:532:LYS:HD3	55:BV:534:TYR:H	1.81	0.45
3:CA:197:A:OP1	60:CA:3744:HOH:O	2.20	0.45
3:CA:613:A:O2'	3:CA:614:A:OP1	2.31	0.45
3:CA:1171:G:N1	3:CA:1172:C:C4	2.85	0.45
3:CA:1344:U:H4'	3:CA:1384:A:C5	2.51	0.45
3:CA:1731:G:O2'	3:CA:1732:C:H3'	2.16	0.45
3:CA:2211:A:O2'	3:CA:2212:A:P	2.75	0.45
3:CA:2305:U:C4	6:CF:151:LEU:HA	2.52	0.45
3:CA:2473:U:C4	3:CA:2474:U:C4	3.04	0.45
3:CA:2849:U:N3	3:CA:2867:G:O4'	2.40	0.45
9:CI:55:PRO:O	9:CI:71:LYS:HG3	2.17	0.45
10:CJ:84:ILE:HG23	10:CJ:84:ILE:O	2.17	0.45
10:CJ:122:LEU:HD11	10:CJ:124:VAL:HG13	1.97	0.45
13:CM:13:HIS:O	13:CM:14:LYS:CB	2.63	0.45
14:CN:69:ARG:O	14:CN:71:ARG:N	2.47	0.45
35:DA:204:G:H1'	35:DA:465:A:C2	2.51	0.45
35:DA:1328:C:C2	35:DA:1329:A:C8	3.04	0.45
43:DJ:63:ASP:HB3	43:DJ:65:TYR:CE1	2.51	0.45
43:DJ:74:VAL:HG12	43:DJ:75:ASP:N	2.31	0.45
46:DM:64:VAL:HG13	46:DM:68:ASP:HB3	1.98	0.45
48:DO:79:THR:O	48:DO:82:ILE:HG12	2.17	0.45
50:DQ:8:LEU:HD12	50:DQ:73:TRP:CH2	2.52	0.45
52:DS:36:ARG:HH22	52:DS:77:THR:CG2	2.29	0.45
3:EA:1028:A:N6	3:EA:1125:G:H2'	2.31	0.45
5:EE:188:MET:CE	5:EE:196:VAL:HG21	2.47	0.45
6:EF:37:MET:HE3	6:EF:151:LEU:HB3	1.98	0.45
7:EG:37:ASN:HB3	7:EG:40:VAL:HG22	1.98	0.45
7:EG:39:ALA:HA	7:EG:57:TYR:CD2	2.52	0.45
9:EI:20:SER:HB3	9:EI:21:PRO:HD3	1.98	0.45
13:EM:54:THR:O	13:EM:56:ALA:N	2.47	0.45
32:E5:15:VAL:HG22	32:E5:66:GLY:HA3	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:FA:1319:A:OP2	52:FS:5:LEU:HD11	2.16	0.45
35:FA:1526:G:P	54:FU:39:GLU:CG	3.04	0.45
41:FH:59:LEU:HD21	41:FH:61:LEU:HD21	1.99	0.45
54:FU:10:GLU:CG	54:FU:11:PRO:HD3	2.47	0.45
55:FV:195:ASP:OD1	55:FV:196:ALA:N	2.50	0.45
3:GA:248:G:O2'	3:GA:2432:A:OP1	2.29	0.45
3:GA:2304:G:O2'	6:GF:152:ASP:OD2	2.32	0.45
3:GA:2634:A:C2	3:GA:2635:A:C4	3.04	0.45
8:GH:31:VAL:HB	8:GH:32:PRO:HD3	1.97	0.45
10:GJ:33:ALA:O	10:GJ:37:ARG:N	2.50	0.45
10:GJ:44:TYR:CE2	17:GQ:59:LEU:HD11	2.51	0.45
11:GK:73:ASP:OD1	11:GK:74:GLY:N	2.49	0.45
18:GR:54:VAL:HG12	18:GR:57:GLY:HA3	1.98	0.45
21:GU:85:ARG:HD3	21:GU:86:PHE:N	2.31	0.45
24:GX:65:THR:O	24:GX:68:ALA:HB3	2.16	0.45
31:G4:1:MET:HE1	31:G4:36:ARG:HB2	1.98	0.45
35:HA:885:G:N1	35:HA:886:G:C5	2.85	0.45
35:HA:1467:C:H2'	35:HA:1468:A:H8	1.81	0.45
37:HD:169:THR:HG22	37:HD:184:ARG:NH2	2.30	0.45
40:HG:111:ARG:HH21	40:HG:123:GLU:HG2	1.82	0.45
40:HG:138:ARG:NH1	40:HG:139:GLU:OE2	2.49	0.45
45:HL:44:LYS:CB	45:HL:45:PRO:CD	2.94	0.45
55:HV:79:TYR:OH	55:HV:284:ASP:OD1	2.22	0.45
3:AA:33:C:O2	3:AA:447:A:N6	2.50	0.45
3:AA:85:G:OP1	21:AU:6:ARG:N	2.49	0.45
3:AA:1161:C:H1'	18:AR:8:GLY:O	2.15	0.45
3:AA:2024:G:C4	3:AA:2040:G:N2	2.84	0.45
3:AA:2852:G:C6	3:AA:2853:C:N3	2.84	0.45
7:AG:83:THR:C	7:AG:84:LYS:HD3	2.37	0.45
22:AV:80:HIS:CD2	22:AV:83:LYS:HB2	2.52	0.45
32:A5:68:PRO:HA	32:A5:72:LEU:CG	2.46	0.45
35:BA:880:C:OP1	45:BL:9:ARG:NH1	2.49	0.45
35:BA:1060:U:OP1	47:BN:85:ARG:NH2	2.49	0.45
44:BK:127:ARG:NH2	54:BU:33:ARG:O	2.47	0.45
3:CA:384:A:H2'	3:CA:385:C:H5'	1.99	0.45
3:CA:813:U:O2'	3:CA:1225:G:O2'	2.28	0.45
3:CA:1266:G:OP2	27:C0:16:ARG:NE	2.49	0.45
3:CA:1838:C:C4	3:CA:1899:A:C4	3.04	0.45
3:CA:2061:G:OP2	60:CA:3492:HOH:O	2.21	0.45
3:CA:2336:A:H61	23:CW:40:ARG:HB3	1.82	0.45
3:CA:2517:C:C6	3:CA:2542:A:N7	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:CD:24:VAL:HA	4:CD:191:GLY:H	1.82	0.45
10:CJ:4:PHE:C	10:CJ:44:TYR:HE1	2.20	0.45
13:CM:35:ALA:HA	13:CM:128:THR:HG22	1.98	0.45
35:DA:206:C:H2'	35:DA:207:C:O4'	2.16	0.45
35:DA:707:U:H4'	44:DK:22:HIS:CD2	2.51	0.45
35:DA:1387:G:C6	35:DA:1388:C:C4	3.05	0.45
36:DC:14:ILE:O	36:DC:15:VAL:HG22	2.17	0.45
39:DF:38:ARG:HG2	39:DF:39:LEU:N	2.32	0.45
45:DL:63:VAL:HG22	45:DL:64:THR:N	2.31	0.45
45:DL:98:VAL:HG13	45:DL:101:ALA:CB	2.46	0.45
3:EA:2204:G:OP2	2:EC:146:LYS:NZ	2.42	0.45
1:EB:116:G:H4'	15:EO:54:VAL:CG1	2.47	0.45
16:EP:4:ILE:HG22	16:EP:8:GLU:HG3	1.96	0.45
22:EV:6:ALA:HB1	22:EV:40:ILE:CG2	2.47	0.45
23:EW:73:PRO:O	23:EW:74:LYS:HB3	2.17	0.45
32:E5:31:ARG:HD3	32:E5:31:ARG:HA	1.76	0.45
35:FA:979:C:N4	35:FA:980:C:C2	2.84	0.45
35:FA:1007:U:C2'	35:FA:1008:U:H5'	2.44	0.45
36:FC:77:ILE:HA	36:FC:84:VAL:HG23	1.99	0.45
43:FJ:88:MET:O	43:FJ:90:LEU:N	2.44	0.45
49:FP:18:GLN:CG	49:FP:35:ARG:HD2	2.46	0.45
3:GA:160:A:C6	3:GA:161:A:C6	3.04	0.45
3:GA:549:G:H2'	10:GJ:1:MET:HE1	1.98	0.45
3:GA:559:G:OP1	10:GJ:111:LYS:HD3	2.17	0.45
3:GA:819:A:C5	3:GA:1189:A:C2	3.04	0.45
3:GA:1010:A:OP1	17:GQ:62:ALA:HA	2.16	0.45
3:GA:1171:G:N2	3:GA:1172:C:C4	2.85	0.45
3:GA:1198:U:O3'	17:GQ:4:LYS:HE3	2.16	0.45
3:GA:1430:G:H2'	3:GA:1431:A:O4'	2.17	0.45
3:GA:1774:C:OP1	60:GA:3441:HOH:O	2.21	0.45
3:GA:1904:G:N3	3:GA:1928:A:H2	2.14	0.45
3:GA:2107:G:N1	3:GA:2182:U:H2'	2.29	0.45
5:GE:109:LEU:HD13	5:GE:112:LEU:HD12	1.99	0.45
11:GK:10:VAL:HG11	11:GK:16:ALA:CB	2.47	0.45
17:GQ:97:ILE:CD1	17:GQ:105:PHE:HD1	2.30	0.45
18:GR:66:HIS:CD2	18:GR:94:THR:HG22	2.51	0.45
35:HA:211:G:H3'	35:HA:211:G:N3	2.31	0.45
35:HA:536:C:H2'	35:HA:537:G:C8	2.51	0.45
35:HA:872:A:C8	35:HA:874:G:C8	3.05	0.45
35:HA:972:C:H4'	43:HJ:59:LYS:HB3	1.98	0.45
35:HA:1128:C:H4'	35:HA:1148:U:C2	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:HA:1404:C:H2'	35:HA:1405:G:C8	2.52	0.45
36:HC:130:PHE:CG	36:HC:131:ARG:N	2.84	0.45
52:HS:36:ARG:CD	52:HS:51:VAL:HG11	2.46	0.45
2:AC:12:ARG:HD3	3:AA:728:G:H4'	1.98	0.45
2:AC:24:HIS:NE2	2:AC:79:ARG:NH2	2.65	0.45
3:AA:855:G:H21	23:AW:23:LYS:HG2	1.82	0.45
3:AA:2326:C:C6	3:AA:2326:C:H3'	2.52	0.45
3:AA:2615:U:C2	27:A0:3:GLN:HA	2.51	0.45
4:AD:1:MET:HG2	4:AD:205:PRO:HG3	1.98	0.45
10:AJ:44:TYR:HD1	17:AQ:63:ARG:HG2	1.81	0.45
14:AN:103:ARG:CZ	14:AN:110:MET:CE	2.95	0.45
17:AQ:7:VAL:HG13	17:AQ:8:ILE:N	2.32	0.45
19:AS:1:MET:O	19:AS:108:SER:HB2	2.16	0.45
30:A3:3:ILE:HG21	30:A3:62:PRO:HG3	1.98	0.45
32:A5:63:ALA:HB3	32:A5:84:TYR:CE2	2.52	0.45
32:A5:136:ILE:HG13	32:A5:139:LEU:HD12	1.98	0.45
35:BA:658:C:O4'	48:BO:22:THR:OG1	2.33	0.45
37:BD:145:ILE:CD1	37:BD:155:VAL:HG21	2.47	0.45
40:BG:15:ASP:HB3	40:BG:20:SER:H	1.82	0.45
55:BV:565:PRO:CG	55:BV:605:PHE:CD2	2.99	0.45
55:BV:658:VAL:HG21	55:BV:663:MET:SD	2.57	0.45
3:CA:580:U:H2'	3:CA:581:C:C6	2.51	0.45
3:CA:1647:U:P	3:CA:1647:U:H3'	2.57	0.45
3:CA:1684:G:C6	3:CA:1685:C:N3	2.84	0.45
6:CF:134:GLN:O	6:CF:136:ILE:N	2.49	0.45
23:CW:8:SER:O	23:CW:9:THR:HG22	2.17	0.45
35:DA:1124:G:H2'	35:DA:1145:A:H61	1.82	0.45
35:DA:1417:G:N2	35:DA:1482:G:H2'	2.32	0.45
35:DA:1486:G:H2'	35:DA:1487:G:O4'	2.17	0.45
55:DV:151:PHE:CE1	55:DV:266:CYS:HB3	2.52	0.45
3:EA:442:G:C6	3:EA:444:C:N4	2.85	0.45
3:EA:646:U:H3'	3:EA:647:G:H5"	1.97	0.45
3:EA:1073:A:C5	3:EA:1074:G:C8	3.04	0.45
3:EA:1676:A:H2'	3:EA:1677:A:O4'	2.16	0.45
3:EA:1773:A:N7	3:EA:1829:A:H1'	2.32	0.45
3:EA:2745:C:C4	3:EA:2746:U:C4	3.05	0.45
1:EB:20:G:C6	1:EB:21:G:C5	3.04	0.45
11:EK:19:VAL:HG13	11:EK:41:ILE:HG12	1.99	0.45
35:FA:135:C:H2'	35:FA:136:C:H5'	1.97	0.45
35:FA:408:A:OP1	37:FD:112:ALA:HB3	2.16	0.45
35:FA:935:A:O2'	35:FA:1383:C:N3	2.38	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:FA:1034:G:O2'	35:FA:1035:A:H5'	2.17	0.45
44:FK:35:THR:HA	44:FK:42:LEU:HG	1.99	0.45
54:FU:34:ARG:HE	54:FU:35:ARG:HG3	1.79	0.45
55:FV:320:LEU:HD23	55:FV:321:ALA:N	2.30	0.45
3:GA:856:G:H2'	3:GA:857:G:C8	2.52	0.45
3:GA:884:U:H2'	3:GA:892:A:H61	1.81	0.45
3:GA:973:A:H5"	18:GR:81:LYS:NZ	2.32	0.45
3:GA:1019:U:C5	3:GA:1142:A:N6	2.84	0.45
3:GA:1462:C:H2'	3:GA:1463:C:C6	2.52	0.45
3:GA:1495:A:C6	3:GA:1496:A:C6	3.04	0.45
3:GA:2665:A:C2	3:GA:2666:C:C6	3.04	0.45
6:GF:102:LEU:HD22	6:GF:106:ALA:HB3	1.98	0.45
9:GI:126:ARG:HH11	9:GI:126:ARG:HG3	1.82	0.45
10:GJ:98:GLU:HB3	10:GJ:124:VAL:HG23	1.98	0.45
13:GM:66:ARG:NH1	13:GM:104:GLU:OE1	2.49	0.45
35:HA:579:A:N6	35:HA:762:U:H3	2.14	0.45
35:HA:587:G:H4'	41:HH:4:GLN:HA	1.97	0.45
41:HH:83:LEU:HD11	45:HL:4:VAL:HG11	1.99	0.45
45:HL:25:GLU:OE2	45:HL:30:LYS:NZ	2.47	0.45
53:HT:62:ALA:CA	53:HT:67:ILE:HG22	2.45	0.45
2:AC:265:PHE:N	2:AC:265:PHE:HD1	2.15	0.45
3:AA:973:A:O4'	3:AA:1188:U:C6	2.70	0.45
3:AA:996:A:H4'	17:AQ:91:ARG:CD	2.47	0.45
3:AA:2740:A:C6	3:AA:2764:A:C8	3.04	0.45
8:AH:8:LYS:O	8:AH:13:GLY:HA2	2.16	0.45
9:AI:24:GLY:O	9:AI:27:LEU:HG	2.16	0.45
16:AP:91:VAL:HG11	16:AP:96:LEU:HD21	1.98	0.45
32:A5:26:VAL:O	32:A5:27:VAL:CB	2.64	0.45
32:A5:71:CYS:CA	32:A5:117:LEU:HD11	2.43	0.45
32:A5:125:ARG:CZ	32:A5:125:ARG:HA	2.46	0.45
34:BB:71:THR:HG22	34:BB:72:LYS:H	1.81	0.45
35:BA:1320:C:O2	52:BS:36:ARG:NH1	2.49	0.45
36:BC:7:PRO:CG	36:BC:184:TYR:CG	3.00	0.45
42:BI:44:ALA:HB1	42:BI:76:ALA:CB	2.47	0.45
55:BV:71:PHE:CE1	55:BV:83:ARG:HG3	2.52	0.45
55:BV:193:TRP:CZ3	55:BV:276:GLN:HB2	2.51	0.45
1:CB:12:C:C4	23:CW:72:GLY:HA3	2.52	0.45
3:CA:202:U:C4	3:CA:203:A:C6	3.05	0.45
3:CA:669:G:N2	3:CA:670:A:C2	2.85	0.45
3:CA:878:A:H3'	3:CA:879:G:H8	1.82	0.45
3:CA:1794:A:H2'	3:CA:1795:C:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CA:2681:C:C2	3:CA:2724:U:O4	2.69	0.45
3:CA:2747:G:O6	3:CA:2755:C:H5"	2.16	0.45
2:CC:225:ASN:HB3	2:CC:226:PRO:HD2	1.98	0.45
7:CG:155:PRO:O	7:CG:170:THR:HA	2.17	0.45
10:CJ:102:GLU:HG3	10:CJ:124:VAL:HG21	1.98	0.45
11:CK:24:VAL:CG1	11:CK:30:ARG:HD3	2.47	0.45
35:DA:223:A:H2'	35:DA:224:U:C6	2.52	0.45
41:DH:47:GLU:O	41:DH:48:ASP:HB3	2.17	0.45
44:DK:88:GLY:H	44:DK:114:THR:HG22	1.81	0.45
51:DR:24:LYS:O	51:DR:26:ILE:N	2.44	0.45
55:DV:19:ILE:HD13	55:DV:92:HIS:H	1.80	0.45
55:DV:500:ASP:N	55:DV:521:ASP:OD1	2.46	0.45
3:EA:322:A:C5	3:EA:340:A:C2	3.05	0.45
3:EA:635:C:O2'	3:EA:639:U:OP1	2.34	0.45
3:EA:725:G:C6	3:EA:726:G:N1	2.84	0.45
3:EA:1054:A:P	32:E5:31:ARG:HH21	2.39	0.45
3:EA:1407:G:C2	3:EA:1596:A:C2	3.05	0.45
3:EA:1566:A:C6	2:EC:212:TRP:CZ3	3.05	0.45
3:EA:2661:G:C6	3:EA:2662:A:C2	3.05	0.45
3:EA:2801:G:C2	3:EA:2802:G:C4	3.04	0.45
1:EB:86:G:H2'	1:EB:87:U:H5"	1.98	0.45
4:ED:118:PHE:O	4:ED:119:ALA:HB3	2.17	0.45
6:EF:39:VAL:HG21	6:EF:42:ALA:HB2	1.97	0.45
10:EJ:44:TYR:C	10:EJ:44:TYR:HD1	2.20	0.45
12:EL:90:VAL:HG13	12:EL:95:LEU:HD21	1.98	0.45
16:EP:19:PHE:HZ	16:EP:83:ILE:CG1	2.29	0.45
23:EW:44:PHE:O	23:EW:78:PHE:HA	2.17	0.45
31:E4:7:VAL:HG23	31:E4:8:LYS:H	1.82	0.45
35:FA:159:G:O2'	35:FA:161:A:N7	2.33	0.45
35:FA:466:A:N1	35:FA:468:A:N7	2.64	0.45
35:FA:1394:A:C5	35:FA:1501:C:H4'	2.51	0.45
35:FA:1468:A:C2'	35:FA:1469:C:C5'	2.95	0.45
34:FB:92:ASN:OD1	34:FB:92:ASN:N	2.50	0.45
38:FE:56:VAL:N	38:FE:57:PRO:HD2	2.31	0.45
39:FF:98:GLU:CG	39:FF:99:ALA:N	2.79	0.45
40:FG:22:LEU:CD1	40:FG:62:PHE:HE2	2.30	0.45
42:FI:57:MET:SD	42:FI:58:VAL:CA	3.05	0.45
42:FI:90:TYR:HB2	42:FI:94:LEU:HD13	1.98	0.45
42:FI:90:TYR:HD2	42:FI:94:LEU:HD21	1.80	0.45
3:GA:439:A:H2'	3:GA:440:C:O4'	2.16	0.45
3:GA:485:C:C2	3:GA:496:G:N2	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:GA:538:A:H4'	10:GJ:7:LYS:HG2	1.99	0.45
3:GA:671:C:H41	12:GL:41:ARG:N	2.14	0.45
3:GA:871:U:C2	3:GA:907:G:N1	2.85	0.45
3:GA:1095:A:C1'	55:HV:632:ILE:HB	2.46	0.45
3:GA:1346:G:H2'	3:GA:1347:A:C8	2.52	0.45
3:GA:1365:A:C2	3:GA:1366:A:C5	3.05	0.45
3:GA:1773:A:N7	3:GA:1829:A:H1'	2.32	0.45
3:GA:2218:G:C6	3:GA:2219:U:C4	3.04	0.45
3:GA:2525:G:N2	3:GA:2539:C:C2	2.85	0.45
9:GI:85:ILE:HD11	9:GI:100:ILE:HG21	1.99	0.45
18:GR:39:LEU:HA	18:GR:49:ILE:HG21	1.99	0.45
19:GS:24:ILE:HG22	19:GS:71:VAL:HG11	1.98	0.45
23:GW:37:VAL:HA	23:GW:56:HIS:HB2	1.98	0.45
35:HA:52:C:H2'	35:HA:53:A:C8	2.52	0.45
35:HA:692:U:OP1	44:HK:127:ARG:HD3	2.17	0.45
35:HA:1486:G:H2'	35:HA:1487:G:O4'	2.16	0.45
34:HB:32:GLY:CA	34:HB:39:ILE:O	2.65	0.45
37:HD:44:ARG:C	37:HD:46:PRO:HD3	2.37	0.45
44:HK:24:HIS:H	44:HK:31:ILE:HD11	1.82	0.45
55:HV:382:ILE:HD12	55:HV:382:ILE:O	2.17	0.45
55:HV:526:GLU:O	55:HV:528:GLY:N	2.50	0.45
2:AC:84:PRO:HG3	3:AA:1567:G:C2'	2.46	0.45
2:AC:93:VAL:HG12	2:AC:94:LEU:N	2.31	0.45
2:AC:163:ILE:HG23	2:AC:171:VAL:CG1	2.47	0.45
3:AA:792:A:C6	3:AA:2440:C:C6	3.05	0.45
3:AA:994:C:H1'	18:AR:10:LYS:CE	2.47	0.45
3:AA:1150:C:H2'	3:AA:1151:A:O5'	2.17	0.45
11:AK:98:ARG:HA	11:AK:118:LEU:CD2	2.47	0.45
12:AL:122:VAL:CG1	12:AL:142:ILE:HG12	2.47	0.45
15:AO:79:ALA:O	15:AO:82:ALA:N	2.49	0.45
25:AY:45:GLN:O	25:AY:46:VAL:HB	2.17	0.45
30:A3:31:ILE:O	30:A3:31:ILE:HG13	2.17	0.45
35:BA:601:G:H2'	35:BA:602:A:C8	2.52	0.45
37:BD:23:SER:O	37:BD:25:VAL:N	2.50	0.45
42:BI:24:GLY:HA3	42:BI:62:ASP:HB2	1.99	0.45
43:BJ:51:VAL:O	43:BJ:62:ARG:HA	2.16	0.45
47:BN:36:ALA:HB2	47:BN:41:ARG:CG	2.47	0.45
49:BP:75:ILE:O	49:BP:77:GLU:N	2.43	0.45
55:BV:393:THR:HG21	55:BV:443:PRO:HD3	1.99	0.45
3:CA:364:C:H2'	3:CA:365:U:H6	1.82	0.45
3:CA:504:A:H3'	3:CA:505:A:H5'	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CA:811:U:H2'	12:CL:21:ARG:HA	1.99	0.45
3:CA:996:A:H4'	17:CQ:91:ARG:NE	2.32	0.45
3:CA:1096:A:N6	3:CA:1097:U:C4	2.85	0.45
3:CA:1394:U:H4'	3:CA:1603:A:H4'	1.99	0.45
3:CA:1405:U:H2'	3:CA:1406:U:C6	2.51	0.45
3:CA:2320:U:O2	3:CA:2322:A:C5	2.70	0.45
3:CA:2478:A:OP2	31:C4:2:LYS:NZ	2.46	0.45
16:CP:113:LEU:HG	16:CP:113:LEU:O	2.16	0.45
23:CW:17:ALA:O	23:CW:18:LYS:HB2	2.17	0.45
23:CW:51:GLY:HA3	23:CW:59:PHE:HE1	1.81	0.45
26:CZ:15:ARG:HH11	26:CZ:15:ARG:HG2	1.80	0.45
35:DA:825:A:O2'	41:DH:9:ASP:OD2	2.34	0.45
35:DA:911:U:H2'	35:DA:912:C:C6	2.52	0.45
35:DA:1028:C:N4	35:DA:1033:G:H1	2.14	0.45
35:DA:1049:U:H4'	35:DA:1050:G:H5'	1.99	0.45
35:DA:1074:G:N3	35:DA:1102:A:C2	2.84	0.45
35:DA:1130:A:N6	35:DA:1143:G:N2	2.64	0.45
34:DB:14:HIS:CG	34:DB:14:HIS:O	2.70	0.45
37:DD:192:SER:OG	37:DD:193:ALA:N	2.50	0.45
38:DE:97:GLN:N	38:DE:124:LEU:O	2.43	0.45
38:DE:111:MET:HG3	38:DE:140:THR:HG21	1.98	0.45
39:DF:61:LEU:HD22	51:DR:24:LYS:HD3	1.98	0.45
42:DI:60:LYS:O	42:DI:61:LEU:HD12	2.17	0.45
46:DM:4:ILE:HA	46:DM:57:ARG:NH1	2.31	0.45
53:DT:78:ASN:ND2	60:DT:102:HOH:O	2.49	0.45
3:EA:265:A:H4'	3:EA:266:G:OP1	2.16	0.45
3:EA:300:A:H2'	3:EA:334:C:H1'	1.99	0.45
4:ED:91:THR:OG1	4:ED:92:VAL:N	2.49	0.45
6:EF:25:MET:HA	6:EF:25:MET:CE	2.46	0.45
7:EG:37:ASN:HB3	7:EG:40:VAL:CG2	2.47	0.45
9:EI:79:LEU:HA	9:EI:83:ALA:HB2	1.98	0.45
11:EK:5:GLN:O	11:EK:6:THR:HB	2.17	0.45
23:EW:22:VAL:O	23:EW:25:PHE:CD1	2.70	0.45
35:FA:641:U:H4'	41:FH:107:SER:O	2.17	0.45
36:FC:7:PRO:HG2	36:FC:184:TYR:CG	2.51	0.45
38:FE:15:LEU:CD1	38:FE:60:ILE:HD13	2.47	0.45
46:FM:54:ASP:HA	46:FM:57:ARG:HB3	1.98	0.45
47:FN:57:PRO:C	47:FN:59:ARG:H	2.20	0.45
55:FV:62:THR:HB	55:FV:90:PRO:HA	1.99	0.45
3:GA:644:A:C2	3:GA:645:C:C2	3.04	0.45
3:GA:812:C:C2	3:GA:1250:G:N1	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:GA:952:G:C4	3:GA:966:G:N1	2.85	0.45
3:GA:1808:A:H3'	3:GA:1809:A:C8	2.52	0.45
3:GA:2297:A:N1	3:GA:2321:U:H5	2.15	0.45
3:GA:2531:A:OP2	7:GG:174:LYS:HG3	2.17	0.45
2:GC:35:LYS:HD3	2:GC:37:SER:HB2	1.99	0.45
5:GE:21:ARG:HD2	5:GE:106:LYS:HB3	1.98	0.45
6:GF:6:TYR:CE1	6:GF:10:GLU:OE2	2.70	0.45
7:GG:1:SER:HA	7:GG:4:ALA:HB3	1.99	0.45
16:GP:33:GLU:HB3	16:GP:36:LYS:O	2.17	0.45
19:GS:18:ARG:HG3	19:GS:76:VAL:HG21	1.98	0.45
35:HA:232:G:H1'	35:HA:262:A:N1	2.32	0.45
35:HA:481:G:O2'	35:HA:482:A:O5'	2.35	0.45
35:HA:764:C:H2'	35:HA:765:G:O4'	2.17	0.45
35:HA:1078:U:H4'	38:HE:138:ARG:CZ	2.47	0.45
35:HA:1130:A:N6	35:HA:1144:G:N3	2.65	0.45
35:HA:1314:C:H42	35:HA:1323:G:H1	1.65	0.45
35:HA:1380:U:C5	40:HG:3:ARG:HA	2.51	0.45
38:HE:34:THR:HG22	38:HE:52:LYS:HE2	1.99	0.45
42:HI:17:ALA:HB1	42:HI:79:ILE:HG13	1.98	0.45
45:HL:24:LEU:HG	45:HL:25:GLU:H	1.81	0.45
50:HQ:8:LEU:HG	50:HQ:25:ILE:HD13	1.98	0.45
3:AA:666:A:H4'	12:AL:48:ARG:HD2	1.99	0.45
3:AA:820:A:H2'	3:AA:821:A:O4'	2.16	0.45
3:AA:979:A:H2'	3:AA:982:C:H42	1.82	0.45
3:AA:2800:A:H3'	3:AA:2801:G:H5"	1.96	0.45
4:AD:44:GLY:HA3	4:AD:45:TYR:HD1	1.82	0.45
11:AK:61:VAL:HG22	11:AK:87:LEU:HD11	1.98	0.45
16:AP:33:GLU:OE2	35:BA:345:C:H5'	2.16	0.45
23:AW:49:ASN:ND2	23:AW:49:ASN:C	2.66	0.45
26:AZ:39:ASP:OD2	26:AZ:44:ARG:NH1	2.46	0.45
29:A2:12:ARG:HH11	29:A2:44:VAL:HG11	1.82	0.45
32:A5:15:VAL:CG2	32:A5:66:GLY:HA2	2.47	0.45
35:BA:161:A:N1	35:BA:347:G:O2'	2.47	0.45
35:BA:376:G:H2'	35:BA:377:G:H8	1.82	0.45
35:BA:1008:U:H2'	35:BA:1009:U:O4'	2.17	0.45
35:BA:1302:C:C6	35:BA:1302:C:O5'	2.70	0.45
3:CA:635:C:H2'	3:CA:636:G:O4'	2.16	0.45
3:CA:929:U:H4'	26:CZ:37:ARG:NH1	2.32	0.45
3:CA:1989:G:H2'	3:CA:1990:C:O4'	2.17	0.45
3:CA:2305:U:O4	3:CA:2306:C:N4	2.49	0.45
3:CA:2406:A:C6	12:CL:69:ARG:NH2	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CA:2425:A:C5'	3:CA:2427:C:O4'	2.64	0.45
3:CA:2846:G:H2'	3:CA:2847:U:O4'	2.16	0.45
32:C5:93:ALA:HA	32:C5:130:PRO:CD	2.47	0.45
35:DA:1524:C:OP2	44:DK:125:LYS:NZ	2.36	0.45
42:DI:47:VAL:HA	42:DI:50:GLN:HG3	1.98	0.45
55:DV:327:ASP:HB3	55:DV:330:VAL:HG22	1.99	0.45
3:EA:243:U:OP1	30:E3:5:THR:OG1	2.27	0.45
3:EA:655:A:H4'	3:EA:656:G:OP1	2.17	0.45
3:EA:1072:C:H5'	3:EA:1073:A:OP1	2.17	0.45
3:EA:1150:C:H2'	3:EA:1151:A:O5'	2.17	0.45
3:EA:1257:C:OP1	5:EE:67:ARG:NH1	2.50	0.45
3:EA:2328:A:H2'	3:EA:2329:U:C6	2.51	0.45
2:EC:29:PHE:CE2	2:EC:31:PRO:HG2	2.52	0.45
14:EN:12:ARG:CZ	14:EN:20:MET:HE1	2.47	0.45
15:EO:14:ALA:O	15:EO:18:LEU:HD22	2.17	0.45
16:EP:111:GLU:OE1	16:EP:111:GLU:N	2.48	0.45
19:ES:18:ARG:O	19:ES:19:LEU:HB2	2.17	0.45
35:FA:586:C:O2'	35:FA:878:A:H4'	2.17	0.45
35:FA:637:C:H2'	35:FA:638:U:C6	2.52	0.45
35:FA:780:A:H5"	44:FK:125:LYS:HE2	1.99	0.45
35:FA:1067:A:N1	35:FA:1108:G:O2'	2.46	0.45
34:FB:209:VAL:HG23	34:FB:210:THR:H	1.81	0.45
44:FK:13:ARG:O	44:FK:14:LYS:CB	2.65	0.45
1:GB:20:G:O6	60:GB:1301:HOH:O	2.19	0.45
3:GA:477:A:N6	3:GA:500:G:O2'	2.50	0.45
3:GA:826:U:O2	60:GA:3349:HOH:O	2.18	0.45
3:GA:1056:G:H5"	3:GA:1057:A:O4'	2.16	0.45
3:GA:1067:A:H2'	3:GA:1068:G:C8	2.48	0.45
3:GA:1092:C:H2'	3:GA:1093:G:H5'	1.98	0.45
3:GA:1155:A:O2'	3:GA:1156:A:H2'	2.17	0.45
3:GA:1223:G:OP1	18:GR:68:ARG:NH1	2.49	0.45
3:GA:1760:C:H2'	3:GA:1761:C:O4'	2.17	0.45
2:GC:260:LYS:N	2:GC:263:ASP:OD1	2.48	0.45
6:GF:110:ILE:CG1	6:GF:136:ILE:HG21	2.46	0.45
8:GH:5:LEU:HD23	8:GH:5:LEU:H	1.82	0.45
14:GN:29:VAL:CG1	14:GN:75:ILE:HG23	2.47	0.45
28:G1:8:ILE:HG13	28:G1:24:LYS:HG2	1.99	0.45
35:HA:1150:A:C2	43:HJ:41:PRO:HG3	2.52	0.45
34:HB:22:TRP:HH2	34:HB:27:LYS:HE3	1.82	0.45
41:HH:84:ARG:NH1	41:HH:124:GLU:OE1	2.49	0.45
45:HL:75:GLN:O	45:HL:77:HIS:N	2.50	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:HU:37:PHE:HA	54:HU:40:LYS:HD2	1.99	0.45
54:HU:43:THR:HG23	54:HU:44:GLU:N	2.32	0.45
55:HV:257:LEU:HD11	55:HV:291:ASP:HB3	1.99	0.45
1:AB:11:C:O2'	1:AB:15:A:N6	2.50	0.45
3:AA:277:G:H2'	3:AA:361:G:O6	2.17	0.45
3:AA:281:C:H2'	3:AA:282:A:C8	2.51	0.45
3:AA:288:U:H2'	3:AA:289:G:C8	2.52	0.45
3:AA:980:A:C4	3:AA:1136:G:O4'	2.70	0.45
3:AA:1031:G:C4'	31:A4:6:SER:HB2	2.47	0.45
3:AA:1141:U:H4'	3:AA:1142:A:O4'	2.17	0.45
3:AA:2103:C:H2'	3:AA:2104:C:C5'	2.47	0.45
4:AD:69:ALA:HA	4:AD:73:VAL:CG1	2.47	0.45
4:AD:73:VAL:HG23	4:AD:74:GLU:H	1.82	0.45
10:AJ:30:THR:HG22	10:AJ:31:GLU:N	2.32	0.45
14:AN:98:LEU:CB	27:A0:42:ILE:HD11	2.46	0.45
17:AQ:91:ARG:HH12	18:AR:10:LYS:HB3	1.82	0.45
23:AW:17:ALA:O	23:AW:18:LYS:CB	2.63	0.45
31:A4:36:ARG:O	31:A4:37:GLN:C	2.55	0.45
34:BB:216:VAL:HA	34:BB:219:THR:HG22	1.98	0.45
35:BA:355:C:C4	35:BA:356:A:N7	2.85	0.45
35:BA:925:G:C2	35:BA:927:G:C8	3.04	0.45
35:BA:982:U:H4'	35:BA:983:A:O5'	2.17	0.45
35:BA:1181:G:N2	35:BA:1182:G:N2	2.64	0.45
37:BD:65:TYR:N	37:BD:65:TYR:CD1	2.84	0.45
39:BF:18:VAL:HG21	39:BF:58:HIS:CD2	2.52	0.45
55:BV:19:ILE:HD13	55:BV:92:HIS:H	1.82	0.45
55:BV:193:TRP:CH2	55:BV:276:GLN:HB2	2.51	0.45
1:CB:12:C:C5	23:CW:72:GLY:HA3	2.52	0.45
3:CA:45:G:H2'	3:CA:215:G:C5	2.52	0.45
3:CA:559:G:OP1	10:CJ:111:LYS:NZ	2.45	0.45
3:CA:1168:G:H3'	3:CA:1169:A:C8	2.51	0.45
3:CA:1276:A:C2	3:CA:1277:G:C5	3.05	0.45
3:CA:2353:G:H1'	23:CW:30:VAL:HG22	1.99	0.45
3:CA:2748:A:H1'	7:CG:66:THR:CG2	2.47	0.45
7:CG:123:GLU:HG2	7:CG:124:CYS:N	2.31	0.45
9:CI:123:ALA:HA	9:CI:126:ARG:NH2	2.32	0.45
11:CK:13:ASN:OD1	11:CK:13:ASN:N	2.50	0.45
12:CL:82:LEU:HB3	12:CL:90:VAL:HG21	1.97	0.45
16:CP:33:GLU:HB3	16:CP:36:LYS:O	2.17	0.45
17:CQ:4:LYS:HG3	17:CQ:5:ARG:N	2.32	0.45
32:C5:31:ARG:C	32:C5:108:VAL:HG21	2.37	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:114:U:O2'	35:DA:115:G:H5'	2.16	0.45
35:DA:1250:A:N3	35:DA:1370:G:O2'	2.42	0.45
34:DB:153:MET:SD	34:DB:157:PRO:HG3	2.56	0.45
34:DB:187:ASP:HB2	34:DB:203:ASP:CG	2.37	0.45
34:DB:212:TYR:CD1	34:DB:216:VAL:HG13	2.52	0.45
39:DF:6:ILE:HB	39:DF:62:MET:HB3	1.98	0.45
49:DP:10:GLY:HA3	49:DP:15:PRO:HA	1.99	0.45
55:DV:33:TYR:CE1	55:DV:199:GLY:HA3	2.52	0.45
55:DV:430:LYS:HG2	55:DV:479:VAL:CG2	2.47	0.45
3:EA:307:G:N2	3:EA:310:A:OP2	2.50	0.45
3:EA:504:A:O2'	3:EA:505:A:OP1	2.26	0.45
3:EA:634:C:H2'	3:EA:635:C:C6	2.51	0.45
3:EA:1087:G:C2	3:EA:1103:A:C2	3.05	0.45
2:EC:16:VAL:H	2:EC:203:VAL:HG12	1.82	0.45
2:EC:77:VAL:O	2:EC:77:VAL:CG2	2.65	0.45
2:EC:163:ILE:HG23	2:EC:171:VAL:CG1	2.47	0.45
7:EG:92:GLY:HA2	55:FV:147:MET:HE3	1.99	0.45
17:EQ:60:TRP:CE2	17:EQ:93:ILE:HB	2.52	0.45
18:ER:37:GLU:HB3	18:ER:53:PHE:CE1	2.52	0.45
18:ER:38:VAL:O	18:ER:53:PHE:HA	2.17	0.45
21:EU:88:ASP:OD1	21:EU:89:GLY:N	2.50	0.45
28:E1:8:ILE:CD1	28:E1:52:LYS:HG2	2.47	0.45
29:E2:31:LEU:HD21	29:E2:43:THR:HG21	1.99	0.45
31:E4:36:ARG:CG	31:E4:37:GLN:H	2.27	0.45
35:FA:227:G:N2	49:FP:63:GLN:O	2.50	0.45
35:FA:376:G:C2	35:FA:377:G:C8	3.05	0.45
35:FA:546:A:P	37:FD:69:GLU:HB2	2.57	0.45
35:FA:926:G:N2	35:FA:1505:G:H2'	2.32	0.45
34:FB:153:MET:O	34:FB:155:GLY:N	2.50	0.45
55:FV:55:GLN:NE2	55:FV:471:ASP:OD1	2.50	0.45
1:GB:53:A:C8	1:GB:54:G:C8	3.05	0.45
3:GA:26:G:OP1	19:GS:80:PRO:HB3	2.16	0.45
3:GA:425:G:C2	3:GA:426:C:C4	3.05	0.45
3:GA:613:A:N3	5:GE:173:THR:HG21	2.32	0.45
3:GA:952:G:C6	3:GA:953:G:C5	3.05	0.45
3:GA:1494:A:C2	3:GA:1495:A:C4	3.05	0.45
3:GA:1682:G:H2'	3:GA:1683:U:C6	2.51	0.45
3:GA:1999:C:H4'	3:GA:2723:C:O2	2.17	0.45
3:GA:2204:G:C6	3:GA:2205:A:C5	3.05	0.45
3:GA:2260:C:O2'	3:GA:2388:A:O2'	2.32	0.45
3:GA:2784:U:H2'	3:GA:2785:C:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:GD:24:VAL:HA	4:GD:191:GLY:H	1.82	0.45
7:GG:175:LYS:HD2	55:HV:630:ASP:HA	1.98	0.45
35:HA:419:C:OP1	35:HA:513:C:O2'	2.29	0.45
35:HA:518:C:H2'	35:HA:530:G:C8	2.52	0.45
35:HA:1049:U:H5"	35:HA:1050:G:H5"	1.98	0.45
41:HH:101:ILE:HB	41:HH:112:THR:CG2	2.47	0.45
55:HV:191:ILE:HG23	55:HV:202:PHE:CE1	2.52	0.45
3:AA:315:G:H2'	3:AA:316:C:C6	2.52	0.44
3:AA:2021:C:P	27:A0:8:THR:HG21	2.56	0.44
3:AA:2262:U:H4'	3:AA:2328:A:C2	2.52	0.44
3:AA:2407:A:C2	3:AA:2408:U:C2	3.05	0.44
4:AD:3:GLY:HA3	4:AD:204:LYS:HG2	1.99	0.44
6:AF:72:SER:HB2	6:AF:80:GLN:HB2	2.00	0.44
23:AW:37:VAL:HG11	23:AW:55:ASP:HB2	1.99	0.44
35:BA:2:A:O2'	37:BD:83:LYS:NZ	2.47	0.44
35:BA:561:U:O2'	35:BA:562:U:OP1	2.33	0.44
35:BA:747:A:H5'	35:BA:748:G:OP2	2.17	0.44
42:BI:9:THR:HG22	42:BI:10:GLY:N	2.31	0.44
43:BJ:73:LEU:O	43:BJ:75:ASP:N	2.50	0.44
46:BM:54:ASP:HA	46:BM:57:ARG:CB	2.47	0.44
49:BP:10:GLY:HA3	49:BP:15:PRO:HA	1.98	0.44
55:BV:33:TYR:HE2	55:BV:275:VAL:HB	1.82	0.44
55:BV:93:VAL:HG22	55:BV:94:ASP:H	1.82	0.44
3:CA:565:C:H4'	3:CA:1253:A:N6	2.32	0.44
3:CA:616:A:OP2	60:CA:3287:HOH:O	2.21	0.44
3:CA:996:A:H4'	17:CQ:91:ARG:CD	2.47	0.44
3:CA:1022:G:C6	3:CA:1140:C:C4	3.05	0.44
3:CA:1262:A:N3	27:C0:6:LYS:NZ	2.58	0.44
3:CA:1948:G:N3	35:DA:1418:A:H2	2.15	0.44
10:CJ:44:TYR:O	10:CJ:45:THR:HG22	2.16	0.44
22:CV:80:HIS:CD2	22:CV:83:LYS:HB2	2.52	0.44
23:CW:28:GLU:HG2	23:CW:29:SER:N	2.31	0.44
35:DA:257:G:C2	35:DA:258:G:C5	3.05	0.44
35:DA:369:G:C4	35:DA:393:A:C2	3.05	0.44
35:DA:1308:U:H3'	46:DM:98:ARG:HH21	1.82	0.44
36:DC:150:LYS:HB3	36:DC:169:ARG:HG2	1.99	0.44
40:DG:68:ASN:OD1	40:DG:130:ASN:ND2	2.50	0.44
49:DP:4:ILE:HD13	49:DP:67:ILE:CD1	2.46	0.44
55:DV:221:ASN:HA	55:DV:224:GLU:CB	2.46	0.44
3:EA:286:U:C2	3:EA:287:G:C8	3.05	0.44
3:EA:301:G:H4'	3:EA:302:C:OP1	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:EA:464:U:C2	3:EA:788:A:C6	3.05	0.44
3:EA:582:A:C6	3:EA:583:G:C6	3.05	0.44
3:EA:1386:C:H2'	3:EA:1387:A:C8	2.51	0.44
3:EA:2037:A:H2'	3:EA:2038:G:C8	2.52	0.44
4:ED:86:GLU:N	4:ED:86:GLU:CD	2.70	0.44
9:EI:6:ALA:CB	9:EI:60:VAL:HB	2.47	0.44
32:E5:23:LEU:HG	32:E5:24:SER:N	2.32	0.44
32:E5:29:ASP:O	32:E5:32:GLY:N	2.46	0.44
32:E5:93:ALA:HA	32:E5:130:PRO:HG2	1.98	0.44
35:FA:109:A:C6	35:FA:326:G:C6	3.05	0.44
35:FA:204:G:H3'	35:FA:205:A:H5"	1.99	0.44
35:FA:723:U:H2'	54:FU:49:LYS:HD3	2.00	0.44
35:FA:1048:G:H5"	47:FN:3:LYS:HG3	1.99	0.44
35:FA:1099:G:H2'	35:FA:1100:C:O4'	2.18	0.44
35:FA:1268:G:C6	35:FA:1269:A:N6	2.85	0.44
34:FB:49:PHE:HA	34:FB:212:TYR:OH	2.17	0.44
34:FB:79:VAL:O	34:FB:83:ALA:HB3	2.17	0.44
43:FJ:84:VAL:HG13	43:FJ:85:ASP:N	2.32	0.44
52:FS:23:VAL:HG23	52:FS:24:GLU:N	2.32	0.44
55:FV:330:VAL:HB	55:FV:386:ILE:HD13	1.98	0.44
3:GA:1038:G:N2	3:GA:1117:C:O2	2.46	0.44
3:GA:2195:U:H2'	3:GA:2196:C:H6	1.82	0.44
3:GA:2673:G:C2	3:GA:2674:G:C8	3.05	0.44
6:GF:56:LEU:HD22	6:GF:88:VAL:HG21	1.99	0.44
11:GK:99:ILE:HG21	11:GK:119:ALA:HB2	1.99	0.44
14:GN:103:ARG:HD3	14:GN:110:MET:HE3	2.00	0.44
20:GT:50:LEU:HD12	20:GT:50:LEU:H	1.82	0.44
21:GU:82:VAL:HG13	21:GU:93:ARG:HB3	1.99	0.44
22:GV:55:GLU:OE1	22:GV:55:GLU:N	2.50	0.44
23:GW:37:VAL:HG13	23:GW:55:ASP:C	2.37	0.44
35:HA:251:G:C6	35:HA:266:G:O6	2.70	0.44
35:HA:429:U:H3'	37:HD:9:LEU:HD23	1.98	0.44
35:HA:827:U:O5'	35:HA:827:U:H6	1.99	0.44
34:HB:134:LEU:C	34:HB:136:ARG:H	2.19	0.44
40:HG:114:LYS:HD3	40:HG:118:LEU:HD13	1.97	0.44
45:HL:6:GLN:HA	45:HL:9:ARG:HE	1.82	0.44
46:HM:50:GLU:HA	46:HM:53:ILE:HD12	1.99	0.44
49:HP:4:ILE:HB	49:HP:67:ILE:HD13	1.99	0.44
50:HQ:44:LEU:HD13	50:HQ:73:TRP:CE2	2.52	0.44
53:HT:67:ILE:O	53:HT:68:HIS:HB2	2.17	0.44
3:AA:2039:U:H2'	3:AA:2040:G:H8	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:24:THR:HG23	7:AG:34:ARG:HG2	1.99	0.44
7:AG:104:LEU:HB2	7:AG:112:VAL:CG2	2.47	0.44
9:AI:45:THR:O	9:AI:48:ILE:HG13	2.18	0.44
10:AJ:44:TYR:O	10:AJ:45:THR:CB	2.64	0.44
10:AJ:55:ILE:HD11	10:AJ:130:HIS:CD2	2.51	0.44
28:A1:4:ILE:HG23	28:A1:5:ARG:N	2.32	0.44
28:A1:6:GLU:OE1	28:A1:52:LYS:CE	2.64	0.44
35:BA:255:G:OP1	50:BQ:71:LYS:NZ	2.49	0.44
35:BA:843:U:O2	35:BA:844:G:N7	2.50	0.44
38:BE:46:VAL:HG21	38:BE:118:ALA:HB2	2.00	0.44
39:BF:43:GLY:HA2	39:BF:58:HIS:CE1	2.52	0.44
40:BG:56:LYS:O	40:BG:61:ALA:HB2	2.18	0.44
42:BI:91:ASP:C	42:BI:93:SER:H	2.21	0.44
46:BM:114:LYS:H	46:BM:115:PRO:CD	2.30	0.44
3:CA:657:U:H2'	3:CA:658:U:C6	2.52	0.44
3:CA:674:G:H1'	5:CE:69:ARG:CD	2.47	0.44
3:CA:1505:A:C6	3:CA:1506:U:C4	3.05	0.44
3:CA:1638:C:O3'	3:CA:2709:G:N2	2.50	0.44
16:CP:38:ARG:NH1	35:DA:346:G:H4'	2.32	0.44
17:CQ:91:ARG:CD	18:CR:11:GLN:H	2.31	0.44
25:CY:8:GLU:HG3	25:CY:8:GLU:O	2.17	0.44
35:DA:41:G:H2'	35:DA:42:G:C8	2.52	0.44
35:DA:224:U:H2'	35:DA:225:C:H6	1.82	0.44
35:DA:452:A:H62	35:DA:480:U:H3	1.64	0.44
35:DA:571:U:O2	35:DA:918:A:H5'	2.16	0.44
35:DA:861:G:C6	35:DA:862:C:C4	3.05	0.44
38:DE:99:ALA:O	38:DE:122:ASN:ND2	2.50	0.44
40:DG:62:PHE:CZ	40:DG:66:LEU:HD13	2.52	0.44
42:DI:55:VAL:HG21	42:DI:87:LEU:HD21	1.99	0.44
55:DV:184:ASP:O	55:DV:188:MET:N	2.50	0.44
55:DV:525:LEU:HD13	55:DV:575:GLY:N	2.33	0.44
3:EA:310:A:H5"	21:EU:14:THR:HG23	1.99	0.44
3:EA:783:A:C2	3:EA:785:G:H1'	2.52	0.44
3:EA:901:C:C4	3:EA:902:C:C4	3.05	0.44
3:EA:1069:A:C2	3:EA:1073:A:C8	3.05	0.44
3:EA:1394:U:H4'	3:EA:1603:A:H4'	2.00	0.44
3:EA:1567:G:H2'	2:EC:84:PRO:HG3	1.99	0.44
3:EA:1647:U:OP2	60:EA:3418:HOH:O	2.21	0.44
3:EA:1806:C:H1'	2:EC:43:ASN:HD22	1.82	0.44
3:EA:2134:A:C2'	3:EA:2156:G:H22	2.30	0.44
3:EA:2804:U:H2'	3:EA:2805:C:C6	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:EF:134:GLN:O	6:EF:136:ILE:N	2.50	0.44
21:EU:84:PHE:O	21:EU:85:ARG:HB3	2.17	0.44
23:EW:49:ASN:OD1	23:EW:49:ASN:C	2.54	0.44
28:E1:4:ILE:HG23	28:E1:5:ARG:N	2.32	0.44
28:E1:8:ILE:CG1	28:E1:51:ALA:HA	2.47	0.44
35:FA:373:A:C2	35:FA:482:A:N6	2.85	0.44
35:FA:455:G:C2	35:FA:478:A:C2	3.05	0.44
35:FA:482:A:C2	35:FA:483:C:H1'	2.52	0.44
35:FA:1008:U:OP1	47:FN:24:ARG:NH2	2.51	0.44
35:FA:1237:C:H3'	35:FA:1238:A:H5'	1.98	0.44
35:FA:1469:C:H2'	35:FA:1470:U:C5'	2.47	0.44
35:FA:1478:U:H2'	35:FA:1479:C:C6	2.52	0.44
36:FC:110:GLU:HB2	36:FC:144:LEU:HD21	1.98	0.44
38:FE:155:ALA:HB1	41:FH:66:PHE:CZ	2.53	0.44
44:FK:20:VAL:HG22	44:FK:83:GLU:HG3	1.98	0.44
44:FK:127:ARG:HB2	54:FU:34:ARG:NH1	2.33	0.44
54:FU:51:SER:C	54:FU:53:VAL:H	2.20	0.44
3:GA:236:C:O2'	3:GA:431:U:H4'	2.16	0.44
3:GA:483:A:C8	21:GU:44:HIS:CD2	3.05	0.44
3:GA:648:G:O2'	3:GA:2351:G:OP1	2.30	0.44
3:GA:874:G:N3	3:GA:904:G:C2	2.86	0.44
3:GA:1383:A:N7	3:GA:1384:A:C5	2.85	0.44
3:GA:2316:G:C2	3:GA:2317:A:C5	3.06	0.44
3:GA:2722:G:H4'	14:GN:4:ARG:HB2	1.99	0.44
20:GT:19:LYS:O	20:GT:23:ALA:HB3	2.17	0.44
35:HA:546:A:OP1	37:HD:69:GLU:HB2	2.17	0.44
35:HA:895:G:H1	35:HA:904:U:H3	1.65	0.44
35:HA:1277:C:HO2'	35:HA:1279:G:H8	1.62	0.44
35:HA:1503:A:N6	35:HA:1532:U:H1'	2.32	0.44
45:HL:33:VAL:HG11	55:HV:429:GLU:HG3	1.97	0.44
48:HO:68:ASP:O	48:HO:71:LYS:HB3	2.17	0.44
3:AA:271:G:H4'	3:AA:272:A:OP1	2.17	0.44
3:AA:272:A:HO2'	3:AA:273:G:H8	1.63	0.44
3:AA:818:G:H5'	3:AA:839:U:OP1	2.18	0.44
3:AA:980:A:C6	3:AA:981:A:N1	2.85	0.44
3:AA:1252:G:C2	17:AQ:32:ARG:HG2	2.52	0.44
3:AA:1340:U:H4'	3:AA:1341:G:OP2	2.17	0.44
3:AA:2307:G:N2	3:AA:2311:A:C8	2.85	0.44
3:AA:2353:G:N3	23:AW:30:VAL:HG12	2.32	0.44
5:AE:160:ALA:O	5:AE:161:ALA:HB3	2.18	0.44
6:AF:127:TYR:O	6:AF:128:SER:CB	2.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:128:SER:HA	6:AF:154:THR:HA	1.99	0.44
9:AI:125:THR:O	9:AI:128:ILE:N	2.48	0.44
11:AK:80:ASP:CB	16:AP:67:GLU:HG3	2.47	0.44
17:AQ:103:VAL:HG23	17:AQ:104:ALA:N	2.32	0.44
20:AT:40:LYS:HG2	20:AT:58:VAL:HG22	1.99	0.44
20:AT:48:GLN:O	20:AT:52:GLU:HA	2.17	0.44
21:AU:6:ARG:O	21:AU:24:VAL:HB	2.17	0.44
21:AU:53:GLN:N	21:AU:54:PRO:CD	2.80	0.44
32:A5:33:VAL:HG12	32:A5:34:THR:N	2.26	0.44
32:A5:48:ALA:HB3	32:A5:51:TYR:HB3	1.98	0.44
32:A5:100:ALA:HB3	32:A5:125:ARG:HD2	1.98	0.44
35:BA:243:A:C4	35:BA:245:U:C5	3.06	0.44
40:BG:111:ARG:HE	40:BG:123:GLU:HG2	1.83	0.44
44:BK:82:LEU:HD21	44:BK:105:PHE:HB3	1.99	0.44
1:CB:42:C:O5'	6:CF:63:LYS:HD2	2.17	0.44
1:CB:98:G:H1	22:CV:14:LYS:HB2	1.81	0.44
3:CA:2081:U:H5'	24:CX:24:THR:HG21	1.99	0.44
3:CA:2091:C:H1'	24:CX:33:HIS:CD2	2.52	0.44
3:CA:2698:U:H2'	3:CA:2699:C:H6	1.81	0.44
5:CE:149:ILE:HD11	5:CE:172:ALA:HA	1.99	0.44
9:CI:25:PRO:CG	55:DV:649:VAL:HG22	2.47	0.44
23:CW:37:VAL:HB	23:CW:38:ARG:HH11	1.81	0.44
35:DA:44:A:C2	35:DA:399:G:C2	3.05	0.44
35:DA:232:G:H1'	35:DA:262:A:N1	2.32	0.44
35:DA:381:C:H2'	35:DA:382:A:O4'	2.17	0.44
35:DA:1244:G:C6	35:DA:1245:C:C4	3.06	0.44
35:DA:1478:U:H2'	35:DA:1479:C:C6	2.52	0.44
37:DD:116:GLN:OE1	37:DD:120:HIS:CE1	2.71	0.44
46:DM:39:ILE:CG2	46:DM:48:LEU:HD11	2.47	0.44
52:DS:63:THR:CG2	52:DS:64:ASP:N	2.80	0.44
55:DV:8:ALA:O	55:DV:288:SER:OG	2.33	0.44
55:DV:131:ASN:OD1	55:DV:137:ARG:NH2	2.49	0.44
3:EA:61:C:C2'	3:EA:62:U:H5'	2.47	0.44
3:EA:749:A:C5	3:EA:1618:A:C2	3.05	0.44
3:EA:1025:G:O2'	60:EA:3704:HOH:O	2.21	0.44
3:EA:1445:G:C5	3:EA:1446:C:C5	3.04	0.44
3:EA:2394:C:P	30:E3:29:ARG:HH21	2.40	0.44
3:EA:2473:U:O4	7:EG:175:LYS:NZ	2.44	0.44
3:EA:2811:G:H2'	3:EA:2812:G:O4'	2.17	0.44
4:ED:12:THR:HG22	4:ED:13:ARG:N	2.31	0.44
7:EG:86:LEU:HD12	7:EG:130:ILE:HB	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:EG:104:LEU:HD12	7:EG:112:VAL:HG21	1.98	0.44
12:EL:91:ASP:HB3	12:EL:94:THR:HB	2.00	0.44
16:EP:74:GLN:O	16:EP:77:SER:HB3	2.17	0.44
21:EU:85:ARG:HD3	21:EU:86:PHE:N	2.33	0.44
35:FA:6:G:C5	38:FE:124:LEU:HD11	2.53	0.44
35:FA:376:G:N3	35:FA:377:G:C8	2.86	0.44
35:FA:1349:A:C2	35:FA:1374:A:C4	3.05	0.44
48:FO:71:LYS:HB2	48:FO:78:TYR:CD2	2.53	0.44
3:GA:307:G:N2	3:GA:310:A:C8	2.85	0.44
3:GA:389:G:C8	3:GA:2413:G:H4'	2.52	0.44
3:GA:414:C:O3'	3:GA:1878:G:N2	2.50	0.44
3:GA:817:C:H42	3:GA:1190:G:H1	1.63	0.44
3:GA:934:U:C4	3:GA:935:C:C5	3.06	0.44
3:GA:1016:G:N1	3:GA:1147:A:C6	2.86	0.44
3:GA:1061:U:O4	9:GI:9:LYS:HG2	2.18	0.44
3:GA:1721:G:O2'	3:GA:1739:A:N6	2.50	0.44
3:GA:2266:A:O2'	60:GA:3513:HOH:O	2.20	0.44
3:GA:2678:C:H2'	3:GA:2679:A:O4'	2.17	0.44
4:GD:106:LYS:HB3	4:GD:206:ALA:HB3	1.99	0.44
5:GE:28:VAL:O	5:GE:31:VAL:N	2.50	0.44
17:GQ:63:ARG:NH2	17:GQ:95:ALA:HB3	2.31	0.44
17:GQ:69:ARG:NH2	17:GQ:74:SER:HA	2.33	0.44
35:HA:796:C:H2'	35:HA:797:C:H5'	2.00	0.44
35:HA:1097:C:H2'	35:HA:1098:C:C6	2.53	0.44
35:HA:1287:A:N3	35:HA:1353:G:O2'	2.35	0.44
35:HA:1377:A:H4'	35:HA:1378:C:H5	1.82	0.44
34:HB:14:HIS:HE1	34:HB:40:ILE:HD13	1.83	0.44
36:HC:148:GLY:HA3	36:HC:172:ARG:O	2.18	0.44
43:HJ:35:GLN:CG	43:HJ:37:ARG:NE	2.79	0.44
43:HJ:37:ARG:HD2	43:HJ:75:ASP:O	2.18	0.44
44:HK:46:THR:OG1	44:HK:47:ALA:N	2.47	0.44
1:AB:51:G:H5"	15:AO:64:TYR:CD2	2.52	0.44
3:AA:580:U:O3'	17:AQ:30:VAL:HG13	2.18	0.44
3:AA:597:G:C2	3:AA:661:A:C2	3.04	0.44
3:AA:1060:U:H3	3:AA:1088:A:H2	1.64	0.44
3:AA:1443:U:H2'	3:AA:1444:G:C8	2.53	0.44
3:AA:1523:U:O2'	3:AA:1524:G:H5'	2.18	0.44
3:AA:1662:U:O2	3:AA:2687:U:H4'	2.17	0.44
3:AA:2180:U:C2	3:AA:2181:U:C5	3.06	0.44
6:AF:62:GLN:NE2	6:AF:89:THR:O	2.46	0.44
8:AH:14:SER:OG	8:AH:17:ASP:CG	2.55	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:100:ILE:HD11	9:AI:137:LEU:CG	2.48	0.44
10:AJ:36:LEU:O	10:AJ:121:LYS:NZ	2.39	0.44
16:AP:58:PHE:CE1	16:AP:75:THR:HG22	2.51	0.44
23:AW:39:GLN:HG3	23:AW:42:THR:H	1.81	0.44
35:BA:76:G:N2	35:BA:95:C:N3	2.65	0.44
35:BA:1451:U:H5"	35:BA:1452:C:C5	2.52	0.44
37:BD:197:GLU:O	37:BD:200:ILE:HG22	2.17	0.44
45:BL:3:THR:HG22	45:BL:5:ASN:H	1.81	0.44
46:BM:4:ILE:HD12	46:BM:22:ILE:HD11	2.00	0.44
47:BN:47:LYS:HD2	52:BS:13:LEU:HG	1.98	0.44
55:BV:317:PHE:CE1	55:BV:343:VAL:CG2	2.99	0.44
56:BW:5:UAL:O	56:BW:6:5OH:NP	2.51	0.44
3:CA:1208:C:C2	3:CA:1239:G:C2	3.05	0.44
3:CA:1713:A:N6	3:CA:1746:A:N1	2.65	0.44
3:CA:1714:U:H5'	3:CA:1715:G:H5'	1.99	0.44
3:CA:1799:G:N2	3:CA:1819:A:OP2	2.44	0.44
3:CA:2212:A:C2	3:CA:2214:C:N4	2.86	0.44
3:CA:2422:C:C4	3:CA:2424:C:C4	3.06	0.44
3:CA:2639:A:C2	3:CA:2778:A:C8	3.05	0.44
2:CC:145:MET:SD	2:CC:153:LEU:HD21	2.57	0.44
10:CJ:44:TYR:O	10:CJ:45:THR:HB	2.18	0.44
15:CO:49:VAL:HG21	15:CO:82:ALA:HA	1.99	0.44
15:CO:67:ASN:O	15:CO:68:LYS:C	2.55	0.44
17:CQ:81:GLY:HA2	17:CQ:116:LEU:CD1	2.48	0.44
26:CZ:8:GLN:HB3	26:CZ:31:ILE:HA	1.99	0.44
35:DA:581:G:N2	35:DA:760:G:N7	2.65	0.44
35:DA:643:C:H5'	41:DH:32:LEU:HD13	2.00	0.44
35:DA:728:A:H2'	35:DA:729:A:C8	2.52	0.44
34:DB:22:TRP:HA	34:DB:189:ASN:HB3	1.99	0.44
34:DB:95:TRP:HH2	34:DB:174:GLU:HG2	1.81	0.44
44:DK:35:THR:HA	44:DK:42:LEU:HG	1.98	0.44
46:DM:2:ALA:O	46:DM:10:PRO:HD2	2.18	0.44
48:DO:15:PHE:CD2	48:DO:84:ARG:CZ	3.01	0.44
3:EA:312:G:H2'	3:EA:313:G:H8	1.81	0.44
3:EA:1171:G:N1	3:EA:1172:C:C4	2.86	0.44
3:EA:2423:U:H5'	3:EA:2423:U:H6	1.82	0.44
4:ED:12:THR:CG2	4:ED:13:ARG:N	2.81	0.44
14:EN:37:THR:OG1	14:EN:40:LYS:HD2	2.17	0.44
23:EW:17:ALA:O	23:EW:18:LYS:CB	2.65	0.44
23:EW:17:ALA:HA	23:EW:35:ILE:HG23	2.00	0.44
32:E5:127:ALA:C	32:E5:129:LEU:N	2.71	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:FA:129:A:H1'	35:FA:130:A:C8	2.52	0.44
35:FA:1092:A:C2	35:FA:1183:U:N3	2.86	0.44
35:FA:1150:A:N6	35:FA:1151:A:N6	2.66	0.44
34:FB:47:PRO:O	34:FB:50:ASN:HB3	2.18	0.44
36:FC:112:ASP:O	36:FC:116:VAL:HG23	2.18	0.44
37:FD:36:GLN:O	37:FD:37:ALA:HB3	2.18	0.44
42:FI:58:VAL:HG12	42:FI:59:GLU:HG2	2.00	0.44
46:FM:7:ILE:O	46:FM:7:ILE:HG13	2.17	0.44
48:FO:19:ALA:O	48:FO:20:ASN:HB2	2.18	0.44
48:FO:85:LEU:HB3	48:FO:87:LEU:HD23	2.00	0.44
3:GA:49:A:N6	3:GA:177:G:C4	2.85	0.44
3:GA:107:G:O3'	3:GA:293:U:O2'	2.26	0.44
3:GA:790:U:H3	3:GA:794:A:HO2'	1.64	0.44
3:GA:949:G:N3	3:GA:969:G:C2	2.85	0.44
3:GA:952:G:C4	3:GA:966:G:C2	3.05	0.44
3:GA:1914:C:O5'	3:GA:1914:C:H6	2.00	0.44
3:GA:2037:A:C6	3:GA:2038:G:C6	3.05	0.44
3:GA:2358:A:C8	3:GA:2359:C:C5	3.06	0.44
4:GD:29:VAL:HB	4:GD:98:VAL:CG1	2.47	0.44
4:GD:106:LYS:CB	4:GD:206:ALA:H	2.31	0.44
5:GE:4:VAL:HG12	5:GE:6:LYS:H	1.82	0.44
7:GG:25:ILE:HG22	7:GG:78:VAL:HG11	1.98	0.44
23:GW:48:ALA:O	23:GW:61:LYS:N	2.43	0.44
24:GX:6:VAL:HG23	24:GX:7:THR:HG23	2.00	0.44
31:G4:3:VAL:HG23	31:G4:4:ARG:H	1.83	0.44
35:HA:224:U:H2'	35:HA:225:C:C6	2.51	0.44
35:HA:381:C:H2'	35:HA:382:A:O4'	2.17	0.44
35:HA:1222:G:OP2	35:HA:1322:C:N4	2.51	0.44
37:HD:35:GLU:HG3	37:HD:36:GLN:HG3	2.00	0.44
37:HD:174:ASP:O	37:HD:175:ALA:HB2	2.18	0.44
50:HQ:59:VAL:CG1	50:HQ:75:LEU:HD13	2.48	0.44
53:HT:67:ILE:HD11	53:HT:71:LYS:HE3	2.00	0.44
54:HU:17:ARG:CG	54:HU:19:PHE:HB3	2.47	0.44
55:HV:28:GLU:CD	55:HV:49:THR:HA	2.38	0.44
55:HV:217:GLU:O	55:HV:220:GLN:N	2.50	0.44
55:HV:303:LYS:HA	55:HV:303:LYS:CE	2.48	0.44
1:AB:90:C:H5"	1:AB:90:C:H6	1.83	0.44
3:AA:635:C:O2'	3:AA:639:U:OP1	2.34	0.44
3:AA:720:U:H2'	3:AA:721:A:C8	2.53	0.44
3:AA:1197:G:H2'	3:AA:1198:U:H6	1.83	0.44
3:AA:1428:C:C5	3:AA:1569:A:H5"	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AA:1452:G:O2'	60:AA:3409:HOH:O	2.17	0.44
3:AA:1614:A:N6	19:AS:92:ARG:O	2.44	0.44
3:AA:2344:U:H4'	3:AA:2345:G:OP1	2.17	0.44
3:AA:2682:A:C8	4:AD:11:MET:HG3	2.53	0.44
13:AM:102:LEU:HD12	13:AM:102:LEU:N	2.32	0.44
16:AP:102:ARG:O	16:AP:103:THR:HG22	2.17	0.44
17:AQ:91:ARG:HH11	18:AR:11:GLN:H	1.64	0.44
22:AV:80:HIS:CD2	22:AV:82:TYR:H	2.35	0.44
32:A5:129:LEU:CB	32:A5:130:PRO:HD2	2.47	0.44
35:BA:1415:G:C6	35:BA:1486:G:C5	3.06	0.44
42:BI:47:VAL:CG2	42:BI:76:ALA:HB1	2.48	0.44
55:BV:90:PRO:HG2	55:BV:98:GLU:HB2	2.00	0.44
55:BV:119:VAL:HG13	55:BV:123:SER:HB2	2.00	0.44
3:CA:168:G:C6	3:CA:169:G:N7	2.86	0.44
3:CA:1054:A:P	32:C5:31:ARG:HH21	2.41	0.44
3:CA:1292:G:H2'	3:CA:1293:C:C6	2.53	0.44
3:CA:2143:C:H3'	3:CA:2144:G:H4'	2.00	0.44
6:CF:84:ILE:O	6:CF:84:ILE:HG13	2.18	0.44
7:CG:31:GLU:HG3	7:CG:32:LEU:HD12	2.00	0.44
19:CS:34:ASP:HB3	27:C0:27:LEU:HD11	1.98	0.44
20:CT:28:ASN:O	20:CT:29:THR:HG22	2.16	0.44
35:DA:62:U:OP1	35:DA:385:C:O2'	2.31	0.44
35:DA:322:C:H5	35:DA:328:C:H5	1.65	0.44
35:DA:1096:C:H2'	35:DA:1097:C:C6	2.52	0.44
35:DA:1124:G:H2'	35:DA:1145:A:N6	2.31	0.44
35:DA:1216:A:OP1	47:DN:3:LYS:HE2	2.17	0.44
35:DA:1397:C:O2'	35:DA:1398:A:OP1	2.33	0.44
34:DB:29:PHE:CE2	34:DB:44:LYS:HE3	2.53	0.44
41:DH:93:PRO:HG3	41:DH:125:ILE:HD12	2.00	0.44
3:EA:922:C:O2'	23:EW:25:PHE:HZ	2.01	0.44
3:EA:923:G:H21	23:EW:23:LYS:NZ	2.16	0.44
3:EA:967:U:H2'	3:EA:968:C:C6	2.52	0.44
3:EA:1157:G:N2	3:EA:1158:C:C2	2.85	0.44
3:EA:2098:U:H2'	3:EA:2099:U:O4'	2.17	0.44
6:EF:134:GLN:HG2	6:EF:135:ILE:N	2.33	0.44
9:EI:87:SER:OG	9:EI:88:GLY:N	2.47	0.44
11:EK:23:LYS:HZ3	11:EK:23:LYS:HB2	1.83	0.44
12:EL:81:ASP:HB3	12:EL:100:ILE:HD13	1.98	0.44
12:EL:95:LEU:CD2	12:EL:100:ILE:HD11	2.48	0.44
13:EM:13:HIS:O	13:EM:14:LYS:HB2	2.17	0.44
16:EP:50:ARG:HD3	16:EP:56:SER:HB3	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:E5:33:VAL:HG12	32:E5:34:THR:N	2.25	0.44
32:E5:71:CYS:CA	32:E5:117:LEU:HD12	2.47	0.44
32:E5:110:ALA:HB1	32:E5:113:PHE:CZ	2.53	0.44
35:FA:35:G:N2	45:FL:115:SER:OG	2.49	0.44
35:FA:298:A:H2'	35:FA:299:G:O4'	2.18	0.44
35:FA:1225:A:H2'	35:FA:1226:C:C5	2.52	0.44
35:FA:1414:U:H2'	35:FA:1415:G:H8	1.82	0.44
36:FC:83:ASP:O	36:FC:86:LYS:HG2	2.18	0.44
36:FC:127:ARG:O	36:FC:127:ARG:HG3	2.18	0.44
36:FC:150:LYS:HZ2	36:FC:169:ARG:HG3	1.83	0.44
37:FD:105:MET:SD	37:FD:143:VAL:HG11	2.57	0.44
37:FD:191:LEU:O	37:FD:192:SER:HB2	2.17	0.44
3:GA:820:A:C2	3:GA:821:A:C4	3.05	0.44
3:GA:833:A:H2'	3:GA:834:G:C8	2.52	0.44
3:GA:945:A:C2	3:GA:2448:A:C4	3.05	0.44
3:GA:966:G:C6	3:GA:967:U:N3	2.86	0.44
3:GA:1371:G:OP2	60:GA:3400:HOH:O	2.21	0.44
3:GA:1816:C:N4	2:GC:34:GLU:OE2	2.47	0.44
3:GA:2803:G:H2'	3:GA:2804:U:H6	1.83	0.44
17:GQ:51:GLN:O	17:GQ:54:ARG:N	2.50	0.44
19:GS:55:ILE:HG23	19:GS:66:ILE:HG22	2.00	0.44
21:GU:86:PHE:CD2	21:GU:88:ASP:HB3	2.52	0.44
35:HA:300:A:H2'	35:HA:301:G:O4'	2.18	0.44
38:HE:106:ILE:HD11	38:HE:124:LEU:HD23	2.00	0.44
40:HG:76:LYS:N	40:HG:87:VAL:O	2.46	0.44
3:AA:278:A:N1	3:AA:362:A:C8	2.85	0.44
3:AA:545:U:H2'	3:AA:546:U:O3'	2.18	0.44
3:AA:799:G:C6	3:AA:800:A:C6	3.05	0.44
3:AA:948:C:H1'	3:AA:984:A:O2'	2.17	0.44
3:AA:1071:G:H1'	3:AA:1089:A:C5	2.53	0.44
3:AA:1914:C:H2'	3:AA:1915:U:O4'	2.18	0.44
3:AA:2276:G:P	13:AM:83:GLY:O	2.76	0.44
3:AA:2902:C:H2'	3:AA:2903:U:O5'	2.18	0.44
4:AD:70:LYS:O	4:AD:71:ALA:HB3	2.17	0.44
5:AE:188:MET:HE3	5:AE:196:VAL:HG21	2.00	0.44
23:AW:30:VAL:O	23:AW:30:VAL:CG1	2.64	0.44
35:BA:202:G:O2'	35:BA:468:A:H8	2.01	0.44
35:BA:517:G:H5'	35:BA:519:C:C2	2.53	0.44
39:BF:86:ARG:NH1	51:BR:64:TYR:HB3	2.32	0.44
43:BJ:17:LEU:HA	43:BJ:20:GLN:HG2	1.98	0.44
44:BK:35:THR:OG1	44:BK:41:ALA:N	2.51	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BK:125:LYS:HG2	54:BU:35:ARG:HG2	2.00	0.44
44:BK:126:LYS:HG3	44:BK:127:ARG:HE	1.82	0.44
47:BN:21:PHE:C	47:BN:23:LYS:H	2.21	0.44
3:CA:223:A:C5	3:CA:422:A:C8	3.06	0.44
3:CA:336:C:N3	3:CA:337:C:C5	2.85	0.44
3:CA:694:U:OP1	3:CA:1569:A:H1'	2.18	0.44
3:CA:1444:G:C4	3:CA:1445:G:C8	3.05	0.44
3:CA:1753:G:OP1	16:CP:92:ARG:NE	2.50	0.44
3:CA:2104:C:N4	3:CA:2183:A:N1	2.66	0.44
2:CC:14:HIS:O	2:CC:203:VAL:HG11	2.17	0.44
7:CG:112:VAL:HG23	7:CG:113:ASP:N	2.32	0.44
17:CQ:91:ARG:HH11	18:CR:11:GLN:H	1.63	0.44
18:CR:39:LEU:O	18:CR:49:ILE:HG23	2.18	0.44
31:C4:23:ILE:HG23	31:C4:38:GLY:HA3	2.00	0.44
35:DA:525:C:H2'	35:DA:526:C:C6	2.53	0.44
35:DA:652:U:O2'	35:DA:653:U:OP2	2.30	0.44
35:DA:1353:G:C2	35:DA:1354:U:C6	3.06	0.44
39:DF:62:MET:HG3	39:DF:62:MET:O	2.18	0.44
39:DF:97:THR:O	39:DF:98:GLU:CG	2.65	0.44
3:EA:833:A:H2'	3:EA:834:G:C8	2.52	0.44
3:EA:1021:A:C6	3:EA:1023:U:C5	3.06	0.44
3:EA:1266:G:OP2	27:E0:16:ARG:NE	2.48	0.44
3:EA:2093:G:C6	3:EA:2225:A:C8	3.06	0.44
3:EA:2249:U:O2'	3:EA:2252:G:OP2	2.29	0.44
5:EE:160:ALA:O	5:EE:161:ALA:HB3	2.18	0.44
6:EF:28:PRO:HB2	6:EF:168:LEU:CD2	2.47	0.44
6:EF:111:ARG:HA	46:FM:71:ARG:NH2	2.33	0.44
9:EI:31:GLY:O	9:EI:60:VAL:HG21	2.17	0.44
9:EI:55:PRO:HG3	9:EI:72:THR:O	2.17	0.44
10:EJ:17:VAL:HG12	10:EJ:57:LEU:CD2	2.48	0.44
10:EJ:45:THR:HG23	10:EJ:45:THR:O	2.18	0.44
15:EO:36:TYR:N	15:EO:36:TYR:CD1	2.86	0.44
25:EY:23:ARG:HA	25:EY:23:ARG:HE	1.82	0.44
32:E5:67:THR:C	32:E5:69:PHE:N	2.71	0.44
35:FA:1151:A:C4	35:FA:1152:A:N7	2.86	0.44
34:FB:9:LEU:HD12	34:FB:42:LEU:HD13	2.00	0.44
36:FC:85:GLU:OE1	36:FC:88:ARG:NH1	2.47	0.44
38:FE:46:VAL:HG11	38:FE:118:ALA:HB2	1.99	0.44
38:FE:74:VAL:HG11	38:FE:144:LEU:HB3	1.99	0.44
43:FJ:91:ASP:OD1	43:FJ:92:LEU:N	2.48	0.44
45:FL:44:LYS:HB2	45:FL:45:PRO:HD3	1.98	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:FQ:79:VAL:O	50:FQ:80:GLU:HB3	2.18	0.44
52:FS:50:ALA:HB1	52:FS:57:HIS:HB3	1.98	0.44
1:GB:78:A:C2	1:GB:99:A:C4	3.06	0.44
3:GA:416:U:C4	3:GA:417:C:C4	3.05	0.44
3:GA:1095:A:C2	55:HV:628:THR:HG22	2.53	0.44
3:GA:1250:G:OP2	12:GL:21:ARG:NH2	2.51	0.44
3:GA:1820:U:C2	2:GC:200:MET:HB2	2.53	0.44
3:GA:2051:A:C6	3:GA:2614:A:C5	3.06	0.44
3:GA:2290:G:H4'	3:GA:2381:A:O2'	2.18	0.44
3:GA:2447:G:C4	3:GA:2500:U:C5	3.05	0.44
6:GF:101:ARG:HA	6:GF:104:THR:HB	1.99	0.44
9:GI:3:LYS:HG3	9:GI:4:VAL:H	1.82	0.44
14:GN:75:ILE:O	14:GN:79:LEU:HD12	2.17	0.44
17:GQ:4:LYS:HG3	17:GQ:5:ARG:N	2.32	0.44
35:HA:35:G:H2'	35:HA:36:C:C6	2.52	0.44
35:HA:89:U:O2	35:HA:90:C:C5	2.71	0.44
35:HA:109:A:C6	35:HA:326:G:C6	3.06	0.44
35:HA:1049:U:C5	35:HA:1201:A:H5'	2.53	0.44
35:HA:1078:U:H5"	38:HE:138:ARG:NH2	2.32	0.44
35:HA:1206:G:O2'	36:HC:193:TYR:HA	2.17	0.44
35:HA:1225:A:H2'	35:HA:1226:C:C5	2.52	0.44
39:HF:62:MET:HG2	39:HF:64:VAL:CG2	2.48	0.44
55:HV:342:VAL:HG13	55:HV:378:ARG:CD	2.47	0.44
3:AA:764:A:C6	3:AA:781:A:C2	3.06	0.44
3:AA:1045:C:C3'	3:AA:1046:A:H5'	2.48	0.44
3:AA:1171:G:N2	3:AA:1179:G:C4	2.86	0.44
3:AA:1232:G:C5	3:AA:1233:C:C5	3.06	0.44
3:AA:2031:A:C6	3:AA:2498:C:H1'	2.53	0.44
3:AA:2745:C:C4	3:AA:2746:U:C4	3.05	0.44
3:AA:2758:A:H2'	3:AA:2759:G:H5'	1.99	0.44
3:AA:2788:C:H2'	3:AA:2789:C:C6	2.53	0.44
4:AD:45:TYR:N	4:AD:45:TYR:CD1	2.86	0.44
9:AI:29:GLN:HE22	55:BV:650:THR:CA	2.31	0.44
17:AQ:27:ARG:HA	17:AQ:33:VAL:HG12	1.99	0.44
23:AW:42:THR:HG22	23:AW:43:LYS:HZ2	1.83	0.44
26:AZ:5:LYS:HD2	26:AZ:5:LYS:N	2.32	0.44
35:BA:8:A:N1	37:BD:206:LYS:HD3	2.32	0.44
35:BA:143:A:H5'	35:BA:144:G:H5'	2.00	0.44
35:BA:636:U:C5'	50:BQ:6:ARG:HE	2.31	0.44
35:BA:1158:C:N4	35:BA:1160:G:C4	2.86	0.44
55:BV:50:MET:HE2	55:BV:50:MET:HA	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CA:45:G:H5"	3:CA:46:G:OP1	2.18	0.44
3:CA:159:G:O2'	3:CA:167:A:N6	2.45	0.44
3:CA:412:A:C5	3:CA:2412:A:H1'	2.52	0.44
3:CA:782:A:C2	2:CC:224:MET:SD	3.11	0.44
3:CA:2210:U:H4'	3:CA:2211:A:H5'	2.00	0.44
4:CD:118:PHE:HZ	14:CN:1:MET:HB2	1.83	0.44
7:CG:2:ARG:O	7:CG:6:ALA:N	2.48	0.44
8:CH:31:VAL:HB	8:CH:32:PRO:CD	2.48	0.44
9:CI:20:SER:N	9:CI:21:PRO:CD	2.81	0.44
11:CK:36:GLY:HA2	11:CK:62:VAL:O	2.18	0.44
12:CL:111:ILE:HD12	12:CL:111:ILE:N	2.33	0.44
13:CM:46:ILE:HD12	13:CM:47:GLU:N	2.33	0.44
14:CN:103:ARG:CZ	14:CN:110:MET:CE	2.96	0.44
16:CP:102:ARG:O	16:CP:103:THR:HG22	2.18	0.44
18:CR:16:GLU:HA	18:CR:98:ILE:HG22	2.00	0.44
23:CW:51:GLY:HA3	23:CW:59:PHE:CE1	2.53	0.44
35:DA:58:C:O2'	35:DA:388:G:N7	2.38	0.44
35:DA:518:C:H2'	35:DA:530:G:H8	1.78	0.44
35:DA:649:A:H2'	35:DA:650:G:O4'	2.18	0.44
35:DA:664:G:H22	35:DA:741:G:H1	1.64	0.44
35:DA:824:G:N2	35:DA:876:C:O2	2.50	0.44
35:DA:1004:A:C2	35:DA:1005:A:H1'	2.53	0.44
34:DB:86:CYS:SG	34:DB:221:ARG:HA	2.57	0.44
37:DD:36:GLN:HG3	37:DD:43:ALA:HA	2.00	0.44
42:DI:52:LEU:HD13	42:DI:57:MET:HG2	1.99	0.44
53:DT:47:ALA:HB3	53:DT:83:ILE:HD13	1.99	0.44
3:EA:30:G:C5	3:EA:31:C:C4	3.05	0.44
3:EA:1301:A:C4	3:EA:1303:G:N7	2.85	0.44
3:EA:1427:A:OP2	3:EA:1559:U:N3	2.42	0.44
3:EA:1534:U:H5'	3:EA:1535:A:P	2.58	0.44
3:EA:2406:A:O4'	12:EL:69:ARG:NH2	2.50	0.44
3:EA:2511:U:O4	3:EA:2575:C:N3	2.50	0.44
3:EA:2529:G:H5'	7:EG:174:LYS:HG3	2.00	0.44
3:EA:2793:C:H2'	3:EA:2794:C:C6	2.53	0.44
2:EC:16:VAL:HB	2:EC:203:VAL:CG1	2.48	0.44
4:ED:121:THR:O	4:ED:122:VAL:HB	2.17	0.44
6:EF:39:VAL:HG11	6:EF:42:ALA:HB2	2.00	0.44
11:EK:105:ARG:HD3	11:EK:122:VAL:CG1	2.48	0.44
12:EL:95:LEU:HD22	12:EL:100:ILE:HD11	2.00	0.44
15:EO:68:LYS:H	15:EO:102:ARG:HD2	1.83	0.44
17:EQ:97:ILE:HD11	17:EQ:105:PHE:HA	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:ET:19:LYS:O	20:ET:20:ALA:C	2.56	0.44
35:FA:275:G:C2	35:FA:276:G:C8	3.06	0.44
35:FA:980:C:O3'	47:FN:13:ARG:NH2	2.50	0.44
35:FA:1112:C:N3	36:FC:178:LEU:N	2.51	0.44
35:FA:1335:U:H5"	35:FA:1337:G:N2	2.32	0.44
36:FC:156:ARG:HB3	36:FC:156:ARG:HH11	1.82	0.44
36:FC:157:LEU:CD2	36:FC:166:GLU:HG2	2.48	0.44
40:FG:15:ASP:HB3	40:FG:20:SER:H	1.82	0.44
47:FN:26:GLU:HG2	47:FN:27:LEU:HD12	1.99	0.44
50:FQ:76:VAL:HG13	50:FQ:77:ARG:H	1.83	0.44
54:FU:12:PHE:CE2	54:FU:16:LEU:HG	2.53	0.44
55:FV:200:VAL:HG23	55:FV:201:THR:HG23	1.99	0.44
1:GB:49:C:OP1	15:GO:101:GLY:HA3	2.17	0.44
3:GA:82:U:H5'	3:GA:296:U:H5"	2.00	0.44
3:GA:365:U:H2'	3:GA:366:C:C6	2.53	0.44
3:GA:489:G:C6	3:GA:491:G:C2	3.06	0.44
3:GA:527:C:O3'	60:GA:3245:HOH:O	2.21	0.44
3:GA:817:C:N4	3:GA:818:G:C6	2.86	0.44
3:GA:819:A:C4	3:GA:1189:A:N1	2.86	0.44
3:GA:911:A:C8	13:GM:9:PHE:CE2	3.06	0.44
3:GA:1252:G:C2	3:GA:1253:A:C2	3.06	0.44
3:GA:1797:G:O2'	2:GC:256:THR:CG2	2.66	0.44
3:GA:2026:U:H2'	3:GA:2027:G:O4'	2.18	0.44
3:GA:2189:U:N3	3:GA:2190:G:N7	2.66	0.44
3:GA:2423:U:O2'	3:GA:2424:C:P	2.76	0.44
3:GA:2489:U:O2	3:GA:2491:U:C4	2.71	0.44
2:GC:43:ASN:OD1	2:GC:44:ASN:N	2.48	0.44
2:GC:254:LYS:O	2:GC:254:LYS:HG2	2.18	0.44
5:GE:149:ILE:HG23	5:GE:188:MET:HA	1.99	0.44
9:GI:122:GLU:HG2	9:GI:126:ARG:NH1	2.33	0.44
35:HA:1306:A:H1'	35:HA:1332:A:C5	2.53	0.44
34:HB:209:VAL:HG23	34:HB:210:THR:H	1.81	0.44
39:HF:12:PRO:HB3	39:HF:44:ARG:CD	2.48	0.44
55:HV:93:VAL:HG13	55:HV:94:ASP:N	2.33	0.44
3:AA:222:A:N6	3:AA:231:A:C2	2.86	0.44
3:AA:476:G:H4'	3:AA:502:A:N1	2.33	0.44
3:AA:684:G:C2	3:AA:794:A:C2	3.06	0.44
3:AA:2283:C:H5"	3:AA:2389:G:O2'	2.18	0.44
3:AA:2283:C:C2	3:AA:2389:G:C2	3.06	0.44
3:AA:2495:G:O2'	13:AM:82:MET:HE3	2.18	0.44
3:AA:2846:G:H2'	3:AA:2847:U:O4'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:121:THR:O	4:AD:122:VAL:HB	2.17	0.44
6:AF:113:PHE:HE1	6:AF:116:LEU:HD13	1.81	0.44
6:AF:134:GLN:OE1	6:AF:149:ARG:HB3	2.18	0.44
9:AI:109:ALA:CB	9:AI:128:ILE:HG13	2.48	0.44
18:AR:64:VAL:O	18:AR:65:ALA:HB3	2.18	0.44
18:AR:74:ILE:HB	18:AR:87:GLN:O	2.18	0.44
20:AT:69:ARG:CG	20:AT:70:HIS:N	2.81	0.44
22:AV:75:GLN:HB2	22:AV:92:VAL:CG2	2.48	0.44
23:AW:24:ARG:HD3	23:AW:65:LYS:CD	2.48	0.44
32:A5:87:GLU:OE2	32:A5:95:LEU:HD23	2.18	0.44
35:BA:8:A:H62	37:BD:205:SER:HB2	1.83	0.44
35:BA:736:C:H2'	35:BA:737:C:C6	2.53	0.44
35:BA:976:G:C2	35:BA:1363:A:C2	3.06	0.44
35:BA:1151:A:HO2'	35:BA:1152:A:H8	1.64	0.44
39:BF:3:HIS:CD2	39:BF:92:THR:HG23	2.52	0.44
39:BF:9:MET:HG2	39:BF:86:ARG:O	2.17	0.44
41:BH:66:PHE:O	41:BH:67:GLN:C	2.56	0.44
3:CA:1593:A:H2'	3:CA:1594:U:O4'	2.17	0.44
3:CA:2505:G:HO2'	3:CA:2506:U:H6	1.60	0.44
3:CA:2632:A:C2	3:CA:2787:C:C2	3.05	0.44
3:CA:2661:G:C6	3:CA:2662:A:C2	3.05	0.44
31:C4:7:VAL:HG23	31:C4:8:LYS:H	1.83	0.44
36:DC:92:ALA:HB2	36:DC:99:ALA:HB3	2.00	0.44
45:DL:24:LEU:O	45:DL:26:ALA:N	2.51	0.44
55:DV:200:VAL:O	55:DV:201:THR:OG1	2.36	0.44
3:EA:361:G:C8	3:EA:361:G:OP2	2.71	0.44
3:EA:387:U:C5	3:EA:388:G:C6	3.06	0.44
3:EA:580:U:O3'	17:EQ:30:VAL:CG1	2.65	0.44
3:EA:644:A:H2'	3:EA:645:C:O4'	2.18	0.44
3:EA:1106:G:H1'	32:E5:56:ARG:HH11	1.82	0.44
3:EA:1808:A:N1	24:EX:27:ARG:HD2	2.32	0.44
3:EA:2318:G:C6	3:EA:2319:G:C6	3.05	0.44
3:EA:2514:U:H2'	3:EA:2515:C:C6	2.53	0.44
3:EA:2766:A:H2'	3:EA:2766:A:N3	2.33	0.44
3:EA:2869:G:H2'	3:EA:2870:C:C6	2.52	0.44
9:EI:6:ALA:HB3	9:EI:60:VAL:HB	1.98	0.44
9:EI:16:MET:HB3	9:EI:19:PRO:HG3	1.98	0.44
10:EJ:17:VAL:HG23	10:EJ:139:VAL:HA	1.99	0.44
19:ES:24:ILE:HG22	19:ES:71:VAL:HG21	1.99	0.44
20:ET:6:ARG:O	20:ET:8:LEU:N	2.51	0.44
25:EY:45:GLN:HA	25:EY:48:ARG:HB2	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:FA:502:A:C2	35:FA:544:G:C2	3.06	0.44
35:FA:521:G:O2'	35:FA:522:C:H5'	2.18	0.44
35:FA:967:C:H5"	42:FI:127:PHE:CZ	2.53	0.44
34:FB:9:LEU:HD12	34:FB:42:LEU:HD22	2.00	0.44
34:FB:44:LYS:O	34:FB:48:MET:CG	2.66	0.44
34:FB:162:VAL:HG22	34:FB:184:ALA:CB	2.48	0.44
54:FU:12:PHE:CE2	54:FU:14:VAL:CG2	3.01	0.44
1:GB:78:A:C2	1:GB:99:A:N3	2.86	0.44
3:GA:553:G:H2'	3:GA:554:U:O4'	2.18	0.44
3:GA:1095:A:C5	55:HV:631:VAL:HB	2.53	0.44
3:GA:1413:A:H61	3:GA:1589:U:H3	1.66	0.44
3:GA:1828:G:O6	2:GC:220:ARG:HD2	2.18	0.44
3:GA:1851:U:H2'	3:GA:1852:U:C6	2.52	0.44
3:GA:2258:C:O2'	3:GA:2427:C:OP2	2.32	0.44
3:GA:2345:G:C8	3:GA:2347:C:C5	3.06	0.44
5:GE:150:THR:HG21	5:GE:153:LEU:HA	1.99	0.44
9:GI:3:LYS:CG	9:GI:4:VAL:H	2.31	0.44
14:GN:32:GLU:OE1	14:GN:86:ARG:NH2	2.43	0.44
18:GR:25:LEU:H	18:GR:94:THR:HG21	1.82	0.44
18:GR:74:ILE:N	18:GR:74:ILE:HD12	2.33	0.44
20:GT:76:ARG:HG2	20:GT:77:ARG:O	2.17	0.44
35:HA:13:U:C4	35:HA:916:U:O4	2.71	0.44
35:HA:237:G:C5	35:HA:238:A:N7	2.86	0.44
35:HA:459:A:C2	35:HA:460:A:H8	2.36	0.44
35:HA:658:C:N3	35:HA:748:G:O6	2.51	0.44
35:HA:714:G:N2	35:HA:777:A:H1'	2.33	0.44
44:HK:82:LEU:HD22	44:HK:105:PHE:CD1	2.53	0.44
46:HM:55:THR:O	46:HM:58:ASP:HB3	2.18	0.44
55:HV:502:GLU:OE1	55:HV:517:HIS:NE2	2.44	0.44
2:AC:24:HIS:CE1	2:AC:79:ARG:HH21	2.36	0.44
3:AA:172:A:H2'	3:AA:173:A:C8	2.53	0.44
3:AA:1171:G:H1	3:AA:1178:C:H42	1.66	0.44
3:AA:1441:G:H2'	3:AA:1442:U:C6	2.53	0.44
3:AA:2564:A:C2	3:AA:2647:U:H4'	2.53	0.44
5:AE:154:ASP:N	5:AE:154:ASP:OD1	2.50	0.44
7:AG:36:LEU:HD22	7:AG:36:LEU:N	2.33	0.44
9:AI:40:ALA:O	9:AI:68:PHE:CZ	2.71	0.44
10:AJ:4:PHE:O	10:AJ:44:TYR:OH	2.34	0.44
10:AJ:44:TYR:O	10:AJ:44:TYR:CD2	2.71	0.44
11:AK:118:LEU:O	11:AK:119:ALA:HB3	2.17	0.44
14:AN:33:ILE:CD1	14:AN:118:ARG:NE	2.80	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AN:38:LEU:HB3	14:AN:39:PRO:CD	2.48	0.44
21:AU:73:ASN:O	21:AU:74:ALA:HB3	2.18	0.44
23:AW:18:LYS:N	23:AW:36:ILE:HG13	2.33	0.44
35:BA:72:A:H3'	35:BA:73:C:H5"	2.00	0.44
43:BJ:17:LEU:HD21	43:BJ:96:VAL:CG2	2.48	0.44
45:BL:44:LYS:CB	45:BL:45:PRO:CD	2.96	0.44
55:BV:303:LYS:HA	55:BV:303:LYS:CE	2.48	0.44
55:BV:611:VAL:HG21	55:BV:689:GLU:HG3	1.99	0.44
55:BV:617:MET:HG3	55:BV:682:MET:HE3	2.00	0.44
3:CA:65:U:O2'	3:CA:456:C:N3	2.46	0.44
3:CA:276:U:O2'	3:CA:278:A:N7	2.51	0.44
3:CA:855:G:H1'	23:CW:23:LYS:HD3	2.00	0.44
3:CA:2352:A:N1	23:CW:30:VAL:CG1	2.80	0.44
3:CA:2788:C:H2'	3:CA:2789:C:C6	2.52	0.44
3:CA:2796:U:O2'	3:CA:2797:U:H2'	2.18	0.44
2:CC:20:ASN:OD1	2:CC:22:GLU:HG2	2.17	0.44
4:CD:148:GLN:HB2	4:CD:152:PRO:HG2	1.99	0.44
6:CF:39:VAL:HG13	6:CF:40:GLY:N	2.33	0.44
9:CI:69:VAL:HG12	9:CI:70:THR:H	1.82	0.44
10:CJ:72:LYS:HD3	10:CJ:74:TYR:CE2	2.52	0.44
13:CM:1:MET:O	13:CM:2:LEU:CB	2.65	0.44
13:CM:2:LEU:HD11	13:CM:68:PHE:CD2	2.53	0.44
18:CR:41:ILE:O	18:CR:46:GLU:HB2	2.18	0.44
18:CR:68:ARG:HD3	18:CR:92:TRP:CE2	2.53	0.44
26:CZ:40:THR:OG1	26:CZ:41:PRO:HD2	2.18	0.44
32:C5:71:CYS:HA	32:C5:117:LEU:HD11	2.00	0.44
32:C5:88:HIS:CB	32:C5:89:PRO:CD	2.96	0.44
35:DA:714:G:H21	35:DA:777:A:H1'	1.82	0.44
35:DA:992:U:C2	35:DA:1043:G:N7	2.86	0.44
35:DA:1048:G:H5"	47:DN:3:LYS:HG3	2.00	0.44
34:DB:32:GLY:HA3	34:DB:39:ILE:H	1.83	0.44
37:DD:30:THR:HG22	37:DD:31:LYS:N	2.33	0.44
44:DK:60:PRO:O	44:DK:95:SER:OG	2.21	0.44
53:DT:55:GLN:N	53:DT:56:PRO:HD2	2.33	0.44
55:DV:9:ARG:HB3	55:DV:82:HIS:ND1	2.33	0.44
3:EA:387:U:C5	3:EA:388:G:O6	2.71	0.44
3:EA:1011:G:C4	3:EA:1151:A:C2	3.06	0.44
3:EA:1022:G:N2	3:EA:1142:A:C2	2.85	0.44
3:EA:1168:G:H3'	3:EA:1169:A:C8	2.53	0.44
3:EA:2199:A:C5'	24:EX:36:ARG:HH11	2.31	0.44
3:EA:2250:G:OP1	3:EA:2275:C:O2'	2.36	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:EA:2281:A:C2'	3:EA:2282:G:H5'	2.47	0.44
1:EB:77:U:OP1	22:EV:21:ARG:NH1	2.47	0.44
11:EK:105:ARG:HD3	11:EK:122:VAL:HG12	1.98	0.44
13:EM:132:THR:CG2	13:EM:133:LYS:N	2.81	0.44
14:EN:33:ILE:HD12	14:EN:33:ILE:N	2.33	0.44
17:EQ:105:PHE:O	17:EQ:108:LEU:N	2.51	0.44
18:ER:24:LYS:HA	18:ER:94:THR:HG23	1.99	0.44
27:E0:10:SER:O	27:E0:14:MET:HG3	2.17	0.44
30:E3:22:LYS:HA	30:E3:47:ALA:O	2.17	0.44
32:E5:64:VAL:O	32:E5:67:THR:N	2.34	0.44
32:E5:117:LEU:HD23	32:E5:121:SER:N	2.33	0.44
35:FA:123:U:OP1	35:FA:311:C:O2'	2.34	0.44
35:FA:874:G:C5	35:FA:875:U:C5	3.06	0.44
34:FB:88:GLN:NE2	34:FB:88:GLN:H	2.15	0.44
43:FJ:23:ALA:O	43:FJ:27:GLU:N	2.46	0.44
45:FL:35:THR:N	45:FL:54:ARG:O	2.49	0.44
55:FV:539:ASP:OD2	55:FV:577:ARG:NH2	2.51	0.44
1:GB:96:G:C6	1:GB:97:C:C4	3.06	0.44
3:GA:995:C:O2	10:GJ:3:THR:HG23	2.18	0.44
3:GA:1062:G:H2'	3:GA:1063:G:O4'	2.17	0.44
3:GA:1458:U:H4'	3:GA:1459:G:O5'	2.17	0.44
3:GA:2365:G:H4'	23:GW:59:PHE:CZ	2.53	0.44
5:GE:187:VAL:HG12	5:GE:188:MET:N	2.32	0.44
6:GF:96:TRP:HZ3	6:GF:172:PHE:CZ	2.35	0.44
7:GG:120:ILE:HD12	7:GG:139:VAL:HG12	1.98	0.44
10:GJ:20:ALA:O	10:GJ:23:LYS:N	2.47	0.44
21:GU:9:GLU:OE2	21:GU:21:ARG:NH2	2.49	0.44
26:GZ:29:ARG:HB3	26:GZ:30:ARG:HE	1.82	0.44
35:HA:206:C:H42	35:HA:213:G:H1	1.64	0.44
35:HA:356:A:N3	35:HA:368:U:O2'	2.35	0.44
35:HA:781:A:OP1	35:HA:1523:G:H5'	2.18	0.44
35:HA:872:A:H2'	35:HA:872:A:N3	2.33	0.44
35:HA:1177:G:N2	35:HA:1181:G:N7	2.55	0.44
35:HA:1202:U:O2	47:HN:67:THR:HG21	2.18	0.44
35:HA:1220:G:H21	52:HS:54:GLY:HA2	1.82	0.44
34:HB:67:LEU:HD12	34:HB:153:MET:HE2	1.98	0.44
39:HF:98:GLU:CG	39:HF:99:ALA:N	2.81	0.44
44:HK:125:LYS:HZ1	54:HU:36:GLU:H	1.66	0.44
55:HV:336:PHE:HE1	55:HV:377:VAL:HG11	1.83	0.44
55:HV:495:ARG:HD3	55:HV:609:LYS:HB3	1.99	0.44
3:AA:822:G:H2'	3:AA:823:C:H6	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AA:1181:U:H2'	3:AA:1182:G:C8	2.52	0.43
3:AA:1186:G:P	60:AA:3592:HOH:O	2.75	0.43
3:AA:2517:C:C5	3:AA:2542:A:C5	3.06	0.43
3:AA:2582:G:C2	3:AA:2583:G:C8	3.06	0.43
7:AG:1:SER:O	7:AG:4:ALA:N	2.48	0.43
14:AN:117:ASP:O	14:AN:118:ARG:C	2.56	0.43
15:AO:75:GLY:HA3	15:AO:109:ALA:HB3	2.00	0.43
19:AS:66:ILE:HD13	19:AS:67:ASP:N	2.33	0.43
32:A5:17:GLU:OE1	32:A5:53:ARG:NH1	2.51	0.43
32:A5:51:TYR:CE1	32:A5:52:MET:HG2	2.53	0.43
35:BA:1358:U:OP1	47:BN:75:ARG:HG2	2.18	0.43
37:BD:125:VAL:HG23	37:BD:126:ASN:N	2.33	0.43
37:BD:198:HIS:O	37:BD:202:GLU:HB2	2.18	0.43
38:BE:46:VAL:O	38:BE:72:ILE:HG22	2.18	0.43
39:BF:92:THR:HG22	39:BF:93:LYS:N	2.33	0.43
1:CB:78:A:H2'	1:CB:79:G:O4'	2.18	0.43
3:CA:188:G:H2'	3:CA:189:G:H5'	2.00	0.43
3:CA:225:C:C4	3:CA:226:A:C8	3.06	0.43
3:CA:1494:A:C2	3:CA:1495:A:C4	3.06	0.43
3:CA:2799:A:O2'	3:CA:2800:A:OP2	2.28	0.43
3:CA:2864:G:C5	3:CA:2865:U:C4	3.06	0.43
2:CC:254:LYS:O	2:CC:254:LYS:HG2	2.18	0.43
5:CE:46:GLN:HG3	5:CE:87:ALA:H	1.82	0.43
10:CJ:4:PHE:CD2	10:CJ:44:TYR:CE1	3.06	0.43
10:CJ:29:ALA:O	10:CJ:30:THR:C	2.57	0.43
14:CN:52:ILE:HB	14:CN:94:TYR:HD2	1.83	0.43
21:CU:97:SER:O	21:CU:98:ASN:HB3	2.18	0.43
35:DA:83:C:HO2'	35:DA:84:U:H5	1.64	0.43
35:DA:143:A:H5'	35:DA:144:G:H5'	2.00	0.43
35:DA:412:A:H2	35:DA:413:G:N7	2.16	0.43
35:DA:982:U:H4'	35:DA:983:A:H5'	2.00	0.43
35:DA:1125:U:O3'	43:DJ:7:ARG:NH1	2.50	0.43
40:DG:103:TRP:HZ3	40:DG:138:ARG:HA	1.83	0.43
42:DI:107:ASP:OD2	42:DI:109:ARG:NH1	2.51	0.43
44:DK:23:ILE:HG13	44:DK:86:VAL:HA	2.00	0.43
44:DK:92:GLY:HA2	44:DK:95:SER:HB3	1.99	0.43
55:DV:218:TRP:CE3	55:DV:223:ILE:HB	2.53	0.43
3:EA:329:G:O4'	3:EA:477:A:H1'	2.17	0.43
3:EA:483:A:N7	3:EA:497:A:H2	2.16	0.43
3:EA:2134:A:C2'	3:EA:2156:G:N2	2.81	0.43
3:EA:2311:A:N3	6:EF:84:ILE:CD1	2.80	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:EA:2845:U:H5"	16:EP:51:ASN:O	2.18	0.43
4:ED:41:ALA:O	4:ED:43:ASP:N	2.49	0.43
11:EK:71:ARG:HG3	11:EK:105:ARG:NH2	2.33	0.43
13:EM:28:PHE:N	13:EM:104:GLU:OE2	2.49	0.43
17:EQ:20:ALA:HA	17:EQ:23:TYR:CE2	2.52	0.43
20:ET:24:MET:HE3	20:ET:29:THR:CG2	2.48	0.43
23:EW:18:LYS:HA	23:EW:36:ILE:HG13	2.00	0.43
25:EY:32:ALA:HA	25:EY:37:LEU:HB3	2.00	0.43
32:E5:23:LEU:HD11	32:E5:96:PHE:CZ	2.53	0.43
32:E5:43:LYS:NZ	32:E5:98:GLU:HB2	2.33	0.43
35:FA:1302:C:O5'	35:FA:1302:C:C6	2.71	0.43
35:FA:1321:U:O2'	52:FS:78:ARG:NH2	2.51	0.43
34:FB:53:LEU:N	34:FB:53:LEU:HD23	2.33	0.43
34:FB:103:TRP:CZ2	34:FB:155:GLY:N	2.86	0.43
49:FP:48:GLU:OE2	49:FP:51:ARG:NH1	2.51	0.43
1:GB:41:G:P	1:GB:43:C:H41	2.41	0.43
3:GA:140:C:H4'	3:GA:141:G:N2	2.33	0.43
3:GA:614:A:H4'	3:GA:616:A:C6	2.53	0.43
3:GA:1140:C:P	10:GJ:68:LYS:HZ3	2.41	0.43
3:GA:1252:G:N2	17:GQ:32:ARG:HG2	2.33	0.43
3:GA:2332:C:H4'	3:GA:2336:A:N6	2.32	0.43
6:GF:43:ILE:HG21	6:GF:77:LYS:HD2	2.00	0.43
7:GG:104:LEU:HB2	7:GG:112:VAL:CG2	2.47	0.43
12:GL:132:ARG:HA	12:GL:142:ILE:CD1	2.48	0.43
35:HA:626:G:C2	35:HA:627:G:C4	3.06	0.43
35:HA:716:A:N3	44:HK:119:ASN:O	2.51	0.43
35:HA:918:A:H2'	35:HA:919:A:O4'	2.18	0.43
35:HA:929:G:C6	35:HA:930:C:C4	3.05	0.43
35:HA:1027:C:HO2'	35:HA:1034:G:H22	1.62	0.43
35:HA:1193:G:O2'	38:HE:26:LYS:NZ	2.45	0.43
35:HA:1208:C:H2'	35:HA:1209:C:O4'	2.17	0.43
35:HA:1297:G:H5'	35:HA:1299:A:N6	2.33	0.43
34:HB:52:ALA:O	34:HB:56:LEU:HB2	2.18	0.43
40:HG:15:ASP:N	40:HG:20:SER:O	2.37	0.43
40:HG:121:ALA:HA	40:HG:124:LEU:HD12	1.99	0.43
45:HL:43:LYS:HB2	45:HL:89:ASP:O	2.18	0.43
55:HV:31:LEU:HA	55:HV:34:THR:HG22	2.00	0.43
1:AB:72:G:N2	1:AB:103:U:C5	2.86	0.43
2:AC:16:VAL:H	2:AC:203:VAL:HG12	1.83	0.43
3:AA:646:U:H3'	3:AA:647:G:H5"	2.00	0.43
3:AA:800:A:OP1	60:AA:3323:HOH:O	2.21	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AA:855:G:H21	23:AW:23:LYS:CG	2.31	0.43
3:AA:1224:U:H4'	18:AR:88:GLY:O	2.18	0.43
3:AA:1387:A:H5'	3:AA:1469:A:H1'	2.00	0.43
3:AA:1867:G:C5	3:AA:1868:C:C5	3.06	0.43
3:AA:2347:C:HO2'	28:A1:20:TYR:HH	1.54	0.43
3:AA:2657:A:C2	3:AA:2665:A:C4	3.06	0.43
15:AO:41:ALA:O	15:AO:44:GLY:N	2.41	0.43
20:AT:29:THR:HB	20:AT:86:THR:HA	2.01	0.43
23:AW:17:ALA:O	23:AW:18:LYS:HB2	2.18	0.43
23:AW:24:ARG:HD3	23:AW:65:LYS:HG2	2.00	0.43
35:BA:204:G:H3'	35:BA:205:A:H5"	2.00	0.43
35:BA:1005:A:H2'	35:BA:1006:G:O4'	2.19	0.43
37:BD:12:SER:HA	37:BD:19:LEU:CD1	2.47	0.43
38:BE:56:VAL:O	38:BE:60:ILE:HG12	2.18	0.43
38:BE:72:ILE:HD11	38:BE:145:GLU:CG	2.48	0.43
38:BE:115:LEU:HG	38:BE:120:VAL:HG21	1.99	0.43
39:BF:63:ASN:ND2	39:BF:96:VAL:CG2	2.81	0.43
41:BH:8:ALA:HA	41:BH:77:ARG:HG3	2.00	0.43
3:CA:45:G:H5'	3:CA:46:G:H5'	1.99	0.43
3:CA:467:G:H2'	3:CA:468:G:O4'	2.18	0.43
3:CA:580:U:O3'	17:CQ:30:VAL:CG1	2.66	0.43
3:CA:871:U:H5"	13:CM:68:PHE:CZ	2.53	0.43
3:CA:1317:G:C5	3:CA:1318:U:C4	3.06	0.43
3:CA:1817:G:H2'	3:CA:1818:U:H5'	2.01	0.43
3:CA:2661:G:H2'	3:CA:2662:A:O4'	2.18	0.43
5:CE:45:ALA:O	5:CE:46:GLN:HB2	2.19	0.43
6:CF:110:ILE:HB	6:CF:113:PHE:HB2	2.00	0.43
9:CI:100:ILE:HG22	9:CI:101:SER:N	2.33	0.43
10:CJ:44:TYR:O	10:CJ:45:THR:CB	2.66	0.43
17:CQ:20:ALA:HA	17:CQ:23:TYR:CE2	2.53	0.43
18:CR:5:PHE:HE1	18:CR:14:VAL:HG21	1.83	0.43
19:CS:2:GLU:HA	19:CS:108:SER:HB3	2.00	0.43
22:CV:36:ALA:O	22:CV:93:ARG:NH1	2.39	0.43
23:CW:56:HIS:ND1	23:CW:56:HIS:N	2.66	0.43
27:C0:2:VAL:HG12	27:C0:3:GLN:N	2.31	0.43
35:DA:154:U:O2	35:DA:168:G:N2	2.52	0.43
35:DA:266:G:H3'	50:DQ:69:LYS:HB2	1.99	0.43
35:DA:642:A:C8	41:DH:107:SER:HA	2.53	0.43
35:DA:781:A:H4'	35:DA:1522:U:O2'	2.18	0.43
50:DQ:62:ARG:C	50:DQ:73:TRP:CE3	2.91	0.43
55:DV:151:PHE:HE1	55:DV:264:VAL:HG12	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:DV:164:ALA:HB1	55:DV:262:ILE:HD11	1.99	0.43
55:DV:219:HIS:C	55:DV:221:ASN:N	2.72	0.43
3:EA:2269:G:O2'	23:EW:18:LYS:HG2	2.19	0.43
3:EA:2852:G:C6	3:EA:2853:C:N3	2.86	0.43
4:ED:99:GLU:CG	4:ED:100:LEU:N	2.81	0.43
6:EF:122:ASP:OD2	6:EF:126:ASN:HB2	2.18	0.43
7:EG:117:PRO:HD2	7:EG:120:ILE:HG13	2.00	0.43
10:EJ:12:LYS:O	10:EJ:13:ARG:HB2	2.18	0.43
15:EO:2:ASP:OD1	15:EO:4:LYS:N	2.51	0.43
18:ER:90:ARG:O	18:ER:91:GLN:HB3	2.18	0.43
20:ET:43:ILE:HD11	20:ET:58:VAL:HG21	1.99	0.43
23:EW:24:ARG:HG3	23:EW:65:LYS:HD3	2.00	0.43
29:E2:24:THR:HG23	29:E2:27:GLY:HA3	2.00	0.43
35:FA:620:C:H1'	37:FD:132:ILE:CD1	2.48	0.43
35:FA:860:A:H2'	35:FA:861:G:O4'	2.17	0.43
35:FA:939:G:C6	35:FA:940:C:N4	2.86	0.43
35:FA:1076:U:C2	35:FA:1082:A:C2	3.06	0.43
35:FA:1171:A:H2'	35:FA:1172:C:C6	2.54	0.43
35:FA:1413:A:C6	35:FA:1414:U:C4	3.07	0.43
35:FA:1526:G:OP1	54:FU:39:GLU:HG2	2.18	0.43
37:FD:145:ILE:HD12	37:FD:178:MET:HB3	2.00	0.43
38:FE:38:VAL:HG11	38:FE:114:VAL:HA	1.99	0.43
43:FJ:80:THR:O	43:FJ:83:THR:HG22	2.19	0.43
47:FN:31:ILE:N	47:FN:31:ILE:HD12	2.33	0.43
3:GA:68:G:H2'	3:GA:69:C:O4'	2.18	0.43
3:GA:685:A:C2	3:GA:689:A:C5	3.06	0.43
3:GA:990:A:H1'	3:GA:1156:A:N3	2.33	0.43
3:GA:1218:G:N1	3:GA:1232:G:C5	2.86	0.43
3:GA:1259:G:C6	3:GA:1260:A:C5	3.06	0.43
3:GA:2025:C:H2'	3:GA:2026:U:H6	1.83	0.43
3:GA:2149:U:C5	3:GA:2150:C:C5	3.06	0.43
3:GA:2429:G:H4'	60:GA:3338:HOH:O	2.18	0.43
2:GC:164:VAL:HG23	2:GC:172:THR:OG1	2.18	0.43
4:GD:13:ARG:NH1	11:GK:73:ASP:O	2.51	0.43
4:GD:110:THR:HG23	4:GD:171:THR:HG22	2.00	0.43
5:GE:54:GLY:O	5:GE:74:LYS:NZ	2.38	0.43
6:GF:110:ILE:HD12	6:GF:113:PHE:CD1	2.54	0.43
7:GG:35:THR:HG22	7:GG:36:LEU:N	2.32	0.43
8:GH:8:LYS:HB3	8:GH:9:VAL:H	1.69	0.43
12:GL:123:ARG:NE	12:GL:143:GLU:OE2	2.42	0.43
22:GV:2:PHE:HB2	22:GV:61:LEU:HD12	1.98	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:G0:14:MET:O	27:G0:17:SER:N	2.42	0.43
35:HA:539:A:C6	35:HA:540:G:C6	3.06	0.43
35:HA:663:A:C2	35:HA:743:A:C2	3.06	0.43
35:HA:979:C:N4	47:HN:58:SER:O	2.38	0.43
34:HB:9:LEU:O	34:HB:9:LEU:HD23	2.17	0.43
37:HD:26:ARG:HD3	37:HD:31:LYS:CE	2.48	0.43
38:HE:140:THR:O	38:HE:144:LEU:HG	2.18	0.43
44:HK:15:GLN:HA	44:HK:77:TYR:O	2.19	0.43
53:HT:51:PHE:C	53:HT:51:PHE:CD1	2.91	0.43
55:HV:619:VAL:HG21	55:HV:658:VAL:HG23	1.98	0.43
3:AA:132:G:C2'	3:AA:133:U:H5'	2.48	0.43
3:AA:1003:G:N2	3:AA:1004:U:C2	2.86	0.43
3:AA:1417:C:N3	3:AA:1581:G:N2	2.60	0.43
3:AA:1494:A:C2	3:AA:1495:A:C4	3.06	0.43
3:AA:1509:A:O2'	3:AA:1510:G:P	2.76	0.43
3:AA:2747:G:O6	3:AA:2755:C:H5"	2.18	0.43
4:AD:120:GLY:HA2	4:AD:162:ALA:HA	2.00	0.43
4:AD:124:ARG:HA	4:AD:165:MET:SD	2.58	0.43
6:AF:94:ARG:HH11	6:AF:94:ARG:CG	2.31	0.43
7:AG:60:GLY:O	7:AG:61:TRP:HB2	2.17	0.43
9:AI:82:ALA:HB1	9:AI:108:ILE:HG21	2.00	0.43
11:AK:47:ILE:HG13	11:AK:48:PRO:HD2	2.00	0.43
14:AN:70:THR:HB	14:AN:75:ILE:HD11	2.01	0.43
30:A3:31:ILE:O	30:A3:31:ILE:CG1	2.66	0.43
35:BA:70:U:O2'	35:BA:71:A:C8	2.68	0.43
35:BA:328:C:H4'	35:BA:329:A:H5"	1.99	0.43
35:BA:958:A:C8	52:BS:55:ARG:NH1	2.86	0.43
45:BL:44:LYS:HB3	45:BL:45:PRO:HD3	2.00	0.43
45:BL:90:LEU:HB3	45:BL:93:VAL:CG2	2.48	0.43
48:BO:3:LEU:HD23	48:BO:8:THR:HG22	2.00	0.43
53:BT:55:GLN:N	53:BT:56:PRO:HD2	2.33	0.43
3:CA:309:A:O3'	21:CU:15:GLY:HA2	2.18	0.43
3:CA:1064:C:H5'	9:CI:89:SER:HB3	1.98	0.43
3:CA:1106:G:H1'	32:C5:56:ARG:HH11	1.83	0.43
3:CA:1301:A:H2'	3:CA:1301:A:N3	2.33	0.43
3:CA:2154:A:H4'	3:CA:2155:U:OP2	2.19	0.43
3:CA:2283:C:H5"	3:CA:2389:G:O2'	2.18	0.43
3:CA:2489:U:HO2'	3:CA:2491:U:H5	1.64	0.43
3:CA:2849:U:OP2	16:CP:92:ARG:HB2	2.18	0.43
17:CQ:23:TYR:HB3	17:CQ:27:ARG:HB3	2.01	0.43
35:DA:464:U:H2'	35:DA:466:A:OP2	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1054:C:H5”	35:DA:1196:A:O2’	2.19	0.43
35:DA:1324:A:H2’	35:DA:1325:C:O4’	2.18	0.43
37:DD:13:ARG:HD2	37:DD:37:ALA:C	2.39	0.43
37:DD:56:ARG:HA	37:DD:56:ARG:NE	2.33	0.43
40:DG:18:PHE:HD2	40:DG:59:LEU:HD23	1.83	0.43
42:DI:28:ILE:HG22	42:DI:30:ILE:HG22	2.00	0.43
44:DK:67:ALA:HB1	44:DK:100:LEU:HD13	2.00	0.43
55:DV:231:GLU:HA	55:DV:234:MET:HG2	1.99	0.43
55:DV:365:GLN:HB2	55:DV:374:ILE:HD11	1.99	0.43
3:EA:948:C:O5’	3:EA:948:C:H6	2.01	0.43
3:EA:1292:G:H2’	3:EA:1293:C:C6	2.53	0.43
3:EA:1378:A:C4	3:EA:1380:G:N7	2.86	0.43
3:EA:1419:A:C8	3:EA:1579:A:N6	2.86	0.43
3:EA:1458:U:H4’	3:EA:1459:G:O5’	2.18	0.43
3:EA:1959:G:C6	3:EA:1960:A:C5	3.06	0.43
3:EA:2276:G:P	13:EM:83:GLY:O	2.76	0.43
2:EC:80:LEU:HD11	2:EC:109:LEU:HG	2.00	0.43
5:EE:149:ILE:HD13	5:EE:172:ALA:HA	2.01	0.43
7:EG:23:ILE:HG21	7:EG:71:LEU:HD11	1.99	0.43
11:EK:113:MET:SD	11:EK:116:ILE:HD11	2.57	0.43
21:EU:53:GLN:N	21:EU:54:PRO:CD	2.81	0.43
32:E5:26:VAL:O	32:E5:27:VAL:HB	2.19	0.43
32:E5:125:ARG:CZ	32:E5:125:ARG:HA	2.48	0.43
35:FA:354:G:N1	35:FA:355:C:C4	2.86	0.43
35:FA:723:U:H5’	54:FU:49:LYS:HD3	2.00	0.43
35:FA:769:G:H4’	35:FA:1513:A:H4’	1.99	0.43
35:FA:1086:U:H3’	35:FA:1087:G:H8	1.84	0.43
36:FC:22:TRP:HB3	36:FC:59:ARG:H	1.83	0.43
3:GA:244:A:N6	3:GA:254:G:O2’	2.51	0.43
3:GA:295:G:H3’	60:GA:3227:HOH:O	2.18	0.43
3:GA:522:A:H2’	3:GA:523:C:C6	2.53	0.43
3:GA:1005:C:C2	3:GA:1143:A:C5	3.06	0.43
3:GA:1148:U:H2’	3:GA:1149:G:C8	2.54	0.43
3:GA:1202:G:O6	3:GA:1244:A:C6	2.72	0.43
3:GA:1266:G:H5”	19:GS:15:GLN:OE1	2.19	0.43
3:GA:2804:U:H2’	3:GA:2805:C:C6	2.52	0.43
2:GC:170:TYR:CE1	2:GC:184:GLU:HA	2.54	0.43
7:GG:97:VAL:HG22	7:GG:102:ILE:HG13	2.00	0.43
9:GI:96:LYS:HE3	9:GI:135:MET:HG3	2.01	0.43
12:GL:26:GLY:C	12:GL:27:LEU:HD12	2.38	0.43
15:GO:85:LYS:HB2	15:GO:87:ILE:CG1	2.42	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:G3:25:HIS:CE1	30:G3:47:ALA:CB	3.01	0.43
35:HA:481:G:O2'	35:HA:482:A:P	2.76	0.43
35:HA:588:G:C1'	41:HH:3:MET:HE2	2.47	0.43
35:HA:865:A:C2	35:HA:918:A:H4'	2.53	0.43
35:HA:1158:C:H4'	34:HB:131:LYS:HE3	2.00	0.43
35:HA:1279:G:H4'	35:HA:1281:C:H41	1.83	0.43
35:HA:1505:G:H4'	35:HA:1506:U:H5"	1.99	0.43
52:HS:9:PRO:CB	52:HS:41:PHE:HZ	2.31	0.43
1:AB:27:C:C5	1:AB:28:C:C5	3.06	0.43
1:AB:78:A:H2'	1:AB:79:G:O4'	2.18	0.43
2:AC:76:VAL:HG22	2:AC:76:VAL:O	2.17	0.43
3:AA:1737:G:H5"	3:AA:1738:G:OP2	2.18	0.43
3:AA:2108:A:H2'	3:AA:2109:U:O5'	2.17	0.43
12:AL:112:LEU:HD23	12:AL:114:GLY:H	1.83	0.43
20:AT:76:ARG:HG3	20:AT:77:ARG:N	2.34	0.43
28:A1:18:HIS:CE1	28:A1:40:PRO:HD3	2.54	0.43
34:BB:118:THR:O	34:BB:119:GLN:HB3	2.18	0.43
35:BA:922:G:H4'	38:BE:25:VAL:HA	2.01	0.43
35:BA:1117:A:O3'	42:BI:106:ARG:CD	2.66	0.43
35:BA:1124:G:H2'	35:BA:1145:A:N6	2.33	0.43
38:BE:97:GLN:N	38:BE:124:LEU:O	2.42	0.43
42:BI:57:MET:SD	42:BI:57:MET:C	2.97	0.43
3:CA:38:A:N3	5:CE:43:THR:HB	2.33	0.43
3:CA:308:G:N2	3:CA:477:A:C8	2.86	0.43
3:CA:682:G:N2	3:CA:796:C:C2	2.86	0.43
3:CA:807:U:H2'	3:CA:808:G:O4'	2.18	0.43
3:CA:942:G:O2'	3:CA:1189:A:O2'	2.23	0.43
3:CA:1068:G:H3'	3:CA:1069:A:H5"	2.00	0.43
3:CA:1220:G:C2	3:CA:1221:C:C2	3.06	0.43
2:CC:109:LEU:O	2:CC:110:LYS:HB3	2.18	0.43
2:CC:221:GLY:O	2:CC:224:MET:HG3	2.18	0.43
12:CL:85:VAL:HG22	12:CL:94:THR:HG22	2.00	0.43
18:CR:37:GLU:HB3	18:CR:53:PHE:CE1	2.53	0.43
19:CS:24:ILE:HG23	19:CS:71:VAL:HG11	2.01	0.43
32:C5:108:VAL:HG12	32:C5:109:LYS:N	2.33	0.43
35:DA:126:G:H2'	35:DA:127:G:O5'	2.19	0.43
35:DA:918:A:H2'	35:DA:919:A:O4'	2.19	0.43
35:DA:946:A:H2'	35:DA:947:G:C8	2.53	0.43
35:DA:993:G:N2	35:DA:996:A:N6	2.67	0.43
35:DA:1147:C:C2'	42:DI:18:ARG:HH11	2.31	0.43
35:DA:1311:A:C2	35:DA:1312:G:C8	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:1530:G:H2'	35:DA:1531:A:C8	2.54	0.43
34:DB:101:THR:HA	34:DB:178:LEU:CD2	2.49	0.43
41:DH:47:GLU:CB	41:DH:62:THR:HB	2.48	0.43
55:DV:220:GLN:O	55:DV:223:ILE:HG23	2.18	0.43
3:EA:217:A:H2'	3:EA:218:A:O4'	2.17	0.43
3:EA:319:G:C4	3:EA:333:G:N2	2.87	0.43
3:EA:704:G:O2'	3:EA:726:G:N2	2.44	0.43
3:EA:1853:A:N1	3:EA:2087:G:H1'	2.32	0.43
3:EA:2897:U:H2'	3:EA:2898:U:C6	2.54	0.43
4:ED:46:ARG:NH2	4:ED:86:GLU:H	2.16	0.43
7:EG:3:VAL:O	7:EG:68:ARG:HG2	2.18	0.43
7:EG:120:ILE:HD13	7:EG:120:ILE:N	2.33	0.43
18:ER:64:VAL:O	18:ER:65:ALA:HB3	2.18	0.43
19:ES:7:HIS:HB2	19:ES:50:VAL:CG2	2.48	0.43
23:EW:18:LYS:H	23:EW:36:ILE:N	2.16	0.43
30:E3:21:PHE:O	30:E3:22:LYS:O	2.36	0.43
32:E5:91:ALA:HB1	32:E5:130:PRO:HG3	2.00	0.43
35:FA:961:U:OP1	35:FA:1223:C:O2'	2.21	0.43
35:FA:973:G:H1'	43:FJ:56:HIS:ND1	2.33	0.43
35:FA:1228:C:P	46:FM:107:ARG:HH22	2.41	0.43
34:FB:72:LYS:HE2	34:FB:163:ILE:HD13	2.00	0.43
37:FD:3:ARG:NE	37:FD:115:ARG:HD3	2.33	0.43
38:FE:25:VAL:N	38:FE:28:GLY:O	2.38	0.43
42:FI:43:THR:O	42:FI:44:ALA:CB	2.66	0.43
46:FM:93:ARG:HH12	52:FS:81:ARG:HH21	1.66	0.43
50:FQ:74:THR:HG22	50:FQ:75:LEU:N	2.33	0.43
52:FS:22:ALA:HA	52:FS:25:SER:HB3	2.00	0.43
52:FS:29:LYS:HB3	52:FS:30:PRO:HD2	2.00	0.43
55:FV:218:TRP:CD1	55:FV:218:TRP:N	2.84	0.43
3:GA:126:A:C4	29:G2:18:PHE:CE2	3.07	0.43
3:GA:217:A:H2'	3:GA:218:A:C8	2.53	0.43
3:GA:311:A:C8	3:GA:332:A:N7	2.86	0.43
3:GA:404:A:H1'	3:GA:405:U:OP2	2.19	0.43
3:GA:537:G:N1	3:GA:555:G:C2	2.87	0.43
3:GA:884:U:H2'	3:GA:892:A:N6	2.33	0.43
3:GA:949:G:C2	3:GA:969:G:C2	3.06	0.43
3:GA:952:G:N3	3:GA:966:G:C2	2.87	0.43
3:GA:1180:U:C5	3:GA:1181:U:C4	3.06	0.43
3:GA:1419:A:N6	3:GA:1421:G:N3	2.67	0.43
3:GA:1421:G:C2	3:GA:1422:G:N7	2.86	0.43
3:GA:1865:U:C5	3:GA:1875:G:N1	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:GA:2153:C:H5”	3:GA:2154:A:OP2	2.18	0.43
3:GA:2246:G:C2	3:GA:2247:A:C4	3.07	0.43
3:GA:2421:G:P	28:G1:7:LYS:NZ	2.92	0.43
2:GC:254:LYS:O	2:GC:256:THR:N	2.52	0.43
5:GE:29:HIS:HA	5:GE:32:VAL:HG13	2.00	0.43
5:GE:164:LEU:HB3	5:GE:167:VAL:HG13	2.00	0.43
6:GF:109:ARG:HB3	6:GF:136:ILE:O	2.19	0.43
10:GJ:55:ILE:HD11	10:GJ:57:LEU:CD2	2.49	0.43
23:GW:56:HIS:N	23:GW:56:HIS:ND1	2.66	0.43
35:HA:204:G:H3’	35:HA:205:A:H5”	2.00	0.43
35:HA:815:A:N6	35:HA:1509:C:H1’	2.34	0.43
37:HD:165:ARG:O	37:HD:167:LYS:N	2.52	0.43
45:HL:83:ARG:HB3	45:HL:96:HIS:HB2	2.00	0.43
3:AA:61:C:H2’	3:AA:62:U:H5’	2.00	0.43
3:AA:336:C:N3	3:AA:337:C:C5	2.86	0.43
3:AA:819:A:C4	3:AA:1189:A:C2	3.06	0.43
3:AA:1239:G:H2’	3:AA:1240:U:O4’	2.19	0.43
3:AA:1439:A:C2	3:AA:1553:A:C4	3.06	0.43
3:AA:1638:C:H4’	3:AA:2710:C:O2	2.18	0.43
3:AA:1956:U:H2’	3:AA:1957:C:H5’	2.01	0.43
3:AA:2557:G:H2’	3:AA:2558:C:C6	2.54	0.43
5:AE:44:ARG:HH21	5:AE:44:ARG:CG	2.31	0.43
5:AE:147:LEU:HB3	5:AE:186:VAL:HG23	1.99	0.43
7:AG:35:THR:HG22	7:AG:36:LEU:N	2.33	0.43
10:AJ:11:VAL:HG11	10:AJ:50:THR:HA	2.01	0.43
10:AJ:44:TYR:HA	17:AQ:59:LEU:CD2	2.48	0.43
12:AL:2:ARG:HA	12:AL:5:THR:CG2	2.48	0.43
14:AN:20:MET:HE1	14:AN:40:LYS:HE2	2.00	0.43
20:AT:69:ARG:HG3	20:AT:70:HIS:H	1.83	0.43
26:AZ:15:ARG:HH11	26:AZ:15:ARG:HG2	1.82	0.43
32:A5:71:CYS:SG	32:A5:117:LEU:HD12	2.58	0.43
35:BA:328:C:O2	35:BA:328:C:H2’	2.19	0.43
35:BA:495:A:C2	35:BA:496:A:C6	3.06	0.43
35:BA:532:A:N6	35:BA:1207:G:H5’	2.33	0.43
38:BE:72:ILE:HG12	38:BE:73:ASN:N	2.33	0.43
38:BE:91:GLY:HA3	38:BE:130:SER:HB3	2.00	0.43
45:BL:23:ALA:HB3	45:BL:95:TYR:CE2	2.53	0.43
3:CA:572:A:C2	3:CA:2033:A:C2	3.06	0.43
3:CA:666:A:H4’	12:CL:48:ARG:HD2	2.00	0.43
3:CA:788:A:H3’	3:CA:790:U:H5	1.83	0.43
3:CA:880:G:C2	3:CA:881:G:C8	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CA:1328:A:H2'	3:CA:1330:C:C4	2.53	0.43
3:CA:1548:A:H2'	3:CA:1549:A:C8	2.54	0.43
3:CA:2748:A:H1'	7:CG:66:THR:HG22	2.01	0.43
3:CA:2902:C:O2'	3:CA:2903:U:P	2.77	0.43
4:CD:68:PHE:C	4:CD:73:VAL:HG12	2.38	0.43
7:CG:66:THR:OG1	7:CG:67:ALA:N	2.52	0.43
18:CR:83:TYR:CD1	18:CR:83:TYR:C	2.91	0.43
20:CT:50:LEU:C	20:CT:52:GLU:H	2.22	0.43
32:C5:23:LEU:H	32:C5:87:GLU:HB2	1.84	0.43
35:DA:978:A:C8	35:DA:1361:G:N2	2.87	0.43
35:DA:983:A:N3	35:DA:983:A:C2'	2.82	0.43
35:DA:1269:A:N7	35:DA:1270:G:H1'	2.33	0.43
35:DA:1401:G:H2'	35:DA:1402:C:O4'	2.17	0.43
37:DD:151:LYS:HB3	37:DD:178:MET:SD	2.59	0.43
38:DE:157:ARG:NH2	41:DH:114:ARG:HH12	2.16	0.43
40:DG:83:SER:HB2	40:DG:85:TYR:CE2	2.53	0.43
52:DS:40:ILE:HB	52:DS:66:MET:O	2.18	0.43
54:DU:10:GLU:HG2	54:DU:11:PRO:HD3	2.01	0.43
55:DV:4:THR:CG2	55:DV:378:ARG:CZ	2.96	0.43
3:EA:309:A:N3	3:EA:329:G:O2'	2.42	0.43
3:EA:782:A:C2	2:EC:224:MET:SD	3.12	0.43
3:EA:1142:A:C4	3:EA:1144:A:C8	3.06	0.43
3:EA:1567:G:C2'	2:EC:84:PRO:HG3	2.48	0.43
3:EA:2698:U:H2'	3:EA:2699:C:C6	2.54	0.43
3:EA:2844:G:C5	3:EA:2845:U:C5	3.06	0.43
2:EC:132:ARG:NH1	2:EC:168:GLY:O	2.51	0.43
6:EF:14:LYS:O	6:EF:17:THR:OG1	2.36	0.43
7:EG:24:THR:HG23	7:EG:34:ARG:HG2	2.00	0.43
12:EL:110:VAL:HG11	12:EL:135:ILE:HD11	2.01	0.43
14:EN:33:ILE:HD11	14:EN:118:ARG:CD	2.49	0.43
17:EQ:91:ARG:CD	18:ER:11:GLN:H	2.31	0.43
24:EX:28:PHE:CD1	24:EX:28:PHE:N	2.86	0.43
28:E1:9:LYS:HE2	28:E1:52:LYS:NZ	2.33	0.43
32:E5:34:THR:O	32:E5:38:MET:HG3	2.18	0.43
32:E5:91:ALA:CB	32:E5:130:PRO:HG3	2.48	0.43
35:FA:355:C:C4	35:FA:356:A:N7	2.87	0.43
36:FC:66:VAL:CG1	36:FC:67:THR:N	2.81	0.43
37:FD:135:TYR:CD1	37:FD:136:GLN:N	2.85	0.43
39:FF:3:HIS:CD2	39:FF:94:HIS:HA	2.53	0.43
40:FG:68:ASN:OD1	40:FG:130:ASN:ND2	2.47	0.43
41:FH:89:LYS:HG3	41:FH:90:ASP:N	2.34	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:FH:93:PRO:HG3	41:FH:125:ILE:HD12	1.99	0.43
42:FI:45:ARG:HG3	42:FI:46:MET:N	2.33	0.43
42:FI:65:ILE:HD13	42:FI:79:ILE:HG23	2.01	0.43
50:FQ:38:ILE:HD12	50:FQ:40:ARG:HG2	1.99	0.43
3:GA:54:G:C2	3:GA:55:G:H1'	2.53	0.43
3:GA:818:G:N7	3:GA:1187:G:C6	2.86	0.43
3:GA:882:G:C6	3:GA:895:U:H1'	2.54	0.43
3:GA:949:G:N1	3:GA:969:G:C6	2.86	0.43
3:GA:983:A:C4	3:GA:984:A:C8	3.07	0.43
3:GA:1223:G:OP2	18:GR:90:ARG:NH1	2.48	0.43
3:GA:1670:C:C5	3:GA:1671:U:C4	3.07	0.43
3:GA:1826:G:P	2:GC:221:GLY:H	2.40	0.43
3:GA:1881:C:H2'	3:GA:1882:U:O4'	2.17	0.43
3:GA:2189:U:C2	3:GA:2190:G:C8	3.06	0.43
3:GA:2633:G:C6	3:GA:2634:A:N7	2.87	0.43
5:GE:170:ARG:NH2	5:GE:179:SER:OG	2.51	0.43
6:GF:93:GLU:O	6:GF:95:MET:N	2.51	0.43
9:GI:36:GLU:HG2	9:GI:66:PHE:CE2	2.54	0.43
12:GL:68:SER:C	12:GL:70:LYS:H	2.22	0.43
13:GM:34:LYS:CD	22:GV:82:TYR:HA	2.48	0.43
16:GP:33:GLU:OE1	35:HA:346:G:P	2.76	0.43
17:GQ:81:GLY:O	17:GQ:85:ALA:N	2.39	0.43
35:HA:297:G:H4'	35:HA:557:G:H4'	1.99	0.43
35:HA:619:U:N3	37:HD:132:ILE:CD1	2.81	0.43
35:HA:1066:C:H3'	35:HA:1067:A:H8	1.83	0.43
35:HA:1220:G:H1'	52:HS:52:HIS:ND1	2.33	0.43
36:HC:19:ASN:O	36:HC:40:ARG:NH2	2.52	0.43
43:HJ:74:VAL:O	43:HJ:75:ASP:HB3	2.19	0.43
44:HK:24:HIS:ND1	44:HK:87:LYS:HD2	2.34	0.43
49:HP:23:ASP:O	49:HP:25:ARG:N	2.51	0.43
52:HS:36:ARG:HD2	52:HS:51:VAL:CG1	2.48	0.43
55:HV:10:TYR:HB2	55:HV:289:PRO:CG	2.49	0.43
3:AA:1476:U:C5	3:AA:1514:G:C2	3.07	0.43
7:AG:123:GLU:HG2	7:AG:125:PRO:HD3	2.00	0.43
8:AH:8:LYS:O	8:AH:9:VAL:CB	2.66	0.43
12:AL:111:ILE:N	12:AL:111:ILE:HD12	2.33	0.43
15:AO:31:THR:HG22	15:AO:34:HIS:N	2.33	0.43
18:AR:5:PHE:HB3	18:AR:59:ILE:HD12	2.01	0.43
34:BB:187:ASP:OD1	34:BB:188:THR:N	2.39	0.43
35:BA:211:G:C6	35:BA:212:G:H1'	2.54	0.43
35:BA:688:G:C5	35:BA:700:G:C2	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BD:148:LYS:H	37:BD:148:LYS:HD2	1.83	0.43
39:BF:61:LEU:HD12	39:BF:62:MET:H	1.83	0.43
41:BH:106:THR:HG21	41:BH:121:LEU:HD13	1.99	0.43
42:BI:60:LYS:HD2	42:BI:61:LEU:CD1	2.49	0.43
43:BJ:35:GLN:HE21	43:BJ:77:VAL:CG2	2.32	0.43
49:BP:70:ARG:O	49:BP:74:LEU:HG	2.19	0.43
55:BV:498:VAL:CG2	55:BV:608:ALA:HA	2.48	0.43
3:CA:479:A:H4'	3:CA:480:A:OP1	2.18	0.43
3:CA:874:G:C6	3:CA:904:G:C6	3.06	0.43
3:CA:1509:A:HO2'	3:CA:1510:G:P	2.40	0.43
3:CA:2758:A:C2'	3:CA:2759:G:H5'	2.49	0.43
4:CD:69:ALA:HA	4:CD:73:VAL:CG1	2.48	0.43
5:CE:176:ASP:OD2	5:CE:179:SER:OG	2.36	0.43
7:CG:1:SER:O	7:CG:4:ALA:N	2.43	0.43
19:CS:54:ALA:HB1	19:CS:107:VAL:HG12	1.99	0.43
19:CS:54:ALA:HB1	19:CS:107:VAL:CG1	2.49	0.43
30:C3:21:PHE:N	30:C3:48:MET:HE1	2.33	0.43
35:DA:626:G:H2'	35:DA:627:G:C8	2.53	0.43
35:DA:980:C:O3'	47:DN:13:ARG:NH2	2.52	0.43
35:DA:1147:C:H4'	42:DI:7:TYR:CE2	2.53	0.43
35:DA:1198:G:H2'	35:DA:1199:U:C6	2.53	0.43
35:DA:1225:A:H4'	52:DS:78:ARG:NE	2.33	0.43
35:DA:1236:A:H4'	35:DA:1304:G:H4'	1.99	0.43
40:DG:17:LYS:C	40:DG:18:PHE:HD1	2.22	0.43
45:DL:43:LYS:HG2	45:DL:44:LYS:HG3	2.00	0.43
3:EA:259:G:H4'	12:EL:103:ILE:HD13	2.01	0.43
3:EA:1168:G:H3'	3:EA:1169:A:H8	1.84	0.43
3:EA:2799:A:O2'	3:EA:2800:A:OP2	2.27	0.43
4:ED:193:VAL:HB	4:ED:194:PRO:HD2	2.01	0.43
10:EJ:123:LYS:CD	10:EJ:123:LYS:N	2.81	0.43
12:EL:68:SER:O	12:EL:69:ARG:HB3	2.19	0.43
16:EP:50:ARG:CD	16:EP:51:ASN:N	2.81	0.43
20:ET:69:ARG:HD2	20:ET:70:HIS:H	1.83	0.43
23:EW:37:VAL:HG13	23:EW:55:ASP:O	2.18	0.43
23:EW:37:VAL:CA	23:EW:39:GLN:HG2	2.49	0.43
35:FA:21:G:H2'	35:FA:22:G:C8	2.54	0.43
35:FA:375:U:C4	35:FA:376:G:N7	2.86	0.43
35:FA:881:G:N7	45:FL:6:GLN:NE2	2.67	0.43
38:FE:89:HIS:CD2	38:FE:138:ARG:HG2	2.54	0.43
52:FS:56:GLN:OE1	52:FS:57:HIS:N	2.51	0.43
55:FV:169:LEU:HD13	55:FV:263:LEU:HD13	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:GB:77:U:OP2	22:GV:14:LYS:HA	2.18	0.43
3:GA:725:G:C6	3:GA:726:G:N1	2.87	0.43
3:GA:796:C:HO2'	3:GA:797:G:H5'	1.84	0.43
3:GA:952:G:N1	3:GA:953:G:C4	2.87	0.43
3:GA:974:G:OP1	18:GR:78:ARG:NH1	2.51	0.43
3:GA:1681:G:O2'	3:GA:1762:A:N3	2.41	0.43
3:GA:1913:A:O2'	56:HW:4:SER:HA	2.18	0.43
3:GA:2376:A:C8	15:GO:99:TYR:HE2	2.36	0.43
2:GC:2:VAL:HG11	2:GC:201:LEU:HD23	2.01	0.43
4:GD:52:THR:HG23	4:GD:53:GLY:N	2.34	0.43
4:GD:133:THR:HG23	4:GD:134:HIS:CD2	2.54	0.43
4:GD:186:LEU:HD21	16:GP:3:ILE:HD11	2.00	0.43
5:GE:161:ALA:HB1	5:GE:167:VAL:CG2	2.48	0.43
9:GI:96:LYS:HG2	9:GI:135:MET:HG2	1.99	0.43
10:GJ:45:THR:HG23	10:GJ:45:THR:O	2.18	0.43
35:HA:481:G:C8	35:HA:481:G:H5"	2.53	0.43
35:HA:507:C:H3'	35:HA:508:U:H5"	1.99	0.43
35:HA:941:G:H4'	35:HA:1350:A:H4'	2.00	0.43
35:HA:1049:U:H4'	35:HA:1050:G:C5'	2.48	0.43
35:HA:1308:U:C5'	46:HM:109:ARG:HE	2.31	0.43
39:HF:3:HIS:H	39:HF:92:THR:HG23	1.84	0.43
40:HG:12:ILE:HD12	40:HG:25:LYS:HG2	2.00	0.43
41:HH:82:GLY:C	41:HH:83:LEU:HD12	2.38	0.43
41:HH:105:SER:N	41:HH:126:ILE:HD13	2.34	0.43
41:HH:112:THR:HG22	41:HH:113:ASP:N	2.33	0.43
42:HI:120:LYS:HG3	42:HI:123:ARG:HB3	2.01	0.43
45:HL:63:VAL:HG11	45:HL:95:TYR:CE2	2.53	0.43
48:HO:70:LEU:CD2	48:HO:78:TYR:HB2	2.49	0.43
55:HV:4:THR:HB	55:HV:7:ILE:HD11	2.00	0.43
3:AA:580:U:H2'	3:AA:581:C:C6	2.54	0.43
3:AA:742:A:H2'	3:AA:743:A:C8	2.53	0.43
3:AA:1779:U:C5	3:AA:1784:A:N7	2.86	0.43
3:AA:1857:G:C2	3:AA:1884:G:N3	2.86	0.43
3:AA:2516:A:N6	3:AA:2517:C:N4	2.67	0.43
9:AI:9:LYS:HB3	9:AI:71:LYS:NZ	2.34	0.43
13:AM:26:VAL:HB	13:AM:133:LYS:HA	1.99	0.43
23:AW:19:ARG:NH1	23:AW:22:VAL:HG21	2.33	0.43
28:A1:5:ARG:CZ	28:A1:24:LYS:HA	2.49	0.43
28:A1:8:ILE:CD1	28:A1:24:LYS:HG2	2.48	0.43
32:A5:88:HIS:CB	32:A5:89:PRO:CD	2.97	0.43
35:BA:876:C:C1'	41:BH:12:THR:HG21	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:911:U:H2'	35:BA:912:C:C6	2.54	0.43
35:BA:1117:A:O3'	42:BI:106:ARG:HD2	2.19	0.43
35:BA:1391:U:H2'	35:BA:1392:G:C8	2.54	0.43
35:BA:1480:A:H2'	35:BA:1481:U:O4'	2.19	0.43
40:BG:18:PHE:CE1	40:BG:58:GLU:HG2	2.54	0.43
1:CB:51:G:H5"	15:CO:64:TYR:CD2	2.52	0.43
3:CA:126:A:C5	29:C2:18:PHE:CD2	3.07	0.43
3:CA:138:U:H5'	3:CA:139:U:C5'	2.48	0.43
3:CA:404:A:N7	3:CA:406:G:C6	2.86	0.43
3:CA:834:G:C6	3:CA:835:C:C4	3.07	0.43
3:CA:1268:A:H2'	3:CA:1269:A:O4'	2.19	0.43
3:CA:1447:C:C2	3:CA:1448:G:C8	3.07	0.43
3:CA:1977:A:H2'	3:CA:1978:A:O4'	2.18	0.43
3:CA:2133:G:H5"	3:CA:2155:U:C5	2.54	0.43
3:CA:2843:G:N2	3:CA:2875:C:C2	2.87	0.43
3:CA:2844:G:H2'	3:CA:2845:U:H5'	2.00	0.43
2:CC:128:THR:HA	2:CC:190:THR:HA	2.00	0.43
5:CE:15:SER:N	5:CE:197:GLU:OE2	2.49	0.43
7:CG:84:LYS:HZ3	7:CG:133:LYS:HG2	1.82	0.43
8:CH:27:ARG:HG3	8:CH:27:ARG:HH21	1.83	0.43
10:CJ:44:TYR:HD2	17:CQ:63:ARG:HG2	1.82	0.43
14:CN:52:ILE:HB	14:CN:94:TYR:CD2	2.53	0.43
24:CX:38:TRP:CZ2	24:CX:43:LYS:HA	2.54	0.43
27:C0:2:VAL:CG1	27:C0:3:GLN:N	2.81	0.43
32:C5:100:ALA:HB2	32:C5:125:ARG:HE	1.84	0.43
32:C5:147:SER:OG	32:C5:148:ALA:N	2.49	0.43
35:DA:233:C:H2'	35:DA:234:C:H6	1.83	0.43
35:DA:538:G:C2	35:DA:539:A:C4	3.06	0.43
35:DA:932:C:C6	40:DG:3:ARG:NH1	2.87	0.43
35:DA:1331:G:O2'	35:DA:1332:A:P	2.77	0.43
35:DA:1394:A:C5	35:DA:1501:C:H4'	2.52	0.43
34:DB:93:HIS:ND1	34:DB:145:ASN:O	2.51	0.43
34:DB:165:ALA:HB3	34:DB:190:SER:HB3	2.01	0.43
36:DC:24:ALA:HB1	36:DC:28:GLU:HG2	2.01	0.43
37:DD:174:ASP:OD1	37:DD:175:ALA:N	2.48	0.43
39:DF:45:ARG:NH1	39:DF:46:GLN:O	2.51	0.43
40:DG:46:ALA:HB2	40:DG:117:ALA:HA	2.00	0.43
45:DL:34:CYS:HA	45:DL:55:VAL:HA	2.01	0.43
46:DM:5:ALA:HB2	46:DM:60:VAL:HG13	2.01	0.43
46:DM:64:VAL:HG13	46:DM:68:ASP:CB	2.48	0.43
52:DS:34:TRP:NE1	52:DS:57:HIS:CE1	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:DV:430:LYS:HB3	55:DV:479:VAL:HG21	2.00	0.43
55:DV:520:ILE:HG22	55:DV:578:LEU:HA	2.01	0.43
3:EA:542:C:N3	3:EA:551:G:O6	2.51	0.43
3:EA:784:G:H5'	2:EC:225:ASN:OD1	2.18	0.43
3:EA:1594:U:H2'	3:EA:1595:C:C6	2.54	0.43
3:EA:1712:U:C4	3:EA:1713:A:C6	3.06	0.43
60:EA:3737:HOH:O	2:EC:237:ARG:NH2	2.51	0.43
4:ED:148:GLN:HB2	4:ED:152:PRO:HG2	1.99	0.43
4:ED:148:GLN:OE1	4:ED:148:GLN:N	2.51	0.43
18:ER:49:ILE:HD12	18:ER:52:PRO:HA	2.01	0.43
18:ER:64:VAL:O	18:ER:65:ALA:CB	2.66	0.43
24:EX:70:LEU:HD13	24:EX:75:GLU:CB	2.49	0.43
35:FA:408:A:H2'	35:FA:409:U:O4'	2.18	0.43
35:FA:1085:U:C6	35:FA:1094:G:N1	2.87	0.43
35:FA:1105:A:C2	35:FA:1106:G:N7	2.87	0.43
35:FA:1124:G:C2	35:FA:1150:A:C2	3.06	0.43
35:FA:1305:G:N2	35:FA:1331:G:O2'	2.52	0.43
35:FA:1464:U:H2'	35:FA:1465:A:C8	2.53	0.43
45:FL:73:ASN:ND2	45:FL:74:LEU:H	2.16	0.43
50:FQ:38:ILE:CD1	50:FQ:40:ARG:HG2	2.48	0.43
3:GA:45:G:H2'	3:GA:215:G:C5	2.54	0.43
3:GA:240:C:H2'	3:GA:256:A:N6	2.34	0.43
3:GA:299:A:N1	3:GA:322:A:O2'	2.49	0.43
3:GA:983:A:N7	3:GA:984:A:N7	2.67	0.43
3:GA:1045:C:H3'	3:GA:1046:A:H5'	2.00	0.43
3:GA:1107:G:C6	3:GA:1108:U:C4	3.07	0.43
3:GA:1287:A:O5'	14:GN:103:ARG:HD2	2.19	0.43
3:GA:2317:A:C5	3:GA:2318:G:C5	3.07	0.43
3:GA:2513:A:H2	4:GD:148:GLN:HG3	1.84	0.43
4:GD:12:THR:HG22	4:GD:13:ARG:N	2.33	0.43
5:GE:144:GLU:HG3	5:GE:145:ASP:N	2.32	0.43
9:GI:96:LYS:NZ	9:GI:137:LEU:HD23	2.33	0.43
10:GJ:73:VAL:HG23	10:GJ:74:TYR:N	2.34	0.43
12:GL:48:ARG:HB2	12:GL:48:ARG:HH11	1.84	0.43
12:GL:127:VAL:HG21	12:GL:135:ILE:CD1	2.48	0.43
20:GT:38:ALA:HB1	20:GT:43:ILE:CG2	2.49	0.43
23:GW:23:LYS:HE2	23:GW:24:ARG:HB3	2.00	0.43
25:GY:39:GLN:HB3	25:GY:42:LEU:HD13	2.01	0.43
30:G3:39:ARG:O	30:G3:43:LEU:HG	2.19	0.43
35:HA:368:U:C4	55:HV:362:ARG:NH2	2.87	0.43
35:HA:392:C:OP1	49:HP:8:ARG:NH2	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:HA:759:A:H2'	35:HA:760:G:H5'	2.00	0.43
35:HA:1052:U:O2'	35:HA:1055:A:OP2	2.28	0.43
37:HD:28:ILE:O	37:HD:29:ASP:C	2.56	0.43
37:HD:95:GLU:O	37:HD:100:ASN:ND2	2.52	0.43
38:HE:77:ASN:HB2	38:HE:82:GLN:NE2	2.33	0.43
40:HG:103:TRP:HA	40:HG:106:GLU:HB3	2.00	0.43
40:HG:114:LYS:HG2	40:HG:115:SER:N	2.33	0.43
44:HK:89:PRO:HG3	54:HU:29:LEU:HD13	2.01	0.43
47:HN:49:GLN:HG2	52:HS:10:PHE:HE1	1.84	0.43
50:HQ:47:HIS:HB2	50:HQ:71:LYS:HE2	1.99	0.43
55:HV:4:THR:HG21	55:HV:378:ARG:HG3	2.00	0.43
2:AC:180:MET:O	2:AC:267:VAL:N	2.42	0.43
3:AA:226:A:C6	3:AA:227:A:C6	3.07	0.43
3:AA:247:G:N7	3:AA:249:C:C2	2.86	0.43
3:AA:348:A:C5	3:AA:349:U:C5	3.07	0.43
3:AA:479:A:N3	3:AA:481:G:H5"	2.34	0.43
3:AA:1223:G:P	18:AR:68:ARG:HH11	2.41	0.43
3:AA:2047:C:O2'	3:AA:2048:G:H5'	2.19	0.43
3:AA:2335:A:N6	3:AA:2337:G:H1'	2.33	0.43
7:AG:39:ALA:HB2	7:AG:57:TYR:CD2	2.54	0.43
10:AJ:110:PRO:HB2	10:AJ:111:LYS:HG3	2.00	0.43
13:AM:13:HIS:O	13:AM:14:LYS:CB	2.66	0.43
22:AV:29:ILE:HD13	22:AV:30:ILE:N	2.33	0.43
23:AW:36:ILE:O	23:AW:36:ILE:HG22	2.18	0.43
25:AY:21:LEU:HA	25:AY:25:GLN:HB3	2.01	0.43
32:A5:71:CYS:HB3	32:A5:74:ASP:OD2	2.18	0.43
34:BB:68:PHE:O	34:BB:91:VAL:N	2.50	0.43
36:BC:70:THR:O	36:BC:106:VAL:N	2.52	0.43
40:BG:130:ASN:HA	40:BG:135:VAL:HG11	2.01	0.43
42:BI:7:TYR:CG	42:BI:8:GLY:N	2.87	0.43
42:BI:28:ILE:HG13	42:BI:63:LEU:HD21	2.00	0.43
42:BI:89:GLU:CG	42:BI:90:TYR:N	2.82	0.43
44:BK:126:LYS:O	44:BK:127:ARG:HB2	2.18	0.43
45:BL:76:GLU:HG3	55:BV:454:ASN:CB	2.49	0.43
55:BV:8:ALA:O	55:BV:288:SER:OG	2.30	0.43
1:CB:89:U:H3'	1:CB:90:C:C5'	2.49	0.43
3:CA:348:A:H2'	3:CA:349:U:O4'	2.19	0.43
3:CA:630:G:N2	3:CA:633:A:OP2	2.30	0.43
3:CA:1022:G:C5	3:CA:1140:C:C4	3.07	0.43
3:CA:1047:G:OP2	32:C5:59:LEU:HG	2.19	0.43
3:CA:1150:C:C2'	3:CA:1151:A:O5'	2.67	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CA:1285:A:H2'	3:CA:1286:A:H5'	2.01	0.43
3:CA:2153:C:H5"	3:CA:2154:A:OP2	2.18	0.43
7:CG:83:THR:C	7:CG:84:LYS:HD2	2.39	0.43
21:CU:73:ASN:O	21:CU:74:ALA:HB3	2.19	0.43
23:CW:16:GLU:O	23:CW:17:ALA:HB3	2.19	0.43
28:C1:33:LEU:HD13	28:C1:34:GLU:N	2.34	0.43
32:C5:47:GLU:HG2	32:C5:95:LEU:CD2	2.48	0.43
35:DA:579:A:O2'	48:DO:54:ARG:NH1	2.50	0.43
35:DA:697:U:C6	35:DA:698:G:C8	3.06	0.43
35:DA:1416:G:H2'	35:DA:1417:G:H5'	2.01	0.43
35:DA:1464:U:H2'	35:DA:1465:A:C8	2.54	0.43
34:DB:67:LEU:HD12	34:DB:157:PRO:CG	2.49	0.43
36:DC:77:ILE:HG22	36:DC:81:GLY:HA2	2.01	0.43
46:DM:83:LEU:HD21	52:DS:65:GLU:HB3	2.01	0.43
55:DV:515:TYR:CE2	55:DV:583:TYR:HA	2.53	0.43
3:EA:12:U:O2	3:EA:12:U:H2'	2.19	0.43
3:EA:1031:G:H4'	31:E4:6:SER:HB2	2.01	0.43
3:EA:2103:C:H2'	3:EA:2104:C:H5'	2.01	0.43
3:EA:2579:C:H4'	4:ED:139:SER:OG	2.19	0.43
1:EB:44:G:N2	1:EB:48:U:O2	2.51	0.43
5:EE:147:LEU:HD23	5:EE:183:PHE:CE1	2.53	0.43
16:EP:29:VAL:CG2	16:EP:79:VAL:HG22	2.49	0.43
16:EP:50:ARG:HG2	16:EP:56:SER:HB3	2.00	0.43
17:EQ:63:ARG:HH12	17:EQ:96:ASP:HA	1.84	0.43
20:ET:3:ARG:NH2	20:ET:7:LEU:HD21	2.33	0.43
25:EY:8:GLU:O	25:EY:8:GLU:HG3	2.18	0.43
26:EZ:15:ARG:HH11	26:EZ:15:ARG:HG2	1.83	0.43
28:E1:8:ILE:HD12	28:E1:9:LYS:H	1.83	0.43
35:FA:1093:A:N3	35:FA:1109:C:O2'	2.41	0.43
34:FB:94:ARG:NH1	34:FB:96:LEU:HA	2.34	0.43
34:FB:140:LEU:O	34:FB:144:GLU:N	2.38	0.43
38:FE:137:VAL:O	38:FE:137:VAL:HG22	2.19	0.43
40:FG:64:VAL:O	40:FG:68:ASN:ND2	2.46	0.43
46:FM:6:GLY:C	46:FM:8:ASN:H	2.22	0.43
55:FV:255:ARG:HB3	55:FV:261:ILE:HG21	2.01	0.43
3:GA:199:A:C6	3:GA:2433:A:H2'	2.53	0.43
3:GA:251:A:C4	3:GA:252:G:H1'	2.53	0.43
3:GA:303:G:H2'	3:GA:304:U:O4'	2.19	0.43
3:GA:419:U:H2'	3:GA:420:C:C6	2.54	0.43
3:GA:557:C:N3	3:GA:558:U:C4	2.87	0.43
3:GA:819:A:C2	3:GA:820:A:N9	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:GA:851:C:O4'	26:GZ:46:MET:HG2	2.18	0.43
3:GA:950:G:H2'	3:GA:951:C:O4'	2.18	0.43
3:GA:1038:G:H2'	3:GA:1039:A:C8	2.54	0.43
3:GA:1074:G:N7	3:GA:1075:C:C4	2.86	0.43
3:GA:1156:A:C8	17:GQ:50:ARG:HD3	2.53	0.43
3:GA:1647:U:H3'	3:GA:1647:U:P	2.59	0.43
3:GA:2344:U:OP2	28:G1:36:LYS:HD2	2.19	0.43
3:GA:2782:G:N2	3:GA:2783:U:C2	2.87	0.43
4:GD:133:THR:HG23	4:GD:134:HIS:N	2.32	0.43
5:GE:79:ARG:HG2	5:GE:80:SER:N	2.34	0.43
11:GK:18:ARG:H	11:GK:45:GLU:HB2	1.83	0.43
12:GL:62:PRO:HB2	30:G3:29:ARG:NH2	2.32	0.43
13:GM:14:LYS:HG3	13:GM:15:GLY:H	1.84	0.43
14:GN:24:MET:HE3	14:GN:44:LEU:HD22	2.00	0.43
15:GO:62:LEU:HD13	15:GO:70:ALA:HB2	1.99	0.43
18:GR:42:ALA:HB2	18:GR:46:GLU:HB2	2.01	0.43
28:G1:8:ILE:CG1	28:G1:24:LYS:HG2	2.48	0.43
28:G1:22:THR:OG1	28:G1:23:THR:N	2.49	0.43
35:HA:297:G:N2	35:HA:300:A:OP2	2.51	0.43
35:HA:1048:G:H2'	35:HA:1050:G:C8	2.53	0.43
39:HF:86:ARG:HH22	51:HR:64:TYR:HA	1.84	0.43
49:HP:6:LEU:CD1	49:HP:71:VAL:HG22	2.49	0.43
1:AB:78:A:C2	1:AB:99:A:C4	3.06	0.43
3:AA:581:C:H2'	3:AA:582:A:C8	2.53	0.43
3:AA:959:A:N6	13:AM:82:MET:CE	2.82	0.43
3:AA:1188:U:H4'	18:AR:81:LYS:O	2.19	0.43
3:AA:1378:A:C4	3:AA:1380:G:N7	2.87	0.43
3:AA:2016:U:O2	27:A0:3:GLN:NE2	2.46	0.43
3:AA:2197:U:O2	3:AA:2198:A:O2'	2.21	0.43
5:AE:52:VAL:HG11	5:AE:81:GLY:HA3	2.01	0.43
8:AH:39:ALA:HB1	8:AH:44:ILE:HG22	2.01	0.43
9:AI:91:LYS:HB2	9:AI:95:ASP:HB2	2.00	0.43
13:AM:8:LYS:CE	13:AM:9:PHE:CE2	3.02	0.43
14:AN:8:ARG:HB3	14:AN:10:LEU:CD2	2.48	0.43
17:AQ:20:ALA:HA	17:AQ:23:TYR:CE2	2.54	0.43
17:AQ:60:TRP:CE2	17:AQ:93:ILE:HB	2.54	0.43
24:AX:52:ALA:O	24:AX:53:LYS:CB	2.67	0.43
27:A0:42:ILE:HG22	27:A0:43:THR:O	2.19	0.43
34:BB:29:PHE:N	34:BB:29:PHE:CD1	2.87	0.43
35:BA:263:A:OP2	53:BT:74:ARG:NH1	2.52	0.43
35:BA:1375:A:P	40:BG:28:ASN:HD22	2.41	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BD:30:THR:HG22	37:BD:31:LYS:H	1.83	0.43
41:BH:5:ASP:OD2	41:BH:77:ARG:NH1	2.47	0.43
45:BL:43:LYS:HG2	45:BL:44:LYS:N	2.34	0.43
46:BM:49:SER:HB2	46:BM:52:GLN:HB2	2.01	0.43
49:BP:48:GLU:OE2	49:BP:51:ARG:NH1	2.52	0.43
55:BV:193:TRP:CZ3	55:BV:202:PHE:HE1	2.36	0.43
55:BV:494:ILE:HD11	55:BV:524:PRO:N	2.34	0.43
3:CA:1044:C:O2'	3:CA:1111:A:N6	2.51	0.43
3:CA:1149:G:H2'	3:CA:1150:C:C6	2.54	0.43
3:CA:1594:U:H2'	3:CA:1595:C:C6	2.54	0.43
3:CA:1722:A:N6	3:CA:1738:G:H1'	2.34	0.43
3:CA:2070:A:O2'	3:CA:2071:A:H5'	2.19	0.43
3:CA:2262:U:H4'	3:CA:2328:A:H2	1.82	0.43
15:CO:22:GLY:HA2	15:CO:42:PRO:HB3	2.01	0.43
23:CW:9:THR:HG23	23:CW:10:ARG:N	2.34	0.43
32:C5:47:GLU:CG	32:C5:95:LEU:HD21	2.47	0.43
32:C5:116:GLU:HG3	32:C5:117:LEU:N	2.27	0.43
35:DA:410:G:P	37:DD:26:ARG:HH21	2.42	0.43
35:DA:598:U:H2'	35:DA:599:C:C6	2.54	0.43
38:DE:13:GLU:HB2	38:DE:39:VAL:HG12	2.01	0.43
53:DT:70:ASN:N	53:DT:70:ASN:OD1	2.51	0.43
55:DV:119:VAL:O	55:DV:123:SER:OG	2.10	0.43
55:DV:621:VAL:HG11	55:DV:631:VAL:HG11	2.01	0.43
55:DV:675:LYS:HB3	55:DV:677:ARG:HD3	2.01	0.43
3:EA:310:A:C5'	21:EU:14:THR:HG23	2.49	0.43
3:EA:1078:U:H5"	3:EA:1079:C:OP1	2.18	0.43
3:EA:1088:A:O2'	3:EA:1089:A:P	2.77	0.43
3:EA:1225:G:C6	3:EA:1226:A:N6	2.87	0.43
3:EA:1913:A:C6	35:FA:1494:G:H5'	2.54	0.43
3:EA:2142:A:C8	3:EA:2147:A:C2	3.07	0.43
3:EA:2200:C:O2	3:EA:2226:C:N4	2.52	0.43
3:EA:2375:G:N2	3:EA:2378:A:OP2	2.42	0.43
2:EC:265:PHE:N	2:EC:265:PHE:CD1	2.87	0.43
9:EI:100:ILE:HG22	9:EI:101:SER:N	2.33	0.43
10:EJ:44:TYR:CD1	10:EJ:44:TYR:O	2.72	0.43
10:EJ:55:ILE:CD1	10:EJ:130:HIS:CG	3.02	0.43
17:EQ:94:LEU:C	17:EQ:96:ASP:N	2.72	0.43
35:FA:509:A:C2	35:FA:510:A:C2	3.07	0.43
35:FA:937:A:N6	35:FA:938:A:C6	2.87	0.43
35:FA:1130:A:N3	35:FA:1146:A:C4	2.87	0.43
34:FB:219:THR:HA	34:FB:221:ARG:HH21	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:FI:54:LEU:N	42:FI:54:LEU:HD12	2.33	0.43
45:FL:46:ASN:HD22	45:FL:89:ASP:CG	2.22	0.43
48:FO:64:ARG:HE	48:FO:88:ARG:NH1	2.17	0.43
55:FV:72:TRP:CD1	55:FV:279:LEU:HB3	2.53	0.43
1:GB:40:U:O2'	1:GB:43:C:OP2	2.24	0.43
3:GA:418:C:C4	3:GA:419:U:C4	3.07	0.43
3:GA:460:A:OP1	29:G2:41:ARG:NH1	2.52	0.43
3:GA:585:G:H5"	3:GA:586:A:OP1	2.19	0.43
3:GA:794:A:C2	3:GA:795:C:C2	3.07	0.43
3:GA:976:G:H2'	3:GA:977:G:C8	2.54	0.43
3:GA:1016:G:H1	3:GA:1146:C:H42	1.67	0.43
3:GA:1068:G:N1	3:GA:1069:A:C6	2.87	0.43
3:GA:1088:A:HO2'	3:GA:1089:A:P	2.41	0.43
3:GA:1324:G:C4	3:GA:1328:A:N6	2.87	0.43
3:GA:1405:U:H2'	3:GA:1406:U:C6	2.53	0.43
3:GA:1474:U:H2'	3:GA:1475:G:H5'	2.01	0.43
3:GA:2238:G:H1'	60:GA:3500:HOH:O	2.18	0.43
3:GA:2294:G:OP1	15:GO:10:ARG:NE	2.51	0.43
4:GD:65:ALA:O	4:GD:69:ALA:N	2.52	0.43
7:GG:84:LYS:CB	7:GG:132:LEU:H	2.32	0.43
9:GI:129:GLU:HB3	9:GI:133:ARG:HH21	1.83	0.43
26:GZ:26:LEU:HD21	26:GZ:46:MET:CB	2.49	0.43
35:HA:145:G:N2	35:HA:178:C:C2	2.87	0.43
35:HA:205:A:OP1	35:HA:205:A:H4'	2.18	0.43
35:HA:373:A:C2	35:HA:374:A:C8	3.07	0.43
35:HA:505:G:H2'	35:HA:506:G:H8	1.83	0.43
35:HA:509:A:N3	35:HA:543:U:O2'	2.50	0.43
35:HA:980:C:H2'	60:HA:1772:HOH:O	2.18	0.43
35:HA:1059:C:O2	43:HJ:55:PRO:HG3	2.19	0.43
35:HA:1087:G:H2'	35:HA:1088:G:C8	2.54	0.43
35:HA:1239:A:C2	35:HA:1296:C:C2	3.07	0.43
35:HA:1360:A:H2'	35:HA:1361:G:H5'	2.00	0.43
38:HE:13:GLU:HB2	38:HE:39:VAL:HG12	2.01	0.43
43:HJ:8:ILE:HD11	43:HJ:76:ILE:CD1	2.49	0.43
44:HK:20:VAL:O	44:HK:35:THR:HG23	2.19	0.43
44:HK:79:ILE:HB	44:HK:105:PHE:CZ	2.54	0.43
45:HL:86:ARG:HH21	45:HL:88:LYS:HG3	1.83	0.43
55:HV:435:LEU:HD13	55:HV:458:ILE:CG2	2.49	0.43
55:HV:495:ARG:HD2	55:HV:611:VAL:HB	2.00	0.43
3:AA:274:C:H2'	3:AA:275:C:O4'	2.19	0.43
3:AA:323:C:OP1	3:AA:338:G:N2	2.51	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AA:1485:U:H2'	3:AA:1486:U:H6	1.82	0.43
3:AA:1536:C:H1'	3:AA:1537:G:N2	2.34	0.43
3:AA:1942:C:OP2	3:AA:1943:U:O2'	2.28	0.43
3:AA:2491:U:HO2'	3:AA:2492:U:H5	1.67	0.43
9:AI:74:PRO:HG2	9:AI:77:VAL:HB	2.01	0.43
11:AK:13:ASN:OD1	11:AK:13:ASN:N	2.48	0.43
12:AL:2:ARG:HA	12:AL:5:THR:HG21	2.01	0.43
18:AR:61:ALA:HB1	18:AR:98:ILE:H	1.84	0.43
21:AU:84:PHE:O	21:AU:85:ARG:HB3	2.19	0.43
23:AW:37:VAL:HB	23:AW:38:ARG:NH1	2.34	0.43
25:AY:31:GLN:HG2	25:AY:36:GLN:HB2	2.01	0.43
35:BA:208:U:C2	35:BA:212:G:N2	2.87	0.43
45:BL:63:VAL:HG21	45:BL:95:TYR:CE1	2.54	0.43
1:CB:5:U:H2'	1:CB:6:G:C8	2.53	0.43
3:CA:517:C:OP2	27:C0:9:ARG:NH2	2.51	0.43
3:CA:548:G:H4'	3:CA:549:G:H21	1.84	0.43
3:CA:1945:G:C2	3:CA:1946:U:C2	3.07	0.43
3:CA:2498:C:P	60:CA:3672:HOH:O	2.77	0.43
2:CC:115:ILE:HG22	2:CC:116:GLN:N	2.34	0.43
4:CD:99:GLU:CG	4:CD:100:LEU:N	2.82	0.43
7:CG:22:VAL:O	7:CG:22:VAL:HG23	2.18	0.43
7:CG:83:THR:O	7:CG:84:LYS:HB3	2.19	0.43
10:CJ:12:LYS:O	10:CJ:13:ARG:HB2	2.19	0.43
11:CK:6:THR:HG22	11:CK:8:LEU:CD2	2.49	0.43
11:CK:71:ARG:HB3	11:CK:72:PRO:CD	2.49	0.43
13:CM:53:MET:O	13:CM:56:ALA:HB3	2.18	0.43
18:CR:58:VAL:CG1	18:CR:102:SER:HB2	2.49	0.43
20:CT:32:LEU:N	20:CT:83:ALA:HB3	2.32	0.43
26:CZ:13:ILE:HG22	26:CZ:14:GLY:N	2.33	0.43
35:DA:395:C:H2'	35:DA:396:C:C6	2.53	0.43
35:DA:607:A:C2	35:DA:608:A:C4	3.07	0.43
35:DA:1049:U:H4'	35:DA:1050:G:C5'	2.49	0.43
35:DA:1053:G:HO2'	35:DA:1199:U:H5	1.65	0.43
35:DA:1360:A:C6	35:DA:1361:G:C4	3.07	0.43
35:DA:1387:G:C6	35:DA:1388:C:N4	2.87	0.43
38:DE:46:VAL:HG12	38:DE:47:GLY:N	2.34	0.43
39:DF:64:VAL:HG12	39:DF:65:GLU:N	2.34	0.43
47:DN:61:ARG:HE	47:DN:70:PRO:HB2	1.82	0.43
49:DP:75:ILE:O	49:DP:77:GLU:N	2.47	0.43
3:EA:108:G:C6	3:EA:109:C:C4	3.07	0.43
3:EA:384:A:H2'	3:EA:385:C:H5'	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:EA:404:A:H1'	3:EA:405:U:OP2	2.18	0.43
3:EA:2024:G:O3'	4:ED:154:LYS:NZ	2.38	0.43
3:EA:2347:C:H2'	3:EA:2348:U:C6	2.54	0.43
3:EA:2808:G:N2	3:EA:2891:U:C6	2.87	0.43
1:EB:7:G:H5'	15:EO:29:HIS:CE1	2.54	0.43
15:EO:33:ARG:HG2	15:EO:34:HIS:CE1	2.54	0.43
29:E2:43:THR:O	29:E2:44:VAL:C	2.57	0.43
32:E5:77:VAL:C	32:E5:79:PRO:HD2	2.39	0.43
32:E5:94:ARG:HB3	32:E5:98:GLU:OE2	2.19	0.43
35:FA:323:U:H4'	53:FT:17:ALA:HB3	2.01	0.43
35:FA:967:C:H5"	42:FI:127:PHE:CE2	2.53	0.43
35:FA:1317:C:N3	47:FN:53:ARG:NE	2.67	0.43
50:FQ:59:VAL:HG12	50:FQ:60:GLU:N	2.32	0.43
55:FV:5:THR:HG23	55:FV:6:PRO:HD3	2.01	0.43
55:FV:574:MET:HE3	55:FV:576:ILE:HD11	2.01	0.43
1:GB:99:A:C4	1:GB:100:G:C8	3.06	0.43
3:GA:875:G:H1	3:GA:902:C:N4	2.16	0.43
3:GA:950:G:N1	3:GA:951:C:C2	2.86	0.43
3:GA:974:G:C5	3:GA:1186:G:C4	3.06	0.43
3:GA:997:G:H2'	3:GA:998:C:H6	1.83	0.43
3:GA:1000:A:C6	3:GA:1155:A:C5	3.07	0.43
3:GA:1686:C:C2	3:GA:1703:G:C2	3.07	0.43
3:GA:2083:G:C6	3:GA:2084:C:C4	3.06	0.43
3:GA:2301:C:N3	3:GA:2316:G:C2	2.87	0.43
3:GA:2405:G:O2'	3:GA:2406:A:OP1	2.29	0.43
3:GA:2489:U:HO2'	3:GA:2491:U:H5	1.63	0.43
3:GA:2656:U:C5	3:GA:2664:G:N2	2.87	0.43
4:GD:12:THR:CG2	4:GD:13:ARG:N	2.82	0.43
7:GG:61:TRP:CE3	7:GG:61:TRP:HA	2.54	0.43
10:GJ:20:ALA:O	10:GJ:21:THR:C	2.56	0.43
18:GR:60:LYS:HB2	18:GR:100:GLY:HA3	2.01	0.43
19:GS:4:ILE:HG22	19:GS:106:VAL:HG13	2.00	0.43
26:GZ:48:ASN:O	26:GZ:51:SER:OG	2.35	0.43
28:G1:38:PHE:HB2	28:G1:45:HIS:NE2	2.33	0.43
35:HA:451:A:N7	35:HA:481:G:N1	2.67	0.43
35:HA:684:U:H2'	35:HA:685:G:O4'	2.19	0.43
34:HB:92:ASN:OD1	34:HB:92:ASN:N	2.51	0.43
37:HD:31:LYS:HD3	37:HD:31:LYS:N	2.33	0.43
40:HG:96:ARG:O	40:HG:99:LEU:HB2	2.19	0.43
45:HL:43:LYS:HG2	45:HL:44:LYS:N	2.34	0.43
55:HV:107:ASP:O	55:HV:135:VAL:HG23	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AA:966:G:C6	3:AA:967:U:C4	3.07	0.42
3:AA:975:A:C5	3:AA:990:A:N7	2.86	0.42
3:AA:1112:G:C5	3:AA:1113:U:C5	3.07	0.42
3:AA:1482:G:H1'	3:AA:1509:A:N6	2.30	0.42
3:AA:1584:U:H2'	3:AA:1585:C:H5'	1.99	0.42
3:AA:1730:C:O2'	3:AA:1731:G:C4	2.69	0.42
3:AA:2755:C:O2'	3:AA:2756:U:H2'	2.19	0.42
4:AD:110:THR:HG23	4:AD:171:THR:HG22	2.00	0.42
7:AG:31:GLU:O	7:AG:33:THR:N	2.52	0.42
9:AI:93:ASN:HB2	9:AI:135:MET:SD	2.59	0.42
16:AP:50:ARG:CB	16:AP:57:ALA:N	2.78	0.42
17:AQ:86:SER:O	18:AR:51:VAL:HA	2.18	0.42
21:AU:10:VAL:HG12	21:AU:71:ILE:HA	2.01	0.42
21:AU:38:ILE:HG23	21:AU:39:ASN:N	2.33	0.42
34:BB:46:VAL:O	34:BB:49:PHE:CD2	2.72	0.42
34:BB:56:LEU:HD23	34:BB:220:VAL:HG13	2.01	0.42
35:BA:1150:A:H1'	35:BA:1280:A:N6	2.33	0.42
35:BA:1384:C:OP2	60:BA:1826:HOH:O	2.22	0.42
37:BD:38:PRO:HD2	37:BD:42:GLY:CA	2.49	0.42
37:BD:110:THR:HG23	37:BD:113:GLU:CB	2.49	0.42
37:BD:198:HIS:O	37:BD:202:GLU:CB	2.67	0.42
39:BF:55:HIS:O	39:BF:56:LYS:HB2	2.18	0.42
42:BI:60:LYS:HD2	42:BI:61:LEU:HD13	2.00	0.42
3:CA:307:G:N1	3:CA:310:A:OP2	2.49	0.42
3:CA:340:A:O2'	5:CE:162:ARG:NH1	2.52	0.42
3:CA:1087:G:C2	3:CA:1103:A:N3	2.87	0.42
3:CA:1195:G:N2	3:CA:1196:C:C2	2.87	0.42
3:CA:2138:G:O2'	3:CA:2154:A:N6	2.52	0.42
5:CE:187:VAL:HG12	5:CE:188:MET:N	2.34	0.42
9:CI:56:VAL:HA	9:CI:71:LYS:NZ	2.34	0.42
9:CI:104:GLN:HA	9:CI:108:ILE:HD12	2.00	0.42
11:CK:105:ARG:H	11:CK:105:ARG:HD3	1.83	0.42
11:CK:105:ARG:HE	11:CK:106:GLU:CD	2.22	0.42
14:CN:33:ILE:HD11	14:CN:118:ARG:CZ	2.49	0.42
17:CQ:16:ILE:HG12	17:CQ:35:PHE:HD1	1.83	0.42
24:CX:39:VAL:HG22	24:CX:44:ARG:O	2.19	0.42
27:C0:24:VAL:C	27:C0:26:SER:H	2.22	0.42
35:DA:481:G:O2'	35:DA:482:A:P	2.77	0.42
35:DA:481:G:H2'	35:DA:483:C:H41	1.82	0.42
36:DC:77:ILE:CG2	36:DC:81:GLY:HA2	2.48	0.42
36:DC:144:LEU:HD13	36:DC:144:LEU:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:DL:24:LEU:C	45:DL:26:ALA:H	2.23	0.42
45:DL:51:LYS:N	45:DL:51:LYS:CD	2.82	0.42
55:DV:93:VAL:HG13	55:DV:94:ASP:N	2.34	0.42
55:DV:617:MET:HG3	55:DV:682:MET:HE3	2.00	0.42
3:EA:45:G:H5'	3:EA:46:G:H5'	2.01	0.42
3:EA:749:A:C6	3:EA:1618:A:C2	3.07	0.42
3:EA:981:A:N1	3:EA:2027:G:O2'	2.49	0.42
3:EA:1063:G:N2	3:EA:1076:C:C2	2.86	0.42
3:EA:1096:A:N6	3:EA:1097:U:C4	2.87	0.42
3:EA:1468:U:H2'	3:EA:1522:A:N6	2.33	0.42
3:EA:2269:G:O5'	60:EA:3509:HOH:O	2.21	0.42
6:EF:11:VAL:HG13	6:EF:171:ALA:HB1	2.00	0.42
7:EG:39:ALA:CB	7:EG:57:TYR:CD2	3.02	0.42
7:EG:120:ILE:N	7:EG:120:ILE:CD1	2.82	0.42
14:EN:79:LEU:O	14:EN:80:PHE:HB2	2.18	0.42
22:EV:80:HIS:HD2	22:EV:83:LYS:N	2.17	0.42
32:E5:110:ALA:CB	32:E5:113:PHE:CE2	3.02	0.42
32:E5:118:ILE:HB	32:E5:119:PRO:HD3	1.99	0.42
35:FA:300:A:H1'	35:FA:565:U:O2	2.20	0.42
35:FA:409:U:H2'	35:FA:410:G:C8	2.54	0.42
35:FA:445:G:C4	35:FA:446:G:C8	3.07	0.42
35:FA:909:A:H2'	35:FA:910:C:O4'	2.19	0.42
35:FA:1101:A:H61	34:FB:101:THR:HG21	1.82	0.42
35:FA:1523:G:P	44:FK:128:ARG:HH12	2.42	0.42
38:FE:149:SER:HB2	38:FE:150:PRO:HD2	2.01	0.42
42:FI:61:LEU:HD23	42:FI:61:LEU:H	1.83	0.42
42:FI:89:GLU:HG3	42:FI:90:TYR:N	2.33	0.42
50:FQ:13:VAL:HG11	50:FQ:24:ALA:HB2	1.99	0.42
52:FS:31:LEU:HB3	52:FS:49:ILE:CG2	2.49	0.42
1:GB:43:C:O2	6:GF:91:ARG:NH2	2.41	0.42
3:GA:108:G:O2'	3:GA:347:A:N3	2.32	0.42
3:GA:416:U:H2'	3:GA:417:C:O4'	2.19	0.42
3:GA:579:G:C2	3:GA:1262:A:C4	3.07	0.42
3:GA:775:G:C4	3:GA:794:A:C8	3.07	0.42
3:GA:863:A:C2	3:GA:915:C:N3	2.87	0.42
3:GA:965:C:C4	3:GA:966:G:N7	2.87	0.42
3:GA:1359:A:C2	3:GA:1360:G:H1'	2.54	0.42
3:GA:1392:A:C6	3:GA:1393:A:C6	3.07	0.42
3:GA:1428:C:C5	3:GA:1569:A:H5"	2.54	0.42
3:GA:2390:U:H3'	30:G3:34:LYS:NZ	2.33	0.42
3:GA:2591:C:P	2:GC:237:ARG:HG3	2.58	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:GC:109:LEU:CD1	2:GC:110:LYS:H	2.32	0.42
9:GI:100:ILE:O	9:GI:140:GLU:HG2	2.18	0.42
19:GS:88:ARG:CG	19:GS:88:ARG:NH2	2.81	0.42
23:GW:23:LYS:HE2	23:GW:24:ARG:H	1.84	0.42
25:GY:56:LEU:O	25:GY:57:LEU:HB3	2.19	0.42
35:HA:64:G:C8	35:HA:99:C:N4	2.87	0.42
35:HA:71:A:N1	35:HA:99:C:O2'	2.52	0.42
35:HA:597:G:C2	35:HA:644:U:C2	3.07	0.42
35:HA:1260:G:O2'	35:HA:1275:A:N6	2.52	0.42
35:HA:1270:G:C2	35:HA:1271:A:N7	2.87	0.42
35:HA:1524:C:H2'	35:HA:1525:G:C8	2.54	0.42
34:HB:13:VAL:HG23	34:HB:207:ARG:CZ	2.49	0.42
37:HD:106:GLY:HA3	37:HD:162:ALA:CB	2.49	0.42
46:HM:19:LEU:HD21	46:HM:34:LEU:HD21	2.01	0.42
52:HS:63:THR:HG22	52:HS:64:ASP:N	2.34	0.42
54:HU:43:THR:CG2	54:HU:44:GLU:N	2.82	0.42
55:HV:125:THR:HA	55:HV:128:ARG:NH1	2.34	0.42
55:HV:502:GLU:HG3	55:HV:519:VAL:HG22	2.01	0.42
1:AB:106:G:H2'	1:AB:107:G:O4'	2.19	0.42
3:AA:146:A:H2'	3:AA:147:C:C6	2.54	0.42
3:AA:1204:A:C2	3:AA:1240:U:N3	2.87	0.42
3:AA:1747:U:H2'	3:AA:1748:C:C6	2.54	0.42
3:AA:2421:G:P	28:A1:7:LYS:NZ	2.92	0.42
3:AA:2467:C:OP1	31:A4:8:LYS:NZ	2.48	0.42
6:AF:103:ILE:HG21	6:AF:173:ASP:HB2	2.01	0.42
9:AI:46:ASP:HA	9:AI:50:LYS:HD2	2.00	0.42
11:AK:35:VAL:HG12	11:AK:36:GLY:N	2.34	0.42
14:AN:8:ARG:HB3	14:AN:10:LEU:HD22	2.01	0.42
18:AR:16:GLU:HA	18:AR:98:ILE:HG22	2.01	0.42
24:AX:67:LEU:HD22	24:AX:77:TYR:CE1	2.53	0.42
32:A5:47:GLU:HG2	32:A5:95:LEU:HD21	2.01	0.42
33:A6:13:ALA:HB1	33:A6:17:MET:CE	2.49	0.42
35:BA:15:G:H4'	38:BE:29:ARG:NH1	2.34	0.42
35:BA:361:G:N7	60:BA:1716:HOH:O	2.37	0.42
35:BA:1086:U:H5"	35:BA:1086:U:O2	2.19	0.42
35:BA:1322:C:N4	60:BA:1834:HOH:O	2.51	0.42
3:CA:2286:G:P	28:C1:29:LYS:CE	3.07	0.42
3:CA:2365:G:H4'	23:CW:59:PHE:CZ	2.55	0.42
2:CC:106:PRO:HB3	2:CC:141:HIS:CE1	2.54	0.42
6:CF:107:VAL:CG1	6:CF:113:PHE:CE1	3.02	0.42
11:CK:13:ASN:O	11:CK:15:GLY:N	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:CN:75:ILE:HD12	14:CN:76:VAL:N	2.34	0.42
17:CQ:63:ARG:NH1	17:CQ:96:ASP:HA	2.34	0.42
18:CR:61:ALA:HB2	18:CR:98:ILE:HA	2.00	0.42
23:CW:9:THR:HG23	23:CW:10:ARG:HD3	2.00	0.42
32:C5:64:VAL:O	32:C5:67:THR:N	2.41	0.42
35:DA:826:C:H2'	35:DA:827:U:C6	2.55	0.42
35:DA:878:A:C5'	41:DH:81:PRO:HG2	2.49	0.42
35:DA:1365:G:C2	35:DA:1366:C:C2	3.07	0.42
34:DB:212:TYR:CE1	34:DB:216:VAL:HG13	2.54	0.42
36:DC:64:ILE:HG12	36:DC:66:VAL:HG23	2.01	0.42
36:DC:130:PHE:CG	36:DC:131:ARG:N	2.87	0.42
46:DM:29:ARG:CZ	46:DM:63:PHE:CD2	3.01	0.42
50:DQ:12:VAL:O	50:DQ:13:VAL:CB	2.67	0.42
52:DS:36:ARG:HH12	52:DS:77:THR:CG2	2.31	0.42
55:DV:173:ILE:HD13	55:DV:211:MET:SD	2.60	0.42
55:DV:414:PRO:HA	55:DV:461:MET:SD	2.59	0.42
55:DV:416:ILE:HG12	55:DV:667:ALA:HB3	2.01	0.42
55:DV:646:GLU:O	55:DV:647:SER:CB	2.67	0.42
55:DV:698:VAL:O	55:DV:699:ILE:HD12	2.18	0.42
3:EA:163:C:O2'	3:EA:164:C:O5'	2.37	0.42
3:EA:1087:G:C6	3:EA:1089:A:C2	3.07	0.42
3:EA:1779:U:H6	60:EA:3686:HOH:O	2.02	0.42
3:EA:2100:G:C5	3:EA:2190:G:C2	3.08	0.42
3:EA:2314:A:H2'	3:EA:2315:G:C8	2.54	0.42
3:EA:2516:A:N6	3:EA:2517:C:H42	2.18	0.42
3:EA:2563:U:H1'	3:EA:2566:A:N6	2.34	0.42
1:EB:35:C:H2'	1:EB:36:C:O4'	2.20	0.42
4:ED:65:ALA:O	4:ED:69:ALA:N	2.47	0.42
5:EE:158:PHE:HA	5:EE:169:VAL:HG21	2.00	0.42
10:EJ:53:TYR:CE2	10:EJ:121:LYS:HG2	2.54	0.42
14:EN:98:LEU:CB	27:E0:42:ILE:HD11	2.44	0.42
20:ET:50:LEU:HD22	25:EY:26:PHE:CZ	2.53	0.42
24:EX:39:VAL:HG12	24:EX:63:ILE:HG21	2.01	0.42
32:E5:45:GLY:HA2	32:E5:49:GLY:HA2	2.02	0.42
32:E5:47:GLU:HG2	32:E5:95:LEU:HD21	2.01	0.42
35:FA:1377:A:C2	40:FG:2:PRO:HD3	2.54	0.42
37:FD:102:VAL:HG13	37:FD:107:PHE:HB2	2.00	0.42
38:FE:81:LEU:HB3	38:FE:147:MET:HE1	2.01	0.42
40:FG:146:GLU:HA	40:FG:149:LYS:HB2	2.01	0.42
44:FK:58:SER:O	44:FK:91:PRO:CG	2.66	0.42
47:FN:73:PHE:CE1	47:FN:75:ARG:HA	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
52:FS:35:SER:OG	52:FS:38:SER:OG	2.07	0.42
53:FT:25:ARG:HG2	53:FT:29:ARG:NH1	2.34	0.42
3:GA:301:G:H4'	3:GA:302:C:OP1	2.18	0.42
3:GA:933:A:H5'	3:GA:934:U:OP2	2.19	0.42
3:GA:976:G:H4'	3:GA:1156:A:C5	2.53	0.42
3:GA:1064:C:N3	3:GA:1065:U:C5	2.87	0.42
3:GA:1202:G:C6	3:GA:1203:U:N3	2.87	0.42
3:GA:1738:G:O2'	3:GA:1739:A:O5'	2.34	0.42
3:GA:2556:C:H2'	3:GA:2557:G:O4'	2.19	0.42
4:GD:1:MET:HG2	4:GD:205:PRO:HG3	2.00	0.42
4:GD:106:LYS:HB3	4:GD:206:ALA:H	1.84	0.42
15:GO:51:ALA:HB3	15:GO:78:VAL:HG13	2.01	0.42
16:GP:25:VAL:HG22	16:GP:26:GLU:N	2.35	0.42
35:HA:237:G:O6	35:HA:238:A:N6	2.52	0.42
35:HA:511:C:HO2'	35:HA:512:U:H6	1.66	0.42
35:HA:685:G:N1	35:HA:686:U:O4	2.52	0.42
35:HA:1237:C:H1'	35:HA:1334:G:O2'	2.19	0.42
34:HB:13:VAL:O	34:HB:207:ARG:HD2	2.18	0.42
37:HD:19:LEU:HB2	37:HD:21:LEU:HG	2.02	0.42
37:HD:29:ASP:OD1	37:HD:30:THR:N	2.34	0.42
46:HM:2:ALA:CA	46:HM:53:ILE:HD13	2.48	0.42
47:HN:26:GLU:HG2	47:HN:27:LEU:HD12	2.00	0.42
3:AA:19:A:H2'	3:AA:20:C:O4'	2.20	0.42
3:AA:545:U:O5'	3:AA:545:U:H6	2.02	0.42
3:AA:659:G:H4'	5:AE:95:LYS:HD3	2.02	0.42
3:AA:962:G:P	60:AA:3351:HOH:O	2.77	0.42
3:AA:1770:G:C6	3:AA:1983:G:C6	3.07	0.42
3:AA:2595:G:N1	3:AA:2599:G:C6	2.87	0.42
3:AA:2748:A:H1'	7:AG:66:THR:CG2	2.49	0.42
5:AE:158:PHE:HD2	5:AE:159:LEU:HD12	1.83	0.42
17:AQ:91:ARG:HH11	18:AR:11:GLN:N	2.16	0.42
23:AW:44:PHE:O	23:AW:78:PHE:HA	2.19	0.42
32:A5:67:THR:C	32:A5:69:PHE:N	2.73	0.42
32:A5:108:VAL:CG1	32:A5:109:LYS:N	2.82	0.42
34:BB:8:MET:HB2	34:BB:42:LEU:HD11	2.00	0.42
34:BB:8:MET:O	34:BB:10:LYS:N	2.52	0.42
35:BA:731:G:H5'	35:BA:766:A:H4'	2.01	0.42
35:BA:885:G:P	45:BL:15:LYS:NZ	2.93	0.42
35:BA:1181:G:C2	35:BA:1182:G:N2	2.88	0.42
35:BA:1237:C:H4'	35:BA:1334:G:N2	2.35	0.42
36:BC:20:SER:OG	36:BC:40:ARG:NH2	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BC:111:LEU:HD21	36:BC:144:LEU:O	2.20	0.42
37:BD:146:ARG:HB3	37:BD:148:LYS:HD2	2.01	0.42
37:BD:192:SER:OG	37:BD:193:ALA:O	2.37	0.42
46:BM:54:ASP:HA	46:BM:57:ARG:HB3	2.02	0.42
50:BQ:8:LEU:N	50:BQ:61:ILE:O	2.53	0.42
3:CA:1054:A:C6	3:CA:1106:G:C6	3.07	0.42
3:CA:2061:G:O4'	3:CA:2503:A:C5	2.73	0.42
3:CA:2136:G:O6	3:CA:2155:U:N3	2.52	0.42
3:CA:2689:U:O4'	3:CA:2713:U:C2	2.72	0.42
4:CD:8:LYS:HB2	4:CD:201:LEU:CD2	2.49	0.42
8:CH:29:PHE:O	8:CH:33:GLN:HB3	2.19	0.42
9:CI:104:GLN:O	9:CI:105:LEU:HB2	2.19	0.42
11:CK:100:PHE:N	11:CK:100:PHE:CD1	2.87	0.42
16:CP:30:TRP:CH2	16:CP:39:LEU:HD13	2.53	0.42
35:DA:1092:A:OP1	40:DG:5:ARG:NH1	2.51	0.42
35:DA:1176:A:H2'	35:DA:1177:G:C8	2.54	0.42
45:DL:102:LEU:N	45:DL:102:LEU:CD1	2.81	0.42
49:DP:21:VAL:CG2	49:DP:34:GLU:H	2.32	0.42
53:DT:9:LYS:HA	53:DT:12:ILE:HG23	2.01	0.42
55:DV:498:VAL:CG2	55:DV:608:ALA:HA	2.50	0.42
55:DV:658:VAL:HG21	55:DV:663:MET:SD	2.60	0.42
3:EA:191:A:H2'	3:EA:192:C:C6	2.55	0.42
3:EA:250:G:P	30:E3:12:ARG:HH12	2.42	0.42
3:EA:523:C:H4'	3:EA:540:C:O2	2.18	0.42
3:EA:617:G:H2'	3:EA:618:G:O4'	2.19	0.42
3:EA:783:A:H8	3:EA:784:G:H5"	1.83	0.42
3:EA:997:G:O2'	3:EA:998:C:H5'	2.19	0.42
3:EA:2297:A:C2	3:EA:2321:U:H5	2.36	0.42
2:EC:93:VAL:HG13	2:EC:94:LEU:N	2.33	0.42
9:EI:18:ASN:N	9:EI:19:PRO:CD	2.83	0.42
11:EK:71:ARG:HB3	11:EK:72:PRO:CD	2.50	0.42
13:EM:41:LEU:HD11	13:EM:96:ILE:HD13	2.00	0.42
26:EZ:23:LEU:HD21	26:EZ:53:MET:SD	2.59	0.42
35:FA:557:G:C6	35:FA:558:G:N1	2.86	0.42
35:FA:764:C:H2'	35:FA:765:G:O4'	2.19	0.42
35:FA:1147:C:O2'	42:FI:18:ARG:HD2	2.20	0.42
44:FK:17:SER:HA	44:FK:80:LYS:H	1.84	0.42
45:FL:82:ILE:CD1	45:FL:95:TYR:CB	2.97	0.42
54:FU:44:GLU:OE2	54:FU:45:ARG:NH1	2.52	0.42
1:GB:104:A:H2'	1:GB:105:G:O4'	2.20	0.42
3:GA:10:A:H2	3:GA:2800:A:HO2'	1.63	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:GA:443:A:H2'	5:GE:40:ARG:NH2	2.34	0.42
3:GA:568:U:H5'	3:GA:945:A:N6	2.33	0.42
3:GA:634:C:H2'	3:GA:635:C:C6	2.54	0.42
3:GA:847:U:O2	3:GA:847:U:H2'	2.19	0.42
3:GA:997:G:C5	3:GA:998:C:C5	3.07	0.42
3:GA:1194:A:C2	3:GA:1195:G:C8	3.07	0.42
3:GA:1310:G:H3'	3:GA:1311:G:C8	2.55	0.42
3:GA:2370:G:C6	3:GA:2371:G:C6	3.07	0.42
3:GA:2395:C:H2'	3:GA:2396:G:O4'	2.19	0.42
3:GA:2481:G:O2'	3:GA:2482:A:H8	2.02	0.42
3:GA:2698:U:H2'	3:GA:2699:C:H6	1.82	0.42
2:GC:143:VAL:HG11	2:GC:173:LEU:HD21	2.01	0.42
7:GG:16:VAL:HG12	7:GG:17:LYS:N	2.34	0.42
14:GN:90:ARG:NE	14:GN:116:VAL:HG11	2.34	0.42
18:GR:4:VAL:HG23	18:GR:39:LEU:HB2	2.02	0.42
35:HA:49:U:O2'	35:HA:50:A:H2'	2.20	0.42
35:HA:362:G:OP1	45:HL:58:THR:OG1	2.37	0.42
35:HA:1014:A:H5"	52:HS:14:HIS:HB2	2.02	0.42
35:HA:1129:C:H5"	42:HI:18:ARG:HH22	1.85	0.42
37:HD:11:LEU:HG	37:HD:63:ARG:HH11	1.82	0.42
39:HF:17:GLN:O	39:HF:21:MET:N	2.40	0.42
39:HF:69:GLU:O	39:HF:73:GLU:HB2	2.18	0.42
42:HI:21:ILE:CD1	42:HI:86:ALA:HB3	2.49	0.42
44:HK:32:VAL:O	44:HK:44:TRP:HB3	2.20	0.42
44:HK:88:GLY:H	44:HK:114:THR:HG22	1.85	0.42
45:HL:50:ARG:HH12	45:HL:89:ASP:CB	2.32	0.42
1:AB:89:U:H3'	1:AB:90:C:C5'	2.50	0.42
3:AA:372:G:C4	24:AX:60:LYS:HE2	2.54	0.42
3:AA:528:A:P	10:AJ:116:ARG:HH21	2.42	0.42
3:AA:573:U:O2'	3:AA:574:A:H3'	2.19	0.42
3:AA:803:U:C4	3:AA:804:A:N7	2.88	0.42
3:AA:1183:U:H2'	3:AA:1184:U:C6	2.55	0.42
3:AA:1281:G:C2	3:AA:1290:C:C2	3.07	0.42
3:AA:1298:C:C2	3:AA:1643:G:N2	2.88	0.42
3:AA:1465:G:H2'	3:AA:1466:U:O4'	2.19	0.42
3:AA:1970:A:OP2	60:AA:3463:HOH:O	2.22	0.42
3:AA:2070:A:H2'	3:AA:2071:A:O4'	2.19	0.42
4:AD:133:THR:HG23	4:AD:134:HIS:N	2.33	0.42
4:AD:149:ASN:CG	4:AD:150:GLN:H	2.21	0.42
7:AG:175:LYS:HA	7:AG:176:LYS:HA	1.79	0.42
17:AQ:94:LEU:CD1	18:AR:13:ARG:HB2	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AR:80:ARG:O	18:AR:81:LYS:HD3	2.20	0.42
20:AT:69:ARG:HA	20:AT:69:ARG:HD2	1.90	0.42
32:A5:54:VAL:O	32:A5:55:VAL:C	2.57	0.42
35:BA:49:U:O4	35:BA:365:U:H5	2.02	0.42
35:BA:408:A:C2	35:BA:435:A:C2	3.07	0.42
35:BA:449:G:H2'	35:BA:450:G:C8	2.55	0.42
35:BA:843:U:H6	35:BA:843:U:H5'	1.84	0.42
35:BA:1053:G:N7	35:BA:1200:C:H5"	2.34	0.42
35:BA:1288:A:N1	35:BA:1371:G:H1'	2.35	0.42
54:BU:25:LYS:HG2	54:BU:26:ALA:N	2.34	0.42
55:BV:638:ARG:O	55:BV:662:GLU:HG2	2.20	0.42
1:CB:20:G:H2'	1:CB:21:G:O4'	2.20	0.42
3:CA:45:G:C5'	3:CA:46:G:H5'	2.49	0.42
3:CA:931:U:OP1	26:CZ:29:ARG:NH1	2.52	0.42
3:CA:1669:A:O2'	3:CA:2549:G:OP1	2.36	0.42
3:CA:2619:C:H5'	4:CD:155:VAL:O	2.19	0.42
3:CA:2747:G:O2'	7:CG:66:THR:HG22	2.18	0.42
3:CA:2838:G:H2'	3:CA:2839:G:O4'	2.20	0.42
2:CC:33:LEU:HD21	2:CC:62:ARG:HD3	2.01	0.42
10:CJ:4:PHE:HB3	10:CJ:44:TYR:CE1	2.54	0.42
10:CJ:17:VAL:HG23	10:CJ:137:PRO:HB2	2.00	0.42
16:CP:50:ARG:HD2	16:CP:51:ASN:N	2.34	0.42
18:CR:66:HIS:CD2	18:CR:94:THR:HG22	2.54	0.42
32:C5:24:SER:HB2	32:C5:117:LEU:H	1.84	0.42
32:C5:122:GLN:CG	32:C5:123:ILE:N	2.83	0.42
32:C5:131:THR:O	32:C5:134:GLU:HG2	2.19	0.42
35:DA:958:A:C8	52:DS:55:ARG:CZ	3.02	0.42
34:DB:207:ARG:HB2	34:DB:211:LEU:HD13	2.01	0.42
36:DC:26:THR:HG22	47:DN:76:LYS:CD	2.49	0.42
39:DF:53:LYS:HG3	39:DF:54:LEU:H	1.83	0.42
39:DF:97:THR:C	39:DF:98:GLU:HG2	2.40	0.42
44:DK:112:ASP:HB3	54:DU:4:ILE:HG23	2.00	0.42
3:EA:161:A:C3'	3:EA:162:U:H5"	2.45	0.42
3:EA:998:C:OP2	17:EQ:57:ARG:NH2	2.46	0.42
3:EA:1021:A:H3'	3:EA:1021:A:N3	2.34	0.42
3:EA:1149:G:H2'	3:EA:1150:C:C6	2.55	0.42
3:EA:1866:A:H2'	3:EA:1867:G:O4'	2.19	0.42
3:EA:2139:U:H4'	3:EA:2151:U:H3	1.84	0.42
3:EA:2145:C:H3'	3:EA:2146:C:H5"	2.01	0.42
4:ED:125:TRP:CE3	4:ED:160:LYS:HD3	2.54	0.42
5:EE:77:ILE:HG12	5:EE:78:TRP:CE3	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:EE:79:ARG:O	5:EE:80:SER:C	2.57	0.42
5:EE:150:THR:OG1	5:EE:151:GLY:N	2.52	0.42
6:EF:43:ILE:HG21	6:EF:78:ILE:HG22	2.01	0.42
12:EL:2:ARG:HA	12:EL:5:THR:CG2	2.49	0.42
12:EL:77:ILE:HD11	12:EL:108:ALA:HB1	2.01	0.42
12:EL:127:VAL:HG23	12:EL:131:ALA:HB3	2.01	0.42
16:EP:63:ILE:HA	16:EP:68:GLY:CA	2.49	0.42
18:ER:80:ARG:C	18:ER:81:LYS:HD3	2.40	0.42
35:FA:205:A:OP1	35:FA:205:A:H4'	2.19	0.42
35:FA:413:G:H21	35:FA:428:G:H1'	1.83	0.42
35:FA:465:A:H2'	35:FA:466:A:C8	2.54	0.42
35:FA:1149:C:P	42:FI:11:ARG:NH1	2.92	0.42
34:FB:53:LEU:HD21	34:FB:212:TYR:CE1	2.52	0.42
36:FC:77:ILE:HG12	36:FC:84:VAL:CG2	2.49	0.42
36:FC:150:LYS:HD3	36:FC:201:TRP:CE3	2.54	0.42
37:FD:30:THR:HG22	37:FD:31:LYS:N	2.35	0.42
38:FE:157:ARG:HD2	41:FH:45:PHE:CE1	2.54	0.42
54:FU:37:PHE:CE1	54:FU:40:LYS:HE3	2.55	0.42
55:FV:309:ARG:HB3	55:FV:340:SER:CB	2.49	0.42
55:FV:317:PHE:CZ	55:FV:343:VAL:HG21	2.54	0.42
3:GA:152:A:N6	3:GA:173:A:N6	2.67	0.42
3:GA:2148:G:H5"	3:GA:2149:U:OP2	2.19	0.42
6:GF:102:LEU:O	6:GF:106:ALA:HB3	2.19	0.42
11:GK:10:VAL:HG11	11:GK:16:ALA:HB3	2.02	0.42
29:G2:43:THR:O	29:G2:44:VAL:C	2.58	0.42
35:HA:6:G:H3'	35:HA:6:G:N3	2.33	0.42
35:HA:72:A:H3'	35:HA:73:C:H5"	2.00	0.42
35:HA:716:A:N3	44:HK:120:GLY:HA2	2.34	0.42
35:HA:837:U:H2'	35:HA:838:G:C8	2.55	0.42
35:HA:841:C:N3	35:HA:843:U:C6	2.87	0.42
35:HA:1084:G:C8	35:HA:1085:U:H2'	2.54	0.42
35:HA:1198:G:H22	43:HJ:55:PRO:CG	2.32	0.42
34:HB:49:PHE:HB2	34:HB:53:LEU:HD12	2.01	0.42
37:HD:195:ILE:O	37:HD:195:ILE:HG13	2.19	0.42
38:HE:56:VAL:N	38:HE:57:PRO:HD2	2.33	0.42
39:HF:19:PRO:HA	39:HF:22:ILE:HD12	2.00	0.42
42:HI:53:GLU:O	42:HI:57:MET:HE3	2.19	0.42
44:HK:60:PRO:HB3	44:HK:92:GLY:HA2	2.00	0.42
45:HL:33:VAL:O	45:HL:34:CYS:HB3	2.19	0.42
45:HL:38:TYR:HB2	45:HL:52:VAL:CG2	2.48	0.42
45:HL:82:ILE:HD11	45:HL:95:TYR:HB2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:HM:34:LEU:HD13	46:HM:41:GLU:HA	2.02	0.42
47:HN:49:GLN:HG3	47:HN:49:GLN:O	2.19	0.42
52:HS:5:LEU:O	52:HS:7:LYS:N	2.53	0.42
55:HV:31:LEU:HA	55:HV:34:THR:CG2	2.50	0.42
2:AC:49:THR:CG2	3:AA:1813:G:H1'	2.49	0.42
3:AA:356:G:C6	3:AA:357:C:C4	3.07	0.42
3:AA:1179:G:C6	3:AA:1180:U:C4	3.08	0.42
3:AA:2274:A:C5	3:AA:2276:G:C8	3.07	0.42
3:AA:2478:A:H5'	31:A4:32:LYS:HD3	2.02	0.42
3:AA:2543:G:C6	3:AA:2544:G:C6	3.08	0.42
3:AA:2845:U:H5"	16:AP:51:ASN:O	2.20	0.42
10:AJ:60:ASP:N	10:AJ:60:ASP:OD1	2.52	0.42
18:AR:74:ILE:N	18:AR:74:ILE:HD12	2.34	0.42
19:AS:88:ARG:HD2	19:AS:94:ASP:OD2	2.20	0.42
26:AZ:15:ARG:HD3	26:AZ:53:MET:SD	2.59	0.42
35:BA:404:G:O2'	35:BA:498:A:N1	2.40	0.42
35:BA:408:A:OP1	37:BD:110:THR:HG21	2.18	0.42
35:BA:1084:G:OP1	35:BA:1086:U:N3	2.53	0.42
35:BA:1158:C:C4	35:BA:1160:G:C4	3.07	0.42
35:BA:1526:G:P	54:BU:38:TYR:CD2	3.13	0.42
43:BJ:8:ILE:HG22	43:BJ:10:LEU:CD1	2.49	0.42
55:BV:257:LEU:HD11	55:BV:287:PRO:HB3	2.02	0.42
3:CA:156:A:H2'	3:CA:157:C:C6	2.54	0.42
3:CA:177:G:H3'	3:CA:178:G:C8	2.53	0.42
3:CA:1224:U:H4'	18:CR:88:GLY:O	2.20	0.42
3:CA:1605:C:H2'	3:CA:1606:C:H5'	2.01	0.42
2:CC:4:LYS:CD	2:CC:4:LYS:N	2.82	0.42
2:CC:70:LYS:HD2	2:CC:73:ILE:HD13	2.00	0.42
7:CG:68:ARG:NH1	7:CG:72:ASN:HD22	2.18	0.42
7:CG:83:THR:HA	7:CG:84:LYS:CE	2.49	0.42
7:CG:84:LYS:CG	7:CG:85:LYS:N	2.82	0.42
20:CT:69:ARG:CG	20:CT:70:HIS:H	2.32	0.42
20:CT:70:HIS:HB3	20:CT:73:ARG:O	2.20	0.42
30:C3:50:SER:OG	30:C3:53:ASP:OD2	2.37	0.42
35:DA:16:A:O4'	38:DE:22:SER:HB3	2.19	0.42
35:DA:430:A:C5	35:DA:431:A:C8	3.06	0.42
35:DA:1182:G:H4'	35:DA:1183:U:C5'	2.50	0.42
34:DB:29:PHE:N	34:DB:29:PHE:CD1	2.86	0.42
36:DC:11:ARG:HD3	36:DC:178:LEU:HD12	2.00	0.42
38:DE:136:VAL:O	38:DE:138:ARG:N	2.52	0.42
39:DF:12:PRO:CG	39:DF:54:LEU:HD21	2.50	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:DI:33:ARG:HH11	42:DI:38:TYR:HD1	1.68	0.42
44:DK:21:ALA:HB2	44:DK:82:LEU:CD1	2.48	0.42
46:DM:56:LEU:O	46:DM:59:GLU:N	2.52	0.42
49:DP:6:LEU:HG	49:DP:17:TYR:HB3	2.02	0.42
49:DP:19:VAL:HG12	49:DP:37:GLY:C	2.39	0.42
55:DV:63:ILE:HG21	55:DV:468:ILE:CD1	2.49	0.42
3:EA:876:C:H2'	3:EA:877:A:O4'	2.19	0.42
3:EA:1057:A:C6	3:EA:1086:A:C2	3.07	0.42
3:EA:1260:A:C6	3:EA:1261:C:C4	3.08	0.42
3:EA:1301:A:C5	3:EA:1303:G:C8	3.08	0.42
3:EA:1378:A:H4'	3:EA:1379:U:OP1	2.17	0.42
3:EA:1450:G:H21	3:EA:1452:G:H1	1.67	0.42
3:EA:2391:G:P	30:E3:31:ILE:HD11	2.59	0.42
3:EA:2756:U:C4	3:EA:2759:G:O6	2.73	0.42
11:EK:8:LEU:CD2	11:EK:8:LEU:N	2.82	0.42
20:ET:50:LEU:HD22	25:EY:26:PHE:CE2	2.54	0.42
20:ET:69:ARG:CD	20:ET:70:HIS:H	2.32	0.42
28:E1:8:ILE:CD1	28:E1:51:ALA:HA	2.50	0.42
35:FA:9:G:H5'	38:FE:108:GLY:HA3	2.01	0.42
35:FA:381:C:H2'	35:FA:382:A:O4'	2.20	0.42
35:FA:1218:C:H2'	35:FA:1219:A:C8	2.55	0.42
35:FA:1324:A:H2'	35:FA:1325:C:O4'	2.20	0.42
34:FB:20:ARG:HA	34:FB:20:ARG:CZ	2.50	0.42
37:FD:62:ARG:HG2	37:FD:72:PHE:CD2	2.54	0.42
1:GB:43:C:H2'	1:GB:44:G:H5'	2.01	0.42
1:GB:99:A:C6	1:GB:100:G:C4	3.06	0.42
3:GA:811:U:P	12:GL:29:LYS:H	2.42	0.42
3:GA:1009:A:OP2	60:GA:3764:HOH:O	2.21	0.42
3:GA:1045:C:C3'	3:GA:1046:A:H5'	2.50	0.42
3:GA:1235:G:C6	3:GA:1236:G:N1	2.88	0.42
3:GA:2046:G:H1'	27:G0:18:HIS:CE1	2.54	0.42
3:GA:2467:C:N4	3:GA:2468:A:N1	2.67	0.42
5:GE:117:ARG:HH12	12:GL:2:ARG:HB2	1.84	0.42
6:GF:135:ILE:HD11	6:GF:148:VAL:HG12	2.01	0.42
7:GG:19:ASN:O	7:GG:21:GLN:N	2.53	0.42
7:GG:84:LYS:HG3	7:GG:131:VAL:HG23	2.01	0.42
10:GJ:36:LEU:HD21	10:GJ:122:LEU:HB2	2.02	0.42
21:GU:95:PHE:HB2	21:GU:98:ASN:HB3	2.00	0.42
23:GW:64:GLY:HA3	23:GW:81:ILE:CG2	2.49	0.42
25:GY:6:LEU:O	25:GY:7:ARG:HB3	2.20	0.42
35:HA:44:A:C2	35:HA:399:G:C6	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:HA:766:A:C6	35:HA:814:A:C4	3.08	0.42
35:HA:1238:A:C2	35:HA:1303:C:H4'	2.55	0.42
35:HA:1412:C:H2'	35:HA:1413:A:C8	2.54	0.42
34:HB:27:LYS:N	34:HB:28:PRO:CD	2.82	0.42
34:HB:110:ILE:O	34:HB:113:LEU:N	2.52	0.42
37:HD:110:THR:O	37:HD:113:GLU:N	2.52	0.42
38:HE:134:ILE:H	38:HE:134:ILE:HD12	1.84	0.42
38:HE:153:VAL:HA	38:HE:156:LYS:HE2	2.00	0.42
40:HG:79:ARG:HD2	40:HG:83:SER:O	2.20	0.42
40:HG:115:SER:H	40:HG:118:LEU:HD12	1.83	0.42
41:HH:21:ASN:HA	41:HH:65:TYR:CE2	2.54	0.42
44:HK:75:LYS:C	44:HK:78:GLY:H	2.23	0.42
3:AA:685:A:C2	3:AA:689:A:C6	3.08	0.42
3:AA:833:A:OP1	12:AL:39:LYS:HE3	2.19	0.42
3:AA:864:G:OP2	13:AM:22:GLN:NE2	2.52	0.42
3:AA:1096:A:H2'	3:AA:1097:U:H5"	2.01	0.42
3:AA:1238:G:O2'	3:AA:1239:G:H5'	2.19	0.42
3:AA:2661:G:H5'	55:BV:19:ILE:HG13	2.02	0.42
5:AE:42:GLY:O	5:AE:43:THR:OG1	2.35	0.42
5:AE:187:VAL:O	5:AE:188:MET:CB	2.67	0.42
6:AF:28:PRO:HB2	6:AF:168:LEU:HD22	2.01	0.42
9:AI:89:SER:OG	9:AI:135:MET:SD	2.68	0.42
16:AP:33:GLU:HB2	16:AP:38:ARG:NH1	2.35	0.42
17:AQ:82:LEU:HD12	17:AQ:112:ALA:HB2	2.02	0.42
23:AW:49:ASN:ND2	23:AW:50:VAL:N	2.67	0.42
26:AZ:4:ILE:HD13	26:AZ:44:ARG:NH1	2.34	0.42
32:A5:108:VAL:HG12	32:A5:109:LYS:N	2.35	0.42
35:BA:115:G:H1'	35:BA:116:A:N7	2.34	0.42
35:BA:769:G:H4'	35:BA:1513:A:H4'	2.01	0.42
36:BC:105:GLU:HG2	36:BC:106:VAL:N	2.35	0.42
37:BD:145:ILE:HD13	37:BD:155:VAL:HG21	2.02	0.42
42:BI:120:LYS:O	42:BI:121:ALA:HB3	2.20	0.42
44:BK:125:LYS:CB	54:BU:35:ARG:HG2	2.49	0.42
46:BM:33:ILE:HG23	46:BM:59:GLU:HB3	2.00	0.42
55:BV:342:VAL:CG2	55:BV:378:ARG:HD2	2.50	0.42
3:CA:217:A:H2'	3:CA:218:A:O4'	2.19	0.42
3:CA:2031:A:C6	3:CA:2498:C:H1'	2.55	0.42
3:CA:2283:C:C4	3:CA:2389:G:C5	3.08	0.42
3:CA:2297:A:C2	3:CA:2321:U:H5	2.37	0.42
3:CA:2357:G:N2	3:CA:2361:G:N7	2.68	0.42
3:CA:2375:G:O2'	3:CA:2377:A:N7	2.44	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CA:2591:C:H2'	3:CA:2592:G:C8	2.54	0.42
6:CF:24:VAL:O	6:CF:27:VAL:HG12	2.19	0.42
6:CF:69:ALA:HB3	6:CF:81:GLY:N	2.34	0.42
11:CK:1:MET:SD	11:CK:67:LYS:HD3	2.60	0.42
35:DA:243:A:C2	35:DA:246:A:C8	3.08	0.42
35:DA:770:C:P	60:DA:1750:HOH:O	2.76	0.42
35:DA:992:U:H4'	35:DA:993:G:C5'	2.50	0.42
35:DA:1304:G:C5	35:DA:1305:G:C2	3.07	0.42
35:DA:1361:G:C4	35:DA:1362:A:N7	2.88	0.42
35:DA:1366:C:H2'	35:DA:1367:C:C6	2.55	0.42
34:DB:181:PRO:HA	34:DB:196:ASP:OD2	2.20	0.42
37:DD:191:LEU:O	37:DD:192:SER:HB2	2.20	0.42
42:DI:19:VAL:HG13	42:DI:63:LEU:HD12	2.00	0.42
44:DK:35:THR:OG1	44:DK:40:ASN:N	2.53	0.42
46:DM:80:LEU:HD22	46:DM:85:CYS:SG	2.59	0.42
55:DV:20:ASP:H	59:DV:801:GCP:H3B1	1.84	0.42
55:DV:199:GLY:O	55:DV:200:VAL:HG22	2.19	0.42
3:EA:594:U:H2'	3:EA:595:C:C6	2.55	0.42
3:EA:1532:A:H3'	3:EA:1533:C:H6	1.84	0.42
3:EA:1568:G:H4'	2:EC:58:LYS:HB3	2.01	0.42
3:EA:1665:A:H5"	11:EK:66:LYS:HG3	2.01	0.42
3:EA:1730:C:N4	36:HC:103:ILE:HB	2.34	0.42
3:EA:2627:G:N2	3:EA:2777:G:OP2	2.51	0.42
3:EA:2800:A:C2	3:EA:2895:G:H1'	2.54	0.42
3:EA:2834:G:H2'	3:EA:2879:A:H61	1.85	0.42
6:EF:100:GLU:O	6:EF:104:THR:HG22	2.19	0.42
10:EJ:43:GLU:O	10:EJ:45:THR:HG22	2.20	0.42
10:EJ:101:ILE:O	10:EJ:105:VAL:HG12	2.20	0.42
12:EL:111:ILE:O	12:EL:113:ALA:N	2.52	0.42
17:EQ:91:ARG:HD3	18:ER:11:GLN:HB2	2.02	0.42
19:ES:24:ILE:HG13	19:ES:36:LEU:HD21	2.01	0.42
23:EW:19:ARG:NH1	23:EW:22:VAL:HG11	2.34	0.42
23:EW:24:ARG:CG	23:EW:65:LYS:HD3	2.49	0.42
23:EW:38:ARG:N	23:EW:38:ARG:HD3	2.35	0.42
24:EX:32:LEU:O	24:EX:33:HIS:CG	2.72	0.42
25:EY:6:LEU:O	25:EY:7:ARG:HB3	2.19	0.42
32:E5:105:LYS:O	32:E5:107:GLU:N	2.42	0.42
38:FE:134:ILE:H	38:FE:134:ILE:HD12	1.84	0.42
43:FJ:77:VAL:O	43:FJ:79:PRO:HD3	2.19	0.42
44:FK:35:THR:OG1	44:FK:41:ALA:N	2.48	0.42
52:FS:63:THR:CG2	52:FS:64:ASP:N	2.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:FV:185:LEU:CD1	55:FV:222:LEU:HD13	2.49	0.42
3:GA:467:G:O2'	3:GA:796:C:O2'	2.21	0.42
3:GA:548:G:H4'	3:GA:549:G:N2	2.34	0.42
3:GA:570:G:C6	3:GA:2030:A:C6	3.08	0.42
3:GA:600:G:C5'	5:GE:27:LEU:HD22	2.49	0.42
3:GA:1179:G:C6	3:GA:1180:U:C6	3.08	0.42
3:GA:2297:A:N7	3:GA:2320:U:C4	2.87	0.42
3:GA:2459:A:N6	3:GA:2494:G:C2	2.88	0.42
3:GA:2902:C:C2'	3:GA:2903:U:O5'	2.67	0.42
9:GI:12:VAL:HG22	9:GI:23:VAL:HG13	2.00	0.42
12:GL:77:ILE:HD11	12:GL:101:ILE:HD11	2.01	0.42
12:GL:81:ASP:HA	12:GL:84:LYS:HE3	2.01	0.42
26:GZ:8:GLN:O	26:GZ:10:ARG:N	2.45	0.42
26:GZ:8:GLN:O	26:GZ:9:THR:HG22	2.19	0.42
35:HA:1283:U:H2'	35:HA:1284:C:C6	2.54	0.42
35:HA:1397:C:O2'	35:HA:1398:A:OP1	2.33	0.42
36:HC:43:LEU:HD23	36:HC:55:ILE:HD12	2.01	0.42
37:HD:34:ILE:O	37:HD:35:GLU:HB3	2.20	0.42
40:HG:106:GLU:HA	40:HG:109:ARG:NE	2.34	0.42
41:HH:53:GLY:HA3	41:HH:57:PRO:HA	2.00	0.42
43:HJ:6:ILE:O	43:HJ:76:ILE:HB	2.19	0.42
46:HM:4:ILE:O	46:HM:6:GLY:N	2.51	0.42
46:HM:34:LEU:HD22	46:HM:39:ILE:HB	2.02	0.42
56:HW:1:KBE:HA	56:HW:2:DPP:HB3	2.02	0.42
3:AA:84:A:P	21:AU:5:ARG:HH22	2.42	0.42
3:AA:570:G:C4	3:AA:2030:A:N7	2.87	0.42
3:AA:1019:U:H3	3:AA:1142:A:N6	2.17	0.42
3:AA:1913:A:C6	35:BA:1494:G:H5'	2.55	0.42
3:AA:2071:A:H2'	3:AA:2072:C:C6	2.54	0.42
3:AA:2661:G:C6	3:AA:2662:A:C2	3.06	0.42
3:AA:2823:A:C5	3:AA:2824:C:C5	3.07	0.42
5:AE:12:LEU:HD12	5:AE:193:VAL:HG11	2.01	0.42
6:AF:134:GLN:HG2	6:AF:135:ILE:N	2.34	0.42
7:AG:137:LYS:HA	7:AG:140:ILE:HG22	2.02	0.42
11:AK:3:GLN:HG3	11:AK:4:GLU:N	2.34	0.42
20:AT:34:VAL:O	20:AT:34:VAL:HG22	2.20	0.42
20:AT:70:HIS:HB3	20:AT:73:ARG:O	2.19	0.42
23:AW:19:ARG:NH2	23:AW:22:VAL:CG2	2.83	0.42
32:A5:22:ALA:N	32:A5:87:GLU:O	2.53	0.42
32:A5:67:THR:CG2	32:A5:72:LEU:HA	2.49	0.42
35:BA:518:C:C2	35:BA:529:G:C6	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BA:658:C:H1'	48:BO:22:THR:HG21	2.02	0.42
35:BA:890:G:O2'	35:BA:906:A:N6	2.52	0.42
35:BA:1072:G:O6	35:BA:1102:A:N6	2.52	0.42
35:BA:1447:A:H5'	35:BA:1448:C:H5	1.83	0.42
36:BC:15:VAL:HG11	36:BC:179:ARG:HA	2.01	0.42
37:BD:3:ARG:CZ	37:BD:115:ARG:HD3	2.50	0.42
37:BD:110:THR:HG23	37:BD:113:GLU:HB2	2.01	0.42
37:BD:150:LYS:HG2	37:BD:178:MET:SD	2.59	0.42
38:BE:16:ILE:HG23	38:BE:110:ALA:HB2	2.01	0.42
45:BL:102:LEU:N	45:BL:102:LEU:CD1	2.83	0.42
47:BN:45:VAL:HG23	47:BN:46:LEU:H	1.83	0.42
55:BV:512:ARG:HG3	55:BV:514:GLN:HE21	1.85	0.42
3:CA:242:G:H5"	30:C3:63:TYR:CE2	2.55	0.42
3:CA:277:G:H2'	3:CA:361:G:O6	2.20	0.42
3:CA:548:G:HO2'	3:CA:549:G:N2	2.16	0.42
3:CA:936:A:H2'	3:CA:937:C:C6	2.55	0.42
3:CA:2262:U:H4'	3:CA:2328:A:C2	2.55	0.42
3:CA:2543:G:C5	3:CA:2544:G:C5	3.08	0.42
3:CA:2653:U:C4	3:CA:2654:A:C6	3.07	0.42
5:CE:23:PHE:CE1	5:CE:28:VAL:HG11	2.55	0.42
6:CF:11:VAL:N	6:CF:14:LYS:HG2	2.34	0.42
9:CI:52:LEU:HB3	9:CI:53:PRO:CD	2.50	0.42
13:CM:62:LYS:HD3	13:CM:64:TRP:CZ2	2.54	0.42
14:CN:38:LEU:HB3	14:CN:39:PRO:HD3	2.01	0.42
16:CP:105:LYS:HA	16:CP:108:ARG:HD2	2.00	0.42
32:C5:2:ALA:CB	32:C5:6:GLN:CD	2.88	0.42
35:DA:451:A:C2	35:DA:480:U:C4	3.08	0.42
35:DA:734:G:N2	35:DA:735:C:C2	2.88	0.42
35:DA:952:U:H2'	35:DA:953:G:C8	2.53	0.42
35:DA:1003:G:O6	35:DA:1036:A:N6	2.53	0.42
35:DA:1186:G:O3'	42:DI:115:LYS:NZ	2.52	0.42
35:DA:1218:C:H2'	35:DA:1219:A:C8	2.55	0.42
34:DB:118:THR:O	34:DB:119:GLN:HB3	2.20	0.42
36:DC:182:ILE:HD13	36:DC:203:PHE:HA	2.01	0.42
37:DD:56:ARG:HA	37:DD:56:ARG:HE	1.85	0.42
42:DI:19:VAL:HG21	42:DI:83:ILE:HG13	2.02	0.42
44:DK:49:GLY:O	44:DK:69:ARG:NH1	2.52	0.42
53:DT:44:LYS:NZ	53:DT:86:LEU:O	2.38	0.42
55:DV:200:VAL:HG23	55:DV:201:THR:HG23	2.02	0.42
3:EA:396:G:H1'	24:EX:28:PHE:HB3	2.01	0.42
3:EA:585:G:H5"	3:EA:586:A:OP1	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:EA:2075:U:H2'	3:EA:2077:A:OP1	2.19	0.42
3:EA:2584:U:H2'	3:EA:2585:U:C6	2.55	0.42
3:EA:2634:A:C2	3:EA:2635:A:C4	3.08	0.42
1:EB:45:A:C4	1:EB:46:A:C8	3.07	0.42
4:ED:106:LYS:HB3	4:ED:206:ALA:HB3	2.01	0.42
5:EE:23:PHE:CD1	5:EE:111:GLU:HG3	2.54	0.42
7:EG:84:LYS:O	7:EG:85:LYS:HB2	2.19	0.42
15:EO:53:THR:HB	15:EO:65:THR:HG22	2.02	0.42
15:EO:78:VAL:HG23	15:EO:79:ALA:N	2.35	0.42
16:EP:50:ARG:HB2	16:EP:56:SER:HA	2.00	0.42
21:EU:5:ARG:HH11	21:EU:93:ARG:HG3	1.84	0.42
21:EU:34:ILE:HG23	21:EU:61:GLU:HB3	2.01	0.42
35:FA:49:U:H3	35:FA:362:G:H1'	1.85	0.42
35:FA:57:G:C2	35:FA:58:C:C2	3.08	0.42
35:FA:57:G:C6	35:FA:58:C:N3	2.88	0.42
35:FA:1130:A:C2	35:FA:1146:A:C8	3.08	0.42
35:FA:1145:A:HO2'	35:FA:1146:A:P	2.43	0.42
34:FB:165:ALA:HB2	34:FB:186:VAL:HG12	2.02	0.42
37:FD:168:PRO:HB2	37:FD:171:LEU:HG	2.01	0.42
40:FG:70:ARG:CG	40:FG:96:ARG:HG2	2.49	0.42
41:FH:10:MET:HG3	41:FH:27:MET:SD	2.60	0.42
42:FI:52:LEU:HB3	42:FI:57:MET:HG2	2.01	0.42
44:FK:23:ILE:HG13	44:FK:86:VAL:HA	2.02	0.42
44:FK:72:ASP:O	44:FK:73:ALA:HB3	2.20	0.42
55:FV:18:HIS:ND1	55:FV:122:GLN:HB2	2.35	0.42
3:GA:4:U:H2'	3:GA:5:A:C8	2.55	0.42
3:GA:100:U:H4'	3:GA:101:A:O5'	2.19	0.42
3:GA:142:A:N3	20:GT:2:ILE:HD13	2.34	0.42
3:GA:307:G:N2	3:GA:309:A:H3'	2.35	0.42
3:GA:323:C:C4	3:GA:333:G:C8	3.07	0.42
3:GA:379:G:C6	3:GA:380:G:C5	3.08	0.42
3:GA:604:G:C6	3:GA:625:G:C6	3.08	0.42
3:GA:614:A:H4'	3:GA:616:A:C5	2.55	0.42
3:GA:784:G:C6	2:GC:227:VAL:HG11	2.55	0.42
3:GA:819:A:C2	3:GA:820:A:C1'	3.02	0.42
3:GA:1041:G:C2	3:GA:1042:G:N7	2.88	0.42
3:GA:1041:G:H2'	3:GA:1042:G:H8	1.84	0.42
3:GA:1071:G:H3'	3:GA:1072:C:O4'	2.20	0.42
3:GA:1930:G:HO2'	3:GA:1968:G:H1	1.60	0.42
3:GA:2267:A:H5"	3:GA:2268:A:H5'	2.01	0.42
3:GA:2348:U:H2'	3:GA:2349:G:O4'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:GA:2589:A:C2	3:GA:2590:A:C5	3.08	0.42
3:GA:2644:G:N7	3:GA:2645:G:C6	2.87	0.42
3:GA:2659:G:OP2	7:GG:157:LYS:NZ	2.53	0.42
5:GE:72:SER:C	5:GE:74:LYS:H	2.22	0.42
5:GE:149:ILE:HG23	5:GE:188:MET:HG3	2.02	0.42
6:GF:63:LYS:HG2	6:GF:64:PRO:O	2.20	0.42
9:GI:4:VAL:CG1	9:GI:7:TYR:HE1	2.32	0.42
9:GI:138:VAL:HG12	9:GI:139:VAL:N	2.34	0.42
10:GJ:12:LYS:O	10:GJ:13:ARG:CB	2.67	0.42
16:GP:92:ARG:O	16:GP:93:LYS:HB2	2.20	0.42
17:GQ:86:SER:O	17:GQ:87:VAL:C	2.58	0.42
30:G3:22:LYS:HB3	30:G3:48:MET:SD	2.59	0.42
30:G3:31:ILE:CD1	30:G3:31:ILE:C	2.88	0.42
30:G3:44:ARG:N	30:G3:45:PRO:HD2	2.35	0.42
35:HA:552:U:H5'	45:HL:83:ARG:NH1	2.35	0.42
35:HA:579:A:HO2'	48:HO:54:ARG:HH12	1.60	0.42
35:HA:777:A:C4	35:HA:778:G:C8	3.08	0.42
35:HA:1017:U:N3	35:HA:1018:G:N7	2.68	0.42
35:HA:1202:U:H2'	35:HA:1203:C:H5'	2.02	0.42
35:HA:1259:C:O5'	35:HA:1259:C:H6	2.01	0.42
34:HB:49:PHE:CD1	34:HB:49:PHE:C	2.93	0.42
36:HC:2:GLY:C	36:HC:3:GLN:HG3	2.40	0.42
36:HC:121:THR:HG23	36:HC:122:SER:N	2.35	0.42
36:HC:167:TRP:O	36:HC:167:TRP:CE3	2.73	0.42
36:HC:182:ILE:HD13	36:HC:203:PHE:HA	2.01	0.42
44:HK:110:ILE:O	54:HU:6:VAL:HG23	2.20	0.42
46:HM:2:ALA:HA	46:HM:53:ILE:HG21	2.02	0.42
48:HO:8:THR:OG1	48:HO:9:ALA:N	2.50	0.42
2:AC:16:VAL:N	2:AC:203:VAL:CG1	2.82	0.42
3:AA:1084:A:C6	3:AA:1085:A:C6	3.08	0.42
3:AA:2094:A:P	8:AH:22:LYS:HD2	2.59	0.42
3:AA:2423:U:H6	3:AA:2423:U:H5'	1.83	0.42
3:AA:2637:U:C2'	3:AA:2638:G:H5'	2.50	0.42
3:AA:2727:A:C6	3:AA:2728:U:O4	2.73	0.42
6:AF:111:ARG:HA	6:AF:111:ARG:NE	2.34	0.42
16:AP:92:ARG:CG	16:AP:92:ARG:O	2.68	0.42
17:AQ:6:GLY:HA2	17:AQ:9:ALA:HB3	2.02	0.42
25:AY:14:LEU:HA	25:AY:17:GLU:HB3	2.01	0.42
32:A5:17:GLU:HA	32:A5:88:HIS:CE1	2.54	0.42
35:BA:264:C:H4'	50:BQ:65:ARG:HD2	2.02	0.42
37:BD:163:GLU:HA	37:BD:167:LYS:HE2	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BE:97:GLN:HB2	38:BE:124:LEU:HB2	2.02	0.42
44:BK:122:ARG:HH12	44:BK:125:LYS:CE	2.33	0.42
46:BM:10:PRO:O	46:BM:11:ASP:CB	2.67	0.42
56:BW:3:SER:O	56:BW:5:UAL:N	2.53	0.42
3:CA:629:G:H4'	3:CA:650:C:O2	2.19	0.42
3:CA:1271:G:C2	3:CA:1617:C:H4'	2.55	0.42
3:CA:2235:G:C6	3:CA:2236:U:C4	3.08	0.42
3:CA:2415:G:H4'	12:CL:66:PHE:HB2	2.01	0.42
3:CA:2742:G:OP1	31:C4:36:ARG:HD3	2.20	0.42
6:CF:64:PRO:HA	6:CF:88:VAL:HG22	2.01	0.42
7:CG:132:LEU:N	7:CG:132:LEU:HD23	2.35	0.42
7:CG:148:ARG:HA	7:CG:161:VAL:CG1	2.49	0.42
14:CN:103:ARG:HB2	14:CN:110:MET:HE3	2.01	0.42
17:CQ:97:ILE:C	17:CQ:97:ILE:HD12	2.40	0.42
19:CS:24:ILE:CD1	19:CS:36:LEU:HD13	2.50	0.42
22:CV:42:LEU:HD12	22:CV:42:LEU:N	2.35	0.42
35:DA:160:A:N6	35:DA:347:G:H1'	2.35	0.42
35:DA:600:A:H2'	35:DA:601:G:C8	2.55	0.42
35:DA:1279:G:H2'	35:DA:1279:G:N3	2.34	0.42
35:DA:1306:A:N7	35:DA:1307:U:C5	2.87	0.42
34:DB:22:TRP:HZ3	34:DB:24:PRO:HA	1.85	0.42
37:DD:30:THR:C	37:DD:31:LYS:HD2	2.40	0.42
37:DD:125:VAL:HG23	37:DD:126:ASN:N	2.34	0.42
39:DF:22:ILE:O	39:DF:26:THR:OG1	2.29	0.42
41:DH:7:ILE:HB	41:DH:77:ARG:NH1	2.35	0.42
45:DL:25:GLU:O	45:DL:26:ALA:C	2.58	0.42
46:DM:4:ILE:HA	46:DM:57:ARG:CZ	2.50	0.42
55:DV:158:ILE:HG23	55:DV:162:LEU:HD12	2.00	0.42
55:DV:199:GLY:HA3	55:DV:276:GLN:NE2	2.35	0.42
3:EA:90:U:C4	3:EA:91:A:C5	3.08	0.42
3:EA:284:U:H2'	3:EA:285:G:C8	2.55	0.42
3:EA:649:G:H2'	3:EA:650:C:C6	2.54	0.42
3:EA:1537:G:H3'	3:EA:1537:G:N3	2.34	0.42
3:EA:1714:U:H5'	3:EA:1715:G:H5'	2.02	0.42
3:EA:2315:G:H2'	3:EA:2316:G:H8	1.84	0.42
3:EA:2326:C:H3'	3:EA:2326:C:C6	2.55	0.42
3:EA:2481:G:HO2'	3:EA:2482:A:H8	1.68	0.42
3:EA:2516:A:N6	3:EA:2517:C:N4	2.67	0.42
2:EC:229:HIS:O	2:EC:231:HIS:N	2.52	0.42
7:EG:117:PRO:CD	7:EG:120:ILE:HD11	2.50	0.42
8:EH:9:VAL:O	8:EH:13:GLY:N	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:EJ:45:THR:OG1	10:EJ:48:VAL:HB	2.20	0.42
18:ER:64:VAL:HG21	18:ER:97:LYS:HB2	2.02	0.42
19:ES:63:GLY:O	19:ES:64:ALA:HB3	2.19	0.42
35:FA:302:G:N3	35:FA:556:C:H4'	2.35	0.42
35:FA:924:C:O2'	35:FA:1502:A:N1	2.36	0.42
35:FA:989:U:N3	35:FA:990:C:C5	2.88	0.42
35:FA:1142:G:C2	35:FA:1143:G:H1'	2.55	0.42
35:FA:1261:A:H2'	35:FA:1262:C:O4'	2.20	0.42
34:FB:27:LYS:HB3	34:FB:28:PRO:HD3	2.01	0.42
37:FD:10:LYS:HG3	37:FD:11:LEU:HD12	2.02	0.42
44:FK:126:LYS:O	44:FK:127:ARG:HB2	2.18	0.42
45:FL:83:ARG:HG2	45:FL:83:ARG:HH11	1.85	0.42
47:FN:47:LYS:HD2	52:FS:13:LEU:HD21	2.02	0.42
55:FV:255:ARG:CG	55:FV:260:GLU:HB2	2.50	0.42
3:GA:80:G:N1	3:GA:81:G:C5	2.88	0.42
3:GA:118:A:C8	3:GA:119:A:C8	3.08	0.42
3:GA:198:C:O5'	3:GA:198:C:H6	2.03	0.42
3:GA:225:C:H2'	3:GA:226:A:C5'	2.50	0.42
3:GA:643:A:C5	28:G1:43:ARG:NH2	2.88	0.42
3:GA:714:U:H6	3:GA:714:U:H5"	1.85	0.42
3:GA:880:G:N1	3:GA:898:C:H1'	2.35	0.42
3:GA:996:A:H8	18:GR:10:LYS:HZ3	1.64	0.42
3:GA:1179:G:C5	3:GA:1180:U:C6	3.08	0.42
3:GA:2266:A:O5'	3:GA:2266:A:H8	2.03	0.42
3:GA:2467:C:C5	3:GA:2468:A:C5	3.08	0.42
3:GA:2788:C:H2'	3:GA:2789:C:C6	2.54	0.42
5:GE:131:THR:CG2	5:GE:164:LEU:CD2	2.97	0.42
6:GF:146:ASP:O	6:GF:147:ARG:HB2	2.19	0.42
8:GH:40:THR:C	8:GH:42:LYS:H	2.23	0.42
9:GI:108:ILE:HG22	9:GI:108:ILE:O	2.20	0.42
15:GO:51:ALA:HB3	15:GO:78:VAL:CG1	2.50	0.42
16:GP:50:ARG:CD	16:GP:51:ASN:N	2.82	0.42
19:GS:68:ASP:O	19:GS:109:ASP:HB3	2.20	0.42
20:GT:64:LYS:N	20:GT:64:LYS:HD2	2.35	0.42
21:GU:10:VAL:HG12	21:GU:71:ILE:HA	2.00	0.42
30:G3:9:ALA:O	30:G3:12:ARG:N	2.49	0.42
35:HA:105:G:H2'	35:HA:106:C:C6	2.55	0.42
35:HA:622:A:C8	35:HA:623:C:C6	3.08	0.42
35:HA:745:G:H5'	35:HA:851:G:H21	1.84	0.42
37:HD:198:HIS:O	37:HD:202:GLU:CB	2.68	0.42
38:HE:16:ILE:HG23	38:HE:110:ALA:HB2	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:HF:5:GLU:O	39:HF:89:VAL:HA	2.19	0.42
40:HG:91:VAL:HG23	40:HG:95:ARG:HD3	2.02	0.42
43:HJ:85:ASP:HA	43:HJ:88:MET:HB2	2.01	0.42
44:HK:128:ARG:HD3	54:HU:34:ARG:NH1	2.35	0.42
2:AC:16:VAL:HB	2:AC:203:VAL:HG12	2.02	0.42
2:AC:109:LEU:HD23	2:AC:110:LYS:H	1.83	0.42
2:AC:203:VAL:O	2:AC:205:GLY:N	2.53	0.42
3:AA:201:C:OP1	24:AX:17:ARG:NH1	2.51	0.42
3:AA:479:A:C2	3:AA:480:A:C5	3.08	0.42
3:AA:528:A:H2	3:AA:2043:C:H5'	1.85	0.42
3:AA:693:A:O2'	3:AA:1353:A:N3	2.51	0.42
3:AA:744:U:H2'	3:AA:745:G:O4'	2.19	0.42
3:AA:936:A:H2'	3:AA:937:C:C6	2.54	0.42
3:AA:959:A:H62	13:AM:82:MET:HE1	1.84	0.42
3:AA:1063:G:H2'	3:AA:1064:C:O4'	2.20	0.42
3:AA:1312:U:H4'	3:AA:1313:U:O5'	2.20	0.42
3:AA:1509:A:H1'	3:AA:1510:G:O5'	2.20	0.42
3:AA:1691:C:C4	3:AA:1692:U:C4	3.08	0.42
3:AA:2134:A:H2'	3:AA:2135:A:H8	1.85	0.42
3:AA:2352:A:N1	23:AW:30:VAL:HG21	2.35	0.42
3:AA:2821:A:C2	3:AA:2822:G:C4	3.08	0.42
7:AG:26:LYS:CG	7:AG:27:GLY:N	2.83	0.42
11:AK:39:ILE:HD12	11:AK:41:ILE:HD11	2.02	0.42
15:AO:14:ALA:O	15:AO:17:LYS:N	2.52	0.42
17:AQ:4:LYS:HZ3	17:AQ:7:VAL:CG1	2.33	0.42
21:AU:35:VAL:O	21:AU:38:ILE:HB	2.19	0.42
21:AU:98:ASN:ND2	21:AU:100:GLU:OE1	2.53	0.42
22:AV:6:ALA:HB1	22:AV:40:ILE:CG2	2.50	0.42
22:AV:72:VAL:HG12	22:AV:93:ARG:HA	2.01	0.42
23:AW:19:ARG:HA	23:AW:34:SER:HA	2.00	0.42
26:AZ:13:ILE:HG22	26:AZ:14:GLY:N	2.34	0.42
33:A6:15:SER:OG	33:A6:16:VAL:N	2.53	0.42
34:BB:86:CYS:SG	34:BB:88:GLN:NE2	2.93	0.42
35:BA:560:A:C5	38:BE:128:TYR:CE2	3.07	0.42
35:BA:608:A:OP2	60:BA:1853:HOH:O	2.22	0.42
35:BA:1072:G:C5	35:BA:1073:U:C4	3.07	0.42
35:BA:1296:C:H4'	35:BA:1302:C:N3	2.35	0.42
35:BA:1526:G:OP1	54:BU:38:TYR:CE2	2.73	0.42
39:BF:92:THR:HG22	39:BF:94:HIS:H	1.84	0.42
42:BI:45:ARG:N	42:BI:45:ARG:NE	2.68	0.42
47:BN:18:ASP:OD1	47:BN:19:LYS:N	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
50:BQ:57:ASP:OD2	50:BQ:81:LYS:NZ	2.51	0.42
3:CA:10:A:H2	3:CA:2800:A:HO2'	1.64	0.42
3:CA:261:G:C2	3:CA:262:A:C8	3.08	0.42
3:CA:476:G:N2	3:CA:479:A:C8	2.88	0.42
3:CA:1000:A:C4	3:CA:1155:A:C6	3.08	0.42
3:CA:1271:G:N2	3:CA:1617:C:O4'	2.53	0.42
3:CA:2219:U:H2'	3:CA:2220:U:O4'	2.20	0.42
3:CA:2846:G:C6	3:CA:2847:U:C4	3.08	0.42
7:CG:53:PRO:HG3	7:CG:61:TRP:CE2	2.55	0.42
10:CJ:81:ILE:CG1	10:CJ:82:GLY:H	2.32	0.42
16:CP:51:ASN:C	16:CP:52:ARG:HG2	2.41	0.42
16:CP:92:ARG:O	16:CP:93:LYS:HB2	2.20	0.42
20:CT:12:ARG:CZ	25:CY:29:ARG:NH2	2.83	0.42
23:CW:13:ARG:HG2	23:CW:14:ASP:H	1.84	0.42
23:CW:35:ILE:O	23:CW:36:ILE:C	2.58	0.42
32:C5:50:VAL:O	32:C5:50:VAL:HG12	2.20	0.42
32:C5:113:PHE:C	32:C5:115:GLY:N	2.73	0.42
35:DA:11:G:C6	35:DA:12:U:C4	3.07	0.42
35:DA:420:U:O2'	35:DA:423:G:O6	2.37	0.42
35:DA:909:A:H2'	35:DA:910:C:O4'	2.19	0.42
35:DA:980:C:H4'	47:DN:59:ARG:HE	1.85	0.42
35:DA:1439:G:C5	35:DA:1440:U:C5	3.08	0.42
34:DB:187:ASP:HB2	34:DB:203:ASP:CB	2.49	0.42
44:DK:63:ALA:HB1	44:DK:96:THR:HB	2.02	0.42
3:EA:481:G:C4	3:EA:507:A:C2	3.08	0.42
3:EA:1428:C:C5	3:EA:1569:A:H5"	2.55	0.42
3:EA:2678:C:H2'	3:EA:2679:A:O4'	2.20	0.42
3:EA:2788:C:H2'	3:EA:2789:C:C6	2.54	0.42
1:EB:42:C:C5	1:EB:43:C:C5	3.07	0.42
9:EI:2:LYS:HG3	9:EI:3:LYS:N	2.34	0.42
9:EI:7:TYR:HA	9:EI:58:ILE:HB	2.02	0.42
9:EI:96:LYS:HG2	9:EI:138:VAL:HG22	2.02	0.42
10:EJ:44:TYR:O	10:EJ:45:THR:HB	2.19	0.42
12:EL:87:GLY:O	12:EL:89:VAL:N	2.53	0.42
13:EM:49:ALA:O	13:EM:52:ALA:N	2.52	0.42
21:EU:71:ILE:HD12	21:EU:71:ILE:O	2.20	0.42
35:FA:633:G:H2'	35:FA:634:C:H6	1.84	0.42
35:FA:636:U:H5'	50:FQ:6:ARG:HH21	1.85	0.42
35:FA:640:A:O3'	41:FH:108:LYS:NZ	2.53	0.42
37:FD:22:LYS:C	37:FD:24:GLY:H	2.21	0.42
44:FK:42:LEU:HB3	44:FK:77:TYR:CE2	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:FM:34:LEU:HB3	46:FM:39:ILE:HB	2.00	0.42
54:FU:20:LYS:C	54:FU:22:SER:H	2.23	0.42
55:FV:290:VAL:C	55:FV:292:VAL:H	2.23	0.42
1:GB:45:A:C2	1:GB:46:A:H1'	2.54	0.42
1:GB:57:A:H2'	1:GB:58:A:C8	2.55	0.42
1:GB:100:G:C5	1:GB:101:A:C5	3.08	0.42
3:GA:24:G:H2'	3:GA:25:U:O4'	2.20	0.42
3:GA:972:A:C6	3:GA:973:A:N6	2.88	0.42
3:GA:1039:A:N6	3:GA:1040:A:C6	2.88	0.42
3:GA:1339:G:O4'	3:GA:1393:A:C2	2.72	0.42
3:GA:1820:U:H4'	3:GA:1821:A:OP2	2.19	0.42
3:GA:1835:G:H1'	3:GA:1931:U:C2	2.54	0.42
3:GA:2680:U:H5'	4:GD:194:PRO:HA	2.01	0.42
3:GA:2689:U:O4'	3:GA:2713:U:C2	2.73	0.42
3:GA:2846:G:OP1	16:GP:52:ARG:NH1	2.52	0.42
7:GG:122:ALA:HA	7:GG:132:LEU:HA	2.00	0.42
16:GP:108:ARG:NH1	35:HA:1464:U:OP2	2.44	0.42
17:GQ:65:ASN:OD1	17:GQ:69:ARG:NH2	2.53	0.42
17:GQ:86:SER:O	17:GQ:88:GLU:N	2.53	0.42
28:G1:4:ILE:HG12	28:G1:27:ARG:HD3	2.01	0.42
35:HA:565:U:C4	35:HA:566:G:C5	3.08	0.42
35:HA:642:A:C5	41:HH:107:SER:HA	2.54	0.42
35:HA:987:G:C2	35:HA:1219:A:C6	3.07	0.42
38:HE:94:VAL:CG2	38:HE:111:MET:HE3	2.50	0.42
43:HJ:9:ARG:HD2	43:HJ:102:LEU:HA	2.02	0.42
44:HK:13:ARG:O	44:HK:15:GLN:N	2.50	0.42
51:HR:36:SER:CB	54:HU:4:ILE:HG12	2.50	0.42
55:HV:218:TRP:CD1	55:HV:218:TRP:N	2.85	0.42
3:AA:945:A:C4	3:AA:2448:A:C2	3.07	0.42
3:AA:1194:A:C2'	3:AA:1195:G:O5'	2.68	0.42
3:AA:1607:C:H42	3:AA:1622:G:P	2.43	0.42
3:AA:1714:U:H5'	3:AA:1715:G:H5'	2.02	0.42
3:AA:2796:U:C4	3:AA:2798:U:C5	3.08	0.42
5:AE:79:ARG:HG2	5:AE:80:SER:N	2.35	0.42
6:AF:94:ARG:HH11	6:AF:94:ARG:HB2	1.84	0.42
10:AJ:38:GLY:O	10:AJ:43:GLU:HB2	2.19	0.42
10:AJ:81:ILE:CG1	10:AJ:82:GLY:H	2.33	0.42
25:AY:56:LEU:H	25:AY:56:LEU:HD22	1.84	0.42
34:BB:51:GLU:HG2	34:BB:197:PHE:CE1	2.55	0.42
34:BB:53:LEU:HD21	34:BB:212:TYR:CE1	2.55	0.42
35:BA:269:C:H2'	35:BA:270:A:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BJ:35:GLN:HG2	43:BJ:77:VAL:H	1.83	0.42
44:BK:21:ALA:HB2	44:BK:82:LEU:HD12	2.01	0.42
55:BV:244:THR:HG22	55:BV:247:GLU:CD	2.41	0.42
55:BV:315:GLU:HB3	55:BV:316:PRO:HD2	2.02	0.42
55:BV:360:PHE:HD2	55:BV:363:ILE:HD11	1.85	0.42
55:BV:611:VAL:HG22	55:BV:612:LEU:N	2.35	0.42
3:CA:26:G:C5	3:CA:27:G:C6	3.08	0.42
3:CA:593:U:H2'	3:CA:594:U:H6	1.85	0.42
3:CA:1106:G:C5	3:CA:1107:G:C8	3.08	0.42
3:CA:1128:G:C2	3:CA:1129:A:C2	3.08	0.42
3:CA:1242:U:C4	3:CA:1243:C:N4	2.88	0.42
3:CA:1313:U:H2'	3:CA:1610:A:C2	2.55	0.42
3:CA:1628:G:C6	3:CA:1629:U:C4	3.08	0.42
3:CA:1684:G:C5	3:CA:1685:C:C4	3.08	0.42
3:CA:1773:A:N7	3:CA:1829:A:H1'	2.34	0.42
3:CA:1797:G:C6	3:CA:1798:U:C4	3.08	0.42
3:CA:1932:A:C2	3:CA:1969:A:C6	3.08	0.42
3:CA:1937:A:N7	3:CA:1939:U:H2'	2.34	0.42
3:CA:2021:C:P	27:C0:8:THR:HG21	2.60	0.42
3:CA:2096:C:H2'	3:CA:2097:A:C8	2.55	0.42
3:CA:2347:C:C2	3:CA:2348:U:C5	3.07	0.42
3:CA:2547:A:H2'	3:CA:2548:U:C6	2.55	0.42
2:CC:131:MET:O	2:CC:166:ARG:NH1	2.52	0.42
5:CE:51:GLU:OE2	5:CE:88:ARG:NH1	2.50	0.42
7:CG:121:THR:O	7:CG:132:LEU:HA	2.20	0.42
8:CH:13:GLY:CA	35:HA:1294:G:H4'	2.50	0.42
16:CP:42:PHE:CE1	16:CP:62:LYS:HD2	2.55	0.42
22:CV:35:GLU:OE1	22:CV:35:GLU:N	2.48	0.42
35:DA:128:G:H2'	35:DA:129:A:H8	1.85	0.42
35:DA:224:U:C2	35:DA:225:C:C5	3.07	0.42
35:DA:501:C:H1'	35:DA:549:C:H1'	2.01	0.42
35:DA:665:A:C8	35:DA:725:G:C2	3.08	0.42
35:DA:782:A:N7	35:DA:783:C:C5	2.88	0.42
35:DA:994:A:C5	35:DA:1216:A:H4'	2.55	0.42
35:DA:1014:A:N7	35:DA:1015:G:C6	2.88	0.42
35:DA:1125:U:H4'	43:DJ:7:ARG:NH1	2.35	0.42
35:DA:1161:C:H2'	35:DA:1162:C:C6	2.55	0.42
34:DB:99:MET:HA	34:DB:106:VAL:HG21	2.02	0.42
37:DD:62:ARG:NH1	37:DD:69:GLU:HG2	2.35	0.42
37:DD:105:MET:SD	37:DD:143:VAL:CG1	3.08	0.42
37:DD:107:PHE:HB3	37:DD:145:ILE:HD11	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:DD:170:TRP:CD2	37:DD:186:PRO:HB3	2.54	0.42
38:DE:81:LEU:N	38:DE:81:LEU:CD2	2.83	0.42
44:DK:20:VAL:N	44:DK:35:THR:O	2.40	0.42
47:DN:13:ARG:NE	47:DN:54:ASP:OD1	2.48	0.42
47:DN:42:TRP:CD1	47:DN:45:VAL:HG13	2.54	0.42
55:DV:103:MET:HG2	55:DV:135:VAL:HG11	2.01	0.42
3:EA:1584:U:H6	3:EA:1584:U:P	2.43	0.42
7:EG:8:VAL:CG1	7:EG:49:LEU:HB2	2.50	0.42
10:EJ:4:PHE:N	10:EJ:44:TYR:HH	2.18	0.42
11:EK:7:MET:C	11:EK:8:LEU:HD22	2.41	0.42
23:EW:37:VAL:HG12	23:EW:38:ARG:N	2.31	0.42
35:FA:61:G:H8	53:FT:5:LYS:HZ1	1.67	0.42
35:FA:369:G:C2	35:FA:370:C:C5	3.08	0.42
35:FA:437:U:O2'	37:FD:120:HIS:ND1	2.50	0.42
35:FA:1181:G:C2	35:FA:1182:G:N2	2.88	0.42
37:FD:58:LYS:HD2	37:FD:204:TYR:CZ	2.55	0.42
37:FD:132:ILE:HD12	37:FD:135:TYR:N	2.34	0.42
44:FK:125:LYS:HG2	54:FU:35:ARG:HG2	2.02	0.42
46:FM:44:LYS:HD3	46:FM:44:LYS:H	1.84	0.42
53:FT:70:ASN:O	53:FT:73:ALA:HB3	2.20	0.42
55:FV:76:ALA:O	55:FV:77:LYS:HB3	2.20	0.42
55:FV:85:ASN:ND2	55:FV:382:ILE:HG13	2.35	0.42
55:FV:188:MET:CE	55:FV:218:TRP:CD1	3.03	0.42
55:FV:312:SER:HB3	55:FV:315:GLU:HG3	2.02	0.42
55:FV:415:VAL:HG21	55:FV:671:ARG:NH1	2.35	0.42
55:FV:505:HIS:HB3	55:FV:516:GLY:H	1.85	0.42
55:FV:590:GLU:OE1	55:FV:591:LEU:N	2.53	0.42
3:GA:286:U:H2'	3:GA:287:G:C8	2.55	0.42
3:GA:349:U:H2'	3:GA:350:G:C8	2.53	0.42
3:GA:974:G:C8	3:GA:1186:G:H1'	2.55	0.42
3:GA:1735:A:C6	3:GA:1736:U:C4	3.08	0.42
3:GA:2024:G:H2'	3:GA:2025:C:O4'	2.20	0.42
6:GF:134:GLN:OE1	6:GF:150:GLY:N	2.52	0.42
7:GG:83:THR:HA	7:GG:84:LYS:NZ	2.35	0.42
12:GL:73:ILE:HD13	12:GL:73:ILE:H	1.84	0.42
14:GN:51:LEU:HB3	14:GN:79:LEU:HD21	2.02	0.42
17:GQ:64:ILE:HG21	17:GQ:75:TYR:CE1	2.55	0.42
17:GQ:97:ILE:HD11	17:GQ:105:PHE:HD1	1.84	0.42
26:GZ:8:GLN:C	26:GZ:10:ARG:H	2.23	0.42
30:G3:30:HIS:CE1	30:G3:31:ILE:HG22	2.55	0.42
35:HA:148:G:N3	35:HA:1446:A:H2	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:HA:814:A:H2'	35:HA:814:A:N3	2.35	0.42
35:HA:1001:C:C2	35:HA:1002:G:C8	3.08	0.42
35:HA:1104:G:C6	35:HA:1105:A:N7	2.87	0.42
36:HC:84:VAL:CG1	36:HC:101:ILE:HG23	2.50	0.42
37:HD:3:ARG:NH1	37:HD:115:ARG:HE	2.18	0.42
43:HJ:80:THR:HG22	43:HJ:82:LYS:H	1.84	0.42
49:HP:4:ILE:HG13	49:HP:21:VAL:HG12	2.02	0.42
55:HV:224:GLU:HA	55:HV:227:ALA:HB3	2.01	0.42
55:HV:630:ASP:HB3	55:HV:673:LEU:HD22	2.01	0.42
3:AA:996:A:C6	3:AA:1160:G:C2	3.08	0.41
3:AA:996:A:C5	3:AA:1160:G:C2	3.08	0.41
3:AA:1365:A:OP1	24:AX:2:ARG:NE	2.48	0.41
3:AA:1414:C:O2	3:AA:1588:G:N2	2.44	0.41
3:AA:1486:U:H2'	3:AA:1487:U:C6	2.55	0.41
3:AA:1647:U:P	3:AA:1647:U:H3'	2.60	0.41
3:AA:2674:G:H4'	11:AK:30:ARG:HG3	2.02	0.41
4:AD:118:PHE:HZ	14:AN:1:MET:HB2	1.85	0.41
14:AN:12:ARG:HB3	14:AN:16:HIS:HB3	2.01	0.41
16:AP:92:ARG:HB2	16:AP:92:ARG:HH11	1.85	0.41
23:AW:24:ARG:HH11	23:AW:65:LYS:HG2	1.85	0.41
23:AW:67:LYS:O	23:AW:68:PHE:HB2	2.20	0.41
35:BA:131:A:H2'	35:BA:132:C:C6	2.55	0.41
35:BA:211:G:C2	35:BA:212:G:H1'	2.55	0.41
35:BA:246:A:C4	35:BA:279:A:C6	3.08	0.41
35:BA:723:U:C5	54:BU:49:LYS:HG3	2.55	0.41
38:BE:105:ILE:H	38:BE:122:ASN:HA	1.84	0.41
39:BF:100:SER:CB	39:BF:101:PRO:HA	2.50	0.41
3:CA:37:C:O2'	5:CE:45:ALA:HA	2.19	0.41
3:CA:201:C:O2'	3:CA:251:A:N1	2.44	0.41
3:CA:846:U:O2'	3:CA:847:U:O5'	2.38	0.41
3:CA:1027:A:C2	3:CA:1126:A:C8	3.08	0.41
3:CA:2294:G:H5"	15:CO:10:ARG:HD3	2.02	0.41
3:CA:2346:A:H3'	3:CA:2347:C:H5"	2.02	0.41
12:CL:81:ASP:C	12:CL:82:LEU:HD13	2.41	0.41
14:CN:103:ARG:CZ	14:CN:110:MET:HE1	2.49	0.41
15:CO:106:LEU:C	15:CO:106:LEU:HD12	2.40	0.41
17:CQ:87:VAL:O	17:CQ:88:GLU:HB3	2.20	0.41
18:CR:49:ILE:HG22	18:CR:53:PHE:C	2.41	0.41
18:CR:49:ILE:HD12	18:CR:53:PHE:H	1.84	0.41
20:CT:69:ARG:HA	20:CT:69:ARG:HD2	1.97	0.41
21:CU:39:ASN:ND2	21:CU:62:ALA:O	2.52	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:CV:80:HIS:HD2	22:CV:83:LYS:N	2.18	0.41
30:C3:22:LYS:HA	30:C3:47:ALA:O	2.20	0.41
32:C5:15:VAL:HG21	32:C5:66:GLY:HA2	2.02	0.41
35:DA:202:G:O2'	35:DA:468:A:H8	2.02	0.41
35:DA:738:C:H5"	39:DF:68:GLN:OE1	2.20	0.41
35:DA:1077:G:N2	35:DA:1080:A:OP2	2.45	0.41
35:DA:1123:U:H4'	43:DJ:39:PRO:HD2	2.01	0.41
55:DV:595:LEU:O	55:DV:599:ILE:HG12	2.20	0.41
55:DV:611:VAL:HG21	55:DV:689:GLU:HG3	2.02	0.41
3:EA:31:C:O2'	3:EA:1238:G:H5'	2.20	0.41
3:EA:136:G:C2	3:EA:144:A:C2	3.08	0.41
3:EA:627:A:C6	3:EA:637:A:C8	3.08	0.41
3:EA:750:A:OP1	3:EA:1615:C:N4	2.44	0.41
3:EA:1144:A:C6	3:EA:1145:C:C4	3.07	0.41
3:EA:1784:A:H4'	3:EA:1785:A:O5'	2.19	0.41
3:EA:1914:C:H6	3:EA:1914:C:O5'	2.03	0.41
3:EA:2092:U:H4'	3:EA:2093:G:O5'	2.19	0.41
10:EJ:140:LEU:O	10:EJ:140:LEU:HD13	2.20	0.41
16:EP:112:ARG:O	16:EP:113:LEU:C	2.58	0.41
23:EW:41:GLY:C	23:EW:43:LYS:N	2.72	0.41
35:FA:505:G:C6	35:FA:535:A:C2	3.07	0.41
35:FA:1113:C:C1'	36:FC:178:LEU:HD23	2.49	0.41
35:FA:1137:C:O2	35:FA:1138:G:N2	2.53	0.41
35:FA:1513:A:H2'	35:FA:1514:G:C8	2.54	0.41
34:FB:27:LYS:N	34:FB:28:PRO:CD	2.83	0.41
34:FB:183:PHE:CE2	34:FB:197:PHE:CD2	3.08	0.41
36:FC:111:LEU:HD13	36:FC:144:LEU:HD11	2.02	0.41
38:FE:82:GLN:HG2	38:FE:150:PRO:HD3	2.01	0.41
46:FM:34:LEU:O	46:FM:39:ILE:N	2.53	0.41
1:GB:81:G:C6	1:GB:82:U:C4	3.08	0.41
3:GA:185:G:C6	3:GA:212:G:N1	2.88	0.41
3:GA:677:A:O2'	3:GA:2071:A:H5'	2.20	0.41
3:GA:923:G:H1'	23:GW:23:LYS:HD3	2.01	0.41
3:GA:1029:A:C2	3:GA:2466:C:O4'	2.73	0.41
3:GA:2274:A:C5	3:GA:2276:G:C8	3.08	0.41
3:GA:2700:A:C6	3:GA:2701:U:C4	3.08	0.41
6:GF:105:ILE:HD12	6:GF:138:PRO:HG2	2.01	0.41
9:GI:58:ILE:HG22	9:GI:59:THR:N	2.35	0.41
10:GJ:110:PRO:HB2	10:GJ:111:LYS:HG3	2.02	0.41
11:GK:2:ILE:HG23	11:GK:6:THR:HG21	2.00	0.41
17:GQ:91:ARG:HD3	18:GR:11:GLN:HB2	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:GR:61:ALA:HB2	18:GR:98:ILE:HA	2.02	0.41
20:GT:20:ALA:O	20:GT:24:MET:HB3	2.20	0.41
22:GV:19:ARG:O	22:GV:22:ALA:HB3	2.20	0.41
35:HA:409:U:H2'	35:HA:410:G:O4'	2.20	0.41
35:HA:429:U:H5'	37:HD:9:LEU:HG	2.02	0.41
35:HA:722:G:H1	35:HA:733:G:H1	1.67	0.41
35:HA:1084:G:C6	35:HA:1085:U:N3	2.88	0.41
39:HF:3:HIS:CD2	39:HF:92:THR:HG23	2.55	0.41
42:HI:120:LYS:O	42:HI:122:ARG:N	2.49	0.41
49:HP:46:LYS:HG3	49:HP:48:GLU:H	1.85	0.41
52:HS:36:ARG:CG	52:HS:51:VAL:HG11	2.47	0.41
55:HV:546:PRO:HD2	55:HV:549:TYR:CD2	2.55	0.41
1:AB:16:G:C5	1:AB:69:G:C2	3.07	0.41
2:AC:172:THR:HG22	2:AC:182:LYS:HG2	2.02	0.41
3:AA:45:G:H5'	3:AA:46:G:H5'	2.03	0.41
3:AA:518:G:H2'	3:AA:519:U:C6	2.54	0.41
3:AA:653:U:H5	3:AA:654:A:C2	2.38	0.41
3:AA:866:A:N7	3:AA:914:G:C6	2.89	0.41
3:AA:2103:C:H2'	3:AA:2104:C:H5"	2.02	0.41
3:AA:2259:U:H1'	3:AA:2427:C:C2	2.55	0.41
3:AA:2478:A:C2'	3:AA:2479:U:H5'	2.51	0.41
3:AA:2526:G:C5	3:AA:2527:C:C5	3.08	0.41
3:AA:2580:U:C5	3:AA:2581:G:C6	3.08	0.41
4:AD:24:VAL:HA	4:AD:191:GLY:H	1.85	0.41
17:AQ:91:ARG:HE	17:AQ:93:ILE:HG23	1.85	0.41
18:AR:38:VAL:O	18:AR:53:PHE:HA	2.20	0.41
30:A3:22:LYS:HA	30:A3:47:ALA:O	2.19	0.41
32:A5:106:PHE:CG	32:A5:107:GLU:N	2.87	0.41
35:BA:375:U:C2	35:BA:376:G:C8	3.08	0.41
35:BA:780:A:C8	35:BA:800:G:C6	3.08	0.41
35:BA:1032:G:H3'	35:BA:1032:G:N3	2.35	0.41
35:BA:1113:C:H4'	36:BC:14:ILE:HG21	2.02	0.41
35:BA:1227:A:OP2	46:BM:110:LYS:HE2	2.20	0.41
35:BA:1343:G:H2'	35:BA:1344:C:C6	2.54	0.41
36:BC:12:LEU:HD13	36:BC:18:TRP:CE2	2.55	0.41
37:BD:191:LEU:O	37:BD:191:LEU:HD12	2.20	0.41
42:BI:51:PRO:HB3	42:BI:84:THR:CG2	2.49	0.41
50:BQ:74:THR:HG22	50:BQ:75:LEU:N	2.36	0.41
51:BR:34:THR:OG1	51:BR:35:GLU:N	2.53	0.41
3:CA:139:U:O2	20:CT:1:MET:HG2	2.20	0.41
3:CA:161:A:C3'	3:CA:162:U:H5"	2.45	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CA:452:G:C2	3:CA:458:G:C4	3.08	0.41
3:CA:892:A:H2'	3:CA:893:C:C5	2.55	0.41
3:CA:959:A:H62	13:CM:82:MET:CE	2.33	0.41
3:CA:995:C:P	17:CQ:52:ARG:HH11	2.43	0.41
3:CA:1296:G:C4	3:CA:1297:C:C5	3.08	0.41
3:CA:1476:U:C5	3:CA:1514:G:C2	3.08	0.41
3:CA:2701:U:H3'	3:CA:2702:G:C5'	2.49	0.41
2:CC:141:HIS:HB2	2:CC:142:ASN:H	1.54	0.41
5:CE:150:THR:OG1	5:CE:151:GLY:N	2.53	0.41
6:CF:131:VAL:HG22	6:CF:151:LEU:H	1.85	0.41
17:CQ:94:LEU:C	17:CQ:96:ASP:N	2.72	0.41
26:CZ:15:ARG:CG	26:CZ:15:ARG:NH1	2.83	0.41
32:C5:58:THR:O	32:C5:60:LEU:N	2.54	0.41
35:DA:79:G:H3'	35:DA:80:A:C8	2.54	0.41
35:DA:237:G:H5'	50:DQ:27:ARG:HH12	1.84	0.41
35:DA:382:A:H2'	35:DA:383:A:C8	2.54	0.41
35:DA:1142:G:C2	35:DA:1143:G:H1'	2.54	0.41
35:DA:1167:A:H8	35:DA:1169:A:N7	2.19	0.41
35:DA:1254:A:C6	35:DA:1255:G:C5	3.08	0.41
35:DA:1323:G:H2'	35:DA:1324:A:C8	2.55	0.41
35:DA:1358:U:OP1	47:DN:75:ARG:HG2	2.20	0.41
39:DF:41:ASP:OD1	39:DF:58:HIS:NE2	2.52	0.41
42:DI:12:ARG:HH11	42:DI:13:LYS:HB2	1.84	0.41
42:DI:97:GLU:HG2	42:DI:100:LYS:HD3	2.02	0.41
43:DJ:5:ARG:CB	43:DJ:77:VAL:HA	2.48	0.41
44:DK:96:THR:HG23	44:DK:97:ILE:N	2.35	0.41
3:EA:30:G:C6	3:EA:31:C:C4	3.09	0.41
3:EA:55:G:H2'	3:EA:56:A:H8	1.84	0.41
3:EA:88:G:C6	3:EA:89:A:N7	2.87	0.41
3:EA:1019:U:H3	3:EA:1142:A:H62	1.68	0.41
3:EA:1360:G:C6	3:EA:1372:U:C2	3.09	0.41
3:EA:2425:A:H5"	3:EA:2427:C:O4'	2.20	0.41
3:EA:2447:G:N7	3:EA:2501:C:O4'	2.53	0.41
3:EA:2472:G:C5	3:EA:2475:C:C4	3.09	0.41
1:EB:43:C:H2'	1:EB:44:G:H5'	2.01	0.41
2:EC:106:PRO:HA	2:EC:194:VAL:HA	2.02	0.41
10:EJ:4:PHE:CG	10:EJ:5:THR:N	2.89	0.41
11:EK:34:GLY:O	11:EK:35:VAL:C	2.58	0.41
23:EW:28:GLU:HB3	23:EW:31:LEU:HD21	2.02	0.41
28:E1:16:THR:HG21	28:E1:41:VAL:HG13	2.01	0.41
35:FA:158:G:H2'	35:FA:159:G:H5'	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:FA:1021:A:C2	35:FA:1022:A:C8	3.08	0.41
35:FA:1049:U:H2'	47:FN:3:LYS:HD2	2.03	0.41
35:FA:1054:C:H5"	35:FA:1196:A:O2'	2.20	0.41
35:FA:1280:A:OP1	43:FJ:9:ARG:NH1	2.51	0.41
39:FF:3:HIS:HB2	39:FF:92:THR:HG23	2.02	0.41
55:FV:445:PHE:CE1	55:FV:469:ILE:HG21	2.55	0.41
3:GA:392:U:H2'	3:GA:393:C:C6	2.55	0.41
3:GA:397:U:OP2	24:GX:9:LYS:NZ	2.46	0.41
3:GA:483:A:O4'	21:GU:44:HIS:HB3	2.20	0.41
3:GA:620:G:H4'	3:GA:621:A:O5'	2.19	0.41
3:GA:646:U:C2	3:GA:2368:C:H1'	2.55	0.41
3:GA:869:G:C6	3:GA:909:A:C5	3.08	0.41
3:GA:883:G:C2	3:GA:884:U:H1'	2.55	0.41
3:GA:966:G:C5	3:GA:967:U:C4	3.08	0.41
3:GA:982:C:H5"	3:GA:983:A:P	2.60	0.41
3:GA:1087:G:C2	3:GA:1089:A:H1'	2.55	0.41
3:GA:1202:G:C6	3:GA:1244:A:C6	3.09	0.41
3:GA:1410:G:N7	60:GA:3612:HOH:O	2.37	0.41
3:GA:2054:A:C2	3:GA:2616:C:C2	3.08	0.41
3:GA:2155:U:C3'	3:GA:2156:G:H5'	2.50	0.41
3:GA:2307:G:O6	6:GF:40:GLY:N	2.53	0.41
3:GA:2344:U:P	28:G1:36:LYS:HD2	2.60	0.41
3:GA:2526:G:H5'	3:GA:2742:G:O2'	2.19	0.41
3:GA:2607:G:C6	3:GA:2608:G:C5	3.08	0.41
14:GN:55:ALA:C	14:GN:57:THR:N	2.73	0.41
17:GQ:94:LEU:O	17:GQ:94:LEU:HD13	2.21	0.41
18:GR:61:ALA:HB2	18:GR:98:ILE:HD13	2.01	0.41
35:HA:2:A:C6	35:HA:3:A:N1	2.88	0.41
35:HA:196:A:OP1	53:HT:64:LYS:HE2	2.20	0.41
35:HA:897:C:C4	35:HA:898:G:N7	2.89	0.41
35:HA:1095:U:C4	35:HA:1096:C:C4	3.07	0.41
35:HA:1105:A:C2	35:HA:1106:G:C5	3.08	0.41
35:HA:1118:U:OP1	42:HI:11:ARG:NE	2.50	0.41
37:HD:132:ILE:HG22	37:HD:134:SER:H	1.83	0.41
38:HE:44:GLY:HA2	38:HE:74:VAL:HB	2.01	0.41
39:HF:61:LEU:CD2	51:HR:24:LYS:HZ3	2.32	0.41
41:HH:41:LYS:CD	41:HH:48:ASP:HB2	2.50	0.41
43:HJ:27:GLU:O	43:HJ:28:THR:CB	2.69	0.41
2:AC:254:LYS:O	2:AC:256:THR:N	2.51	0.41
3:AA:527:C:H4'	3:AA:528:A:O5'	2.21	0.41
3:AA:1301:A:H2'	3:AA:1301:A:N3	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AA:1494:A:C6	3:AA:1495:A:C5	3.08	0.41
3:AA:1591:A:H2'	3:AA:1592:C:C6	2.55	0.41
3:AA:1937:A:N7	3:AA:1939:U:H2'	2.35	0.41
3:AA:2803:G:H2'	3:AA:2804:U:H6	1.84	0.41
4:AD:35:THR:N	4:AD:49:GLN:O	2.41	0.41
4:AD:46:ARG:HH21	4:AD:86:GLU:H	1.69	0.41
10:AJ:4:PHE:CD2	10:AJ:44:TYR:CE2	3.08	0.41
11:AK:76:VAL:CB	16:AP:72:VAL:HG22	2.47	0.41
14:AN:79:LEU:O	14:AN:80:PHE:HB2	2.19	0.41
15:AO:49:VAL:HG12	15:AO:50:ALA:N	2.35	0.41
35:BA:382:A:H2'	35:BA:383:A:C8	2.56	0.41
38:BE:44:GLY:H	38:BE:76:LEU:CD1	2.32	0.41
43:BJ:15:HIS:O	43:BJ:17:LEU:N	2.50	0.41
43:BJ:59:LYS:HG3	43:BJ:60:ASP:OD1	2.20	0.41
45:BL:3:THR:O	45:BL:6:GLN:N	2.54	0.41
3:CA:3:U:H2'	3:CA:4:U:O4'	2.20	0.41
3:CA:178:G:C6	3:CA:179:C:C5	3.08	0.41
3:CA:282:A:H2'	3:CA:283:G:C8	2.55	0.41
3:CA:323:C:H2'	5:CE:163:ASN:ND2	2.35	0.41
3:CA:638:G:C6	3:CA:651:G:C2	3.09	0.41
3:CA:807:U:C2	3:CA:808:G:C8	3.09	0.41
3:CA:2109:U:H2'	3:CA:2110:G:C5'	2.50	0.41
3:CA:2209:G:N3	3:CA:2216:G:N2	2.68	0.41
3:CA:2469:A:C2	3:CA:2482:A:H1'	2.55	0.41
6:CF:151:LEU:CD1	6:CF:153:ILE:HG23	2.50	0.41
8:CH:13:GLY:O	35:HA:1294:G:O2'	2.20	0.41
9:CI:14:ALA:CB	9:CI:45:THR:HG22	2.50	0.41
10:CJ:105:VAL:HG11	10:CJ:122:LEU:HD21	2.02	0.41
12:CL:23:ILE:HD12	18:CR:84:ARG:CZ	2.50	0.41
17:CQ:81:GLY:HA2	17:CQ:116:LEU:HD12	2.02	0.41
17:CQ:81:GLY:CA	17:CQ:116:LEU:CD1	2.99	0.41
17:CQ:91:ARG:NH2	17:CQ:93:ILE:HG21	2.35	0.41
18:CR:5:PHE:HA	18:CR:39:LEU:HG	2.02	0.41
22:CV:51:GLN:NE2	22:CV:57:TYR:OH	2.53	0.41
24:CX:34:SER:HA	24:CX:48:LEU:O	2.20	0.41
32:C5:100:ALA:HA	32:C5:113:PHE:CE2	2.55	0.41
35:DA:292:G:N7	35:DA:293:G:H1'	2.36	0.41
35:DA:750:C:C2	35:DA:751:U:H5	2.39	0.41
35:DA:811:C:C5	35:DA:812:G:C6	3.08	0.41
35:DA:1340:A:H2'	35:DA:1341:U:O4'	2.21	0.41
34:DB:100:LEU:HD21	34:DB:180:ILE:HD12	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:DC:26:THR:HG22	47:DN:76:LYS:CE	2.50	0.41
38:DE:81:LEU:HD23	38:DE:123:VAL:CG1	2.50	0.41
43:DJ:74:VAL:O	43:DJ:75:ASP:HB3	2.21	0.41
54:DU:53:VAL:HG13	54:DU:54:LYS:N	2.35	0.41
55:DV:51:ASP:HB3	55:DV:56:GLU:HG3	2.01	0.41
3:EA:27:G:C4	3:EA:512:G:N2	2.89	0.41
3:EA:62:U:O2	3:EA:62:U:H2'	2.19	0.41
3:EA:479:A:H4'	3:EA:480:A:OP1	2.21	0.41
3:EA:611:C:H2'	3:EA:612:G:O4'	2.20	0.41
3:EA:738:G:C2	3:EA:759:G:C5	3.08	0.41
3:EA:855:G:N3	23:EW:23:LYS:HD2	2.35	0.41
3:EA:861:A:C2	3:EA:917:A:C4	3.08	0.41
3:EA:1119:U:OP1	22:EV:83:LYS:NZ	2.38	0.41
3:EA:1270:C:N4	3:EA:1648:U:O4	2.54	0.41
3:EA:2619:C:O2'	3:EA:2620:C:H5'	2.20	0.41
3:EA:2660:A:H5'	55:FV:675:LYS:HG3	2.02	0.41
2:EC:93:VAL:O	2:EC:94:LEU:HB3	2.20	0.41
4:ED:121:THR:O	4:ED:122:VAL:CB	2.68	0.41
7:EG:83:THR:HA	7:EG:84:LYS:NZ	2.35	0.41
10:EJ:38:GLY:O	10:EJ:43:GLU:HB2	2.20	0.41
12:EL:61:LEU:O	30:E3:12:ARG:HD3	2.20	0.41
19:ES:59:GLU:HA	19:ES:64:ALA:HB2	2.02	0.41
24:EX:48:LEU:HB3	24:EX:50:VAL:HG23	2.02	0.41
24:EX:68:ALA:C	24:EX:69:GLU:O	2.54	0.41
32:E5:44:ALA:HB1	32:E5:52:MET:HB2	2.02	0.41
35:FA:495:A:C2	35:FA:496:A:N6	2.89	0.41
35:FA:895:G:C5	35:FA:896:C:C5	3.08	0.41
35:FA:955:U:H2'	35:FA:956:U:O4'	2.20	0.41
35:FA:1009:U:H3	35:FA:1020:G:H1	1.67	0.41
35:FA:1412:C:H2'	35:FA:1413:A:C8	2.55	0.41
35:FA:1461:G:H2'	35:FA:1462:C:O4'	2.20	0.41
34:FB:49:PHE:HB2	34:FB:212:TYR:OH	2.21	0.41
42:FI:34:SER:HB3	42:FI:37:GLN:HG2	2.00	0.41
46:FM:14:HIS:ND1	46:FM:42:ASP:O	2.53	0.41
50:FQ:17:MET:HB3	50:FQ:20:SER:HB3	2.03	0.41
52:FS:36:ARG:HB3	52:FS:72:GLY:HA2	2.01	0.41
55:FV:317:PHE:HA	55:FV:341:GLY:HA3	2.02	0.41
3:GA:15:G:C6	3:GA:16:C:C4	3.08	0.41
3:GA:80:G:O2'	3:GA:294:A:N1	2.43	0.41
3:GA:849:A:C2	3:GA:930:G:N2	2.88	0.41
3:GA:878:A:H3'	3:GA:879:G:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:GA:1252:G:N3	17:GQ:32:ARG:HG2	2.35	0.41
3:GA:1663:G:N1	3:GA:1998:A:C6	2.88	0.41
3:GA:1851:U:C2	3:GA:1852:U:C5	3.08	0.41
3:GA:2097:A:C2	3:GA:2098:U:C2	3.09	0.41
3:GA:2209:G:C6	3:GA:2216:G:N1	2.89	0.41
3:GA:2273:A:H2'	3:GA:2274:A:C8	2.55	0.41
3:GA:2335:A:OP1	15:GO:13:ARG:HD2	2.21	0.41
3:GA:2469:A:C8	3:GA:2482:A:N6	2.89	0.41
3:GA:2535:G:C4	3:GA:2536:G:C8	3.09	0.41
4:GD:68:PHE:CZ	4:GD:79:LEU:HD11	2.56	0.41
9:GI:96:LYS:CG	9:GI:135:MET:HG2	2.50	0.41
9:GI:104:GLN:O	9:GI:105:LEU:HB2	2.19	0.41
12:GL:111:ILE:N	12:GL:111:ILE:HD12	2.35	0.41
17:GQ:12:ARG:O	17:GQ:15:LYS:HB3	2.20	0.41
22:GV:21:ARG:NH2	22:GV:87:GLN:O	2.47	0.41
24:GX:32:LEU:O	24:GX:33:HIS:ND1	2.52	0.41
29:G2:1:MET:CG	29:G2:2:LYS:N	2.84	0.41
35:HA:851:G:C5	35:HA:852:G:N7	2.88	0.41
35:HA:1001:C:N3	35:HA:1002:G:N7	2.68	0.41
35:HA:1167:A:H3'	35:HA:1169:A:N7	2.34	0.41
37:HD:58:LYS:HA	37:HD:200:ILE:CD1	2.50	0.41
51:HR:40:VAL:CG1	51:HR:41:PRO:HD2	2.50	0.41
51:HR:40:VAL:HG13	51:HR:41:PRO:HD2	2.02	0.41
55:HV:614:GLU:O	55:HV:687:TYR:HA	2.19	0.41
2:AC:143:VAL:HB	2:AC:153:LEU:HB2	2.02	0.41
3:AA:301:G:H2'	3:AA:334:C:H2'	2.01	0.41
3:AA:1309:G:OP1	29:A2:9:VAL:HG13	2.21	0.41
3:AA:1394:U:OP1	60:AA:3404:HOH:O	2.22	0.41
3:AA:1945:G:C6	3:AA:1946:U:C4	3.09	0.41
3:AA:2409:G:H2'	3:AA:2410:G:O4'	2.20	0.41
6:AF:148:VAL:HG23	6:AF:149:ARG:N	2.36	0.41
13:AM:53:MET:CE	13:AM:63:ILE:HG21	2.50	0.41
17:AQ:63:ARG:HH12	17:AQ:96:ASP:HA	1.86	0.41
32:A5:57:ASN:C	32:A5:59:LEU:N	2.74	0.41
32:A5:59:LEU:HD23	32:A5:62:ARG:HE	1.85	0.41
34:BB:170:ILE:H	34:BB:170:ILE:HD13	1.85	0.41
35:BA:978:A:O2'	35:BA:1322:C:H5	2.03	0.41
35:BA:1132:C:N4	35:BA:1142:G:O6	2.53	0.41
37:BD:24:GLY:HA2	37:BD:109:ALA:HB1	2.01	0.41
41:BH:111:MET:HE2	41:BH:115:ALA:C	2.40	0.41
50:BQ:5:ILE:HD12	50:BQ:5:ILE:N	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:BV:124:GLU:OE2	55:BV:677:ARG:NH1	2.54	0.41
3:CA:163:C:HO2'	3:CA:164:C:C5'	2.31	0.41
3:CA:892:A:H2'	3:CA:893:C:C6	2.55	0.41
3:CA:952:G:H2'	3:CA:953:G:O5'	2.19	0.41
3:CA:1378:A:C4	3:CA:1380:G:C8	3.09	0.41
3:CA:2017:U:H5"	3:CA:2018:G:P	2.60	0.41
3:CA:2392:A:C8	3:CA:2429:G:C2	3.08	0.41
3:CA:2751:G:H2'	3:CA:2751:G:N3	2.36	0.41
4:CD:101:PHE:CE2	4:CD:203:VAL:CG2	3.04	0.41
18:CR:64:VAL:O	18:CR:65:ALA:CB	2.69	0.41
21:CU:94:PHE:HA	21:CU:101:THR:HA	2.03	0.41
22:CV:70:ILE:O	22:CV:71:LYS:HB3	2.20	0.41
23:CW:17:ALA:HA	23:CW:35:ILE:HG23	2.01	0.41
35:DA:10:A:OP2	38:DE:131:THR:OG1	2.21	0.41
35:DA:257:G:N1	35:DA:258:G:C5	2.88	0.41
35:DA:369:G:C5	35:DA:393:A:C2	3.08	0.41
35:DA:625:U:H4'	49:DP:16:PHE:CE2	2.55	0.41
35:DA:650:G:C5	35:DA:651:C:C5	3.09	0.41
35:DA:728:A:C6	35:DA:729:A:C6	3.08	0.41
35:DA:1053:G:N7	35:DA:1199:U:H3'	2.36	0.41
35:DA:1239:A:H4'	35:DA:1240:U:H5"	2.02	0.41
35:DA:1511:G:C6	35:DA:1512:U:C4	3.08	0.41
36:DC:139:GLN:O	36:DC:143:ARG:N	2.51	0.41
43:DJ:53:ILE:HG13	47:DN:85:ARG:CD	2.50	0.41
44:DK:43:GLY:HA3	44:DK:74:VAL:CG1	2.51	0.41
44:DK:82:LEU:N	44:DK:82:LEU:HD23	2.35	0.41
55:DV:218:TRP:CD1	55:DV:218:TRP:N	2.88	0.41
55:DV:453:SER:O	55:DV:455:GLN:N	2.53	0.41
3:EA:566:U:H2'	3:EA:567:U:O4'	2.20	0.41
3:EA:817:C:H2'	3:EA:818:G:O4'	2.20	0.41
3:EA:855:G:N2	23:EW:23:LYS:HD2	2.35	0.41
3:EA:1150:C:C2'	3:EA:1151:A:O5'	2.68	0.41
3:EA:1179:G:N1	3:EA:1180:U:C4	2.88	0.41
3:EA:1655:A:H2'	3:EA:1656:C:O4'	2.21	0.41
3:EA:1732:C:C3'	3:EA:1733:G:H5'	2.51	0.41
3:EA:2031:A:N3	3:EA:2455:G:O2'	2.45	0.41
3:EA:2287:A:C8	3:EA:2289:G:C8	3.08	0.41
4:ED:121:THR:HB	4:ED:127:PHE:CD2	2.55	0.41
6:EF:34:THR:HG22	6:EF:89:THR:HA	2.02	0.41
9:EI:42:ASN:HA	9:EI:45:THR:HB	2.02	0.41
9:EI:120:ASP:HB3	9:EI:123:ALA:CB	2.49	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:EJ:130:HIS:ND1	10:EJ:130:HIS:O	2.53	0.41
18:ER:48:LYS:H	18:ER:48:LYS:CD	2.34	0.41
20:ET:24:MET:HG3	20:ET:29:THR:CG2	2.50	0.41
21:EU:73:ASN:O	21:EU:74:ALA:HB3	2.20	0.41
24:EX:76:LYS:HG3	24:EX:77:TYR:H	1.84	0.41
27:E0:32:THR:HG22	27:E0:33:SER:N	2.34	0.41
32:E5:9:GLN:NE2	32:E5:13:ALA:HB2	2.36	0.41
32:E5:40:GLU:O	32:E5:40:GLU:CG	2.68	0.41
35:FA:62:U:OP1	35:FA:385:C:O2'	2.25	0.41
35:FA:66:A:C2	35:FA:67:C:C6	3.08	0.41
35:FA:131:A:O2'	35:FA:262:A:N3	2.45	0.41
35:FA:327:A:O2'	35:FA:328:C:O4'	2.28	0.41
35:FA:1004:A:H2'	35:FA:1005:A:O4'	2.21	0.41
37:FD:75:TYR:OH	37:FD:97:ARG:NH1	2.53	0.41
38:FE:159:LYS:HZ1	41:FH:64:LYS:HE2	1.85	0.41
46:FM:91:HIS:HA	46:FM:109:ARG:HH22	1.84	0.41
54:FU:39:GLU:O	54:FU:43:THR:HG22	2.20	0.41
55:FV:75:MET:SD	55:FV:202:PHE:CZ	3.13	0.41
55:FV:602:LYS:O	55:FV:604:GLY:N	2.51	0.41
3:GA:27:G:HO2'	3:GA:28:A:P	2.41	0.41
3:GA:83:A:H5"	3:GA:84:A:OP1	2.20	0.41
3:GA:247:G:N2	3:GA:252:G:C5	2.88	0.41
3:GA:571:U:O4	3:GA:2030:A:N1	2.53	0.41
3:GA:1002:G:H2'	3:GA:1003:G:O4'	2.20	0.41
3:GA:1010:A:H5'	17:GQ:61:ILE:HG22	2.02	0.41
3:GA:1570:A:H2'	3:GA:1571:A:C8	2.55	0.41
3:GA:2054:A:H2'	27:G0:4:GLN:OE1	2.19	0.41
3:GA:2207:C:C2	3:GA:2218:G:C2	3.08	0.41
3:GA:2643:G:C6	3:GA:2644:G:C4	3.09	0.41
2:GC:16:VAL:H	2:GC:203:VAL:HG12	1.84	0.41
5:GE:52:VAL:HG12	5:GE:53:THR:N	2.35	0.41
5:GE:82:GLY:N	60:GE:301:HOH:O	2.52	0.41
5:GE:187:VAL:O	5:GE:188:MET:CB	2.68	0.41
13:GM:96:ILE:HD13	13:GM:102:LEU:CD1	2.51	0.41
20:GT:29:THR:CA	20:GT:86:THR:HA	2.50	0.41
20:GT:69:ARG:O	20:GT:74:ILE:HD12	2.20	0.41
21:GU:21:ARG:CZ	21:GU:72:PHE:CE2	3.04	0.41
35:HA:66:A:H4'	35:HA:173:U:C5	2.56	0.41
35:HA:673:A:C2	35:HA:734:G:C2	3.08	0.41
35:HA:717:U:H2'	35:HA:734:G:C8	2.56	0.41
35:HA:749:A:H2	48:HO:22:THR:CG2	2.33	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:HA:1124:G:H3'	35:HA:1145:A:H61	1.85	0.41
35:HA:1377:A:C6	40:HG:7:ILE:HD11	2.55	0.41
37:HD:98:LEU:HD23	37:HD:102:VAL:HG23	2.01	0.41
43:HJ:35:GLN:HG2	43:HJ:37:ARG:NE	2.36	0.41
44:HK:128:ARG:HD2	54:HU:35:ARG:HG3	2.03	0.41
45:HL:63:VAL:HG22	45:HL:64:THR:N	2.35	0.41
45:HL:83:ARG:HG2	45:HL:83:ARG:HH11	1.85	0.41
46:HM:96:PRO:HD3	46:HM:102:THR:HG21	2.02	0.41
55:HV:252:LEU:HD13	55:HV:285:TYR:CE2	2.55	0.41
55:HV:526:GLU:N	55:HV:526:GLU:OE1	2.53	0.41
2:AC:77:VAL:HG23	2:AC:77:VAL:O	2.20	0.41
2:AC:184:GLU:O	2:AC:185:ALA:HB3	2.20	0.41
3:AA:75:G:H4'	25:AY:48:ARG:NH2	2.35	0.41
3:AA:1020:A:C2	3:AA:1141:U:C2	3.09	0.41
3:AA:1579:A:H2'	3:AA:1580:A:C8	2.56	0.41
3:AA:2685:G:H1	3:AA:2724:U:H3	1.68	0.41
10:AJ:88:THR:HG22	10:AJ:91:GLU:CG	2.49	0.41
11:AK:13:ASN:O	11:AK:14:SER:CB	2.67	0.41
16:AP:50:ARG:HB2	16:AP:51:ASN:H	1.53	0.41
27:A0:12:ARG:HD2	27:A0:16:ARG:NH2	2.36	0.41
32:A5:131:THR:HA	32:A5:134:GLU:CG	2.50	0.41
32:A5:142:THR:OG1	32:A5:143:MET:N	2.52	0.41
35:BA:270:A:H2'	35:BA:271:C:C6	2.56	0.41
35:BA:363:A:OP1	45:BL:58:THR:HG21	2.20	0.41
35:BA:441:A:H5"	35:BA:442:G:OP2	2.20	0.41
35:BA:958:A:C6	35:BA:959:A:N1	2.88	0.41
35:BA:1163:A:C2	35:BA:1174:G:C2	3.08	0.41
35:BA:1372:U:C4	35:BA:1373:G:C4	3.09	0.41
35:BA:1397:C:HO2'	35:BA:1398:A:P	2.39	0.41
36:BC:167:TRP:CE3	36:BC:167:TRP:O	2.73	0.41
37:BD:174:ASP:O	37:BD:175:ALA:HB2	2.20	0.41
38:BE:111:MET:HE3	38:BE:125:ALA:HB1	2.02	0.41
45:BL:40:THR:OG1	45:BL:41:THR:N	2.51	0.41
54:BU:25:LYS:CG	54:BU:26:ALA:H	2.33	0.41
55:BV:519:VAL:N	55:BV:580:PHE:O	2.53	0.41
1:CB:37:C:C5	1:CB:38:C:C4	3.08	0.41
3:CA:272:A:HO2'	3:CA:273:G:H8	1.64	0.41
3:CA:323:C:C4	3:CA:333:G:C8	3.08	0.41
3:CA:415:A:C2	3:CA:2409:G:C2	3.09	0.41
3:CA:443:A:N6	5:CE:40:ARG:HD3	2.36	0.41
3:CA:956:G:O6	13:CM:14:LYS:NZ	2.52	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CA:1410:G:N7	60:CA:3609:HOH:O	2.37	0.41
3:CA:1641:A:C8	3:CA:1642:G:C8	3.09	0.41
3:CA:1798:U:OP1	2:CC:257:ARG:HB2	2.20	0.41
3:CA:1972:G:H2'	3:CA:1973:G:H8	1.85	0.41
3:CA:2199:A:H2'	3:CA:2199:A:N3	2.36	0.41
2:CC:255:LYS:O	2:CC:257:ARG:N	2.54	0.41
6:CF:37:MET:HE3	6:CF:151:LEU:HD23	2.03	0.41
6:CF:166:ARG:O	6:CF:170:ALA:N	2.52	0.41
10:CJ:4:PHE:CD1	10:CJ:5:THR:N	2.88	0.41
10:CJ:38:GLY:HA2	10:CJ:51:GLY:HA2	2.03	0.41
12:CL:57:LEU:C	12:CL:59:ARG:H	2.24	0.41
13:CM:1:MET:O	13:CM:2:LEU:HB2	2.21	0.41
35:DA:960:U:C4	35:DA:1225:A:C8	3.08	0.41
35:DA:990:C:N4	35:DA:991:U:O4	2.54	0.41
35:DA:1332:A:C8	35:DA:1333:A:C8	3.08	0.41
34:DB:14:HIS:CE1	34:DB:40:ILE:HD11	2.54	0.41
34:DB:207:ARG:HG3	34:DB:208:ALA:N	2.36	0.41
37:DD:151:LYS:HA	37:DD:178:MET:HE1	2.02	0.41
39:DF:18:VAL:HG21	39:DF:58:HIS:CD2	2.55	0.41
41:DH:24:ALA:HA	41:DH:63:LEU:CD2	2.50	0.41
41:DH:41:LYS:CD	41:DH:47:GLU:O	2.68	0.41
55:DV:23:LYS:NZ	59:DV:801:GCP:O1B	2.47	0.41
3:EA:962:G:C5	3:EA:963:U:C5	3.08	0.41
3:EA:1220:G:H2'	3:EA:1221:C:O4'	2.20	0.41
3:EA:1316:U:H2'	3:EA:1317:G:H8	1.86	0.41
3:EA:2019:A:H4'	17:EQ:33:VAL:HG21	2.01	0.41
3:EA:2705:A:H2'	3:EA:2706:A:O4'	2.21	0.41
4:ED:193:VAL:HG21	4:ED:201:LEU:HD21	2.02	0.41
5:EE:36:ALA:O	5:EE:39:ALA:HB3	2.20	0.41
6:EF:82:TYR:CD2	6:EF:83:PRO:HD2	2.56	0.41
8:EH:31:VAL:HB	8:EH:32:PRO:HD3	2.02	0.41
9:EI:100:ILE:O	9:EI:139:VAL:HA	2.20	0.41
9:EI:123:ALA:HA	9:EI:126:ARG:HH12	1.85	0.41
16:EP:13:LYS:HZ2	16:EP:80:VAL:HG12	1.84	0.41
16:EP:24:THR:HA	16:EP:45:VAL:HA	2.01	0.41
16:EP:80:VAL:CG1	16:EP:81:ASP:N	2.82	0.41
23:EW:46:ALA:O	23:EW:50:VAL:HG22	2.20	0.41
23:EW:65:LYS:HG3	23:EW:84:GLU:HB3	2.01	0.41
35:FA:175:C:H2'	35:FA:176:C:C6	2.56	0.41
35:FA:736:C:H2'	35:FA:737:C:C6	2.55	0.41
34:FB:116:LEU:HB3	34:FB:140:LEU:HD21	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:FB:222:GLU:OE1	34:FB:225:SER:HA	2.21	0.41
37:FD:106:GLY:HA3	37:FD:162:ALA:CB	2.50	0.41
37:FD:106:GLY:HA3	37:FD:162:ALA:HB1	2.02	0.41
44:FK:110:ILE:HB	54:FU:6:VAL:CG2	2.50	0.41
45:FL:65:SER:OG	45:FL:97:THR:HG23	2.21	0.41
46:FM:54:ASP:HA	46:FM:57:ARG:CB	2.50	0.41
48:FO:17:ARG:CZ	48:FO:17:ARG:HB2	2.50	0.41
49:FP:2:VAL:HG22	49:FP:65:ALA:HA	2.03	0.41
54:FU:10:GLU:N	54:FU:11:PRO:CD	2.83	0.41
54:FU:20:LYS:CE	54:FU:20:LYS:HA	2.51	0.41
55:FV:15:ILE:HG22	55:FV:23:LYS:HG3	2.02	0.41
3:GA:263:G:N2	3:GA:264:C:H1'	2.36	0.41
3:GA:648:G:H2'	3:GA:649:G:H8	1.86	0.41
3:GA:977:G:N3	3:GA:1001:A:H2	2.17	0.41
3:GA:1419:A:C5	3:GA:1421:G:C4	3.08	0.41
3:GA:1448:G:HO2'	3:GA:1528:A:H2	1.65	0.41
3:GA:1965:C:C4	3:GA:1966:A:C5	3.08	0.41
3:GA:2145:C:C6	3:GA:2148:G:C8	3.08	0.41
3:GA:2307:G:C2	3:GA:2311:A:H2'	2.55	0.41
3:GA:2308:G:C8	6:GF:76:PHE:HE1	2.39	0.41
2:GC:93:VAL:CG1	2:GC:94:LEU:N	2.84	0.41
2:GC:265:PHE:N	2:GC:265:PHE:CD1	2.89	0.41
7:GG:176:LYS:H	55:HV:673:LEU:HD23	1.85	0.41
9:GI:133:ARG:O	9:GI:133:ARG:HG2	2.20	0.41
11:GK:5:GLN:O	11:GK:6:THR:HB	2.20	0.41
13:GM:72:PRO:HA	13:GM:92:TRP:CZ3	2.55	0.41
14:GN:38:LEU:HB3	14:GN:39:PRO:HD3	2.03	0.41
18:GR:64:VAL:O	18:GR:65:ALA:HB3	2.21	0.41
20:GT:55:VAL:HG22	20:GT:87:LEU:CD2	2.51	0.41
22:GV:60:VAL:O	22:GV:61:LEU:HD13	2.20	0.41
23:GW:60:ALA:HB2	23:GW:81:ILE:HD12	2.02	0.41
35:HA:327:A:O2'	35:HA:328:C:O4'	2.30	0.41
35:HA:412:A:H2	35:HA:413:G:N7	2.19	0.41
35:HA:673:A:C4	35:HA:734:G:N2	2.88	0.41
35:HA:697:U:C2'	35:HA:698:G:H5'	2.51	0.41
35:HA:707:U:H4'	44:HK:22:HIS:CD2	2.56	0.41
35:HA:844:G:H2'	35:HA:845:A:H5"	2.02	0.41
35:HA:858:G:O2'	35:HA:859:G:H5'	2.20	0.41
35:HA:982:U:H4'	35:HA:983:A:O5'	2.21	0.41
35:HA:994:A:N1	35:HA:1047:G:H4'	2.35	0.41
35:HA:1415:G:C6	35:HA:1486:G:C6	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:HA:1423:G:C6	35:HA:1424:U:C4	3.09	0.41
35:HA:1430:A:C2	35:HA:1471:U:C2	3.08	0.41
34:HB:14:HIS:O	34:HB:16:GLY:N	2.54	0.41
37:HD:91:LEU:HA	37:HD:94:LEU:HD12	2.02	0.41
44:HK:22:HIS:HD2	44:HK:35:THR:HG21	1.85	0.41
50:HQ:21:ILE:HG23	50:HQ:46:VAL:HB	2.03	0.41
55:HV:315:GLU:HB3	55:HV:316:PRO:HD2	2.03	0.41
55:HV:350:LEU:HD12	55:HV:351:ASN:N	2.36	0.41
2:AC:250:GLN:NE2	3:AA:1843:C:H5'	2.36	0.41
3:AA:138:U:H5'	3:AA:139:U:C5'	2.51	0.41
3:AA:179:C:C2	3:AA:180:G:C8	3.08	0.41
3:AA:307:G:N2	3:AA:310:A:C8	2.89	0.41
3:AA:528:A:H2	3:AA:2043:C:C5'	2.34	0.41
3:AA:749:A:C5	3:AA:1618:A:C2	3.09	0.41
3:AA:1096:A:N6	3:AA:1097:U:C4	2.89	0.41
3:AA:1338:G:O2'	3:AA:1393:A:N1	2.44	0.41
3:AA:1392:A:C6	3:AA:1393:A:C6	3.09	0.41
3:AA:1403:A:C2	3:AA:1404:C:C2	3.09	0.41
3:AA:1817:G:C2'	3:AA:1818:U:H5'	2.51	0.41
3:AA:2180:U:N3	3:AA:2181:U:C5	2.89	0.41
3:AA:2576:G:N3	3:AA:2576:G:H3'	2.35	0.41
4:AD:88:GLU:O	4:AD:89:GLU:HG3	2.21	0.41
6:AF:151:LEU:CD1	6:AF:153:ILE:HG23	2.51	0.41
10:AJ:64:VAL:HG13	10:AJ:65:THR:N	2.35	0.41
12:AL:29:LYS:HG2	12:AL:30:THR:N	2.36	0.41
14:AN:51:LEU:HD21	14:AN:70:THR:CG2	2.51	0.41
16:AP:58:PHE:HD1	16:AP:75:THR:HG22	1.83	0.41
16:AP:88:ARG:HH12	16:AP:113:LEU:HA	1.86	0.41
19:AS:63:GLY:O	19:AS:64:ALA:HB3	2.21	0.41
25:AY:2:LYS:HD2	25:AY:2:LYS:N	2.36	0.41
32:A5:129:LEU:C	32:A5:131:THR:N	2.73	0.41
32:A5:132:TYR:HE1	33:A6:19:VAL:HG13	1.85	0.41
33:A6:7:ILE:HA	33:A6:10:ALA:HB3	2.02	0.41
35:BA:383:A:C5	35:BA:384:G:H1'	2.56	0.41
35:BA:557:G:C6	35:BA:558:G:C6	3.08	0.41
35:BA:921:U:H2'	35:BA:922:G:O4'	2.21	0.41
35:BA:1348:U:H4'	42:BI:122:ARG:HG3	2.03	0.41
36:BC:123:GLN:HB3	36:BC:128:VAL:CG1	2.51	0.41
38:BE:156:LYS:HA	38:BE:159:LYS:NZ	2.35	0.41
39:BF:97:THR:O	39:BF:98:GLU:CB	2.69	0.41
42:BI:36:GLU:HA	42:BI:40:GLY:HA3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BJ:57:VAL:CG1	43:BJ:58:ASN:H	2.33	0.41
45:BL:33:VAL:HG21	55:BV:429:GLU:CG	2.51	0.41
55:BV:414:PRO:HA	55:BV:461:MET:SD	2.61	0.41
3:CA:324:A:N6	3:CA:338:G:O2'	2.44	0.41
3:CA:1607:C:H4'	3:CA:1608:A:O5'	2.20	0.41
3:CA:1707:G:C6	3:CA:1708:C:N3	2.88	0.41
3:CA:2354:C:H4'	23:CW:31:LEU:HD22	2.01	0.41
3:CA:2675:A:C6	3:CA:2676:C:C4	3.08	0.41
3:CA:2820:A:OP1	14:CN:2:ARG:NH2	2.54	0.41
4:CD:29:VAL:HB	4:CD:98:VAL:HG22	2.03	0.41
4:CD:86:GLU:N	4:CD:86:GLU:CD	2.72	0.41
10:CJ:32:LEU:O	10:CJ:36:LEU:HB2	2.21	0.41
10:CJ:105:VAL:HG11	10:CJ:122:LEU:CD2	2.51	0.41
35:DA:181:A:N6	35:DA:195:A:C8	2.88	0.41
35:DA:411:A:C5	35:DA:429:U:C5	3.09	0.41
35:DA:745:G:H1'	35:DA:836:G:O2'	2.21	0.41
35:DA:1103:C:C4	35:DA:1104:G:N7	2.88	0.41
35:DA:1227:A:OP2	46:DM:110:LYS:HE2	2.20	0.41
37:DD:26:ARG:HD3	37:DD:31:LYS:HE2	2.02	0.41
37:DD:38:PRO:HD2	37:DD:42:GLY:CA	2.50	0.41
38:DE:101:GLU:OE1	38:DE:122:ASN:HB3	2.19	0.41
41:DH:126:ILE:HD12	41:DH:126:ILE:N	2.36	0.41
53:DT:48:GLN:HG2	53:DT:83:ILE:HD11	2.02	0.41
55:DV:298:ILE:HG21	55:DV:303:LYS:HZ3	1.86	0.41
55:DV:342:VAL:HG13	55:DV:378:ARG:CD	2.51	0.41
3:EA:272:A:O2'	3:EA:273:G:P	2.79	0.41
3:EA:517:C:O2'	19:ES:18:ARG:NH2	2.53	0.41
3:EA:1714:U:H5"	3:EA:1715:G:H5"	2.02	0.41
3:EA:2297:A:N1	3:EA:2321:U:C5	2.88	0.41
3:EA:2602:A:H4'	3:EA:2603:G:OP2	2.19	0.41
1:EB:13:G:H1	1:EB:69:G:HO2'	1.67	0.41
4:ED:120:GLY:HA2	4:ED:162:ALA:HA	2.02	0.41
5:EE:187:VAL:HG12	5:EE:188:MET:N	2.35	0.41
9:EI:77:VAL:C	9:EI:79:LEU:H	2.23	0.41
10:EJ:16:TYR:HB3	10:EJ:140:LEU:HD12	2.02	0.41
10:EJ:114:LEU:O	10:EJ:118:MET:HG3	2.21	0.41
16:EP:31:VAL:O	16:EP:31:VAL:CG2	2.68	0.41
18:ER:68:ARG:HD3	18:ER:92:TRP:CZ2	2.55	0.41
28:E1:32:LYS:HA	28:E1:51:ALA:HB3	2.02	0.41
32:E5:107:GLU:O	32:E5:108:VAL:HB	2.21	0.41
32:E5:125:ARG:HA	32:E5:125:ARG:NH1	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:FA:57:G:C5	35:FA:58:C:C4	3.08	0.41
35:FA:111:G:C6	35:FA:330:C:N4	2.88	0.41
35:FA:212:G:H2'	35:FA:213:G:H8	1.85	0.41
35:FA:299:G:C6	35:FA:300:A:C6	3.08	0.41
35:FA:354:G:C2	35:FA:355:C:C5	3.08	0.41
35:FA:712:A:H2'	35:FA:713:G:O4'	2.20	0.41
35:FA:911:U:H2'	35:FA:912:C:C6	2.55	0.41
35:FA:1113:C:H4'	36:FC:14:ILE:HG21	2.02	0.41
36:FC:56:VAL:HG12	36:FC:57:ILE:N	2.36	0.41
37:FD:81:ARG:NH2	37:FD:82:LEU:HD21	2.36	0.41
49:FP:39:PHE:CG	49:FP:74:LEU:HD11	2.55	0.41
52:FS:49:ILE:HD11	52:FS:62:VAL:CG2	2.50	0.41
55:FV:8:ALA:O	55:FV:288:SER:OG	2.32	0.41
55:FV:155:VAL:HG11	55:FV:168:PRO:HG3	2.02	0.41
1:GB:89:U:H3'	1:GB:90:C:C5'	2.49	0.41
3:GA:126:A:O5'	29:G2:19:ARG:HG3	2.20	0.41
3:GA:821:A:C6	3:GA:946:C:C2	3.08	0.41
3:GA:864:G:H2'	3:GA:865:C:C6	2.55	0.41
3:GA:1178:C:C2	3:GA:1179:G:N7	2.89	0.41
3:GA:1315:C:C2	3:GA:1316:U:C5	3.08	0.41
3:GA:2135:A:H62	3:GA:2156:G:C1'	2.34	0.41
3:GA:2332:C:C5'	3:GA:2336:A:N6	2.84	0.41
3:GA:2737:G:C6	3:GA:2738:A:C6	3.08	0.41
3:GA:2741:A:O3'	31:G4:36:ARG:NH1	2.54	0.41
2:GC:140:VAL:HG21	2:GC:163:ILE:HG13	2.03	0.41
4:GD:121:THR:O	4:GD:122:VAL:CB	2.69	0.41
9:GI:3:LYS:HG3	9:GI:4:VAL:N	2.35	0.41
17:GQ:91:ARG:HB3	17:GQ:94:LEU:H	1.85	0.41
19:GS:18:ARG:CG	19:GS:76:VAL:CG2	2.98	0.41
24:GX:69:GLU:HA	24:GX:72:ALA:HB3	2.03	0.41
35:HA:664:G:P	51:HR:53:ARG:HE	2.42	0.41
35:HA:671:G:C2	35:HA:736:C:C2	3.09	0.41
35:HA:815:A:H4'	35:HA:817:C:C4	2.56	0.41
35:HA:1005:A:OP2	35:HA:1024:G:N2	2.53	0.41
35:HA:1113:C:H4'	36:HC:14:ILE:HG21	2.03	0.41
35:HA:1233:G:H21	35:HA:1364:U:H6	1.69	0.41
35:HA:1298:U:H4'	35:HA:1299:A:H5'	2.03	0.41
35:HA:1435:G:H2'	35:HA:1436:U:C6	2.55	0.41
37:HD:13:ARG:HD2	37:HD:38:PRO:HA	2.02	0.41
37:HD:54:GLN:HG2	37:HD:203:LEU:HB2	2.02	0.41
37:HD:110:THR:H	37:HD:113:GLU:HB3	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:HH:77:ARG:HD3	41:HH:78:VAL:N	2.35	0.41
42:HI:17:ALA:CB	42:HI:79:ILE:HG13	2.50	0.41
43:HJ:15:HIS:CG	43:HJ:16:ARG:N	2.88	0.41
47:HN:27:LEU:O	47:HN:31:ILE:HD13	2.20	0.41
49:HP:78:VAL:HG12	49:HP:78:VAL:O	2.21	0.41
52:HS:63:THR:CG2	52:HS:64:ASP:N	2.83	0.41
53:HT:22:ALA:O	53:HT:26:SER:N	2.51	0.41
54:HU:25:LYS:HG2	54:HU:26:ALA:H	1.86	0.41
55:HV:394:GLY:O	55:HV:408:ARG:HG3	2.21	0.41
3:AA:58:G:N2	3:AA:70:G:C4	2.89	0.41
3:AA:347:A:C2	3:AA:348:A:C4	3.09	0.41
3:AA:485:C:C2	3:AA:496:G:N2	2.88	0.41
3:AA:1069:A:C2'	3:AA:1070:A:OP2	2.68	0.41
3:AA:1674:G:N2	3:AA:1677:A:N1	2.69	0.41
3:AA:1747:U:H2'	3:AA:1748:C:H6	1.85	0.41
3:AA:2287:A:C8	3:AA:2289:G:C8	3.08	0.41
3:AA:2660:A:H5'	55:BV:675:LYS:HG3	2.02	0.41
4:AD:8:LYS:HB2	4:AD:201:LEU:HD22	2.03	0.41
5:AE:134:LEU:CD2	5:AE:161:ALA:HB2	2.51	0.41
6:AF:107:VAL:HG13	6:AF:110:ILE:HD12	2.02	0.41
6:AF:112:ASP:N	6:AF:112:ASP:OD1	2.54	0.41
10:AJ:43:GLU:O	10:AJ:44:TYR:C	2.58	0.41
12:AL:77:ILE:HD13	12:AL:108:ALA:HB1	2.02	0.41
14:AN:87:PHE:O	14:AN:89:SER:N	2.54	0.41
32:A5:3:LEU:HD12	32:A5:5:LEU:N	2.35	0.41
35:BA:78:A:H62	35:BA:93:U:H4'	1.86	0.41
35:BA:561:U:O2'	35:BA:562:U:P	2.79	0.41
35:BA:1336:C:H4'	35:BA:1337:G:H5'	2.03	0.41
35:BA:1526:G:OP1	54:BU:39:GLU:HG3	2.21	0.41
36:BC:64:ILE:HG22	36:BC:97:VAL:HG23	2.03	0.41
40:BG:79:ARG:HA	40:BG:83:SER:O	2.20	0.41
40:BG:146:GLU:H	40:BG:149:LYS:HE2	1.86	0.41
50:BQ:61:ILE:HG22	50:BQ:75:LEU:HA	2.01	0.41
51:BR:63:ARG:HD3	51:BR:70:TYR:CD2	2.55	0.41
54:BU:20:LYS:HA	54:BU:20:LYS:CE	2.50	0.41
54:BU:34:ARG:NE	54:BU:35:ARG:HG3	2.36	0.41
3:CA:11:C:H2'	3:CA:12:U:H5'	2.03	0.41
3:CA:277:G:C2'	3:CA:278:A:OP2	2.69	0.41
3:CA:478:A:C6	3:CA:480:A:C6	3.09	0.41
3:CA:579:G:C2	3:CA:1262:A:C4	3.08	0.41
3:CA:1092:C:H2'	3:CA:1093:G:H5'	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CA:1107:G:H5”	32:C5:58:THR:HG23	2.01	0.41
3:CA:2138:G:N2	3:CA:2153:C:C5	2.88	0.41
3:CA:2194:U:O2	40:HG:52:GLN:NE2	2.53	0.41
3:CA:2682:A:C8	4:CD:11:MET:CG	3.03	0.41
7:CG:83:THR:HA	7:CG:84:LYS:NZ	2.36	0.41
9:CI:107:GLU:HA	9:CI:110:GLN:HB3	2.01	0.41
12:CL:74:THR:HG22	12:CL:107:PHE:HB2	2.03	0.41
12:CL:87:GLY:O	12:CL:89:VAL:N	2.53	0.41
14:CN:59:SER:OG	14:CN:60:VAL:N	2.53	0.41
14:CN:79:LEU:O	14:CN:80:PHE:HB2	2.21	0.41
14:CN:103:ARG:CD	14:CN:110:MET:HE3	2.51	0.41
17:CQ:91:ARG:NE	17:CQ:93:ILE:CG2	2.82	0.41
23:CW:59:PHE:N	23:CW:59:PHE:CD1	2.89	0.41
24:CX:6:VAL:HG22	24:CX:7:THR:HG23	2.03	0.41
28:C1:4:ILE:HD13	28:C1:5:ARG:H	1.85	0.41
28:C1:6:GLU:HG2	28:C1:7:LYS:N	2.36	0.41
32:C5:31:ARG:HB2	32:C5:108:VAL:HG13	2.01	0.41
35:DA:729:A:C4	35:DA:730:G:C8	3.09	0.41
45:DL:3:THR:HG22	45:DL:5:ASN:H	1.85	0.41
46:DM:4:ILE:HG22	46:DM:57:ARG:HB2	2.01	0.41
54:DU:41:PRO:O	54:DU:44:GLU:N	2.54	0.41
55:DV:10:TYR:CD1	55:DV:83:ARG:HB3	2.56	0.41
3:EA:283:G:C2	3:EA:284:U:H1’	2.56	0.41
3:EA:419:U:H2’	3:EA:420:C:C6	2.56	0.41
3:EA:856:G:C2	3:EA:857:G:C6	3.09	0.41
3:EA:923:G:O4’	23:EW:25:PHE:CE1	2.74	0.41
3:EA:1265:A:P	60:EA:3742:HOH:O	2.78	0.41
3:EA:1548:A:H2’	3:EA:1549:A:H8	1.85	0.41
3:EA:1670:C:C5	3:EA:1671:U:C4	3.09	0.41
3:EA:1807:G:H2’	3:EA:1808:A:H5’	2.01	0.41
3:EA:2037:A:H2’	3:EA:2038:G:H8	1.84	0.41
1:EB:11:C:O2’	1:EB:15:A:N6	2.53	0.41
2:EC:167:ASP:OD1	2:EC:167:ASP:N	2.47	0.41
2:EC:265:PHE:N	2:EC:265:PHE:HD1	2.19	0.41
5:EE:147:LEU:HB3	5:EE:186:VAL:HG23	2.03	0.41
5:EE:187:VAL:O	5:EE:188:MET:HB3	2.19	0.41
7:EG:79:THR:OG1	7:EG:80:GLU:N	2.53	0.41
9:EI:104:GLN:HA	9:EI:107:GLU:HB2	2.02	0.41
10:EJ:24:THR:HG23	10:EJ:27:ARG:HB2	2.01	0.41
21:EU:60:LYS:HG3	21:EU:61:GLU:H	1.84	0.41
32:E5:51:TYR:CD1	32:E5:51:TYR:C	2.93	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:E5:94:ARG:O	32:E5:95:LEU:C	2.59	0.41
35:FA:362:G:OP1	45:FL:58:THR:OG1	2.39	0.41
35:FA:425:G:C2	35:FA:426:U:C2	3.09	0.41
35:FA:474:G:N2	35:FA:475:C:H1'	2.36	0.41
35:FA:701:U:H5"	35:FA:703:G:O4'	2.21	0.41
35:FA:1127:G:H1'	35:FA:1280:A:C6	2.55	0.41
35:FA:1316:G:N2	35:FA:1318:A:H3'	2.35	0.41
41:FH:64:LYS:CB	41:FH:71:VAL:HG21	2.51	0.41
50:FQ:7:THR:OG1	50:FQ:60:GLU:HG2	2.19	0.41
54:FU:40:LYS:HA	54:FU:43:THR:CG2	2.51	0.41
55:FV:93:VAL:HG22	55:FV:94:ASP:H	1.85	0.41
3:GA:167:A:C5	3:GA:168:G:C8	3.08	0.41
3:GA:574:A:H4'	3:GA:575:A:C5'	2.51	0.41
3:GA:1435:G:N2	3:GA:1558:C:N4	2.69	0.41
3:GA:1831:G:C4	3:GA:1975:G:N2	2.89	0.41
3:GA:2107:G:C6	3:GA:2182:U:H2'	2.56	0.41
3:GA:2145:C:C5	3:GA:2147:A:H5'	2.55	0.41
3:GA:2204:G:H4'	2:GC:149:LYS:HG3	2.01	0.41
3:GA:2303:G:C2'	3:GA:2304:G:H5'	2.50	0.41
3:GA:2685:G:OP1	11:GK:78:ARG:NH2	2.52	0.41
2:GC:221:GLY:O	2:GC:224:MET:HG3	2.20	0.41
4:GD:117:GLY:C	4:GD:118:PHE:CD2	2.94	0.41
6:GF:130:GLY:HA2	6:GF:152:ASP:HB3	2.01	0.41
9:GI:85:ILE:HD11	9:GI:100:ILE:HG13	2.02	0.41
10:GJ:45:THR:CG2	10:GJ:50:THR:HG21	2.51	0.41
12:GL:56:PRO:O	12:GL:60:ARG:HG3	2.20	0.41
16:GP:30:TRP:CD2	16:GP:39:LEU:CD1	3.03	0.41
18:GR:68:ARG:HD3	18:GR:92:TRP:CZ2	2.56	0.41
35:HA:1034:G:N2	35:HA:1035:A:C5	2.88	0.41
35:HA:1057:G:O3'	36:HC:197:GLY:HA3	2.20	0.41
35:HA:1532:U:H2'	35:HA:1534:A:H5"	2.02	0.41
34:HB:40:ILE:HG21	34:HB:201:GLY:HA2	2.03	0.41
42:HI:99:ARG:HB2	42:HI:104:VAL:HG21	2.02	0.41
44:HK:50:SER:CB	44:HK:65:VAL:HG11	2.51	0.41
45:HL:24:LEU:HG	45:HL:25:GLU:N	2.36	0.41
45:HL:102:LEU:N	45:HL:102:LEU:CD1	2.83	0.41
50:HQ:12:VAL:HG13	50:HQ:21:ILE:HD11	2.02	0.41
51:HR:73:ARG:O	51:HR:74:HIS:ND1	2.53	0.41
55:HV:602:LYS:O	55:HV:603:GLU:HB3	2.21	0.41
55:HV:666:TYR:CE2	55:HV:670:LEU:HD22	2.55	0.41
3:AA:1026:G:H2'	3:AA:1027:A:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AA:1722:A:C2	3:AA:1739:A:N3	2.89	0.41
3:AA:1814:G:C6	3:AA:1815:A:C6	3.08	0.41
3:AA:2478:A:H5'	31:A4:32:LYS:CD	2.51	0.41
9:AI:19:PRO:HG2	9:AI:24:GLY:H	1.86	0.41
9:AI:20:SER:HB3	9:AI:21:PRO:HD3	2.02	0.41
9:AI:52:LEU:HB3	9:AI:53:PRO:HD2	2.03	0.41
9:AI:100:ILE:CD1	9:AI:137:LEU:HD12	2.50	0.41
9:AI:100:ILE:CG2	9:AI:101:SER:N	2.79	0.41
10:AJ:65:THR:HG22	10:AJ:68:LYS:NZ	2.36	0.41
10:AJ:88:THR:HG23	10:AJ:91:GLU:H	1.86	0.41
11:AK:15:GLY:O	11:AK:46:ALA:HA	2.20	0.41
11:AK:71:ARG:O	11:AK:72:PRO:O	2.39	0.41
14:AN:24:MET:CE	14:AN:36:THR:HG21	2.51	0.41
14:AN:99:LYS:O	27:A0:42:ILE:HD12	2.20	0.41
16:AP:50:ARG:CD	16:AP:56:SER:HB3	2.51	0.41
19:AS:69:LEU:HG	19:AS:107:VAL:HG22	2.03	0.41
19:AS:96:ILE:O	19:AS:96:ILE:HG13	2.20	0.41
27:A0:33:SER:OG	27:A0:35:GLU:HG3	2.21	0.41
32:A5:51:TYR:CD1	32:A5:52:MET:HG2	2.55	0.41
34:BB:117:GLU:HA	34:BB:120:SER:HB2	2.02	0.41
34:BB:187:ASP:HB2	34:BB:203:ASP:HB3	2.02	0.41
35:BA:171:A:H2'	35:BA:172:A:C8	2.56	0.41
35:BA:213:G:C8	35:BA:214:C:C6	3.08	0.41
35:BA:232:G:H1'	35:BA:262:A:N1	2.36	0.41
35:BA:1231:G:C6	35:BA:1232:U:C4	3.08	0.41
40:BG:46:ALA:HB3	40:BG:120:LEU:HD13	2.03	0.41
41:BH:83:LEU:CD1	41:BH:85:ILE:HD11	2.51	0.41
41:BH:112:THR:HG22	41:BH:113:ASP:N	2.36	0.41
45:BL:33:VAL:O	45:BL:34:CYS:HB3	2.19	0.41
46:BM:83:LEU:HD21	52:BS:65:GLU:HB3	2.03	0.41
55:BV:374:ILE:HG22	55:BV:376:GLU:H	1.86	0.41
3:CA:160:A:C6	3:CA:161:A:C6	3.09	0.41
3:CA:340:A:H2'	3:CA:341:C:H5'	2.02	0.41
3:CA:477:A:C6	3:CA:478:A:C6	3.09	0.41
3:CA:669:G:N3	3:CA:669:G:C2'	2.84	0.41
3:CA:789:A:OP1	3:CA:790:U:C5	2.73	0.41
3:CA:884:U:O4	3:CA:892:A:C2	2.74	0.41
3:CA:1414:C:O2	3:CA:1588:G:N2	2.44	0.41
3:CA:1479:G:N1	3:CA:1513:U:C2	2.89	0.41
3:CA:1949:G:C6	3:CA:1950:G:C6	3.09	0.41
3:CA:2093:G:C2'	3:CA:2094:A:H5'	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:CA:2564:A:C6	3:CA:2565:A:N1	2.88	0.41
5:CE:43:THR:O	5:CE:43:THR:OG1	2.37	0.41
5:CE:181:ILE:HG23	12:CL:2:ARG:HD3	2.03	0.41
6:CF:107:VAL:CG1	6:CF:116:LEU:HD21	2.51	0.41
6:CF:124:ARG:O	6:CF:126:ASN:ND2	2.54	0.41
10:CJ:140:LEU:HD22	10:CJ:141:ASP:O	2.21	0.41
11:CK:118:LEU:O	11:CK:119:ALA:HB3	2.21	0.41
32:C5:67:THR:HB	32:C5:68:PRO:HD3	2.03	0.41
35:DA:1478:U:H2'	35:DA:1479:C:H6	1.86	0.41
38:DE:111:MET:CE	38:DE:125:ALA:HB1	2.51	0.41
39:DF:97:THR:HG22	39:DF:98:GLU:H	1.85	0.41
41:DH:24:ALA:HA	41:DH:63:LEU:HD23	2.03	0.41
41:DH:126:ILE:HG22	41:DH:127:CYS:SG	2.61	0.41
45:DL:94:ARG:HB2	45:DL:95:TYR:CE1	2.56	0.41
46:DM:114:LYS:HB2	46:DM:115:PRO:CD	2.51	0.41
55:DV:230:SER:HB3	55:DV:233:LEU:HB2	2.03	0.41
3:EA:316:C:H2'	3:EA:317:G:O5'	2.21	0.41
3:EA:914:G:H5'	3:EA:915:C:OP2	2.20	0.41
3:EA:999:U:C5	3:EA:1154:G:N7	2.89	0.41
3:EA:1131:G:N2	3:EA:2024:G:H21	2.19	0.41
3:EA:1494:A:C2	3:EA:1495:A:C4	3.09	0.41
3:EA:2287:A:H2'	3:EA:2287:A:N3	2.36	0.41
3:EA:2354:C:H4'	23:EW:31:LEU:HD22	2.03	0.41
12:EL:23:ILE:HD13	18:ER:84:ARG:HG2	2.02	0.41
13:EM:35:ALA:HA	13:EM:128:THR:HG22	2.01	0.41
13:EM:50:ARG:HD3	13:EM:65:ILE:HD11	2.03	0.41
35:FA:204:G:H1'	35:FA:465:A:C2	2.55	0.41
35:FA:1105:A:C2	35:FA:1106:G:C8	3.09	0.41
35:FA:1125:U:C5	35:FA:1127:G:C5	3.08	0.41
35:FA:1305:G:H22	35:FA:1331:G:C2'	2.34	0.41
35:FA:1346:A:N1	35:FA:1374:A:H5"	2.36	0.41
34:FB:19:THR:O	34:FB:38:HIS:CD2	2.74	0.41
34:FB:103:TRP:CZ2	34:FB:107:ARG:HD3	2.56	0.41
34:FB:219:THR:O	34:FB:221:ARG:NH2	2.54	0.41
39:FF:64:VAL:CG1	39:FF:65:GLU:N	2.84	0.41
47:FN:33:ASP:O	47:FN:35:ASN:N	2.54	0.41
48:FO:45:GLU:O	48:FO:47:LYS:N	2.54	0.41
52:FS:13:LEU:HD23	52:FS:13:LEU:HA	1.92	0.41
1:GB:30:C:H1'	1:GB:58:A:C2	2.56	0.41
3:GA:327:G:H2'	3:GA:328:U:O4'	2.20	0.41
3:GA:915:C:C4	3:GA:916:G:N7	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:GA:1035:U:H2'	3:GA:1036:G:C8	2.55	0.41
3:GA:1171:G:C2	3:GA:1178:C:N3	2.89	0.41
3:GA:1297:C:O2'	3:GA:1302:A:N1	2.51	0.41
3:GA:1439:A:C8	3:GA:1440:U:C6	3.09	0.41
3:GA:1813:G:H1'	2:GC:49:THR:CG2	2.48	0.41
3:GA:1956:U:C4	3:GA:1957:C:C5	3.09	0.41
3:GA:2138:G:H2'	3:GA:2153:C:N3	2.34	0.41
3:GA:2310:C:N3	6:GF:75:GLY:HA3	2.36	0.41
3:GA:2526:G:C2'	31:G4:1:MET:H1	2.34	0.41
3:GA:2531:A:H5'	7:GG:156:TYR:CE1	2.56	0.41
3:GA:2588:G:C5	3:GA:2589:A:N7	2.87	0.41
5:GE:128:ALA:C	5:GE:156:ASN:HB3	2.41	0.41
11:GK:64:ARG:O	11:GK:82:ASN:HA	2.21	0.41
23:GW:50:VAL:O	23:GW:52:CYS:N	2.53	0.41
30:G3:25:HIS:CE1	30:G3:47:ALA:HB3	2.55	0.41
35:HA:16:A:C2'	35:HA:17:U:H5'	2.50	0.41
35:HA:188:C:H2'	35:HA:189:A:O4'	2.20	0.41
35:HA:673:A:C2	35:HA:674:G:C2	3.09	0.41
35:HA:1332:A:H3'	35:HA:1333:A:H8	1.86	0.41
35:HA:1458:G:H5'	53:HT:27:MET:HB3	2.03	0.41
35:HA:1468:A:C2'	35:HA:1469:C:C5'	2.98	0.41
60:HA:1772:HOH:O	47:HN:61:ARG:HD3	2.21	0.41
34:HB:82:ALA:HB1	34:HB:217:ALA:CB	2.50	0.41
34:HB:90:PHE:CE1	34:HB:149:GLY:N	2.88	0.41
39:HF:86:ARG:O	39:HF:86:ARG:HD3	2.21	0.41
40:HG:15:ASP:HB3	40:HG:20:SER:H	1.86	0.41
40:HG:115:SER:HB3	40:HG:118:LEU:HD12	2.03	0.41
42:HI:9:THR:HG22	42:HI:10:GLY:N	2.35	0.41
43:HJ:19:ASP:HA	43:HJ:22:THR:HG22	2.02	0.41
45:HL:33:VAL:HG21	55:HV:429:GLU:CG	2.51	0.41
55:HV:4:THR:CB	55:HV:7:ILE:HD11	2.51	0.41
56:HW:1:KBE:NZ	56:HW:1:KBE:HB	2.36	0.41
2:AC:115:ILE:HG22	2:AC:116:GLN:N	2.36	0.41
3:AA:126:A:C6	3:AA:127:A:N1	2.88	0.41
3:AA:301:G:C6	3:AA:317:G:C6	3.09	0.41
3:AA:535:G:C6	3:AA:559:G:C6	3.09	0.41
3:AA:669:G:N3	3:AA:669:G:C2'	2.83	0.41
3:AA:848:C:H2'	3:AA:849:A:C8	2.56	0.41
3:AA:1069:A:N3	3:AA:1073:A:C6	2.88	0.41
3:AA:1094:U:N3	3:AA:1097:U:OP2	2.51	0.41
3:AA:1494:A:C6	3:AA:1495:A:C6	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AA:1613:G:O6	3:AA:1617:C:H2'	2.21	0.41
3:AA:1638:C:H5"	3:AA:2710:C:O2'	2.21	0.41
3:AA:1789:A:H2'	3:AA:1790:C:O4'	2.20	0.41
3:AA:1864:U:O3'	3:AA:2409:G:N2	2.54	0.41
3:AA:2201:G:C6	3:AA:2202:U:C4	3.08	0.41
3:AA:2537:U:C4	3:AA:2538:C:N4	2.89	0.41
3:AA:2601:C:H2'	3:AA:2603:G:C8	2.56	0.41
3:AA:2607:G:H2'	3:AA:2608:G:O4'	2.20	0.41
3:AA:2618:G:C6	3:AA:2619:C:C4	3.09	0.41
3:AA:2661:G:H2'	3:AA:2662:A:O4'	2.20	0.41
3:AA:2676:C:P	11:AK:31:ARG:HH12	2.44	0.41
3:AA:2682:A:C8	4:AD:11:MET:CG	3.04	0.41
3:AA:2869:G:C6	3:AA:2870:C:C4	3.09	0.41
5:AE:109:LEU:O	5:AE:112:LEU:N	2.54	0.41
5:AE:128:ALA:O	5:AE:130:LYS:N	2.53	0.41
5:AE:178:VAL:HG23	5:AE:179:SER:N	2.36	0.41
6:AF:46:LYS:HD3	6:AF:46:LYS:H	1.86	0.41
7:AG:10:VAL:HG22	7:AG:47:ASN:C	2.41	0.41
7:AG:68:ARG:HH21	7:AG:72:ASN:ND2	2.18	0.41
8:AH:14:SER:HG	8:AH:17:ASP:CG	2.23	0.41
10:AJ:4:PHE:HB3	10:AJ:44:TYR:CE2	2.55	0.41
10:AJ:35:ARG:HG2	10:AJ:40:HIS:HD2	1.85	0.41
16:AP:30:TRP:CE3	16:AP:39:LEU:HD12	2.56	0.41
21:AU:13:LEU:HD11	21:AU:70:ALA:HB2	2.03	0.41
23:AW:19:ARG:HH21	23:AW:19:ARG:HG2	1.86	0.41
23:AW:60:ALA:CB	23:AW:81:ILE:CD1	2.98	0.41
25:AY:12:GLU:O	25:AY:15:ASN:HB2	2.21	0.41
34:BB:26:MET:HE3	34:BB:192:PRO:HG3	2.02	0.41
34:BB:63:LYS:HE2	34:BB:224:ARG:HD3	2.02	0.41
34:BB:132:GLU:HG2	34:BB:132:GLU:O	2.21	0.41
35:BA:460:A:C2	35:BA:462:G:C8	3.09	0.41
35:BA:780:A:C2	35:BA:803:G:C6	3.09	0.41
35:BA:976:G:N2	35:BA:1362:A:H2'	2.35	0.41
35:BA:1014:A:C2	52:BS:34:TRP:CE2	3.09	0.41
35:BA:1070:U:H2'	35:BA:1071:C:C6	2.56	0.41
35:BA:1299:A:O2'	35:BA:1300:G:H4'	2.21	0.41
35:BA:1512:U:O4	60:BA:1868:HOH:O	2.20	0.41
37:BD:19:LEU:HD23	37:BD:64:ILE:HG13	2.03	0.41
37:BD:103:TYR:HE1	37:BD:109:ALA:O	2.04	0.41
39:BF:15:SER:OG	39:BF:58:HIS:ND1	2.48	0.41
42:BI:12:ARG:O	42:BI:13:LYS:C	2.59	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:BK:112:ASP:HB3	54:BU:20:LYS:HE3	2.03	0.41
50:BQ:50:ASN:O	50:BQ:52:GLU:N	2.54	0.41
3:CA:227:A:C2	3:CA:2407:A:H1'	2.56	0.41
3:CA:529:A:O3'	60:CA:3652:HOH:O	2.21	0.41
3:CA:569:U:H1'	3:CA:947:A:O4'	2.20	0.41
3:CA:588:U:H2'	3:CA:589:U:C6	2.56	0.41
3:CA:646:U:H3'	3:CA:647:G:H5"	2.02	0.41
3:CA:674:G:H1'	5:CE:69:ARG:HD2	2.03	0.41
3:CA:856:G:H21	23:CW:19:ARG:NH2	2.19	0.41
3:CA:948:C:H1'	3:CA:984:A:O2'	2.20	0.41
3:CA:1023:U:OP2	3:CA:1025:G:O2'	2.38	0.41
3:CA:1181:U:H2'	3:CA:1182:G:C8	2.56	0.41
3:CA:1419:A:C5	3:CA:1421:G:C5	3.08	0.41
3:CA:1838:C:N4	3:CA:1899:A:O4'	2.54	0.41
3:CA:1873:G:N1	3:CA:1874:C:C4	2.89	0.41
3:CA:2250:G:H8	3:CA:2250:G:O5'	2.04	0.41
3:CA:2277:G:H3'	3:CA:2278:A:H5"	2.03	0.41
3:CA:2642:G:H5'	10:CJ:80:HIS:CD2	2.56	0.41
3:CA:2661:G:H5'	55:DV:19:ILE:HG13	2.03	0.41
3:CA:2743:U:H2'	3:CA:2744:G:O4'	2.21	0.41
3:CA:2847:U:OP1	16:CP:95:LYS:HE3	2.21	0.41
3:CA:2896:C:H2'	3:CA:2897:U:H6	1.86	0.41
2:CC:4:LYS:N	2:CC:4:LYS:HD2	2.36	0.41
2:CC:62:ARG:NH2	2:CC:84:PRO:HD3	2.36	0.41
2:CC:93:VAL:CG1	2:CC:94:LEU:N	2.83	0.41
4:CD:106:LYS:O	4:CD:107:VAL:HB	2.20	0.41
4:CD:133:THR:HG23	4:CD:134:HIS:CD2	2.55	0.41
5:CE:112:LEU:HD13	5:CE:186:VAL:HG11	2.03	0.41
9:CI:12:VAL:CG2	9:CI:54:ILE:HB	2.50	0.41
9:CI:28:GLY:HA2	9:CI:32:VAL:CB	2.51	0.41
9:CI:71:LYS:HB3	9:CI:71:LYS:HZ2	1.86	0.41
10:CJ:73:VAL:HG23	10:CJ:74:TYR:H	1.86	0.41
11:CK:71:ARG:HB3	11:CK:72:PRO:HD2	2.02	0.41
12:CL:110:VAL:O	12:CL:111:ILE:O	2.39	0.41
17:CQ:91:ARG:HD2	18:CR:11:GLN:H	1.86	0.41
22:CV:80:HIS:CG	22:CV:83:LYS:HB2	2.56	0.41
23:CW:65:LYS:O	23:CW:81:ILE:HA	2.21	0.41
31:C4:10:LEU:N	31:C4:10:LEU:HD23	2.36	0.41
32:C5:39:THR:HG22	32:C5:42:ARG:NH1	2.36	0.41
32:C5:68:PRO:HA	32:C5:72:LEU:HD21	2.02	0.41
32:C5:78:GLY:N	32:C5:79:PRO:HD2	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:174:A:H2'	35:DA:175:C:H5'	2.03	0.41
35:DA:259:G:N2	35:DA:260:G:H1'	2.36	0.41
35:DA:344:A:H2'	35:DA:344:A:N3	2.36	0.41
35:DA:827:U:C4	35:DA:870:U:C2	3.09	0.41
35:DA:1141:C:C2	35:DA:1142:G:C8	3.09	0.41
35:DA:1192:C:OP2	36:DC:4:LYS:NZ	2.46	0.41
35:DA:1361:G:H2'	35:DA:1362:A:H8	1.86	0.41
35:DA:1492:A:H4'	56:DW:1:KBE:HE	2.02	0.41
34:DB:69:VAL:N	34:DB:161:PHE:O	2.54	0.41
36:DC:150:LYS:HG3	36:DC:201:TRP:HE3	1.86	0.41
37:DD:34:ILE:O	37:DD:35:GLU:HB3	2.20	0.41
39:DF:78:PHE:HA	39:DF:84:VAL:HG11	2.03	0.41
42:DI:80:ARG:CZ	42:DI:103:PHE:CD1	3.04	0.41
42:DI:124:ARG:HG3	42:DI:125:PRO:N	2.36	0.41
44:DK:21:ALA:CB	44:DK:82:LEU:CD1	2.98	0.41
45:DL:66:TYR:CE2	45:DL:68:GLY:HA2	2.56	0.41
48:DO:3:LEU:HD23	48:DO:8:THR:HG22	2.03	0.41
50:DQ:30:LYS:HB3	50:DQ:37:PHE:CZ	2.56	0.41
50:DQ:45:HIS:CG	50:DQ:70:THR:HG22	2.56	0.41
54:DU:10:GLU:CG	54:DU:11:PRO:HD3	2.51	0.41
55:DV:336:PHE:CD2	55:DV:383:ALA:O	2.73	0.41
55:DV:350:LEU:HD12	55:DV:356:ALA:O	2.20	0.41
3:EA:266:G:C6	3:EA:267:C:C4	3.08	0.41
3:EA:336:C:N3	3:EA:337:C:C5	2.88	0.41
3:EA:1082:U:O2'	32:E5:41:LEU:HD13	2.21	0.41
3:EA:1174:U:C2'	3:EA:1176:U:H1'	2.50	0.41
3:EA:1265:A:OP1	60:EA:3742:HOH:O	2.21	0.41
3:EA:1866:A:N1	3:EA:1876:A:C8	2.89	0.41
3:EA:2039:U:H2'	3:EA:2040:G:C8	2.56	0.41
3:EA:2094:A:C2	3:EA:2196:C:C2	3.09	0.41
3:EA:2230:G:H2'	3:EA:2231:U:C6	2.56	0.41
3:EA:2283:C:H2'	3:EA:2284:A:O5'	2.21	0.41
3:EA:2425:A:C5'	3:EA:2427:C:O4'	2.69	0.41
2:EC:195:GLY:O	2:EC:197:ALA:N	2.53	0.41
5:EE:3:LEU:O	5:EE:11:ALA:HA	2.20	0.41
6:EF:48:LEU:CD1	6:EF:147:ARG:HH21	2.34	0.41
7:EG:167:VAL:O	7:EG:168:VAL:HG22	2.20	0.41
9:EI:18:ASN:HB2	9:EI:37:PHE:CE2	2.56	0.41
9:EI:27:LEU:HD12	9:EI:28:GLY:N	2.36	0.41
10:EJ:4:PHE:HB3	10:EJ:44:TYR:CE2	2.56	0.41
10:EJ:17:VAL:HG22	10:EJ:137:PRO:HB2	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:EK:13:ASN:OD1	11:EK:13:ASN:N	2.45	0.41
12:EL:55:MET:HA	12:EL:56:PRO:HD3	1.94	0.41
12:EL:77:ILE:HD12	12:EL:77:ILE:N	2.36	0.41
17:EQ:63:ARG:NH1	17:EQ:96:ASP:HA	2.35	0.41
24:EX:70:LEU:HD13	24:EX:75:GLU:HB3	2.02	0.41
30:E3:49:VAL:HG23	30:E3:54:LEU:HD22	2.02	0.41
32:E5:51:TYR:CE1	32:E5:52:MET:HG2	2.56	0.41
32:E5:71:CYS:HA	32:E5:117:LEU:HD13	2.00	0.41
35:FA:195:A:H1'	35:FA:222:C:O2'	2.21	0.41
35:FA:237:G:H5'	50:FQ:27:ARG:NH2	2.36	0.41
35:FA:927:G:H4'	35:FA:1503:A:N7	2.35	0.41
35:FA:954:G:H2'	35:FA:955:U:C6	2.56	0.41
35:FA:1001:C:H2'	35:FA:1002:G:C8	2.55	0.41
35:FA:1071:C:H2'	35:FA:1072:G:C8	2.56	0.41
35:FA:1159:U:C4	35:FA:1182:G:C5	3.09	0.41
35:FA:1169:A:C2	35:FA:1170:A:C4	3.08	0.41
35:FA:1419:G:C6	35:FA:1482:G:C2	3.09	0.41
34:FB:23:ASN:O	34:FB:25:LYS:N	2.53	0.41
34:FB:88:GLN:CA	34:FB:88:GLN:HE21	2.34	0.41
34:FB:112:ARG:NE	34:FB:116:LEU:HD21	2.36	0.41
34:FB:138:ARG:HA	34:FB:141:GLU:HG2	2.03	0.41
36:FC:140:ASN:O	36:FC:144:LEU:HD23	2.21	0.41
37:FD:58:LYS:CB	37:FD:200:ILE:HG13	2.50	0.41
37:FD:65:TYR:HE2	37:FD:94:LEU:HB3	1.86	0.41
37:FD:84:GLY:O	37:FD:86:THR:N	2.54	0.41
41:FH:78:VAL:HG21	41:FH:128:TYR:CE1	2.56	0.41
41:FH:116:ALA:HA	41:FH:121:LEU:CD1	2.50	0.41
42:FI:97:GLU:HA	42:FI:100:LYS:HD3	2.03	0.41
47:FN:52:PRO:O	47:FN:53:ARG:HB2	2.21	0.41
53:FT:5:LYS:CD	53:FT:7:ALA:H	2.33	0.41
54:FU:39:GLU:CA	54:FU:41:PRO:HD2	2.50	0.41
55:FV:19:ILE:HD13	55:FV:19:ILE:N	2.36	0.41
55:FV:526:GLU:O	55:FV:528:GLY:N	2.53	0.41
3:GA:48:G:N1	3:GA:177:G:OP2	2.51	0.41
3:GA:58:G:C2	3:GA:59:U:C2	3.09	0.41
3:GA:139:U:O2'	20:GT:1:MET:HA	2.21	0.41
3:GA:156:A:H2'	3:GA:157:C:C6	2.56	0.41
3:GA:200:U:H5	3:GA:248:G:N3	2.19	0.41
3:GA:238:C:C4	3:GA:239:C:C5	3.08	0.41
3:GA:309:A:C5	3:GA:330:A:C6	3.08	0.41
3:GA:328:U:O2'	21:GU:68:ASN:OD1	2.30	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:GA:370:G:O2'	3:GA:424:G:OP1	2.36	0.41
3:GA:411:G:OP1	60:GA:3554:HOH:O	2.21	0.41
3:GA:561:G:HO2'	17:GQ:44:TYR:HH	1.67	0.41
3:GA:949:G:C4	3:GA:969:G:N2	2.88	0.41
3:GA:1095:A:C2	55:HV:654:ILE:HD11	2.56	0.41
3:GA:1095:A:H62	55:HV:631:VAL:HG23	1.86	0.41
3:GA:1107:G:C5	3:GA:1108:U:C5	3.09	0.41
3:GA:1171:G:N2	3:GA:1178:C:C2	2.89	0.41
3:GA:1220:G:C2	3:GA:1230:A:C2	3.09	0.41
3:GA:1232:G:C6	3:GA:1233:C:C4	3.09	0.41
3:GA:1474:U:C2'	3:GA:1475:G:H5'	2.51	0.41
3:GA:1663:G:C2	3:GA:1998:A:C2	3.09	0.41
3:GA:1667:G:OP1	11:GK:6:THR:HA	2.21	0.41
3:GA:1956:U:C5	3:GA:1957:C:C5	3.09	0.41
3:GA:2094:A:C2	3:GA:2196:C:C2	3.09	0.41
3:GA:2211:A:HO2'	3:GA:2212:A:P	2.35	0.41
3:GA:2218:G:C5	3:GA:2219:U:C5	3.08	0.41
3:GA:2354:C:O4'	23:GW:31:LEU:HD22	2.21	0.41
3:GA:2452:C:C4	3:GA:2453:A:C6	3.09	0.41
3:GA:2512:C:H4'	4:GD:127:PHE:CE2	2.56	0.41
3:GA:2520:C:C6	3:GA:2567:G:H1'	2.56	0.41
3:GA:2896:C:H2'	3:GA:2897:U:H6	1.86	0.41
2:GC:183:VAL:HG12	2:GC:184:GLU:N	2.36	0.41
7:GG:21:GLN:HG3	7:GG:21:GLN:O	2.20	0.41
7:GG:23:ILE:HD12	7:GG:23:ILE:H	1.85	0.41
7:GG:175:LYS:O	7:GG:176:LYS:CB	2.69	0.41
9:GI:81:LYS:O	9:GI:81:LYS:HG2	2.21	0.41
9:GI:91:LYS:HB2	9:GI:95:ASP:HB3	2.02	0.41
12:GL:93:ASN:HB2	12:GL:96:LYS:HB3	2.03	0.41
16:GP:17:PRO:HD2	16:GP:83:ILE:HG13	2.03	0.41
19:GS:18:ARG:C	19:GS:20:VAL:H	2.20	0.41
19:GS:54:ALA:HB1	19:GS:107:VAL:CG1	2.50	0.41
19:GS:70:LYS:HD2	19:GS:70:LYS:N	2.36	0.41
20:GT:59:ASN:O	20:GT:83:ALA:O	2.38	0.41
26:GZ:18:LYS:O	26:GZ:20:LYS:N	2.53	0.41
30:G3:28:LEU:HD22	30:G3:43:LEU:HB2	2.03	0.41
35:HA:210:C:H4'	35:HA:211:G:C2	2.56	0.41
35:HA:250:A:H4'	35:HA:251:G:O5'	2.21	0.41
35:HA:360:G:C6	35:HA:361:G:C6	3.08	0.41
35:HA:429:U:H1'	35:HA:430:A:H5"	2.02	0.41
35:HA:461:A:C2'	35:HA:462:G:H5'	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:HA:465:A:H2'	35:HA:466:A:C8	2.56	0.41
35:HA:665:A:H2'	35:HA:732:C:O2	2.20	0.41
35:HA:759:A:C2'	35:HA:760:G:H5'	2.51	0.41
35:HA:774:G:C6	35:HA:775:G:C4	3.09	0.41
35:HA:794:A:C6	35:HA:795:C:N4	2.89	0.41
35:HA:796:C:H5'	44:HK:129:VAL:HG13	2.03	0.41
35:HA:867:G:H2'	35:HA:868:C:C6	2.56	0.41
35:HA:944:G:H2'	35:HA:1338:G:O6	2.20	0.41
35:HA:1096:C:H2'	35:HA:1097:C:H6	1.86	0.41
35:HA:1251:A:H1'	35:HA:1370:G:C4'	2.51	0.41
35:HA:1251:A:H1'	35:HA:1370:G:H4'	2.02	0.41
35:HA:1264:U:C2	35:HA:1272:G:N2	2.89	0.41
35:HA:1402:C:C4	35:HA:1403:C:C2	3.09	0.41
35:HA:1412:C:OP1	45:HL:54:ARG:NH1	2.54	0.41
35:HA:1527:U:OP2	54:HU:39:GLU:CG	2.69	0.41
36:HC:131:ARG:HA	36:HC:134:MET:HE2	2.03	0.41
37:HD:197:GLU:C	37:HD:199:LEU:N	2.72	0.41
39:HF:49:TYR:CE2	51:HR:70:TYR:CE2	3.08	0.41
39:HF:49:TYR:CE2	51:HR:70:TYR:HE2	2.38	0.41
40:HG:116:MET:SD	40:HG:119:ARG:HD2	2.61	0.41
41:HH:37:ALA:HB1	41:HH:49:PHE:HB3	2.03	0.41
44:HK:84:VAL:HB	44:HK:110:ILE:HG12	2.03	0.41
46:HM:33:ILE:HD13	46:HM:59:GLU:CG	2.50	0.41
47:HN:87:ALA:O	47:HN:92:GLU:HG3	2.21	0.41
50:HQ:8:LEU:CG	50:HQ:25:ILE:HD13	2.51	0.41
50:HQ:61:ILE:HG22	50:HQ:75:LEU:HA	2.02	0.41
54:HU:39:GLU:CA	54:HU:41:PRO:HD2	2.51	0.41
55:HV:317:PHE:HA	55:HV:341:GLY:HA3	2.02	0.41
55:HV:611:VAL:HG13	55:HV:613:LEU:HD22	2.03	0.41
1:AB:77:U:OP1	22:AV:21:ARG:NH1	2.54	0.41
3:AA:45:G:C5'	3:AA:46:G:H5'	2.51	0.41
3:AA:82:U:H2'	3:AA:83:A:C8	2.56	0.41
3:AA:996:A:C5	3:AA:1160:G:N2	2.89	0.41
3:AA:1078:U:H5"	3:AA:1079:C:OP1	2.20	0.41
3:AA:1083:U:H4'	32:A5:37:LYS:HE2	2.03	0.41
3:AA:1365:A:N6	3:AA:1366:A:C6	2.89	0.41
3:AA:1582:C:C2'	3:AA:1585:C:H42	2.35	0.41
3:AA:1587:G:C4	3:AA:1588:G:C8	3.09	0.41
3:AA:1681:G:N2	3:AA:1763:G:OP2	2.45	0.41
3:AA:2038:G:H2'	3:AA:2039:U:O4'	2.21	0.41
3:AA:2298:A:C6	3:AA:2321:U:C4	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AA:2555:U:C5	3:AA:2556:C:C2	3.09	0.41
5:AE:129:PRO:HG3	5:AE:156:ASN:OD1	2.21	0.41
6:AF:169:LEU:O	6:AF:174:PHE:HB2	2.21	0.41
8:AH:27:ARG:NH1	24:AX:63:ILE:HG13	2.36	0.41
12:AL:127:VAL:HG11	12:AL:142:ILE:HG21	2.03	0.41
17:AQ:46:TYR:CZ	17:AQ:50:ARG:NH2	2.89	0.41
19:AS:59:GLU:HA	19:AS:64:ALA:CB	2.49	0.41
35:BA:328:C:O2	35:BA:328:C:C2'	2.69	0.41
35:BA:728:A:C6	35:BA:729:A:C6	3.09	0.41
35:BA:834:U:H2'	35:BA:835:U:C6	2.56	0.41
35:BA:1476:A:C2	35:BA:1477:U:C2	3.08	0.41
38:BE:81:LEU:HB3	38:BE:147:MET:HE1	2.03	0.41
38:BE:83:HIS:CD2	41:BH:96:MET:CE	3.04	0.41
40:BG:86:GLN:HE21	40:BG:86:GLN:HB2	1.75	0.41
55:BV:13:ILE:HD13	55:BV:282:VAL:HG11	2.02	0.41
55:BV:320:LEU:HD23	55:BV:321:ALA:N	2.36	0.41
3:CA:285:G:C4	3:CA:356:G:C2	3.09	0.41
3:CA:336:C:C2	3:CA:337:C:C5	3.08	0.41
3:CA:391:A:C2	3:CA:411:G:C5	3.09	0.41
3:CA:460:A:C2	3:CA:470:A:C4	3.09	0.41
3:CA:820:A:C2	3:CA:821:A:C4	3.09	0.41
3:CA:1774:C:OP1	60:CA:3441:HOH:O	2.22	0.41
3:CA:2024:G:C2	3:CA:2025:C:C2	3.09	0.41
3:CA:2636:C:H2'	3:CA:2637:U:C6	2.55	0.41
3:CA:2685:G:H1	3:CA:2724:U:H3	1.69	0.41
4:CD:106:LYS:O	4:CD:107:VAL:CB	2.68	0.41
7:CG:10:VAL:HB	7:CG:14:VAL:CG2	2.51	0.41
9:CI:98:GLY:HA3	9:CI:137:LEU:HD22	2.03	0.41
18:CR:39:LEU:HB3	18:CR:49:ILE:HD13	2.03	0.41
19:CS:7:HIS:CE1	19:CS:10:ALA:HB2	2.56	0.41
21:CU:10:VAL:HG12	21:CU:71:ILE:HA	2.03	0.41
32:C5:77:VAL:HA	32:C5:114:GLU:OE1	2.20	0.41
32:C5:98:GLU:HA	32:C5:101:LYS:HB2	2.03	0.41
35:DA:341:C:H2'	35:DA:342:C:H6	1.84	0.41
35:DA:1181:G:O2'	35:DA:1182:G:C8	2.74	0.41
36:DC:15:VAL:O	36:DC:15:VAL:HG23	2.20	0.41
36:DC:118:ASP:HA	36:DC:121:THR:HG22	2.02	0.41
38:DE:137:VAL:O	38:DE:138:ARG:HB2	2.20	0.41
41:DH:98:GLY:C	41:DH:100:GLY:H	2.23	0.41
41:DH:106:THR:HG22	41:DH:107:SER:N	2.36	0.41
42:DI:31:ASN:HD21	42:DI:67:VAL:H	1.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:DJ:80:THR:HB	43:DJ:83:THR:H	1.85	0.41
55:DV:574:MET:CE	55:DV:601:PHE:CE2	3.04	0.41
55:DV:632:ILE:HD12	55:DV:642:LEU:HD22	2.03	0.41
3:EA:215:G:H4'	3:EA:216:A:H4'	2.03	0.41
3:EA:280:U:C2'	3:EA:281:C:O5'	2.69	0.41
3:EA:701:G:C6	3:EA:702:U:C5	3.08	0.41
3:EA:843:G:H2'	3:EA:844:A:C8	2.56	0.41
3:EA:2063:C:C4	3:EA:2064:C:C4	3.09	0.41
3:EA:2183:A:N1	3:EA:2184:A:C2	2.89	0.41
1:EB:28:C:H2'	1:EB:29:A:O4'	2.20	0.41
6:EF:151:LEU:HD12	6:EF:152:ASP:N	2.36	0.41
11:EK:39:ILE:HD12	11:EK:41:ILE:HD11	2.03	0.41
12:EL:132:ARG:HG3	12:EL:142:ILE:HD12	2.02	0.41
25:EY:6:LEU:O	25:EY:7:ARG:CB	2.69	0.41
32:E5:59:LEU:HD23	32:E5:62:ARG:HE	1.86	0.41
35:FA:72:A:H3'	35:FA:73:C:H5"	2.02	0.41
35:FA:309:A:H2'	35:FA:310:G:H8	1.85	0.41
35:FA:532:A:H4'	35:FA:533:A:OP2	2.20	0.41
35:FA:560:A:H5'	35:FA:566:G:N2	2.35	0.41
35:FA:833:G:C6	35:FA:834:U:C4	3.09	0.41
36:FC:52:VAL:HA	36:FC:70:THR:HG23	2.03	0.41
37:FD:184:ARG:HD2	37:FD:184:ARG:C	2.41	0.41
37:FD:192:SER:OG	37:FD:193:ALA:O	2.39	0.41
45:FL:43:LYS:HG2	45:FL:44:LYS:N	2.36	0.41
52:FS:3:ARG:HH12	52:FS:68:GLY:HA3	1.86	0.41
3:GA:339:U:H6	3:GA:339:U:O5'	2.04	0.41
3:GA:582:A:C6	3:GA:583:G:C6	3.09	0.41
3:GA:611:C:H2'	3:GA:612:G:O4'	2.20	0.41
3:GA:648:G:O4'	3:GA:2351:G:H5"	2.21	0.41
3:GA:853:C:H2'	3:GA:854:C:C6	2.55	0.41
3:GA:971:G:H2'	3:GA:972:A:C5'	2.51	0.41
3:GA:1060:U:P	9:GI:75:ALA:HB2	2.61	0.41
3:GA:1799:G:OP1	2:GC:257:ARG:NE	2.50	0.41
3:GA:2208:C:C2	3:GA:2217:G:C2	3.09	0.41
3:GA:2340:A:H2'	3:GA:2341:G:C8	2.54	0.41
3:GA:2716:C:C2	3:GA:2717:C:C5	3.09	0.41
2:GC:64:VAL:HA	2:GC:102:TYR:CB	2.51	0.41
5:GE:187:VAL:O	5:GE:188:MET:HB3	2.21	0.41
7:GG:84:LYS:HG3	7:GG:132:LEU:N	2.36	0.41
7:GG:88:LEU:HD22	7:GG:161:VAL:HG22	2.02	0.41
7:GG:97:VAL:HG23	7:GG:124:CYS:SG	2.61	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:GI:12:VAL:HG23	9:GI:13:ALA:N	2.36	0.41
9:GI:55:PRO:HB2	9:GI:71:LYS:HD2	2.02	0.41
9:GI:74:PRO:O	9:GI:112:LYS:NZ	2.52	0.41
10:GJ:4:PHE:HD2	10:GJ:44:TYR:CE1	2.39	0.41
10:GJ:34:ARG:HG3	10:GJ:39:LYS:HB3	2.03	0.41
10:GJ:64:VAL:HG22	10:GJ:68:LYS:HB2	2.02	0.41
11:GK:13:ASN:OD1	11:GK:13:ASN:N	2.54	0.41
14:GN:28:LEU:HD23	14:GN:48:VAL:HG21	2.03	0.41
16:GP:87:ARG:HH12	16:GP:109:ILE:CD1	2.34	0.41
17:GQ:67:ALA:HB2	17:GQ:98:ALA:HB1	2.03	0.41
17:GQ:85:ALA:HA	17:GQ:115:ALA:CB	2.51	0.41
18:GR:8:GLY:HA2	18:GR:23:GLU:CG	2.51	0.41
20:GT:29:THR:H	20:GT:91:GLN:HE22	1.69	0.41
25:GY:56:LEU:HA	25:GY:59:GLU:CD	2.41	0.41
26:GZ:11:SER:N	26:GZ:31:ILE:HG22	2.36	0.41
28:G1:4:ILE:CG1	28:G1:27:ARG:NH1	2.84	0.41
35:HA:18:C:H4'	35:HA:1078:U:O2	2.21	0.41
35:HA:27:G:H2'	35:HA:28:A:O4'	2.21	0.41
35:HA:57:G:C6	35:HA:58:C:C4	3.08	0.41
35:HA:374:A:C6	35:HA:375:U:C4	3.09	0.41
35:HA:684:U:O4	35:HA:685:G:N1	2.54	0.41
35:HA:784:A:C6	35:HA:799:G:C2	3.09	0.41
35:HA:844:G:H3'	35:HA:845:A:H5"	2.03	0.41
35:HA:983:A:N3	35:HA:983:A:C2'	2.83	0.41
37:HD:197:GLU:O	37:HD:200:ILE:HG22	2.20	0.41
42:HI:45:ARG:HG3	42:HI:46:MET:N	2.36	0.41
44:HK:59:THR:HB	44:HK:60:PRO:HD2	2.01	0.41
44:HK:61:PHE:O	44:HK:64:GLN:HB3	2.21	0.41
45:HL:43:LYS:HG2	45:HL:44:LYS:H	1.85	0.41
46:HM:22:ILE:O	46:HM:25:VAL:HG22	2.21	0.41
51:HR:22:ASP:OD1	51:HR:24:LYS:N	2.54	0.41
52:HS:8:GLY:H	52:HS:9:PRO:HD3	1.86	0.41
55:HV:33:TYR:CE1	55:HV:199:GLY:HA3	2.56	0.41
2:AC:52:HIS:ND1	60:AC:406:HOH:O	2.31	0.40
3:AA:109:C:H4'	3:AA:348:A:H4'	2.02	0.40
3:AA:1028:A:N3	3:AA:2486:C:O2'	2.42	0.40
3:AA:1381:G:H1'	3:AA:1571:A:N1	2.36	0.40
3:AA:1807:G:H2'	3:AA:1808:A:H5'	2.03	0.40
3:AA:1936:A:C2	3:AA:1943:U:H5	2.38	0.40
3:AA:2724:U:P	4:AD:116:LYS:HZ2	2.44	0.40
3:AA:2766:A:N3	3:AA:2766:A:H2'	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:24:GLY:O	8:AH:28:ASN:HB2	2.21	0.40
9:AI:82:ALA:HB1	9:AI:108:ILE:HD13	2.03	0.40
10:AJ:26:GLY:HA2	10:AJ:29:ALA:HB3	2.02	0.40
11:AK:19:VAL:HG13	11:AK:41:ILE:HG12	2.02	0.40
32:A5:99:PHE:HB3	32:A5:113:PHE:HE1	1.86	0.40
44:BK:87:LYS:HA	44:BK:114:THR:HG22	2.03	0.40
48:BO:70:LEU:HD21	48:BO:77:ARG:HB2	2.03	0.40
49:BP:51:ARG:C	49:BP:52:LEU:HD12	2.41	0.40
55:BV:175:ALA:N	55:BV:178:HIS:O	2.54	0.40
55:BV:622:GLU:HG3	55:BV:653:LYS:HG2	2.03	0.40
3:CA:577:G:C6	3:CA:578:G:C6	3.08	0.40
3:CA:893:C:H2'	3:CA:894:U:C6	2.56	0.40
3:CA:1027:A:N1	3:CA:1126:A:C4	2.89	0.40
3:CA:1309:G:H4'	29:C2:7:PRO:HB2	2.02	0.40
3:CA:1484:U:H2'	3:CA:1485:U:C6	2.55	0.40
3:CA:2521:C:O2'	3:CA:2564:A:O2'	2.30	0.40
3:CA:2701:U:H3'	3:CA:2702:G:H5"	2.03	0.40
2:CC:71:ASP:O	2:CC:73:ILE:HD12	2.21	0.40
2:CC:202:ARG:HH22	2:CC:213:ARG:HE	1.68	0.40
4:CD:106:LYS:HB3	4:CD:206:ALA:HB3	2.03	0.40
4:CD:200:ASP:N	4:CD:200:ASP:OD1	2.54	0.40
5:CE:160:ALA:O	5:CE:161:ALA:HB3	2.20	0.40
7:CG:154:GLU:OE1	7:CG:158:GLY:N	2.54	0.40
8:CH:4:ILE:HG12	8:CH:18:GLN:OE1	2.21	0.40
12:CL:95:LEU:CD2	12:CL:100:ILE:HD11	2.51	0.40
20:CT:54:GLU:HB2	20:CT:88:LYS:HB2	2.03	0.40
31:C4:3:VAL:HG23	31:C4:4:ARG:H	1.86	0.40
32:C5:31:ARG:HA	32:C5:31:ARG:HD3	1.75	0.40
35:DA:78:A:OP1	35:DA:80:A:N1	2.55	0.40
35:DA:1287:A:H2'	35:DA:1288:A:C8	2.56	0.40
35:DA:1447:A:C5'	35:DA:1448:C:H5	2.33	0.40
37:DD:35:GLU:O	37:DD:38:PRO:HD3	2.21	0.40
38:DE:105:ILE:HD13	38:DE:115:LEU:HB3	2.02	0.40
40:DG:69:VAL:C	40:DG:138:ARG:HD3	2.41	0.40
41:DH:78:VAL:HG21	41:DH:128:TYR:CE1	2.57	0.40
45:DL:44:LYS:CB	45:DL:45:PRO:CD	2.99	0.40
46:DM:2:ALA:HB2	46:DM:53:ILE:HD13	2.03	0.40
47:DN:53:ARG:HB3	47:DN:59:ARG:HH12	1.86	0.40
50:DQ:47:HIS:HB2	50:DQ:71:LYS:HE2	2.02	0.40
54:DU:11:PRO:O	54:DU:12:PHE:HB3	2.20	0.40
55:DV:503:GLY:HA3	55:DV:600:ALA:HB2	2.02	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:EA:118:A:N3	3:EA:178:G:H1'	2.36	0.40
3:EA:118:A:C8	3:EA:119:A:C8	3.10	0.40
3:EA:242:G:N2	3:EA:255:A:OP2	2.34	0.40
3:EA:246:C:C2'	3:EA:247:G:H5'	2.51	0.40
3:EA:275:C:H3'	3:EA:276:U:H5"	2.04	0.40
3:EA:536:G:N2	10:EJ:47:HIS:CG	2.89	0.40
3:EA:1172:C:H42	3:EA:1177:G:H1	1.69	0.40
3:EA:1340:U:H4'	3:EA:1341:G:OP2	2.21	0.40
3:EA:1436:G:N3	3:EA:1515:A:H2	2.19	0.40
3:EA:1486:U:H2'	3:EA:1487:U:O4'	2.20	0.40
3:EA:1737:G:C5'	3:EA:1738:G:P	3.10	0.40
3:EA:1827:U:O2'	3:EA:1828:G:H5'	2.22	0.40
3:EA:2336:A:N6	23:EW:40:ARG:HD3	2.36	0.40
3:EA:2423:U:O2'	3:EA:2424:C:P	2.79	0.40
3:EA:2803:G:H2'	3:EA:2804:U:C6	2.56	0.40
2:EC:161:VAL:CG1	2:EC:173:LEU:HB3	2.51	0.40
2:EC:203:VAL:O	2:EC:205:GLY:N	2.54	0.40
4:ED:29:VAL:HB	4:ED:98:VAL:HG22	2.03	0.40
8:EH:9:VAL:HG22	8:EH:35:LYS:HD3	2.02	0.40
9:EI:104:GLN:O	9:EI:105:LEU:HB2	2.21	0.40
11:EK:105:ARG:HD3	11:EK:105:ARG:H	1.87	0.40
13:EM:67:VAL:HG11	13:EM:102:LEU:HD12	2.03	0.40
21:EU:21:ARG:CZ	21:EU:72:PHE:CE2	3.04	0.40
23:EW:63:ASP:OD1	23:EW:63:ASP:N	2.49	0.40
28:E1:38:PHE:CZ	28:E1:43:ARG:HA	2.55	0.40
32:E5:121:SER:HG	32:E5:122:GLN:H	1.69	0.40
35:FA:9:G:OP2	38:FE:126:LYS:NZ	2.50	0.40
35:FA:276:G:C2	35:FA:277:C:C6	3.10	0.40
35:FA:522:C:C4	35:FA:523:A:C5	3.09	0.40
35:FA:1302:C:O2	46:FM:17:ILE:CD1	2.70	0.40
34:FB:107:ARG:O	34:FB:110:ILE:HB	2.22	0.40
42:FI:72:ILE:HG23	42:FI:73:SER:N	2.36	0.40
46:FM:83:LEU:HD22	52:FS:66:MET:HG2	2.02	0.40
55:FV:4:THR:CG2	55:FV:378:ARG:NE	2.84	0.40
55:FV:230:SER:HB3	55:FV:233:LEU:HB2	2.03	0.40
55:FV:330:VAL:CG2	55:FV:333:LEU:HD21	2.51	0.40
1:GB:32:U:C4	1:GB:51:G:N2	2.89	0.40
1:GB:78:A:H2'	1:GB:79:G:H8	1.85	0.40
1:GB:86:G:H2'	1:GB:87:U:H5"	2.02	0.40
3:GA:315:G:H2'	3:GA:316:C:C6	2.56	0.40
3:GA:452:G:C6	3:GA:453:A:C6	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:GA:454:A:H4'	3:GA:455:C:OP2	2.20	0.40
3:GA:529:A:N6	3:GA:2042:A:H1'	2.36	0.40
3:GA:614:A:H5"	3:GA:616:A:N6	2.35	0.40
3:GA:769:U:C4	3:GA:770:G:N7	2.89	0.40
3:GA:849:A:H2'	3:GA:850:U:C6	2.56	0.40
3:GA:907:G:C6	3:GA:908:C:C4	3.09	0.40
3:GA:968:C:N4	60:GA:3334:HOH:O	2.49	0.40
3:GA:1080:A:H2'	3:GA:1081:U:C6	2.55	0.40
3:GA:1147:A:C5	3:GA:1148:U:C5	3.09	0.40
3:GA:1210:G:C2	3:GA:1237:A:C6	3.09	0.40
3:GA:1478:G:H2'	3:GA:1479:G:H8	1.85	0.40
3:GA:1626:A:C2'	3:GA:1627:G:OP2	2.69	0.40
3:GA:1652:A:C2	3:GA:2006:C:N3	2.88	0.40
3:GA:1727:C:H2'	3:GA:1728:C:O4'	2.20	0.40
3:GA:1786:A:H1'	3:GA:1938:A:N6	2.36	0.40
3:GA:2461:A:H1'	3:GA:2492:U:C2	2.55	0.40
3:GA:2799:A:O2'	3:GA:2800:A:OP2	2.33	0.40
2:GC:172:THR:HG22	2:GC:182:LYS:CG	2.51	0.40
2:GC:221:GLY:O	2:GC:223:ALA:N	2.54	0.40
5:GE:101:TYR:CE1	5:GE:177:PRO:HG3	2.57	0.40
10:GJ:102:GLU:HG3	10:GJ:124:VAL:HG21	2.03	0.40
12:GL:80:SER:HA	12:GL:115:GLU:O	2.21	0.40
12:GL:132:ARG:HG3	12:GL:142:ILE:HD12	2.03	0.40
13:GM:14:LYS:HG3	13:GM:15:GLY:N	2.36	0.40
18:GR:77:PHE:CE1	18:GR:79:ARG:HA	2.52	0.40
25:GY:6:LEU:O	25:GY:7:ARG:CB	2.69	0.40
26:GZ:26:LEU:HD21	26:GZ:46:MET:HB2	2.03	0.40
29:G2:18:PHE:C	29:G2:18:PHE:CD1	2.94	0.40
35:HA:948:C:OP1	46:HM:107:ARG:N	2.53	0.40
35:HA:964:A:N3	35:HA:969:A:O2'	2.27	0.40
35:HA:1021:A:C2'	35:HA:1022:A:H5'	2.51	0.40
35:HA:1491:G:H2'	56:HW:6:5OH:HA	2.01	0.40
41:HH:95:VAL:HG12	41:HH:96:MET:HG3	2.03	0.40
42:HI:8:GLY:HA3	42:HI:86:ALA:CA	2.51	0.40
44:HK:23:ILE:HG13	44:HK:86:VAL:HA	2.02	0.40
44:HK:128:ARG:HD3	54:HU:34:ARG:CZ	2.51	0.40
45:HL:67:ILE:HG21	45:HL:72:HIS:CD2	2.56	0.40
46:HM:63:PHE:CZ	46:HM:69:LEU:HD22	2.56	0.40
50:HQ:11:ARG:HH21	50:HQ:56:GLY:HA2	1.85	0.40
54:HU:37:PHE:HE2	54:HU:45:ARG:CZ	2.34	0.40
3:AA:176:A:N7	3:AA:177:G:C6	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AA:607:U:OP1	60:AA:3286:HOH:O	2.22	0.40
3:AA:608:A:C8	3:AA:621:A:N6	2.89	0.40
3:AA:931:U:OP1	26:AZ:29:ARG:NH1	2.55	0.40
3:AA:1322:A:OP1	19:AS:11:ARG:NE	2.38	0.40
3:AA:1684:G:C2	3:AA:1705:A:C2	3.09	0.40
3:AA:1847:A:H4'	3:AA:1848:A:OP2	2.21	0.40
16:AP:92:ARG:O	16:AP:93:LYS:HB2	2.21	0.40
35:BA:341:C:H2'	35:BA:342:C:H6	1.85	0.40
35:BA:1314:C:OP2	52:BS:6:LYS:HD2	2.20	0.40
43:BJ:56:HIS:CD2	43:BJ:57:VAL:HG23	2.56	0.40
44:BK:16:VAL:O	44:BK:18:ASP:N	2.52	0.40
49:BP:42:ILE:O	49:BP:44:SER:N	2.45	0.40
51:BR:23:TYR:CE2	51:BR:24:LYS:HE2	2.56	0.40
55:BV:220:GLN:O	55:BV:223:ILE:HG23	2.22	0.40
55:BV:529:SER:O	55:BV:532:LYS:HG3	2.21	0.40
3:CA:760:G:H4'	3:CA:1776:G:OP1	2.22	0.40
3:CA:1342:A:C6	3:CA:1397:U:C5	3.09	0.40
3:CA:1362:C:C4	3:CA:1363:C:C5	3.09	0.40
3:CA:1566:A:C6	2:CC:212:TRP:CZ3	3.09	0.40
3:CA:2400:G:N2	3:CA:2417:C:C2	2.89	0.40
3:CA:2469:A:C2	3:CA:2482:A:C4	3.09	0.40
3:CA:2470:G:O6	3:CA:2476:A:O2'	2.29	0.40
3:CA:2748:A:C2	3:CA:2757:A:C5	3.09	0.40
3:CA:2799:A:C6	3:CA:2801:G:C5	3.09	0.40
3:CA:2857:G:N2	3:CA:2860:A:OP2	2.42	0.40
2:CC:18:VAL:O	2:CC:18:VAL:HG23	2.21	0.40
2:CC:93:VAL:HG12	2:CC:94:LEU:N	2.36	0.40
2:CC:259:ASN:O	2:CC:260:LYS:HB2	2.21	0.40
4:CD:70:LYS:O	4:CD:71:ALA:HB3	2.21	0.40
8:CH:17:ASP:CG	46:HM:40:ALA:HB1	2.42	0.40
9:CI:28:GLY:CA	9:CI:32:VAL:HB	2.52	0.40
12:CL:77:ILE:HG12	12:CL:95:LEU:HD22	2.02	0.40
12:CL:123:ARG:NE	12:CL:143:GLU:OE2	2.54	0.40
24:CX:6:VAL:CG1	24:CX:50:VAL:HG22	2.52	0.40
32:C5:57:ASN:C	32:C5:59:LEU:N	2.73	0.40
32:C5:71:CYS:CA	32:C5:117:LEU:CD1	2.99	0.40
32:C5:110:ALA:O	32:C5:113:PHE:N	2.45	0.40
32:C5:118:ILE:HB	32:C5:119:PRO:CD	2.51	0.40
35:DA:463:U:H5'	35:DA:464:U:OP2	2.21	0.40
35:DA:468:A:N1	35:DA:469:C:N4	2.69	0.40
35:DA:672:U:O2'	39:DF:86:ARG:NH1	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:841:C:N3	35:DA:843:U:C6	2.90	0.40
35:DA:1049:U:C2	35:DA:1201:A:C2	3.09	0.40
35:DA:1350:A:OP1	42:DI:123:ARG:NH1	2.55	0.40
35:DA:1468:A:C2'	35:DA:1469:C:C5'	2.97	0.40
34:DB:30:ILE:HD11	34:DB:188:THR:HB	2.03	0.40
34:DB:116:LEU:HB3	34:DB:140:LEU:HD11	2.03	0.40
36:DC:26:THR:HG22	47:DN:76:LYS:HD3	2.03	0.40
40:DG:24:ALA:O	40:DG:27:VAL:HG12	2.21	0.40
50:DQ:19:LYS:HB3	50:DQ:47:HIS:CE1	2.57	0.40
52:DS:36:ARG:HH22	52:DS:77:THR:HG23	1.85	0.40
55:DV:309:ARG:HB3	55:DV:340:SER:CB	2.51	0.40
55:DV:525:LEU:HD21	55:DV:535:GLU:HB2	2.03	0.40
3:EA:169:G:H2'	3:EA:170:U:C6	2.56	0.40
3:EA:634:C:H2'	3:EA:635:C:H6	1.87	0.40
3:EA:747:U:C4	3:EA:2613:U:C4	3.10	0.40
3:EA:1094:U:H2'	3:EA:1096:A:OP2	2.21	0.40
3:EA:1649:G:C2'	3:EA:1650:A:H5'	2.51	0.40
3:EA:2283:C:C2	3:EA:2389:G:C2	3.09	0.40
3:EA:2289:G:C2	3:EA:2290:G:C8	3.10	0.40
3:EA:2369:A:C2	3:EA:2370:G:C4	3.09	0.40
3:EA:2742:G:OP1	31:E4:36:ARG:HD3	2.21	0.40
1:EB:78:A:H2'	1:EB:79:G:O4'	2.21	0.40
5:EE:5:LEU:CD1	5:EE:122:GLU:HB2	2.51	0.40
6:EF:116:LEU:O	6:EF:176:PHE:HA	2.21	0.40
7:EG:162:ARG:HB3	7:EG:166:GLU:HG2	2.04	0.40
9:EI:21:PRO:N	9:EI:22:PRO:CD	2.85	0.40
10:EJ:44:TYR:CE1	17:EQ:59:LEU:HD13	2.57	0.40
25:EY:56:LEU:O	25:EY:57:LEU:HB3	2.19	0.40
29:E2:35:ARG:HG2	29:E2:42:LEU:HD21	2.03	0.40
29:E2:43:THR:O	29:E2:43:THR:OG1	2.26	0.40
34:FB:9:LEU:HB2	34:FB:42:LEU:HD11	2.02	0.40
34:FB:113:LEU:HB2	34:FB:143:LEU:HD12	2.03	0.40
39:FF:29:ILE:HD13	39:FF:64:VAL:HG11	2.04	0.40
46:FM:43:VAL:HG13	46:FM:47:GLU:HG2	2.04	0.40
55:FV:119:VAL:HG23	55:FV:157:GLN:HB3	2.02	0.40
55:FV:169:LEU:HD21	55:FV:285:TYR:CE1	2.56	0.40
55:FV:492:GLU:OE1	55:FV:567:ALA:N	2.52	0.40
1:GB:64:G:O6	60:GB:1302:HOH:O	2.21	0.40
3:GA:18:U:O3'	17:GQ:22:GLY:HA2	2.21	0.40
3:GA:224:U:N3	3:GA:225:C:C5	2.88	0.40
3:GA:247:G:C2	3:GA:252:G:C6	3.08	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:GA:483:A:O2'	21:GU:56:GLY:HA2	2.21	0.40
3:GA:801:G:H4'	3:GA:802:A:OP2	2.21	0.40
3:GA:818:G:N2	3:GA:1190:G:N1	2.70	0.40
3:GA:864:G:C6	3:GA:865:C:N4	2.89	0.40
3:GA:873:C:N3	3:GA:905:A:C2	2.89	0.40
3:GA:1018:U:H5"	3:GA:1036:G:O2'	2.20	0.40
3:GA:1248:G:C6	5:GE:46:GLN:NE2	2.89	0.40
3:GA:1920:C:O5'	3:GA:1920:C:H6	2.04	0.40
3:GA:2294:G:OP1	15:GO:10:ARG:HD3	2.22	0.40
3:GA:2548:U:C4	3:GA:2549:G:N7	2.90	0.40
3:GA:2745:C:C4	3:GA:2746:U:C4	3.10	0.40
3:GA:2774:C:N4	3:GA:2775:G:C6	2.89	0.40
7:GG:1:SER:O	7:GG:3:VAL:N	2.54	0.40
10:GJ:54:ILE:HD11	10:GJ:56:VAL:CG2	2.51	0.40
14:GN:98:LEU:O	14:GN:112:TYR:N	2.51	0.40
15:GO:75:GLY:HA2	15:GO:106:LEU:HD13	2.02	0.40
15:GO:78:VAL:HG23	15:GO:79:ALA:N	2.36	0.40
17:GQ:91:ARG:HB3	17:GQ:93:ILE:HG23	2.03	0.40
21:GU:33:VAL:HG13	21:GU:66:VAL:CG2	2.50	0.40
26:GZ:10:ARG:C	26:GZ:31:ILE:HG22	2.42	0.40
35:HA:51:A:C6	35:HA:353:A:C2	3.08	0.40
35:HA:316:C:H2'	35:HA:317:U:H6	1.87	0.40
35:HA:469:C:C4	35:HA:470:C:C4	3.10	0.40
35:HA:640:A:H2'	41:HH:107:SER:HB2	2.02	0.40
35:HA:778:G:H2'	35:HA:779:C:O4'	2.20	0.40
35:HA:784:A:C6	35:HA:785:G:C6	3.09	0.40
35:HA:942:G:C2	35:HA:943:U:C5	3.09	0.40
35:HA:1178:G:C6	42:HI:99:ARG:NH2	2.90	0.40
35:HA:1229:A:H62	46:HM:104:THR:CG2	2.34	0.40
35:HA:1328:C:H5"	46:HM:28:THR:HG21	2.02	0.40
35:HA:1469:C:H2'	35:HA:1470:U:C5'	2.52	0.40
37:HD:25:VAL:HG23	37:HD:26:ARG:N	2.36	0.40
41:HH:126:ILE:HG22	41:HH:127:CYS:SG	2.61	0.40
44:HK:24:HIS:HB3	44:HK:31:ILE:CD1	2.52	0.40
44:HK:86:VAL:CG1	44:HK:93:ARG:HE	2.34	0.40
46:HM:25:VAL:CG1	46:HM:29:ARG:HD3	2.50	0.40
46:HM:60:VAL:O	46:HM:60:VAL:HG22	2.20	0.40
54:HU:37:PHE:CE2	54:HU:45:ARG:CZ	3.04	0.40
55:HV:625:GLU:HA	55:HV:628:THR:CG2	2.50	0.40
3:AA:580:U:O3'	17:AQ:30:VAL:CG1	2.70	0.40
3:AA:635:C:P	12:AL:126:ARG:HH11	2.44	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AA:714:U:H5'	3:AA:715:A:OP2	2.21	0.40
3:AA:783:A:C8	3:AA:784:G:H4'	2.56	0.40
3:AA:1007:C:OP1	10:AJ:37:ARG:NH2	2.54	0.40
3:AA:2070:A:C2	3:AA:2071:A:C4	3.09	0.40
3:AA:2103:C:N4	3:AA:2186:G:H1	2.19	0.40
3:AA:2145:C:N3	3:AA:2146:C:N3	2.69	0.40
3:AA:2681:C:C2	3:AA:2724:U:O4	2.74	0.40
10:AJ:73:VAL:HB	10:AJ:75:TYR:CE2	2.57	0.40
14:AN:24:MET:HE2	14:AN:44:LEU:HD22	2.02	0.40
19:AS:15:GLN:NE2	27:A0:16:ARG:CZ	2.84	0.40
19:AS:18:ARG:HG3	19:AS:76:VAL:CG1	2.50	0.40
20:AT:69:ARG:HG3	20:AT:70:HIS:N	2.36	0.40
32:A5:73:LYS:HB2	32:A5:117:LEU:HD21	2.04	0.40
34:BB:153:MET:SD	34:BB:157:PRO:HD3	2.62	0.40
35:BA:509:A:C2	35:BA:510:A:C2	3.09	0.40
35:BA:537:G:H2'	35:BA:538:G:C8	2.56	0.40
35:BA:824:G:O4'	41:BH:2:SER:HA	2.21	0.40
35:BA:927:G:N2	35:BA:1391:U:H1'	2.36	0.40
35:BA:1493:A:OP1	56:BW:1:KBE:CB	2.66	0.40
38:BE:90:THR:HB	38:BE:135:ASN:ND2	2.36	0.40
38:BE:94:VAL:CG2	38:BE:111:MET:SD	3.09	0.40
41:BH:59:LEU:HD11	41:BH:61:LEU:HD21	2.03	0.40
42:BI:88:MET:SD	42:BI:88:MET:C	2.99	0.40
45:BL:95:TYR:CD1	45:BL:95:TYR:N	2.89	0.40
52:BS:63:THR:CG2	52:BS:64:ASP:N	2.84	0.40
54:BU:34:ARG:CG	54:BU:35:ARG:H	2.33	0.40
55:BV:461:MET:H	55:BV:465:HIS:CD2	2.39	0.40
55:BV:611:VAL:HG21	55:BV:689:GLU:CD	2.41	0.40
55:BV:697:ALA:O	55:BV:699:ILE:N	2.53	0.40
3:CA:126:A:C6	3:CA:127:A:N1	2.90	0.40
3:CA:833:A:P	12:CL:39:LYS:HZ1	2.44	0.40
3:CA:1290:C:N4	3:CA:1291:C:N4	2.69	0.40
3:CA:1315:C:O2'	3:CA:1316:U:H5'	2.20	0.40
3:CA:2211:A:H1'	3:CA:2212:A:OP1	2.22	0.40
2:CC:75:ALA:HB1	2:CC:93:VAL:HG13	2.04	0.40
7:CG:25:ILE:HG22	7:CG:78:VAL:HG21	2.02	0.40
9:CI:104:GLN:HG2	9:CI:108:ILE:HD12	2.04	0.40
14:CN:20:MET:HE1	14:CN:40:LYS:HE2	2.03	0.40
26:CZ:40:THR:HG22	26:CZ:43:ILE:HG23	2.02	0.40
32:C5:87:GLU:OE2	32:C5:95:LEU:HD23	2.21	0.40
35:DA:146:G:N2	35:DA:177:G:C8	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:DA:185:U:C4	35:DA:186:C:N4	2.89	0.40
35:DA:787:A:N1	35:DA:788:U:C2	2.89	0.40
35:DA:1059:C:O3'	47:DN:85:ARG:NH2	2.54	0.40
35:DA:1096:C:H2'	35:DA:1097:C:H6	1.86	0.40
35:DA:1369:C:H2'	35:DA:1370:G:O4'	2.20	0.40
34:DB:19:THR:HG23	34:DB:20:ARG:H	1.86	0.40
34:DB:45:THR:CG2	34:DB:49:PHE:HE2	2.34	0.40
39:DF:4:TYR:OH	39:DF:68:GLN:HB3	2.20	0.40
39:DF:45:ARG:HG2	39:DF:46:GLN:N	2.36	0.40
44:DK:59:THR:HB	44:DK:60:PRO:HD2	2.02	0.40
46:DM:11:ASP:O	46:DM:12:HIS:HB2	2.21	0.40
46:DM:33:ILE:HD13	46:DM:59:GLU:HB3	2.02	0.40
55:DV:318:SER:HB3	55:DV:404:ILE:HD11	2.03	0.40
55:DV:630:ASP:HB3	55:DV:673:LEU:HD22	2.02	0.40
3:EA:96:C:H2'	3:EA:97:C:C6	2.57	0.40
3:EA:197:A:N6	3:EA:2430:A:H2'	2.36	0.40
3:EA:528:A:C8	3:EA:528:A:H3'	2.56	0.40
3:EA:870:U:C2'	3:EA:871:U:H5'	2.51	0.40
3:EA:971:G:H2'	3:EA:972:A:C5'	2.52	0.40
3:EA:1141:U:H4'	3:EA:1142:A:O4'	2.21	0.40
3:EA:1278:C:H2'	3:EA:1279:G:H8	1.86	0.40
3:EA:1284:A:N1	3:EA:1285:A:C2	2.90	0.40
3:EA:2250:G:H8	3:EA:2250:G:O5'	2.04	0.40
1:EB:72:G:O2'	1:EB:104:A:N6	2.49	0.40
4:ED:34:VAL:CG2	4:ED:94:GLN:H	2.35	0.40
8:EH:12:LEU:HB2	8:EH:19:VAL:HG11	2.03	0.40
10:EJ:64:VAL:O	10:EJ:65:THR:CB	2.70	0.40
14:EN:55:ALA:O	14:EN:57:THR:N	2.54	0.40
16:EP:80:VAL:HG12	16:EP:81:ASP:N	2.36	0.40
16:EP:80:VAL:O	16:EP:81:ASP:HB3	2.22	0.40
23:EW:39:GLN:HG3	23:EW:56:HIS:CB	2.51	0.40
23:EW:74:LYS:O	23:EW:75:ASN:C	2.59	0.40
32:E5:78:GLY:N	32:E5:79:PRO:HD2	2.36	0.40
32:E5:98:GLU:HA	32:E5:101:LYS:HB2	2.03	0.40
35:FA:130:A:O2'	35:FA:131:A:O5'	2.36	0.40
35:FA:280:C:O4'	50:FQ:40:ARG:NH1	2.54	0.40
35:FA:653:U:H5'	41:FH:56:LYS:CE	2.52	0.40
35:FA:807:A:H2'	35:FA:808:C:C6	2.56	0.40
37:FD:191:LEU:O	37:FD:191:LEU:HD12	2.20	0.40
46:FM:29:ARG:CZ	46:FM:63:PHE:CD2	3.04	0.40
55:FV:75:MET:CE	55:FV:202:PHE:HZ	2.35	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:GB:50:A:OP1	15:GO:67:ASN:HB2	2.21	0.40
1:GB:66:A:OP2	1:GB:108:A:N6	2.55	0.40
3:GA:36:G:N2	3:GA:37:C:H1'	2.36	0.40
3:GA:221:A:C4	3:GA:266:G:N7	2.90	0.40
3:GA:298:G:O2'	3:GA:322:A:N1	2.31	0.40
3:GA:451:U:H2'	3:GA:453:A:N7	2.35	0.40
3:GA:600:G:C4'	5:GE:27:LEU:HD13	2.52	0.40
3:GA:660:C:O4'	5:GE:30:GLN:NE2	2.54	0.40
3:GA:1002:G:C6	3:GA:1154:G:N2	2.89	0.40
3:GA:1021:A:H3'	3:GA:1021:A:N3	2.37	0.40
3:GA:1171:G:H1'	3:GA:1179:G:H1	1.86	0.40
3:GA:1197:G:C2	3:GA:1250:G:C2	3.09	0.40
3:GA:1208:C:C2	3:GA:1239:G:C2	3.10	0.40
3:GA:1213:A:C1'	3:GA:1237:A:C2	3.04	0.40
3:GA:1387:A:H5'	3:GA:1469:A:H1'	2.03	0.40
3:GA:1865:U:P	3:GA:2409:G:H21	2.44	0.40
3:GA:2352:A:N1	23:GW:30:VAL:HG22	2.36	0.40
3:GA:2414:G:C2	3:GA:2415:G:C8	3.09	0.40
3:GA:2533:U:OP1	3:GA:2665:A:O2'	2.28	0.40
3:GA:2556:C:C5	3:GA:2557:G:N7	2.89	0.40
3:GA:2793:C:H2'	3:GA:2794:C:H6	1.82	0.40
3:GA:2830:C:O3'	4:GD:56:LYS:NZ	2.55	0.40
3:GA:2834:G:H2'	3:GA:2879:A:H61	1.86	0.40
7:GG:37:ASN:HD22	7:GG:40:VAL:HG21	1.86	0.40
9:GI:19:PRO:HD2	9:GI:23:VAL:HG23	2.02	0.40
9:GI:79:LEU:HA	9:GI:85:ILE:HD13	2.03	0.40
10:GJ:4:PHE:N	10:GJ:44:TYR:OH	2.55	0.40
10:GJ:34:ARG:CG	10:GJ:39:LYS:HB3	2.51	0.40
12:GL:111:ILE:O	12:GL:113:ALA:N	2.54	0.40
17:GQ:107:ALA:O	17:GQ:110:GLU:HB2	2.21	0.40
28:G1:38:PHE:HD2	28:G1:45:HIS:CE1	2.38	0.40
35:HA:780:A:N6	35:HA:801:U:OP2	2.47	0.40
35:HA:1084:G:C5	35:HA:1085:U:C2	3.09	0.40
35:HA:1088:G:N2	35:HA:1089:G:H1'	2.36	0.40
35:HA:1179:A:H2'	35:HA:1180:A:O4'	2.21	0.40
35:HA:1194:U:H3'	35:HA:1195:C:C6	2.56	0.40
35:HA:1358:U:H5'	47:HN:74:LEU:HD23	2.03	0.40
37:HD:198:HIS:O	37:HD:202:GLU:HB2	2.21	0.40
40:HG:135:VAL:CG2	40:HG:136:LYS:N	2.85	0.40
44:HK:30:THR:HG21	44:HK:63:ALA:HA	2.04	0.40
50:HQ:12:VAL:HG12	50:HQ:13:VAL:N	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
54:HU:9:ASN:HB2	54:HU:11:PRO:HD2	2.02	0.40
3:AA:68:G:H2'	3:AA:69:C:O4'	2.22	0.40
3:AA:181:A:C2	3:AA:182:A:C4	3.09	0.40
3:AA:841:G:C2	3:AA:938:G:C2	3.10	0.40
3:AA:1022:G:C5	3:AA:1140:C:N4	2.89	0.40
3:AA:1124:G:H1'	31:A4:38:GLY:OXT	2.21	0.40
3:AA:1268:A:H2'	3:AA:1269:A:O4'	2.20	0.40
3:AA:1905:C:N4	3:AA:1930:G:C2	2.89	0.40
3:AA:2447:G:C4	3:AA:2500:U:C5	3.09	0.40
3:AA:2799:A:O2'	3:AA:2800:A:OP2	2.32	0.40
3:AA:2868:A:C2	3:AA:2869:G:C4	3.09	0.40
9:AI:52:LEU:HB3	9:AI:53:PRO:CD	2.51	0.40
12:AL:74:THR:HG22	12:AL:107:PHE:HB2	2.03	0.40
21:AU:82:VAL:HG13	21:AU:93:ARG:HB3	2.03	0.40
27:A0:47:TYR:CE1	27:A0:52:LYS:HD3	2.57	0.40
32:A5:40:GLU:O	32:A5:40:GLU:CG	2.70	0.40
32:A5:71:CYS:HA	32:A5:117:LEU:HD11	1.96	0.40
35:BA:209:U:H5	35:BA:211:G:C6	2.40	0.40
35:BA:246:A:C4	35:BA:279:A:N6	2.90	0.40
37:BD:44:ARG:O	37:BD:46:PRO:HD3	2.21	0.40
37:BD:188:ARG:NH1	37:BD:191:LEU:O	2.54	0.40
46:BM:40:ALA:HB3	46:BM:43:VAL:HG23	2.03	0.40
47:BN:51:LEU:HB2	47:BN:52:PRO:CD	2.51	0.40
49:BP:28:ARG:HG2	49:BP:29:ASN:OD1	2.21	0.40
55:BV:53:MET:HB2	55:BV:56:GLU:CG	2.51	0.40
55:BV:103:MET:HG2	55:BV:135:VAL:HG11	2.02	0.40
55:BV:365:GLN:HB2	55:BV:374:ILE:HD11	2.02	0.40
55:BV:526:GLU:N	55:BV:526:GLU:OE1	2.54	0.40
3:CA:188:G:C2'	3:CA:189:G:H5'	2.52	0.40
3:CA:197:A:N6	3:CA:2430:A:H2'	2.36	0.40
3:CA:225:C:C4	3:CA:226:A:N7	2.89	0.40
3:CA:783:A:C8	3:CA:784:G:H4'	2.56	0.40
3:CA:936:A:H2'	3:CA:937:C:H6	1.86	0.40
3:CA:1083:U:P	32:C5:41:LEU:HD22	2.61	0.40
3:CA:1171:G:N2	3:CA:1179:G:C4	2.89	0.40
3:CA:1492:G:H1	3:CA:1498:C:N4	2.20	0.40
3:CA:1654:A:O2'	4:CD:118:PHE:CB	2.70	0.40
3:CA:2064:C:H2'	3:CA:2065:C:C6	2.56	0.40
3:CA:2766:A:N3	3:CA:2766:A:H2'	2.36	0.40
3:CA:2809:A:H62	3:CA:2890:G:H2'	1.86	0.40
2:CC:109:LEU:CD1	2:CC:110:LYS:H	2.34	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:CC:265:PHE:N	2:CC:265:PHE:CD1	2.90	0.40
4:CD:121:THR:O	4:CD:122:VAL:HB	2.21	0.40
6:CF:69:ALA:N	6:CF:82:TYR:O	2.53	0.40
15:CO:31:THR:HG23	15:CO:32:PRO:CD	2.52	0.40
16:CP:50:ARG:CD	16:CP:56:SER:HB3	2.51	0.40
17:CQ:94:LEU:C	17:CQ:96:ASP:H	2.23	0.40
18:CR:4:VAL:HA	18:CR:12:HIS:O	2.21	0.40
20:CT:89:GLU:O	20:CT:91:GLN:N	2.54	0.40
35:DA:248:C:C4	35:DA:249:U:C4	3.10	0.40
35:DA:598:U:H4'	41:DH:86:TYR:CD1	2.56	0.40
35:DA:968:A:H4'	35:DA:969:A:OP2	2.22	0.40
35:DA:1173:U:O5'	35:DA:1173:U:H6	2.05	0.40
35:DA:1266:G:C6	35:DA:1270:G:C6	3.09	0.40
35:DA:1492:A:OP1	45:DL:44:LYS:N	2.54	0.40
36:DC:12:LEU:HB3	36:DC:18:TRP:CZ2	2.57	0.40
37:DD:72:PHE:CZ	37:DD:200:ILE:HD11	2.57	0.40
45:DL:76:GLU:HG3	55:DV:454:ASN:HB2	2.04	0.40
45:DL:83:ARG:NH2	45:DL:96:HIS:CG	2.90	0.40
50:DQ:59:VAL:CG1	50:DQ:75:LEU:HD13	2.51	0.40
55:DV:697:ALA:O	55:DV:699:ILE:N	2.53	0.40
3:EA:323:C:H6	3:EA:1205:A:N1	2.19	0.40
3:EA:346:A:C2	3:EA:347:A:H1'	2.56	0.40
3:EA:438:G:H2'	3:EA:439:A:C8	2.57	0.40
3:EA:452:G:N2	3:EA:458:G:C4	2.89	0.40
3:EA:522:A:N6	3:EA:523:C:N4	2.69	0.40
3:EA:879:G:H2'	3:EA:880:G:H8	1.86	0.40
3:EA:1604:C:H5'	60:EA:3406:HOH:O	2.22	0.40
3:EA:1629:U:H2'	3:EA:1630:A:O4'	2.21	0.40
3:EA:1631:G:N2	3:EA:1634:A:OP2	2.52	0.40
3:EA:1827:U:H2'	3:EA:1828:G:O4'	2.21	0.40
3:EA:2054:A:C2	3:EA:2616:C:C2	3.10	0.40
3:EA:2156:G:H2'	3:EA:2157:G:N2	2.35	0.40
3:EA:2336:A:C6	23:EW:40:ARG:HD3	2.57	0.40
3:EA:2722:G:H4'	14:EN:4:ARG:HB2	2.03	0.40
3:EA:2796:U:C4	3:EA:2798:U:C4	3.09	0.40
3:EA:2831:G:OP2	4:ED:59:ARG:NH1	2.47	0.40
3:EA:2834:G:H2'	3:EA:2879:A:N6	2.36	0.40
1:EB:78:A:C2	1:EB:99:A:C4	3.09	0.40
4:ED:56:LYS:O	4:ED:60:VAL:HG23	2.22	0.40
6:EF:134:GLN:OE1	6:EF:149:ARG:HB3	2.22	0.40
7:EG:88:LEU:HD22	7:EG:161:VAL:HG22	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:EI:14:ALA:CA	9:EI:54:ILE:HD11	2.51	0.40
12:EL:85:VAL:O	12:EL:86:GLU:HB3	2.21	0.40
14:EN:117:ASP:CG	14:EN:118:ARG:H	2.22	0.40
20:ET:15:HIS:O	20:ET:17:SER:N	2.54	0.40
32:E5:102:ALA:O	32:E5:105:LYS:N	2.46	0.40
35:FA:256:U:O4	60:FA:1806:HOH:O	2.20	0.40
35:FA:520:A:N7	35:FA:521:G:C8	2.89	0.40
35:FA:620:C:H1'	37:FD:132:ILE:HD11	2.02	0.40
35:FA:958:A:N1	52:FS:54:GLY:HA3	2.37	0.40
35:FA:971:G:O6	35:FA:1364:U:O2'	2.38	0.40
35:FA:1072:G:C5	35:FA:1073:U:C4	3.10	0.40
38:FE:110:ALA:O	38:FE:111:MET:CB	2.68	0.40
41:FH:47:GLU:N	41:FH:64:LYS:HG3	2.36	0.40
44:FK:58:SER:O	44:FK:91:PRO:HG2	2.21	0.40
46:FM:3:ARG:HD2	46:FM:7:ILE:HD12	2.03	0.40
52:FS:31:LEU:HD23	52:FS:32:ARG:N	2.36	0.40
3:GA:137:U:H5"	3:GA:140:C:C5	2.57	0.40
3:GA:863:A:C2	3:GA:915:C:N4	2.90	0.40
3:GA:871:U:O2	3:GA:872:U:C4	2.75	0.40
3:GA:947:A:C6	3:GA:948:C:C4	3.09	0.40
3:GA:1215:G:O6	3:GA:1235:G:N2	2.54	0.40
3:GA:1515:A:H2'	3:GA:1516:G:O4'	2.22	0.40
3:GA:1853:A:N1	3:GA:1854:A:C2	2.90	0.40
3:GA:2060:A:N6	5:GE:69:ARG:NH2	2.69	0.40
3:GA:2333:A:H5'	3:GA:2335:A:H1'	2.02	0.40
3:GA:2357:G:C5	3:GA:2359:C:OP2	2.75	0.40
5:GE:151:GLY:HA3	5:GE:191:ASP:HB3	2.03	0.40
6:GF:111:ARG:HH22	52:HS:67:VAL:CG2	2.35	0.40
7:GG:26:LYS:HE2	7:GG:32:LEU:HD21	2.03	0.40
7:GG:44:HIS:HA	7:GG:49:LEU:HD23	2.04	0.40
7:GG:132:LEU:N	7:GG:132:LEU:HD23	2.37	0.40
9:GI:18:ASN:N	9:GI:19:PRO:HD3	2.36	0.40
10:GJ:36:LEU:HD13	10:GJ:36:LEU:HA	1.98	0.40
11:GK:70:ARG:O	11:GK:71:ARG:HB2	2.22	0.40
15:GO:105:ALA:O	15:GO:107:ALA:N	2.49	0.40
17:GQ:91:ARG:HB2	17:GQ:94:LEU:HB2	2.04	0.40
24:GX:38:TRP:CD1	24:GX:40:GLU:HB2	2.56	0.40
30:G3:31:ILE:C	30:G3:31:ILE:HD12	2.42	0.40
35:HA:34:C:O4'	45:HL:29:GLN:NE2	2.54	0.40
35:HA:354:G:N1	35:HA:355:C:C4	2.90	0.40
35:HA:469:C:H2'	35:HA:470:C:O4'	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:HA:678:U:H2'	35:HA:679:C:C6	2.57	0.40
35:HA:1088:G:N2	35:HA:1167:A:H62	2.20	0.40
35:HA:1132:C:H3'	35:HA:1133:G:H8	1.86	0.40
36:HC:76:VAL:HG11	36:HC:103:ILE:CD1	2.52	0.40
36:HC:120:ILE:HD11	36:HC:137:ALA:HB2	2.02	0.40
37:HD:167:LYS:HA	37:HD:168:PRO:HD3	1.96	0.40
42:HI:52:LEU:O	42:HI:57:MET:HE2	2.21	0.40
45:HL:3:THR:O	45:HL:7:LEU:HD13	2.22	0.40
55:HV:381:ASP:OD1	55:HV:382:ILE:N	2.48	0.40
3:AA:136:G:H1	3:AA:143:C:H42	1.69	0.40
3:AA:230:G:N2	3:AA:231:A:C4	2.90	0.40
3:AA:629:G:H4'	3:AA:650:C:O2	2.21	0.40
3:AA:1263:U:O2'	27:A0:7:PRO:HD2	2.22	0.40
3:AA:1365:A:C6	3:AA:1366:A:C5	3.10	0.40
3:AA:1378:A:H4'	3:AA:1379:U:OP1	2.20	0.40
3:AA:1450:G:C6	3:AA:1451:C:N4	2.90	0.40
3:AA:2017:U:H5"	3:AA:2018:G:P	2.61	0.40
3:AA:2469:A:C6	3:AA:2482:A:C8	3.10	0.40
4:AD:46:ARG:CZ	4:AD:46:ARG:HB3	2.51	0.40
4:AD:106:LYS:HB3	4:AD:206:ALA:CB	2.52	0.40
6:AF:148:VAL:HG23	6:AF:149:ARG:H	1.87	0.40
7:AG:166:GLU:CD	7:AG:166:GLU:C	2.80	0.40
10:AJ:36:LEU:HD21	10:AJ:122:LEU:HB2	2.04	0.40
10:AJ:110:PRO:HB2	10:AJ:111:LYS:CG	2.52	0.40
16:AP:33:GLU:HG3	16:AP:36:LYS:O	2.22	0.40
30:A3:30:HIS:ND1	30:A3:31:ILE:HG23	2.36	0.40
32:A5:47:GLU:CG	32:A5:95:LEU:HD21	2.51	0.40
35:BA:62:U:O2'	35:BA:379:C:O2	2.27	0.40
35:BA:539:A:H2'	35:BA:540:G:C8	2.56	0.40
35:BA:1113:C:H2'	35:BA:1114:C:H6	1.87	0.40
35:BA:1126:U:O2	35:BA:1280:A:H2'	2.21	0.40
36:BC:40:ARG:HG2	36:BC:55:ILE:HG13	2.03	0.40
36:BC:184:TYR:HA	36:BC:200:VAL:O	2.22	0.40
37:BD:91:LEU:HD11	37:BD:197:GLU:HG3	2.02	0.40
40:BG:122:ASN:O	40:BG:126:ASP:HB2	2.22	0.40
44:BK:93:ARG:NH1	54:BU:25:LYS:HE2	2.36	0.40
45:BL:14:ARG:NH1	45:BL:15:LYS:HG2	2.36	0.40
47:BN:36:ALA:HB2	47:BN:41:ARG:HG3	2.03	0.40
48:BO:43:PHE:CZ	48:BO:53:ARG:HA	2.56	0.40
55:BV:104:ARG:HD2	55:BV:104:ARG:C	2.41	0.40
55:BV:224:GLU:HG3	55:BV:237:TYR:CE2	2.57	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:BV:497:LYS:HG2	55:BV:524:PRO:HD2	2.03	0.40
55:BV:512:ARG:HG3	55:BV:514:GLN:NE2	2.37	0.40
1:CB:42:C:P	6:CF:63:LYS:NZ	2.95	0.40
1:CB:42:C:H4'	6:CF:63:LYS:HD2	2.03	0.40
3:CA:271:G:C2	3:CA:367:G:C2	3.09	0.40
3:CA:288:U:H2'	3:CA:289:G:O4'	2.22	0.40
3:CA:490:C:H4'	3:CA:491:G:OP2	2.22	0.40
3:CA:802:A:C5	3:CA:803:U:C4	3.09	0.40
3:CA:1062:G:H2'	3:CA:1063:G:C8	2.56	0.40
3:CA:1168:G:H3'	3:CA:1169:A:H8	1.87	0.40
3:CA:1208:C:C4	3:CA:1209:U:C4	3.10	0.40
3:CA:1865:U:C5	3:CA:1875:G:C2	3.09	0.40
3:CA:1975:G:C6	3:CA:1976:U:C4	3.10	0.40
3:CA:2478:A:C2'	3:CA:2479:U:H5'	2.51	0.40
3:CA:2591:C:P	2:CC:237:ARG:HG3	2.62	0.40
3:CA:2902:C:HO2'	3:CA:2903:U:P	2.44	0.40
4:CD:149:ASN:CG	4:CD:150:GLN:H	2.23	0.40
7:CG:19:ASN:O	7:CG:22:VAL:HG22	2.21	0.40
10:CJ:122:LEU:C	10:CJ:122:LEU:HD12	2.42	0.40
11:CK:18:ARG:H	11:CK:45:GLU:HB2	1.86	0.40
12:CL:95:LEU:HD11	12:CL:125:LEU:HD11	2.04	0.40
14:CN:56:LYS:HD2	14:CN:88:ALA:HA	2.03	0.40
19:CS:27:LYS:O	19:CS:71:VAL:HG12	2.22	0.40
22:CV:1:MET:HG3	22:CV:2:PHE:N	2.36	0.40
35:DA:468:A:C2	35:DA:469:C:N4	2.89	0.40
35:DA:602:A:H2'	35:DA:603:U:C6	2.56	0.40
35:DA:632:U:H3'	35:DA:633:G:H5'	2.02	0.40
35:DA:938:A:C6	35:DA:939:G:C5	3.09	0.40
35:DA:1074:G:C6	35:DA:1075:U:N3	2.90	0.40
35:DA:1346:A:N1	35:DA:1374:A:H5"	2.36	0.40
35:DA:1375:A:C6	35:DA:1376:U:C4	3.10	0.40
36:DC:105:GLU:HG2	36:DC:106:VAL:N	2.36	0.40
41:DH:11:LEU:CD2	41:DH:75:ILE:HD11	2.52	0.40
43:DJ:6:ILE:O	43:DJ:76:ILE:HB	2.21	0.40
48:DO:45:GLU:O	48:DO:47:LYS:N	2.53	0.40
55:DV:90:PRO:HG2	55:DV:98:GLU:HB2	2.04	0.40
55:DV:532:LYS:HD3	55:DV:534:TYR:H	1.86	0.40
3:EA:276:U:C4	3:EA:277:G:N2	2.90	0.40
3:EA:333:G:C6	3:EA:334:C:C4	3.09	0.40
3:EA:558:U:O3'	10:EJ:111:LYS:HE3	2.22	0.40
3:EA:691:C:O2'	2:EC:40:GLY:HA3	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:EA:2343:U:HO2'	3:EA:2373:G:HO2'	1.65	0.40
3:EA:2427:C:H5"	3:EA:2428:G:OP1	2.21	0.40
3:EA:2447:G:C4	3:EA:2500:U:C5	3.10	0.40
2:EC:76:VAL:HG12	2:EC:94:LEU:HB3	2.04	0.40
4:ED:177:VAL:HG13	4:ED:187:LEU:HD11	2.03	0.40
6:EF:168:LEU:C	6:EF:168:LEU:HD12	2.42	0.40
7:EG:36:LEU:HD22	7:EG:36:LEU:N	2.37	0.40
19:ES:66:ILE:HD13	19:ES:67:ASP:N	2.37	0.40
21:EU:39:ASN:O	21:EU:62:ALA:N	2.51	0.40
35:FA:158:G:C5	35:FA:164:G:C6	3.10	0.40
35:FA:202:G:O2'	35:FA:468:A:H8	2.04	0.40
35:FA:570:G:H1'	35:FA:820:U:C4	2.57	0.40
35:FA:751:U:H4'	48:FO:24:SER:HA	2.04	0.40
34:FB:17:HIS:CD2	34:FB:202:ASN:ND2	2.90	0.40
36:FC:121:THR:CG2	36:FC:122:SER:N	2.85	0.40
38:FE:96:MET:HE2	38:FE:115:LEU:HD21	2.03	0.40
39:FF:77:THR:O	39:FF:81:ASN:CB	2.69	0.40
40:FG:12:ILE:HG22	40:FG:13:LEU:O	2.22	0.40
41:FH:112:THR:HG23	41:FH:115:ALA:HB2	2.03	0.40
44:FK:63:ALA:CB	44:FK:92:GLY:HA3	2.51	0.40
44:FK:107:ILE:HD11	44:FK:110:ILE:HG13	2.04	0.40
53:FT:24:ARG:N	53:FT:24:ARG:HD2	2.36	0.40
55:FV:282:VAL:HG13	55:FV:286:LEU:HD23	2.03	0.40
3:GA:283:G:N1	3:GA:284:U:C2	2.90	0.40
3:GA:463:G:N2	3:GA:466:A:OP2	2.53	0.40
3:GA:497:A:C5	3:GA:498:G:N7	2.90	0.40
3:GA:587:C:O2	12:GL:33:ARG:NH2	2.54	0.40
3:GA:874:G:H1'	3:GA:904:G:N2	2.36	0.40
3:GA:1000:A:C5	3:GA:1155:A:C5	3.10	0.40
3:GA:1243:C:C4	3:GA:1244:A:N7	2.89	0.40
3:GA:1678:A:H2'	3:GA:1679:A:O4'	2.21	0.40
3:GA:1722:A:N6	3:GA:1738:G:H1'	2.36	0.40
3:GA:1783:A:C2	3:GA:2588:G:O4'	2.75	0.40
3:GA:2304:G:H21	3:GA:2312:U:H3	1.68	0.40
3:GA:2527:C:C4	3:GA:2528:U:C5	3.09	0.40
2:GC:24:HIS:CE1	2:GC:79:ARG:HH21	2.40	0.40
2:GC:175:LEU:CD1	2:GC:175:LEU:N	2.84	0.40
2:GC:259:ASN:O	2:GC:260:LYS:HB2	2.22	0.40
9:GI:75:ALA:HA	9:GI:112:LYS:HD2	2.03	0.40
10:GJ:89:PHE:CE2	10:GJ:100:VAL:HG11	2.57	0.40
13:GM:71:LYS:HB3	13:GM:93:VAL:O	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:GM:91:TYR:N	13:GM:91:TYR:CD1	2.90	0.40
16:GP:9:GLN:C	16:GP:11:GLN:H	2.23	0.40
21:GU:99:SER:O	21:GU:99:SER:OG	2.36	0.40
35:HA:50:A:O2'	35:HA:360:G:N2	2.54	0.40
35:HA:505:G:H2'	35:HA:506:G:C8	2.56	0.40
35:HA:735:C:H1'	51:HR:64:TYR:CZ	2.56	0.40
35:HA:1014:A:H4'	52:HS:14:HIS:CG	2.57	0.40
35:HA:1189:U:H2'	35:HA:1190:G:H5'	2.03	0.40
35:HA:1338:G:N2	35:HA:1339:A:C4	2.89	0.40
35:HA:1351:U:H2'	35:HA:1352:C:C6	2.57	0.40
35:HA:1373:G:H5"	40:HG:36:LYS:HD2	2.04	0.40
34:HB:140:LEU:O	34:HB:143:LEU:HG	2.21	0.40
38:HE:80:THR:OG1	38:HE:81:LEU:N	2.55	0.40
50:HQ:62:ARG:HG2	50:HQ:76:VAL:HG13	2.02	0.40
52:HS:13:LEU:HD23	52:HS:13:LEU:HA	1.97	0.40
53:HT:3:ASN:O	53:HT:5:LYS:N	2.50	0.40
55:HV:15:ILE:CD1	55:HV:86:ILE:HG23	2.52	0.40
55:HV:407:GLU:O	55:HV:408:ARG:CB	2.69	0.40

All (2) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:FA:1029:U:O3'	3:GA:1508:A:N6[1_565]	2.04	0.16
43:FJ:85:ASP:OD1	3:GA:1722:A:O2'[1_565]	2.16	0.04

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
2	AC	269/273 (98%)	211 (78%)	43 (16%)	15 (6%)	1 4

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
2	CC	269/273 (98%)	211 (78%)	42 (16%)	16 (6%)	1 4
2	EC	269/273 (98%)	212 (79%)	44 (16%)	13 (5%)	2 7
2	GC	269/273 (98%)	210 (78%)	42 (16%)	17 (6%)	1 3
4	AD	207/209 (99%)	163 (79%)	30 (14%)	14 (7%)	1 3
4	CD	207/209 (99%)	166 (80%)	27 (13%)	14 (7%)	1 3
4	ED	207/209 (99%)	165 (80%)	29 (14%)	13 (6%)	1 3
4	GD	207/209 (99%)	161 (78%)	32 (16%)	14 (7%)	1 3
5	AE	199/201 (99%)	162 (81%)	27 (14%)	10 (5%)	1 6
5	CE	199/201 (99%)	159 (80%)	27 (14%)	13 (6%)	1 3
5	EE	199/201 (99%)	164 (82%)	24 (12%)	11 (6%)	1 5
5	GE	199/201 (99%)	159 (80%)	30 (15%)	10 (5%)	1 6
6	AF	175/179 (98%)	141 (81%)	30 (17%)	4 (2%)	5 20
6	CF	175/179 (98%)	145 (83%)	25 (14%)	5 (3%)	3 15
6	EF	175/179 (98%)	140 (80%)	26 (15%)	9 (5%)	1 6
6	GF	175/179 (98%)	140 (80%)	26 (15%)	9 (5%)	1 6
7	AG	174/177 (98%)	127 (73%)	30 (17%)	17 (10%)	0 1
7	CG	174/177 (98%)	131 (75%)	28 (16%)	15 (9%)	0 1
7	EG	174/177 (98%)	125 (72%)	35 (20%)	14 (8%)	1 2
7	GG	174/177 (98%)	126 (72%)	30 (17%)	18 (10%)	0 1
8	AH	48/50 (96%)	29 (60%)	14 (29%)	5 (10%)	0 1
8	CH	48/50 (96%)	31 (65%)	12 (25%)	5 (10%)	0 1
8	EH	48/50 (96%)	31 (65%)	12 (25%)	5 (10%)	0 1
8	GH	48/50 (96%)	30 (62%)	15 (31%)	3 (6%)	1 3
9	AI	139/142 (98%)	97 (70%)	33 (24%)	9 (6%)	1 3
9	CI	139/142 (98%)	95 (68%)	38 (27%)	6 (4%)	2 8
9	EI	139/142 (98%)	97 (70%)	38 (27%)	4 (3%)	3 15
9	GI	139/142 (98%)	95 (68%)	34 (24%)	10 (7%)	1 2
10	AJ	140/142 (99%)	113 (81%)	18 (13%)	9 (6%)	1 3
10	CJ	140/142 (99%)	112 (80%)	20 (14%)	8 (6%)	1 4
10	EJ	140/142 (99%)	114 (81%)	17 (12%)	9 (6%)	1 3
10	GJ	140/142 (99%)	113 (81%)	19 (14%)	8 (6%)	1 4

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
11	AK	120/123 (98%)	96 (80%)	14 (12%)	10 (8%)	0 2
11	CK	120/123 (98%)	93 (78%)	21 (18%)	6 (5%)	1 6
11	EK	120/123 (98%)	92 (77%)	21 (18%)	7 (6%)	1 4
11	GK	120/123 (98%)	92 (77%)	20 (17%)	8 (7%)	1 3
12	AL	141/144 (98%)	104 (74%)	32 (23%)	5 (4%)	3 12
12	CL	141/144 (98%)	103 (73%)	33 (23%)	5 (4%)	3 12
12	EL	141/144 (98%)	108 (77%)	26 (18%)	7 (5%)	1 6
12	GL	141/144 (98%)	103 (73%)	32 (23%)	6 (4%)	2 8
13	AM	134/136 (98%)	107 (80%)	16 (12%)	11 (8%)	1 2
13	CM	134/136 (98%)	110 (82%)	16 (12%)	8 (6%)	1 4
13	EM	134/136 (98%)	106 (79%)	18 (13%)	10 (8%)	1 2
13	GM	134/136 (98%)	109 (81%)	17 (13%)	8 (6%)	1 4
14	AN	118/127 (93%)	101 (86%)	16 (14%)	1 (1%)	16 45
14	CN	118/127 (93%)	103 (87%)	14 (12%)	1 (1%)	16 45
14	EN	118/127 (93%)	100 (85%)	17 (14%)	1 (1%)	16 45
14	GN	118/127 (93%)	98 (83%)	19 (16%)	1 (1%)	16 45
15	AO	114/117 (97%)	95 (83%)	18 (16%)	1 (1%)	14 43
15	CO	114/117 (97%)	95 (83%)	15 (13%)	4 (4%)	3 12
15	EO	114/117 (97%)	95 (83%)	18 (16%)	1 (1%)	14 43
15	GO	114/117 (97%)	95 (83%)	15 (13%)	4 (4%)	3 12
16	AP	112/115 (97%)	86 (77%)	17 (15%)	9 (8%)	1 2
16	CP	112/115 (97%)	87 (78%)	16 (14%)	9 (8%)	1 2
16	EP	112/115 (97%)	84 (75%)	16 (14%)	12 (11%)	0 1
16	GP	112/115 (97%)	85 (76%)	19 (17%)	8 (7%)	1 2
17	AQ	115/118 (98%)	99 (86%)	12 (10%)	4 (4%)	3 12
17	CQ	115/118 (98%)	99 (86%)	12 (10%)	4 (4%)	3 12
17	EQ	115/118 (98%)	99 (86%)	12 (10%)	4 (4%)	3 12
17	GQ	115/118 (98%)	99 (86%)	14 (12%)	2 (2%)	7 27
18	AR	101/103 (98%)	83 (82%)	15 (15%)	3 (3%)	3 15
18	CR	101/103 (98%)	83 (82%)	15 (15%)	3 (3%)	3 15
18	ER	101/103 (98%)	83 (82%)	15 (15%)	3 (3%)	3 15

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
18	GR	101/103 (98%)	83 (82%)	13 (13%)	5 (5%)	1 6
19	AS	108/110 (98%)	94 (87%)	9 (8%)	5 (5%)	2 8
19	CS	108/110 (98%)	95 (88%)	9 (8%)	4 (4%)	2 11
19	ES	108/110 (98%)	92 (85%)	10 (9%)	6 (6%)	1 4
19	GS	108/110 (98%)	91 (84%)	11 (10%)	6 (6%)	1 4
20	AT	91/100 (91%)	57 (63%)	24 (26%)	10 (11%)	0 1
20	CT	91/100 (91%)	55 (60%)	25 (28%)	11 (12%)	0 1
20	ET	91/100 (91%)	56 (62%)	26 (29%)	9 (10%)	0 1
20	GT	91/100 (91%)	58 (64%)	23 (25%)	10 (11%)	0 1
21	AU	100/104 (96%)	74 (74%)	16 (16%)	10 (10%)	0 1
21	CU	100/104 (96%)	75 (75%)	17 (17%)	8 (8%)	1 2
21	EU	100/104 (96%)	74 (74%)	15 (15%)	11 (11%)	0 1
21	GU	100/104 (96%)	76 (76%)	14 (14%)	10 (10%)	0 1
22	AV	92/94 (98%)	81 (88%)	11 (12%)	0	100 100
22	CV	92/94 (98%)	80 (87%)	11 (12%)	1 (1%)	12 37
22	EV	92/94 (98%)	80 (87%)	12 (13%)	0	100 100
22	GV	92/94 (98%)	78 (85%)	13 (14%)	1 (1%)	12 37
23	AW	77/85 (91%)	39 (51%)	22 (29%)	16 (21%)	0 0
23	CW	77/85 (91%)	41 (53%)	17 (22%)	19 (25%)	0 0
23	EW	77/85 (91%)	41 (53%)	21 (27%)	15 (20%)	0 0
23	GW	77/85 (91%)	40 (52%)	21 (27%)	16 (21%)	0 0
24	AX	75/78 (96%)	64 (85%)	8 (11%)	3 (4%)	2 10
24	CX	75/78 (96%)	63 (84%)	10 (13%)	2 (3%)	4 17
24	EX	75/78 (96%)	63 (84%)	9 (12%)	3 (4%)	2 10
24	GX	75/78 (96%)	63 (84%)	9 (12%)	3 (4%)	2 10
25	AY	61/63 (97%)	39 (64%)	18 (30%)	4 (7%)	1 3
25	CY	61/63 (97%)	42 (69%)	15 (25%)	4 (7%)	1 3
25	EY	61/63 (97%)	40 (66%)	17 (28%)	4 (7%)	1 3
25	GY	61/63 (97%)	39 (64%)	20 (33%)	2 (3%)	3 13
26	AZ	56/59 (95%)	46 (82%)	8 (14%)	2 (4%)	3 12
26	CZ	56/59 (95%)	46 (82%)	8 (14%)	2 (4%)	3 12

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
26	EZ	56/59 (95%)	46 (82%)	8 (14%)	2 (4%)	3 12
26	GZ	56/59 (95%)	44 (79%)	10 (18%)	2 (4%)	3 12
27	A0	54/57 (95%)	43 (80%)	7 (13%)	4 (7%)	1 2
27	C0	54/57 (95%)	45 (83%)	3 (6%)	6 (11%)	0 1
27	E0	54/57 (95%)	44 (82%)	6 (11%)	4 (7%)	1 2
27	G0	54/57 (95%)	46 (85%)	4 (7%)	4 (7%)	1 2
28	A1	48/55 (87%)	42 (88%)	3 (6%)	3 (6%)	1 3
28	C1	48/55 (87%)	42 (88%)	4 (8%)	2 (4%)	2 9
28	E1	48/55 (87%)	42 (88%)	4 (8%)	2 (4%)	2 9
28	G1	48/55 (87%)	42 (88%)	3 (6%)	3 (6%)	1 3
29	A2	44/46 (96%)	41 (93%)	3 (7%)	0	100 100
29	C2	44/46 (96%)	41 (93%)	2 (4%)	1 (2%)	5 20
29	E2	44/46 (96%)	40 (91%)	4 (9%)	0	100 100
29	G2	44/46 (96%)	40 (91%)	3 (7%)	1 (2%)	5 20
30	A3	62/65 (95%)	53 (86%)	7 (11%)	2 (3%)	3 13
30	C3	62/65 (95%)	54 (87%)	6 (10%)	2 (3%)	3 13
30	E3	62/65 (95%)	56 (90%)	4 (6%)	2 (3%)	3 13
30	G3	62/65 (95%)	54 (87%)	6 (10%)	2 (3%)	3 13
31	A4	36/38 (95%)	29 (81%)	4 (11%)	3 (8%)	0 2
31	C4	36/38 (95%)	29 (81%)	4 (11%)	3 (8%)	0 2
31	E4	36/38 (95%)	29 (81%)	4 (11%)	3 (8%)	0 2
31	G4	36/38 (95%)	30 (83%)	2 (6%)	4 (11%)	0 1
32	A5	146/165 (88%)	77 (53%)	40 (27%)	29 (20%)	0 0
32	C5	146/165 (88%)	78 (53%)	45 (31%)	23 (16%)	0 0
32	E5	143/165 (87%)	79 (55%)	41 (29%)	23 (16%)	0 0
33	A6	28/121 (23%)	20 (71%)	7 (25%)	1 (4%)	3 12
34	BB	216/241 (90%)	151 (70%)	51 (24%)	14 (6%)	1 3
34	DB	216/241 (90%)	157 (73%)	47 (22%)	12 (6%)	1 4
34	FB	216/241 (90%)	153 (71%)	51 (24%)	12 (6%)	1 4
34	HB	216/241 (90%)	153 (71%)	51 (24%)	12 (6%)	1 4
36	BC	204/233 (88%)	181 (89%)	18 (9%)	5 (2%)	4 18

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
36	DC	204/233 (88%)	179 (88%)	20 (10%)	5 (2%)	4 18
36	FC	204/233 (88%)	180 (88%)	18 (9%)	6 (3%)	3 15
36	HC	204/233 (88%)	181 (89%)	17 (8%)	6 (3%)	3 15
37	BD	203/206 (98%)	162 (80%)	30 (15%)	11 (5%)	1 5
37	DD	203/206 (98%)	162 (80%)	29 (14%)	12 (6%)	1 4
37	FD	203/206 (98%)	163 (80%)	29 (14%)	11 (5%)	1 5
37	HD	203/206 (98%)	165 (81%)	26 (13%)	12 (6%)	1 4
38	BE	148/167 (89%)	123 (83%)	18 (12%)	7 (5%)	2 7
38	DE	148/167 (89%)	125 (84%)	18 (12%)	5 (3%)	3 13
38	FE	148/167 (89%)	122 (82%)	20 (14%)	6 (4%)	2 9
38	HE	148/167 (89%)	121 (82%)	20 (14%)	7 (5%)	2 7
39	BF	100/135 (74%)	79 (79%)	15 (15%)	6 (6%)	1 4
39	DF	98/135 (73%)	80 (82%)	13 (13%)	5 (5%)	1 6
39	FF	98/135 (73%)	81 (83%)	11 (11%)	6 (6%)	1 4
39	HF	98/135 (73%)	76 (78%)	18 (18%)	4 (4%)	2 9
40	BG	149/179 (83%)	128 (86%)	20 (13%)	1 (1%)	19 49
40	DG	149/179 (83%)	125 (84%)	22 (15%)	2 (1%)	10 33
40	FG	149/179 (83%)	127 (85%)	21 (14%)	1 (1%)	19 49
40	HG	149/179 (83%)	127 (85%)	20 (13%)	2 (1%)	10 33
41	BH	127/130 (98%)	114 (90%)	12 (9%)	1 (1%)	16 45
41	DH	127/130 (98%)	113 (89%)	12 (9%)	2 (2%)	8 28
41	FH	127/130 (98%)	112 (88%)	13 (10%)	2 (2%)	8 28
41	HH	127/130 (98%)	112 (88%)	13 (10%)	2 (2%)	8 28
42	BI	125/130 (96%)	105 (84%)	14 (11%)	6 (5%)	2 7
42	DI	125/130 (96%)	102 (82%)	22 (18%)	1 (1%)	16 45
42	FI	125/130 (96%)	106 (85%)	13 (10%)	6 (5%)	2 7
42	HI	125/130 (96%)	103 (82%)	19 (15%)	3 (2%)	5 19
43	BJ	96/103 (93%)	69 (72%)	20 (21%)	7 (7%)	1 2
43	DJ	96/103 (93%)	71 (74%)	19 (20%)	6 (6%)	1 3
43	FJ	96/103 (93%)	69 (72%)	21 (22%)	6 (6%)	1 3
43	HJ	96/103 (93%)	68 (71%)	19 (20%)	9 (9%)	0 1

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
44	BK	115/129 (89%)	97 (84%)	12 (10%)	6 (5%)	1 5
44	DK	115/129 (89%)	92 (80%)	19 (16%)	4 (4%)	3 12
44	FK	115/129 (89%)	96 (84%)	13 (11%)	6 (5%)	1 5
44	HK	115/129 (89%)	91 (79%)	15 (13%)	9 (8%)	1 2
45	BL	121/124 (98%)	101 (84%)	16 (13%)	4 (3%)	3 13
45	DL	121/124 (98%)	98 (81%)	20 (16%)	3 (2%)	4 18
45	FL	121/124 (98%)	100 (83%)	14 (12%)	7 (6%)	1 4
45	HL	121/124 (98%)	101 (84%)	15 (12%)	5 (4%)	2 9
46	BM	112/118 (95%)	98 (88%)	8 (7%)	6 (5%)	1 5
46	DM	112/118 (95%)	96 (86%)	11 (10%)	5 (4%)	2 8
46	FM	112/118 (95%)	99 (88%)	7 (6%)	6 (5%)	1 5
46	HM	112/118 (95%)	92 (82%)	12 (11%)	8 (7%)	1 2
47	BN	92/101 (91%)	73 (79%)	13 (14%)	6 (6%)	1 3
47	DN	92/101 (91%)	71 (77%)	19 (21%)	2 (2%)	5 21
47	FN	92/101 (91%)	71 (77%)	17 (18%)	4 (4%)	2 8
47	HN	92/101 (91%)	70 (76%)	18 (20%)	4 (4%)	2 8
48	BO	86/89 (97%)	75 (87%)	9 (10%)	2 (2%)	5 20
48	DO	86/89 (97%)	75 (87%)	11 (13%)	0	100 100
48	FO	86/89 (97%)	75 (87%)	11 (13%)	0	100 100
48	HO	86/89 (97%)	72 (84%)	11 (13%)	3 (4%)	3 12
49	BP	80/82 (98%)	60 (75%)	17 (21%)	3 (4%)	2 11
49	DP	80/82 (98%)	60 (75%)	15 (19%)	5 (6%)	1 3
49	FP	80/82 (98%)	62 (78%)	15 (19%)	3 (4%)	2 11
49	HP	80/82 (98%)	56 (70%)	21 (26%)	3 (4%)	2 11
50	BQ	78/84 (93%)	59 (76%)	15 (19%)	4 (5%)	1 6
50	DQ	78/84 (93%)	58 (74%)	14 (18%)	6 (8%)	1 2
50	FQ	78/84 (93%)	58 (74%)	17 (22%)	3 (4%)	2 11
50	HQ	78/84 (93%)	58 (74%)	13 (17%)	7 (9%)	0 1
51	BR	53/75 (71%)	47 (89%)	6 (11%)	0	100 100
51	DR	53/75 (71%)	46 (87%)	7 (13%)	0	100 100
51	FR	53/75 (71%)	48 (91%)	5 (9%)	0	100 100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
51	HR	53/75 (71%)	49 (92%)	4 (8%)	0	100 100
52	BS	77/92 (84%)	65 (84%)	11 (14%)	1 (1%)	10 33
52	DS	77/92 (84%)	66 (86%)	11 (14%)	0	100 100
52	FS	77/92 (84%)	64 (83%)	11 (14%)	2 (3%)	4 17
52	HS	77/92 (84%)	66 (86%)	9 (12%)	2 (3%)	4 17
53	BT	83/87 (95%)	74 (89%)	7 (8%)	2 (2%)	5 19
53	DT	83/87 (95%)	74 (89%)	6 (7%)	3 (4%)	3 12
53	FT	83/87 (95%)	75 (90%)	6 (7%)	2 (2%)	5 19
53	HT	83/87 (95%)	73 (88%)	8 (10%)	2 (2%)	5 19
54	BU	49/71 (69%)	26 (53%)	20 (41%)	3 (6%)	1 4
54	DU	49/71 (69%)	25 (51%)	20 (41%)	4 (8%)	1 2
54	FU	49/71 (69%)	24 (49%)	21 (43%)	4 (8%)	1 2
54	HU	49/71 (69%)	29 (59%)	18 (37%)	2 (4%)	2 9
55	BV	686/704 (97%)	559 (82%)	92 (13%)	35 (5%)	1 6
55	DV	685/704 (97%)	559 (82%)	93 (14%)	33 (5%)	2 7
55	FV	685/704 (97%)	564 (82%)	89 (13%)	32 (5%)	2 7
55	HV	685/704 (97%)	562 (82%)	88 (13%)	35 (5%)	1 6
56	BW	2/6 (33%)	0	0	2 (100%)	0 0
56	DW	2/6 (33%)	0	1 (50%)	1 (50%)	0 0
56	FW	2/6 (33%)	2 (100%)	0	0	100 100
56	HW	2/6 (33%)	1 (50%)	0	1 (50%)	0 0
All	All	25302/27000 (94%)	20075 (79%)	3885 (15%)	1342 (5%)	1 5

All (1342) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AC	70	LYS
2	AC	104	LEU
2	AC	121	ALA
2	AC	140	VAL
4	AD	43	ASP
4	AD	73	VAL
4	AD	170	VAL
5	AE	79	ARG
6	AF	111	ARG

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Mol	Chain	Res	Type
7	AG	2	ARG
7	AG	16	VAL
7	AG	28	LYS
7	AG	31	GLU
7	AG	84	LYS
7	AG	164	ALA
7	AG	168	VAL
8	AH	3	VAL
10	AJ	13	ARG
10	AJ	21	THR
10	AJ	44	TYR
10	AJ	45	THR
10	AJ	81	ILE
10	AJ	125	TYR
12	AL	66	PHE
13	AM	14	LYS
13	AM	77	PRO
14	AN	119	SER
16	AP	50	ARG
16	AP	51	ASN
16	AP	93	LYS
19	AS	3	THR
19	AS	14	ALA
19	AS	64	ALA
20	AT	27	SER
20	AT	29	THR
20	AT	40	LYS
21	AU	6	ARG
21	AU	87	GLU
21	AU	92	VAL
21	AU	98	ASN
21	AU	99	SER
23	AW	9	THR
23	AW	18	LYS
23	AW	29	SER
23	AW	36	ILE
23	AW	56	HIS
26	AZ	9	THR
27	A0	23	ALA
30	A3	22	LYS
31	A4	8	LYS
32	A5	27	VAL

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Mol	Chain	Res	Type
32	A5	48	ALA
32	A5	54	VAL
32	A5	55	VAL
32	A5	58	THR
32	A5	69	PHE
32	A5	93	ALA
32	A5	107	GLU
32	A5	108	VAL
32	A5	120	ALA
32	A5	124	ASP
32	A5	130	PRO
34	BB	33	ALA
34	BB	40	ILE
34	BB	119	GLN
36	BC	101	ILE
37	BD	24	GLY
37	BD	25	VAL
37	BD	29	ASP
37	BD	36	GLN
37	BD	125	VAL
37	BD	153	SER
37	BD	166	GLU
37	BD	175	ALA
38	BE	123	VAL
41	BH	67	GLN
42	BI	42	GLU
42	BI	58	VAL
43	BJ	57	VAL
43	BJ	61	ALA
44	BK	14	LYS
44	BK	41	ALA
44	BK	105	PHE
44	BK	127	ARG
45	BL	24	LEU
45	BL	44	LYS
46	BM	4	ILE
46	BM	11	ASP
46	BM	114	LYS
47	BN	52	PRO
47	BN	53	ARG
49	BP	80	LYS
50	BQ	51	ASN

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Mol	Chain	Res	Type
50	BQ	82	ALA
53	BT	4	ILE
54	BU	13	ASP
55	BV	5	THR
55	BV	7	ILE
55	BV	24	THR
55	BV	195	ASP
55	BV	197	ASP
55	BV	200	VAL
55	BV	204	TYR
55	BV	304	ASP
55	BV	423	LYS
55	BV	454	ASN
55	BV	500	ASP
55	BV	529	SER
55	BV	646	GLU
2	CC	70	LYS
2	CC	104	LEU
2	CC	121	ALA
2	CC	140	VAL
4	CD	43	ASP
4	CD	92	VAL
4	CD	118	PHE
4	CD	170	VAL
5	CE	79	ARG
5	CE	175	ILE
6	CF	111	ARG
6	CF	135	ILE
7	CG	2	ARG
7	CG	84	LYS
7	CG	175	LYS
8	CH	3	VAL
8	CH	8	LYS
8	CH	9	VAL
8	CH	11	ASN
9	CI	20	SER
9	CI	59	THR
9	CI	92	PRO
10	CJ	13	ARG
10	CJ	21	THR
10	CJ	45	THR
10	CJ	81	ILE

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Mol	Chain	Res	Type
10	CJ	125	TYR
11	CK	13	ASN
12	CL	66	PHE
13	CM	2	LEU
13	CM	14	LYS
13	CM	69	PRO
13	CM	77	PRO
14	CN	118	ARG
15	CO	68	LYS
16	CP	4	ILE
16	CP	50	ARG
16	CP	51	ASN
16	CP	93	LYS
19	CS	3	THR
19	CS	14	ALA
19	CS	64	ALA
19	CS	96	ILE
20	CT	27	SER
20	CT	40	LYS
21	CU	6	ARG
21	CU	87	GLU
21	CU	92	VAL
21	CU	98	ASN
21	CU	99	SER
23	CW	9	THR
23	CW	14	ASP
23	CW	18	LYS
23	CW	74	LYS
27	C0	23	ALA
28	C1	4	ILE
30	C3	22	LYS
32	C5	27	VAL
32	C5	31	ARG
32	C5	48	ALA
32	C5	54	VAL
32	C5	55	VAL
32	C5	69	PHE
32	C5	93	ALA
32	C5	107	GLU
32	C5	108	VAL
32	C5	120	ALA
32	C5	124	ASP

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Mol	Chain	Res	Type
32	C5	130	PRO
34	DB	22	TRP
34	DB	33	ALA
34	DB	40	ILE
34	DB	119	GLN
34	DB	150	ILE
36	DC	101	ILE
37	DD	25	VAL
37	DD	27	ALA
37	DD	33	LYS
37	DD	153	SER
38	DE	138	ARG
39	DF	63	ASN
42	DI	58	VAL
43	DJ	36	VAL
43	DJ	57	VAL
44	DK	41	ALA
45	DL	24	LEU
45	DL	44	LYS
46	DM	4	ILE
46	DM	114	LYS
50	DQ	12	VAL
50	DQ	13	VAL
50	DQ	51	ASN
53	DT	4	ILE
55	DV	5	THR
55	DV	7	ILE
55	DV	24	THR
55	DV	195	ASP
55	DV	197	ASP
55	DV	200	VAL
55	DV	204	TYR
55	DV	300	ASP
55	DV	304	ASP
55	DV	454	ASN
55	DV	647	SER
55	DV	662	GLU
56	DW	4	SER
2	EC	70	LYS
2	EC	104	LEU
2	EC	140	VAL
2	EC	196	ASN

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Mol	Chain	Res	Type
4	ED	43	ASP
4	ED	73	VAL
4	ED	91	THR
4	ED	92	VAL
4	ED	118	PHE
5	EE	79	ARG
6	EF	10	GLU
6	EF	111	ARG
6	EF	176	PHE
7	EG	2	ARG
7	EG	84	LYS
7	EG	168	VAL
7	EG	175	LYS
8	EH	3	VAL
8	EH	9	VAL
8	EH	10	ALA
9	EI	19	PRO
9	EI	20	SER
9	EI	92	PRO
10	EJ	13	ARG
10	EJ	21	THR
10	EJ	44	TYR
10	EJ	45	THR
10	EJ	81	ILE
10	EJ	125	TYR
11	EK	13	ASN
12	EL	66	PHE
13	EM	14	LYS
13	EM	23	GLY
13	EM	69	PRO
14	EN	118	ARG
16	EP	50	ARG
16	EP	51	ASN
16	EP	92	ARG
16	EP	104	GLY
18	ER	65	ALA
19	ES	3	THR
19	ES	14	ALA
19	ES	64	ALA
19	ES	96	ILE
20	ET	27	SER
20	ET	29	THR

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Mol	Chain	Res	Type
20	ET	40	LYS
21	EU	6	ARG
21	EU	87	GLU
21	EU	88	ASP
21	EU	92	VAL
21	EU	98	ASN
21	EU	99	SER
23	EW	9	THR
23	EW	14	ASP
23	EW	18	LYS
23	EW	29	SER
23	EW	34	SER
23	EW	37	VAL
23	EW	56	HIS
24	EX	76	LYS
25	EY	37	LEU
27	E0	23	ALA
28	E1	4	ILE
30	E3	22	LYS
32	E5	27	VAL
32	E5	48	ALA
32	E5	54	VAL
32	E5	55	VAL
32	E5	58	THR
32	E5	69	PHE
32	E5	88	HIS
32	E5	92	ALA
32	E5	107	GLU
32	E5	108	VAL
32	E5	120	ALA
32	E5	124	ASP
32	E5	130	PRO
34	FB	21	TYR
34	FB	33	ALA
34	FB	40	ILE
34	FB	150	ILE
36	FC	66	VAL
36	FC	101	ILE
37	FD	23	SER
37	FD	29	ASP
37	FD	37	ALA
37	FD	125	VAL

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Mol	Chain	Res	Type
37	FD	153	SER
39	FF	63	ASN
39	FF	92	THR
42	FI	42	GLU
42	FI	43	THR
42	FI	44	ALA
42	FI	58	VAL
43	FJ	57	VAL
44	FK	14	LYS
44	FK	41	ALA
44	FK	127	ARG
45	FL	24	LEU
45	FL	44	LYS
45	FL	123	LYS
46	FM	4	ILE
46	FM	11	ASP
50	FQ	51	ASN
54	FU	12	PHE
55	FV	5	THR
55	FV	7	ILE
55	FV	24	THR
55	FV	195	ASP
55	FV	200	VAL
55	FV	300	ASP
55	FV	304	ASP
55	FV	423	LYS
55	FV	454	ASN
55	FV	646	GLU
55	FV	662	GLU
2	GC	37	SER
2	GC	70	LYS
2	GC	104	LEU
2	GC	121	ALA
2	GC	140	VAL
2	GC	196	ASN
4	GD	43	ASP
4	GD	73	VAL
4	GD	92	VAL
4	GD	169	ARG
6	GF	63	LYS
6	GF	93	GLU
6	GF	135	ILE

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Mol	Chain	Res	Type
6	GF	147	ARG
7	GG	9	VAL
7	GG	16	VAL
7	GG	28	LYS
7	GG	170	THR
8	GH	3	VAL
9	GI	77	VAL
9	GI	85	ILE
9	GI	92	PRO
9	GI	138	VAL
10	GJ	13	ARG
10	GJ	21	THR
10	GJ	45	THR
10	GJ	81	ILE
10	GJ	125	TYR
11	GK	35	VAL
12	GL	5	THR
12	GL	66	PHE
13	GM	14	LYS
13	GM	23	GLY
15	GO	57	ALA
15	GO	112	GLU
15	GO	113	ALA
16	GP	4	ILE
16	GP	50	ARG
16	GP	51	ASN
16	GP	93	LYS
17	GQ	87	VAL
19	GS	3	THR
19	GS	14	ALA
19	GS	18	ARG
19	GS	64	ALA
19	GS	96	ILE
20	GT	27	SER
20	GT	40	LYS
21	GU	6	ARG
21	GU	85	ARG
21	GU	99	SER
23	GW	9	THR
23	GW	18	LYS
23	GW	56	HIS
23	GW	74	LYS

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Mol	Chain	Res	Type
27	G0	23	ALA
28	G1	4	ILE
30	G3	22	LYS
31	G4	4	ARG
31	G4	8	LYS
34	HB	21	TYR
34	HB	33	ALA
34	HB	40	ILE
34	HB	75	ALA
34	HB	119	GLN
34	HB	127	LYS
34	HB	150	ILE
36	HC	101	ILE
37	HD	25	VAL
37	HD	125	VAL
37	HD	153	SER
37	HD	175	ALA
38	HE	98	PRO
39	HF	15	SER
39	HF	54	LEU
43	HJ	57	VAL
43	HJ	93	ALA
44	HK	41	ALA
44	HK	69	ARG
45	HL	24	LEU
45	HL	44	LYS
46	HM	4	ILE
46	HM	11	ASP
46	HM	66	GLU
50	HQ	13	VAL
50	HQ	51	ASN
50	HQ	53	CYS
52	HS	6	LYS
53	HT	4	ILE
55	HV	5	THR
55	HV	7	ILE
55	HV	24	THR
55	HV	195	ASP
55	HV	197	ASP
55	HV	200	VAL
55	HV	204	TYR
55	HV	300	ASP

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Mol	Chain	Res	Type
55	HV	423	LYS
55	HV	454	ASN
55	HV	500	ASP
55	HV	646	GLU
55	HV	662	GLU
2	AC	37	SER
2	AC	77	VAL
2	AC	238	ASN
2	AC	256	THR
4	AD	92	VAL
4	AD	99	GLU
4	AD	107	VAL
4	AD	118	PHE
6	AF	135	ILE
7	AG	169	ARG
8	AH	9	VAL
8	AH	16	GLY
9	AI	20	SER
9	AI	79	LEU
10	AJ	111	LYS
11	AK	35	VAL
11	AK	71	ARG
12	AL	111	ILE
13	AM	2	LEU
13	AM	36	VAL
13	AM	56	ALA
18	AR	65	ALA
19	AS	19	LEU
19	AS	96	ILE
20	AT	36	LYS
20	AT	49	LYS
21	AU	51	LEU
23	AW	14	ASP
23	AW	47	GLY
23	AW	50	VAL
23	AW	74	LYS
25	AY	37	LEU
27	A0	35	GLU
28	A1	4	ILE
28	A1	50	GLU
32	A5	3	LEU
32	A5	33	VAL

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Mol	Chain	Res	Type
32	A5	88	HIS
32	A5	92	ALA
32	A5	116	GLU
32	A5	119	PRO
34	BB	148	GLY
34	BB	150	ILE
36	BC	17	PRO
36	BC	66	VAL
37	BD	33	LYS
38	BE	138	ARG
39	BF	98	GLU
40	BG	7	ILE
43	BJ	74	VAL
49	BP	77	GLU
50	BQ	14	SER
53	BT	69	LYS
55	BV	48	ALA
55	BV	118	GLY
55	BV	202	PHE
55	BV	300	ASP
55	BV	661	SER
55	BV	662	GLU
2	CC	77	VAL
2	CC	196	ASN
2	CC	238	ASN
4	CD	72	GLY
4	CD	99	GLU
4	CD	107	VAL
4	CD	192	ALA
5	CE	7	ASP
7	CG	8	VAL
7	CG	16	VAL
7	CG	28	LYS
7	CG	33	THR
7	CG	164	ALA
7	CG	168	VAL
7	CG	170	THR
10	CJ	44	TYR
10	CJ	74	TYR
11	CK	35	VAL
12	CL	88	GLY
12	CL	111	ILE

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Mol	Chain	Res	Type
13	CM	23	GLY
15	CO	3	LYS
18	CR	65	ALA
18	CR	98	ILE
20	CT	29	THR
20	CT	36	LYS
23	CW	36	ILE
23	CW	50	VAL
23	CW	56	HIS
25	CY	37	LEU
26	CZ	9	THR
29	C2	44	VAL
32	C5	33	VAL
32	C5	58	THR
32	C5	88	HIS
32	C5	92	ALA
32	C5	118	ILE
37	DD	125	VAL
37	DD	175	ALA
41	DH	67	GLN
41	DH	89	LYS
43	DJ	74	VAL
44	DK	127	ARG
49	DP	42	ILE
49	DP	44	SER
49	DP	77	GLU
50	DQ	6	ARG
50	DQ	53	CYS
54	DU	35	ARG
55	DV	93	VAL
55	DV	118	GLY
55	DV	202	PHE
55	DV	423	LYS
55	DV	500	ASP
55	DV	529	SER
55	DV	649	VAL
55	DV	661	SER
2	EC	37	SER
2	EC	121	ALA
2	EC	238	ASN
4	ED	99	GLU
4	ED	107	VAL

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Mol	Chain	Res	Type
4	ED	170	VAL
4	ED	175	LEU
6	EF	2	LYS
6	EF	113	PHE
6	EF	135	ILE
7	EG	16	VAL
7	EG	28	LYS
7	EG	117	PRO
7	EG	164	ALA
7	EG	170	THR
9	EI	12	VAL
10	EJ	111	LYS
11	EK	35	VAL
12	EL	111	ILE
13	EM	13	HIS
13	EM	56	ALA
13	EM	77	PRO
15	EO	3	LYS
16	EP	4	ILE
16	EP	93	LYS
16	EP	103	THR
19	ES	19	LEU
20	ET	36	LYS
20	ET	49	LYS
21	EU	85	ARG
23	EW	36	ILE
23	EW	47	GLY
23	EW	50	VAL
25	EY	7	ARG
26	EZ	9	THR
27	E0	35	GLU
28	E1	50	GLU
32	E5	31	ARG
34	FB	75	ALA
34	FB	119	GLN
37	FD	33	LYS
37	FD	175	ALA
38	FE	99	ALA
38	FE	110	ALA
38	FE	138	ARG
40	FG	7	ILE
41	FH	67	GLN

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Mol	Chain	Res	Type
43	FJ	74	VAL
44	FK	105	PHE
46	FM	114	LYS
47	FN	28	LYS
49	FP	77	GLU
49	FP	80	LYS
52	FS	4	SER
53	FT	69	LYS
55	FV	93	VAL
55	FV	118	GLY
55	FV	197	ASP
55	FV	500	ASP
55	FV	529	SER
55	FV	649	VAL
55	FV	661	SER
55	FV	698	VAL
2	GC	77	VAL
4	GD	95	SER
4	GD	118	PHE
4	GD	144	GLY
5	GE	7	ASP
5	GE	79	ARG
7	GG	2	ARG
7	GG	18	ILE
7	GG	31	GLU
7	GG	84	LYS
7	GG	164	ALA
7	GG	168	VAL
8	GH	9	VAL
9	GI	30	GLN
10	GJ	44	TYR
10	GJ	74	TYR
11	GK	13	ASN
12	GL	81	ASP
12	GL	111	ILE
14	GN	118	ARG
16	GP	34	GLY
18	GR	65	ALA
18	GR	98	ILE
20	GT	29	THR
20	GT	38	ALA
20	GT	55	VAL

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Mol	Chain	Res	Type
21	GU	55	GLY
21	GU	87	GLU
21	GU	98	ASN
23	GW	14	ASP
23	GW	42	THR
23	GW	50	VAL
24	GX	34	SER
25	GY	37	LEU
27	G0	35	GLU
28	G1	50	GLU
31	G4	16	ILE
37	HD	29	ASP
38	HE	110	ALA
38	HE	138	ARG
38	HE	158	GLY
40	HG	8	GLY
40	HG	130	ASN
41	HH	67	GLN
42	HI	42	GLU
43	HJ	28	THR
43	HJ	61	ALA
44	HK	14	LYS
45	HL	78	SER
46	HM	5	ALA
47	HN	62	ASN
49	HP	80	LYS
50	HQ	6	ARG
50	HQ	12	VAL
53	HT	69	LYS
55	HV	93	VAL
55	HV	118	GLY
55	HV	198	GLN
55	HV	304	ASP
55	HV	529	SER
55	HV	649	VAL
55	HV	661	SER
2	AC	110	LYS
4	AD	95	SER
4	AD	109	VAL
4	AD	192	ALA
5	AE	7	ASP
5	AE	70	SER

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Mol	Chain	Res	Type
5	AE	123	LYS
6	AF	176	PHE
7	AG	32	LEU
7	AG	117	PRO
7	AG	170	THR
8	AH	10	ALA
9	AI	11	GLN
11	AK	13	ASN
11	AK	46	ALA
11	AK	93	GLN
13	AM	69	PRO
15	AO	3	LYS
16	AP	113	LEU
18	AR	98	ILE
21	AU	85	ARG
21	AU	101	THR
23	AW	34	SER
24	AX	17	ARG
24	AX	34	SER
26	AZ	34	THR
28	A1	51	ALA
31	A4	4	ARG
32	A5	5	LEU
32	A5	78	GLY
32	A5	118	ILE
33	A6	14	MET
34	BB	18	GLN
34	BB	75	ALA
36	BC	15	VAL
37	BD	167	LYS
38	BE	99	ALA
38	BE	110	ALA
39	BF	54	LEU
39	BF	63	ASN
39	BF	101	PRO
45	BL	98	VAL
46	BM	5	ALA
48	BO	46	HIS
55	BV	93	VAL
55	BV	323	LYS
55	BV	527	PRO
55	BV	541	LYS

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Mol	Chain	Res	Type
55	BV	649	VAL
56	BW	3	SER
56	BW	4	SER
2	CC	37	SER
2	CC	59	GLN
2	CC	197	ALA
4	CD	73	VAL
4	CD	109	VAL
4	CD	175	LEU
5	CE	46	GLN
6	CF	175	PRO
7	CG	117	PRO
7	CG	163	TYR
10	CJ	111	LYS
11	CK	93	GLN
13	CM	56	ALA
13	CM	134	THR
15	CO	57	ALA
15	CO	58	ILE
16	CP	34	GLY
17	CQ	87	VAL
17	CQ	88	GLU
20	CT	49	LYS
21	CU	53	GLN
21	CU	101	THR
23	CW	29	SER
23	CW	42	THR
24	CX	17	ARG
24	CX	34	SER
26	CZ	34	THR
27	C0	35	GLU
31	C4	4	ARG
31	C4	16	ILE
32	C5	119	PRO
32	C5	135	ALA
34	DB	21	TYR
34	DB	72	LYS
34	DB	75	ALA
36	DC	15	VAL
36	DC	66	VAL
37	DD	35	GLU
37	DD	167	LYS

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Mol	Chain	Res	Type
38	DE	110	ALA
40	DG	7	ILE
43	DJ	61	ALA
45	DL	74	LEU
46	DM	5	ALA
46	DM	11	ASP
47	DN	62	ASN
53	DT	68	HIS
53	DT	69	LYS
54	DU	27	GLY
55	DV	198	GLN
55	DV	510	GLY
2	EC	59	GLN
2	EC	77	VAL
2	EC	256	THR
4	ED	169	ARG
5	EE	7	ASP
7	EG	31	GLU
7	EG	33	THR
7	EG	97	VAL
10	EJ	74	TYR
13	EM	2	LEU
13	EM	70	ASP
13	EM	134	THR
16	EP	105	LYS
17	EQ	87	VAL
17	EQ	88	GLU
18	ER	98	ILE
21	EU	55	GLY
21	EU	101	THR
24	EX	17	ARG
25	EY	62	GLY
27	E0	54	ILE
31	E4	4	ARG
31	E4	8	LYS
31	E4	16	ILE
32	E5	72	LEU
32	E5	118	ILE
32	E5	119	PRO
34	FB	18	GLN
34	FB	128	LEU
34	FB	148	GLY

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Mol	Chain	Res	Type
39	FF	91	ARG
43	FJ	61	ALA
46	FM	10	PRO
50	FQ	53	CYS
54	FU	32	VAL
55	FV	198	GLN
55	FV	202	PHE
55	FV	305	THR
55	FV	311	ALA
55	FV	323	LYS
55	FV	510	GLY
55	FV	527	PRO
55	FV	569	TYR
55	FV	647	SER
2	GC	238	ASN
2	GC	256	THR
4	GD	99	GLU
4	GD	107	VAL
4	GD	145	SER
4	GD	170	VAL
4	GD	175	LEU
4	GD	192	ALA
5	GE	46	GLN
5	GE	70	SER
5	GE	123	LYS
6	GF	71	LYS
6	GF	94	ARG
6	GF	111	ARG
6	GF	175	PRO
7	GG	20	GLY
7	GG	163	TYR
9	GI	87	SER
10	GJ	111	LYS
11	GK	46	ALA
13	GM	56	ALA
13	GM	69	PRO
13	GM	73	ILE
13	GM	77	PRO
13	GM	134	THR
15	GO	99	TYR
18	GR	40	MET
20	GT	36	LYS

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Mol	Chain	Res	Type
23	GW	47	GLY
24	GX	17	ARG
26	GZ	9	THR
34	HB	18	GLN
34	HB	72	LYS
34	HB	148	GLY
37	HD	23	SER
37	HD	24	GLY
37	HD	33	LYS
37	HD	35	GLU
37	HD	167	LYS
38	HE	12	GLN
43	HJ	89	ARG
44	HK	101	ASN
44	HK	102	ALA
44	HK	127	ARG
48	HO	46	HIS
49	HP	49	GLY
49	HP	77	GLU
55	HV	94	ASP
55	HV	202	PHE
55	HV	510	GLY
55	HV	698	VAL
56	HW	3	SER
2	AC	59	GLN
2	AC	197	ALA
4	AD	169	ARG
4	AD	175	LEU
6	AF	132	ARG
7	AG	33	THR
7	AG	173	ALA
9	AI	64	ARG
10	AJ	74	TYR
11	AK	119	ALA
12	AL	29	LYS
13	AM	23	GLY
13	AM	134	THR
16	AP	4	ILE
16	AP	92	ARG
16	AP	103	THR
17	AQ	87	VAL
17	AQ	88	GLU

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Mol	Chain	Res	Type
17	AQ	95	ALA
20	AT	28	ASN
20	AT	51	PHE
20	AT	55	VAL
23	AW	37	VAL
24	AX	76	LYS
25	AY	7	ARG
27	A0	54	ILE
31	A4	16	ILE
32	A5	89	PRO
34	BB	9	LEU
34	BB	120	SER
34	BB	128	LEU
36	BC	3	GLN
38	BE	98	PRO
42	BI	120	LYS
42	BI	129	LYS
43	BJ	35	GLN
44	BK	15	GLN
46	BM	105	ASN
47	BN	62	ASN
48	BO	47	LYS
49	BP	49	GLY
55	BV	198	GLN
55	BV	305	THR
55	BV	413	GLU
55	BV	569	TYR
55	BV	698	VAL
2	CC	120	ASP
4	CD	95	SER
4	CD	183	GLU
5	CE	70	SER
5	CE	123	LYS
7	CG	9	VAL
8	CH	16	GLY
9	CI	18	ASN
9	CI	58	ILE
11	CK	118	LEU
11	CK	119	ALA
12	CL	41	ARG
16	CP	81	ASP
17	CQ	85	ALA

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Mol	Chain	Res	Type
20	CT	28	ASN
20	CT	55	VAL
20	CT	86	THR
21	CU	85	ARG
23	CW	34	SER
23	CW	76	ARG
25	CY	7	ARG
27	C0	54	ILE
28	C1	50	GLU
31	C4	8	LYS
32	C5	89	PRO
34	DB	18	GLN
34	DB	148	GLY
36	DC	3	GLN
39	DF	54	LEU
39	DF	56	LYS
39	DF	94	HIS
40	DG	56	LYS
44	DK	14	LYS
44	DK	80	LYS
55	DV	413	GLU
55	DV	569	TYR
55	DV	646	GLU
2	EC	110	LYS
4	ED	95	SER
4	ED	109	VAL
4	ED	192	ALA
5	EE	70	SER
6	EF	175	PRO
8	EH	16	GLY
11	EK	46	ALA
11	EK	93	GLN
11	EK	118	LEU
11	EK	119	ALA
12	EL	29	LYS
12	EL	41	ARG
20	ET	7	LEU
20	ET	55	VAL
24	EX	34	SER
32	E5	89	PRO
37	FD	126	ASN
37	FD	167	LYS

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Mol	Chain	Res	Type
39	FF	54	LEU
39	FF	98	GLU
41	FH	89	LYS
43	FJ	42	LEU
45	FL	74	LEU
46	FM	5	ALA
47	FN	62	ASN
47	FN	92	GLU
52	FS	5	LEU
55	FV	94	ASP
55	FV	219	HIS
55	FV	413	GLU
2	GC	59	GLN
2	GC	110	LYS
2	GC	120	ASP
4	GD	109	VAL
5	GE	11	ALA
6	GF	61	GLY
7	GG	117	PRO
7	GG	166	GLU
11	GK	93	GLN
11	GK	119	ALA
12	GL	41	ARG
16	GP	103	THR
20	GT	16	VAL
20	GT	69	ARG
21	GU	53	GLN
25	GY	7	ARG
31	G4	37	GLN
34	HB	67	LEU
36	HC	3	GLN
37	HD	193	ALA
42	HI	58	VAL
43	HJ	37	ARG
45	HL	74	LEU
46	HM	45	ILE
47	HN	3	LYS
48	HO	47	LYS
55	HV	92	HIS
55	HV	259	ASN
55	HV	305	THR
55	HV	409	MET

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Mol	Chain	Res	Type
55	HV	413	GLU
55	HV	527	PRO
2	AC	64	VAL
2	AC	120	ASP
2	AC	196	ASN
4	AD	183	GLU
5	AE	46	GLN
5	AE	96	VAL
7	AG	97	VAL
7	AG	163	TYR
7	AG	166	GLU
9	AI	12	VAL
9	AI	71	LYS
10	AJ	65	THR
11	AK	49	ARG
11	AK	108	ARG
12	AL	5	THR
12	AL	41	ARG
13	AM	35	ALA
13	AM	73	ILE
16	AP	34	GLY
17	AQ	85	ALA
20	AT	86	THR
20	AT	89	GLU
21	AU	88	ASP
23	AW	46	ALA
23	AW	76	ARG
25	AY	9	LYS
32	A5	36	ASP
32	A5	72	LEU
34	BB	72	LYS
34	BB	124	THR
34	BB	154	GLY
38	BE	24	THR
38	BE	45	ARG
39	BF	100	SER
42	BI	9	THR
42	BI	56	ASP
43	BJ	37	ARG
44	BK	100	LEU
45	BL	74	LEU
46	BM	10	PRO

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Mol	Chain	Res	Type
47	BN	34	VAL
47	BN	92	GLU
55	BV	92	HIS
55	BV	409	MET
55	BV	510	GLY
55	BV	647	SER
2	CC	64	VAL
2	CC	94	LEU
2	CC	109	LEU
2	CC	110	LYS
5	CE	45	ALA
6	CF	113	PHE
6	CF	114	ARG
7	CG	118	ALA
9	CI	78	LEU
11	CK	46	ALA
12	CL	58	TYR
13	CM	73	ILE
16	CP	5	LYS
16	CP	103	THR
18	CR	40	MET
20	CT	51	PHE
23	CW	37	VAL
23	CW	46	ALA
23	CW	47	GLY
32	C5	59	LEU
34	DB	128	LEU
37	DD	26	ARG
38	DE	24	THR
38	DE	45	ARG
38	DE	50	TYR
43	DJ	42	LEU
49	DP	49	GLY
50	DQ	71	LYS
54	DU	41	PRO
55	DV	219	HIS
55	DV	305	THR
55	DV	323	LYS
55	DV	506	ALA
55	DV	541	LYS
2	EC	64	VAL
2	EC	109	LEU

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Mol	Chain	Res	Type
5	EE	13	THR
5	EE	46	GLN
5	EE	96	VAL
5	EE	123	LYS
6	EF	149	ARG
7	EG	44	HIS
12	EL	5	THR
12	EL	88	GLY
13	EM	73	ILE
16	EP	34	GLY
16	EP	65	ASN
17	EQ	95	ALA
18	ER	40	MET
20	ET	86	THR
23	EW	23	LYS
23	EW	42	THR
23	EW	46	ALA
25	EY	9	LYS
26	EZ	34	THR
32	E5	4	ASN
32	E5	33	VAL
32	E5	113	PHE
34	FB	72	LYS
34	FB	81	ASP
36	FC	3	GLN
36	FC	15	VAL
36	FC	61	ALA
38	FE	98	PRO
45	FL	73	ASN
50	FQ	6	ARG
54	FU	26	ALA
54	FU	41	PRO
55	FV	204	TYR
2	GC	64	VAL
2	GC	94	LEU
2	GC	109	LEU
5	GE	6	LYS
5	GE	96	VAL
7	GG	8	VAL
7	GG	45	ALA
7	GG	118	ALA
9	GI	64	ARG

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Mol	Chain	Res	Type
9	GI	108	ILE
11	GK	118	LEU
13	GM	13	HIS
16	GP	5	LYS
18	GR	53	PHE
19	GS	19	LEU
20	GT	28	ASN
20	GT	49	LYS
21	GU	16	LYS
21	GU	101	THR
23	GW	10	ARG
23	GW	27	GLY
23	GW	34	SER
23	GW	46	ALA
23	GW	76	ARG
26	GZ	34	THR
28	G1	51	ALA
36	HC	17	PRO
36	HC	66	VAL
36	HC	146	ALA
38	HE	24	THR
42	HI	57	MET
43	HJ	75	ASP
44	HK	51	GLY
45	HL	123	LYS
50	HQ	18	GLU
50	HQ	71	LYS
55	HV	323	LYS
5	AE	83	VAL
5	AE	153	LEU
7	AG	118	ALA
8	AH	14	SER
9	AI	93	ASN
11	AK	6	THR
11	AK	50	GLY
13	AM	13	HIS
18	AR	40	MET
21	AU	16	LYS
23	AW	10	ARG
23	AW	78	PHE
32	A5	59	LEU
32	A5	94	ARG

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Mol	Chain	Res	Type
32	A5	102	ALA
32	A5	128	THR
39	BF	86	ARG
43	BJ	36	VAL
43	BJ	42	LEU
47	BN	29	ALA
50	BQ	71	LYS
54	BU	32	VAL
55	BV	259	ASN
55	BV	309	ARG
4	CD	169	ARG
5	CE	83	VAL
5	CE	96	VAL
5	CE	116	ASP
5	CE	188	MET
17	CQ	4	LYS
20	CT	89	GLU
23	CW	10	ARG
23	CW	17	ALA
23	CW	23	LYS
23	CW	68	PHE
23	CW	78	PHE
25	CY	8	GLU
25	CY	9	LYS
27	C0	26	SER
32	C5	36	ASP
32	C5	94	ARG
34	DB	58	LYS
39	DF	99	ALA
43	DJ	35	GLN
55	DV	259	ASN
55	DV	527	PRO
55	DV	698	VAL
5	EE	6	LYS
5	EE	83	VAL
5	EE	153	LEU
6	EF	133	GLU
7	EG	83	THR
8	EH	8	LYS
10	EJ	41	LYS
11	EK	6	THR
12	EL	82	LEU

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Mol	Chain	Res	Type
17	EQ	85	ALA
20	ET	28	ASN
23	EW	74	LYS
32	E5	36	ASP
32	E5	132	TYR
34	FB	58	LYS
36	FC	146	ALA
37	FD	85	ASN
38	FE	24	THR
39	FF	86	ARG
42	FI	120	LYS
43	FJ	58	ASN
44	FK	15	GLN
45	FL	88	LYS
46	FM	100	GLN
49	FP	49	GLY
53	FT	68	HIS
2	GC	142	ASN
5	GE	83	VAL
7	GG	97	VAL
8	GH	16	GLY
11	GK	6	THR
11	GK	17	ARG
12	GL	82	LEU
17	GQ	5	ARG
18	GR	91	GLN
21	GU	18	LYS
22	GV	67	GLY
23	GW	23	LYS
23	GW	78	PHE
27	G0	54	ILE
30	G3	31	ILE
36	HC	15	VAL
39	HF	16	GLU
39	HF	99	ALA
43	HJ	74	VAL
44	HK	17	SER
46	HM	10	PRO
46	HM	65	VAL
47	HN	48	LEU
48	HO	44	ALA
55	HV	219	HIS

Continued on next page...

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Mol	Chain	Res	Type
55	HV	345	SER
16	AP	63	ILE
23	AW	41	GLY
54	BU	27	GLY
7	CG	97	VAL
46	DM	10	PRO
9	GI	32	VAL
23	GW	37	VAL
43	HJ	42	LEU
46	HM	114	LYS
54	HU	32	VAL
5	CE	174	GLY
16	CP	63	ILE
20	CT	90	GLY
37	DD	24	GLY
54	DU	32	VAL
16	EP	63	ILE
23	EW	30	VAL
43	FJ	36	VAL
44	HK	89	PRO
55	HV	569	TYR
5	AE	148	ILE
25	AY	62	GLY
32	A5	32	GLY
34	BB	200	PRO
52	BS	30	PRO
27	C0	34	GLY
37	DD	37	ALA
27	E0	24	VAL
37	FD	24	GLY
38	FE	137	VAL
37	HD	37	ALA
54	HU	27	GLY
2	AC	232	GLY
4	AD	122	VAL
9	AI	22	PRO
9	AI	88	GLY
30	A3	6	VAL
2	CC	233	GLY
5	CE	71	GLY
22	CV	67	GLY
36	DC	17	PRO

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Mol	Chain	Res	Type
47	DN	34	VAL
49	DP	10	GLY
5	EE	148	ILE
16	EP	83	ILE
21	EU	38	ILE
21	EU	54	PRO
42	FI	10	GLY
45	FL	45	PRO
47	FN	34	VAL
2	GC	232	GLY
24	GX	63	ILE
29	G2	44	VAL
34	HB	12	GLY
41	HH	78	VAL
47	HN	34	VAL
5	AE	71	GLY
27	A0	24	VAL
37	BD	168	PRO
27	C0	24	VAL
30	C3	31	ILE
37	DD	168	PRO
19	ES	63	GLY
30	E3	31	ILE
44	FK	89	PRO
5	GE	42	GLY
9	GI	88	GLY
16	GP	63	ILE
27	G0	24	VAL
38	HE	137	VAL
52	HS	26	GLY
55	HV	120	GLN

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	AC	216/218 (99%)	202 (94%)	14 (6%)	14 40
2	CC	216/218 (99%)	197 (91%)	19 (9%)	8 26
2	EC	216/218 (99%)	194 (90%)	22 (10%)	6 19
2	GC	216/218 (99%)	203 (94%)	13 (6%)	16 44
4	AD	164/164 (100%)	151 (92%)	13 (8%)	10 30
4	CD	164/164 (100%)	152 (93%)	12 (7%)	11 34
4	ED	164/164 (100%)	152 (93%)	12 (7%)	11 34
4	GD	164/164 (100%)	151 (92%)	13 (8%)	10 30
5	AE	165/165 (100%)	146 (88%)	19 (12%)	4 15
5	CE	165/165 (100%)	157 (95%)	8 (5%)	21 54
5	EE	165/165 (100%)	153 (93%)	12 (7%)	11 34
5	GE	165/165 (100%)	152 (92%)	13 (8%)	10 30
6	AF	148/150 (99%)	138 (93%)	10 (7%)	13 38
6	CF	148/150 (99%)	140 (95%)	8 (5%)	18 49
6	EF	148/150 (99%)	133 (90%)	15 (10%)	6 20
6	GF	148/150 (99%)	146 (99%)	2 (1%)	62 86
7	AG	137/138 (99%)	122 (89%)	15 (11%)	5 17
7	CG	137/138 (99%)	125 (91%)	12 (9%)	8 26
7	EG	137/138 (99%)	119 (87%)	18 (13%)	3 10
7	GG	137/138 (99%)	128 (93%)	9 (7%)	14 39
8	AH	40/40 (100%)	39 (98%)	1 (2%)	42 75
8	CH	40/40 (100%)	38 (95%)	2 (5%)	20 52
8	EH	40/40 (100%)	37 (92%)	3 (8%)	11 33
8	GH	40/40 (100%)	39 (98%)	1 (2%)	42 75
9	AI	109/110 (99%)	105 (96%)	4 (4%)	29 64
9	CI	109/110 (99%)	106 (97%)	3 (3%)	38 73
9	EI	109/110 (99%)	106 (97%)	3 (3%)	38 73
9	GI	109/110 (99%)	107 (98%)	2 (2%)	54 82
10	AJ	116/116 (100%)	100 (86%)	16 (14%)	3 9
10	CJ	116/116 (100%)	101 (87%)	15 (13%)	3 11

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
10	EJ	116/116 (100%)	97 (84%)	19 (16%)	2 6
10	GJ	116/116 (100%)	104 (90%)	12 (10%)	6 19
11	AK	103/104 (99%)	92 (89%)	11 (11%)	5 17
11	CK	103/104 (99%)	87 (84%)	16 (16%)	2 7
11	EK	103/104 (99%)	87 (84%)	16 (16%)	2 7
11	GK	103/104 (99%)	90 (87%)	13 (13%)	3 11
12	AL	102/103 (99%)	95 (93%)	7 (7%)	13 37
12	CL	102/103 (99%)	94 (92%)	8 (8%)	10 31
12	EL	102/103 (99%)	96 (94%)	6 (6%)	16 45
12	GL	102/103 (99%)	96 (94%)	6 (6%)	16 45
13	AM	109/109 (100%)	93 (85%)	16 (15%)	2 8
13	CM	109/109 (100%)	98 (90%)	11 (10%)	6 20
13	EM	109/109 (100%)	100 (92%)	9 (8%)	9 28
13	GM	109/109 (100%)	103 (94%)	6 (6%)	18 48
14	AN	100/103 (97%)	93 (93%)	7 (7%)	12 36
14	CN	100/103 (97%)	96 (96%)	4 (4%)	27 61
14	EN	100/103 (97%)	96 (96%)	4 (4%)	27 61
14	GN	100/103 (97%)	93 (93%)	7 (7%)	12 36
15	AO	86/87 (99%)	78 (91%)	8 (9%)	7 23
15	CO	86/87 (99%)	80 (93%)	6 (7%)	12 36
15	EO	86/87 (99%)	81 (94%)	5 (6%)	17 46
15	GO	86/87 (99%)	81 (94%)	5 (6%)	17 46
16	AP	99/100 (99%)	91 (92%)	8 (8%)	9 29
16	CP	99/100 (99%)	90 (91%)	9 (9%)	7 25
16	EP	99/100 (99%)	88 (89%)	11 (11%)	5 16
16	GP	99/100 (99%)	90 (91%)	9 (9%)	7 25
17	AQ	89/90 (99%)	81 (91%)	8 (9%)	8 25
17	CQ	89/90 (99%)	84 (94%)	5 (6%)	17 47
17	EQ	89/90 (99%)	83 (93%)	6 (7%)	13 39
17	GQ	89/90 (99%)	83 (93%)	6 (7%)	13 39
18	AR	84/84 (100%)	78 (93%)	6 (7%)	12 36

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
18	CR	84/84 (100%)	79 (94%)	5 (6%)	16 44
18	ER	84/84 (100%)	76 (90%)	8 (10%)	7 22
18	GR	84/84 (100%)	79 (94%)	5 (6%)	16 44
19	AS	93/93 (100%)	84 (90%)	9 (10%)	6 22
19	CS	93/93 (100%)	86 (92%)	7 (8%)	11 33
19	ES	93/93 (100%)	84 (90%)	9 (10%)	6 22
19	GS	93/93 (100%)	88 (95%)	5 (5%)	18 49
20	AT	80/84 (95%)	77 (96%)	3 (4%)	28 63
20	CT	80/84 (95%)	75 (94%)	5 (6%)	15 42
20	ET	80/84 (95%)	74 (92%)	6 (8%)	11 33
20	GT	80/84 (95%)	77 (96%)	3 (4%)	28 63
21	AU	83/85 (98%)	76 (92%)	7 (8%)	9 28
21	CU	83/85 (98%)	80 (96%)	3 (4%)	30 65
21	EU	83/85 (98%)	78 (94%)	5 (6%)	16 44
21	GU	83/85 (98%)	79 (95%)	4 (5%)	21 54
22	AV	78/78 (100%)	75 (96%)	3 (4%)	28 63
22	CV	78/78 (100%)	73 (94%)	5 (6%)	14 41
22	EV	78/78 (100%)	75 (96%)	3 (4%)	28 63
22	GV	78/78 (100%)	77 (99%)	1 (1%)	65 88
23	AW	59/63 (94%)	53 (90%)	6 (10%)	6 19
23	CW	59/63 (94%)	55 (93%)	4 (7%)	13 38
23	EW	59/63 (94%)	49 (83%)	10 (17%)	1 5
23	GW	59/63 (94%)	57 (97%)	2 (3%)	32 67
24	AX	67/68 (98%)	61 (91%)	6 (9%)	8 25
24	CX	67/68 (98%)	60 (90%)	7 (10%)	5 18
24	EX	67/68 (98%)	57 (85%)	10 (15%)	2 8
24	GX	67/68 (98%)	63 (94%)	4 (6%)	16 44
25	AY	55/55 (100%)	52 (94%)	3 (6%)	18 48
25	CY	55/55 (100%)	51 (93%)	4 (7%)	11 34
25	EY	55/55 (100%)	50 (91%)	5 (9%)	7 25
25	GY	55/55 (100%)	52 (94%)	3 (6%)	18 48

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
26	AZ	48/49 (98%)	40 (83%)	8 (17%)	2 5
26	CZ	48/49 (98%)	39 (81%)	9 (19%)	1 4
26	EZ	48/49 (98%)	41 (85%)	7 (15%)	2 8
26	GZ	48/49 (98%)	46 (96%)	2 (4%)	25 59
27	A0	47/48 (98%)	46 (98%)	1 (2%)	48 78
27	C0	47/48 (98%)	47 (100%)	0	100 100
27	E0	47/48 (98%)	46 (98%)	1 (2%)	48 78
27	G0	47/48 (98%)	45 (96%)	2 (4%)	25 57
28	A1	45/49 (92%)	42 (93%)	3 (7%)	13 39
28	C1	45/49 (92%)	42 (93%)	3 (7%)	13 39
28	E1	45/49 (92%)	42 (93%)	3 (7%)	13 39
28	G1	45/49 (92%)	43 (96%)	2 (4%)	24 57
29	A2	38/38 (100%)	35 (92%)	3 (8%)	10 30
29	C2	38/38 (100%)	34 (90%)	4 (10%)	5 18
29	E2	38/38 (100%)	36 (95%)	2 (5%)	19 49
29	G2	38/38 (100%)	35 (92%)	3 (8%)	10 30
30	A3	51/52 (98%)	46 (90%)	5 (10%)	6 21
30	C3	51/52 (98%)	49 (96%)	2 (4%)	27 62
30	E3	51/52 (98%)	47 (92%)	4 (8%)	10 31
30	G3	51/52 (98%)	48 (94%)	3 (6%)	16 45
31	A4	34/34 (100%)	31 (91%)	3 (9%)	8 26
31	C4	34/34 (100%)	32 (94%)	2 (6%)	16 45
31	E4	34/34 (100%)	32 (94%)	2 (6%)	16 45
31	G4	34/34 (100%)	33 (97%)	1 (3%)	37 72
32	A5	112/123 (91%)	93 (83%)	19 (17%)	1 5
32	C5	112/123 (91%)	95 (85%)	17 (15%)	2 7
32	E5	111/123 (90%)	93 (84%)	18 (16%)	2 6
33	A6	26/85 (31%)	22 (85%)	4 (15%)	2 7
34	BB	180/199 (90%)	170 (94%)	10 (6%)	17 47
34	DB	180/199 (90%)	170 (94%)	10 (6%)	17 47
34	FB	180/199 (90%)	171 (95%)	9 (5%)	20 52

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
34	HB	180/199 (90%)	174 (97%)	6 (3%)	33 68
36	BC	170/190 (90%)	156 (92%)	14 (8%)	9 29
36	DC	170/190 (90%)	162 (95%)	8 (5%)	22 55
36	FC	170/190 (90%)	158 (93%)	12 (7%)	12 36
36	HC	170/190 (90%)	163 (96%)	7 (4%)	26 60
37	BD	172/173 (99%)	165 (96%)	7 (4%)	26 60
37	DD	172/173 (99%)	163 (95%)	9 (5%)	19 50
37	FD	172/173 (99%)	165 (96%)	7 (4%)	26 60
37	HD	172/173 (99%)	167 (97%)	5 (3%)	37 72
38	BE	113/126 (90%)	108 (96%)	5 (4%)	24 57
38	DE	113/126 (90%)	109 (96%)	4 (4%)	31 66
38	FE	113/126 (90%)	107 (95%)	6 (5%)	19 49
38	HE	113/126 (90%)	105 (93%)	8 (7%)	12 36
39	BF	89/116 (77%)	82 (92%)	7 (8%)	10 30
39	DF	87/116 (75%)	86 (99%)	1 (1%)	70 90
39	FF	87/116 (75%)	82 (94%)	5 (6%)	17 47
39	HF	87/116 (75%)	85 (98%)	2 (2%)	45 77
40	BG	124/147 (84%)	115 (93%)	9 (7%)	11 34
40	DG	124/147 (84%)	123 (99%)	1 (1%)	79 93
40	FG	124/147 (84%)	122 (98%)	2 (2%)	58 84
40	HG	124/147 (84%)	124 (100%)	0	100 100
41	BH	104/105 (99%)	96 (92%)	8 (8%)	10 31
41	DH	104/105 (99%)	97 (93%)	7 (7%)	13 39
41	FH	104/105 (99%)	99 (95%)	5 (5%)	21 54
41	HH	104/105 (99%)	97 (93%)	7 (7%)	13 39
42	BI	105/107 (98%)	96 (91%)	9 (9%)	8 27
42	DI	105/107 (98%)	101 (96%)	4 (4%)	28 63
42	FI	105/107 (98%)	96 (91%)	9 (9%)	8 27
42	HI	105/107 (98%)	102 (97%)	3 (3%)	37 72
43	BJ	86/90 (96%)	83 (96%)	3 (4%)	31 66
43	DJ	86/90 (96%)	82 (95%)	4 (5%)	22 55

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
43	FJ	86/90 (96%)	83 (96%)	3 (4%)	31 66
43	HJ	86/90 (96%)	81 (94%)	5 (6%)	17 46
44	BK	90/99 (91%)	85 (94%)	5 (6%)	17 47
44	DK	90/99 (91%)	87 (97%)	3 (3%)	33 68
44	FK	90/99 (91%)	81 (90%)	9 (10%)	6 20
44	HK	90/99 (91%)	83 (92%)	7 (8%)	10 31
45	BL	103/104 (99%)	96 (93%)	7 (7%)	13 38
45	DL	103/104 (99%)	96 (93%)	7 (7%)	13 38
45	FL	103/104 (99%)	96 (93%)	7 (7%)	13 38
45	HL	103/104 (99%)	99 (96%)	4 (4%)	27 62
46	BM	92/96 (96%)	88 (96%)	4 (4%)	25 57
46	DM	92/96 (96%)	92 (100%)	0	100 100
46	FM	92/96 (96%)	91 (99%)	1 (1%)	70 90
46	HM	92/96 (96%)	91 (99%)	1 (1%)	70 90
47	BN	79/84 (94%)	75 (95%)	4 (5%)	20 51
47	DN	79/84 (94%)	78 (99%)	1 (1%)	65 88
47	FN	79/84 (94%)	76 (96%)	3 (4%)	28 63
47	HN	79/84 (94%)	79 (100%)	0	100 100
48	BO	76/77 (99%)	72 (95%)	4 (5%)	19 49
48	DO	76/77 (99%)	74 (97%)	2 (3%)	41 74
48	FO	76/77 (99%)	71 (93%)	5 (7%)	14 39
48	HO	76/77 (99%)	74 (97%)	2 (3%)	41 74
49	BP	65/65 (100%)	61 (94%)	4 (6%)	15 43
49	DP	65/65 (100%)	62 (95%)	3 (5%)	23 55
49	FP	65/65 (100%)	64 (98%)	1 (2%)	60 85
49	HP	65/65 (100%)	63 (97%)	2 (3%)	35 70
50	BQ	74/78 (95%)	66 (89%)	8 (11%)	5 17
50	DQ	74/78 (95%)	71 (96%)	3 (4%)	26 60
50	FQ	74/78 (95%)	72 (97%)	2 (3%)	40 73
50	HQ	74/78 (95%)	68 (92%)	6 (8%)	9 29
51	BR	48/65 (74%)	47 (98%)	1 (2%)	48 78

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
51	DR	48/65 (74%)	48 (100%)	0	100 100
51	FR	48/65 (74%)	48 (100%)	0	100 100
51	HR	48/65 (74%)	48 (100%)	0	100 100
52	BS	70/79 (89%)	64 (91%)	6 (9%)	8 27
52	DS	70/79 (89%)	67 (96%)	3 (4%)	25 57
52	FS	70/79 (89%)	67 (96%)	3 (4%)	25 57
52	HS	70/79 (89%)	69 (99%)	1 (1%)	62 86
53	BT	65/66 (98%)	60 (92%)	5 (8%)	10 31
53	DT	65/66 (98%)	58 (89%)	7 (11%)	5 17
53	FT	65/66 (98%)	58 (89%)	7 (11%)	5 17
53	HT	65/66 (98%)	57 (88%)	8 (12%)	4 12
54	BU	44/61 (72%)	36 (82%)	8 (18%)	1 4
54	DU	44/61 (72%)	42 (96%)	2 (4%)	23 56
54	FU	44/61 (72%)	39 (89%)	5 (11%)	4 15
54	HU	44/61 (72%)	43 (98%)	1 (2%)	45 77
55	BV	568/578 (98%)	521 (92%)	47 (8%)	9 28
55	DV	568/578 (98%)	527 (93%)	41 (7%)	12 35
55	FV	568/578 (98%)	528 (93%)	40 (7%)	12 36
55	HV	568/578 (98%)	535 (94%)	33 (6%)	17 46
56	BW	2/2 (100%)	1 (50%)	1 (50%)	0 0
56	DW	2/2 (100%)	1 (50%)	1 (50%)	0 0
56	FW	2/2 (100%)	1 (50%)	1 (50%)	0 0
56	HW	2/2 (100%)	0	2 (100%)	0 0
All	All	21011/21990 (96%)	19590 (93%)	1421 (7%)	13 38

All (1421) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	AC	51	ARG
2	AC	57	HIS
2	AC	109	LEU
2	AC	117	SER
2	AC	124	LYS
2	AC	129	LEU

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Mol	Chain	Res	Type
2	AC	142	ASN
2	AC	155	ARG
2	AC	166	ARG
2	AC	176	ARG
2	AC	194	VAL
2	AC	212	TRP
2	AC	251	THR
2	AC	270	ARG
4	AD	33	ARG
4	AD	37	VAL
4	AD	97	SER
4	AD	103	ASP
4	AD	107	VAL
4	AD	118	PHE
4	AD	124	ARG
4	AD	170	VAL
4	AD	171	THR
4	AD	177	VAL
4	AD	183	GLU
4	AD	201	LEU
4	AD	203	VAL
5	AE	5	LEU
5	AE	12	LEU
5	AE	21	ARG
5	AE	40	ARG
5	AE	44	ARG
5	AE	65	THR
5	AE	69	ARG
5	AE	70	SER
5	AE	78	TRP
5	AE	88	ARG
5	AE	109	LEU
5	AE	113	VAL
5	AE	118	LEU
5	AE	120	VAL
5	AE	126	VAL
5	AE	131	THR
5	AE	149	ILE
5	AE	167	VAL
5	AE	171	ASP
6	AF	9	ASP
6	AF	16	MET

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Mol	Chain	Res	Type
6	AF	34	THR
6	AF	41	GLU
6	AF	46	LYS
6	AF	90	LEU
6	AF	94	ARG
6	AF	111	ARG
6	AF	114	ARG
6	AF	154	THR
7	AG	3	VAL
7	AG	16	VAL
7	AG	44	HIS
7	AG	68	ARG
7	AG	84	LYS
7	AG	94	ARG
7	AG	103	ASN
7	AG	110	HIS
7	AG	121	THR
7	AG	126	THR
7	AG	131	VAL
7	AG	132	LEU
7	AG	151	ARG
7	AG	170	THR
7	AG	176	LYS
8	AH	3	VAL
9	AI	23	VAL
9	AI	63	ASP
9	AI	102	ARG
9	AI	137	LEU
10	AJ	2	LYS
10	AJ	17	VAL
10	AJ	24	THR
10	AJ	30	THR
10	AJ	36	LEU
10	AJ	40	HIS
10	AJ	54	ILE
10	AJ	55	ILE
10	AJ	65	THR
10	AJ	72	LYS
10	AJ	73	VAL
10	AJ	95	ARG
10	AJ	103	ILE
10	AJ	129	GLU

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Mol	Chain	Res	Type
10	AJ	131	ASN
10	AJ	140	LEU
11	AK	3	GLN
11	AK	8	LEU
11	AK	13	ASN
11	AK	18	ARG
11	AK	21	CYS
11	AK	23	LYS
11	AK	41	ILE
11	AK	54	LYS
11	AK	73	ASP
11	AK	93	GLN
11	AK	105	ARG
12	AL	5	THR
12	AL	19	LEU
12	AL	82	LEU
12	AL	91	ASP
12	AL	100	ILE
12	AL	121	THR
12	AL	144	GLU
13	AM	12	MET
13	AM	13	HIS
13	AM	31	PHE
13	AM	33	LEU
13	AM	46	ILE
13	AM	53	MET
13	AM	70	ASP
13	AM	72	PRO
13	AM	81	ARG
13	AM	88	ASN
13	AM	95	LEU
13	AM	96	ILE
13	AM	97	GLN
13	AM	100	LYS
13	AM	110	GLU
13	AM	134	THR
14	AN	6	SER
14	AN	8	ARG
14	AN	33	ILE
14	AN	65	LEU
14	AN	69	ARG
14	AN	70	THR

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Mol	Chain	Res	Type
14	AN	71	ARG
15	AO	18	LEU
15	AO	31	THR
15	AO	33	ARG
15	AO	36	TYR
15	AO	38	GLN
15	AO	47	VAL
15	AO	106	LEU
15	AO	115	LEU
16	AP	16	VAL
16	AP	19	PHE
16	AP	62	LYS
16	AP	83	ILE
16	AP	85	VAL
16	AP	92	ARG
16	AP	95	LYS
16	AP	103	THR
17	AQ	16	ILE
17	AQ	40	LYS
17	AQ	50	ARG
17	AQ	59	LEU
17	AQ	63	ARG
17	AQ	88	GLU
17	AQ	93	ILE
17	AQ	97	ILE
18	AR	4	VAL
18	AR	29	THR
18	AR	38	VAL
18	AR	46	GLU
18	AR	48	LYS
18	AR	63	VAL
19	AS	3	THR
19	AS	4	ILE
19	AS	7	HIS
19	AS	36	LEU
19	AS	45	VAL
19	AS	66	ILE
19	AS	76	VAL
19	AS	96	ILE
19	AS	101	SER
20	AT	32	LEU
20	AT	43	ILE

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Mol	Chain	Res	Type
20	AT	58	VAL
21	AU	6	ARG
21	AU	26	ASN
21	AU	30	SER
21	AU	38	ILE
21	AU	61	GLU
21	AU	86	PHE
21	AU	92	VAL
22	AV	29	ILE
22	AV	61	LEU
22	AV	87	GLN
23	AW	19	ARG
23	AW	23	LYS
23	AW	25	PHE
23	AW	30	VAL
23	AW	49	ASN
23	AW	63	ASP
24	AX	19	HIS
24	AX	24	THR
24	AX	26	ARG
24	AX	29	LEU
24	AX	34	SER
24	AX	77	TYR
25	AY	10	SER
25	AY	16	THR
25	AY	57	LEU
26	AZ	2	LYS
26	AZ	9	THR
26	AZ	15	ARG
26	AZ	23	LEU
26	AZ	30	ARG
26	AZ	31	ILE
26	AZ	37	ARG
26	AZ	40	THR
27	A0	24	VAL
28	A1	8	ILE
28	A1	35	LEU
28	A1	47	ILE
29	A2	8	SER
29	A2	9	VAL
29	A2	24	THR
30	A3	7	ARG

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Mol	Chain	Res	Type
30	A3	30	HIS
30	A3	31	ILE
30	A3	49	VAL
30	A3	56	LEU
31	A4	4	ARG
31	A4	15	LYS
31	A4	27	CYS
32	A5	1	MET
32	A5	3	LEU
32	A5	26	VAL
32	A5	42	ARG
32	A5	51	TYR
32	A5	54	VAL
32	A5	59	LEU
32	A5	65	GLU
32	A5	69	PHE
32	A5	70	GLU
32	A5	96	PHE
32	A5	106	PHE
32	A5	107	GLU
32	A5	116	GLU
32	A5	121	SER
32	A5	125	ARG
32	A5	130	PRO
32	A5	132	TYR
32	A5	143	MET
33	A6	17	MET
33	A6	18	ASP
33	A6	24	SER
33	A6	26	MET
34	BB	19	THR
34	BB	20	ARG
34	BB	26	MET
34	BB	37	VAL
34	BB	63	LYS
34	BB	88	GLN
34	BB	143	LEU
34	BB	162	VAL
34	BB	170	ILE
34	BB	212	TYR
36	BC	3	GLN
36	BC	15	VAL

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Mol	Chain	Res	Type
36	BC	18	TRP
36	BC	55	ILE
36	BC	58	GLU
36	BC	111	LEU
36	BC	121	THR
36	BC	129	MET
36	BC	162	ILE
36	BC	166	GLU
36	BC	167	TRP
36	BC	178	LEU
36	BC	186	THR
36	BC	193	TYR
37	BD	26	ARG
37	BD	32	CYS
37	BD	58	LYS
37	BD	110	THR
37	BD	143	VAL
37	BD	148	LYS
37	BD	161	LEU
38	BE	26	LYS
38	BE	45	ARG
38	BE	82	GLN
38	BE	88	VAL
38	BE	149	SER
39	BF	17	GLN
39	BF	38	ARG
39	BF	55	HIS
39	BF	86	ARG
39	BF	89	VAL
39	BF	97	THR
39	BF	100	SER
40	BG	5	ARG
40	BG	7	ILE
40	BG	13	LEU
40	BG	49	THR
40	BG	59	LEU
40	BG	86	GLN
40	BG	106	GLU
40	BG	120	LEU
40	BG	149	LYS
41	BH	48	ASP
41	BH	66	PHE

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Mol	Chain	Res	Type
41	BH	77	ARG
41	BH	83	LEU
41	BH	87	LYS
41	BH	99	LEU
41	BH	121	LEU
41	BH	125	ILE
42	BI	14	SER
42	BI	39	PHE
42	BI	43	THR
42	BI	45	ARG
42	BI	57	MET
42	BI	63	LEU
42	BI	87	LEU
42	BI	88	MET
42	BI	111	VAL
43	BJ	27	GLU
43	BJ	73	LEU
43	BJ	83	THR
44	BK	15	GLN
44	BK	65	VAL
44	BK	69	ARG
44	BK	82	LEU
44	BK	129	VAL
45	BL	29	GLN
45	BL	33	VAL
45	BL	38	TYR
45	BL	74	LEU
45	BL	90	LEU
45	BL	95	TYR
45	BL	121	ARG
46	BM	29	ARG
46	BM	63	PHE
46	BM	87	ARG
46	BM	107	ARG
47	BN	5	SER
47	BN	31	ILE
47	BN	51	LEU
47	BN	96	LEU
48	BO	6	GLU
48	BO	35	GLN
48	BO	64	ARG
48	BO	87	LEU

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Mol	Chain	Res	Type
49	BP	1	MET
49	BP	19	VAL
49	BP	31	ARG
49	BP	68	SER
50	BQ	4	LYS
50	BQ	13	VAL
50	BQ	21	ILE
50	BQ	22	VAL
50	BQ	29	VAL
50	BQ	55	ILE
50	BQ	62	ARG
50	BQ	75	LEU
51	BR	29	LEU
52	BS	11	ILE
52	BS	13	LEU
52	BS	24	GLU
52	BS	36	ARG
52	BS	37	ARG
52	BS	49	ILE
53	BT	12	ILE
53	BT	16	LYS
53	BT	27	MET
53	BT	49	LYS
53	BT	54	MET
54	BU	5	LYS
54	BU	6	VAL
54	BU	16	LEU
54	BU	19	PHE
54	BU	20	LYS
54	BU	28	VAL
54	BU	34	ARG
54	BU	43	THR
55	BV	5	THR
55	BV	19	ILE
55	BV	23	LYS
55	BV	77	LYS
55	BV	83	ARG
55	BV	95	PHE
55	BV	96	THR
55	BV	101	ARG
55	BV	104	ARG
55	BV	106	LEU

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Mol	Chain	Res	Type
55	BV	160	THR
55	BV	182	VAL
55	BV	185	LEU
55	BV	200	VAL
55	BV	202	PHE
55	BV	204	TYR
55	BV	205	GLU
55	BV	214	LEU
55	BV	220	GLN
55	BV	232	GLU
55	BV	252	LEU
55	BV	266	CYS
55	BV	276	GLN
55	BV	286	LEU
55	BV	291	ASP
55	BV	299	LEU
55	BV	303	LYS
55	BV	336	PHE
55	BV	409	MET
55	BV	418	ILE
55	BV	446	ARG
55	BV	494	ILE
55	BV	504	LYS
55	BV	508	GLN
55	BV	515	TYR
55	BV	532	LYS
55	BV	560	GLN
55	BV	584	HIS
55	BV	589	SER
55	BV	602	LYS
55	BV	612	LEU
55	BV	628	THR
55	BV	660	LEU
55	BV	675	LYS
55	BV	677	ARG
55	BV	681	THR
55	BV	685	LEU
56	BW	4	SER
2	CC	12	ARG
2	CC	51	ARG
2	CC	57	HIS
2	CC	93	VAL

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Mol	Chain	Res	Type
2	CC	109	LEU
2	CC	129	LEU
2	CC	141	HIS
2	CC	153	LEU
2	CC	166	ARG
2	CC	191	LEU
2	CC	194	VAL
2	CC	202	ARG
2	CC	212	TRP
2	CC	224	MET
2	CC	241	LYS
2	CC	251	THR
2	CC	256	THR
2	CC	257	ARG
2	CC	270	ARG
4	CD	24	VAL
4	CD	40	LEU
4	CD	91	THR
4	CD	97	SER
4	CD	107	VAL
4	CD	124	ARG
4	CD	129	THR
4	CD	131	ASP
4	CD	183	GLU
4	CD	201	LEU
4	CD	203	VAL
4	CD	207	VAL
5	CE	22	ASP
5	CE	28	VAL
5	CE	40	ARG
5	CE	44	ARG
5	CE	70	SER
5	CE	109	LEU
5	CE	164	LEU
5	CE	178	VAL
6	CF	3	LEU
6	CF	24	VAL
6	CF	30	VAL
6	CF	41	GLU
6	CF	50	ASP
6	CF	111	ARG
6	CF	114	ARG

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Mol	Chain	Res	Type
6	CF	157	THR
7	CG	26	LYS
7	CG	38	ASP
7	CG	44	HIS
7	CG	68	ARG
7	CG	84	LYS
7	CG	86	LEU
7	CG	103	ASN
7	CG	126	THR
7	CG	132	LEU
7	CG	151	ARG
7	CG	165	ASP
7	CG	166	GLU
8	CH	6	LEU
8	CH	25	TYR
9	CI	8	VAL
9	CI	23	VAL
9	CI	71	LYS
10	CJ	2	LYS
10	CJ	14	ASP
10	CJ	24	THR
10	CJ	25	LEU
10	CJ	30	THR
10	CJ	40	HIS
10	CJ	54	ILE
10	CJ	65	THR
10	CJ	72	LYS
10	CJ	95	ARG
10	CJ	103	ILE
10	CJ	122	LEU
10	CJ	124	VAL
10	CJ	129	GLU
10	CJ	140	LEU
11	CK	3	GLN
11	CK	8	LEU
11	CK	13	ASN
11	CK	18	ARG
11	CK	19	VAL
11	CK	23	LYS
11	CK	38	ILE
11	CK	47	ILE
11	CK	63	VAL

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Mol	Chain	Res	Type
11	CK	73	ASP
11	CK	93	GLN
11	CK	95	ILE
11	CK	100	PHE
11	CK	105	ARG
11	CK	111	LYS
11	CK	115	ILE
12	CL	19	LEU
12	CL	46	VAL
12	CL	51	GLU
12	CL	67	THR
12	CL	82	LEU
12	CL	95	LEU
12	CL	100	ILE
12	CL	118	THR
13	CM	33	LEU
13	CM	58	LYS
13	CM	68	PHE
13	CM	70	ASP
13	CM	72	PRO
13	CM	78	LEU
13	CM	81	ARG
13	CM	93	VAL
13	CM	97	GLN
13	CM	100	LYS
13	CM	134	THR
14	CN	14	SER
14	CN	69	ARG
14	CN	71	ARG
14	CN	94	TYR
15	CO	28	VAL
15	CO	31	THR
15	CO	36	TYR
15	CO	47	VAL
15	CO	94	ARG
15	CO	106	LEU
16	CP	6	GLN
16	CP	19	PHE
16	CP	31	VAL
16	CP	52	ARG
16	CP	83	ILE
16	CP	92	ARG

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Mol	Chain	Res	Type
16	CP	95	LYS
16	CP	103	THR
16	CP	113	LEU
17	CQ	50	ARG
17	CQ	59	LEU
17	CQ	63	ARG
17	CQ	65	ASN
17	CQ	93	ILE
18	CR	29	THR
18	CR	39	LEU
18	CR	46	GLU
18	CR	48	LYS
18	CR	63	VAL
19	CS	3	THR
19	CS	4	ILE
19	CS	24	ILE
19	CS	36	LEU
19	CS	66	ILE
19	CS	83	LYS
19	CS	88	ARG
20	CT	18	GLU
20	CT	32	LEU
20	CT	43	ILE
20	CT	68	LYS
20	CT	93	LEU
21	CU	64	ILE
21	CU	86	PHE
21	CU	92	VAL
22	CV	20	LEU
22	CV	31	TYR
22	CV	51	GLN
22	CV	61	LEU
22	CV	87	GLN
23	CW	19	ARG
23	CW	23	LYS
23	CW	59	PHE
23	CW	63	ASP
24	CX	6	VAL
24	CX	24	THR
24	CX	26	ARG
24	CX	27	ARG
24	CX	29	LEU

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Mol	Chain	Res	Type
24	CX	46	VAL
24	CX	77	TYR
25	CY	37	LEU
25	CY	47	ARG
25	CY	56	LEU
25	CY	57	LEU
26	CZ	2	LYS
26	CZ	8	GLN
26	CZ	9	THR
26	CZ	15	ARG
26	CZ	20	LYS
26	CZ	23	LEU
26	CZ	30	ARG
26	CZ	37	ARG
26	CZ	43	ILE
28	C1	4	ILE
28	C1	33	LEU
28	C1	35	LEU
29	C2	4	THR
29	C2	8	SER
29	C2	9	VAL
29	C2	24	THR
30	C3	5	THR
30	C3	56	LEU
31	C4	4	ARG
31	C4	10	LEU
32	C5	1	MET
32	C5	7	ASP
32	C5	26	VAL
32	C5	42	ARG
32	C5	51	TYR
32	C5	54	VAL
32	C5	59	LEU
32	C5	65	GLU
32	C5	69	PHE
32	C5	70	GLU
32	C5	96	PHE
32	C5	106	PHE
32	C5	107	GLU
32	C5	125	ARG
32	C5	130	PRO
32	C5	132	TYR

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Mol	Chain	Res	Type
32	C5	143	MET
34	DB	13	VAL
34	DB	14	HIS
34	DB	19	THR
34	DB	56	LEU
34	DB	58	LYS
34	DB	71	THR
34	DB	178	LEU
34	DB	206	ILE
34	DB	209	VAL
34	DB	212	TYR
36	DC	3	GLN
36	DC	15	VAL
36	DC	59	ARG
36	DC	119	SER
36	DC	129	MET
36	DC	144	LEU
36	DC	149	ILE
36	DC	167	TRP
37	DD	10	LYS
37	DD	31	LYS
37	DD	32	CYS
37	DD	56	ARG
37	DD	59	GLN
37	DD	142	VAL
37	DD	171	LEU
37	DD	195	ILE
37	DD	206	LYS
38	DE	77	ASN
38	DE	96	MET
38	DE	100	SER
38	DE	114	VAL
39	DF	97	THR
40	DG	5	ARG
41	DH	77	ARG
41	DH	80	ARG
41	DH	83	LEU
41	DH	90	ASP
41	DH	96	MET
41	DH	121	LEU
41	DH	125	ILE
42	DI	57	MET

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Mol	Chain	Res	Type
42	DI	63	LEU
42	DI	87	LEU
42	DI	88	MET
43	DJ	57	VAL
43	DJ	82	LYS
43	DJ	83	THR
43	DJ	102	LEU
44	DK	82	LEU
44	DK	97	ILE
44	DK	129	VAL
45	DL	27	CYS
45	DL	39	THR
45	DL	52	VAL
45	DL	64	THR
45	DL	74	LEU
45	DL	90	LEU
45	DL	123	LYS
47	DN	71	HIS
48	DO	64	ARG
48	DO	87	LEU
49	DP	1	MET
49	DP	6	LEU
49	DP	32	PHE
50	DQ	6	ARG
50	DQ	40	ARG
50	DQ	55	ILE
52	DS	47	LEU
52	DS	49	ILE
52	DS	70	LYS
53	DT	5	LYS
53	DT	10	ARG
53	DT	12	ILE
53	DT	27	MET
53	DT	54	MET
53	DT	70	ASN
53	DT	83	ILE
54	DU	5	LYS
54	DU	34	ARG
55	DV	5	THR
55	DV	19	ILE
55	DV	23	LYS
55	DV	29	ARG

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Mol	Chain	Res	Type
55	DV	37	ASN
55	DV	77	LYS
55	DV	83	ARG
55	DV	95	PHE
55	DV	96	THR
55	DV	104	ARG
55	DV	106	LEU
55	DV	182	VAL
55	DV	185	LEU
55	DV	200	VAL
55	DV	202	PHE
55	DV	204	TYR
55	DV	214	LEU
55	DV	232	GLU
55	DV	252	LEU
55	DV	266	CYS
55	DV	286	LEU
55	DV	291	ASP
55	DV	299	LEU
55	DV	303	LYS
55	DV	305	THR
55	DV	409	MET
55	DV	446	ARG
55	DV	472	ARG
55	DV	494	ILE
55	DV	504	LYS
55	DV	532	LYS
55	DV	558	GLN
55	DV	560	GLN
55	DV	580	PHE
55	DV	584	HIS
55	DV	602	LYS
55	DV	650	THR
55	DV	675	LYS
55	DV	677	ARG
55	DV	685	LEU
55	DV	699	ILE
56	DW	3	SER
2	EC	12	ARG
2	EC	57	HIS
2	EC	77	VAL
2	EC	93	VAL

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Mol	Chain	Res	Type
2	EC	104	LEU
2	EC	109	LEU
2	EC	119	VAL
2	EC	120	ASP
2	EC	129	LEU
2	EC	155	ARG
2	EC	166	ARG
2	EC	173	LEU
2	EC	175	LEU
2	EC	176	ARG
2	EC	194	VAL
2	EC	204	LEU
2	EC	212	TRP
2	EC	241	LYS
2	EC	251	THR
2	EC	256	THR
2	EC	268	ARG
2	EC	270	ARG
4	ED	24	VAL
4	ED	91	THR
4	ED	97	SER
4	ED	124	ARG
4	ED	129	THR
4	ED	139	SER
4	ED	141	ARG
4	ED	151	THR
4	ED	171	THR
4	ED	172	VAL
4	ED	201	LEU
4	ED	203	VAL
5	EE	5	LEU
5	EE	9	GLN
5	EE	28	VAL
5	EE	44	ARG
5	EE	47	LYS
5	EE	77	ILE
5	EE	113	VAL
5	EE	118	LEU
5	EE	119	ILE
5	EE	131	THR
5	EE	149	ILE
5	EE	153	LEU

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Mol	Chain	Res	Type
6	EF	3	LEU
6	EF	9	ASP
6	EF	12	VAL
6	EF	25	MET
6	EF	35	LEU
6	EF	36	ASN
6	EF	66	ILE
6	EF	80	GLN
6	EF	82	TYR
6	EF	107	VAL
6	EF	114	ARG
6	EF	146	ASP
6	EF	153	ILE
6	EF	168	LEU
6	EF	177	ARG
7	EG	5	LYS
7	EG	18	ILE
7	EG	37	ASN
7	EG	38	ASP
7	EG	41	GLU
7	EG	44	HIS
7	EG	50	THR
7	EG	68	ARG
7	EG	76	ILE
7	EG	84	LYS
7	EG	86	LEU
7	EG	103	ASN
7	EG	120	ILE
7	EG	126	THR
7	EG	131	VAL
7	EG	132	LEU
7	EG	147	LEU
7	EG	165	ASP
8	EH	3	VAL
8	EH	27	ARG
8	EH	43	ASN
9	EI	23	VAL
9	EI	93	ASN
9	EI	135	MET
10	EJ	2	LYS
10	EJ	3	THR
10	EJ	5	THR

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Mol	Chain	Res	Type
10	EJ	17	VAL
10	EJ	24	THR
10	EJ	30	THR
10	EJ	40	HIS
10	EJ	44	TYR
10	EJ	54	ILE
10	EJ	55	ILE
10	EJ	65	THR
10	EJ	72	LYS
10	EJ	95	ARG
10	EJ	103	ILE
10	EJ	123	LYS
10	EJ	131	ASN
10	EJ	138	GLN
10	EJ	139	VAL
10	EJ	140	LEU
11	EK	3	GLN
11	EK	8	LEU
11	EK	13	ASN
11	EK	19	VAL
11	EK	21	CYS
11	EK	23	LYS
11	EK	41	ILE
11	EK	47	ILE
11	EK	61	VAL
11	EK	73	ASP
11	EK	93	GLN
11	EK	95	ILE
11	EK	97	THR
11	EK	105	ARG
11	EK	107	LEU
11	EK	111	LYS
12	EL	5	THR
12	EL	19	LEU
12	EL	30	THR
12	EL	100	ILE
12	EL	121	THR
12	EL	122	VAL
13	EM	7	THR
13	EM	41	LEU
13	EM	76	LYS
13	EM	97	GLN

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Mol	Chain	Res	Type
13	EM	115	GLU
13	EM	118	LYS
13	EM	126	ILE
13	EM	132	THR
13	EM	134	THR
14	EN	51	LEU
14	EN	69	ARG
14	EN	83	LEU
14	EN	97	ILE
15	EO	8	ILE
15	EO	18	LEU
15	EO	31	THR
15	EO	36	TYR
15	EO	106	LEU
16	EP	7	LEU
16	EP	16	VAL
16	EP	24	THR
16	EP	31	VAL
16	EP	36	LYS
16	EP	79	VAL
16	EP	80	VAL
16	EP	92	ARG
16	EP	99	LEU
16	EP	103	THR
16	EP	113	LEU
17	EQ	57	ARG
17	EQ	59	LEU
17	EQ	63	ARG
17	EQ	88	GLU
17	EQ	93	ILE
17	EQ	116	LEU
18	ER	4	VAL
18	ER	25	LEU
18	ER	26	ASP
18	ER	29	THR
18	ER	38	VAL
18	ER	48	LYS
18	ER	52	PRO
18	ER	81	LYS
19	ES	3	THR
19	ES	4	ILE
19	ES	7	HIS

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Mol	Chain	Res	Type
19	ES	18	ARG
19	ES	30	SER
19	ES	66	ILE
19	ES	76	VAL
19	ES	101	SER
19	ES	107	VAL
20	ET	18	GLU
20	ET	32	LEU
20	ET	43	ILE
20	ET	64	LYS
20	ET	68	LYS
20	ET	85	VAL
21	EU	18	LYS
21	EU	29	SER
21	EU	71	ILE
21	EU	86	PHE
21	EU	92	VAL
22	EV	18	ARG
22	EV	46	LYS
22	EV	61	LEU
23	EW	19	ARG
23	EW	23	LYS
23	EW	24	ARG
23	EW	25	PHE
23	EW	30	VAL
23	EW	49	ASN
23	EW	63	ASP
23	EW	67	LYS
23	EW	71	LYS
23	EW	76	ARG
24	EX	10	ARG
24	EX	16	ASN
24	EX	17	ARG
24	EX	24	THR
24	EX	26	ARG
24	EX	29	LEU
24	EX	34	SER
24	EX	46	VAL
24	EX	70	LEU
24	EX	77	TYR
25	EY	1	MET
25	EY	16	THR

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Mol	Chain	Res	Type
25	EY	18	LEU
25	EY	47	ARG
25	EY	56	LEU
26	EZ	8	GLN
26	EZ	15	ARG
26	EZ	17	PRO
26	EZ	23	LEU
26	EZ	30	ARG
26	EZ	37	ARG
26	EZ	56	VAL
27	E0	24	VAL
28	E1	7	LYS
28	E1	9	LYS
28	E1	35	LEU
29	E2	39	ARG
29	E2	42	LEU
30	E3	7	ARG
30	E3	30	HIS
30	E3	31	ILE
30	E3	54	LEU
31	E4	16	ILE
31	E4	26	ILE
32	E5	1	MET
32	E5	26	VAL
32	E5	42	ARG
32	E5	43	LYS
32	E5	51	TYR
32	E5	59	LEU
32	E5	65	GLU
32	E5	69	PHE
32	E5	70	GLU
32	E5	96	PHE
32	E5	106	PHE
32	E5	107	GLU
32	E5	108	VAL
32	E5	116	GLU
32	E5	125	ARG
32	E5	130	PRO
32	E5	132	TYR
32	E5	143	MET
34	FB	19	THR
34	FB	49	PHE

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Mol	Chain	Res	Type
34	FB	53	LEU
34	FB	58	LYS
34	FB	88	GLN
34	FB	212	TYR
34	FB	219	THR
34	FB	221	ARG
34	FB	224	ARG
36	FC	3	GLN
36	FC	15	VAL
36	FC	26	THR
36	FC	38	LYS
36	FC	39	VAL
36	FC	70	THR
36	FC	121	THR
36	FC	144	LEU
36	FC	150	LYS
36	FC	156	ARG
36	FC	167	TRP
36	FC	185	ASN
37	FD	10	LYS
37	FD	65	TYR
37	FD	101	VAL
37	FD	110	THR
37	FD	111	ARG
37	FD	117	LEU
37	FD	161	LEU
38	FE	76	LEU
38	FE	80	THR
38	FE	114	VAL
38	FE	123	VAL
38	FE	153	VAL
38	FE	157	ARG
39	FF	52	ASN
39	FF	54	LEU
39	FF	55	HIS
39	FF	89	VAL
39	FF	97	THR
40	FG	13	LEU
40	FG	23	LEU
41	FH	48	ASP
41	FH	104	VAL
41	FH	112	THR

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Mol	Chain	Res	Type
41	FH	121	LEU
41	FH	125	ILE
42	FI	32	GLN
42	FI	57	MET
42	FI	61	LEU
42	FI	63	LEU
42	FI	84	THR
42	FI	88	MET
42	FI	89	GLU
42	FI	106	ARG
42	FI	123	ARG
43	FJ	52	LEU
43	FJ	57	VAL
43	FJ	87	LEU
44	FK	15	GLN
44	FK	69	ARG
44	FK	77	TYR
44	FK	82	LEU
44	FK	83	GLU
44	FK	97	ILE
44	FK	107	ILE
44	FK	122	ARG
44	FK	129	VAL
45	FL	29	GLN
45	FL	45	PRO
45	FL	52	VAL
45	FL	74	LEU
45	FL	82	ILE
45	FL	95	TYR
45	FL	117	TYR
46	FM	64	VAL
47	FN	28	LYS
47	FN	49	GLN
47	FN	53	ARG
48	FO	5	THR
48	FO	8	THR
48	FO	35	GLN
48	FO	64	ARG
48	FO	87	LEU
49	FP	1	MET
50	FQ	29	VAL
50	FQ	76	VAL

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Mol	Chain	Res	Type
52	FS	36	ARG
52	FS	49	ILE
52	FS	56	GLN
53	FT	5	LYS
53	FT	9	LYS
53	FT	10	ARG
53	FT	12	ILE
53	FT	27	MET
53	FT	48	GLN
53	FT	54	MET
54	FU	16	LEU
54	FU	20	LYS
54	FU	28	VAL
54	FU	34	ARG
54	FU	43	THR
55	FV	5	THR
55	FV	19	ILE
55	FV	23	LYS
55	FV	77	LYS
55	FV	83	ARG
55	FV	95	PHE
55	FV	96	THR
55	FV	104	ARG
55	FV	106	LEU
55	FV	116	VAL
55	FV	182	VAL
55	FV	200	VAL
55	FV	202	PHE
55	FV	204	TYR
55	FV	214	LEU
55	FV	232	GLU
55	FV	252	LEU
55	FV	266	CYS
55	FV	286	LEU
55	FV	291	ASP
55	FV	299	LEU
55	FV	303	LYS
55	FV	305	THR
55	FV	409	MET
55	FV	416	ILE
55	FV	446	ARG
55	FV	494	ILE

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Mol	Chain	Res	Type
55	FV	504	LYS
55	FV	508	GLN
55	FV	532	LYS
55	FV	558	GLN
55	FV	560	GLN
55	FV	584	HIS
55	FV	602	LYS
55	FV	612	LEU
55	FV	660	LEU
55	FV	675	LYS
55	FV	677	ARG
55	FV	685	LEU
55	FV	699	ILE
56	FW	4	SER
2	GC	51	ARG
2	GC	93	VAL
2	GC	100	ARG
2	GC	104	LEU
2	GC	109	LEU
2	GC	129	LEU
2	GC	166	ARG
2	GC	202	ARG
2	GC	212	TRP
2	GC	215	VAL
2	GC	224	MET
2	GC	251	THR
2	GC	270	ARG
4	GD	16	THR
4	GD	79	LEU
4	GD	86	GLU
4	GD	98	VAL
4	GD	100	LEU
4	GD	103	ASP
4	GD	129	THR
4	GD	138	LEU
4	GD	170	VAL
4	GD	176	ASP
4	GD	186	LEU
4	GD	201	LEU
4	GD	203	VAL
5	GE	12	LEU
5	GE	21	ARG

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Mol	Chain	Res	Type
5	GE	28	VAL
5	GE	40	ARG
5	GE	44	ARG
5	GE	77	ILE
5	GE	78	TRP
5	GE	88	ARG
5	GE	108	ILE
5	GE	111	GLU
5	GE	118	LEU
5	GE	123	LYS
5	GE	167	VAL
6	GF	114	ARG
6	GF	174	PHE
7	GG	32	LEU
7	GG	38	ASP
7	GG	44	HIS
7	GG	68	ARG
7	GG	84	LYS
7	GG	86	LEU
7	GG	103	ASN
7	GG	126	THR
7	GG	132	LEU
8	GH	5	LEU
9	GI	23	VAL
9	GI	33	ASN
10	GJ	2	LYS
10	GJ	25	LEU
10	GJ	36	LEU
10	GJ	40	HIS
10	GJ	54	ILE
10	GJ	55	ILE
10	GJ	65	THR
10	GJ	69	ARG
10	GJ	95	ARG
10	GJ	103	ILE
10	GJ	105	VAL
10	GJ	138	GLN
11	GK	3	GLN
11	GK	8	LEU
11	GK	21	CYS
11	GK	23	LYS
11	GK	30	ARG

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Mol	Chain	Res	Type
11	GK	47	ILE
11	GK	58	LEU
11	GK	73	ASP
11	GK	93	GLN
11	GK	95	ILE
11	GK	97	THR
11	GK	105	ARG
11	GK	115	ILE
12	GL	19	LEU
12	GL	21	ARG
12	GL	48	ARG
12	GL	66	PHE
12	GL	73	ILE
12	GL	95	LEU
13	GM	14	LYS
13	GM	17	ASN
13	GM	31	PHE
13	GM	91	TYR
13	GM	132	THR
13	GM	134	THR
14	GN	6	SER
14	GN	14	SER
14	GN	33	ILE
14	GN	51	LEU
14	GN	69	ARG
14	GN	71	ARG
14	GN	75	ILE
15	GO	28	VAL
15	GO	30	ARG
15	GO	36	TYR
15	GO	94	ARG
15	GO	106	LEU
16	GP	3	ILE
16	GP	7	LEU
16	GP	15	ASP
16	GP	83	ILE
16	GP	92	ARG
16	GP	95	LYS
16	GP	99	LEU
16	GP	103	THR
16	GP	113	LEU
17	GQ	17	LEU

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Mol	Chain	Res	Type
17	GQ	63	ARG
17	GQ	93	ILE
17	GQ	94	LEU
17	GQ	96	ASP
17	GQ	108	LEU
18	GR	25	LEU
18	GR	38	VAL
18	GR	48	LYS
18	GR	54	VAL
18	GR	83	TYR
19	GS	4	ILE
19	GS	33	LEU
19	GS	62	ASP
19	GS	66	ILE
19	GS	88	ARG
20	GT	32	LEU
20	GT	37	ASP
20	GT	43	ILE
21	GU	18	LYS
21	GU	68	ASN
21	GU	71	ILE
21	GU	86	PHE
22	GV	31	TYR
23	GW	23	LYS
23	GW	63	ASP
24	GX	24	THR
24	GX	26	ARG
24	GX	39	VAL
24	GX	75	GLU
25	GY	14	LEU
25	GY	37	LEU
25	GY	56	LEU
26	GZ	2	LYS
26	GZ	30	ARG
27	G0	24	VAL
27	G0	42	ILE
28	G1	8	ILE
28	G1	33	LEU
29	G2	4	THR
29	G2	18	PHE
29	G2	21	ARG
30	G3	7	ARG

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Mol	Chain	Res	Type
30	G3	31	ILE
30	G3	54	LEU
31	G4	26	ILE
34	HB	19	THR
34	HB	58	LYS
34	HB	90	PHE
34	HB	143	LEU
34	HB	206	ILE
34	HB	212	TYR
36	HC	3	GLN
36	HC	15	VAL
36	HC	55	ILE
36	HC	90	VAL
36	HC	144	LEU
36	HC	167	TRP
36	HC	185	ASN
37	HD	10	LYS
37	HD	60	LYS
37	HD	135	TYR
37	HD	146	ARG
37	HD	161	LEU
38	HE	12	GLN
38	HE	66	LYS
38	HE	77	ASN
38	HE	81	LEU
38	HE	124	LEU
38	HE	136	VAL
38	HE	153	VAL
38	HE	157	ARG
39	HF	86	ARG
39	HF	97	THR
41	HH	40	LEU
41	HH	55	THR
41	HH	66	PHE
41	HH	77	ARG
41	HH	99	LEU
41	HH	104	VAL
41	HH	121	LEU
42	HI	57	MET
42	HI	63	LEU
42	HI	88	MET
43	HJ	7	ARG

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Mol	Chain	Res	Type
43	HJ	22	THR
43	HJ	83	THR
43	HJ	91	ASP
43	HJ	92	LEU
44	HK	44	TRP
44	HK	56	ARG
44	HK	57	LYS
44	HK	82	LEU
44	HK	89	PRO
44	HK	125	LYS
44	HK	129	VAL
45	HL	27	CYS
45	HL	59	ASN
45	HL	74	LEU
45	HL	115	SER
46	HM	109	ARG
48	HO	64	ARG
48	HO	87	LEU
49	HP	1	MET
49	HP	34	GLU
50	HQ	4	LYS
50	HQ	21	ILE
50	HQ	29	VAL
50	HQ	33	ILE
50	HQ	40	ARG
50	HQ	76	VAL
52	HS	49	ILE
53	HT	5	LYS
53	HT	12	ILE
53	HT	27	MET
53	HT	28	MET
53	HT	49	LYS
53	HT	51	PHE
53	HT	54	MET
53	HT	69	LYS
54	HU	34	ARG
55	HV	5	THR
55	HV	19	ILE
55	HV	23	LYS
55	HV	57	GLN
55	HV	77	LYS
55	HV	83	ARG

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Mol	Chain	Res	Type
55	HV	95	PHE
55	HV	96	THR
55	HV	104	ARG
55	HV	182	VAL
55	HV	185	LEU
55	HV	202	PHE
55	HV	204	TYR
55	HV	214	LEU
55	HV	232	GLU
55	HV	252	LEU
55	HV	266	CYS
55	HV	286	LEU
55	HV	299	LEU
55	HV	303	LYS
55	HV	336	PHE
55	HV	409	MET
55	HV	437	ARG
55	HV	446	ARG
55	HV	494	ILE
55	HV	504	LYS
55	HV	532	LYS
55	HV	560	GLN
55	HV	584	HIS
55	HV	602	LYS
55	HV	658	VAL
55	HV	675	LYS
55	HV	685	LEU
56	HW	3	SER
56	HW	4	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (99) such sidechains are listed below:

Mol	Chain	Res	Type
6	AF	4	HIS
22	AV	44	HIS
22	AV	80	HIS
25	AY	41	HIS
30	A3	30	HIS
34	BB	88	GLN
39	BF	3	HIS
40	BG	86	GLN
41	BH	18	GLN

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Mol	Chain	Res	Type
42	BI	81	HIS
43	BJ	35	GLN
49	BP	26	ASN
55	BV	122	GLN
55	BV	220	GLN
55	BV	276	GLN
55	BV	465	HIS
2	CC	36	ASN
2	CC	250	GLN
5	CE	163	ASN
8	CH	33	GLN
10	CJ	80	HIS
13	CM	13	HIS
15	CO	34	HIS
16	CP	65	ASN
17	CQ	65	ASN
18	CR	66	HIS
20	CT	70	HIS
22	CV	44	HIS
22	CV	51	GLN
22	CV	80	HIS
23	CW	56	HIS
30	C3	25	HIS
34	DB	119	GLN
39	DF	3	HIS
40	DG	86	GLN
40	DG	122	ASN
40	DG	142	HIS
41	DH	18	GLN
44	DK	81	ASN
45	DL	5	ASN
51	DR	54	GLN
52	DS	52	HIS
55	DV	122	GLN
55	DV	276	GLN
55	DV	465	HIS
2	EC	24	HIS
4	ED	49	GLN
13	EM	13	HIS
15	EO	29	HIS
15	EO	34	HIS
18	ER	66	HIS

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Mol	Chain	Res	Type
22	EV	44	HIS
22	EV	80	HIS
25	EY	41	HIS
37	FD	116	GLN
38	FE	82	GLN
38	FE	83	HIS
38	FE	89	HIS
41	FH	18	GLN
47	FN	35	ASN
52	FS	14	HIS
52	FS	52	HIS
52	FS	57	HIS
55	FV	55	GLN
55	FV	78	GLN
55	FV	122	GLN
55	FV	276	GLN
55	FV	310	HIS
55	FV	465	HIS
55	FV	505	HIS
55	FV	558	GLN
5	GE	29	HIS
5	GE	30	GLN
5	GE	46	GLN
5	GE	92	HIS
5	GE	97	ASN
7	GG	21	GLN
8	GH	18	GLN
12	GL	99	ASN
13	GM	13	HIS
15	GO	34	HIS
16	GP	76	HIS
21	GU	44	HIS
22	GV	44	HIS
22	GV	80	HIS
25	GY	20	ASN
30	G3	25	HIS
34	HB	176	ASN
38	HE	89	HIS
39	HF	3	HIS
40	HG	148	ASN
43	HJ	56	HIS
44	HK	22	HIS

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Mol	Chain	Res	Type
45	HL	29	GLN
46	HM	91	HIS
47	HN	71	HIS
48	HO	50	HIS
55	HV	122	GLN
55	HV	465	HIS

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AB	117/120 (97%)	17 (14%)	0
1	CB	117/120 (97%)	19 (16%)	0
1	EB	117/120 (97%)	18 (15%)	0
1	GB	117/120 (97%)	20 (17%)	0
3	AA	2850/2904 (98%)	455 (15%)	40 (1%)
3	CA	2850/2904 (98%)	457 (16%)	39 (1%)
3	EA	2850/2904 (98%)	452 (15%)	36 (1%)
3	GA	2850/2904 (98%)	459 (16%)	38 (1%)
35	BA	1532/1542 (99%)	264 (17%)	17 (1%)
35	DA	1532/1542 (99%)	264 (17%)	14 (0%)
35	FA	1532/1542 (99%)	263 (17%)	16 (1%)
35	HA	1532/1542 (99%)	268 (17%)	15 (0%)
All	All	17996/18264 (98%)	2956 (16%)	215 (1%)

All (2956) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AB	3	C
1	AB	15	A
1	AB	16	G
1	AB	21	G
1	AB	30	C
1	AB	35	C
1	AB	42	C
1	AB	44	G
1	AB	45	A
1	AB	56	G
1	AB	84	G
1	AB	87	U
1	AB	88	C
1	AB	89	U

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Mol	Chain	Res	Type
1	AB	90	C
1	AB	99	A
1	AB	109	A
3	AA	10	A
3	AA	12	U
3	AA	15	G
3	AA	34	U
3	AA	35	G
3	AA	42	A
3	AA	43	G
3	AA	45	G
3	AA	46	G
3	AA	51	G
3	AA	61	C
3	AA	71	A
3	AA	74	A
3	AA	75	G
3	AA	80	G
3	AA	82	U
3	AA	84	A
3	AA	96	C
3	AA	101	A
3	AA	118	A
3	AA	119	A
3	AA	120	U
3	AA	131	A
3	AA	135	U
3	AA	136	G
3	AA	137	U
3	AA	138	U
3	AA	139	U
3	AA	140	C
3	AA	141	G
3	AA	142	A
3	AA	144	A
3	AA	149	A
3	AA	162	U
3	AA	163	C
3	AA	164	C
3	AA	181	A
3	AA	188	G
3	AA	196	A

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Mol	Chain	Res	Type
3	AA	199	A
3	AA	215	G
3	AA	216	A
3	AA	222	A
3	AA	226	A
3	AA	230	G
3	AA	248	G
3	AA	255	A
3	AA	264	C
3	AA	265	A
3	AA	266	G
3	AA	267	C
3	AA	272	A
3	AA	273	G
3	AA	276	U
3	AA	277	G
3	AA	278	A
3	AA	281	C
3	AA	285	G
3	AA	302	C
3	AA	311	A
3	AA	329	G
3	AA	330	A
3	AA	346	A
3	AA	347	A
3	AA	353	C
3	AA	355	U
3	AA	361	G
3	AA	362	A
3	AA	371	A
3	AA	372	G
3	AA	382	A
3	AA	383	C
3	AA	386	G
3	AA	388	G
3	AA	396	G
3	AA	404	A
3	AA	405	U
3	AA	411	G
3	AA	412	A
3	AA	424	G
3	AA	451	U

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Mol	Chain	Res	Type
3	AA	455	C
3	AA	481	G
3	AA	491	G
3	AA	503	A
3	AA	504	A
3	AA	505	A
3	AA	509	C
3	AA	528	A
3	AA	531	C
3	AA	532	A
3	AA	533	G
3	AA	538	A
3	AA	543	G
3	AA	544	C
3	AA	546	U
3	AA	547	A
3	AA	548	G
3	AA	549	G
3	AA	563	A
3	AA	573	U
3	AA	575	A
3	AA	586	A
3	AA	603	A
3	AA	604	G
3	AA	613	A
3	AA	614	A
3	AA	615	U
3	AA	627	A
3	AA	631	A
3	AA	637	A
3	AA	645	C
3	AA	646	U
3	AA	647	G
3	AA	648	G
3	AA	654	A
3	AA	655	A
3	AA	656	G
3	AA	686	U
3	AA	714	U
3	AA	715	A
3	AA	730	A
3	AA	738	G

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Mol	Chain	Res	Type
3	AA	747	U
3	AA	775	G
3	AA	776	G
3	AA	782	A
3	AA	784	G
3	AA	785	G
3	AA	805	G
3	AA	812	C
3	AA	819	A
3	AA	827	U
3	AA	828	U
3	AA	845	A
3	AA	846	U
3	AA	847	U
3	AA	859	G
3	AA	878	A
3	AA	883	G
3	AA	884	U
3	AA	896	A
3	AA	897	C
3	AA	910	A
3	AA	914	G
3	AA	915	C
3	AA	932	U
3	AA	941	A
3	AA	946	C
3	AA	961	C
3	AA	974	G
3	AA	983	A
3	AA	985	C
3	AA	995	C
3	AA	996	A
3	AA	1003	G
3	AA	1012	U
3	AA	1013	C
3	AA	1021	A
3	AA	1022	G
3	AA	1023	U
3	AA	1025	G
3	AA	1026	G
3	AA	1033	U
3	AA	1045	C

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Mol	Chain	Res	Type
3	AA	1046	A
3	AA	1047	G
3	AA	1051	G
3	AA	1053	C
3	AA	1059	G
3	AA	1060	U
3	AA	1061	U
3	AA	1062	G
3	AA	1067	A
3	AA	1069	A
3	AA	1070	A
3	AA	1072	C
3	AA	1074	G
3	AA	1078	U
3	AA	1083	U
3	AA	1084	A
3	AA	1088	A
3	AA	1089	A
3	AA	1090	A
3	AA	1091	G
3	AA	1097	U
3	AA	1098	A
3	AA	1110	G
3	AA	1111	A
3	AA	1112	G
3	AA	1129	A
3	AA	1132	U
3	AA	1133	A
3	AA	1135	C
3	AA	1136	G
3	AA	1139	G
3	AA	1142	A
3	AA	1151	A
3	AA	1155	A
3	AA	1169	A
3	AA	1170	C
3	AA	1172	C
3	AA	1174	U
3	AA	1175	A
3	AA	1176	U
3	AA	1180	U
3	AA	1186	G

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Mol	Chain	Res	Type
3	AA	1238	G
3	AA	1248	G
3	AA	1250	G
3	AA	1253	A
3	AA	1256	G
3	AA	1266	G
3	AA	1268	A
3	AA	1271	G
3	AA	1272	A
3	AA	1273	U
3	AA	1281	G
3	AA	1300	G
3	AA	1301	A
3	AA	1313	U
3	AA	1317	G
3	AA	1352	U
3	AA	1365	A
3	AA	1368	G
3	AA	1378	A
3	AA	1379	U
3	AA	1383	A
3	AA	1395	A
3	AA	1415	U
3	AA	1416	G
3	AA	1419	A
3	AA	1420	A
3	AA	1428	C
3	AA	1435	G
3	AA	1452	G
3	AA	1459	G
3	AA	1482	G
3	AA	1493	C
3	AA	1504	A
3	AA	1508	A
3	AA	1510	G
3	AA	1515	A
3	AA	1524	G
3	AA	1533	C
3	AA	1534	U
3	AA	1535	A
3	AA	1536	C
3	AA	1566	A

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Mol	Chain	Res	Type
3	AA	1569	A
3	AA	1578	U
3	AA	1583	A
3	AA	1584	U
3	AA	1585	C
3	AA	1607	C
3	AA	1608	A
3	AA	1610	A
3	AA	1613	G
3	AA	1627	G
3	AA	1647	U
3	AA	1648	U
3	AA	1649	G
3	AA	1652	A
3	AA	1653	G
3	AA	1674	G
3	AA	1714	U
3	AA	1715	G
3	AA	1723	G
3	AA	1729	U
3	AA	1730	C
3	AA	1737	G
3	AA	1738	G
3	AA	1739	A
3	AA	1744	A
3	AA	1758	U
3	AA	1764	C
3	AA	1773	A
3	AA	1776	G
3	AA	1791	A
3	AA	1800	C
3	AA	1801	A
3	AA	1802	A
3	AA	1808	A
3	AA	1811	G
3	AA	1816	C
3	AA	1829	A
3	AA	1833	C
3	AA	1847	A
3	AA	1848	A
3	AA	1858	A
3	AA	1869	G

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Mol	Chain	Res	Type
3	AA	1870	C
3	AA	1871	A
3	AA	1872	A
3	AA	1873	G
3	AA	1884	G
3	AA	1906	G
3	AA	1913	A
3	AA	1914	C
3	AA	1927	A
3	AA	1929	G
3	AA	1930	G
3	AA	1937	A
3	AA	1938	A
3	AA	1955	U
3	AA	1960	A
3	AA	1966	A
3	AA	1967	C
3	AA	1970	A
3	AA	1971	U
3	AA	1972	G
3	AA	1991	U
3	AA	1993	U
3	AA	1997	C
3	AA	2017	U
3	AA	2020	A
3	AA	2022	U
3	AA	2023	C
3	AA	2031	A
3	AA	2033	A
3	AA	2043	C
3	AA	2055	C
3	AA	2056	G
3	AA	2060	A
3	AA	2061	G
3	AA	2062	A
3	AA	2069	G
3	AA	2072	C
3	AA	2093	G
3	AA	2104	C
3	AA	2106	U
3	AA	2107	G
3	AA	2108	A

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Mol	Chain	Res	Type
3	AA	2109	U
3	AA	2110	G
3	AA	2134	A
3	AA	2135	A
3	AA	2137	U
3	AA	2138	G
3	AA	2139	U
3	AA	2140	G
3	AA	2142	A
3	AA	2143	C
3	AA	2144	G
3	AA	2145	C
3	AA	2146	C
3	AA	2147	A
3	AA	2148	G
3	AA	2149	U
3	AA	2150	C
3	AA	2151	U
3	AA	2153	C
3	AA	2154	A
3	AA	2155	U
3	AA	2156	G
3	AA	2157	G
3	AA	2180	U
3	AA	2183	A
3	AA	2185	U
3	AA	2194	U
3	AA	2198	A
3	AA	2199	A
3	AA	2204	G
3	AA	2211	A
3	AA	2212	A
3	AA	2214	C
3	AA	2225	A
3	AA	2226	C
3	AA	2238	G
3	AA	2239	G
3	AA	2250	G
3	AA	2268	A
3	AA	2278	A
3	AA	2283	C
3	AA	2284	A

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Mol	Chain	Res	Type
3	AA	2286	G
3	AA	2287	A
3	AA	2305	U
3	AA	2308	G
3	AA	2311	A
3	AA	2322	A
3	AA	2325	G
3	AA	2327	A
3	AA	2333	A
3	AA	2336	A
3	AA	2347	C
3	AA	2354	C
3	AA	2361	G
3	AA	2383	G
3	AA	2385	C
3	AA	2402	U
3	AA	2403	C
3	AA	2406	A
3	AA	2423	U
3	AA	2424	C
3	AA	2425	A
3	AA	2429	G
3	AA	2430	A
3	AA	2435	A
3	AA	2441	U
3	AA	2448	A
3	AA	2470	G
3	AA	2476	A
3	AA	2491	U
3	AA	2502	G
3	AA	2503	A
3	AA	2505	G
3	AA	2506	U
3	AA	2507	C
3	AA	2518	A
3	AA	2529	G
3	AA	2554	U
3	AA	2556	C
3	AA	2566	A
3	AA	2567	G
3	AA	2572	A
3	AA	2573	C

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Mol	Chain	Res	Type
3	AA	2585	U
3	AA	2602	A
3	AA	2603	G
3	AA	2609	U
3	AA	2613	U
3	AA	2629	U
3	AA	2663	G
3	AA	2671	G
3	AA	2681	C
3	AA	2682	A
3	AA	2689	U
3	AA	2690	U
3	AA	2714	G
3	AA	2716	C
3	AA	2726	A
3	AA	2733	A
3	AA	2744	G
3	AA	2748	A
3	AA	2757	A
3	AA	2760	C
3	AA	2765	A
3	AA	2778	A
3	AA	2791	G
3	AA	2798	U
3	AA	2800	A
3	AA	2801	G
3	AA	2818	U
3	AA	2820	A
3	AA	2821	A
3	AA	2861	U
3	AA	2867	G
3	AA	2873	A
3	AA	2874	C
3	AA	2883	A
3	AA	2884	U
3	AA	2885	G
3	AA	2891	U
3	AA	2903	U
35	BA	5	U
35	BA	9	G
35	BA	22	G
35	BA	32	A

Continued on next page...

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Mol	Chain	Res	Type
35	BA	39	G
35	BA	40	C
35	BA	48	C
35	BA	51	A
35	BA	70	U
35	BA	71	A
35	BA	73	C
35	BA	74	A
35	BA	75	G
35	BA	76	G
35	BA	77	A
35	BA	78	A
35	BA	79	G
35	BA	80	A
35	BA	81	A
35	BA	82	G
35	BA	83	C
35	BA	84	U
35	BA	85	U
35	BA	86	G
35	BA	89	U
35	BA	90	C
35	BA	98	A
35	BA	115	G
35	BA	116	A
35	BA	122	G
35	BA	127	G
35	BA	130	A
35	BA	131	A
35	BA	137	U
35	BA	141	G
35	BA	143	A
35	BA	144	G
35	BA	159	G
35	BA	163	C
35	BA	164	G
35	BA	173	U
35	BA	177	G
35	BA	182	A
35	BA	183	C
35	BA	204	G
35	BA	205	A

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Mol	Chain	Res	Type
35	BA	209	U
35	BA	210	C
35	BA	240	G
35	BA	245	U
35	BA	247	G
35	BA	251	G
35	BA	258	G
35	BA	266	G
35	BA	267	C
35	BA	273	U
35	BA	285	C
35	BA	289	G
35	BA	321	A
35	BA	328	C
35	BA	329	A
35	BA	332	G
35	BA	344	A
35	BA	345	C
35	BA	347	G
35	BA	352	C
35	BA	353	A
35	BA	354	G
35	BA	367	U
35	BA	372	C
35	BA	373	A
35	BA	384	G
35	BA	406	G
35	BA	408	A
35	BA	411	A
35	BA	412	A
35	BA	413	G
35	BA	421	U
35	BA	422	C
35	BA	423	G
35	BA	424	G
35	BA	429	U
35	BA	430	A
35	BA	435	A
35	BA	441	A
35	BA	457	G
35	BA	458	U
35	BA	459	A

Continued on next page...

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Mol	Chain	Res	Type
35	BA	461	A
35	BA	462	G
35	BA	463	U
35	BA	467	U
35	BA	468	A
35	BA	481	G
35	BA	482	A
35	BA	483	C
35	BA	484	G
35	BA	485	U
35	BA	486	U
35	BA	491	G
35	BA	508	U
35	BA	509	A
35	BA	511	C
35	BA	518	C
35	BA	527	G
35	BA	532	A
35	BA	533	A
35	BA	547	A
35	BA	556	C
35	BA	559	A
35	BA	562	U
35	BA	564	C
35	BA	572	A
35	BA	573	A
35	BA	576	C
35	BA	577	G
35	BA	579	A
35	BA	588	G
35	BA	596	A
35	BA	604	G
35	BA	650	G
35	BA	653	U
35	BA	665	A
35	BA	675	A
35	BA	701	U
35	BA	702	A
35	BA	721	G
35	BA	723	U
35	BA	731	G
35	BA	734	G

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Mol	Chain	Res	Type
35	BA	747	A
35	BA	748	G
35	BA	755	G
35	BA	777	A
35	BA	793	U
35	BA	794	A
35	BA	813	U
35	BA	815	A
35	BA	817	C
35	BA	821	G
35	BA	828	U
35	BA	829	G
35	BA	841	C
35	BA	843	U
35	BA	845	A
35	BA	846	G
35	BA	859	G
35	BA	887	G
35	BA	914	A
35	BA	922	G
35	BA	926	G
35	BA	927	G
35	BA	932	C
35	BA	934	C
35	BA	935	A
35	BA	960	U
35	BA	966	G
35	BA	969	A
35	BA	971	G
35	BA	974	A
35	BA	975	A
35	BA	976	G
35	BA	977	A
35	BA	983	A
35	BA	993	G
35	BA	1003	G
35	BA	1004	A
35	BA	1008	U
35	BA	1018	G
35	BA	1022	A
35	BA	1026	G
35	BA	1029	U

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Mol	Chain	Res	Type
35	BA	1030	U
35	BA	1031	C
35	BA	1032	G
35	BA	1033	G
35	BA	1034	G
35	BA	1037	C
35	BA	1045	C
35	BA	1050	G
35	BA	1054	C
35	BA	1055	A
35	BA	1065	U
35	BA	1066	C
35	BA	1086	U
35	BA	1088	G
35	BA	1094	G
35	BA	1095	U
35	BA	1101	A
35	BA	1124	G
35	BA	1125	U
35	BA	1130	A
35	BA	1133	G
35	BA	1135	U
35	BA	1136	C
35	BA	1137	C
35	BA	1139	G
35	BA	1146	A
35	BA	1159	U
35	BA	1167	A
35	BA	1168	U
35	BA	1169	A
35	BA	1181	G
35	BA	1182	G
35	BA	1183	U
35	BA	1196	A
35	BA	1197	A
35	BA	1202	U
35	BA	1212	U
35	BA	1213	A
35	BA	1214	C
35	BA	1225	A
35	BA	1226	C
35	BA	1227	A

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Mol	Chain	Res	Type
35	BA	1239	A
35	BA	1240	U
35	BA	1249	C
35	BA	1256	A
35	BA	1279	G
35	BA	1280	A
35	BA	1286	U
35	BA	1287	A
35	BA	1293	C
35	BA	1299	A
35	BA	1300	G
35	BA	1302	C
35	BA	1303	C
35	BA	1305	G
35	BA	1317	C
35	BA	1318	A
35	BA	1320	C
35	BA	1322	C
35	BA	1332	A
35	BA	1336	C
35	BA	1337	G
35	BA	1338	G
35	BA	1353	G
35	BA	1364	U
35	BA	1368	A
35	BA	1381	U
35	BA	1398	A
35	BA	1406	U
35	BA	1411	C
35	BA	1419	G
35	BA	1440	U
35	BA	1441	A
35	BA	1446	A
35	BA	1452	C
35	BA	1454	G
35	BA	1469	C
35	BA	1475	G
35	BA	1487	G
35	BA	1491	G
35	BA	1492	A
35	BA	1493	A
35	BA	1494	G

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Mol	Chain	Res	Type
35	BA	1497	G
35	BA	1503	A
35	BA	1506	U
35	BA	1517	G
35	BA	1519	A
35	BA	1529	G
35	BA	1530	G
35	BA	1534	A
1	CB	3	C
1	CB	15	A
1	CB	16	G
1	CB	21	G
1	CB	24	G
1	CB	30	C
1	CB	35	C
1	CB	42	C
1	CB	44	G
1	CB	45	A
1	CB	56	G
1	CB	84	G
1	CB	87	U
1	CB	88	C
1	CB	89	U
1	CB	90	C
1	CB	99	A
1	CB	109	A
1	CB	117	G
3	CA	10	A
3	CA	12	U
3	CA	15	G
3	CA	34	U
3	CA	35	G
3	CA	42	A
3	CA	43	G
3	CA	45	G
3	CA	46	G
3	CA	51	G
3	CA	61	C
3	CA	71	A
3	CA	74	A
3	CA	75	G
3	CA	80	G

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Mol	Chain	Res	Type
3	CA	82	U
3	CA	84	A
3	CA	96	C
3	CA	101	A
3	CA	118	A
3	CA	119	A
3	CA	120	U
3	CA	131	A
3	CA	135	U
3	CA	136	G
3	CA	137	U
3	CA	138	U
3	CA	139	U
3	CA	140	C
3	CA	141	G
3	CA	142	A
3	CA	144	A
3	CA	149	A
3	CA	162	U
3	CA	163	C
3	CA	164	C
3	CA	181	A
3	CA	188	G
3	CA	196	A
3	CA	199	A
3	CA	215	G
3	CA	216	A
3	CA	222	A
3	CA	226	A
3	CA	230	G
3	CA	248	G
3	CA	255	A
3	CA	264	C
3	CA	265	A
3	CA	266	G
3	CA	267	C
3	CA	272	A
3	CA	273	G
3	CA	276	U
3	CA	277	G
3	CA	278	A
3	CA	281	C

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Mol	Chain	Res	Type
3	CA	285	G
3	CA	302	C
3	CA	311	A
3	CA	329	G
3	CA	330	A
3	CA	346	A
3	CA	347	A
3	CA	353	C
3	CA	355	U
3	CA	361	G
3	CA	362	A
3	CA	371	A
3	CA	372	G
3	CA	382	A
3	CA	383	C
3	CA	386	G
3	CA	388	G
3	CA	396	G
3	CA	404	A
3	CA	405	U
3	CA	411	G
3	CA	412	A
3	CA	424	G
3	CA	451	U
3	CA	455	C
3	CA	481	G
3	CA	491	G
3	CA	503	A
3	CA	504	A
3	CA	505	A
3	CA	509	C
3	CA	528	A
3	CA	531	C
3	CA	532	A
3	CA	533	G
3	CA	538	A
3	CA	543	G
3	CA	544	C
3	CA	546	U
3	CA	547	A
3	CA	548	G
3	CA	549	G

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Mol	Chain	Res	Type
3	CA	563	A
3	CA	573	U
3	CA	575	A
3	CA	586	A
3	CA	603	A
3	CA	604	G
3	CA	613	A
3	CA	614	A
3	CA	615	U
3	CA	627	A
3	CA	631	A
3	CA	637	A
3	CA	645	C
3	CA	646	U
3	CA	647	G
3	CA	648	G
3	CA	653	U
3	CA	654	A
3	CA	655	A
3	CA	656	G
3	CA	686	U
3	CA	714	U
3	CA	715	A
3	CA	730	A
3	CA	738	G
3	CA	747	U
3	CA	775	G
3	CA	776	G
3	CA	782	A
3	CA	784	G
3	CA	785	G
3	CA	789	A
3	CA	801	G
3	CA	805	G
3	CA	812	C
3	CA	819	A
3	CA	827	U
3	CA	828	U
3	CA	845	A
3	CA	846	U
3	CA	847	U
3	CA	859	G

Continued on next page...

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Mol	Chain	Res	Type
3	CA	878	A
3	CA	883	G
3	CA	896	A
3	CA	897	C
3	CA	902	C
3	CA	910	A
3	CA	914	G
3	CA	915	C
3	CA	932	U
3	CA	941	A
3	CA	946	C
3	CA	961	C
3	CA	974	G
3	CA	983	A
3	CA	985	C
3	CA	995	C
3	CA	996	A
3	CA	1003	G
3	CA	1012	U
3	CA	1013	C
3	CA	1021	A
3	CA	1022	G
3	CA	1023	U
3	CA	1025	G
3	CA	1026	G
3	CA	1033	U
3	CA	1045	C
3	CA	1046	A
3	CA	1047	G
3	CA	1051	G
3	CA	1053	C
3	CA	1059	G
3	CA	1060	U
3	CA	1061	U
3	CA	1062	G
3	CA	1067	A
3	CA	1069	A
3	CA	1070	A
3	CA	1072	C
3	CA	1074	G
3	CA	1078	U
3	CA	1083	U

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Mol	Chain	Res	Type
3	CA	1084	A
3	CA	1088	A
3	CA	1089	A
3	CA	1090	A
3	CA	1091	G
3	CA	1097	U
3	CA	1098	A
3	CA	1110	G
3	CA	1111	A
3	CA	1112	G
3	CA	1129	A
3	CA	1132	U
3	CA	1133	A
3	CA	1135	C
3	CA	1136	G
3	CA	1139	G
3	CA	1142	A
3	CA	1151	A
3	CA	1155	A
3	CA	1169	A
3	CA	1170	C
3	CA	1171	G
3	CA	1172	C
3	CA	1174	U
3	CA	1175	A
3	CA	1176	U
3	CA	1180	U
3	CA	1186	G
3	CA	1238	G
3	CA	1248	G
3	CA	1250	G
3	CA	1253	A
3	CA	1256	G
3	CA	1266	G
3	CA	1268	A
3	CA	1271	G
3	CA	1272	A
3	CA	1273	U
3	CA	1300	G
3	CA	1301	A
3	CA	1313	U
3	CA	1317	G

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Mol	Chain	Res	Type
3	CA	1352	U
3	CA	1365	A
3	CA	1368	G
3	CA	1379	U
3	CA	1383	A
3	CA	1395	A
3	CA	1415	U
3	CA	1416	G
3	CA	1419	A
3	CA	1420	A
3	CA	1428	C
3	CA	1435	G
3	CA	1452	G
3	CA	1459	G
3	CA	1482	G
3	CA	1493	C
3	CA	1504	A
3	CA	1508	A
3	CA	1510	G
3	CA	1515	A
3	CA	1524	G
3	CA	1533	C
3	CA	1534	U
3	CA	1535	A
3	CA	1536	C
3	CA	1566	A
3	CA	1569	A
3	CA	1578	U
3	CA	1583	A
3	CA	1584	U
3	CA	1585	C
3	CA	1607	C
3	CA	1608	A
3	CA	1610	A
3	CA	1627	G
3	CA	1647	U
3	CA	1648	U
3	CA	1649	G
3	CA	1652	A
3	CA	1653	G
3	CA	1674	G
3	CA	1714	U

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Mol	Chain	Res	Type
3	CA	1715	G
3	CA	1723	G
3	CA	1729	U
3	CA	1730	C
3	CA	1731	G
3	CA	1732	C
3	CA	1737	G
3	CA	1738	G
3	CA	1739	A
3	CA	1744	A
3	CA	1764	C
3	CA	1773	A
3	CA	1776	G
3	CA	1791	A
3	CA	1800	C
3	CA	1801	A
3	CA	1808	A
3	CA	1811	G
3	CA	1816	C
3	CA	1829	A
3	CA	1833	C
3	CA	1847	A
3	CA	1848	A
3	CA	1858	A
3	CA	1869	G
3	CA	1870	C
3	CA	1871	A
3	CA	1872	A
3	CA	1873	G
3	CA	1884	G
3	CA	1906	G
3	CA	1913	A
3	CA	1914	C
3	CA	1927	A
3	CA	1929	G
3	CA	1930	G
3	CA	1937	A
3	CA	1938	A
3	CA	1955	U
3	CA	1960	A
3	CA	1966	A
3	CA	1967	C

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Mol	Chain	Res	Type
3	CA	1970	A
3	CA	1971	U
3	CA	1972	G
3	CA	1991	U
3	CA	1993	U
3	CA	1997	C
3	CA	2017	U
3	CA	2020	A
3	CA	2022	U
3	CA	2023	C
3	CA	2031	A
3	CA	2043	C
3	CA	2055	C
3	CA	2056	G
3	CA	2060	A
3	CA	2061	G
3	CA	2062	A
3	CA	2069	G
3	CA	2072	C
3	CA	2093	G
3	CA	2104	C
3	CA	2105	U
3	CA	2106	U
3	CA	2107	G
3	CA	2108	A
3	CA	2109	U
3	CA	2110	G
3	CA	2134	A
3	CA	2135	A
3	CA	2138	G
3	CA	2139	U
3	CA	2140	G
3	CA	2142	A
3	CA	2143	C
3	CA	2144	G
3	CA	2145	C
3	CA	2147	A
3	CA	2148	G
3	CA	2149	U
3	CA	2150	C
3	CA	2151	U
3	CA	2153	C

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Mol	Chain	Res	Type
3	CA	2154	A
3	CA	2155	U
3	CA	2156	G
3	CA	2157	G
3	CA	2180	U
3	CA	2182	U
3	CA	2183	A
3	CA	2185	U
3	CA	2194	U
3	CA	2198	A
3	CA	2199	A
3	CA	2204	G
3	CA	2211	A
3	CA	2212	A
3	CA	2214	C
3	CA	2225	A
3	CA	2226	C
3	CA	2238	G
3	CA	2239	G
3	CA	2250	G
3	CA	2268	A
3	CA	2278	A
3	CA	2283	C
3	CA	2284	A
3	CA	2286	G
3	CA	2287	A
3	CA	2305	U
3	CA	2308	G
3	CA	2311	A
3	CA	2322	A
3	CA	2325	G
3	CA	2327	A
3	CA	2333	A
3	CA	2334	U
3	CA	2336	A
3	CA	2347	C
3	CA	2354	C
3	CA	2361	G
3	CA	2383	G
3	CA	2385	C
3	CA	2402	U
3	CA	2403	C

Continued on next page...

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Mol	Chain	Res	Type
3	CA	2406	A
3	CA	2423	U
3	CA	2424	C
3	CA	2425	A
3	CA	2429	G
3	CA	2430	A
3	CA	2435	A
3	CA	2441	U
3	CA	2448	A
3	CA	2470	G
3	CA	2476	A
3	CA	2491	U
3	CA	2502	G
3	CA	2503	A
3	CA	2505	G
3	CA	2506	U
3	CA	2507	C
3	CA	2518	A
3	CA	2529	G
3	CA	2554	U
3	CA	2556	C
3	CA	2566	A
3	CA	2567	G
3	CA	2572	A
3	CA	2573	C
3	CA	2585	U
3	CA	2602	A
3	CA	2603	G
3	CA	2609	U
3	CA	2613	U
3	CA	2629	U
3	CA	2663	G
3	CA	2671	G
3	CA	2682	A
3	CA	2689	U
3	CA	2690	U
3	CA	2714	G
3	CA	2716	C
3	CA	2726	A
3	CA	2733	A
3	CA	2744	G
3	CA	2748	A

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Mol	Chain	Res	Type
3	CA	2757	A
3	CA	2760	C
3	CA	2765	A
3	CA	2769	U
3	CA	2778	A
3	CA	2791	G
3	CA	2798	U
3	CA	2799	A
3	CA	2800	A
3	CA	2801	G
3	CA	2818	U
3	CA	2820	A
3	CA	2821	A
3	CA	2861	U
3	CA	2867	G
3	CA	2873	A
3	CA	2874	C
3	CA	2883	A
3	CA	2884	U
3	CA	2885	G
3	CA	2891	U
3	CA	2903	U
35	DA	5	U
35	DA	9	G
35	DA	22	G
35	DA	32	A
35	DA	39	G
35	DA	40	C
35	DA	47	C
35	DA	48	C
35	DA	51	A
35	DA	58	C
35	DA	70	U
35	DA	71	A
35	DA	73	C
35	DA	74	A
35	DA	75	G
35	DA	76	G
35	DA	77	A
35	DA	78	A
35	DA	80	A
35	DA	81	A

Continued on next page...

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Mol	Chain	Res	Type
35	DA	82	G
35	DA	83	C
35	DA	84	U
35	DA	85	U
35	DA	86	G
35	DA	88	U
35	DA	89	U
35	DA	90	C
35	DA	98	A
35	DA	115	G
35	DA	116	A
35	DA	122	G
35	DA	127	G
35	DA	130	A
35	DA	131	A
35	DA	137	U
35	DA	141	G
35	DA	143	A
35	DA	144	G
35	DA	159	G
35	DA	163	C
35	DA	164	G
35	DA	166	U
35	DA	173	U
35	DA	177	G
35	DA	182	A
35	DA	183	C
35	DA	204	G
35	DA	205	A
35	DA	209	U
35	DA	210	C
35	DA	240	G
35	DA	245	U
35	DA	247	G
35	DA	251	G
35	DA	258	G
35	DA	266	G
35	DA	267	C
35	DA	273	U
35	DA	285	C
35	DA	289	G
35	DA	321	A

Continued on next page...

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Mol	Chain	Res	Type
35	DA	328	C
35	DA	329	A
35	DA	332	G
35	DA	344	A
35	DA	345	C
35	DA	347	G
35	DA	352	C
35	DA	353	A
35	DA	354	G
35	DA	367	U
35	DA	372	C
35	DA	373	A
35	DA	384	G
35	DA	406	G
35	DA	408	A
35	DA	411	A
35	DA	412	A
35	DA	413	G
35	DA	421	U
35	DA	422	C
35	DA	423	G
35	DA	424	G
35	DA	429	U
35	DA	430	A
35	DA	435	A
35	DA	441	A
35	DA	457	G
35	DA	458	U
35	DA	459	A
35	DA	461	A
35	DA	462	G
35	DA	463	U
35	DA	467	U
35	DA	468	A
35	DA	481	G
35	DA	482	A
35	DA	483	C
35	DA	484	G
35	DA	485	U
35	DA	486	U
35	DA	491	G
35	DA	508	U

Continued on next page...

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Mol	Chain	Res	Type
35	DA	509	A
35	DA	511	C
35	DA	518	C
35	DA	527	G
35	DA	532	A
35	DA	533	A
35	DA	547	A
35	DA	556	C
35	DA	559	A
35	DA	562	U
35	DA	564	C
35	DA	572	A
35	DA	573	A
35	DA	576	C
35	DA	577	G
35	DA	579	A
35	DA	588	G
35	DA	604	G
35	DA	650	G
35	DA	653	U
35	DA	665	A
35	DA	701	U
35	DA	702	A
35	DA	721	G
35	DA	723	U
35	DA	724	G
35	DA	731	G
35	DA	734	G
35	DA	747	A
35	DA	748	G
35	DA	755	G
35	DA	777	A
35	DA	793	U
35	DA	794	A
35	DA	813	U
35	DA	815	A
35	DA	817	C
35	DA	821	G
35	DA	828	U
35	DA	829	G
35	DA	841	C
35	DA	843	U

Continued on next page...

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Mol	Chain	Res	Type
35	DA	845	A
35	DA	846	G
35	DA	859	G
35	DA	887	G
35	DA	914	A
35	DA	922	G
35	DA	926	G
35	DA	927	G
35	DA	932	C
35	DA	934	C
35	DA	960	U
35	DA	966	G
35	DA	969	A
35	DA	971	G
35	DA	974	A
35	DA	975	A
35	DA	976	G
35	DA	977	A
35	DA	983	A
35	DA	993	G
35	DA	1003	G
35	DA	1004	A
35	DA	1008	U
35	DA	1018	G
35	DA	1022	A
35	DA	1029	U
35	DA	1030	U
35	DA	1031	C
35	DA	1032	G
35	DA	1033	G
35	DA	1034	G
35	DA	1037	C
35	DA	1045	C
35	DA	1050	G
35	DA	1054	C
35	DA	1065	U
35	DA	1066	C
35	DA	1086	U
35	DA	1088	G
35	DA	1089	G
35	DA	1094	G
35	DA	1095	U

Continued on next page...

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Mol	Chain	Res	Type
35	DA	1101	A
35	DA	1124	G
35	DA	1125	U
35	DA	1130	A
35	DA	1133	G
35	DA	1135	U
35	DA	1136	C
35	DA	1137	C
35	DA	1139	G
35	DA	1142	G
35	DA	1159	U
35	DA	1167	A
35	DA	1168	U
35	DA	1169	A
35	DA	1181	G
35	DA	1182	G
35	DA	1183	U
35	DA	1196	A
35	DA	1197	A
35	DA	1202	U
35	DA	1212	U
35	DA	1213	A
35	DA	1214	C
35	DA	1225	A
35	DA	1226	C
35	DA	1227	A
35	DA	1239	A
35	DA	1240	U
35	DA	1249	C
35	DA	1256	A
35	DA	1279	G
35	DA	1280	A
35	DA	1286	U
35	DA	1287	A
35	DA	1293	C
35	DA	1297	G
35	DA	1299	A
35	DA	1300	G
35	DA	1302	C
35	DA	1305	G
35	DA	1317	C
35	DA	1318	A

Continued on next page...

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Mol	Chain	Res	Type
35	DA	1320	C
35	DA	1322	C
35	DA	1323	G
35	DA	1332	A
35	DA	1336	C
35	DA	1337	G
35	DA	1338	G
35	DA	1353	G
35	DA	1364	U
35	DA	1368	A
35	DA	1398	A
35	DA	1406	U
35	DA	1411	C
35	DA	1419	G
35	DA	1440	U
35	DA	1441	A
35	DA	1446	A
35	DA	1452	C
35	DA	1454	G
35	DA	1469	C
35	DA	1475	G
35	DA	1487	G
35	DA	1491	G
35	DA	1492	A
35	DA	1493	A
35	DA	1494	G
35	DA	1497	G
35	DA	1503	A
35	DA	1506	U
35	DA	1517	G
35	DA	1519	A
35	DA	1529	G
35	DA	1530	G
35	DA	1534	A
3	EA	10	A
3	EA	12	U
3	EA	15	G
3	EA	34	U
3	EA	35	G
3	EA	42	A
3	EA	43	G
3	EA	45	G

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Mol	Chain	Res	Type
3	EA	46	G
3	EA	51	G
3	EA	61	C
3	EA	71	A
3	EA	74	A
3	EA	75	G
3	EA	80	G
3	EA	82	U
3	EA	84	A
3	EA	96	C
3	EA	101	A
3	EA	118	A
3	EA	119	A
3	EA	120	U
3	EA	131	A
3	EA	135	U
3	EA	136	G
3	EA	137	U
3	EA	138	U
3	EA	139	U
3	EA	140	C
3	EA	141	G
3	EA	142	A
3	EA	143	C
3	EA	144	A
3	EA	149	A
3	EA	162	U
3	EA	163	C
3	EA	164	C
3	EA	181	A
3	EA	188	G
3	EA	196	A
3	EA	199	A
3	EA	215	G
3	EA	216	A
3	EA	222	A
3	EA	226	A
3	EA	230	G
3	EA	248	G
3	EA	255	A
3	EA	264	C
3	EA	265	A

Continued on next page...

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Mol	Chain	Res	Type
3	EA	266	G
3	EA	267	C
3	EA	272	A
3	EA	273	G
3	EA	276	U
3	EA	277	G
3	EA	278	A
3	EA	281	C
3	EA	285	G
3	EA	302	C
3	EA	311	A
3	EA	329	G
3	EA	330	A
3	EA	346	A
3	EA	347	A
3	EA	353	C
3	EA	355	U
3	EA	361	G
3	EA	362	A
3	EA	371	A
3	EA	372	G
3	EA	382	A
3	EA	383	C
3	EA	386	G
3	EA	388	G
3	EA	396	G
3	EA	404	A
3	EA	405	U
3	EA	411	G
3	EA	412	A
3	EA	424	G
3	EA	451	U
3	EA	455	C
3	EA	481	G
3	EA	491	G
3	EA	503	A
3	EA	504	A
3	EA	505	A
3	EA	509	C
3	EA	528	A
3	EA	531	C
3	EA	532	A

Continued on next page...

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Mol	Chain	Res	Type
3	EA	533	G
3	EA	538	A
3	EA	543	G
3	EA	544	C
3	EA	546	U
3	EA	547	A
3	EA	548	G
3	EA	549	G
3	EA	563	A
3	EA	573	U
3	EA	575	A
3	EA	586	A
3	EA	603	A
3	EA	604	G
3	EA	613	A
3	EA	614	A
3	EA	615	U
3	EA	627	A
3	EA	631	A
3	EA	637	A
3	EA	645	C
3	EA	646	U
3	EA	647	G
3	EA	654	A
3	EA	655	A
3	EA	656	G
3	EA	686	U
3	EA	714	U
3	EA	715	A
3	EA	730	A
3	EA	738	G
3	EA	747	U
3	EA	775	G
3	EA	776	G
3	EA	782	A
3	EA	784	G
3	EA	785	G
3	EA	805	G
3	EA	812	C
3	EA	819	A
3	EA	827	U
3	EA	828	U

Continued on next page...

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Mol	Chain	Res	Type
3	EA	845	A
3	EA	846	U
3	EA	847	U
3	EA	859	G
3	EA	883	G
3	EA	896	A
3	EA	897	C
3	EA	910	A
3	EA	914	G
3	EA	915	C
3	EA	932	U
3	EA	941	A
3	EA	946	C
3	EA	961	C
3	EA	973	A
3	EA	974	G
3	EA	983	A
3	EA	985	C
3	EA	995	C
3	EA	996	A
3	EA	1003	G
3	EA	1012	U
3	EA	1013	C
3	EA	1021	A
3	EA	1022	G
3	EA	1023	U
3	EA	1025	G
3	EA	1026	G
3	EA	1033	U
3	EA	1045	C
3	EA	1046	A
3	EA	1047	G
3	EA	1051	G
3	EA	1053	C
3	EA	1059	G
3	EA	1060	U
3	EA	1061	U
3	EA	1062	G
3	EA	1067	A
3	EA	1069	A
3	EA	1070	A
3	EA	1072	C

Continued on next page...

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Mol	Chain	Res	Type
3	EA	1078	U
3	EA	1083	U
3	EA	1084	A
3	EA	1088	A
3	EA	1089	A
3	EA	1090	A
3	EA	1091	G
3	EA	1097	U
3	EA	1098	A
3	EA	1110	G
3	EA	1111	A
3	EA	1112	G
3	EA	1129	A
3	EA	1132	U
3	EA	1133	A
3	EA	1135	C
3	EA	1136	G
3	EA	1139	G
3	EA	1142	A
3	EA	1151	A
3	EA	1169	A
3	EA	1170	C
3	EA	1171	G
3	EA	1172	C
3	EA	1174	U
3	EA	1175	A
3	EA	1176	U
3	EA	1177	G
3	EA	1186	G
3	EA	1238	G
3	EA	1248	G
3	EA	1250	G
3	EA	1253	A
3	EA	1256	G
3	EA	1266	G
3	EA	1268	A
3	EA	1271	G
3	EA	1272	A
3	EA	1273	U
3	EA	1281	G
3	EA	1300	G
3	EA	1301	A

Continued on next page...

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Mol	Chain	Res	Type
3	EA	1313	U
3	EA	1317	G
3	EA	1352	U
3	EA	1365	A
3	EA	1368	G
3	EA	1378	A
3	EA	1379	U
3	EA	1383	A
3	EA	1386	C
3	EA	1395	A
3	EA	1415	U
3	EA	1416	G
3	EA	1419	A
3	EA	1420	A
3	EA	1428	C
3	EA	1435	G
3	EA	1452	G
3	EA	1459	G
3	EA	1482	G
3	EA	1493	C
3	EA	1504	A
3	EA	1508	A
3	EA	1510	G
3	EA	1515	A
3	EA	1524	G
3	EA	1533	C
3	EA	1534	U
3	EA	1535	A
3	EA	1536	C
3	EA	1566	A
3	EA	1569	A
3	EA	1578	U
3	EA	1583	A
3	EA	1584	U
3	EA	1585	C
3	EA	1607	C
3	EA	1608	A
3	EA	1610	A
3	EA	1627	G
3	EA	1647	U
3	EA	1648	U
3	EA	1649	G

Continued on next page...

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Mol	Chain	Res	Type
3	EA	1653	G
3	EA	1674	G
3	EA	1714	U
3	EA	1715	G
3	EA	1723	G
3	EA	1729	U
3	EA	1730	C
3	EA	1732	C
3	EA	1737	G
3	EA	1738	G
3	EA	1739	A
3	EA	1744	A
3	EA	1764	C
3	EA	1773	A
3	EA	1776	G
3	EA	1791	A
3	EA	1800	C
3	EA	1801	A
3	EA	1802	A
3	EA	1808	A
3	EA	1811	G
3	EA	1816	C
3	EA	1829	A
3	EA	1833	C
3	EA	1847	A
3	EA	1848	A
3	EA	1858	A
3	EA	1869	G
3	EA	1870	C
3	EA	1871	A
3	EA	1872	A
3	EA	1873	G
3	EA	1884	G
3	EA	1906	G
3	EA	1913	A
3	EA	1914	C
3	EA	1927	A
3	EA	1929	G
3	EA	1930	G
3	EA	1937	A
3	EA	1938	A
3	EA	1939	U

Continued on next page...

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Mol	Chain	Res	Type
3	EA	1955	U
3	EA	1960	A
3	EA	1966	A
3	EA	1967	C
3	EA	1970	A
3	EA	1971	U
3	EA	1972	G
3	EA	1991	U
3	EA	1993	U
3	EA	1997	C
3	EA	2017	U
3	EA	2020	A
3	EA	2022	U
3	EA	2023	C
3	EA	2031	A
3	EA	2033	A
3	EA	2043	C
3	EA	2055	C
3	EA	2056	G
3	EA	2060	A
3	EA	2061	G
3	EA	2062	A
3	EA	2069	G
3	EA	2072	C
3	EA	2093	G
3	EA	2104	C
3	EA	2106	U
3	EA	2107	G
3	EA	2108	A
3	EA	2110	G
3	EA	2134	A
3	EA	2137	U
3	EA	2138	G
3	EA	2139	U
3	EA	2140	G
3	EA	2142	A
3	EA	2143	C
3	EA	2144	G
3	EA	2145	C
3	EA	2146	C
3	EA	2147	A
3	EA	2148	G

Continued on next page...

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Mol	Chain	Res	Type
3	EA	2149	U
3	EA	2150	C
3	EA	2151	U
3	EA	2153	C
3	EA	2156	G
3	EA	2157	G
3	EA	2180	U
3	EA	2181	U
3	EA	2182	U
3	EA	2183	A
3	EA	2185	U
3	EA	2186	G
3	EA	2187	U
3	EA	2194	U
3	EA	2198	A
3	EA	2199	A
3	EA	2204	G
3	EA	2211	A
3	EA	2212	A
3	EA	2214	C
3	EA	2225	A
3	EA	2226	C
3	EA	2238	G
3	EA	2239	G
3	EA	2250	G
3	EA	2268	A
3	EA	2278	A
3	EA	2283	C
3	EA	2284	A
3	EA	2286	G
3	EA	2287	A
3	EA	2305	U
3	EA	2308	G
3	EA	2311	A
3	EA	2322	A
3	EA	2325	G
3	EA	2327	A
3	EA	2333	A
3	EA	2336	A
3	EA	2347	C
3	EA	2354	C
3	EA	2361	G

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Mol	Chain	Res	Type
3	EA	2383	G
3	EA	2385	C
3	EA	2402	U
3	EA	2403	C
3	EA	2406	A
3	EA	2423	U
3	EA	2424	C
3	EA	2425	A
3	EA	2429	G
3	EA	2430	A
3	EA	2435	A
3	EA	2441	U
3	EA	2448	A
3	EA	2470	G
3	EA	2476	A
3	EA	2491	U
3	EA	2502	G
3	EA	2503	A
3	EA	2505	G
3	EA	2506	U
3	EA	2507	C
3	EA	2518	A
3	EA	2529	G
3	EA	2554	U
3	EA	2566	A
3	EA	2567	G
3	EA	2572	A
3	EA	2573	C
3	EA	2585	U
3	EA	2602	A
3	EA	2603	G
3	EA	2609	U
3	EA	2613	U
3	EA	2629	U
3	EA	2663	G
3	EA	2671	G
3	EA	2682	A
3	EA	2689	U
3	EA	2690	U
3	EA	2714	G
3	EA	2716	C
3	EA	2726	A

Continued on next page...

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Mol	Chain	Res	Type
3	EA	2733	A
3	EA	2744	G
3	EA	2748	A
3	EA	2757	A
3	EA	2760	C
3	EA	2765	A
3	EA	2769	U
3	EA	2778	A
3	EA	2791	G
3	EA	2798	U
3	EA	2800	A
3	EA	2801	G
3	EA	2820	A
3	EA	2821	A
3	EA	2825	G
3	EA	2861	U
3	EA	2867	G
3	EA	2873	A
3	EA	2874	C
3	EA	2883	A
3	EA	2884	U
3	EA	2885	G
3	EA	2891	U
3	EA	2903	U
1	EB	3	C
1	EB	15	A
1	EB	16	G
1	EB	21	G
1	EB	30	C
1	EB	35	C
1	EB	42	C
1	EB	44	G
1	EB	45	A
1	EB	56	G
1	EB	84	G
1	EB	87	U
1	EB	88	C
1	EB	89	U
1	EB	90	C
1	EB	99	A
1	EB	109	A
1	EB	117	G

Continued on next page...

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Mol	Chain	Res	Type
35	FA	5	U
35	FA	9	G
35	FA	22	G
35	FA	32	A
35	FA	39	G
35	FA	40	C
35	FA	48	C
35	FA	51	A
35	FA	70	U
35	FA	71	A
35	FA	73	C
35	FA	74	A
35	FA	75	G
35	FA	76	G
35	FA	77	A
35	FA	80	A
35	FA	81	A
35	FA	82	G
35	FA	83	C
35	FA	85	U
35	FA	86	G
35	FA	89	U
35	FA	90	C
35	FA	92	U
35	FA	98	A
35	FA	115	G
35	FA	116	A
35	FA	122	G
35	FA	127	G
35	FA	130	A
35	FA	131	A
35	FA	137	U
35	FA	138	G
35	FA	141	G
35	FA	143	A
35	FA	144	G
35	FA	159	G
35	FA	163	C
35	FA	164	G
35	FA	173	U
35	FA	177	G
35	FA	182	A

Continued on next page...

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Mol	Chain	Res	Type
35	FA	183	C
35	FA	189	A
35	FA	204	G
35	FA	205	A
35	FA	208	U
35	FA	209	U
35	FA	210	C
35	FA	240	G
35	FA	245	U
35	FA	247	G
35	FA	251	G
35	FA	258	G
35	FA	266	G
35	FA	267	C
35	FA	273	U
35	FA	285	C
35	FA	289	G
35	FA	321	A
35	FA	328	C
35	FA	329	A
35	FA	332	G
35	FA	344	A
35	FA	345	C
35	FA	347	G
35	FA	352	C
35	FA	353	A
35	FA	354	G
35	FA	367	U
35	FA	372	C
35	FA	373	A
35	FA	384	G
35	FA	406	G
35	FA	408	A
35	FA	411	A
35	FA	412	A
35	FA	413	G
35	FA	421	U
35	FA	422	C
35	FA	423	G
35	FA	424	G
35	FA	429	U
35	FA	430	A

Continued on next page...

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Mol	Chain	Res	Type
35	FA	435	A
35	FA	441	A
35	FA	457	G
35	FA	458	U
35	FA	459	A
35	FA	461	A
35	FA	462	G
35	FA	463	U
35	FA	467	U
35	FA	468	A
35	FA	481	G
35	FA	482	A
35	FA	483	C
35	FA	484	G
35	FA	485	U
35	FA	486	U
35	FA	491	G
35	FA	508	U
35	FA	509	A
35	FA	511	C
35	FA	518	C
35	FA	527	G
35	FA	532	A
35	FA	533	A
35	FA	547	A
35	FA	556	C
35	FA	559	A
35	FA	562	U
35	FA	564	C
35	FA	572	A
35	FA	573	A
35	FA	576	C
35	FA	577	G
35	FA	579	A
35	FA	588	G
35	FA	596	A
35	FA	604	G
35	FA	650	G
35	FA	653	U
35	FA	665	A
35	FA	675	A
35	FA	701	U

Continued on next page...

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Mol	Chain	Res	Type
35	FA	702	A
35	FA	721	G
35	FA	723	U
35	FA	724	G
35	FA	731	G
35	FA	734	G
35	FA	747	A
35	FA	748	G
35	FA	755	G
35	FA	777	A
35	FA	793	U
35	FA	794	A
35	FA	813	U
35	FA	815	A
35	FA	817	C
35	FA	821	G
35	FA	828	U
35	FA	829	G
35	FA	841	C
35	FA	843	U
35	FA	844	G
35	FA	845	A
35	FA	846	G
35	FA	859	G
35	FA	887	G
35	FA	914	A
35	FA	922	G
35	FA	926	G
35	FA	927	G
35	FA	932	C
35	FA	934	C
35	FA	960	U
35	FA	966	G
35	FA	969	A
35	FA	971	G
35	FA	974	A
35	FA	975	A
35	FA	976	G
35	FA	977	A
35	FA	983	A
35	FA	993	G
35	FA	1003	G

Continued on next page...

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Mol	Chain	Res	Type
35	FA	1004	A
35	FA	1008	U
35	FA	1018	G
35	FA	1022	A
35	FA	1026	G
35	FA	1029	U
35	FA	1030	U
35	FA	1031	C
35	FA	1032	G
35	FA	1033	G
35	FA	1034	G
35	FA	1037	C
35	FA	1045	C
35	FA	1050	G
35	FA	1054	C
35	FA	1065	U
35	FA	1066	C
35	FA	1086	U
35	FA	1088	G
35	FA	1089	G
35	FA	1094	G
35	FA	1095	U
35	FA	1101	A
35	FA	1124	G
35	FA	1125	U
35	FA	1130	A
35	FA	1133	G
35	FA	1135	U
35	FA	1136	C
35	FA	1137	C
35	FA	1139	G
35	FA	1146	A
35	FA	1159	U
35	FA	1167	A
35	FA	1168	U
35	FA	1169	A
35	FA	1181	G
35	FA	1182	G
35	FA	1183	U
35	FA	1196	A
35	FA	1197	A
35	FA	1202	U

Continued on next page...

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Mol	Chain	Res	Type
35	FA	1212	U
35	FA	1213	A
35	FA	1214	C
35	FA	1225	A
35	FA	1226	C
35	FA	1227	A
35	FA	1239	A
35	FA	1240	U
35	FA	1249	C
35	FA	1256	A
35	FA	1280	A
35	FA	1286	U
35	FA	1287	A
35	FA	1293	C
35	FA	1299	A
35	FA	1300	G
35	FA	1302	C
35	FA	1303	C
35	FA	1305	G
35	FA	1317	C
35	FA	1318	A
35	FA	1322	C
35	FA	1332	A
35	FA	1336	C
35	FA	1337	G
35	FA	1338	G
35	FA	1353	G
35	FA	1364	U
35	FA	1368	A
35	FA	1398	A
35	FA	1406	U
35	FA	1411	C
35	FA	1419	G
35	FA	1440	U
35	FA	1441	A
35	FA	1446	A
35	FA	1452	C
35	FA	1454	G
35	FA	1469	C
35	FA	1475	G
35	FA	1487	G
35	FA	1491	G

Continued on next page...

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Mol	Chain	Res	Type
35	FA	1492	A
35	FA	1493	A
35	FA	1494	G
35	FA	1497	G
35	FA	1503	A
35	FA	1506	U
35	FA	1517	G
35	FA	1519	A
35	FA	1529	G
35	FA	1530	G
35	FA	1534	A
1	GB	3	C
1	GB	15	A
1	GB	16	G
1	GB	21	G
1	GB	24	G
1	GB	30	C
1	GB	35	C
1	GB	42	C
1	GB	44	G
1	GB	45	A
1	GB	56	G
1	GB	84	G
1	GB	87	U
1	GB	88	C
1	GB	89	U
1	GB	90	C
1	GB	99	A
1	GB	109	A
1	GB	117	G
1	GB	119	A
3	GA	10	A
3	GA	12	U
3	GA	15	G
3	GA	34	U
3	GA	35	G
3	GA	42	A
3	GA	43	G
3	GA	45	G
3	GA	46	G
3	GA	61	C
3	GA	71	A

Continued on next page...

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Mol	Chain	Res	Type
3	GA	74	A
3	GA	75	G
3	GA	80	G
3	GA	82	U
3	GA	84	A
3	GA	96	C
3	GA	101	A
3	GA	118	A
3	GA	119	A
3	GA	120	U
3	GA	131	A
3	GA	135	U
3	GA	136	G
3	GA	137	U
3	GA	138	U
3	GA	139	U
3	GA	140	C
3	GA	141	G
3	GA	142	A
3	GA	144	A
3	GA	162	U
3	GA	163	C
3	GA	164	C
3	GA	181	A
3	GA	188	G
3	GA	196	A
3	GA	199	A
3	GA	215	G
3	GA	216	A
3	GA	222	A
3	GA	224	U
3	GA	226	A
3	GA	230	G
3	GA	248	G
3	GA	255	A
3	GA	264	C
3	GA	265	A
3	GA	266	G
3	GA	267	C
3	GA	272	A
3	GA	273	G
3	GA	276	U

Continued on next page...

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Mol	Chain	Res	Type
3	GA	277	G
3	GA	278	A
3	GA	281	C
3	GA	285	G
3	GA	302	C
3	GA	311	A
3	GA	329	G
3	GA	330	A
3	GA	346	A
3	GA	347	A
3	GA	353	C
3	GA	355	U
3	GA	361	G
3	GA	362	A
3	GA	371	A
3	GA	372	G
3	GA	382	A
3	GA	383	C
3	GA	386	G
3	GA	388	G
3	GA	396	G
3	GA	404	A
3	GA	405	U
3	GA	411	G
3	GA	412	A
3	GA	424	G
3	GA	451	U
3	GA	455	C
3	GA	481	G
3	GA	491	G
3	GA	503	A
3	GA	504	A
3	GA	505	A
3	GA	509	C
3	GA	527	C
3	GA	528	A
3	GA	531	C
3	GA	532	A
3	GA	533	G
3	GA	538	A
3	GA	543	G
3	GA	544	C

Continued on next page...

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Mol	Chain	Res	Type
3	GA	546	U
3	GA	547	A
3	GA	548	G
3	GA	549	G
3	GA	563	A
3	GA	573	U
3	GA	575	A
3	GA	586	A
3	GA	603	A
3	GA	604	G
3	GA	613	A
3	GA	614	A
3	GA	615	U
3	GA	627	A
3	GA	631	A
3	GA	637	A
3	GA	645	C
3	GA	646	U
3	GA	647	G
3	GA	648	G
3	GA	654	A
3	GA	655	A
3	GA	656	G
3	GA	686	U
3	GA	714	U
3	GA	715	A
3	GA	730	A
3	GA	738	G
3	GA	747	U
3	GA	775	G
3	GA	776	G
3	GA	782	A
3	GA	784	G
3	GA	785	G
3	GA	789	A
3	GA	805	G
3	GA	812	C
3	GA	819	A
3	GA	827	U
3	GA	828	U
3	GA	830	G
3	GA	845	A

Continued on next page...

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Mol	Chain	Res	Type
3	GA	846	U
3	GA	847	U
3	GA	859	G
3	GA	878	A
3	GA	883	G
3	GA	884	U
3	GA	896	A
3	GA	897	C
3	GA	902	C
3	GA	910	A
3	GA	914	G
3	GA	915	C
3	GA	932	U
3	GA	941	A
3	GA	946	C
3	GA	961	C
3	GA	974	G
3	GA	983	A
3	GA	985	C
3	GA	995	C
3	GA	996	A
3	GA	1003	G
3	GA	1012	U
3	GA	1013	C
3	GA	1021	A
3	GA	1022	G
3	GA	1023	U
3	GA	1026	G
3	GA	1033	U
3	GA	1045	C
3	GA	1046	A
3	GA	1047	G
3	GA	1051	G
3	GA	1053	C
3	GA	1059	G
3	GA	1060	U
3	GA	1061	U
3	GA	1062	G
3	GA	1067	A
3	GA	1069	A
3	GA	1070	A
3	GA	1072	C

Continued on next page...

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Mol	Chain	Res	Type
3	GA	1074	G
3	GA	1078	U
3	GA	1083	U
3	GA	1084	A
3	GA	1088	A
3	GA	1089	A
3	GA	1090	A
3	GA	1091	G
3	GA	1097	U
3	GA	1098	A
3	GA	1110	G
3	GA	1111	A
3	GA	1112	G
3	GA	1129	A
3	GA	1132	U
3	GA	1133	A
3	GA	1135	C
3	GA	1136	G
3	GA	1139	G
3	GA	1142	A
3	GA	1151	A
3	GA	1155	A
3	GA	1169	A
3	GA	1170	C
3	GA	1171	G
3	GA	1172	C
3	GA	1174	U
3	GA	1175	A
3	GA	1176	U
3	GA	1180	U
3	GA	1186	G
3	GA	1238	G
3	GA	1248	G
3	GA	1250	G
3	GA	1253	A
3	GA	1256	G
3	GA	1266	G
3	GA	1268	A
3	GA	1271	G
3	GA	1272	A
3	GA	1273	U
3	GA	1281	G

Continued on next page...

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Mol	Chain	Res	Type
3	GA	1300	G
3	GA	1301	A
3	GA	1313	U
3	GA	1317	G
3	GA	1352	U
3	GA	1365	A
3	GA	1368	G
3	GA	1378	A
3	GA	1379	U
3	GA	1383	A
3	GA	1386	C
3	GA	1395	A
3	GA	1415	U
3	GA	1416	G
3	GA	1419	A
3	GA	1420	A
3	GA	1428	C
3	GA	1435	G
3	GA	1452	G
3	GA	1459	G
3	GA	1482	G
3	GA	1493	C
3	GA	1504	A
3	GA	1508	A
3	GA	1510	G
3	GA	1515	A
3	GA	1524	G
3	GA	1533	C
3	GA	1534	U
3	GA	1535	A
3	GA	1536	C
3	GA	1566	A
3	GA	1569	A
3	GA	1578	U
3	GA	1583	A
3	GA	1584	U
3	GA	1585	C
3	GA	1607	C
3	GA	1608	A
3	GA	1610	A
3	GA	1616	A
3	GA	1627	G

Continued on next page...

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Mol	Chain	Res	Type
3	GA	1647	U
3	GA	1648	U
3	GA	1649	G
3	GA	1653	G
3	GA	1674	G
3	GA	1714	U
3	GA	1715	G
3	GA	1723	G
3	GA	1729	U
3	GA	1730	C
3	GA	1737	G
3	GA	1738	G
3	GA	1739	A
3	GA	1744	A
3	GA	1758	U
3	GA	1764	C
3	GA	1773	A
3	GA	1776	G
3	GA	1791	A
3	GA	1800	C
3	GA	1801	A
3	GA	1802	A
3	GA	1808	A
3	GA	1811	G
3	GA	1816	C
3	GA	1829	A
3	GA	1833	C
3	GA	1847	A
3	GA	1848	A
3	GA	1858	A
3	GA	1869	G
3	GA	1870	C
3	GA	1871	A
3	GA	1872	A
3	GA	1873	G
3	GA	1884	G
3	GA	1906	G
3	GA	1913	A
3	GA	1914	C
3	GA	1927	A
3	GA	1929	G
3	GA	1930	G

Continued on next page...

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Mol	Chain	Res	Type
3	GA	1937	A
3	GA	1938	A
3	GA	1955	U
3	GA	1960	A
3	GA	1966	A
3	GA	1967	C
3	GA	1970	A
3	GA	1971	U
3	GA	1972	G
3	GA	1991	U
3	GA	1993	U
3	GA	1997	C
3	GA	2017	U
3	GA	2020	A
3	GA	2022	U
3	GA	2023	C
3	GA	2031	A
3	GA	2033	A
3	GA	2043	C
3	GA	2055	C
3	GA	2056	G
3	GA	2060	A
3	GA	2061	G
3	GA	2062	A
3	GA	2069	G
3	GA	2072	C
3	GA	2093	G
3	GA	2104	C
3	GA	2106	U
3	GA	2108	A
3	GA	2109	U
3	GA	2110	G
3	GA	2134	A
3	GA	2135	A
3	GA	2137	U
3	GA	2138	G
3	GA	2140	G
3	GA	2141	G
3	GA	2142	A
3	GA	2143	C
3	GA	2144	G
3	GA	2145	C

Continued on next page...

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Mol	Chain	Res	Type
3	GA	2146	C
3	GA	2147	A
3	GA	2148	G
3	GA	2149	U
3	GA	2150	C
3	GA	2151	U
3	GA	2152	G
3	GA	2153	C
3	GA	2154	A
3	GA	2155	U
3	GA	2156	G
3	GA	2181	U
3	GA	2182	U
3	GA	2183	A
3	GA	2185	U
3	GA	2186	G
3	GA	2187	U
3	GA	2194	U
3	GA	2198	A
3	GA	2199	A
3	GA	2204	G
3	GA	2211	A
3	GA	2212	A
3	GA	2214	C
3	GA	2225	A
3	GA	2226	C
3	GA	2238	G
3	GA	2239	G
3	GA	2250	G
3	GA	2268	A
3	GA	2278	A
3	GA	2283	C
3	GA	2284	A
3	GA	2286	G
3	GA	2287	A
3	GA	2305	U
3	GA	2308	G
3	GA	2311	A
3	GA	2322	A
3	GA	2325	G
3	GA	2327	A
3	GA	2336	A

Continued on next page...

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Mol	Chain	Res	Type
3	GA	2347	C
3	GA	2354	C
3	GA	2361	G
3	GA	2383	G
3	GA	2385	C
3	GA	2402	U
3	GA	2403	C
3	GA	2406	A
3	GA	2423	U
3	GA	2424	C
3	GA	2425	A
3	GA	2429	G
3	GA	2430	A
3	GA	2435	A
3	GA	2441	U
3	GA	2448	A
3	GA	2470	G
3	GA	2476	A
3	GA	2491	U
3	GA	2502	G
3	GA	2503	A
3	GA	2505	G
3	GA	2506	U
3	GA	2507	C
3	GA	2518	A
3	GA	2529	G
3	GA	2554	U
3	GA	2566	A
3	GA	2567	G
3	GA	2572	A
3	GA	2573	C
3	GA	2585	U
3	GA	2602	A
3	GA	2603	G
3	GA	2609	U
3	GA	2613	U
3	GA	2629	U
3	GA	2663	G
3	GA	2671	G
3	GA	2682	A
3	GA	2689	U
3	GA	2690	U

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Mol	Chain	Res	Type
3	GA	2714	G
3	GA	2716	C
3	GA	2726	A
3	GA	2733	A
3	GA	2744	G
3	GA	2748	A
3	GA	2757	A
3	GA	2760	C
3	GA	2765	A
3	GA	2769	U
3	GA	2778	A
3	GA	2779	U
3	GA	2791	G
3	GA	2798	U
3	GA	2800	A
3	GA	2801	G
3	GA	2818	U
3	GA	2820	A
3	GA	2821	A
3	GA	2861	U
3	GA	2867	G
3	GA	2873	A
3	GA	2874	C
3	GA	2883	A
3	GA	2884	U
3	GA	2885	G
3	GA	2891	U
3	GA	2903	U
35	HA	5	U
35	HA	9	G
35	HA	22	G
35	HA	32	A
35	HA	39	G
35	HA	40	C
35	HA	47	C
35	HA	48	C
35	HA	51	A
35	HA	58	C
35	HA	70	U
35	HA	71	A
35	HA	73	C
35	HA	74	A

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Mol	Chain	Res	Type
35	HA	75	G
35	HA	76	G
35	HA	77	A
35	HA	78	A
35	HA	79	G
35	HA	80	A
35	HA	81	A
35	HA	82	G
35	HA	83	C
35	HA	84	U
35	HA	85	U
35	HA	86	G
35	HA	89	U
35	HA	90	C
35	HA	98	A
35	HA	115	G
35	HA	116	A
35	HA	122	G
35	HA	130	A
35	HA	131	A
35	HA	137	U
35	HA	141	G
35	HA	143	A
35	HA	144	G
35	HA	159	G
35	HA	163	C
35	HA	164	G
35	HA	166	U
35	HA	173	U
35	HA	177	G
35	HA	182	A
35	HA	183	C
35	HA	189	A
35	HA	204	G
35	HA	205	A
35	HA	208	U
35	HA	209	U
35	HA	210	C
35	HA	240	G
35	HA	245	U
35	HA	247	G
35	HA	251	G

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Mol	Chain	Res	Type
35	HA	258	G
35	HA	266	G
35	HA	267	C
35	HA	273	U
35	HA	285	C
35	HA	289	G
35	HA	321	A
35	HA	328	C
35	HA	329	A
35	HA	332	G
35	HA	344	A
35	HA	345	C
35	HA	347	G
35	HA	352	C
35	HA	354	G
35	HA	367	U
35	HA	372	C
35	HA	373	A
35	HA	384	G
35	HA	406	G
35	HA	408	A
35	HA	411	A
35	HA	412	A
35	HA	413	G
35	HA	421	U
35	HA	422	C
35	HA	423	G
35	HA	424	G
35	HA	429	U
35	HA	430	A
35	HA	435	A
35	HA	441	A
35	HA	457	G
35	HA	458	U
35	HA	459	A
35	HA	461	A
35	HA	462	G
35	HA	463	U
35	HA	467	U
35	HA	468	A
35	HA	481	G
35	HA	482	A

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Mol	Chain	Res	Type
35	HA	483	C
35	HA	484	G
35	HA	485	U
35	HA	486	U
35	HA	491	G
35	HA	508	U
35	HA	509	A
35	HA	511	C
35	HA	518	C
35	HA	527	G
35	HA	532	A
35	HA	533	A
35	HA	547	A
35	HA	556	C
35	HA	559	A
35	HA	562	U
35	HA	564	C
35	HA	572	A
35	HA	573	A
35	HA	576	C
35	HA	577	G
35	HA	579	A
35	HA	588	G
35	HA	596	A
35	HA	604	G
35	HA	650	G
35	HA	653	U
35	HA	665	A
35	HA	701	U
35	HA	702	A
35	HA	721	G
35	HA	723	U
35	HA	724	G
35	HA	731	G
35	HA	747	A
35	HA	748	G
35	HA	755	G
35	HA	777	A
35	HA	793	U
35	HA	794	A
35	HA	813	U
35	HA	815	A

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Mol	Chain	Res	Type
35	HA	817	C
35	HA	821	G
35	HA	828	U
35	HA	829	G
35	HA	841	C
35	HA	843	U
35	HA	845	A
35	HA	846	G
35	HA	859	G
35	HA	887	G
35	HA	902	G
35	HA	914	A
35	HA	922	G
35	HA	926	G
35	HA	927	G
35	HA	932	C
35	HA	934	C
35	HA	960	U
35	HA	966	G
35	HA	969	A
35	HA	971	G
35	HA	974	A
35	HA	975	A
35	HA	976	G
35	HA	977	A
35	HA	983	A
35	HA	993	G
35	HA	1003	G
35	HA	1004	A
35	HA	1008	U
35	HA	1012	A
35	HA	1018	G
35	HA	1022	A
35	HA	1026	G
35	HA	1029	U
35	HA	1030	U
35	HA	1031	C
35	HA	1033	G
35	HA	1034	G
35	HA	1037	C
35	HA	1045	C
35	HA	1050	G

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Mol	Chain	Res	Type
35	HA	1054	C
35	HA	1055	A
35	HA	1065	U
35	HA	1066	C
35	HA	1086	U
35	HA	1088	G
35	HA	1089	G
35	HA	1094	G
35	HA	1095	U
35	HA	1101	A
35	HA	1124	G
35	HA	1125	U
35	HA	1130	A
35	HA	1133	G
35	HA	1135	U
35	HA	1136	C
35	HA	1137	C
35	HA	1139	G
35	HA	1140	C
35	HA	1146	A
35	HA	1159	U
35	HA	1167	A
35	HA	1168	U
35	HA	1169	A
35	HA	1181	G
35	HA	1182	G
35	HA	1183	U
35	HA	1196	A
35	HA	1197	A
35	HA	1202	U
35	HA	1212	U
35	HA	1213	A
35	HA	1214	C
35	HA	1225	A
35	HA	1226	C
35	HA	1227	A
35	HA	1239	A
35	HA	1240	U
35	HA	1250	A
35	HA	1256	A
35	HA	1279	G
35	HA	1280	A

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Mol	Chain	Res	Type
35	HA	1286	U
35	HA	1287	A
35	HA	1293	C
35	HA	1299	A
35	HA	1302	C
35	HA	1305	G
35	HA	1317	C
35	HA	1318	A
35	HA	1320	C
35	HA	1322	C
35	HA	1323	G
35	HA	1332	A
35	HA	1336	C
35	HA	1337	G
35	HA	1338	G
35	HA	1353	G
35	HA	1364	U
35	HA	1368	A
35	HA	1379	G
35	HA	1398	A
35	HA	1406	U
35	HA	1411	C
35	HA	1419	G
35	HA	1440	U
35	HA	1441	A
35	HA	1446	A
35	HA	1452	C
35	HA	1453	G
35	HA	1454	G
35	HA	1469	C
35	HA	1475	G
35	HA	1487	G
35	HA	1491	G
35	HA	1492	A
35	HA	1493	A
35	HA	1494	G
35	HA	1497	G
35	HA	1503	A
35	HA	1506	U
35	HA	1517	G
35	HA	1519	A
35	HA	1529	G

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Mol	Chain	Res	Type
35	HA	1530	G
35	HA	1534	A

All (215) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
3	AA	119	A
3	AA	271	G
3	AA	277	G
3	AA	301	G
3	AA	403	U
3	AA	404	A
3	AA	503	A
3	AA	527	C
3	AA	613	A
3	AA	655	A
3	AA	784	G
3	AA	827	U
3	AA	846	U
3	AA	882	G
3	AA	931	U
3	AA	1020	A
3	AA	1025	G
3	AA	1069	A
3	AA	1088	A
3	AA	1110	G
3	AA	1247	A
3	AA	1378	A
3	AA	1458	U
3	AA	1509	A
3	AA	1535	A
3	AA	1626	A
3	AA	1738	G
3	AA	1757	A
3	AA	1847	A
3	AA	1870	C
3	AA	1939	U
3	AA	2108	A
3	AA	2142	A
3	AA	2211	A
3	AA	2286	G
3	AA	2326	C

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Mol	Chain	Res	Type
3	AA	2423	U
3	AA	2756	U
3	AA	2873	A
3	AA	2902	C
35	BA	79	G
35	BA	115	G
35	BA	250	A
35	BA	429	U
35	BA	481	G
35	BA	484	G
35	BA	701	U
35	BA	733	G
35	BA	913	A
35	BA	1054	C
35	BA	1136	C
35	BA	1145	A
35	BA	1201	A
35	BA	1302	C
35	BA	1331	G
35	BA	1336	C
35	BA	1451	U
3	CA	119	A
3	CA	271	G
3	CA	277	G
3	CA	301	G
3	CA	403	U
3	CA	404	A
3	CA	503	A
3	CA	527	C
3	CA	613	A
3	CA	655	A
3	CA	784	G
3	CA	800	A
3	CA	827	U
3	CA	846	U
3	CA	882	G
3	CA	931	U
3	CA	1020	A
3	CA	1025	G
3	CA	1069	A
3	CA	1088	A
3	CA	1247	A

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Mol	Chain	Res	Type
3	CA	1378	A
3	CA	1458	U
3	CA	1509	A
3	CA	1535	A
3	CA	1626	A
3	CA	1731	G
3	CA	1738	G
3	CA	1847	A
3	CA	1870	C
3	CA	1939	U
3	CA	2154	A
3	CA	2211	A
3	CA	2286	G
3	CA	2326	C
3	CA	2423	U
3	CA	2756	U
3	CA	2873	A
3	CA	2902	C
35	DA	115	G
35	DA	209	U
35	DA	250	A
35	DA	429	U
35	DA	481	G
35	DA	484	G
35	DA	701	U
35	DA	733	G
35	DA	913	A
35	DA	1054	C
35	DA	1201	A
35	DA	1331	G
35	DA	1336	C
35	DA	1451	U
3	EA	119	A
3	EA	271	G
3	EA	301	G
3	EA	403	U
3	EA	404	A
3	EA	503	A
3	EA	527	C
3	EA	613	A
3	EA	655	A
3	EA	784	G

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Mol	Chain	Res	Type
3	EA	827	U
3	EA	846	U
3	EA	882	G
3	EA	931	U
3	EA	1020	A
3	EA	1025	G
3	EA	1069	A
3	EA	1088	A
3	EA	1176	U
3	EA	1247	A
3	EA	1378	A
3	EA	1458	U
3	EA	1509	A
3	EA	1535	A
3	EA	1583	A
3	EA	1626	A
3	EA	1847	A
3	EA	1870	C
3	EA	1939	U
3	EA	2146	C
3	EA	2211	A
3	EA	2286	G
3	EA	2326	C
3	EA	2423	U
3	EA	2756	U
3	EA	2873	A
35	FA	115	G
35	FA	250	A
35	FA	429	U
35	FA	481	G
35	FA	484	G
35	FA	701	U
35	FA	733	G
35	FA	913	A
35	FA	1054	C
35	FA	1136	C
35	FA	1145	A
35	FA	1201	A
35	FA	1302	C
35	FA	1331	G
35	FA	1336	C
35	FA	1451	U

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Mol	Chain	Res	Type
3	GA	119	A
3	GA	271	G
3	GA	301	G
3	GA	403	U
3	GA	404	A
3	GA	503	A
3	GA	527	C
3	GA	613	A
3	GA	620	G
3	GA	655	A
3	GA	784	G
3	GA	827	U
3	GA	846	U
3	GA	882	G
3	GA	901	C
3	GA	931	U
3	GA	1020	A
3	GA	1025	G
3	GA	1069	A
3	GA	1088	A
3	GA	1247	A
3	GA	1378	A
3	GA	1458	U
3	GA	1509	A
3	GA	1535	A
3	GA	1626	A
3	GA	1738	G
3	GA	1757	A
3	GA	1847	A
3	GA	1870	C
3	GA	2145	C
3	GA	2211	A
3	GA	2286	G
3	GA	2326	C
3	GA	2423	U
3	GA	2756	U
3	GA	2873	A
3	GA	2902	C
35	HA	80	A
35	HA	115	G
35	HA	250	A
35	HA	429	U

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Mol	Chain	Res	Type
35	HA	481	G
35	HA	484	G
35	HA	701	U
35	HA	913	A
35	HA	1054	C
35	HA	1145	A
35	HA	1201	A
35	HA	1331	G
35	HA	1336	C
35	HA	1451	U
35	HA	1452	C

5.4 Non-standard residues in protein, DNA, RNA chains (i)

16 non-standard protein/DNA/RNA residues are modelled in this entry.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
56	UAL	FW	5	56	6,8,9	2.47	3 (50%)	4,9,11	5.15	1 (25%)
56	KBE	DW	1	56	8,8,9	0.98	0	6,8,10	1.47	2 (33%)
56	5OH	HW	6	56	7,12,13	1.77	2 (28%)	4,16,18	1.42	1 (25%)
56	DPP	DW	2	56	4,5,6	0.89	0	1,5,7	0.82	0
56	UAL	BW	5	56	6,8,9	2.51	3 (50%)	4,9,11	4.46	1 (25%)
56	KBE	HW	1	56	8,8,9	0.94	0	6,8,10	1.24	1 (16%)
56	KBE	FW	1	56	8,8,9	0.96	0	6,8,10	1.09	0
56	DPP	BW	2	56	4,5,6	1.00	0	1,5,7	0.46	0
56	5OH	DW	6	56	7,12,13	1.82	2 (28%)	4,16,18	1.91	3 (75%)
56	DPP	HW	2	56	4,5,6	0.99	0	1,5,7	0.35	0
56	KBE	BW	1	56	8,8,9	1.23	2 (25%)	6,8,10	1.30	1 (16%)
56	5OH	FW	6	56	7,12,13	2.07	2 (28%)	4,16,18	1.75	2 (50%)
56	UAL	DW	5	56	6,8,9	2.50	3 (50%)	4,9,11	4.33	2 (50%)
56	DPP	FW	2	56	4,5,6	1.23	0	1,5,7	0.88	0
56	5OH	BW	6	56	7,12,13	1.81	2 (28%)	4,16,18	2.49	2 (50%)

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\|>2$	Counts	RMSZ	$\#\|Z\|>2$
56	UAL	HW	5	56	6,8,9	3.19	3 (50%)	4,9,11	4.61	3 (75%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
56	UAL	FW	5	56	-	0/3/7/9	-
56	KBE	DW	1	56	-	3/7/7/8	-
56	5OH	HW	6	56	-	1/2/18/20	0/1/1/1
56	DPP	DW	2	56	-	0/2/4/6	-
56	UAL	BW	5	56	-	0/3/7/9	-
56	KBE	HW	1	56	-	4/7/7/8	-
56	KBE	FW	1	56	-	3/7/7/8	-
56	DPP	BW	2	56	-	0/2/4/6	-
56	5OH	DW	6	56	-	1/2/18/20	0/1/1/1
56	DPP	HW	2	56	-	0/2/4/6	-
56	KBE	BW	1	56	-	7/7/7/8	-
56	5OH	FW	6	56	-	0/2/18/20	0/1/1/1
56	UAL	DW	5	56	-	1/3/7/9	-
56	DPP	FW	2	56	-	0/2/4/6	-
56	5OH	BW	6	56	-	0/2/18/20	0/1/1/1
56	UAL	HW	5	56	-	1/3/7/9	-

All (22) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	HW	5	UAL	C1-N1	4.85	1.47	1.40
56	HW	5	UAL	CB-N1	4.44	1.47	1.35
56	FW	5	UAL	CB-N1	4.16	1.46	1.35
56	HW	5	UAL	C-CA	4.15	1.52	1.45
56	BW	5	UAL	CB-N1	4.15	1.46	1.35
56	DW	5	UAL	CB-N1	3.93	1.45	1.35
56	DW	5	UAL	C1-N1	3.92	1.46	1.40
56	FW	6	5OH	CR-CB	-3.70	1.47	1.53
56	FW	5	UAL	C1-N1	3.66	1.45	1.40
56	HW	6	5OH	CQ-NQ	3.59	1.42	1.34
56	BW	5	UAL	C1-N1	3.51	1.45	1.40
56	DW	6	5OH	CQ-NQ	3.47	1.42	1.34
56	BW	6	5OH	CQ-NQ	3.41	1.42	1.34

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
56	FW	6	5OH	CQ-NQ	3.21	1.41	1.34
56	BW	6	5OH	CR-CB	-2.97	1.48	1.53
56	BW	5	UAL	C-CA	2.81	1.49	1.45
56	DW	6	5OH	CR-CB	-2.54	1.49	1.53
56	HW	6	5OH	CR-CB	-2.50	1.49	1.53
56	DW	5	UAL	C-CA	2.40	1.49	1.45
56	FW	5	UAL	C-CA	2.36	1.49	1.45
56	BW	1	KBE	CB-N	-2.19	1.39	1.46
56	BW	1	KBE	CA-CB	-2.01	1.50	1.53

All (19) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
56	FW	5	UAL	O-C-CA	-10.13	112.69	125.39
56	BW	5	UAL	O-C-CA	-8.81	114.35	125.39
56	HW	5	UAL	O-C-CA	-8.73	114.45	125.39
56	DW	5	UAL	O-C-CA	-8.24	115.06	125.39
56	BW	6	5OH	O-C-CA	-3.70	115.26	124.77
56	BW	6	5OH	CR-CB-CA	-3.13	109.29	112.61
56	HW	1	KBE	O-C-CA	-2.76	117.34	125.38
56	DW	1	KBE	O-C-CA	-2.59	117.84	125.38
56	FW	6	5OH	CR-CB-CA	-2.45	110.01	112.61
56	FW	6	5OH	O-C-CA	-2.43	118.52	124.77
56	DW	6	5OH	CR-CB-CA	-2.42	110.04	112.61
56	HW	6	5OH	O-C-CA	-2.36	118.69	124.77
56	DW	1	KBE	CB-CA-C	-2.34	108.39	112.17
56	BW	1	KBE	O-C-CA	-2.23	118.88	125.38
56	DW	5	UAL	N2-C1-N1	2.18	120.15	115.39
56	HW	5	UAL	N2-C1-N1	2.17	120.14	115.39
56	DW	6	5OH	O-C-CA	-2.13	119.30	124.77
56	HW	5	UAL	O2-C1-N2	-2.03	119.09	123.18
56	DW	6	5OH	OS-CS-CR	2.02	113.79	109.76

There are no chirality outliers.

All (21) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
56	BW	1	KBE	O-C-CA-CB
56	BW	1	KBE	C-CA-CB-N
56	BW	1	KBE	C-CA-CB-CG
56	BW	1	KBE	N-CB-CG-CD
56	BW	1	KBE	CA-CB-CG-CD

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Mol	Chain	Res	Type	Atoms
56	DW	1	KBE	CA-CB-CG-CD
56	DW	6	5OH	C-CA-CB-CR
56	FW	1	KBE	C-CA-CB-N
56	FW	1	KBE	CA-CB-CG-CD
56	HW	1	KBE	O-C-CA-CB
56	HW	1	KBE	C-CA-CB-N
56	HW	1	KBE	C-CA-CB-CG
56	HW	6	5OH	C-CA-CB-CR
56	DW	5	UAL	CA-CB-N1-C1
56	HW	5	UAL	CA-CB-N1-C1
56	BW	1	KBE	CG-CD-CE-NZ
56	FW	1	KBE	C-CA-CB-CG
56	DW	1	KBE	N-CB-CG-CD
56	BW	1	KBE	CE-CD-CG-CB
56	DW	1	KBE	C-CA-CB-N
56	HW	1	KBE	CG-CD-CE-NZ

There are no ring outliers.

12 monomers are involved in 15 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
56	FW	5	UAL	1	0
56	DW	1	KBE	2	0
56	HW	6	5OH	2	0
56	BW	5	UAL	2	0
56	HW	1	KBE	3	0
56	FW	1	KBE	1	0
56	DW	6	5OH	1	0
56	HW	2	DPP	1	0
56	BW	1	KBE	2	0
56	FW	6	5OH	1	0
56	DW	5	UAL	2	0
56	BW	6	5OH	1	0

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 756 ligands modelled in this entry, 752 are monoatomic - leaving 4 for Mogul analysis.

In the following table, the Counts columns list the number of bonds (or angles) for which Mogul statistics could be retrieved, the number of bonds (or angles) that are observed in the model and the number of bonds (or angles) that are defined in the Chemical Component Dictionary. The Link column lists molecule types, if any, to which the group is linked. The Z score for a bond length (or angle) is the number of standard deviations the observed value is removed from the expected value. A bond length (or angle) with $|Z| > 2$ is considered an outlier worth inspection. RMSZ is the root-mean-square of all Z scores of the bond lengths (or angles).

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
59	GCP	HV	801	57	27,34,34	2.22	6 (22%)	35,54,54	2.68	13 (37%)
59	GCP	FV	801	57	27,34,34	2.28	7 (25%)	35,54,54	2.37	9 (25%)
59	GCP	BV	801	57	27,34,34	2.30	8 (29%)	35,54,54	2.58	7 (20%)
59	GCP	DV	801	57	27,34,34	2.22	7 (25%)	35,54,54	2.64	8 (22%)

In the following table, the Chirals column lists the number of chiral outliers, the number of chiral centers analysed, the number of these observed in the model and the number defined in the Chemical Component Dictionary. Similar counts are reported in the Torsion and Rings columns. '-' means no outliers of that kind were identified.

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
59	GCP	HV	801	57	-	3/15/38/38	0/3/3/3
59	GCP	FV	801	57	-	3/15/38/38	0/3/3/3
59	GCP	BV	801	57	-	2/15/38/38	0/3/3/3
59	GCP	DV	801	57	-	1/15/38/38	0/3/3/3

All (28) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
59	FV	801	GCP	O4'-C1'	6.19	1.49	1.40
59	HV	801	GCP	C2-N2	5.90	1.45	1.33
59	FV	801	GCP	C2-N2	5.65	1.45	1.33
59	HV	801	GCP	O4'-C1'	5.54	1.48	1.40
59	DV	801	GCP	C2-N2	5.45	1.44	1.33
59	BV	801	GCP	C2-N2	5.44	1.44	1.33
59	BV	801	GCP	O4'-C1'	5.41	1.48	1.40
59	DV	801	GCP	O4'-C1'	5.07	1.47	1.40
59	DV	801	GCP	C1'-N9	-4.28	1.39	1.49
59	FV	801	GCP	C2'-C3'	-4.18	1.42	1.53
59	DV	801	GCP	C2'-C3'	-4.16	1.42	1.53
59	BV	801	GCP	C1'-N9	-4.02	1.40	1.49
59	HV	801	GCP	C2'-C3'	-3.94	1.42	1.53
59	BV	801	GCP	C2'-C3'	-3.92	1.42	1.53

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
59	HV	801	GCP	C1'-N9	-3.79	1.40	1.49
59	BV	801	GCP	PB-O3A	-3.71	1.54	1.58
59	FV	801	GCP	C1'-N9	-3.43	1.41	1.49
59	BV	801	GCP	C3'-C4'	-3.23	1.44	1.53
59	DV	801	GCP	C3'-C4'	-3.22	1.44	1.53
59	HV	801	GCP	C3'-C4'	-2.92	1.45	1.53
59	DV	801	GCP	PB-O3A	-2.77	1.55	1.58
59	FV	801	GCP	C3'-C4'	-2.75	1.46	1.53
59	FV	801	GCP	PB-O3A	-2.75	1.55	1.58
59	BV	801	GCP	PA-O3A	-2.20	1.57	1.59
59	BV	801	GCP	C5'-C4'	-2.18	1.45	1.51
59	HV	801	GCP	C5'-C4'	-2.17	1.45	1.51
59	DV	801	GCP	C5'-C4'	-2.15	1.45	1.51
59	FV	801	GCP	C6-N1	2.15	1.36	1.33

All (37) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
59	DV	801	GCP	C4'-O4'-C1'	-10.01	100.76	109.92
59	HV	801	GCP	C4'-O4'-C1'	-9.59	101.14	109.92
59	BV	801	GCP	C4'-O4'-C1'	-9.30	101.41	109.92
59	HV	801	GCP	N3-C2-N1	-6.43	119.04	127.21
59	FV	801	GCP	C4'-O4'-C1'	-6.27	104.18	109.92
59	FV	801	GCP	C2-N3-C4	6.14	122.10	115.48
59	FV	801	GCP	N3-C2-N1	-6.07	119.50	127.21
59	BV	801	GCP	PB-O3A-PA	-5.82	113.39	132.37
59	BV	801	GCP	N3-C2-N1	-5.62	120.06	127.21
59	DV	801	GCP	N3-C2-N1	-5.57	120.13	127.21
59	HV	801	GCP	C2-N3-C4	5.35	121.25	115.48
59	DV	801	GCP	PB-O3A-PA	-5.22	115.35	132.37
59	BV	801	GCP	C2-N3-C4	5.08	120.96	115.48
59	FV	801	GCP	PB-O3A-PA	-5.04	115.94	132.37
59	DV	801	GCP	C2-N3-C4	4.52	120.35	115.48
59	HV	801	GCP	C2-N1-C6	3.57	120.92	115.96
59	HV	801	GCP	O4'-C1'-N9	3.28	113.10	108.75
59	DV	801	GCP	C2-N1-C6	3.23	120.45	115.96
59	BV	801	GCP	C2-N1-C6	3.13	120.31	115.96
59	HV	801	GCP	PB-O3A-PA	-3.05	122.42	132.37
59	HV	801	GCP	C1'-N9-C4	-2.96	121.44	126.64
59	FV	801	GCP	C2-N1-C6	2.77	119.81	115.96
59	DV	801	GCP	C5-C6-N1	-2.75	119.75	123.42
59	BV	801	GCP	C5-C6-N1	-2.67	119.85	123.42

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
59	FV	801	GCP	O4'-C1'-N9	2.59	112.18	108.75
59	DV	801	GCP	C2'-C3'-C4'	2.58	107.59	102.61
59	HV	801	GCP	C5-C6-N1	-2.44	120.16	123.42
59	FV	801	GCP	N2-C2-N1	2.43	120.87	117.22
59	DV	801	GCP	C1'-N9-C4	-2.39	122.44	126.64
59	HV	801	GCP	O4'-C4'-C3'	2.35	109.82	105.15
59	HV	801	GCP	C4-C5-C6	-2.30	117.72	121.23
59	HV	801	GCP	N2-C2-N1	2.29	120.66	117.22
59	FV	801	GCP	C2'-C3'-C4'	2.29	107.03	102.61
59	HV	801	GCP	C2'-C3'-C4'	2.12	106.70	102.61
59	FV	801	GCP	C5-C6-N1	-2.05	120.67	123.42
59	HV	801	GCP	C5'-C4'-C3'	-2.03	107.90	115.21
59	BV	801	GCP	O3G-PG-C3B	2.00	111.26	106.40

There are no chirality outliers.

All (9) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
59	BV	801	GCP	PB-C3B-PG-O3G
59	FV	801	GCP	PB-C3B-PG-O1G
59	FV	801	GCP	PB-C3B-PG-O2G
59	FV	801	GCP	PB-C3B-PG-O3G
59	HV	801	GCP	PB-C3B-PG-O1G
59	HV	801	GCP	PB-C3B-PG-O2G
59	HV	801	GCP	PB-C3B-PG-O3G
59	BV	801	GCP	PB-C3B-PG-O2G
59	DV	801	GCP	PB-C3B-PG-O3G

There are no ring outliers.

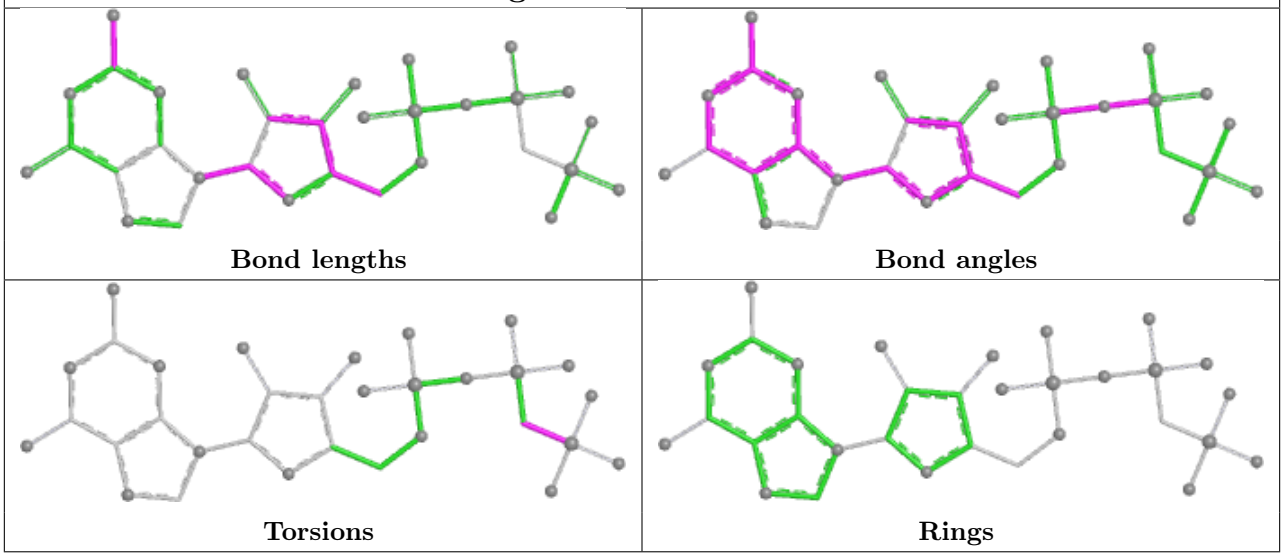
4 monomers are involved in 6 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
59	HV	801	GCP	1	0
59	FV	801	GCP	2	0
59	BV	801	GCP	1	0
59	DV	801	GCP	2	0

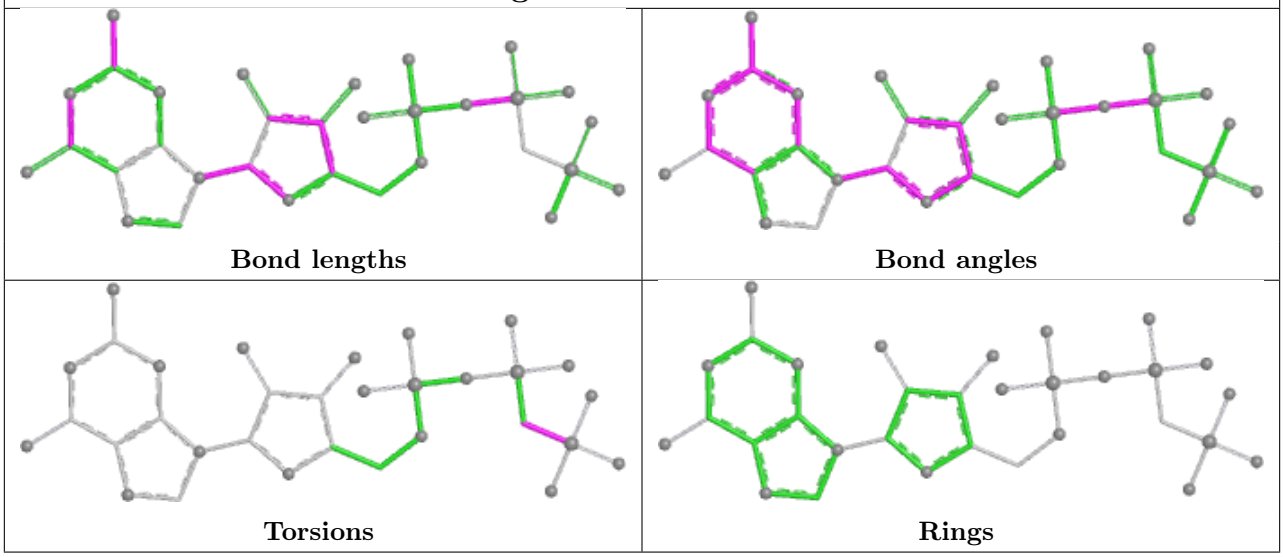
The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier.

Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.

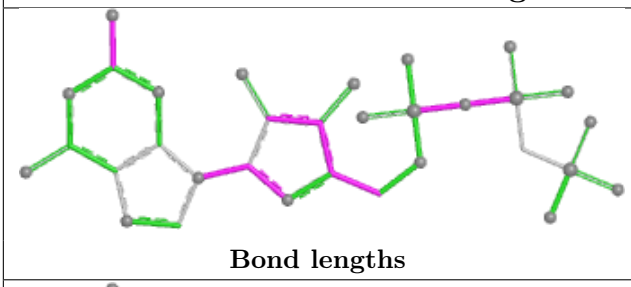
Ligand GCP HV 801



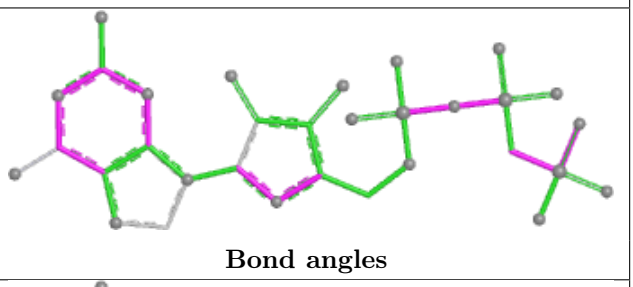
Ligand GCP FV 801



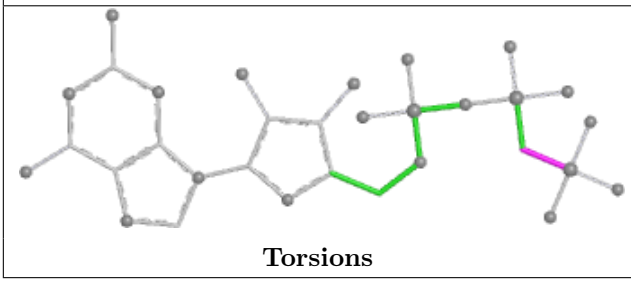
Ligand GCP BV 801



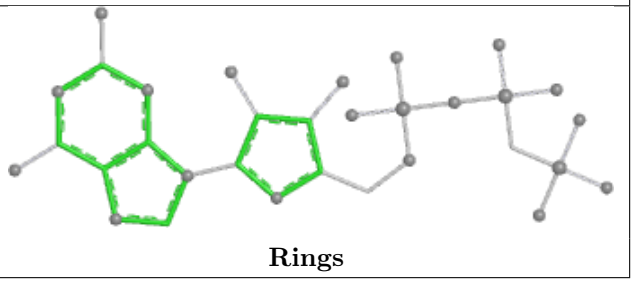
Bond lengths



Bond angles

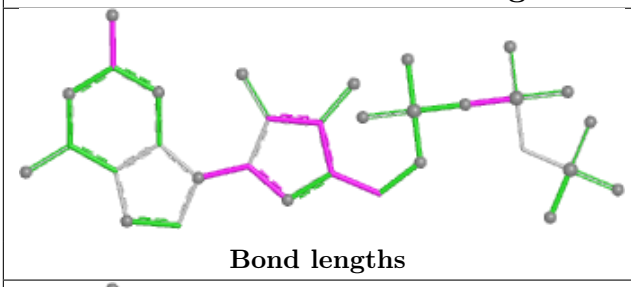


Torsions

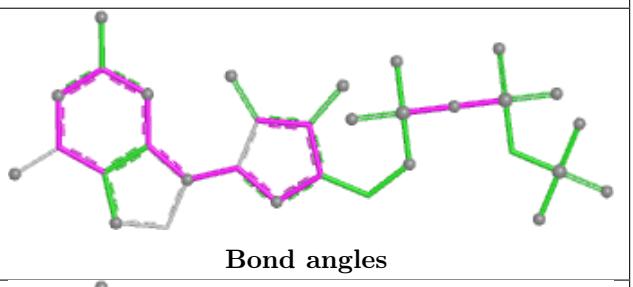


Rings

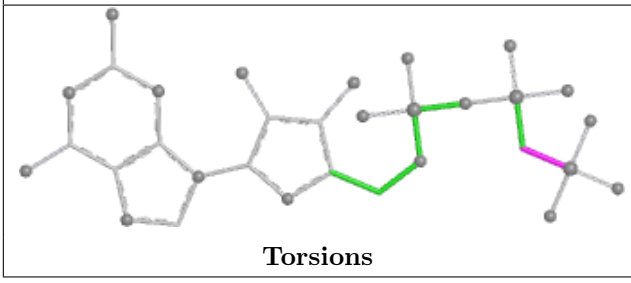
Ligand GCP DV 801



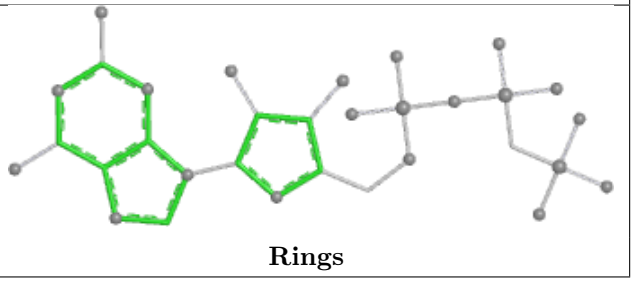
Bond lengths



Bond angles



Torsions



Rings

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

In the following table, the column labelled '#RSRZ> 2' contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95^{th} percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled 'Q< 0.9' lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
1	AB	118/120 (98%)	-1.10	0 100 100	7, 25, 37, 49	0
1	CB	118/120 (98%)	-0.88	0 100 100	19, 41, 55, 61	0
1	EB	118/120 (98%)	-1.01	0 100 100	6, 27, 41, 51	0
1	GB	118/120 (98%)	0.13	0 100 100	34, 57, 66, 70	0
2	AC	271/273 (99%)	-0.59	3 (1%) 77 72	2, 14, 26, 50	0
2	CC	271/273 (99%)	-0.26	4 (1%) 71 66	14, 33, 45, 54	0
2	EC	271/273 (99%)	-0.51	3 (1%) 77 72	3, 17, 30, 42	0
2	GC	271/273 (99%)	-0.38	3 (1%) 77 72	12, 29, 43, 52	0
3	AA	2854/2904 (98%)	-0.87	44 (1%) 71 66	2, 14, 50, 79	0
3	CA	2854/2904 (98%)	-0.83	22 (0%) 82 78	8, 29, 57, 78	0
3	EA	2854/2904 (98%)	-0.86	29 (1%) 79 74	2, 16, 52, 83	0
3	GA	2854/2904 (98%)	-0.39	11 (0%) 89 86	10, 42, 64, 76	0
4	AD	209/209 (100%)	-0.53	3 (1%) 73 68	2, 15, 35, 57	0
4	CD	209/209 (100%)	-0.51	3 (1%) 73 68	5, 23, 42, 56	0
4	ED	209/209 (100%)	-0.47	5 (2%) 59 53	2, 20, 40, 52	0
4	GD	209/209 (100%)	-0.41	3 (1%) 73 68	10, 30, 46, 55	0
5	AE	201/201 (100%)	-0.57	0 100 100	3, 19, 40, 51	0
5	CE	201/201 (100%)	-0.46	1 (0%) 87 84	9, 34, 47, 57	0
5	EE	201/201 (100%)	-0.58	1 (0%) 87 84	2, 21, 43, 57	0
5	GE	201/201 (100%)	0.42	4 (1%) 64 58	25, 51, 61, 68	0
6	AF	177/179 (98%)	-0.62	0 100 100	19, 33, 50, 60	0
6	CF	177/179 (98%)	-0.27	0 100 100	31, 47, 56, 62	0
6	EF	177/179 (98%)	-0.36	0 100 100	16, 34, 49, 58	0
6	GF	177/179 (98%)	1.09	29 (16%) 5 5	47, 59, 67, 72	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
7	AG	176/177 (99%)	-0.39	0 100 100	9, 25, 46, 59	0
7	CG	176/177 (99%)	-0.26	2 (1%) 77 72	18, 36, 51, 61	0
7	EG	176/177 (99%)	-0.34	2 (1%) 77 72	16, 31, 44, 55	0
7	GG	176/177 (99%)	-0.05	1 (0%) 85 82	26, 43, 54, 65	0
8	AH	50/50 (100%)	-0.39	0 100 100	16, 41, 55, 57	0
8	CH	50/50 (100%)	0.83	4 (8%) 20 17	46, 57, 64, 68	0
8	EH	50/50 (100%)	-0.39	0 100 100	14, 38, 56, 62	0
8	GH	50/50 (100%)	0.54	2 (4%) 43 36	39, 52, 61, 64	0
9	AI	141/142 (99%)	0.54	8 (5%) 30 26	31, 53, 66, 78	0
9	CI	141/142 (99%)	0.50	4 (2%) 55 49	36, 54, 63, 72	0
9	EI	141/142 (99%)	0.39	7 (4%) 35 30	32, 54, 66, 76	0
9	GI	141/142 (99%)	1.33	30 (21%) 3 3	42, 59, 69, 80	0
10	AJ	142/142 (100%)	-0.50	3 (2%) 63 57	4, 11, 29, 39	0
10	CJ	142/142 (100%)	-0.56	2 (1%) 73 68	8, 24, 37, 54	0
10	EJ	142/142 (100%)	-0.37	3 (2%) 63 57	5, 14, 28, 43	0
10	GJ	142/142 (100%)	-0.00	3 (2%) 63 57	21, 36, 47, 55	0
11	AK	122/123 (99%)	-0.51	1 (0%) 82 78	4, 10, 25, 50	0
11	CK	122/123 (99%)	-0.52	0 100 100	9, 18, 35, 42	0
11	EK	122/123 (99%)	-0.54	2 (1%) 70 64	7, 18, 34, 47	0
11	GK	122/123 (99%)	-0.48	0 100 100	12, 24, 39, 53	0
12	AL	143/144 (99%)	-0.44	1 (0%) 84 80	2, 18, 34, 39	0
12	CL	143/144 (99%)	-0.33	1 (0%) 84 80	11, 31, 46, 54	0
12	EL	143/144 (99%)	-0.53	0 100 100	2, 18, 37, 49	0
12	GL	143/144 (99%)	0.48	5 (3%) 47 41	29, 46, 59, 65	0
13	AM	136/136 (100%)	-0.64	1 (0%) 84 80	2, 9, 25, 48	0
13	CM	136/136 (100%)	-0.59	0 100 100	10, 21, 36, 52	0
13	EM	136/136 (100%)	-0.62	0 100 100	4, 13, 29, 43	0
13	GM	136/136 (100%)	0.32	4 (2%) 54 48	28, 44, 56, 60	0
14	AN	120/127 (94%)	-0.69	0 100 100	5, 13, 25, 56	0
14	CN	120/127 (94%)	-0.63	0 100 100	13, 24, 35, 56	0
14	EN	120/127 (94%)	-0.66	0 100 100	9, 19, 31, 59	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
14	GN	120/127 (94%)	-0.47	1 (0%) 82 78	16, 28, 37, 58	0
15	AO	116/117 (99%)	-0.63	0 100 100	12, 24, 37, 46	0
15	CO	116/117 (99%)	-0.36	0 100 100	29, 40, 53, 59	0
15	EO	116/117 (99%)	-0.64	0 100 100	14, 27, 40, 44	0
15	GO	116/117 (99%)	0.58	4 (3%) 48 42	39, 52, 58, 65	0
16	AP	114/115 (99%)	-0.52	2 (1%) 67 61	5, 19, 36, 44	0
16	CP	114/115 (99%)	-0.37	1 (0%) 81 76	11, 25, 41, 54	0
16	EP	114/115 (99%)	-0.69	0 100 100	14, 26, 41, 60	0
16	GP	114/115 (99%)	-0.62	0 100 100	13, 27, 42, 51	0
17	AQ	117/118 (99%)	-0.43	4 (3%) 48 42	3, 10, 26, 53	0
17	CQ	117/118 (99%)	-0.45	5 (4%) 40 34	9, 23, 35, 54	0
17	EQ	117/118 (99%)	-0.43	2 (1%) 69 63	2, 12, 27, 52	0
17	GQ	117/118 (99%)	0.29	4 (3%) 48 42	24, 41, 53, 58	0
18	AR	103/103 (100%)	-0.58	1 (0%) 79 74	2, 18, 34, 47	0
18	CR	103/103 (100%)	-0.50	0 100 100	12, 31, 45, 55	0
18	ER	103/103 (100%)	-0.44	2 (1%) 66 60	3, 23, 42, 49	0
18	GR	103/103 (100%)	0.40	5 (4%) 36 30	30, 47, 56, 64	0
19	AS	110/110 (100%)	-0.54	1 (0%) 81 76	3, 12, 32, 54	0
19	CS	110/110 (100%)	-0.48	3 (2%) 56 50	13, 22, 40, 47	0
19	ES	110/110 (100%)	-0.57	0 100 100	5, 14, 36, 51	0
19	GS	110/110 (100%)	-0.23	0 100 100	20, 39, 50, 55	0
20	AT	93/100 (93%)	-0.34	1 (1%) 77 72	7, 24, 51, 55	0
20	CT	93/100 (93%)	-0.28	2 (2%) 62 55	22, 36, 52, 56	0
20	ET	93/100 (93%)	-0.25	2 (2%) 62 55	13, 26, 50, 58	0
20	GT	93/100 (93%)	0.02	1 (1%) 77 72	26, 45, 57, 64	0
21	AU	102/104 (98%)	-0.35	0 100 100	9, 22, 41, 62	0
21	CU	102/104 (98%)	-0.15	1 (0%) 79 74	25, 36, 52, 65	0
21	EU	102/104 (98%)	-0.29	2 (1%) 64 58	14, 30, 44, 59	0
21	GU	102/104 (98%)	0.79	8 (7%) 20 18	35, 53, 61, 68	0
22	AV	94/94 (100%)	-0.65	0 100 100	8, 23, 40, 46	0
22	CV	94/94 (100%)	-0.72	0 100 100	22, 31, 44, 52	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
22	EV	94/94 (100%)	-0.69	0 100 100	12, 23, 40, 48	0
22	GV	94/94 (100%)	0.20	1 (1%) 77 72	36, 49, 59, 61	0
23	AW	79/85 (92%)	0.36	8 (10%) 14 12	8, 19, 41, 49	0
23	CW	79/85 (92%)	0.37	5 (6%) 27 23	18, 32, 48, 60	0
23	EW	79/85 (92%)	0.33	10 (12%) 9 8	6, 20, 38, 51	0
23	GW	79/85 (92%)	1.15	16 (20%) 3 3	35, 49, 59, 71	0
24	AX	77/78 (98%)	-0.50	0 100 100	7, 17, 37, 41	0
24	CX	77/78 (98%)	-0.17	0 100 100	22, 37, 49, 54	0
24	EX	77/78 (98%)	-0.73	0 100 100	5, 15, 36, 37	0
24	GX	77/78 (98%)	0.25	1 (1%) 74 69	26, 44, 53, 58	0
25	AY	63/63 (100%)	-0.39	1 (1%) 70 64	16, 34, 48, 52	0
25	CY	63/63 (100%)	-0.28	0 100 100	30, 43, 55, 62	0
25	EY	63/63 (100%)	-0.22	2 (3%) 50 44	18, 33, 45, 56	0
25	GY	63/63 (100%)	0.27	1 (1%) 70 64	44, 51, 58, 60	0
26	AZ	58/59 (98%)	-0.41	1 (1%) 69 63	4, 13, 39, 51	0
26	CZ	58/59 (98%)	-0.41	1 (1%) 69 63	11, 26, 46, 59	0
26	EZ	58/59 (98%)	-0.59	0 100 100	3, 15, 37, 47	0
26	GZ	58/59 (98%)	0.84	5 (8%) 18 15	25, 48, 58, 63	0
27	A0	56/57 (98%)	-0.49	1 (1%) 67 61	3, 19, 42, 51	0
27	C0	56/57 (98%)	-0.50	0 100 100	10, 27, 44, 55	0
27	E0	56/57 (98%)	-0.64	1 (1%) 67 61	3, 22, 40, 47	0
27	G0	56/57 (98%)	-0.33	0 100 100	18, 35, 49, 57	0
28	A1	50/55 (90%)	-0.71	0 100 100	13, 24, 37, 43	0
28	C1	50/55 (90%)	-0.36	1 (2%) 64 58	25, 39, 50, 51	0
28	E1	50/55 (90%)	-0.54	0 100 100	12, 22, 36, 43	0
28	G1	50/55 (90%)	0.63	3 (6%) 29 24	38, 50, 60, 65	0
29	A2	46/46 (100%)	-0.60	1 (2%) 62 55	4, 8, 18, 44	0
29	C2	46/46 (100%)	-0.10	3 (6%) 26 22	17, 24, 34, 43	0
29	E2	46/46 (100%)	-0.63	0 100 100	5, 11, 21, 36	0
29	G2	46/46 (100%)	0.00	2 (4%) 40 34	20, 36, 43, 54	0
30	A3	64/65 (98%)	-0.51	0 100 100	3, 10, 18, 30	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
30	C3	64/65 (98%)	-0.33	0 100 100	14, 28, 36, 39	0
30	E3	64/65 (98%)	-0.40	1 (1%) 70 64	4, 9, 19, 31	0
30	G3	64/65 (98%)	0.90	7 (10%) 12 10	32, 43, 52, 60	0
31	A4	38/38 (100%)	-0.49	0 100 100	5, 11, 25, 27	0
31	C4	38/38 (100%)	-0.46	0 100 100	14, 23, 37, 39	0
31	E4	38/38 (100%)	-0.53	0 100 100	7, 16, 27, 30	0
31	G4	38/38 (100%)	-0.16	0 100 100	24, 37, 50, 53	0
32	A5	148/165 (89%)	0.92	20 (13%) 8 7	30, 49, 61, 72	0
32	C5	148/165 (89%)	1.06	22 (14%) 7 6	37, 54, 64, 72	0
32	E5	145/165 (87%)	1.03	20 (13%) 8 7	36, 53, 62, 67	0
33	A6	30/121 (24%)	1.39	8 (26%) 2 2	47, 53, 62, 65	0
34	BB	218/241 (90%)	-0.23	3 (1%) 73 68	24, 41, 56, 66	0
34	DB	218/241 (90%)	0.10	3 (1%) 73 68	35, 52, 61, 69	0
34	FB	218/241 (90%)	-0.29	4 (1%) 67 61	25, 43, 56, 66	0
34	HB	218/241 (90%)	0.40	6 (2%) 55 49	42, 56, 66, 71	0
35	BA	1533/1542 (99%)	-0.94	7 (0%) 87 84	7, 21, 52, 78	0
35	DA	1533/1542 (99%)	-0.54	8 (0%) 87 84	13, 42, 64, 78	0
35	FA	1533/1542 (99%)	-0.75	2 (0%) 92 92	9, 31, 57, 75	0
35	HA	1533/1542 (99%)	0.03	37 (2%) 59 53	20, 52, 71, 78	0
36	BC	206/233 (88%)	-0.78	0 100 100	8, 26, 39, 57	0
36	DC	206/233 (88%)	-0.30	0 100 100	30, 45, 52, 59	0
36	FC	206/233 (88%)	-0.53	0 100 100	15, 30, 44, 57	0
36	HC	206/233 (88%)	0.26	4 (1%) 66 60	36, 52, 61, 67	0
37	BD	205/206 (99%)	-0.47	2 (0%) 79 74	12, 28, 44, 51	0
37	DD	205/206 (99%)	-0.43	6 (2%) 54 48	14, 30, 47, 55	0
37	FD	205/206 (99%)	-0.07	3 (1%) 71 66	29, 45, 56, 68	0
37	HD	205/206 (99%)	0.18	7 (3%) 48 42	32, 45, 56, 65	0
38	BE	150/167 (89%)	-0.46	1 (0%) 84 80	11, 26, 45, 63	0
38	DE	150/167 (89%)	-0.25	1 (0%) 84 80	24, 38, 51, 60	0
38	FE	150/167 (89%)	-0.39	0 100 100	16, 35, 49, 64	0
38	HE	150/167 (89%)	0.21	4 (2%) 56 50	34, 49, 56, 59	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
39	BF	102/135 (75%)	-0.59	0 100 100	15, 30, 42, 51	0
39	DF	100/135 (74%)	0.05	1 (1%) 79 74	42, 52, 59, 63	0
39	FF	100/135 (74%)	-0.59	2 (2%) 64 58	13, 32, 44, 49	0
39	HF	100/135 (74%)	0.53	2 (2%) 64 58	46, 56, 65, 69	0
40	BG	151/179 (84%)	-0.40	4 (2%) 57 51	10, 27, 46, 60	0
40	DG	151/179 (84%)	0.41	5 (3%) 49 43	41, 54, 61, 67	0
40	FG	151/179 (84%)	-0.36	4 (2%) 57 51	15, 32, 50, 59	0
40	HG	151/179 (84%)	1.11	26 (17%) 5 4	46, 58, 66, 69	0
41	BH	129/130 (99%)	-0.68	0 100 100	15, 26, 40, 58	0
41	DH	129/130 (99%)	-0.26	1 (0%) 82 78	27, 43, 55, 61	0
41	FH	129/130 (99%)	-0.35	2 (1%) 70 64	19, 35, 47, 55	0
41	HH	129/130 (99%)	0.24	0 100 100	36, 50, 58, 64	0
42	BI	127/130 (97%)	-0.23	3 (2%) 59 53	8, 25, 47, 58	0
42	DI	127/130 (97%)	0.63	12 (9%) 15 13	41, 55, 62, 68	0
42	FI	127/130 (97%)	-0.21	4 (3%) 51 46	9, 27, 50, 56	0
42	HI	127/130 (97%)	1.03	18 (14%) 7 6	46, 57, 65, 68	0
43	BJ	98/103 (95%)	-0.36	1 (1%) 79 74	9, 35, 56, 61	0
43	DJ	98/103 (95%)	0.31	3 (3%) 51 46	38, 52, 60, 68	0
43	FJ	98/103 (95%)	-0.10	4 (4%) 42 35	16, 31, 53, 59	0
43	HJ	98/103 (95%)	0.86	13 (13%) 8 7	40, 54, 63, 66	0
44	BK	117/129 (90%)	-0.40	2 (1%) 69 63	14, 26, 40, 52	0
44	DK	117/129 (90%)	0.51	7 (5%) 29 24	38, 52, 60, 62	0
44	FK	117/129 (90%)	-0.58	3 (2%) 57 51	13, 24, 36, 41	0
44	HK	117/129 (90%)	0.94	12 (10%) 13 12	45, 58, 68, 73	0
45	BL	123/124 (99%)	-0.50	3 (2%) 59 53	5, 12, 29, 52	0
45	DL	123/124 (99%)	-0.33	6 (4%) 36 30	12, 24, 40, 49	0
45	FL	123/124 (99%)	-0.26	4 (3%) 49 43	11, 26, 43, 51	0
45	HL	123/124 (99%)	0.33	10 (8%) 19 16	24, 41, 53, 63	0
46	BM	114/118 (96%)	-0.58	0 100 100	11, 30, 51, 54	0
46	DM	114/118 (96%)	0.36	1 (0%) 81 76	39, 53, 62, 66	0
46	FM	114/118 (96%)	-0.46	1 (0%) 81 76	16, 36, 52, 59	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
46	HM	114/118 (96%)	1.66	37 (32%) 1 1	48, 60, 68, 76	0
47	BN	96/101 (95%)	-0.31	3 (3%) 51 46	10, 22, 46, 57	0
47	DN	96/101 (95%)	0.21	1 (1%) 79 74	31, 45, 55, 62	0
47	FN	96/101 (95%)	0.17	6 (6%) 27 23	19, 29, 50, 64	0
47	HN	96/101 (95%)	1.45	29 (30%) 1 1	41, 56, 66, 71	0
48	BO	88/89 (98%)	-0.66	0 100 100	12, 27, 40, 42	0
48	DO	88/89 (98%)	0.01	1 (1%) 77 72	36, 46, 55, 59	0
48	FO	88/89 (98%)	-0.67	0 100 100	16, 31, 44, 51	0
48	HO	88/89 (98%)	0.39	4 (4%) 39 32	37, 49, 58, 63	0
49	BP	82/82 (100%)	-0.49	2 (2%) 59 53	13, 21, 46, 63	0
49	DP	82/82 (100%)	-0.37	1 (1%) 76 71	16, 27, 48, 59	0
49	FP	82/82 (100%)	0.05	4 (4%) 36 30	24, 35, 54, 70	0
49	HP	82/82 (100%)	0.08	1 (1%) 76 71	25, 37, 49, 59	0
50	BQ	80/84 (95%)	-0.40	0 100 100	14, 26, 39, 48	0
50	DQ	80/84 (95%)	-0.30	1 (1%) 74 69	26, 37, 45, 48	0
50	FQ	80/84 (95%)	-0.23	0 100 100	18, 36, 50, 55	0
50	HQ	80/84 (95%)	0.21	5 (6%) 27 23	35, 44, 55, 62	0
51	BR	55/75 (73%)	-0.63	2 (3%) 46 40	16, 26, 39, 48	0
51	DR	55/75 (73%)	0.20	0 100 100	43, 52, 60, 62	0
51	FR	55/75 (73%)	-0.69	2 (3%) 46 40	18, 26, 37, 45	0
51	HR	55/75 (73%)	0.71	4 (7%) 22 19	43, 54, 61, 63	0
52	BS	79/92 (85%)	-0.61	1 (1%) 74 69	14, 23, 39, 65	0
52	DS	79/92 (85%)	0.19	3 (3%) 44 38	31, 49, 58, 61	0
52	FS	79/92 (85%)	-0.19	2 (2%) 58 52	22, 34, 48, 52	0
52	HS	79/92 (85%)	1.62	27 (34%) 1 1	50, 60, 70, 73	0
53	BT	85/87 (97%)	-0.48	2 (2%) 59 53	12, 23, 42, 47	0
53	DT	85/87 (97%)	-0.30	2 (2%) 59 53	17, 28, 44, 53	0
53	FT	85/87 (97%)	-0.07	2 (2%) 59 53	25, 38, 47, 63	0
53	HT	85/87 (97%)	-0.28	3 (3%) 47 41	22, 33, 46, 52	0
54	BU	51/71 (71%)	0.48	5 (9%) 14 12	22, 37, 52, 61	0
54	DU	51/71 (71%)	0.90	8 (15%) 6 5	36, 54, 60, 64	0

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Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å^2)	Q<0.9
54	FU	51/71 (71%)	0.54	5 (9%) 14 12	25, 35, 54, 61	0
54	HU	51/71 (71%)	1.02	8 (15%) 6 5	40, 54, 65, 71	0
55	BV	690/704 (98%)	-0.62	2 (0%) 90 88	10, 30, 48, 66	0
55	DV	689/704 (97%)	-0.52	4 (0%) 85 82	16, 37, 53, 63	0
55	FV	689/704 (97%)	-0.40	3 (0%) 89 86	16, 41, 54, 63	0
55	HV	689/704 (97%)	0.10	11 (1%) 70 64	25, 51, 62, 73	0
56	BW	2/6 (33%)	-0.49	0 100 100	16, 16, 16, 20	0
56	DW	2/6 (33%)	-0.58	0 100 100	32, 32, 32, 34	0
56	FW	2/6 (33%)	-0.82	0 100 100	23, 23, 23, 29	0
56	HW	2/6 (33%)	0.89	0 100 100	51, 51, 51, 58	0
All	All	43746/45264 (96%)	-0.37	891 (2%) 64 58	2, 33, 60, 83	0

All (891) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
23	GW	51	GLY	8.1
44	FK	126	LYS	7.3
53	DT	4	ILE	7.1
26	AZ	1	ALA	6.9
47	FN	21	PHE	6.7
3	AA	2148	G	6.2
23	AW	40	ARG	6.0
23	CW	51	GLY	6.0
33	A6	22	LEU	5.9
4	ED	92	VAL	5.8
3	AA	2106	U	5.8
32	A5	84	TYR	5.6
32	C5	96	PHE	5.6
32	E5	96	PHE	5.5
32	A5	116	GLU	5.4
4	GD	92	VAL	5.4
17	AQ	4	LYS	5.4
35	BA	78	A	5.4
3	EA	2105	U	5.3
35	DA	86	G	5.3
34	HB	188	THR	5.3
13	GM	21	ALA	5.3
29	C2	1	MET	5.3

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Mol	Chain	Res	Type	RSRZ
42	BI	43	THR	5.3
4	GD	118	PHE	5.2
40	HG	104	ILE	5.2
35	DA	78	A	5.2
3	AA	2149	U	5.1
3	AA	2105	U	5.1
3	AA	2107	G	5.0
26	CZ	1	ALA	4.9
17	AQ	86	SER	4.9
40	HG	30	LEU	4.9
54	BU	38	TYR	4.9
42	HI	125	PRO	4.8
6	GF	169	LEU	4.8
37	DD	28	ILE	4.7
32	C5	24	SER	4.7
54	BU	35	ARG	4.7
3	AA	2150	C	4.6
10	AJ	111	LYS	4.6
6	GF	11	VAL	4.6
49	HP	22	ALA	4.6
52	HS	51	VAL	4.6
32	E5	116	GLU	4.5
47	HN	22	ALA	4.5
54	DU	38	TYR	4.5
35	BA	1362	A	4.5
23	EW	73	PRO	4.5
3	EA	2602	A	4.5
18	GR	5	PHE	4.4
3	EA	2140	G	4.4
54	HU	38	TYR	4.4
46	HM	106	ALA	4.3
47	BN	22	ALA	4.3
3	AA	2141	G	4.3
4	ED	93	GLY	4.3
46	HM	96	PRO	4.3
44	BK	126	LYS	4.3
3	AA	2133	G	4.3
30	G3	22	LYS	4.3
47	FN	22	ALA	4.3
44	BK	129	VAL	4.3
46	HM	94	GLY	4.3
43	HJ	53	ILE	4.2

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Mol	Chain	Res	Type	RSRZ
3	CA	2151	U	4.2
3	AA	2104	C	4.2
17	CQ	4	LYS	4.2
32	A5	112	ALA	4.2
3	EA	2106	U	4.1
7	EG	42	VAL	4.1
43	HJ	61	ALA	4.1
10	EJ	111	LYS	4.1
46	HM	80	LEU	4.1
37	HD	28	ILE	4.1
17	GQ	4	LYS	4.1
46	HM	108	THR	4.0
40	HG	33	ASP	4.0
11	AK	71	ARG	4.0
12	GL	110	VAL	4.0
15	GO	97	PHE	4.0
46	HM	85	CYS	4.0
32	C5	40	GLU	4.0
28	C1	52	LYS	4.0
9	GI	132	ALA	4.0
47	HN	57	PRO	4.0
16	AP	67	GLU	4.0
44	HK	126	LYS	4.0
3	AA	2103	C	4.0
9	GI	75	ALA	4.0
32	E5	84	TYR	4.0
55	HV	542	GLY	4.0
2	AC	29	PHE	3.9
4	AD	92	VAL	3.9
53	BT	68	HIS	3.9
40	HG	32	VAL	3.9
46	HM	43	VAL	3.9
4	CD	209	ALA	3.9
53	FT	7	ALA	3.9
42	HI	72	ILE	3.9
3	AA	2152	G	3.9
25	EY	17	GLU	3.8
42	HI	124	ARG	3.8
2	CC	250	GLN	3.8
32	C5	116	GLU	3.8
40	BG	80	VAL	3.8
47	HN	71	HIS	3.8

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Mol	Chain	Res	Type	RSRZ
7	CG	175	LYS	3.8
46	HM	103	LYS	3.8
3	AA	2181	U	3.8
32	C5	84	TYR	3.8
37	FD	25	VAL	3.8
29	G2	23	ALA	3.8
17	GQ	90	ASP	3.8
32	C5	111	ALA	3.7
45	FL	14	ARG	3.7
23	EW	42	THR	3.7
9	GI	137	LEU	3.7
43	HJ	26	VAL	3.7
34	HB	19	THR	3.7
49	BP	47	GLU	3.7
48	HO	2	SER	3.7
54	FU	35	ARG	3.7
35	DA	85	U	3.7
9	GI	8	VAL	3.6
40	HG	87	VAL	3.6
43	FJ	35	GLN	3.6
53	BT	4	ILE	3.6
52	BS	30	PRO	3.6
3	AA	2156	G	3.6
46	HM	84	GLY	3.6
4	CD	119	ALA	3.6
50	HQ	28	PHE	3.6
43	FJ	90	LEU	3.6
18	ER	50	GLY	3.6
10	AJ	81	ILE	3.6
50	HQ	26	GLU	3.6
32	E5	50	VAL	3.6
9	GI	128	ILE	3.6
35	HA	1331	G	3.6
37	DD	29	ASP	3.6
30	G3	28	LEU	3.6
35	HA	1362	A	3.5
46	HM	77	ILE	3.5
46	HM	100	GLN	3.5
3	AA	2147	A	3.5
54	HU	32	VAL	3.5
3	AA	138	U	3.5
3	AA	2153	C	3.5

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Mol	Chain	Res	Type	RSRZ
3	EA	2136	G	3.5
3	AA	2155	U	3.5
21	GU	14	THR	3.5
47	HN	31	ILE	3.5
32	E5	51	TYR	3.5
9	CI	4	VAL	3.5
40	HG	80	VAL	3.5
3	AA	2154	A	3.5
3	EA	2181	U	3.4
42	DI	130	ARG	3.4
54	HU	40	LYS	3.4
9	GI	105	LEU	3.4
3	AA	2185	U	3.4
3	AA	2108	A	3.4
23	GW	35	ILE	3.4
36	HC	2	GLY	3.4
29	G2	46	LYS	3.4
55	HV	540	ILE	3.4
33	A6	18	ASP	3.4
34	BB	17	HIS	3.4
6	GF	30	VAL	3.4
2	GC	232	GLY	3.4
42	FI	90	TYR	3.3
4	ED	118	PHE	3.3
32	A5	96	PHE	3.3
46	HM	10	PRO	3.3
42	HI	111	VAL	3.3
45	HL	4	VAL	3.3
54	BU	28	VAL	3.3
32	A5	117	LEU	3.3
10	EJ	42	ALA	3.3
32	E5	111	ALA	3.3
3	CA	2108	A	3.3
15	GO	26	LEU	3.3
45	HL	124	ALA	3.3
47	HN	29	ALA	3.3
3	AA	2136	G	3.3
45	FL	44	LYS	3.3
26	GZ	8	GLN	3.3
6	GF	33	ILE	3.3
3	AA	2135	A	3.3
35	HA	975	A	3.3

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Mol	Chain	Res	Type	RSRZ
54	DU	41	PRO	3.2
9	GI	14	ALA	3.2
17	CQ	86	SER	3.2
34	HB	150	ILE	3.2
45	DL	4	VAL	3.2
3	AA	1175	A	3.2
9	AI	21	PRO	3.2
23	EW	24	ARG	3.2
3	CA	2149	U	3.2
23	CW	50	VAL	3.2
32	C5	50	VAL	3.2
53	DT	68	HIS	3.2
47	HN	72	GLY	3.2
3	AA	1420	A	3.2
35	HA	976	G	3.2
42	HI	123	ARG	3.2
6	GF	171	ALA	3.2
17	EQ	86	SER	3.2
21	GU	70	ALA	3.2
32	A5	28	ALA	3.2
3	GA	2183	A	3.2
9	EI	4	VAL	3.2
32	A5	85	SER	3.2
52	HS	60	VAL	3.2
51	HR	55	LEU	3.2
2	CC	29	PHE	3.2
19	AS	11	ARG	3.2
29	C2	46	LYS	3.2
42	HI	103	PHE	3.2
52	FS	37	ARG	3.2
40	HG	105	VAL	3.1
35	HA	978	A	3.1
9	CI	90	GLY	3.1
3	EA	2156	G	3.1
47	HN	70	PRO	3.1
32	A5	88	HIS	3.1
3	AA	2151	U	3.1
40	BG	5	ARG	3.1
47	HN	52	PRO	3.1
3	EA	2152	G	3.1
35	HA	1312	G	3.1
6	GF	49	LEU	3.1

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Mol	Chain	Res	Type	RSRZ
42	HI	116	VAL	3.1
3	AA	2187	U	3.1
23	CW	40	ARG	3.1
34	BB	51	GLU	3.1
9	GI	83	ALA	3.1
32	C5	112	ALA	3.1
46	HM	95	LEU	3.1
9	GI	139	VAL	3.1
54	FU	32	VAL	3.1
44	DK	126	LYS	3.1
2	EC	250	GLN	3.1
44	HK	120	GLY	3.1
45	BL	14	ARG	3.1
34	DB	129	THR	3.1
52	HS	33	THR	3.1
3	EA	2180	U	3.1
3	EA	2187	U	3.1
3	CA	1175	A	3.1
14	GN	25	ALA	3.1
52	HS	71	LEU	3.0
54	DU	53	VAL	3.0
52	HS	36	ARG	3.0
54	HU	36	GLU	3.0
55	DV	699	ILE	3.0
52	DS	27	ASP	3.0
35	BA	461	A	3.0
42	DI	127	PHE	3.0
9	GI	123	ALA	3.0
43	HJ	52	LEU	3.0
52	HS	13	LEU	3.0
52	HS	16	LEU	3.0
54	FU	26	ALA	3.0
32	C5	115	GLY	3.0
9	GI	100	ILE	3.0
13	GM	73	ILE	3.0
26	GZ	11	SER	3.0
38	HE	92	SER	3.0
20	ET	16	VAL	3.0
23	CW	45	HIS	3.0
3	CA	2104	C	3.0
46	HM	99	GLY	3.0
42	HI	126	GLN	3.0

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Mol	Chain	Res	Type	RSRZ
6	GF	84	ILE	3.0
54	FU	36	GLU	3.0
6	GF	88	VAL	3.0
32	A5	77	VAL	3.0
52	HS	19	VAL	3.0
3	AA	2145	C	2.9
3	EA	2157	G	2.9
42	HI	118	LEU	2.9
46	HM	104	THR	2.9
2	CC	269	ARG	2.9
39	FF	100	SER	2.9
3	AA	2099	U	2.9
3	CA	2139	U	2.9
23	GW	21	GLY	2.9
6	GF	66	ILE	2.9
44	DK	82	LEU	2.9
40	HG	108	ALA	2.9
3	AA	2184	A	2.9
12	AL	92	LEU	2.9
37	BD	28	ILE	2.9
37	DD	27	ALA	2.9
8	CH	19	VAL	2.9
40	HG	31	MET	2.9
52	HS	11	ILE	2.9
3	EA	2137	U	2.9
53	HT	69	LYS	2.9
21	GU	92	VAL	2.9
36	HC	192	THR	2.9
42	HI	119	ARG	2.9
4	AD	118	PHE	2.8
55	HV	360	PHE	2.8
10	GJ	111	LYS	2.8
32	A5	115	GLY	2.8
36	HC	162	ILE	2.8
44	FK	125	LYS	2.8
46	HM	4	ILE	2.8
26	GZ	12	ALA	2.8
23	CW	16	GLU	2.8
32	E5	40	GLU	2.8
6	GF	116	LEU	2.8
21	GU	64	ILE	2.8
23	GW	53	GLY	2.8

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Mol	Chain	Res	Type	RSRZ
47	HN	56	SER	2.8
37	BD	29	ASP	2.8
3	AA	2137	U	2.8
40	HG	121	ALA	2.8
3	CA	2152	G	2.8
9	GI	131	THR	2.8
23	GW	42	THR	2.8
35	HA	971	G	2.8
17	GQ	89	ILE	2.8
23	GW	75	ASN	2.8
2	EC	232	GLY	2.8
3	AA	1847	A	2.8
9	GI	13	ALA	2.8
9	GI	114	ALA	2.8
47	HN	2	ALA	2.8
9	GI	60	VAL	2.8
38	HE	137	VAL	2.8
32	C5	51	TYR	2.8
21	EU	86	PHE	2.8
6	GF	15	LEU	2.8
52	HS	15	LEU	2.8
3	EA	2148	G	2.8
35	HA	1453	G	2.8
46	HM	53	ILE	2.8
42	HI	117	GLY	2.8
45	HL	2	ALA	2.8
55	HV	588	SER	2.8
9	AI	4	VAL	2.8
35	HA	780	A	2.8
35	HA	1302	C	2.8
18	GR	35	PHE	2.8
47	HN	21	PHE	2.8
32	E5	60	LEU	2.8
2	CC	232	GLY	2.8
23	GW	12	GLY	2.8
46	HM	26	GLY	2.8
3	AA	2186	G	2.7
3	CA	2107	G	2.7
3	EA	2141	G	2.7
3	EA	2144	G	2.7
5	EE	201	ALA	2.7
18	GR	84	ARG	2.7

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Mol	Chain	Res	Type	RSRZ
47	HN	25	ALA	2.7
52	HS	4	SER	2.7
51	FR	64	TYR	2.7
3	CA	2183	A	2.7
21	GU	13	LEU	2.7
35	HA	974	A	2.7
12	GL	77	ILE	2.7
52	DS	4	SER	2.7
3	AA	2157	G	2.7
3	CA	2140	G	2.7
25	EY	22	LEU	2.7
7	CG	31	GLU	2.7
40	DG	85	TYR	2.7
40	HG	38	THR	2.7
43	HJ	56	HIS	2.7
43	HJ	45	ARG	2.7
47	HN	53	ARG	2.7
32	C5	83	ALA	2.7
43	DJ	59	LYS	2.7
47	HN	48	LEU	2.7
37	FD	28	ILE	2.7
3	EA	2186	G	2.7
9	AI	90	GLY	2.7
17	AQ	63	ARG	2.7
35	HA	80	A	2.7
44	FK	127	ARG	2.7
45	HL	9	ARG	2.7
23	GW	79	ILE	2.7
32	E5	89	PRO	2.7
52	HS	37	ARG	2.6
35	HA	1207	G	2.6
45	DL	26	ALA	2.6
45	HL	24	LEU	2.6
52	HS	5	LEU	2.6
35	HA	87	C	2.6
8	GH	38	PRO	2.6
55	DV	542	GLY	2.6
16	AP	50	ARG	2.6
42	DI	124	ARG	2.6
23	AW	50	VAL	2.6
23	EW	50	VAL	2.6
36	HC	195	VAL	2.6

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Mol	Chain	Res	Type	RSRZ
46	HM	16	VAL	2.6
6	GF	118	ALA	2.6
6	GF	170	ALA	2.6
33	A6	23	ILE	2.6
3	AA	2138	G	2.6
4	AD	151	THR	2.6
28	G1	20	TYR	2.6
33	A6	15	SER	2.6
54	DU	35	ARG	2.6
43	HJ	51	VAL	2.6
44	HK	71	ALA	2.6
47	FN	30	ILE	2.6
3	AA	2134	A	2.6
23	EW	45	HIS	2.6
38	HE	93	ARG	2.6
40	BG	131	LYS	2.6
3	AA	2144	G	2.6
35	BA	79	G	2.6
35	BA	86	G	2.6
35	BA	83	C	2.6
6	GF	24	VAL	2.6
10	EJ	64	VAL	2.6
33	A6	11	VAL	2.6
44	DK	129	VAL	2.6
5	GE	104	ALA	2.6
12	GL	57	LEU	2.6
55	FV	319	ALA	2.6
35	DA	723	U	2.6
55	HV	545	ILE	2.6
54	BU	47	ARG	2.6
32	E5	36	ASP	2.6
23	GW	17	ALA	2.5
30	E3	64	ALA	2.5
52	HS	31	LEU	2.6
3	CA	1731	G	2.5
35	HA	1511	G	2.5
6	GF	174	PHE	2.5
44	DK	52	PHE	2.5
9	GI	9	LYS	2.5
44	HK	91	PRO	2.5
46	FM	12	HIS	2.5
37	HD	66	GLY	2.5

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Mol	Chain	Res	Type	RSRZ
45	HL	92	GLY	2.5
32	A5	50	VAL	2.5
32	E5	33	VAL	2.5
33	A6	20	VAL	2.5
40	DG	32	VAL	2.5
55	HV	290	VAL	2.5
34	DB	128	LEU	2.5
10	GJ	42	ALA	2.5
27	E0	26	SER	2.5
32	E5	24	SER	2.5
47	HN	8	ALA	2.5
47	HN	58	SER	2.5
52	HS	75	ALA	2.5
3	CA	2143	C	2.5
35	HA	1230	C	2.5
3	AA	2140	G	2.5
3	CA	2186	G	2.5
3	GA	102	U	2.5
40	DG	5	ARG	2.5
23	GW	45	HIS	2.5
44	HK	43	GLY	2.5
9	GI	78	LEU	2.5
13	GM	67	VAL	2.5
32	E5	18	VAL	2.5
39	HF	10	VAL	2.5
42	DI	94	LEU	2.5
42	FI	43	THR	2.5
44	HK	30	THR	2.5
47	HN	20	TYR	2.5
6	GF	42	ALA	2.5
6	GF	140	ILE	2.5
52	FS	3	ARG	2.5
32	A5	66	GLY	2.5
35	DA	83	C	2.5
9	GI	69	VAL	2.5
44	HK	65	VAL	2.5
4	CD	151	THR	2.5
17	GQ	1	ALA	2.5
34	FB	135	MET	2.5
40	HG	39	ALA	2.5
51	BR	64	TYR	2.5
52	HS	22	ALA	2.5

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Mol	Chain	Res	Type	RSRZ
3	CA	2602	A	2.5
35	HA	1319	A	2.5
54	HU	35	ARG	2.5
6	GF	175	PRO	2.5
54	BU	44	GLU	2.5
9	GI	10	LEU	2.5
40	HG	120	LEU	2.5
55	HV	586	VAL	2.5
9	EI	67	THR	2.5
9	GI	82	ALA	2.5
18	GR	41	ILE	2.5
32	A5	111	ALA	2.5
32	C5	25	ALA	2.5
32	E5	82	ILE	2.5
55	BV	699	ILE	2.5
42	BI	90	TYR	2.5
29	A2	46	LYS	2.4
37	HD	151	LYS	2.4
42	HI	120	LYS	2.4
6	GF	45	ASP	2.4
6	GF	64	PRO	2.4
3	CA	2147	A	2.4
35	DA	80	A	2.4
9	EI	90	GLY	2.4
11	EK	68	GLY	2.4
40	HG	66	LEU	2.4
41	DH	3	MET	2.4
21	CU	102	ILE	2.4
23	EW	35	ILE	2.4
30	G3	36	ALA	2.4
37	FD	27	ALA	2.4
6	GF	172	PHE	2.4
45	DL	44	LYS	2.4
47	HN	73	PHE	2.4
3	EA	2104	C	2.4
3	GA	2143	C	2.4
18	GR	83	TYR	2.4
32	C5	85	SER	2.4
46	HM	30	SER	2.4
35	HA	941	G	2.4
2	AC	240	GLY	2.4
6	GF	48	LEU	2.4

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Mol	Chain	Res	Type	RSRZ
34	BB	42	LEU	2.4
10	GJ	64	VAL	2.4
43	HJ	77	VAL	2.4
51	BR	20	GLU	2.4
3	EA	2135	A	2.4
3	GA	1175	A	2.4
42	DI	21	ILE	2.4
43	HJ	67	ILE	2.4
46	HM	5	ALA	2.4
25	GY	16	THR	2.4
28	G1	16	THR	2.4
40	HG	49	THR	2.4
32	A5	56	ARG	2.4
42	BI	130	ARG	2.4
47	FN	24	ARG	2.4
50	HQ	27	ARG	2.4
3	EA	140	C	2.4
47	HN	55	SER	2.4
52	HS	38	SER	2.4
2	AC	232	GLY	2.4
6	GF	96	TRP	2.4
48	HO	3	LEU	2.4
30	G3	25	HIS	2.4
8	CH	9	VAL	2.4
32	A5	14	GLU	2.4
3	GA	2152	G	2.4
27	A0	54	ILE	2.4
35	HA	973	G	2.4
35	HA	1361	G	2.4
40	HG	114	LYS	2.4
32	C5	110	ALA	2.4
40	HG	117	ALA	2.4
3	GA	1095	A	2.4
35	HA	960	U	2.4
38	BE	31	PHE	2.4
23	EW	75	ASN	2.4
23	AW	42	THR	2.4
46	HM	102	THR	2.4
50	DQ	70	THR	2.4
17	CQ	63	ARG	2.4
45	DL	24	LEU	2.4
3	CA	1730	C	2.4

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Mol	Chain	Res	Type	RSRZ
30	G3	19	GLY	2.4
9	AI	3	LYS	2.4
15	GO	87	ILE	2.4
37	DD	151	LYS	2.4
42	HI	114	LYS	2.4
21	GU	79	ALA	2.4
32	C5	141	ALA	2.4
40	HG	62	PHE	2.4
47	HN	36	ALA	2.4
55	HV	593	PHE	2.4
46	HM	105	ASN	2.4
50	HQ	53	CYS	2.4
3	CA	2141	G	2.4
20	ET	7	LEU	2.3
42	DI	35	LEU	2.3
47	HN	27	LEU	2.3
52	HS	66	MET	2.3
2	GC	11	GLY	2.3
23	EW	72	GLY	2.3
8	GH	19	VAL	2.3
43	FJ	74	VAL	2.3
23	EW	36	ILE	2.3
42	HI	42	GLU	2.3
51	FR	20	GLU	2.3
52	HS	49	ILE	2.3
19	CS	43	ALA	2.3
19	CS	44	ALA	2.3
32	C5	127	ALA	2.3
52	HS	10	PHE	2.3
45	DL	14	ARG	2.3
3	AA	2182	U	2.3
3	GA	2137	U	2.3
5	GE	143	LEU	2.3
6	GF	21	TYR	2.3
20	AT	24	MET	2.3
34	DB	135	MET	2.3
35	DA	1534	A	2.3
3	GA	2157	G	2.3
35	HA	1305	G	2.3
13	GM	15	GLY	2.3
47	HN	3	LYS	2.3
47	HN	7	LYS	2.3

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Mol	Chain	Res	Type	RSRZ
11	EK	35	VAL	2.3
23	GW	50	VAL	2.3
46	HM	65	VAL	2.3
37	HD	194	ASP	2.3
40	HG	54	SER	2.3
52	HS	12	ASP	2.3
37	HD	70	ARG	2.3
40	FG	109	ARG	2.3
3	EA	2150	C	2.3
35	HA	699	C	2.3
5	GE	105	LEU	2.3
55	HV	106	LEU	2.3
47	FN	52	PRO	2.3
54	FU	38	TYR	2.3
23	GW	74	LYS	2.3
3	EA	2134	A	2.3
3	EA	2154	A	2.3
47	HN	45	VAL	2.3
9	GI	34	ILE	2.3
21	GU	71	ILE	2.3
12	GL	50	PHE	2.3
32	E5	110	ALA	2.3
47	BN	24	ARG	2.3
46	HM	34	LEU	2.3
47	HN	46	LEU	2.3
4	GD	151	THR	2.3
45	FL	15	LYS	2.3
3	AA	546	U	2.3
3	AA	2180	U	2.3
9	EI	32	VAL	2.3
9	GI	118	GLY	2.3
24	GX	66	VAL	2.3
40	HG	29	ILE	2.3
42	HI	47	VAL	2.3
55	FV	302	GLY	2.3
32	E5	123	ILE	2.3
51	HR	26	ILE	2.3
3	GA	1189	A	2.3
47	DN	21	PHE	2.3
4	ED	119	ALA	2.3
4	ED	209	ALA	2.3
32	C5	28	ALA	2.3

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Mol	Chain	Res	Type	RSRZ
43	DJ	45	ARG	2.3
47	HN	59	ARG	2.3
12	CL	68	SER	2.3
32	C5	126	LEU	2.3
46	HM	83	LEU	2.3
46	HM	89	LEU	2.3
43	HJ	59	LYS	2.3
43	HJ	79	PRO	2.3
50	HQ	32	PRO	2.3
52	HS	59	PRO	2.3
23	AW	75	ASN	2.2
3	CA	2150	C	2.2
6	GF	12	VAL	2.2
18	AR	50	GLY	2.2
20	GT	16	VAL	2.2
23	AW	51	GLY	2.2
32	A5	27	VAL	2.2
33	A6	19	VAL	2.2
46	HM	14	HIS	2.2
46	HM	22	ILE	2.2
25	AY	5	GLU	2.2
26	GZ	49	ALA	2.2
45	HL	14	ARG	2.2
49	FP	7	ALA	2.2
32	A5	126	LEU	2.2
46	HM	11	ASP	2.2
47	HN	47	LYS	2.2
32	A5	89	PRO	2.2
38	DE	103	THR	2.2
45	HL	3	THR	2.2
46	HM	20	THR	2.2
9	AI	8	VAL	2.2
9	GI	4	VAL	2.2
9	GI	58	ILE	2.2
9	GI	130	GLY	2.2
51	HR	39	ILE	2.2
32	C5	88	HIS	2.2
40	FG	85	TYR	2.2
42	DI	38	TYR	2.2
3	EA	2151	U	2.2
3	GA	234	U	2.2
48	HO	43	PHE	2.2

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Mol	Chain	Res	Type	RSRZ
35	HA	1228	C	2.2
9	GI	27	LEU	2.2
52	DS	5	LEU	2.2
7	GG	165	ASP	2.2
9	GI	96	LYS	2.2
17	EQ	4	LYS	2.2
35	HA	1311	A	2.2
34	HB	129	THR	2.2
38	HE	103	THR	2.2
40	DG	42	ILE	2.2
47	BN	30	ILE	2.2
21	GU	89	GLY	2.2
6	GF	62	GLN	2.2
53	HT	68	HIS	2.2
20	CT	56	GLU	2.2
32	C5	14	GLU	2.2
35	HA	945	G	2.2
45	HL	25	GLU	2.2
37	DD	191	LEU	2.2
37	HD	117	LEU	2.2
41	FH	83	LEU	2.2
8	CH	8	LYS	2.2
45	BL	44	LYS	2.2
9	AI	89	SER	2.2
6	GF	110	ILE	2.2
40	HG	133	THR	2.2
42	DI	116	VAL	2.2
44	HK	97	ILE	2.2
39	HF	11	HIS	2.2
23	GW	25	PHE	2.2
40	BG	85	TYR	2.2
42	FI	127	PHE	2.2
42	FI	130	ARG	2.2
40	HG	127	ALA	2.2
40	HG	134	ALA	2.2
49	FP	65	ALA	2.2
54	HU	26	ALA	2.2
3	EA	139	U	2.2
3	GA	846	U	2.2
9	GI	2	LYS	2.2
22	GV	14	LYS	2.2
43	DJ	52	LEU	2.2

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Mol	Chain	Res	Type	RSRZ
43	FJ	59	LYS	2.2
47	HN	28	LYS	2.2
55	DV	548	GLU	2.2
52	HS	34	TRP	2.2
3	CA	2157	G	2.2
23	GW	14	ASP	2.2
35	HA	1533	C	2.2
41	FH	2	SER	2.2
48	HO	12	VAL	2.2
28	G1	17	GLY	2.1
34	FB	12	GLY	2.1
2	GC	250	GLN	2.1
23	AW	13	ARG	2.1
32	A5	125	ARG	2.1
43	BJ	45	ARG	2.1
44	DK	105	PHE	2.1
9	EI	7	TYR	2.1
7	EG	47	ASN	2.1
8	CH	15	LEU	2.1
9	GI	103	ALA	2.1
17	CQ	1	ALA	2.1
32	C5	75	ALA	2.1
32	E5	81	LEU	2.1
2	EC	34	GLU	2.1
49	DP	47	GLU	2.1
35	HA	1301	U	2.1
9	EI	25	PRO	2.1
46	HM	73	ILE	2.1
53	HT	4	ILE	2.1
42	DI	111	VAL	2.1
46	HM	64	VAL	2.1
32	E5	30	SER	2.1
44	DK	19	GLY	2.1
3	CA	2153	C	2.1
16	CP	50	ARG	2.1
23	GW	13	ARG	2.1
32	E5	88	HIS	2.1
35	DA	87	C	2.1
35	FA	844	G	2.1
35	HA	1222	G	2.1
35	HA	1317	C	2.1
35	HA	1322	C	2.1

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Mol	Chain	Res	Type	RSRZ
35	HA	1323	G	2.1
18	ER	6	GLN	2.1
40	HG	107	ALA	2.1
42	HI	44	ALA	2.1
46	HM	40	ALA	2.1
3	EA	138	U	2.1
42	DI	51	PRO	2.1
52	HS	42	PRO	2.1
26	GZ	6	ILE	2.1
34	HB	40	ILE	2.1
47	HN	30	ILE	2.1
42	DI	104	VAL	2.1
44	DK	65	VAL	2.1
44	HK	16	VAL	2.1
20	CT	24	MET	2.1
32	E5	66	GLY	2.1
40	HG	5	ARG	2.1
44	HK	127	ARG	2.1
52	HS	8	GLY	2.1
54	DU	47	ARG	2.1
42	HI	20	PHE	2.1
48	DO	43	PHE	2.1
23	AW	74	LYS	2.1
46	HM	27	LYS	2.1
49	FP	12	LYS	2.1
43	HJ	73	LEU	2.1
46	HM	69	LEU	2.1
3	EA	1172	C	2.1
9	GI	6	ALA	2.1
49	FP	82	ALA	2.1
34	HB	21	TYR	2.1
3	AA	2110	G	2.1
35	BA	82	G	2.1
21	EU	87	GLU	2.1
34	FB	50	ASN	2.1
3	AA	613	A	2.1
39	FF	51	ILE	2.1
43	HJ	25	ILE	2.1
40	FG	80	VAL	2.1
9	AI	9	LYS	2.1
10	CJ	111	LYS	2.1
40	HG	35	LYS	2.1

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Mol	Chain	Res	Type	RSRZ
29	C2	10	LEU	2.1
47	FN	27	LEU	2.1
5	CE	86	ALA	2.1
9	EI	1	ALA	2.1
10	AJ	42	ALA	2.1
23	GW	32	ALA	2.1
45	BL	124	ALA	2.1
35	HA	1218	C	2.1
35	HA	1325	C	2.1
55	BV	548	GLU	2.1
5	GE	89	PRO	2.1
32	C5	89	PRO	2.1
6	GF	43	ILE	2.1
55	FV	699	ILE	2.1
37	HD	25	VAL	2.1
40	DG	43	VAL	2.1
45	DL	16	VAL	2.1
54	DU	28	VAL	2.1
33	A6	17	MET	2.1
3	EA	2182	U	2.1
35	HA	1354	U	2.1
23	EW	18	LYS	2.1
44	HK	49	GLY	2.1
49	BP	80	LYS	2.1
54	HU	37	PHE	2.1
54	HU	43	THR	2.0
45	FL	17	ALA	2.0
32	A5	123	ILE	2.0
46	HM	39	ILE	2.0
19	CS	11	ARG	2.0
37	DD	115	ARG	2.0
30	G3	14	LYS	2.0
44	HK	125	LYS	2.0
3	EA	1175	A	2.0
35	FA	1534	A	2.0
35	HA	1306	A	2.0
52	HS	72	GLY	2.0
3	AA	2109	U	2.0
3	CA	2180	U	2.0
9	AI	137	LEU	2.0
35	HA	1364	U	2.0
3	AA	2102	G	2.0

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Mol	Chain	Res	Type	RSRZ
3	CA	2148	G	2.0
3	EA	2110	G	2.0
10	CJ	42	ALA	2.0
12	GL	108	ALA	2.0
13	AM	60	GLN	2.0
42	HI	84	THR	2.0
15	GO	50	ALA	2.0
39	DF	99	ALA	2.0
45	HL	17	ALA	2.0
46	DM	106	ALA	2.0
54	DU	52	ALA	2.0
55	HV	506	ALA	2.0
51	HR	51	TYR	2.0
9	CI	92	PRO	2.0
52	HS	9	PRO	2.0
54	DU	24	GLU	2.0
55	DV	538	ASN	2.0
9	CI	3	LYS	2.0
17	AQ	87	VAL	2.0
17	CQ	87	VAL	2.0
53	FT	24	ARG	2.0
55	HV	377	VAL	2.0
6	GF	76	PHE	2.0
23	AW	33	GLY	2.0
30	G3	13	PHE	2.0
40	FG	66	LEU	2.0
42	DI	87	LEU	2.0
34	FB	17	HIS	2.0

6.2 Non-standard residues in protein, DNA, RNA chains (i)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	5OH	HW	6	12/13	0.71	0.13	48,54,58,60	0
56	KBE	DW	1	9/10	0.74	0.14	33,35,41,48	0
56	DPP	HW	2	6/7	0.81	0.10	30,41,49,53	0
56	KBE	HW	1	9/10	0.84	0.11	27,45,52,55	0
56	UAL	HW	5	9/10	0.85	0.07	36,48,56,60	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
56	UAL	BW	5	9/10	0.87	0.10	16,20,27,32	0
56	KBE	FW	1	9/10	0.91	0.07	17,21,37,51	0
56	UAL	DW	5	9/10	0.91	0.07	17,27,36,48	0
56	DPP	DW	2	6/7	0.91	0.06	25,37,38,39	0
56	5OH	DW	6	12/13	0.92	0.07	22,29,35,37	0
56	KBE	BW	1	9/10	0.93	0.10	4,9,22,23	0
56	5OH	BW	6	12/13	0.93	0.07	11,17,21,21	0
56	DPP	BW	2	6/7	0.94	0.08	6,12,15,22	0
56	DPP	FW	2	6/7	0.96	0.06	18,22,27,32	0
56	UAL	FW	5	9/10	0.96	0.04	15,18,29,38	0
56	5OH	FW	6	12/13	0.96	0.05	10,24,29,30	0

6.3 Carbohydrates (i)

There are no monosaccharides in this entry.

6.4 Ligands (i)

In the following table, the Atoms column lists the number of modelled atoms in the group and the number defined in the chemical component dictionary. The B-factors column lists the minimum, median, 95^{th} percentile and maximum values of B factors of atoms in the group. The column labelled 'Q< 0.9' lists the number of atoms with occupancy less than 0.9.

Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	HA	1624	1/1	0.60	0.13	38,38,38,38	0
57	MG	DA	1629	1/1	0.62	0.15	43,43,43,43	0
57	MG	EA	3055	1/1	0.68	0.23	30,30,30,30	0
57	MG	GA	3069	1/1	0.71	0.32	70,70,70,70	0
57	MG	CA	3069	1/1	0.75	0.30	61,61,61,61	0
57	MG	AA	3069	1/1	0.76	0.21	44,44,44,44	0
57	MG	HA	1608	1/1	0.76	0.27	47,47,47,47	0
57	MG	GB	1204	1/1	0.76	0.14	37,37,37,37	0
57	MG	HA	1626	1/1	0.77	0.14	32,32,32,32	0
57	MG	FA	1635	1/1	0.78	0.25	41,41,41,41	0
57	MG	EA	3083	1/1	0.79	0.10	35,35,35,35	0
57	MG	CB	1201	1/1	0.80	0.14	28,28,28,28	0
57	MG	EA	3050	1/1	0.81	0.10	23,23,23,23	0
57	MG	EA	3076	1/1	0.82	0.07	6,6,6,6	0
57	MG	HA	1616	1/1	0.82	0.22	40,40,40,40	0
57	MG	GA	3076	1/1	0.82	0.09	34,34,34,34	0
57	MG	GA	3079	1/1	0.82	0.12	52,52,52,52	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	AA	3078	1/1	0.83	0.26	13,13,13,13	0
57	MG	GB	1201	1/1	0.83	0.07	62,62,62,62	0
57	MG	FA	1627	1/1	0.84	0.18	53,53,53,53	0
57	MG	DA	1619	1/1	0.84	0.13	34,34,34,34	0
57	MG	HA	1611	1/1	0.84	0.20	26,26,26,26	0
57	MG	GA	3005	1/1	0.85	0.11	42,42,42,42	0
57	MG	GA	3009	1/1	0.85	0.20	35,35,35,35	0
57	MG	HE	201	1/1	0.85	0.09	55,55,55,55	0
57	MG	GA	3050	1/1	0.86	0.25	26,26,26,26	0
57	MG	GL	201	1/1	0.86	0.06	47,47,47,47	0
57	MG	GB	1202	1/1	0.87	0.12	64,64,64,64	0
57	MG	HA	1615	1/1	0.87	0.13	36,36,36,36	0
57	MG	FA	1636	1/1	0.87	0.07	35,35,35,35	0
57	MG	AA	3016	1/1	0.88	0.13	11,11,11,11	0
57	MG	AA	3090	1/1	0.88	0.04	32,32,32,32	0
57	MG	GA	3136	1/1	0.88	0.16	27,27,27,27	0
57	MG	GA	3057	1/1	0.88	0.24	28,28,28,28	0
57	MG	HA	1601	1/1	0.88	0.16	27,27,27,27	0
57	MG	BE	201	1/1	0.88	0.15	31,31,31,31	0
57	MG	FA	1604	1/1	0.89	0.17	34,34,34,34	0
57	MG	DA	1626	1/1	0.89	0.29	44,44,44,44	0
57	MG	DA	1602	1/1	0.89	0.15	28,28,28,28	0
57	MG	AA	3060	1/1	0.89	0.38	34,34,34,34	0
57	MG	HA	1625	1/1	0.89	0.06	44,44,44,44	0
57	MG	EA	3091	1/1	0.89	0.08	40,40,40,40	0
57	MG	EA	3097	1/1	0.89	0.07	19,19,19,19	0
57	MG	FA	1610	1/1	0.90	0.28	33,33,33,33	0
57	MG	GA	3095	1/1	0.90	0.07	43,43,43,43	0
57	MG	GA	3135	1/1	0.90	0.28	28,28,28,28	0
57	MG	CA	3091	1/1	0.90	0.06	38,38,38,38	0
57	MG	BA	1637	1/1	0.90	0.30	15,15,15,15	0
57	MG	AA	3006	1/1	0.90	0.27	32,32,32,32	0
57	MG	HA	1634	1/1	0.90	0.05	35,35,35,35	0
57	MG	HA	1637	1/1	0.90	0.09	51,51,51,51	0
57	MG	GA	3008	1/1	0.90	0.13	24,24,24,24	0
57	MG	HA	1627	1/1	0.91	0.20	41,41,41,41	0
57	MG	HA	1628	1/1	0.91	0.05	29,29,29,29	0
57	MG	GA	3024	1/1	0.91	0.17	14,14,14,14	0
57	MG	GA	3004	1/1	0.91	0.08	25,25,25,25	0
57	MG	HA	1609	1/1	0.91	0.10	23,23,23,23	0
57	MG	FA	1618	1/1	0.92	0.09	21,21,21,21	0
57	MG	BA	1607	1/1	0.92	0.12	34,34,34,34	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	GA	3006	1/1	0.92	0.14	29,29,29,29	0
57	MG	AA	3012	1/1	0.92	0.32	32,32,32,32	0
57	MG	GA	3133	1/1	0.92	0.27	15,15,15,15	0
57	MG	EA	3110	1/1	0.92	0.17	12,12,12,12	0
57	MG	EA	3124	1/1	0.92	0.23	4,4,4,4	0
57	MG	GA	3032	1/1	0.92	0.19	22,22,22,22	0
57	MG	CA	3025	1/1	0.92	0.21	24,24,24,24	0
57	MG	DA	1636	1/1	0.92	0.12	34,34,34,34	0
57	MG	GA	3066	1/1	0.92	0.13	12,12,12,12	0
57	MG	HK	201	1/1	0.92	0.15	28,28,28,28	0
57	MG	CA	3098	1/1	0.93	0.06	29,29,29,29	0
57	MG	GA	3083	1/1	0.93	0.06	26,26,26,26	0
57	MG	CA	3110	1/1	0.93	0.20	23,23,23,23	0
57	MG	GA	3109	1/1	0.93	0.09	35,35,35,35	0
57	MG	GA	3113	1/1	0.93	0.14	32,32,32,32	0
57	MG	GA	3114	1/1	0.93	0.14	27,27,27,27	0
57	MG	GA	3131	1/1	0.93	0.06	43,43,43,43	0
57	MG	CA	3014	1/1	0.93	0.19	13,13,13,13	0
57	MG	CA	3019	1/1	0.93	0.08	27,27,27,27	0
57	MG	BA	1615	1/1	0.93	0.05	25,25,25,25	0
57	MG	EA	3125	1/1	0.93	0.16	18,18,18,18	0
57	MG	EA	3136	1/1	0.93	0.26	15,15,15,15	0
57	MG	EA	3137	1/1	0.93	0.19	11,11,11,11	0
57	MG	GA	3018	1/1	0.93	0.09	21,21,21,21	0
57	MG	DA	1628	1/1	0.93	0.14	44,44,44,44	0
57	MG	AA	3114	1/1	0.93	0.11	10,10,10,10	0
57	MG	GA	3037	1/1	0.93	0.18	18,18,18,18	0
57	MG	GA	3045	1/1	0.93	0.15	17,17,17,17	0
57	MG	CA	3005	1/1	0.93	0.21	35,35,35,35	0
57	MG	CA	3092	1/1	0.93	0.13	58,58,58,58	0
57	MG	FA	1629	1/1	0.93	0.09	30,30,30,30	0
57	MG	GA	3068	1/1	0.93	0.28	30,30,30,30	0
57	MG	CA	3094	1/1	0.93	0.06	37,37,37,37	0
57	MG	CA	3095	1/1	0.93	0.07	14,14,14,14	0
57	MG	GA	3077	1/1	0.93	0.06	55,55,55,55	0
57	MG	GA	3078	1/1	0.93	0.16	35,35,35,35	0
57	MG	GA	3127	1/1	0.94	0.09	18,18,18,18	0
57	MG	GA	3128	1/1	0.94	0.05	18,18,18,18	0
57	MG	CA	3015	1/1	0.94	0.15	25,25,25,25	0
57	MG	GA	3035	1/1	0.94	0.12	24,24,24,24	0
57	MG	EA	3057	1/1	0.94	0.11	18,18,18,18	0
57	MG	DA	1616	1/1	0.94	0.20	28,28,28,28	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	GA	3046	1/1	0.94	0.09	35,35,35,35	0
57	MG	FA	1630	1/1	0.94	0.13	44,44,44,44	0
57	MG	HA	1606	1/1	0.94	0.12	29,29,29,29	0
57	MG	DA	1617	1/1	0.94	0.06	39,39,39,39	0
57	MG	EA	3088	1/1	0.94	0.07	19,19,19,19	0
57	MG	HA	1610	1/1	0.94	0.05	31,31,31,31	0
57	MG	BA	1636	1/1	0.94	0.21	24,24,24,24	0
57	MG	HA	1613	1/1	0.94	0.21	32,32,32,32	0
57	MG	EA	3094	1/1	0.94	0.17	33,33,33,33	0
57	MG	DA	1623	1/1	0.94	0.07	42,42,42,42	0
57	MG	HA	1617	1/1	0.94	0.05	49,49,49,49	0
57	MG	HA	1618	1/1	0.94	0.13	35,35,35,35	0
57	MG	DA	1624	1/1	0.94	0.14	18,18,18,18	0
57	MG	AA	3097	1/1	0.94	0.07	34,34,34,34	0
57	MG	AB	1201	1/1	0.94	0.07	34,34,34,34	0
57	MG	CA	3077	1/1	0.94	0.15	37,37,37,37	0
57	MG	GA	3088	1/1	0.94	0.05	37,37,37,37	0
57	MG	CA	3090	1/1	0.94	0.11	19,19,19,19	0
57	MG	EA	3011	1/1	0.94	0.39	24,24,24,24	0
57	MG	CA	3135	1/1	0.94	0.20	8,8,8,8	0
57	MG	GA	3025	1/1	0.94	0.15	25,25,25,25	0
57	MG	GA	3091	1/1	0.95	0.09	28,28,28,28	0
57	MG	CA	3079	1/1	0.95	0.13	27,27,27,27	0
57	MG	GA	3100	1/1	0.95	0.15	12,12,12,12	0
57	MG	GA	3104	1/1	0.95	0.17	12,12,12,12	0
57	MG	DA	1639	1/1	0.95	0.04	30,30,30,30	0
57	MG	EA	3005	1/1	0.95	0.19	16,16,16,16	0
57	MG	CA	3088	1/1	0.95	0.05	23,23,23,23	0
57	MG	EA	3047	1/1	0.95	0.12	25,25,25,25	0
57	MG	BA	1627	1/1	0.95	0.15	19,19,19,19	0
57	MG	AA	3070	1/1	0.95	0.21	6,6,6,6	0
57	MG	AA	3100	1/1	0.95	0.19	1,1,1,1	0
57	MG	AA	3110	1/1	0.95	0.10	9,9,9,9	0
57	MG	AA	3001	1/1	0.95	0.27	20,20,20,20	0
57	MG	AA	3118	1/1	0.95	0.06	14,14,14,14	0
57	MG	CA	3009	1/1	0.95	0.13	10,10,10,10	0
57	MG	AE	301	1/1	0.95	0.27	21,21,21,21	0
57	MG	HA	1607	1/1	0.95	0.04	33,33,33,33	0
57	MG	CA	3136	1/1	0.95	0.23	22,22,22,22	0
57	MG	BA	1602	1/1	0.95	0.19	38,38,38,38	0
57	MG	DA	1611	1/1	0.95	0.16	35,35,35,35	0
57	MG	DA	1612	1/1	0.95	0.14	33,33,33,33	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	HA	1612	1/1	0.95	0.09	20,20,20,20	0
57	MG	GA	3047	1/1	0.95	0.14	38,38,38,38	0
57	MG	DA	1614	1/1	0.95	0.06	46,46,46,46	0
57	MG	CA	3016	1/1	0.95	0.12	11,11,11,11	0
57	MG	GA	3062	1/1	0.95	0.17	19,19,19,19	0
57	MG	AA	3021	1/1	0.95	0.14	6,6,6,6	0
57	MG	HA	1622	1/1	0.95	0.23	30,30,30,30	0
57	MG	GA	3067	1/1	0.95	0.19	29,29,29,29	0
57	MG	BA	1610	1/1	0.95	0.13	41,41,41,41	0
57	MG	FA	1617	1/1	0.95	0.08	40,40,40,40	0
57	MG	CA	3055	1/1	0.95	0.18	19,19,19,19	0
57	MG	FA	1620	1/1	0.95	0.06	41,41,41,41	0
57	MG	AA	3093	1/1	0.95	0.14	34,34,34,34	0
57	MG	CA	3074	1/1	0.95	0.11	13,13,13,13	0
57	MG	HA	1641	1/1	0.95	0.16	30,30,30,30	0
57	MG	CA	3076	1/1	0.95	0.04	16,16,16,16	0
57	MG	BA	1620	1/1	0.95	0.18	15,15,15,15	0
57	MG	GA	3087	1/1	0.96	0.12	23,23,23,23	0
57	MG	DA	1603	1/1	0.96	0.10	20,20,20,20	0
57	MG	DA	1604	1/1	0.96	0.12	18,18,18,18	0
57	MG	GA	3092	1/1	0.96	0.14	16,16,16,16	0
57	MG	CA	3011	1/1	0.96	0.15	31,31,31,31	0
57	MG	GA	3099	1/1	0.96	0.06	33,33,33,33	0
57	MG	GA	3003	1/1	0.96	0.10	26,26,26,26	0
57	MG	EA	3061	1/1	0.96	0.06	5,5,5,5	0
57	MG	EA	3069	1/1	0.96	0.14	25,25,25,25	0
57	MG	CA	3078	1/1	0.96	0.07	34,34,34,34	0
57	MG	AA	3019	1/1	0.96	0.13	15,15,15,15	0
57	MG	GA	3115	1/1	0.96	0.14	20,20,20,20	0
57	MG	GA	3116	1/1	0.96	0.27	22,22,22,22	0
57	MG	GA	3119	1/1	0.96	0.13	18,18,18,18	0
57	MG	GA	3121	1/1	0.96	0.05	16,16,16,16	0
57	MG	BA	1604	1/1	0.96	0.10	17,17,17,17	0
57	MG	GA	3011	1/1	0.96	0.06	46,46,46,46	0
57	MG	GA	3129	1/1	0.96	0.20	29,29,29,29	0
57	MG	GA	3013	1/1	0.96	0.06	18,18,18,18	0
57	MG	BA	1605	1/1	0.96	0.09	28,28,28,28	0
57	MG	AA	3095	1/1	0.96	0.15	4,4,4,4	0
57	MG	AA	3084	1/1	0.96	0.07	2,2,2,2	0
57	MG	GC	302	1/1	0.96	0.06	22,22,22,22	0
57	MG	GA	3030	1/1	0.96	0.14	15,15,15,15	0
57	MG	GA	3031	1/1	0.96	0.06	15,15,15,15	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	HA	1602	1/1	0.96	0.09	26,26,26,26	0
57	MG	CA	3093	1/1	0.96	0.04	40,40,40,40	0
57	MG	EA	3122	1/1	0.96	0.16	4,4,4,4	0
57	MG	CA	3026	1/1	0.96	0.08	14,14,14,14	0
57	MG	GA	3039	1/1	0.96	0.20	28,28,28,28	0
57	MG	GA	3042	1/1	0.96	0.18	20,20,20,20	0
57	MG	GA	3043	1/1	0.96	0.08	20,20,20,20	0
57	MG	GA	3044	1/1	0.96	0.09	21,21,21,21	0
57	MG	CB	1202	1/1	0.96	0.08	44,44,44,44	0
57	MG	CA	3056	1/1	0.96	0.12	27,27,27,27	0
57	MG	DA	1631	1/1	0.96	0.06	13,13,13,13	0
57	MG	EB	1201	1/1	0.96	0.08	30,30,30,30	0
57	MG	DA	1634	1/1	0.96	0.05	34,34,34,34	0
57	MG	HA	1619	1/1	0.96	0.13	19,19,19,19	0
57	MG	AA	3124	1/1	0.96	0.13	4,4,4,4	0
57	MG	HA	1623	1/1	0.96	0.16	36,36,36,36	0
57	MG	CA	3115	1/1	0.96	0.14	51,51,51,51	0
57	MG	DA	1640	1/1	0.96	0.07	24,24,24,24	0
57	MG	CA	3071	1/1	0.96	0.12	10,10,10,10	0
57	MG	FA	1621	1/1	0.96	0.12	13,13,13,13	0
57	MG	CA	3006	1/1	0.96	0.05	30,30,30,30	0
57	MG	HA	1633	1/1	0.96	0.10	46,46,46,46	0
57	MG	EA	3015	1/1	0.96	0.40	2,2,2,2	0
57	MG	EA	3042	1/1	0.96	0.20	13,13,13,13	0
57	MG	EA	3045	1/1	0.96	0.11	9,9,9,9	0
57	MG	AA	3076	1/1	0.96	0.12	13,13,13,13	0
57	MG	GA	3084	1/1	0.96	0.25	30,30,30,30	0
59	GCP	HV	801	32/32	0.96	0.05	18,36,48,55	0
57	MG	AA	3109	1/1	0.97	0.04	20,20,20,20	0
57	MG	CA	3116	1/1	0.97	0.11	7,7,7,7	0
57	MG	CA	3117	1/1	0.97	0.05	7,7,7,7	0
57	MG	EA	3070	1/1	0.97	0.10	23,23,23,23	0
57	MG	CA	3120	1/1	0.97	0.13	11,11,11,11	0
57	MG	CA	3121	1/1	0.97	0.14	8,8,8,8	0
57	MG	GA	3051	1/1	0.97	0.21	20,20,20,20	0
57	MG	GA	3055	1/1	0.97	0.08	21,21,21,21	0
57	MG	EA	3087	1/1	0.97	0.11	21,21,21,21	0
57	MG	GA	3059	1/1	0.97	0.07	25,25,25,25	0
57	MG	CA	3124	1/1	0.97	0.08	26,26,26,26	0
57	MG	CA	3131	1/1	0.97	0.11	11,11,11,11	0
57	MG	CA	3134	1/1	0.97	0.15	21,21,21,21	0
57	MG	EA	3095	1/1	0.97	0.12	6,6,6,6	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	CA	3021	1/1	0.97	0.08	5,5,5,5	0
57	MG	EA	3109	1/1	0.97	0.06	19,19,19,19	0
57	MG	CA	3022	1/1	0.97	0.06	17,17,17,17	0
57	MG	EA	3113	1/1	0.97	0.13	7,7,7,7	0
57	MG	EA	3114	1/1	0.97	0.11	17,17,17,17	0
57	MG	EA	3115	1/1	0.97	0.13	6,6,6,6	0
57	MG	EA	3121	1/1	0.97	0.17	5,5,5,5	0
57	MG	GA	3086	1/1	0.97	0.05	24,24,24,24	0
57	MG	DA	1601	1/1	0.97	0.16	26,26,26,26	0
57	MG	CA	3023	1/1	0.97	0.17	5,5,5,5	0
57	MG	AA	3082	1/1	0.97	0.09	22,22,22,22	0
57	MG	EA	3126	1/1	0.97	0.06	6,6,6,6	0
57	MG	GA	3093	1/1	0.97	0.04	21,21,21,21	0
57	MG	BA	1626	1/1	0.97	0.10	5,5,5,5	0
57	MG	DA	1606	1/1	0.97	0.12	15,15,15,15	0
57	MG	DA	1607	1/1	0.97	0.09	16,16,16,16	0
57	MG	EE	301	1/1	0.97	0.10	19,19,19,19	0
57	MG	GA	3108	1/1	0.97	0.06	38,38,38,38	0
57	MG	DA	1609	1/1	0.97	0.06	13,13,13,13	0
57	MG	GA	3110	1/1	0.97	0.09	11,11,11,11	0
57	MG	CA	3037	1/1	0.97	0.13	6,6,6,6	0
57	MG	FA	1611	1/1	0.97	0.13	7,7,7,7	0
57	MG	CA	3044	1/1	0.97	0.09	28,28,28,28	0
57	MG	CA	3049	1/1	0.97	0.11	7,7,7,7	0
57	MG	DA	1615	1/1	0.97	0.15	45,45,45,45	0
57	MG	AA	3083	1/1	0.97	0.10	18,18,18,18	0
57	MG	GA	3123	1/1	0.97	0.11	44,44,44,44	0
57	MG	GA	3124	1/1	0.97	0.03	36,36,36,36	0
57	MG	GA	3126	1/1	0.97	0.05	35,35,35,35	0
57	MG	FA	1625	1/1	0.97	0.07	21,21,21,21	0
57	MG	BA	1631	1/1	0.97	0.05	16,16,16,16	0
57	MG	AA	3115	1/1	0.97	0.16	1,1,1,1	0
57	MG	AA	3057	1/1	0.97	0.07	25,25,25,25	0
57	MG	FA	1631	1/1	0.97	0.10	24,24,24,24	0
57	MG	BA	1639	1/1	0.97	0.13	12,12,12,12	0
57	MG	AA	3122	1/1	0.97	0.04	6,6,6,6	0
57	MG	FA	1638	1/1	0.97	0.11	16,16,16,16	0
57	MG	FE	201	1/1	0.97	0.05	35,35,35,35	0
57	MG	FU	101	1/1	0.97	0.04	21,21,21,21	0
57	MG	BU	101	1/1	0.97	0.22	19,19,19,19	0
57	MG	AA	3008	1/1	0.97	0.09	19,19,19,19	0
57	MG	GB	1203	1/1	0.97	0.09	23,23,23,23	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	AA	3129	1/1	0.97	0.17	9,9,9,9	0
57	MG	CA	3085	1/1	0.97	0.05	5,5,5,5	0
57	MG	CA	3087	1/1	0.97	0.04	23,23,23,23	0
57	MG	DA	1638	1/1	0.97	0.07	25,25,25,25	0
57	MG	CA	3002	1/1	0.97	0.07	38,38,38,38	0
57	MG	GA	3007	1/1	0.97	0.07	39,39,39,39	0
57	MG	HA	1614	1/1	0.97	0.05	49,49,49,49	0
57	MG	AA	3135	1/1	0.97	0.28	12,12,12,12	0
57	MG	DA	1643	1/1	0.97	0.08	32,32,32,32	0
57	MG	AA	3091	1/1	0.97	0.11	33,33,33,33	0
57	MG	CA	3007	1/1	0.97	0.06	35,35,35,35	0
57	MG	AA	3026	1/1	0.97	0.12	4,4,4,4	0
57	MG	GA	3021	1/1	0.97	0.17	20,20,20,20	0
57	MG	EA	3018	1/1	0.97	0.15	9,9,9,9	0
57	MG	EA	3030	1/1	0.97	0.14	7,7,7,7	0
57	MG	GA	3027	1/1	0.97	0.04	17,17,17,17	0
57	MG	GA	3028	1/1	0.97	0.11	12,12,12,12	0
57	MG	GA	3029	1/1	0.97	0.07	16,16,16,16	0
57	MG	EA	3039	1/1	0.97	0.07	15,15,15,15	0
57	MG	HA	1629	1/1	0.97	0.09	45,45,45,45	0
57	MG	HA	1630	1/1	0.97	0.16	32,32,32,32	0
57	MG	HA	1632	1/1	0.97	0.06	31,31,31,31	0
57	MG	EA	3041	1/1	0.97	0.17	3,3,3,3	0
57	MG	AA	3038	1/1	0.97	0.17	3,3,3,3	0
57	MG	HA	1635	1/1	0.97	0.06	28,28,28,28	0
57	MG	GA	3034	1/1	0.97	0.10	36,36,36,36	0
57	MG	AA	3044	1/1	0.97	0.05	4,4,4,4	0
57	MG	AA	3099	1/1	0.97	0.10	13,13,13,13	0
57	MG	AA	3045	1/1	0.97	0.15	8,8,8,8	0
57	MG	HV	802	1/1	0.97	0.08	38,38,38,38	0
59	GCP	FV	801	32/32	0.97	0.06	16,28,45,57	0
57	MG	CA	3111	1/1	0.97	0.20	18,18,18,18	0
57	MG	AA	3111	1/1	0.98	0.10	3,3,3,3	0
57	MG	GA	3010	1/1	0.98	0.07	16,16,16,16	0
57	MG	BA	1629	1/1	0.98	0.16	15,15,15,15	0
57	MG	AA	3112	1/1	0.98	0.17	0,0,0,0	0
57	MG	GA	3015	1/1	0.98	0.17	27,27,27,27	0
57	MG	GA	3017	1/1	0.98	0.07	10,10,10,10	0
57	MG	BA	1635	1/1	0.98	0.08	29,29,29,29	0
57	MG	GA	3019	1/1	0.98	0.09	6,6,6,6	0
57	MG	GA	3020	1/1	0.98	0.12	3,3,3,3	0
57	MG	EA	3002	1/1	0.98	0.09	7,7,7,7	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	EA	3004	1/1	0.98	0.10	12,12,12,12	0
57	MG	CA	3080	1/1	0.98	0.09	20,20,20,20	0
57	MG	EA	3007	1/1	0.98	0.11	12,12,12,12	0
57	MG	EA	3009	1/1	0.98	0.15	2,2,2,2	0
57	MG	CA	3083	1/1	0.98	0.11	32,32,32,32	0
57	MG	EA	3012	1/1	0.98	0.12	2,2,2,2	0
57	MG	EA	3014	1/1	0.98	0.06	1,1,1,1	0
57	MG	AA	3027	1/1	0.98	0.11	15,15,15,15	0
57	MG	GA	3033	1/1	0.98	0.12	30,30,30,30	0
57	MG	AA	3046	1/1	0.98	0.18	13,13,13,13	0
57	MG	EA	3023	1/1	0.98	0.10	9,9,9,9	0
57	MG	GA	3036	1/1	0.98	0.06	38,38,38,38	0
57	MG	EA	3025	1/1	0.98	0.16	1,1,1,1	0
57	MG	EA	3028	1/1	0.98	0.07	7,7,7,7	0
57	MG	GA	3040	1/1	0.98	0.07	15,15,15,15	0
57	MG	BA	1638	1/1	0.98	0.10	13,13,13,13	0
57	MG	EA	3034	1/1	0.98	0.05	31,31,31,31	0
57	MG	CA	3089	1/1	0.98	0.13	14,14,14,14	0
57	MG	EA	3040	1/1	0.98	0.13	11,11,11,11	0
57	MG	AA	3117	1/1	0.98	0.11	11,11,11,11	0
57	MG	AA	3048	1/1	0.98	0.12	16,16,16,16	0
57	MG	GA	3048	1/1	0.98	0.09	15,15,15,15	0
57	MG	EA	3043	1/1	0.98	0.14	8,8,8,8	0
57	MG	EA	3044	1/1	0.98	0.07	15,15,15,15	0
57	MG	AA	3119	1/1	0.98	0.07	0,0,0,0	0
57	MG	GA	3056	1/1	0.98	0.11	13,13,13,13	0
57	MG	AA	3049	1/1	0.98	0.14	17,17,17,17	0
57	MG	EA	3049	1/1	0.98	0.10	8,8,8,8	0
57	MG	GA	3061	1/1	0.98	0.06	20,20,20,20	0
57	MG	AA	3088	1/1	0.98	0.09	4,4,4,4	0
57	MG	EA	3052	1/1	0.98	0.11	12,12,12,12	0
57	MG	CB	1204	1/1	0.98	0.03	15,15,15,15	0
57	MG	CA	3096	1/1	0.98	0.12	16,16,16,16	0
57	MG	AA	3125	1/1	0.98	0.09	8,8,8,8	0
57	MG	GA	3070	1/1	0.98	0.15	22,22,22,22	0
57	MG	GA	3071	1/1	0.98	0.11	16,16,16,16	0
57	MG	GA	3073	1/1	0.98	0.05	10,10,10,10	0
57	MG	CA	3103	1/1	0.98	0.03	17,17,17,17	0
57	MG	CA	3105	1/1	0.98	0.13	14,14,14,14	0
57	MG	CA	3108	1/1	0.98	0.10	11,11,11,11	0
57	MG	EA	3082	1/1	0.98	0.04	6,6,6,6	0
57	MG	CA	3109	1/1	0.98	0.11	7,7,7,7	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	CA	3003	1/1	0.98	0.08	10,10,10,10	0
57	MG	AA	3054	1/1	0.98	0.10	3,3,3,3	0
57	MG	CA	3113	1/1	0.98	0.11	10,10,10,10	0
57	MG	AA	3131	1/1	0.98	0.03	3,3,3,3	0
57	MG	GA	3089	1/1	0.98	0.14	8,8,8,8	0
57	MG	GA	3090	1/1	0.98	0.08	27,27,27,27	0
57	MG	AA	3134	1/1	0.98	0.06	21,21,21,21	0
57	MG	AA	3033	1/1	0.98	0.07	1,1,1,1	0
57	MG	EA	3098	1/1	0.98	0.04	4,4,4,4	0
57	MG	EA	3100	1/1	0.98	0.05	1,1,1,1	0
57	MG	GA	3098	1/1	0.98	0.03	15,15,15,15	0
57	MG	EA	3101	1/1	0.98	0.04	7,7,7,7	0
57	MG	EA	3108	1/1	0.98	0.08	15,15,15,15	0
57	MG	GA	3101	1/1	0.98	0.07	13,13,13,13	0
57	MG	GA	3103	1/1	0.98	0.13	12,12,12,12	0
57	MG	CA	3118	1/1	0.98	0.13	31,31,31,31	0
57	MG	CA	3119	1/1	0.98	0.12	34,34,34,34	0
57	MG	CA	3010	1/1	0.98	0.11	8,8,8,8	0
57	MG	AA	3136	1/1	0.98	0.26	11,11,11,11	0
57	MG	GA	3111	1/1	0.98	0.03	35,35,35,35	0
57	MG	CA	3123	1/1	0.98	0.08	26,26,26,26	0
57	MG	EA	3117	1/1	0.98	0.08	15,15,15,15	0
57	MG	EA	3118	1/1	0.98	0.03	17,17,17,17	0
57	MG	EA	3119	1/1	0.98	0.10	1,1,1,1	0
57	MG	GA	3117	1/1	0.98	0.05	10,10,10,10	0
57	MG	GA	3118	1/1	0.98	0.04	39,39,39,39	0
57	MG	EA	3120	1/1	0.98	0.17	5,5,5,5	0
57	MG	AA	3092	1/1	0.98	0.08	14,14,14,14	0
57	MG	CA	3127	1/1	0.98	0.08	3,3,3,3	0
57	MG	A4	101	1/1	0.98	0.06	20,20,20,20	0
57	MG	CA	3132	1/1	0.98	0.04	9,9,9,9	0
57	MG	CA	3133	1/1	0.98	0.08	13,13,13,13	0
57	MG	EA	3128	1/1	0.98	0.09	0,0,0,0	0
57	MG	EA	3133	1/1	0.98	0.13	0,0,0,0	0
57	MG	EA	3134	1/1	0.98	0.12	7,7,7,7	0
57	MG	GA	3132	1/1	0.98	0.10	28,28,28,28	0
57	MG	AA	3059	1/1	0.98	0.12	1,1,1,1	0
57	MG	GA	3134	1/1	0.98	0.08	28,28,28,28	0
57	MG	BA	1603	1/1	0.98	0.10	18,18,18,18	0
57	MG	AA	3035	1/1	0.98	0.12	5,5,5,5	0
57	MG	GC	301	1/1	0.98	0.15	26,26,26,26	0
57	MG	EB	1202	1/1	0.98	0.05	17,17,17,17	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	EB	1203	1/1	0.98	0.14	0,0,0,0	0
57	MG	AA	3062	1/1	0.98	0.09	4,4,4,4	0
57	MG	FA	1602	1/1	0.98	0.18	18,18,18,18	0
57	MG	AA	3023	1/1	0.98	0.04	0,0,0,0	0
57	MG	FA	1609	1/1	0.98	0.13	7,7,7,7	0
57	MG	CA	3024	1/1	0.98	0.14	6,6,6,6	0
57	MG	BA	1608	1/1	0.98	0.14	11,11,11,11	0
57	MG	AA	3042	1/1	0.98	0.14	8,8,8,8	0
57	MG	CA	3030	1/1	0.98	0.07	39,39,39,39	0
57	MG	CA	3034	1/1	0.98	0.05	13,13,13,13	0
57	MG	DA	1610	1/1	0.98	0.12	28,28,28,28	0
57	MG	FA	1624	1/1	0.98	0.08	27,27,27,27	0
57	MG	AA	3102	1/1	0.98	0.04	10,10,10,10	0
57	MG	CA	3038	1/1	0.98	0.11	9,9,9,9	0
57	MG	FA	1628	1/1	0.98	0.07	27,27,27,27	0
57	MG	BA	1617	1/1	0.98	0.03	21,21,21,21	0
57	MG	CA	3047	1/1	0.98	0.11	23,23,23,23	0
57	MG	HA	1620	1/1	0.98	0.09	32,32,32,32	0
57	MG	HA	1621	1/1	0.98	0.12	7,7,7,7	0
57	MG	BA	1618	1/1	0.98	0.11	1,1,1,1	0
57	MG	FA	1633	1/1	0.98	0.12	24,24,24,24	0
57	MG	FA	1634	1/1	0.98	0.10	13,13,13,13	0
57	MG	CA	3053	1/1	0.98	0.04	20,20,20,20	0
57	MG	DA	1618	1/1	0.98	0.03	37,37,37,37	0
57	MG	FA	1637	1/1	0.98	0.07	29,29,29,29	0
57	MG	AA	3075	1/1	0.98	0.04	15,15,15,15	0
57	MG	DA	1622	1/1	0.98	0.11	13,13,13,13	0
57	MG	BA	1622	1/1	0.98	0.09	17,17,17,17	0
57	MG	HA	1631	1/1	0.98	0.12	31,31,31,31	0
57	MG	CA	3061	1/1	0.98	0.06	4,4,4,4	0
57	MG	DA	1625	1/1	0.98	0.07	29,29,29,29	0
57	MG	CA	3063	1/1	0.98	0.07	4,4,4,4	0
57	MG	DA	1627	1/1	0.98	0.04	23,23,23,23	0
57	MG	GA	3002	1/1	0.98	0.03	31,31,31,31	0
57	MG	HA	1638	1/1	0.98	0.05	28,28,28,28	0
57	MG	HA	1639	1/1	0.98	0.08	22,22,22,22	0
57	MG	CA	3067	1/1	0.98	0.14	6,6,6,6	0
57	MG	BA	1624	1/1	0.98	0.17	9,9,9,9	0
57	MG	CA	3070	1/1	0.98	0.07	8,8,8,8	0
57	MG	BA	1625	1/1	0.98	0.06	23,23,23,23	0
58	ZN	E4	101	1/1	0.98	0.06	59,59,59,59	0
59	GCP	DV	801	32/32	0.98	0.05	17,28,38,41	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	DA	1635	1/1	0.98	0.04	37,37,37,37	0
57	MG	AA	3002	1/1	0.98	0.08	25,25,25,25	0
57	MG	CA	3106	1/1	0.99	0.10	12,12,12,12	0
57	MG	CA	3107	1/1	0.99	0.10	14,14,14,14	0
57	MG	EA	3127	1/1	0.99	0.05	11,11,11,11	0
57	MG	BA	1633	1/1	0.99	0.04	20,20,20,20	0
57	MG	EA	3130	1/1	0.99	0.13	0,0,0,0	0
57	MG	EA	3132	1/1	0.99	0.09	21,21,21,21	0
57	MG	BA	1634	1/1	0.99	0.03	13,13,13,13	0
57	MG	AA	3039	1/1	0.99	0.04	3,3,3,3	0
57	MG	EA	3135	1/1	0.99	0.04	25,25,25,25	0
57	MG	AA	3040	1/1	0.99	0.12	1,1,1,1	0
57	MG	CA	3112	1/1	0.99	0.10	10,10,10,10	0
57	MG	AA	3094	1/1	0.99	0.04	16,16,16,16	0
57	MG	CA	3114	1/1	0.99	0.06	26,26,26,26	0
57	MG	AA	3013	1/1	0.99	0.04	0,0,0,0	0
57	MG	ED	301	1/1	0.99	0.05	7,7,7,7	0
57	MG	AA	3043	1/1	0.99	0.09	5,5,5,5	0
57	MG	FA	1601	1/1	0.99	0.06	17,17,17,17	0
57	MG	BA	1640	1/1	0.99	0.09	11,11,11,11	0
57	MG	FA	1603	1/1	0.99	0.04	20,20,20,20	0
57	MG	AA	3015	1/1	0.99	0.12	0,0,0,0	0
57	MG	FA	1605	1/1	0.99	0.03	30,30,30,30	0
57	MG	FA	1606	1/1	0.99	0.07	15,15,15,15	0
57	MG	FA	1607	1/1	0.99	0.04	21,21,21,21	0
57	MG	BN	201	1/1	0.99	0.05	13,13,13,13	0
57	MG	AB	1203	1/1	0.99	0.08	0,0,0,0	0
57	MG	BV	802	1/1	0.99	0.07	22,22,22,22	0
57	MG	FA	1612	1/1	0.99	0.14	4,4,4,4	0
57	MG	FA	1613	1/1	0.99	0.12	6,6,6,6	0
57	MG	FA	1614	1/1	0.99	0.05	13,13,13,13	0
57	MG	FA	1615	1/1	0.99	0.04	16,16,16,16	0
57	MG	FA	1616	1/1	0.99	0.04	18,18,18,18	0
57	MG	CA	3122	1/1	0.99	0.06	5,5,5,5	0
57	MG	AA	3101	1/1	0.99	0.08	8,8,8,8	0
57	MG	FA	1619	1/1	0.99	0.07	7,7,7,7	0
57	MG	AA	3018	1/1	0.99	0.08	2,2,2,2	0
57	MG	CA	3125	1/1	0.99	0.13	11,11,11,11	0
57	MG	CA	3126	1/1	0.99	0.04	22,22,22,22	0
57	MG	CB	1203	1/1	0.99	0.07	12,12,12,12	0
57	MG	FA	1626	1/1	0.99	0.10	22,22,22,22	0
57	MG	CA	3129	1/1	0.99	0.02	9,9,9,9	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	CA	3130	1/1	0.99	0.12	21,21,21,21	0
57	MG	AA	3104	1/1	0.99	0.10	2,2,2,2	0
57	MG	AA	3106	1/1	0.99	0.10	4,4,4,4	0
57	MG	AA	3047	1/1	0.99	0.09	12,12,12,12	0
57	MG	CA	3004	1/1	0.99	0.05	24,24,24,24	0
57	MG	AA	3005	1/1	0.99	0.09	16,16,16,16	0
57	MG	AA	3020	1/1	0.99	0.03	9,9,9,9	0
57	MG	CN	201	1/1	0.99	0.15	20,20,20,20	0
57	MG	C4	101	1/1	0.99	0.04	17,17,17,17	0
57	MG	AA	3051	1/1	0.99	0.05	9,9,9,9	0
57	MG	FA	1639	1/1	0.99	0.08	20,20,20,20	0
57	MG	CA	3008	1/1	0.99	0.09	14,14,14,14	0
57	MG	FN	201	1/1	0.99	0.12	14,14,14,14	0
57	MG	AA	3113	1/1	0.99	0.02	8,8,8,8	0
57	MG	FV	802	1/1	0.99	0.08	24,24,24,24	0
57	MG	AA	3052	1/1	0.99	0.09	3,3,3,3	0
57	MG	DA	1605	1/1	0.99	0.09	18,18,18,18	0
57	MG	AA	3053	1/1	0.99	0.06	4,4,4,4	0
57	MG	CA	3012	1/1	0.99	0.04	6,6,6,6	0
57	MG	GA	3001	1/1	0.99	0.03	31,31,31,31	0
57	MG	DA	1608	1/1	0.99	0.11	30,30,30,30	0
57	MG	AA	3116	1/1	0.99	0.06	0,0,0,0	0
57	MG	AB	1204	1/1	0.99	0.03	18,18,18,18	0
57	MG	AA	3055	1/1	0.99	0.10	0,0,0,0	0
57	MG	CA	3017	1/1	0.99	0.09	7,7,7,7	0
57	MG	CA	3018	1/1	0.99	0.03	30,30,30,30	0
57	MG	AA	3022	1/1	0.99	0.02	2,2,2,2	0
57	MG	CA	3020	1/1	0.99	0.05	6,6,6,6	0
57	MG	AA	3120	1/1	0.99	0.09	9,9,9,9	0
57	MG	AA	3007	1/1	0.99	0.12	19,19,19,19	0
57	MG	GA	3012	1/1	0.99	0.09	22,22,22,22	0
57	MG	AA	3123	1/1	0.99	0.03	5,5,5,5	0
57	MG	GA	3014	1/1	0.99	0.03	15,15,15,15	0
57	MG	DA	1620	1/1	0.99	0.02	12,12,12,12	0
57	MG	GA	3016	1/1	0.99	0.08	12,12,12,12	0
57	MG	DA	1621	1/1	0.99	0.07	44,44,44,44	0
57	MG	AA	3025	1/1	0.99	0.06	0,0,0,0	0
57	MG	AA	3061	1/1	0.99	0.13	5,5,5,5	0
57	MG	AA	3126	1/1	0.99	0.04	2,2,2,2	0
57	MG	CA	3027	1/1	0.99	0.03	10,10,10,10	0
57	MG	GA	3023	1/1	0.99	0.25	27,27,27,27	0
57	MG	CA	3028	1/1	0.99	0.08	9,9,9,9	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	CA	3029	1/1	0.99	0.06	19,19,19,19	0
57	MG	GA	3026	1/1	0.99	0.08	31,31,31,31	0
57	MG	AA	3127	1/1	0.99	0.06	10,10,10,10	0
57	MG	CA	3031	1/1	0.99	0.06	7,7,7,7	0
57	MG	DA	1630	1/1	0.99	0.06	25,25,25,25	0
57	MG	CA	3032	1/1	0.99	0.05	8,8,8,8	0
57	MG	DA	1632	1/1	0.99	0.04	22,22,22,22	0
57	MG	DA	1633	1/1	0.99	0.03	29,29,29,29	0
57	MG	AA	3128	1/1	0.99	0.08	0,0,0,0	0
57	MG	CA	3036	1/1	0.99	0.06	28,28,28,28	0
57	MG	AC	301	1/1	0.99	0.04	3,3,3,3	0
57	MG	DA	1637	1/1	0.99	0.04	25,25,25,25	0
57	MG	AA	3130	1/1	0.99	0.08	3,3,3,3	0
57	MG	GA	3038	1/1	0.99	0.04	21,21,21,21	0
57	MG	CA	3039	1/1	0.99	0.12	4,4,4,4	0
57	MG	CA	3040	1/1	0.99	0.04	11,11,11,11	0
57	MG	GA	3041	1/1	0.99	0.07	10,10,10,10	0
57	MG	DA	1641	1/1	0.99	0.03	28,28,28,28	0
57	MG	DA	1642	1/1	0.99	0.11	4,4,4,4	0
57	MG	CA	3041	1/1	0.99	0.03	12,12,12,12	0
57	MG	EA	3001	1/1	0.99	0.05	11,11,11,11	0
57	MG	CA	3042	1/1	0.99	0.06	16,16,16,16	0
57	MG	EA	3003	1/1	0.99	0.07	9,9,9,9	0
57	MG	CA	3043	1/1	0.99	0.07	4,4,4,4	0
57	MG	GA	3049	1/1	0.99	0.13	12,12,12,12	0
57	MG	AA	3063	1/1	0.99	0.05	0,0,0,0	0
57	MG	EA	3006	1/1	0.99	0.07	9,9,9,9	0
57	MG	GA	3052	1/1	0.99	0.10	4,4,4,4	0
57	MG	GA	3053	1/1	0.99	0.12	6,6,6,6	0
57	MG	GA	3054	1/1	0.99	0.09	12,12,12,12	0
57	MG	CA	3045	1/1	0.99	0.10	5,5,5,5	0
57	MG	EA	3008	1/1	0.99	0.11	1,1,1,1	0
57	MG	CA	3046	1/1	0.99	0.12	21,21,21,21	0
57	MG	GA	3058	1/1	0.99	0.13	24,24,24,24	0
57	MG	EA	3010	1/1	0.99	0.04	6,6,6,6	0
57	MG	GA	3060	1/1	0.99	0.07	18,18,18,18	0
57	MG	AA	3132	1/1	0.99	0.09	0,0,0,0	0
57	MG	CA	3048	1/1	0.99	0.09	17,17,17,17	0
57	MG	GA	3063	1/1	0.99	0.04	27,27,27,27	0
57	MG	GA	3064	1/1	0.99	0.04	11,11,11,11	0
57	MG	GA	3065	1/1	0.99	0.04	20,20,20,20	0
57	MG	AA	3065	1/1	0.99	0.15	11,11,11,11	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	CA	3050	1/1	0.99	0.06	14,14,14,14	0
57	MG	EA	3016	1/1	0.99	0.11	0,0,0,0	0
57	MG	EA	3017	1/1	0.99	0.10	8,8,8,8	0
57	MG	CA	3051	1/1	0.99	0.25	6,6,6,6	0
57	MG	EA	3019	1/1	0.99	0.04	10,10,10,10	0
57	MG	GA	3072	1/1	0.99	0.04	24,24,24,24	0
57	MG	EA	3020	1/1	0.99	0.08	7,7,7,7	0
57	MG	GA	3074	1/1	0.99	0.08	10,10,10,10	0
57	MG	EA	3021	1/1	0.99	0.06	11,11,11,11	0
57	MG	EA	3022	1/1	0.99	0.07	2,2,2,2	0
57	MG	AA	3066	1/1	0.99	0.12	0,0,0,0	0
57	MG	AA	3068	1/1	0.99	0.11	2,2,2,2	0
57	MG	GA	3080	1/1	0.99	0.10	36,36,36,36	0
57	MG	GA	3081	1/1	0.99	0.11	14,14,14,14	0
57	MG	GA	3082	1/1	0.99	0.02	38,38,38,38	0
57	MG	EA	3026	1/1	0.99	0.10	0,0,0,0	0
57	MG	EA	3027	1/1	0.99	0.09	4,4,4,4	0
57	MG	GA	3085	1/1	0.99	0.04	10,10,10,10	0
57	MG	AA	3009	1/1	0.99	0.10	2,2,2,2	0
57	MG	EA	3029	1/1	0.99	0.13	2,2,2,2	0
57	MG	CA	3057	1/1	0.99	0.08	7,7,7,7	0
57	MG	EA	3033	1/1	0.99	0.12	0,0,0,0	0
57	MG	CA	3058	1/1	0.99	0.05	18,18,18,18	0
57	MG	EA	3035	1/1	0.99	0.05	12,12,12,12	0
57	MG	EA	3036	1/1	0.99	0.02	12,12,12,12	0
57	MG	EA	3037	1/1	0.99	0.11	2,2,2,2	0
57	MG	GA	3094	1/1	0.99	0.07	14,14,14,14	0
57	MG	CA	3059	1/1	0.99	0.09	10,10,10,10	0
57	MG	GA	3096	1/1	0.99	0.04	15,15,15,15	0
57	MG	GA	3097	1/1	0.99	0.12	10,10,10,10	0
57	MG	AA	3028	1/1	0.99	0.06	4,4,4,4	0
57	MG	CA	3062	1/1	0.99	0.06	15,15,15,15	0
57	MG	AA	3071	1/1	0.99	0.03	4,4,4,4	0
57	MG	CA	3064	1/1	0.99	0.10	6,6,6,6	0
57	MG	GA	3102	1/1	0.99	0.05	19,19,19,19	0
57	MG	CA	3065	1/1	0.99	0.05	11,11,11,11	0
57	MG	CA	3066	1/1	0.99	0.08	4,4,4,4	0
57	MG	GA	3106	1/1	0.99	0.11	7,7,7,7	0
57	MG	GA	3107	1/1	0.99	0.11	13,13,13,13	0
57	MG	EA	3046	1/1	0.99	0.15	9,9,9,9	0
57	MG	AA	3072	1/1	0.99	0.09	5,5,5,5	0
57	MG	EA	3048	1/1	0.99	0.09	25,25,25,25	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	CA	3068	1/1	0.99	0.09	9,9,9,9	0
57	MG	AA	3073	1/1	0.99	0.07	2,2,2,2	0
57	MG	EA	3051	1/1	0.99	0.19	6,6,6,6	0
57	MG	AA	3029	1/1	0.99	0.13	0,0,0,0	0
57	MG	EA	3053	1/1	0.99	0.12	1,1,1,1	0
57	MG	EA	3054	1/1	0.99	0.04	2,2,2,2	0
57	MG	BA	1606	1/1	0.99	0.07	14,14,14,14	0
57	MG	EA	3056	1/1	0.99	0.09	13,13,13,13	0
57	MG	GA	3120	1/1	0.99	0.08	19,19,19,19	0
57	MG	CA	3073	1/1	0.99	0.09	4,4,4,4	0
57	MG	EA	3058	1/1	0.99	0.10	5,5,5,5	0
57	MG	EA	3060	1/1	0.99	0.13	2,2,2,2	0
57	MG	GA	3125	1/1	0.99	0.05	10,10,10,10	0
57	MG	AA	3030	1/1	0.99	0.05	1,1,1,1	0
57	MG	EA	3063	1/1	0.99	0.04	2,2,2,2	0
57	MG	EA	3066	1/1	0.99	0.03	1,1,1,1	0
57	MG	EA	3067	1/1	0.99	0.10	3,3,3,3	0
57	MG	GA	3130	1/1	0.99	0.04	18,18,18,18	0
57	MG	EA	3068	1/1	0.99	0.10	2,2,2,2	0
57	MG	CA	3075	1/1	0.99	0.08	11,11,11,11	0
57	MG	AA	3077	1/1	0.99	0.05	16,16,16,16	0
57	MG	EA	3071	1/1	0.99	0.07	0,0,0,0	0
57	MG	EA	3072	1/1	0.99	0.08	2,2,2,2	0
57	MG	EA	3073	1/1	0.99	0.06	0,0,0,0	0
57	MG	EA	3074	1/1	0.99	0.10	11,11,11,11	0
57	MG	EA	3075	1/1	0.99	0.05	11,11,11,11	0
57	MG	BA	1609	1/1	0.99	0.03	7,7,7,7	0
57	MG	EA	3077	1/1	0.99	0.09	18,18,18,18	0
57	MG	EA	3078	1/1	0.99	0.12	20,20,20,20	0
57	MG	HA	1603	1/1	0.99	0.02	25,25,25,25	0
57	MG	HA	1604	1/1	0.99	0.08	31,31,31,31	0
57	MG	HA	1605	1/1	0.99	0.05	40,40,40,40	0
57	MG	EA	3080	1/1	0.99	0.07	15,15,15,15	0
57	MG	EA	3081	1/1	0.99	0.06	0,0,0,0	0
57	MG	AA	3031	1/1	0.99	0.10	5,5,5,5	0
57	MG	BA	1613	1/1	0.99	0.10	8,8,8,8	0
57	MG	EA	3085	1/1	0.99	0.09	11,11,11,11	0
57	MG	EA	3086	1/1	0.99	0.06	8,8,8,8	0
57	MG	BA	1614	1/1	0.99	0.03	7,7,7,7	0
57	MG	CA	3081	1/1	0.99	0.10	6,6,6,6	0
57	MG	EA	3089	1/1	0.99	0.04	6,6,6,6	0
57	MG	EA	3090	1/1	0.99	0.02	11,11,11,11	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	AA	3080	1/1	0.99	0.09	0,0,0,0	0
57	MG	EA	3092	1/1	0.99	0.10	22,22,22,22	0
57	MG	EA	3093	1/1	0.99	0.07	11,11,11,11	0
57	MG	CA	3084	1/1	0.99	0.12	20,20,20,20	0
57	MG	BA	1616	1/1	0.99	0.11	3,3,3,3	0
57	MG	EA	3096	1/1	0.99	0.09	9,9,9,9	0
57	MG	CA	3086	1/1	0.99	0.06	15,15,15,15	0
57	MG	AA	3081	1/1	0.99	0.03	1,1,1,1	0
57	MG	EA	3099	1/1	0.99	0.09	3,3,3,3	0
57	MG	AA	3010	1/1	0.99	0.12	8,8,8,8	0
57	MG	AA	3034	1/1	0.99	0.10	4,4,4,4	0
57	MG	EA	3102	1/1	0.99	0.03	23,23,23,23	0
57	MG	EA	3103	1/1	0.99	0.16	0,0,0,0	0
57	MG	EA	3104	1/1	0.99	0.11	0,0,0,0	0
57	MG	EA	3107	1/1	0.99	0.04	5,5,5,5	0
57	MG	BA	1621	1/1	0.99	0.03	11,11,11,11	0
57	MG	AA	3011	1/1	0.99	0.12	6,6,6,6	0
57	MG	AA	3086	1/1	0.99	0.03	14,14,14,14	0
57	MG	EA	3112	1/1	0.99	0.09	2,2,2,2	0
57	MG	AA	3087	1/1	0.99	0.07	19,19,19,19	0
57	MG	HA	1636	1/1	0.99	0.03	28,28,28,28	0
57	MG	AA	3036	1/1	0.99	0.08	2,2,2,2	0
57	MG	AA	3089	1/1	0.99	0.03	4,4,4,4	0
57	MG	EA	3116	1/1	0.99	0.08	6,6,6,6	0
57	MG	HA	1640	1/1	0.99	0.10	18,18,18,18	0
57	MG	AA	3037	1/1	0.99	0.15	30,30,30,30	0
57	MG	BA	1630	1/1	0.99	0.12	26,26,26,26	0
57	MG	CA	3099	1/1	0.99	0.04	5,5,5,5	0
57	MG	CA	3101	1/1	0.99	0.06	5,5,5,5	0
58	ZN	A4	102	1/1	0.99	0.02	42,42,42,42	0
57	MG	CA	3102	1/1	0.99	0.11	9,9,9,9	0
58	ZN	G4	101	1/1	0.99	0.03	66,66,66,66	0
59	GCP	BV	801	32/32	0.99	0.04	9,25,32,35	0
57	MG	AB	1202	1/1	0.99	0.03	25,25,25,25	0
57	MG	EA	3123	1/1	0.99	0.07	3,3,3,3	0
57	MG	BA	1632	1/1	0.99	0.08	14,14,14,14	0
57	MG	EA	3106	1/1	1.00	0.02	9,9,9,9	0
57	MG	AA	3085	1/1	1.00	0.01	7,7,7,7	0
57	MG	DV	802	1/1	1.00	0.08	14,14,14,14	0
57	MG	GA	3122	1/1	1.00	0.04	16,16,16,16	0
57	MG	BA	1611	1/1	1.00	0.02	7,7,7,7	0
57	MG	FA	1632	1/1	1.00	0.06	24,24,24,24	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	CA	3097	1/1	1.00	0.03	3,3,3,3	0
57	MG	EA	3111	1/1	1.00	0.01	5,5,5,5	0
57	MG	BA	1612	1/1	1.00	0.07	3,3,3,3	0
57	MG	CA	3060	1/1	1.00	0.03	7,7,7,7	0
57	MG	CA	3100	1/1	1.00	0.04	16,16,16,16	0
57	MG	AA	3103	1/1	1.00	0.06	0,0,0,0	0
57	MG	AA	3024	1/1	1.00	0.06	5,5,5,5	0
57	MG	AA	3105	1/1	1.00	0.03	2,2,2,2	0
57	MG	EA	3059	1/1	1.00	0.06	10,10,10,10	0
57	MG	FN	202	1/1	1.00	0.06	26,26,26,26	0
57	MG	CA	3104	1/1	1.00	0.06	8,8,8,8	0
57	MG	AA	3050	1/1	1.00	0.10	2,2,2,2	0
57	MG	EA	3062	1/1	1.00	0.07	4,4,4,4	0
57	MG	AA	3107	1/1	1.00	0.08	4,4,4,4	0
57	MG	EA	3064	1/1	1.00	0.05	2,2,2,2	0
57	MG	EA	3065	1/1	1.00	0.04	5,5,5,5	0
57	MG	AA	3108	1/1	1.00	0.10	1,1,1,1	0
57	MG	EA	3013	1/1	1.00	0.03	1,1,1,1	0
57	MG	BA	1619	1/1	1.00	0.09	13,13,13,13	0
57	MG	DA	1613	1/1	1.00	0.03	23,23,23,23	0
57	MG	EA	3129	1/1	1.00	0.09	2,2,2,2	0
57	MG	CA	3001	1/1	1.00	0.02	16,16,16,16	0
57	MG	GA	3075	1/1	1.00	0.03	16,16,16,16	0
57	MG	EA	3131	1/1	1.00	0.05	3,3,3,3	0
57	MG	CA	3033	1/1	1.00	0.06	6,6,6,6	0
57	MG	AA	3003	1/1	1.00	0.05	11,11,11,11	0
57	MG	CA	3035	1/1	1.00	0.04	7,7,7,7	0
57	MG	CA	3072	1/1	1.00	0.05	14,14,14,14	0
57	MG	AA	3074	1/1	1.00	0.04	5,5,5,5	0
57	MG	AA	3133	1/1	1.00	0.05	10,10,10,10	0
57	MG	BA	1623	1/1	1.00	0.01	25,25,25,25	0
57	MG	EA	3024	1/1	1.00	0.07	2,2,2,2	0
57	MG	EA	3079	1/1	1.00	0.07	8,8,8,8	0
57	MG	EB	1204	1/1	1.00	0.06	8,8,8,8	0
57	MG	AA	3017	1/1	1.00	0.03	0,0,0,0	0
57	MG	AA	3032	1/1	1.00	0.05	0,0,0,0	0
57	MG	AA	3064	1/1	1.00	0.02	3,3,3,3	0
57	MG	AA	3014	1/1	1.00	0.03	2,2,2,2	0
57	MG	GA	3022	1/1	1.00	0.07	30,30,30,30	0
57	MG	EA	3084	1/1	1.00	0.09	7,7,7,7	0
57	MG	BA	1628	1/1	1.00	0.05	18,18,18,18	0
57	MG	AA	3079	1/1	1.00	0.05	4,4,4,4	0

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Mol	Type	Chain	Res	Atoms	RSCC	RSR	B-factors(Å^2)	Q<0.9
57	MG	EA	3031	1/1	1.00	0.04	1,1,1,1	0
57	MG	EA	3032	1/1	1.00	0.06	1,1,1,1	0
57	MG	FA	1608	1/1	1.00	0.05	13,13,13,13	0
57	MG	CA	3082	1/1	1.00	0.05	14,14,14,14	0
57	MG	BA	1601	1/1	1.00	0.11	23,23,23,23	0
57	MG	CA	3013	1/1	1.00	0.03	9,9,9,9	0
57	MG	AA	3004	1/1	1.00	0.09	20,20,20,20	0
57	MG	AA	3096	1/1	1.00	0.03	0,0,0,0	0
57	MG	EA	3038	1/1	1.00	0.07	2,2,2,2	0
57	MG	CA	3128	1/1	1.00	0.05	17,17,17,17	0
57	MG	GA	3105	1/1	1.00	0.05	16,16,16,16	0
57	MG	AA	3067	1/1	1.00	0.07	2,2,2,2	0
57	MG	AA	3098	1/1	1.00	0.06	0,0,0,0	0
57	MG	AA	3056	1/1	1.00	0.03	11,11,11,11	0
57	MG	CA	3052	1/1	1.00	0.06	4,4,4,4	0
57	MG	AA	3121	1/1	1.00	0.07	3,3,3,3	0
57	MG	CA	3054	1/1	1.00	0.03	14,14,14,14	0
57	MG	GA	3112	1/1	1.00	0.09	13,13,13,13	0
58	ZN	C4	102	1/1	1.00	0.01	41,41,41,41	0
57	MG	FA	1622	1/1	1.00	0.07	9,9,9,9	0
57	MG	FA	1623	1/1	1.00	0.08	6,6,6,6	0
57	MG	AA	3041	1/1	1.00	0.07	7,7,7,7	0
57	MG	AA	3058	1/1	1.00	0.04	9,9,9,9	0
57	MG	CE	301	1/1	1.00	0.06	19,19,19,19	0
57	MG	EA	3105	1/1	1.00	0.08	5,5,5,5	0

6.5 Other polymers (i)

There are no such residues in this entry.