Full wwPDB EM Validation Report ⓘ

Mar 20, 2026 – 02:44 PM UTC

PDB ID	:	8UXA / pdb_00008uxa
EMDB ID	:	EMD-42720
Title	:	Glucose treated mitochondrial ribosome of saccharomyces cerevisiae class I
Authors	:	Yu, Z.; Zheng, F.; Zhou, C.
Deposited on	:	2023-11-09
Resolution	:	3.20 Å(reported)

This is a Full wwPDB EM 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/EMValidationReportHelp
with specific help available everywhere you see the ⓘ 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 ⓘ) were used in the production of this report:

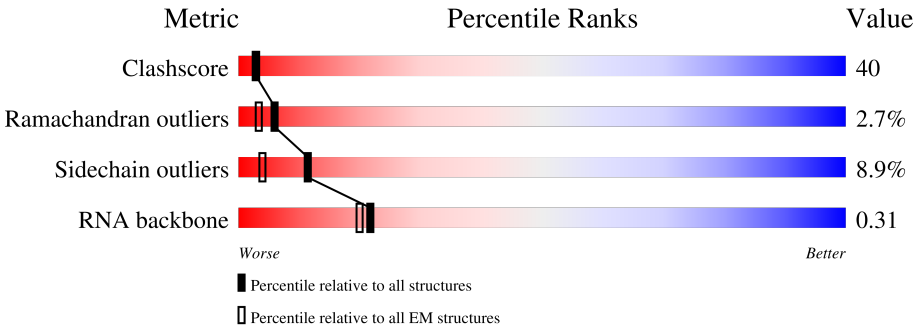
EMDB validation analysis	:	0.0.1.dev132
MolProbity	:	4-5-2 with Phenix2.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics	:	202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

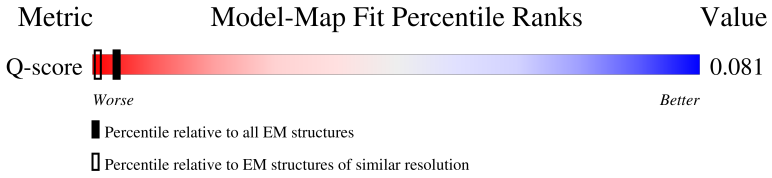
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:
ELECTRON MICROSCOPY

The reported resolution of this entry is 3.20 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)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	15020 (2.70 - 3.70)

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the 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 EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	AA	34	65% 24% 68% 9%
2	AB	101	90% 20% 51% 22% • 6%
3	AC	259	93% 28% 58% 13% •

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Mol	Chain	Length	Quality of chain
4	AD	321	91% 30% 49% 14% 6%
5	AE	339	87% 12% 53% 19% 12%
6	AF	320	73% 22% 40% 14% 21%
7	AG	236	81% 33% 56% 10%
8	AH	234	93% 31% 56% 11%
9	AI	405	92% 28% 59% 11%
10	AJ	96	88% 39% 39% 19%
11	AK	273	86% 36% 52% 8%
12	AL	1649	55% 16% 46% 26% 9%
13	AM	76	95% 12% 55% 32%
14	AN	13	69% 8% 15% 77%
15	Z	91	74% 32% 48% 14%
16	g	344	51% 20% 30% 7% 42%
17	h	267	71% 37% 53% 9%
18	i	398	61% 22% 39% 12% 26%
19	j	486	53% 23% 31% 41%
20	k	293	65% 40% 47% 11%
21	l	131	87% 19% 68% 13%
22	m	161	80% 35% 48% 16%
23	n	155	74% 59% 41%
24	o	244	82% 49% 34% 8% 7%
25	p	186	58% 20% 38% 12% 28%
26	q	152	73% 22% 65% 12%
27	r	125	77% 25% 60% 14%
28	s	120	88% 18% 53% 24% 5%

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Mol	Chain	Length	Quality of chain
29	t	115	83% 35% 47% 14%
30	u	253	85% 25% 65% 10%
31	v	120	86% 21% 62% 12%
32	w	237	77% 19% 51% 15% 14%
33	x	99	68% 17% 52% 20% 8%
34	y	80	92% 19% 61% 14% 6%
35	z	92	73% 37% 47% 14%
36	0	38	76% 76% 24%
37	1	348	93% 86% 14%
38	2	113	90% 81% 19%
39	3	130	75% 84% 16%
40	4	138	83% 86% 14%
41	5	324	87% 83% 16%
42	6	281	78% 73% 10% 17%
43	7	106	81% 85% 14%
44	8	264	69% 67% 9% 25%
45	9	215	90% 85% 9% 6%
46	A	3296	49% 9% 52% 25% 13%
47	B	393	66% 44% 30% 8% 18%
48	C	249	80% 76% 23%
49	D	252	73% 82% 16%
50	E	274	88% 83% 15%
51	F	196	91% 89% 11%
52	G	74	93% 91% 9%
53	H	160	74% 86% 14%

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Mol	Chain	Length	Quality of chain
54	I	138	77% 78% 14% 8%
55	J	220	72% 71% 24% 5%
56	K	195	68% 78% 18%
57	L	237	82% 85% 11%
58	M	151	89% 89% 11%
59	N	118	73% 83% 15%
60	O	225	68% 88% 12%
61	P	207	79% 84% 16%
62	Q	296	83% 83% 11%
63	R	337	92% 25% 58% 14%
64	S	216	71% 71% 14% 14%
65	T	225	78% 80% 16%
66	U	82	73% 76% 21%
67	V	177	34% 33% 5% 63%
68	W	112	66% 90% 9%
69	X	64	92% 48% 36% 9% 6%
70	Y	46	33% 74% 24%
71	a	177	90% 81% 18%
72	b	155	87% 85% 14%
73	c	119	66% 87% 12%
74	d	215	79% 84% 12%
75	e	249	66% 26% 30% 10% 34%
76	f	158	87% 29% 47% 9% 13%

2 Entry composition

There are 76 unique types of molecules in this entry. The entry contains 201764 atoms, of which 0 are hydrogens and 0 are deuteriums.

In the tables below, 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 protein called Small ribosomal subunit protein mS38.

Mol	Chain	Residues	Atoms					AltConf	Trace
1	AA	34	Total	C	N	O	S	0	0
			304	183	75	44	2		

- Molecule 2 is a protein called Small ribosomal subunit protein mS41.

Mol	Chain	Residues	Atoms					AltConf	Trace
2	AB	95	Total	C	N	O	S	0	0
			808	512	153	142	1		

- Molecule 3 is a protein called Small ribosomal subunit protein mS42.

Mol	Chain	Residues	Atoms					AltConf	Trace
3	AC	259	Total	C	N	O	S	0	0
			2079	1335	352	387	5		

- Molecule 4 is a protein called 37S ribosomal protein MRP1, mitochondrial.

Mol	Chain	Residues	Atoms					AltConf	Trace
4	AD	301	Total	C	N	O	S	0	0
			2422	1530	418	464	10		

- Molecule 5 is a protein called 37S ribosomal protein MRP13, mitochondrial.

Mol	Chain	Residues	Atoms					AltConf	Trace
5	AE	298	Total	C	N	O	S	0	0
			2432	1569	421	438	4		

- Molecule 6 is a protein called Small ribosomal subunit protein mS45.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	AF	252	Total	C	N	O	S	0	0
			2079	1327	377	369	6		

- Molecule 7 is a protein called Small ribosomal subunit protein mS23.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	AG	236	Total	C	N	O	S	0	0
			1931	1224	337	363	7		

- Molecule 8 is a protein called Small ribosomal subunit protein mS26.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	AH	234	Total	C	N	O	S	0	0
			1887	1197	339	347	4		

- Molecule 9 is a protein called Small ribosomal subunit protein mS29.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	AI	405	Total	C	N	O	S	0	0
			3243	2087	545	603	8		

- Molecule 10 is a protein called Small ribosomal subunit protein mS33.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	AJ	96	Total	C	N	O	S	0	0
			774	496	140	135	3		

- Molecule 11 is a protein called Small ribosomal subunit protein mS35.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	AK	264	Total	C	N	O	S	0	0
			2212	1397	399	412	4		

- Molecule 12 is a RNA chain called Small ribosomal subunit rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	AL	1501	Total	C	N	O	P	0	0
			31883	14338	5633	10411	1501		

- Molecule 13 is a RNA chain called Small ribosomal subunit tRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	AM	76	Total	C	N	O	P	0	0
			1615	723	289	528	75		

- Molecule 14 is a RNA chain called mRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	AN	13	Total	C	N	O	P	0	0
			270	123	49	86	12		

- Molecule 15 is a protein called Small ribosomal subunit protein mS37.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	Z	87	Total	C	N	O	S	0	0
			687	435	128	118	6		

- Molecule 16 is a protein called 37S ribosomal protein MRP51, mitochondrial.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	g	198	Total	C	N	O	S	0	0
			1577	1014	278	280	5		

- Molecule 17 is a protein called Small ribosomal subunit protein uS2m.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	h	267	Total	C	N	O	S	0	0
			2095	1319	368	406	2		

- Molecule 18 is a protein called Ribosomal protein VAR1, mitochondrial.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	i	293	Total	C	N	O	S	0	0
			2461	1554	432	452	23		

- Molecule 19 is a protein called 37S ribosomal protein NAM9, mitochondrial.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	j	287	Total	C	N	O	S	0	0
			2370	1542	420	404	4		

- Molecule 20 is a protein called Small ribosomal subunit protein uS5m.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	k	288	Total	C	N	O	S	0	0
			2306	1473	408	417	8		

- Molecule 21 is a protein called 37S ribosomal protein MRP17, mitochondrial.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	l	131	Total	C	N	O	S	0	0
			1055	671	189	191	4		

- Molecule 22 is a protein called Small ribosomal subunit protein uS7m.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	m	161	Total	C	N	O	S	0	0
			1282	811	238	228	5		

- Molecule 23 is a protein called 37S ribosomal protein S8, mitochondrial.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	n	155	Total	C	N	O	S	0	0
			1221	772	218	221	10		

- Molecule 24 is a protein called Small ribosomal subunit protein uS9m.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	o	226	Total	C	N	O	S	0	0
			1820	1167	332	316	5		

- Molecule 25 is a protein called Small ribosomal subunit protein uS10m.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	p	134	Total	C	N	O	S	0	0
			1108	719	192	193	4		

- Molecule 26 is a protein called Small ribosomal subunit protein uS11m.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	q	152	Total	C	N	O	S	0	0
			1208	775	211	216	6		

- Molecule 27 is a protein called Small ribosomal subunit protein uS12m.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	r	125	Total	C	N	O	S	0	0
			955	588	195	168	4		

- Molecule 28 is a protein called Small ribosomal subunit protein uS13m.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	s	120	Total	C	N	O	S	0	0
			942	596	179	161	6		

- Molecule 29 is a protein called 37S ribosomal protein MRP2, mitochondrial.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	t	113	Total	C	N	O	S	0	0
			942	605	180	153	4		

- Molecule 30 is a protein called Small ribosomal subunit protein uS15m.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	u	253	Total	C	N	O	S	0	0
			2070	1292	387	383	8		

- Molecule 31 is a protein called Small ribosomal subunit protein bS16m.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	v	106	Total	C	N	O	S	0	0
			830	529	155	144	2		

- Molecule 32 is a protein called 37S ribosomal protein S17, mitochondrial.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	w	204	Total	C	N	O	S	0	0
			1683	1055	315	308	5		

- Molecule 33 is a protein called Small ribosomal subunit protein bS18m.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	x	91	Total	C	N	O	S	0	0
			738	463	143	128	4		

- Molecule 34 is a protein called Small ribosomal subunit protein uS19m.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	y	80	Total	C	N	O	S	0	0
			636	408	115	111	2		

- Molecule 35 is a protein called Small ribosomal subunit protein bS21m.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	z	92	Total	C	N	O	S	0	0
			760	475	150	130	5		

- Molecule 36 is a protein called Large ribosomal subunit protein bL36m.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	0	38	Total	C	N	O	S	0	0
			324	205	66	50	3		

- Molecule 37 is a protein called Large ribosomal subunit protein mL38.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	1	348	Total	C	N	O	S	0	0
			2875	1847	499	523	6		

- Molecule 38 is a protein called Large ribosomal subunit protein mL40.

Mol	Chain	Residues	Atoms					AltConf	Trace
38	2	113	Total	C	N	O	S	0	0
			944	597	174	168	5		

- Molecule 39 is a protein called Large ribosomal subunit protein mL41.

Mol	Chain	Residues	Atoms					AltConf	Trace
39	3	130	Total	C	N	O	S	0	0
			1046	671	189	183	3		

- Molecule 40 is a protein called Large ribosomal subunit protein mL43.

Mol	Chain	Residues	Atoms					AltConf	Trace
40	4	138	Total	C	N	O	S	0	0
			1117	700	219	193	5		

- Molecule 41 is a protein called Large ribosomal subunit protein mL44.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	5	324	Total	C	N	O	S	0	0
			2552	1630	431	480	11		

- Molecule 42 is a protein called Large ribosomal subunit protein mL46.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	6	234	Total	C	N	O	S	0	0
			1932	1250	327	353	2		

- Molecule 43 is a protein called Large ribosomal subunit protein mL49.

Mol	Chain	Residues	Atoms					AltConf	Trace
43	7	106	Total	C	N	O	S	0	0
			858	553	151	152	2		

- Molecule 44 is a protein called Large ribosomal subunit protein mL50.

Mol	Chain	Residues	Atoms					AltConf	Trace
44	8	199	Total	C	N	O	S	0	0
			1629	1032	278	315	4		

- Molecule 45 is a protein called Large ribosomal subunit protein mL57.

Mol	Chain	Residues	Atoms					AltConf	Trace
45	9	202	Total	C	N	O	S	0	0
			1587	1014	279	289	5		

- Molecule 46 is a RNA chain called Large ribosomal subunit rRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	A	2876	Total	C	N	O	P	0	0
			61141	27507	10875	19889	2870		

- Molecule 47 is a protein called Large ribosomal subunit protein uL2m.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	B	321	Total	C	N	O	S	0	0
			2527	1575	507	436	9		

- Molecule 48 is a protein called Large ribosomal subunit protein uL3m.

Mol	Chain	Residues	Atoms					AltConf	Trace
48	C	249	Total	C	N	O	S	0	0
			1932	1218	360	344	10		

- Molecule 49 is a protein called Large ribosomal subunit protein uL4m.

Mol	Chain	Residues	Atoms					AltConf	Trace
49	D	252	Total	C	N	O	S	0	0
			1989	1262	355	369	3		

- Molecule 50 is a protein called Large ribosomal subunit protein uL5m.

Mol	Chain	Residues	Atoms					AltConf	Trace
50	E	274	Total	C	N	O	S	0	0
			2187	1396	391	394	6		

- Molecule 51 is a protein called Large ribosomal subunit protein uL6m.

Mol	Chain	Residues	Atoms					AltConf	Trace
51	F	196	Total	C	N	O	S	0	0
			1524	967	273	280	4		

- Molecule 52 is a protein called Large ribosomal subunit protein bL9m.

Mol	Chain	Residues	Atoms					AltConf	Trace
52	G	74	Total	C	N	O	S	0	0
			617	393	110	113	1		

- Molecule 53 is a protein called Large ribosomal subunit protein uL13m.

Mol	Chain	Residues	Atoms					AltConf	Trace
53	H	160	Total	C	N	O	S	0	0
			1275	807	240	224	4		

- Molecule 54 is a protein called Large ribosomal subunit protein uL14m.

Mol	Chain	Residues	Atoms					AltConf	Trace
54	I	127	Total	C	N	O	S	0	0
			956	595	180	170	11		

- Molecule 55 is a protein called Large ribosomal subunit protein uL15m.

Mol	Chain	Residues	Atoms					AltConf	Trace
55	J	220	Total	C	N	O	S	0	0
			1746	1119	326	298	3		

- Molecule 56 is a protein called Large ribosomal subunit protein uL16m.

Mol	Chain	Residues	Atoms					AltConf	Trace
56	K	195	Total	C	N	O	S	0	0
			1573	1001	297	270	5		

- Molecule 57 is a protein called Large ribosomal subunit protein bL17m.

Mol	Chain	Residues	Atoms					AltConf	Trace
57	L	229	Total	C	N	O	S	0	0
			1817	1140	333	336	8		

- Molecule 58 is a protein called Large ribosomal subunit protein bL19m.

Mol	Chain	Residues	Atoms					AltConf	Trace
58	M	151	Total	C	N	O	S	0	0
			1206	766	220	217	3		

- Molecule 59 is a protein called Large ribosomal subunit protein bL21m.

Mol	Chain	Residues	Atoms					AltConf	Trace
59	N	118	Total	C	N	O	S	0	0
			948	598	177	171	2		

- Molecule 60 is a protein called Large ribosomal subunit protein uL22m.

Mol	Chain	Residues	Atoms					AltConf	Trace
60	O	225	Total	C	N	O	S	0	0
			1826	1169	332	320	5		

- Molecule 61 is a protein called Large ribosomal subunit protein uL23m.

Mol	Chain	Residues	Atoms					AltConf	Trace
61	P	207	Total	C	N	O	S	0	0
			1729	1104	310	309	6		

- Molecule 62 is a protein called Large ribosomal subunit protein uL24m.

Mol	Chain	Residues	Atoms					AltConf	Trace
62	Q	284	Total	C	N	O	S	0	0
			2272	1451	396	417	8		

- Molecule 63 is a protein called Large ribosomal subunit protein bL27m.

Mol	Chain	Residues	Atoms					AltConf	Trace
63	R	331	Total	C	N	O	S	0	0
			2738	1728	497	509	4		

- Molecule 64 is a protein called Large ribosomal subunit protein bL28m.

Mol	Chain	Residues	Atoms					AltConf	Trace
64	S	185	Total	C	N	O	S	0	0
			1543	994	281	265	3		

- Molecule 65 is a protein called Large ribosomal subunit protein uL29m.

Mol	Chain	Residues	Atoms					AltConf	Trace
65	T	216	Total	C	N	O	S	0	0
			1792	1139	324	325	4		

- Molecule 66 is a protein called Large ribosomal subunit protein uL30m.

Mol	Chain	Residues	Atoms				AltConf	Trace
66	U	82	Total	C	N	O	0	0
			639	410	116	113		

- Molecule 67 is a protein called Large ribosomal subunit protein bL31m.

Mol	Chain	Residues	Atoms					AltConf	Trace
67	V	66	Total	C	N	O	S	0	0
			543	340	110	92	1		

- Molecule 68 is a protein called Large ribosomal subunit protein bL32m.

Mol	Chain	Residues	Atoms					AltConf	Trace
68	W	112	Total	C	N	O	S	0	0
			937	587	181	163	6		

- Molecule 69 is a protein called Large ribosomal subunit protein bL33m.

Mol	Chain	Residues	Atoms				AltConf	Trace
69	X	64	Total	C	N	O	0	0
			512	330	96	86		

- Molecule 70 is a protein called Large ribosomal subunit protein bL34m.

Mol	Chain	Residues	Atoms				AltConf	Trace
70	Y	46	Total	C	N	O	0	0
			385	245	82	58		

- Molecule 71 is a protein called Large ribosomal subunit protein mL58.

Mol	Chain	Residues	Atoms					AltConf	Trace
71	a	177	Total	C	N	O	S	0	0
			1440	907	267	260	6		

- Molecule 72 is a protein called Large ribosomal subunit protein mL59.

Mol	Chain	Residues	Atoms					AltConf	Trace
72	b	155	Total	C	N	O	S	0	0
			1299	850	225	221	3		

- Molecule 73 is a protein called Large ribosomal subunit protein mL60.

Mol	Chain	Residues	Atoms					AltConf	Trace
73	c	119	Total	C	N	O	S	0	0
			1004	645	191	164	4		

- Molecule 74 is a protein called Large ribosomal subunit protein mL67.

Mol	Chain	Residues	Atoms					AltConf	Trace
74	d	206	Total	C	N	O	S	0	0
			1746	1117	318	304	7		

- Molecule 75 is a protein called Large ribosomal subunit protein uL10m.

Mol	Chain	Residues	Atoms					AltConf	Trace
75	e	165	Total	C	N	O	S	0	0
			1340	862	234	238	6		

- Molecule 76 is a protein called Large ribosomal subunit protein uL11m.

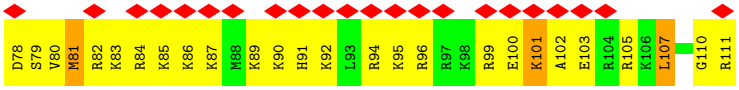
Mol	Chain	Residues	Atoms					AltConf	Trace
76	f	138	Total	C	N	O	S	0	0
			1032	668	176	183	5		

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 atom inclusion in map 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 diamond above a residue indicates a poor fit to the EM map for this residue (all-atom inclusion < 40%). 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.

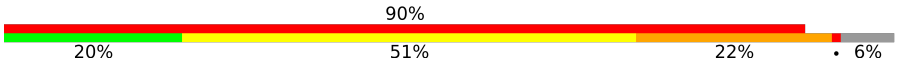
• Molecule 1: Small ribosomal subunit protein mS38

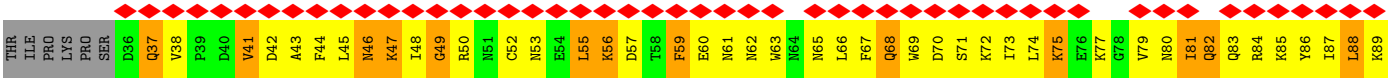
Chain AA:

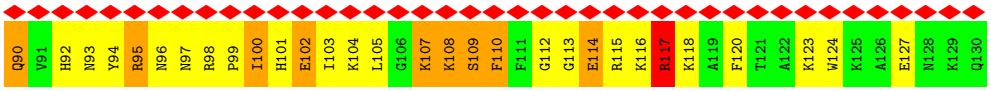


• Molecule 2: Small ribosomal subunit protein mS41

Chain AB:

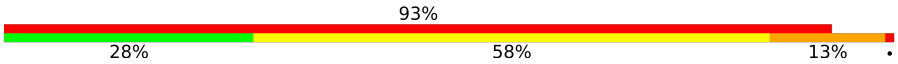


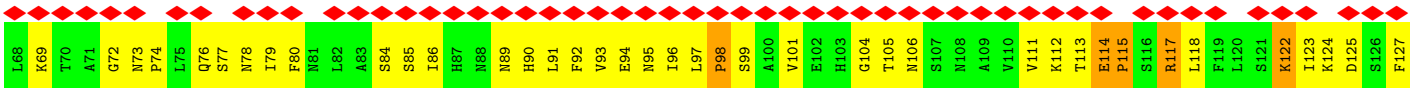


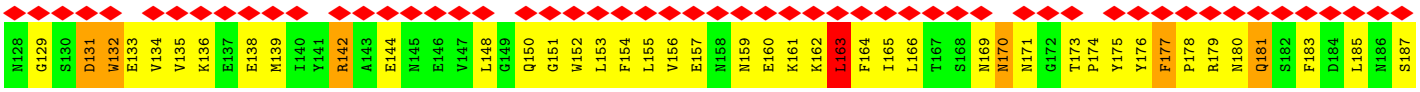


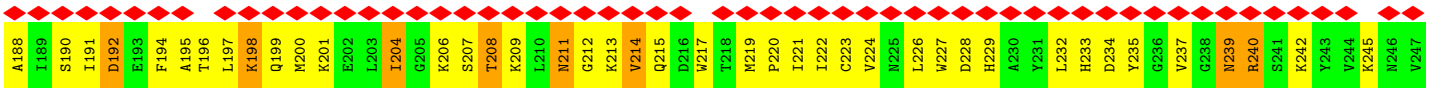
• Molecule 3: Small ribosomal subunit protein mS42

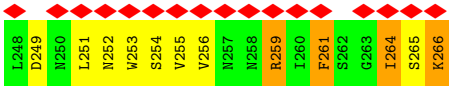
Chain AC:





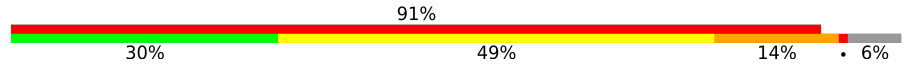


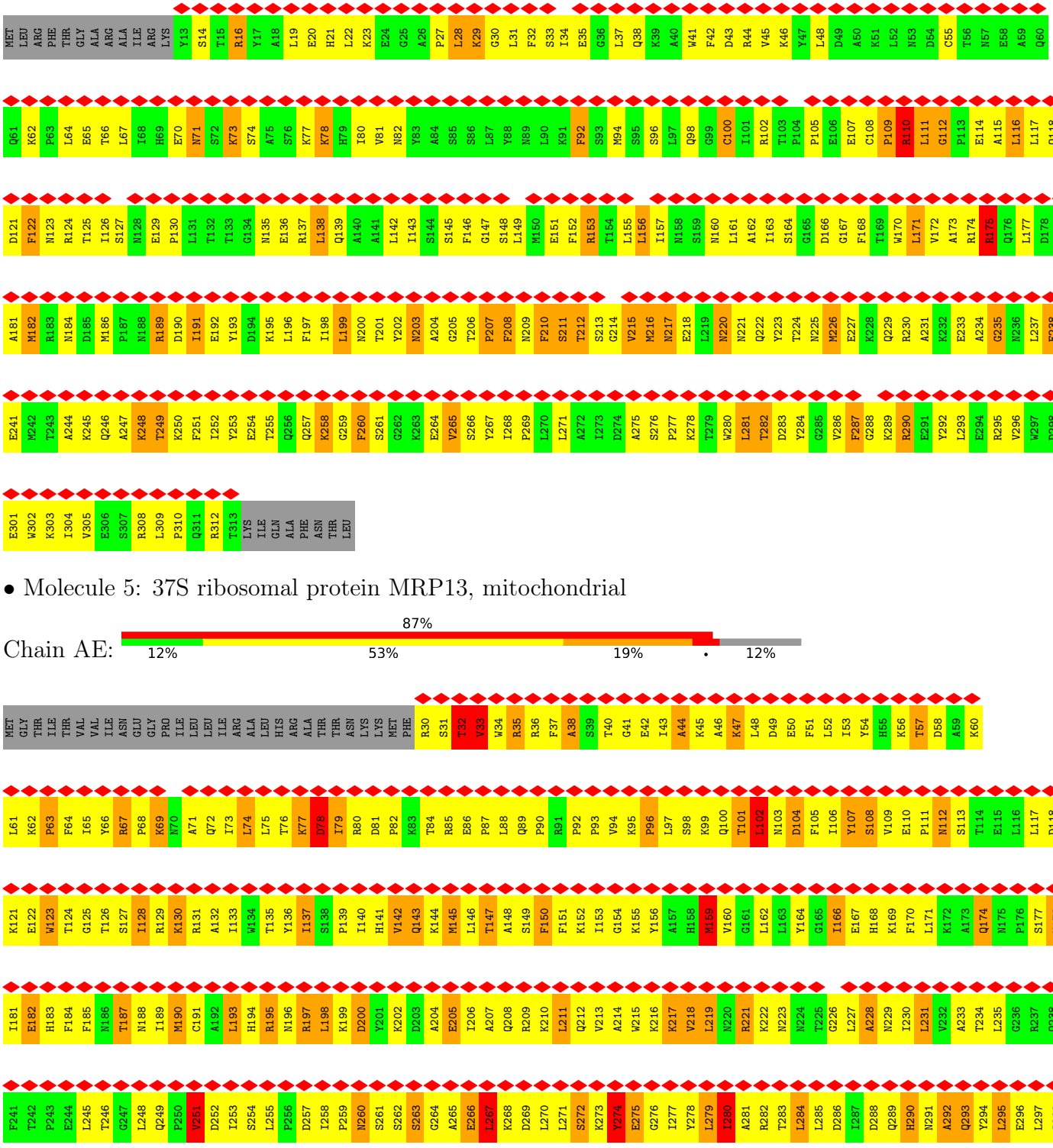




• Molecule 4: 37S ribosomal protein MRP1, mitochondrial

Chain AD:



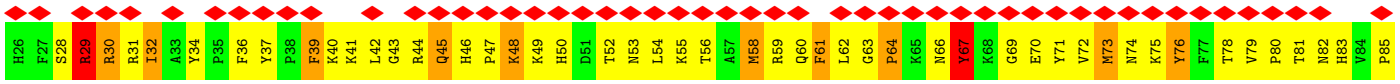


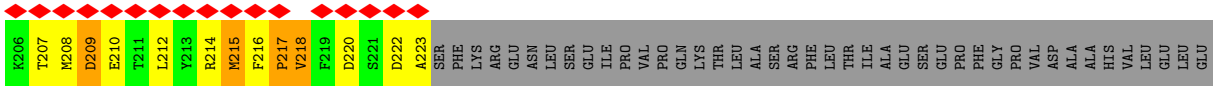
• Molecule 5: 37S ribosomal protein MRP13, mitochondrial

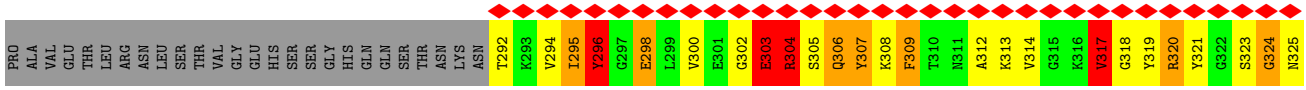
Chain AE:

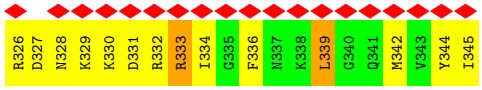
• Molecule 6: Small ribosomal subunit protein mS45

Chain AF:



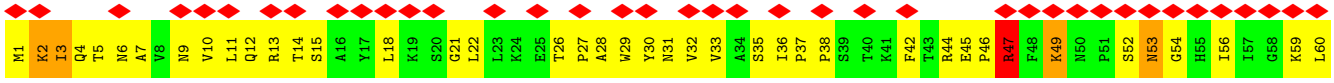


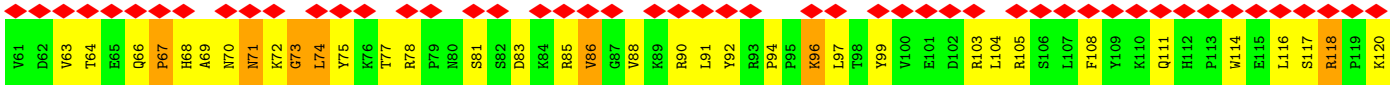


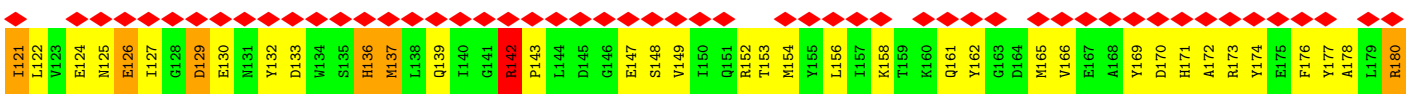


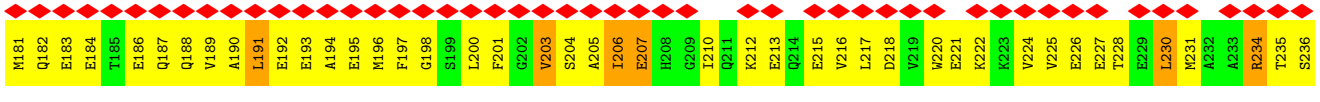
• Molecule 7: Small ribosomal subunit protein mS23

Chain AG:



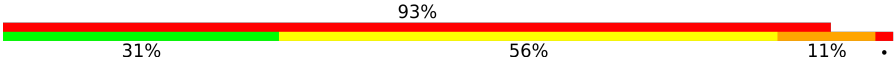


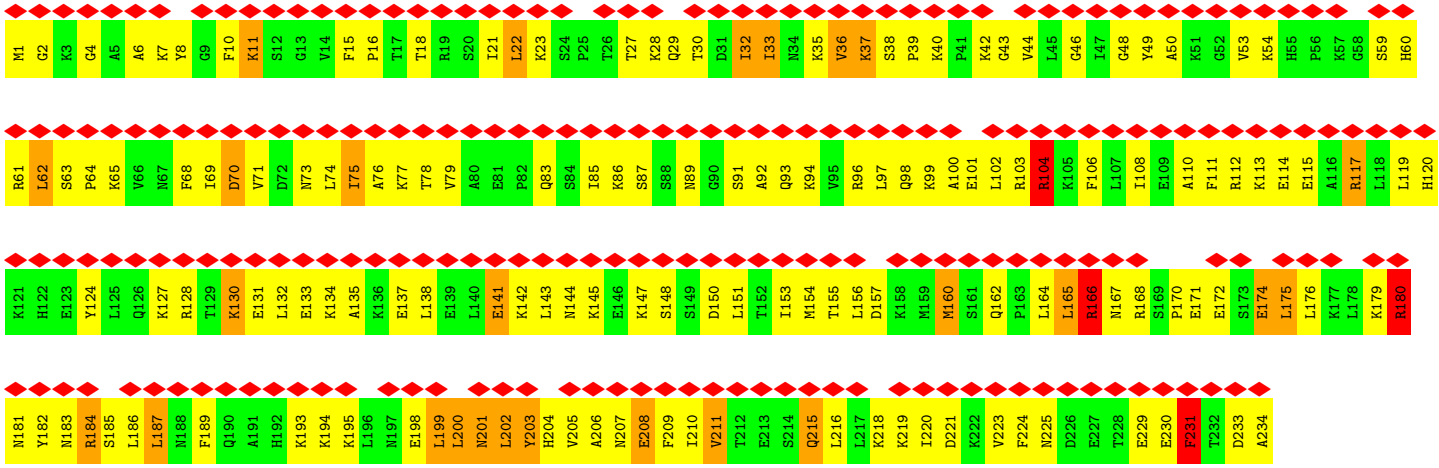




• Molecule 8: Small ribosomal subunit protein mS26

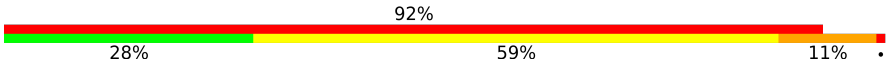
Chain AH:

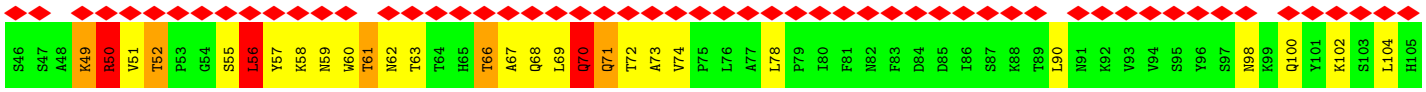




• Molecule 9: Small ribosomal subunit protein mS29

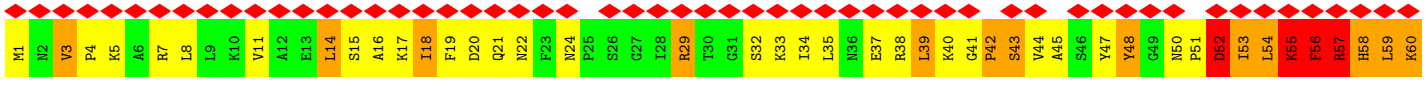
Chain AI:

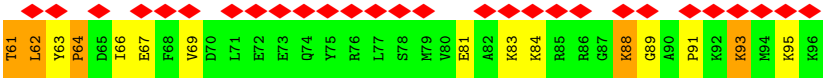




• Molecule 10: Small ribosomal subunit protein mS33

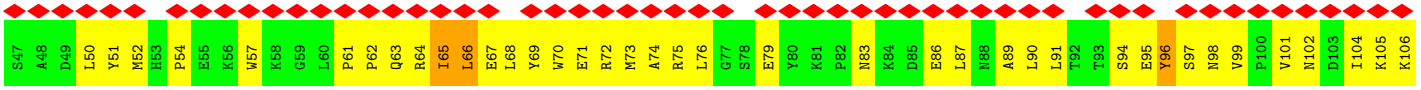
Chain AJ:

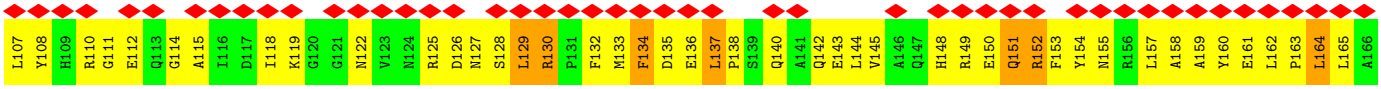


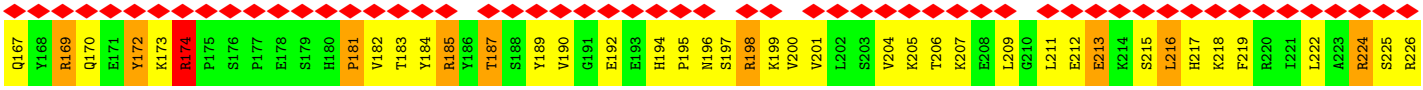


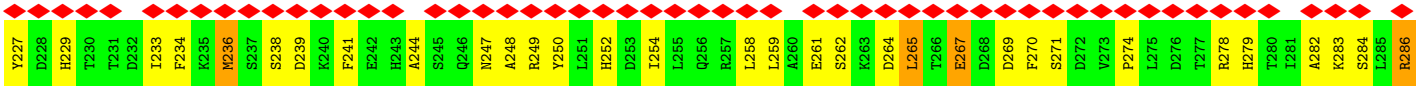
• Molecule 11: Small ribosomal subunit protein mS35

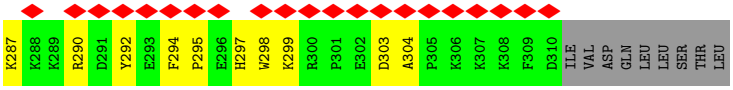
Chain AK:





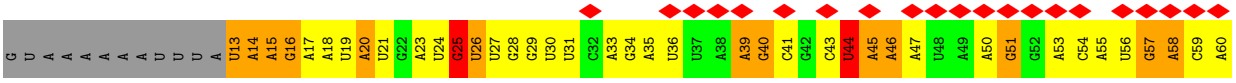


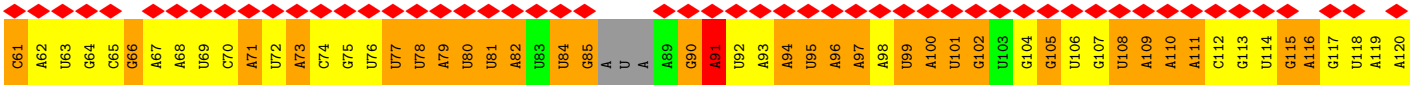


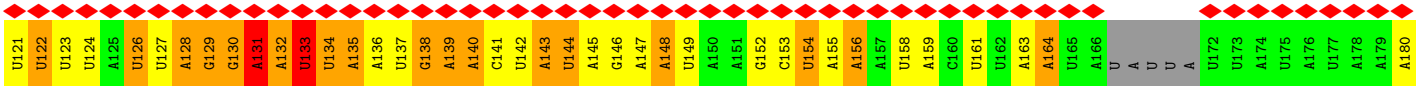


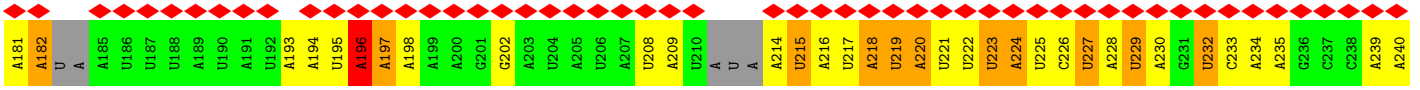
• Molecule 12: Small ribosomal subunit rRNA

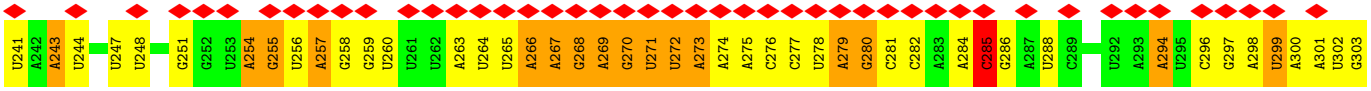
Chain AL:

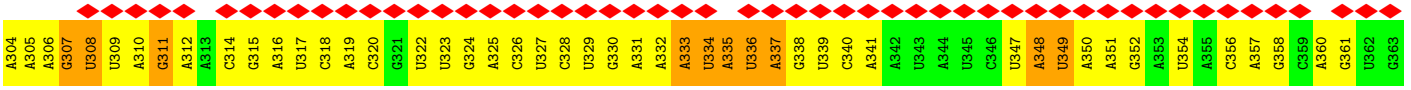


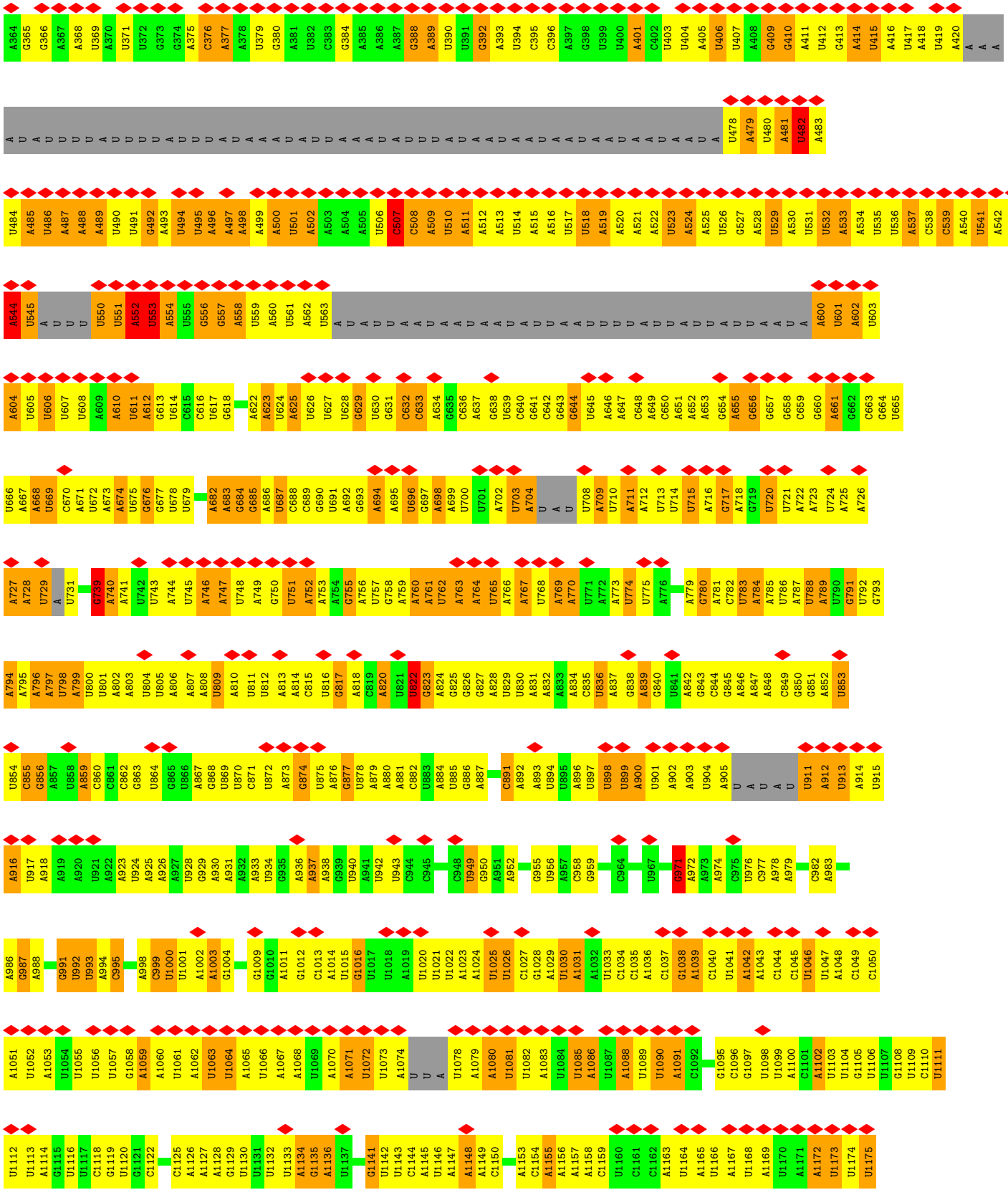


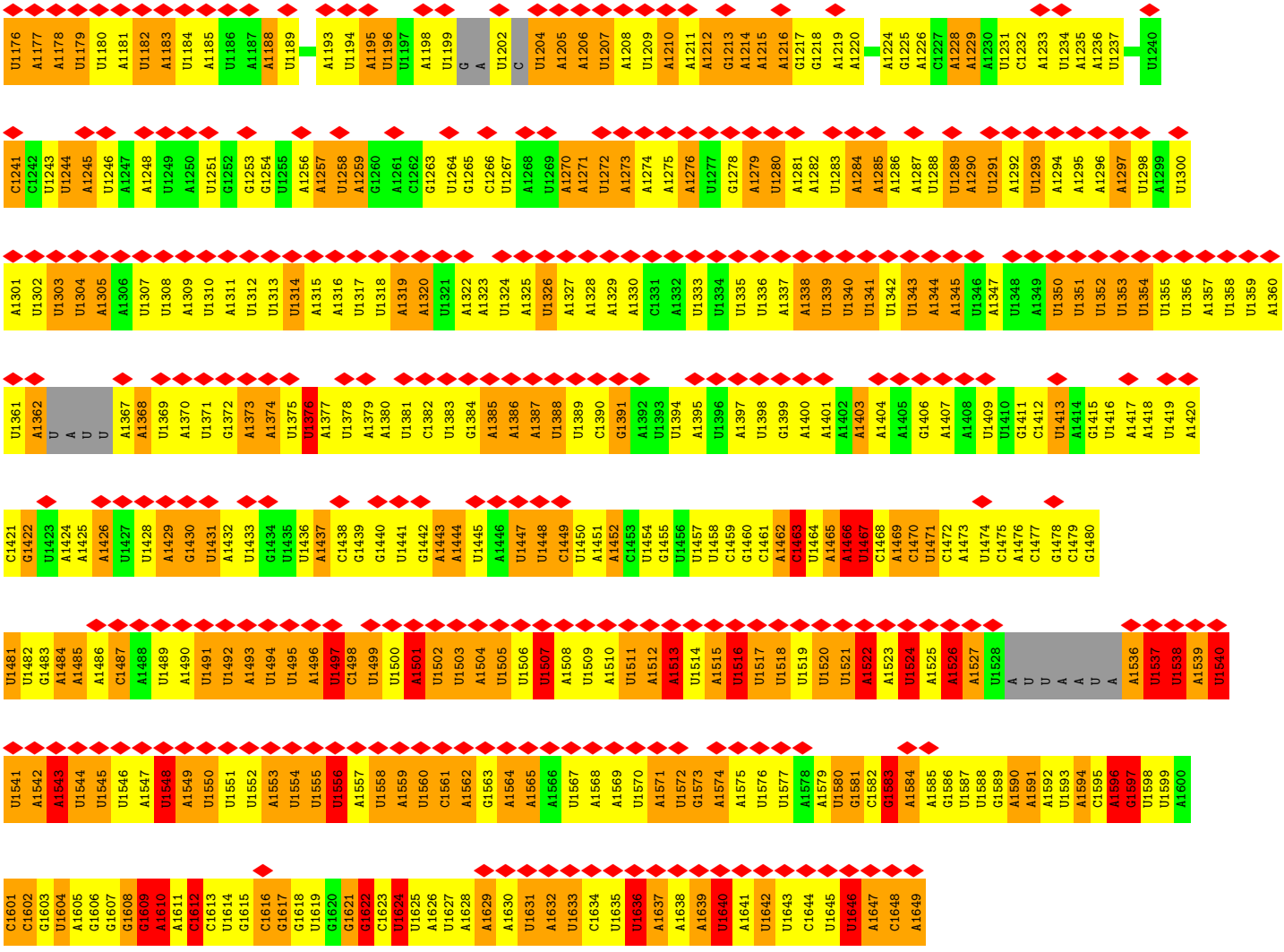






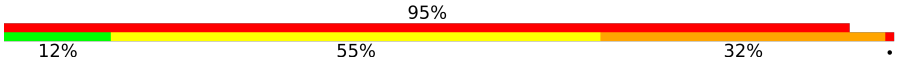


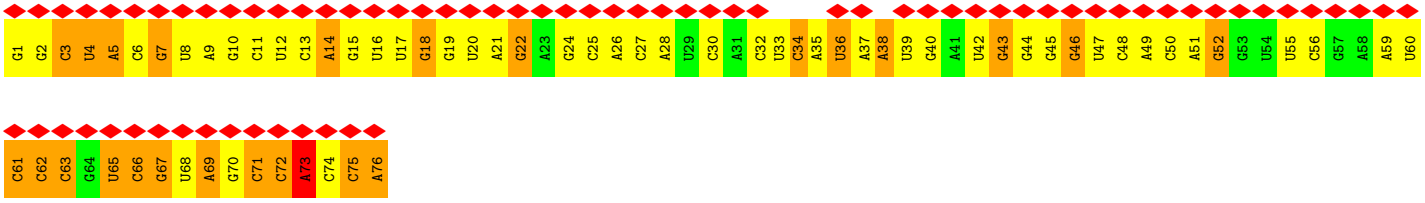




• Molecule 13: Small ribosomal subunit tRNA

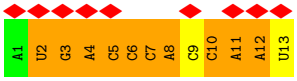
Chain AM:





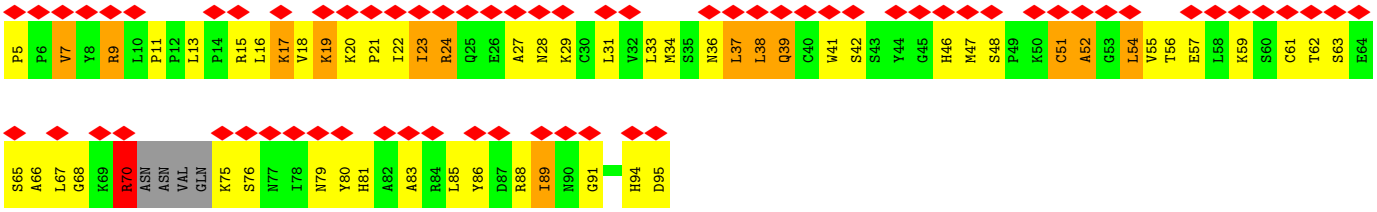
• Molecule 14: mRNA

Chain AN:



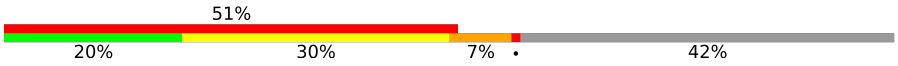
• Molecule 15: Small ribosomal subunit protein mS37

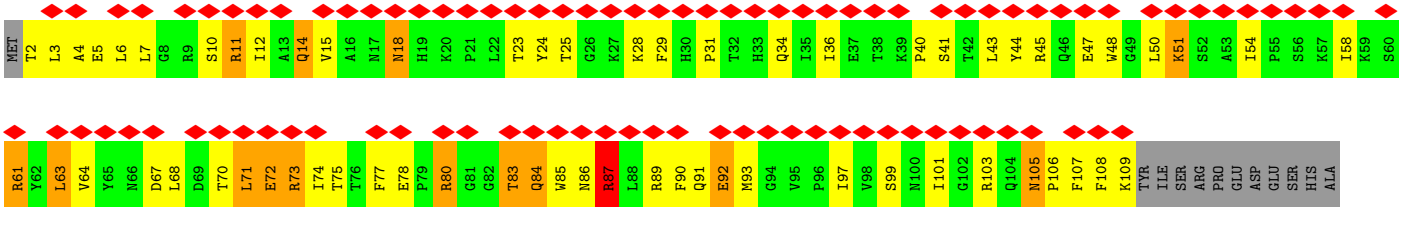
Chain Z:



• Molecule 16: 37S ribosomal protein MRP51, mitochondrial

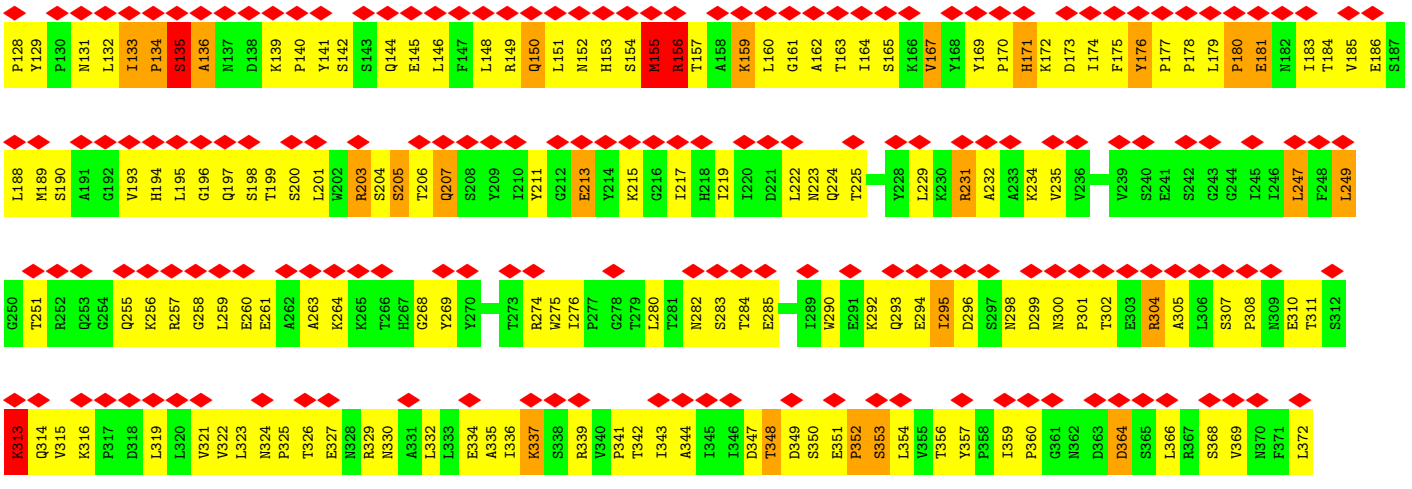
Chain g:

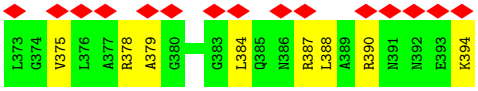




• Molecule 17: Small ribosomal subunit protein uS2m

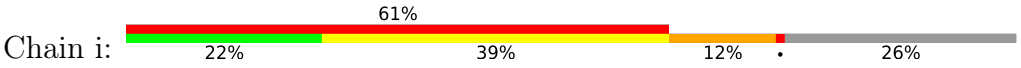
Chain h:

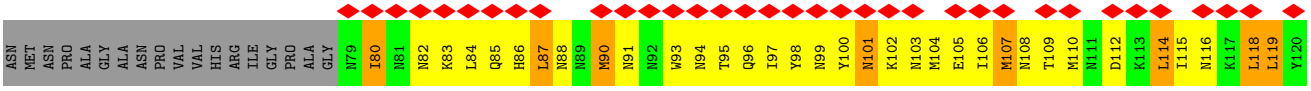


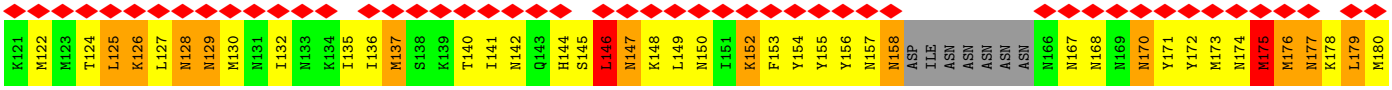


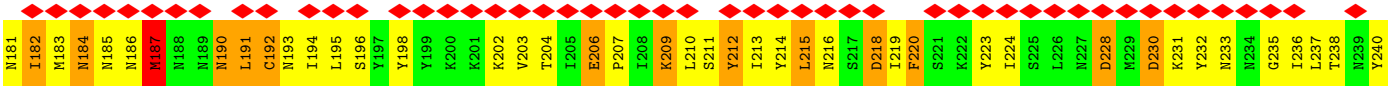
• Molecule 18: Ribosomal protein VAR1, mitochondrial

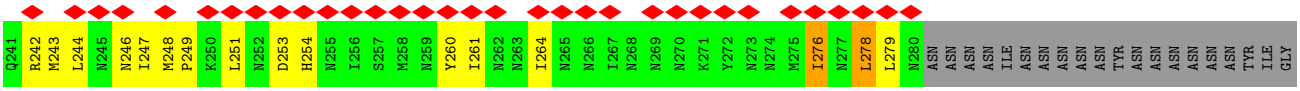
Chain i:

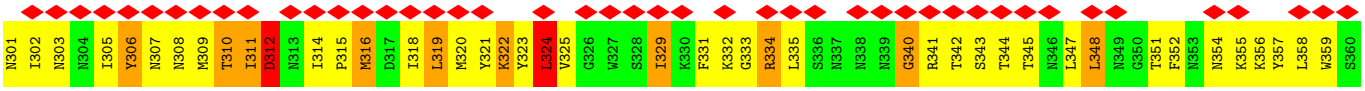


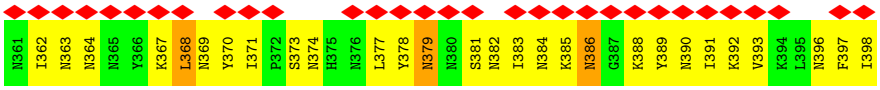






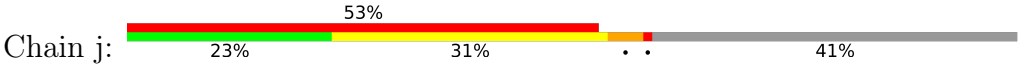


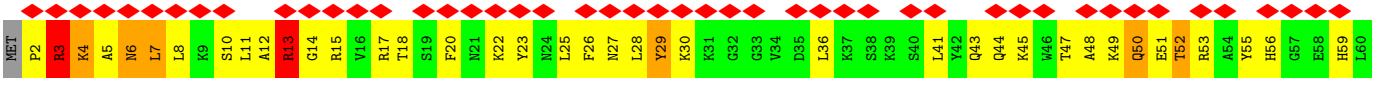


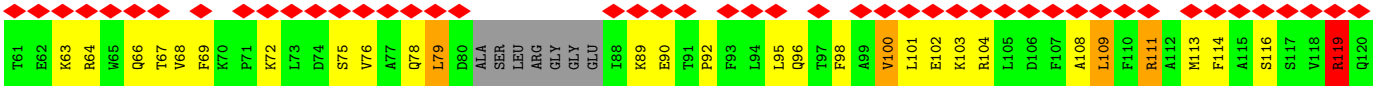


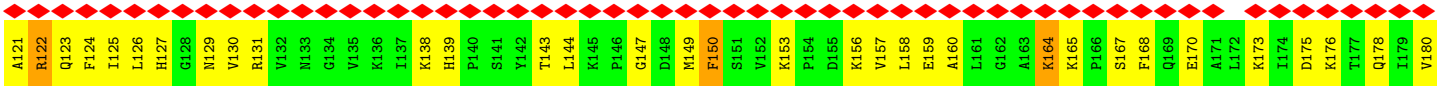
• Molecule 19: 37S ribosomal protein NAM9, mitochondrial

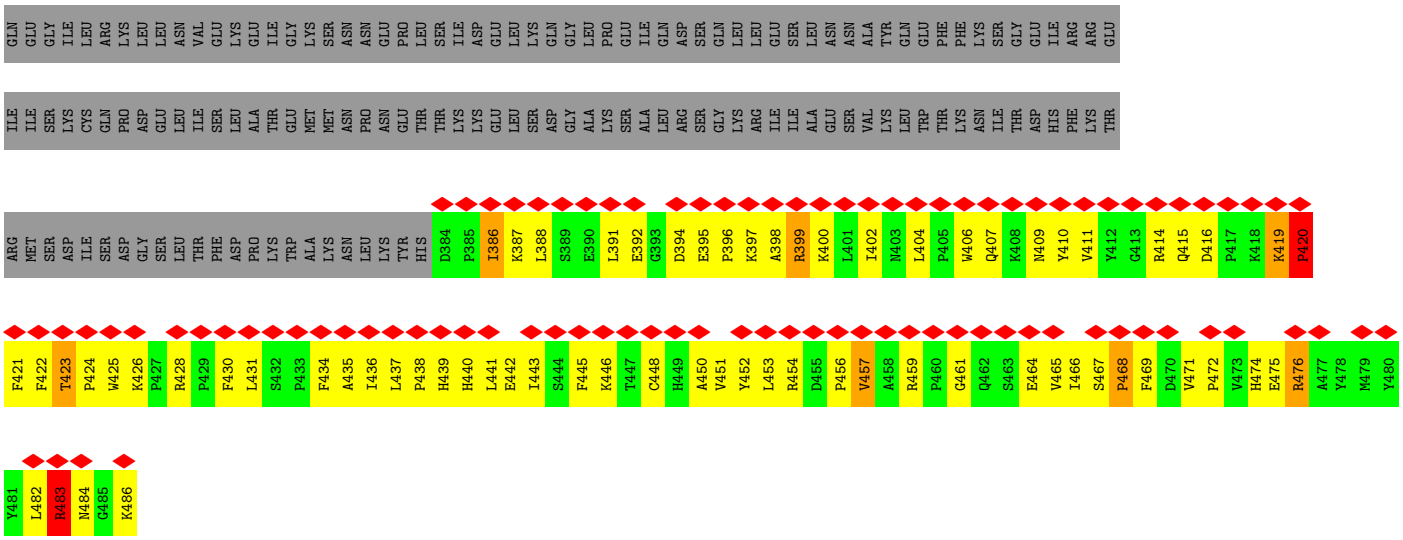
Chain j:



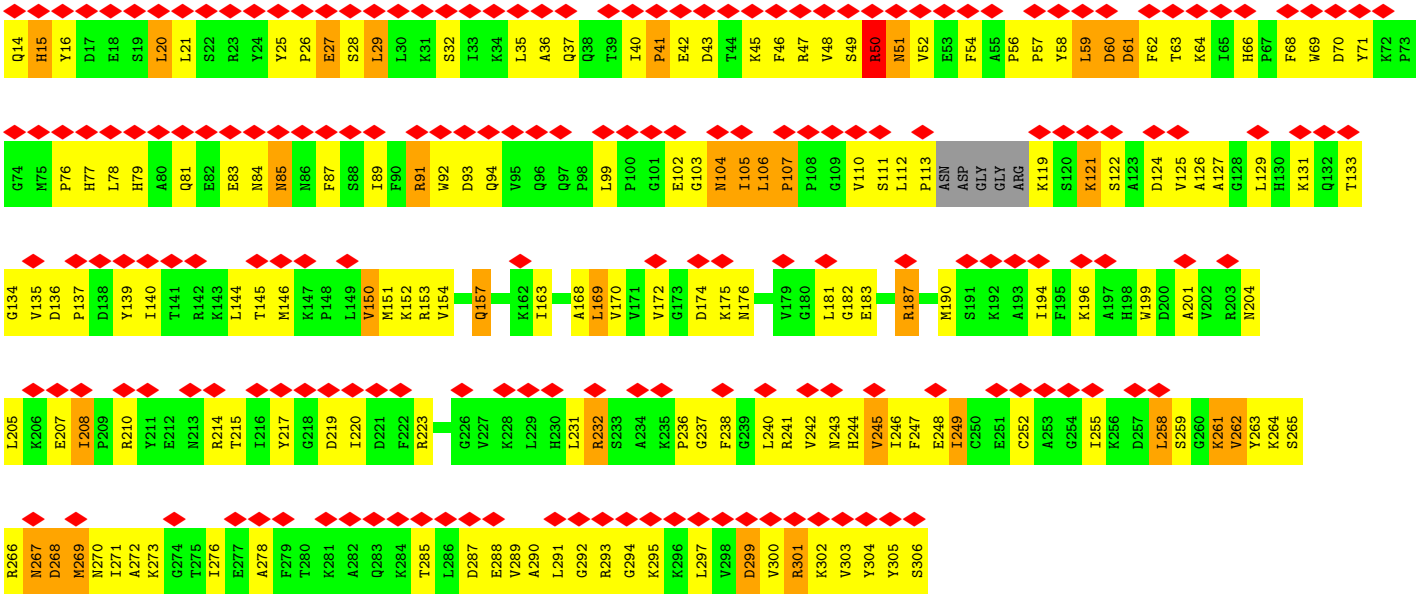




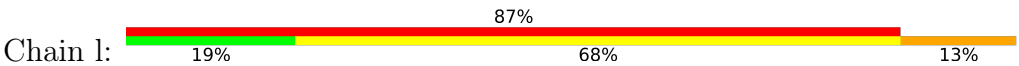


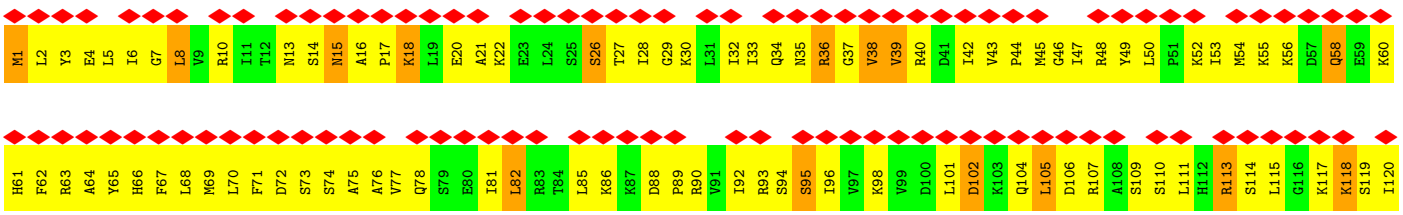


• Molecule 20: Small ribosomal subunit protein uS5m



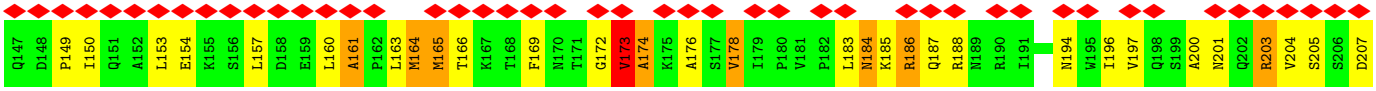
• Molecule 21: 37S ribosomal protein MRP17, mitochondrial

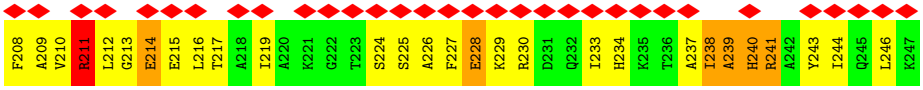




• Molecule 22: Small ribosomal subunit protein uS7m

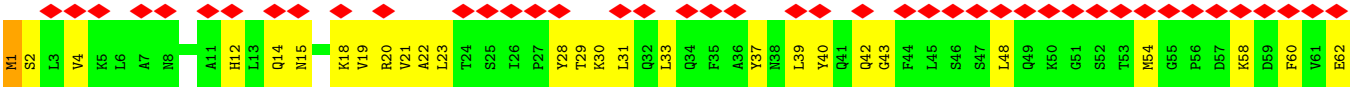
Chain m:

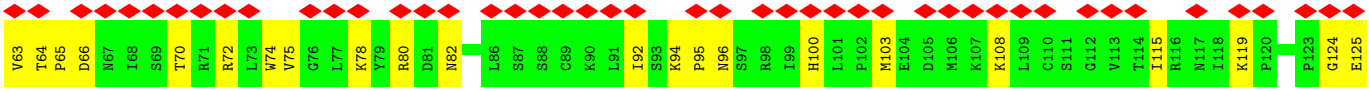


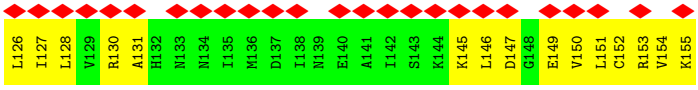


• Molecule 23: 37S ribosomal protein S8, mitochondrial

Chain n:

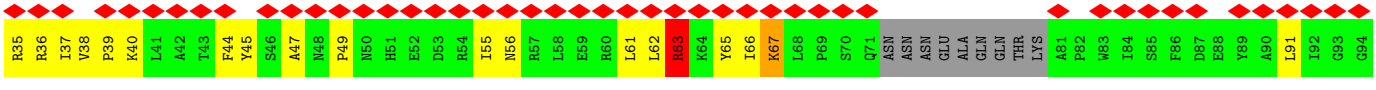


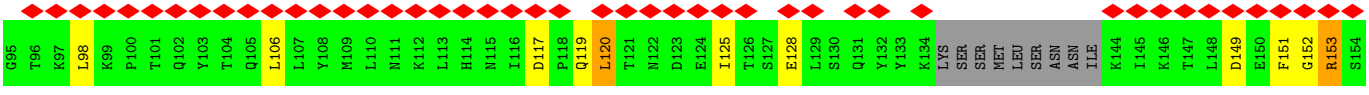


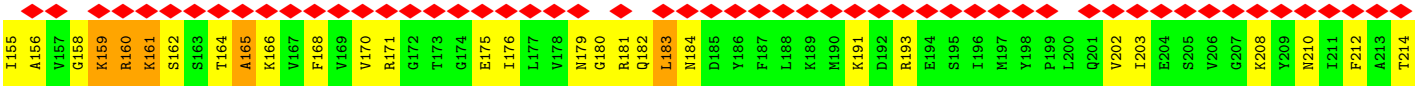


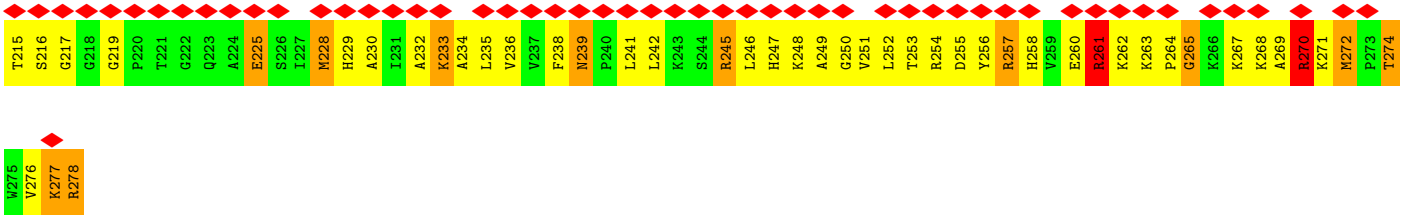
• Molecule 24: Small ribosomal subunit protein uS9m

Chain o:







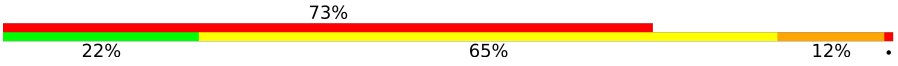


• Molecule 25: Small ribosomal subunit protein uS10m

Chain p:

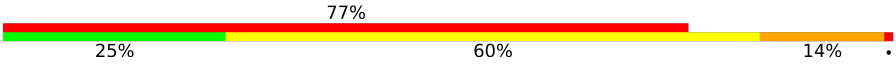
• Molecule 26: Small ribosomal subunit protein uS11m

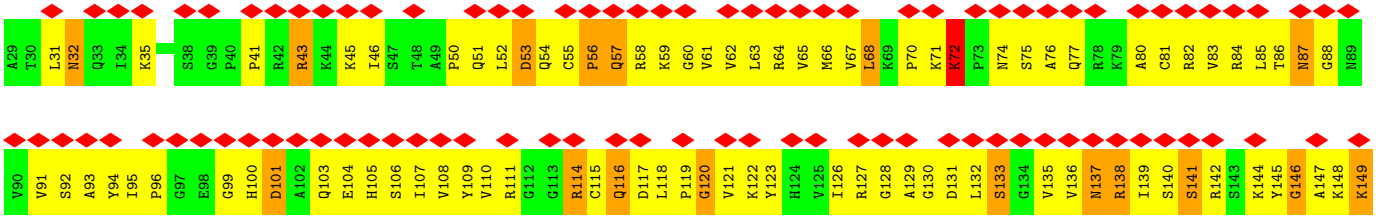
Chain q:

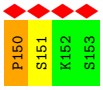


• Molecule 27: Small ribosomal subunit protein uS12m

Chain r:

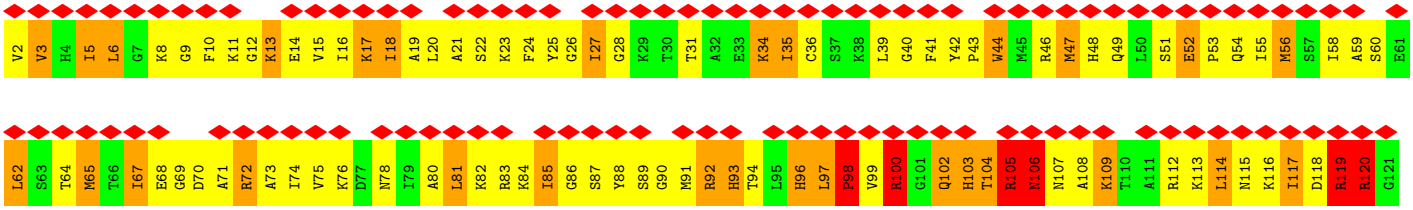






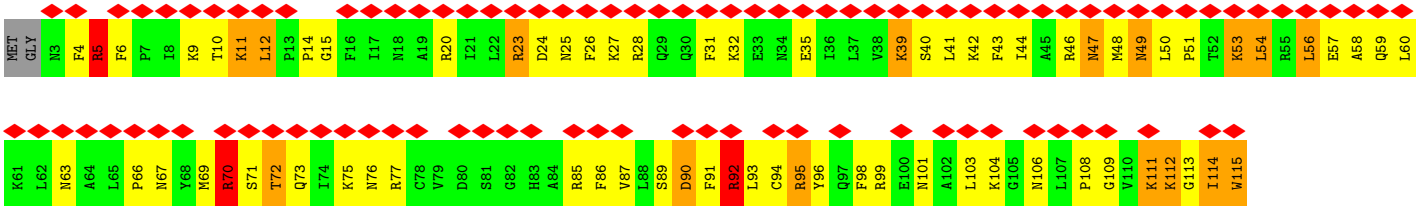
• Molecule 28: Small ribosomal subunit protein uS13m

Chain s:



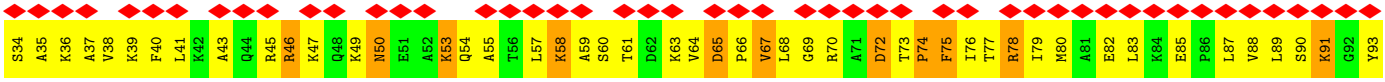
• Molecule 29: 37S ribosomal protein MRP2, mitochondrial

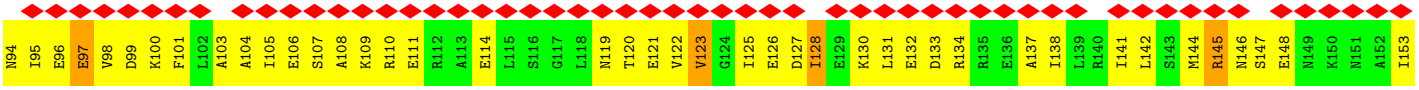
Chain t:

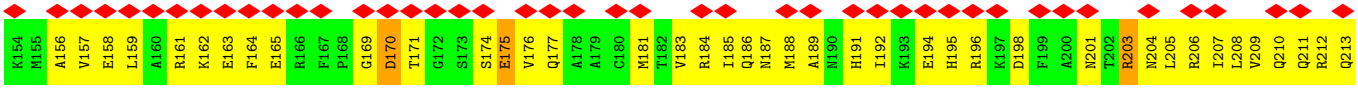


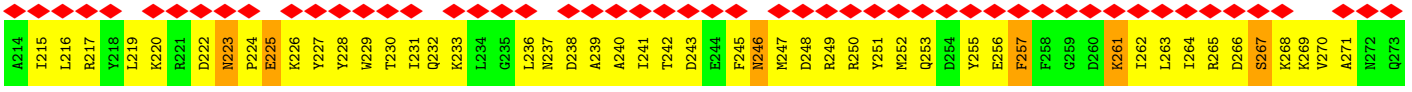
• Molecule 30: Small ribosomal subunit protein uS15m

Chain u:



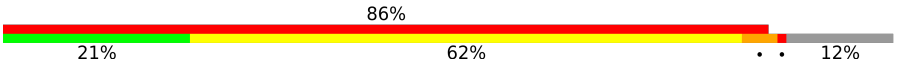


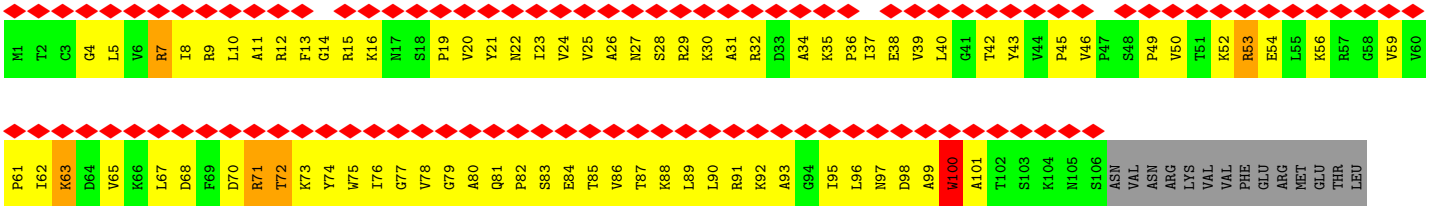




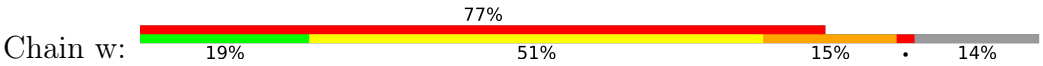
• Molecule 31: Small ribosomal subunit protein bS16m

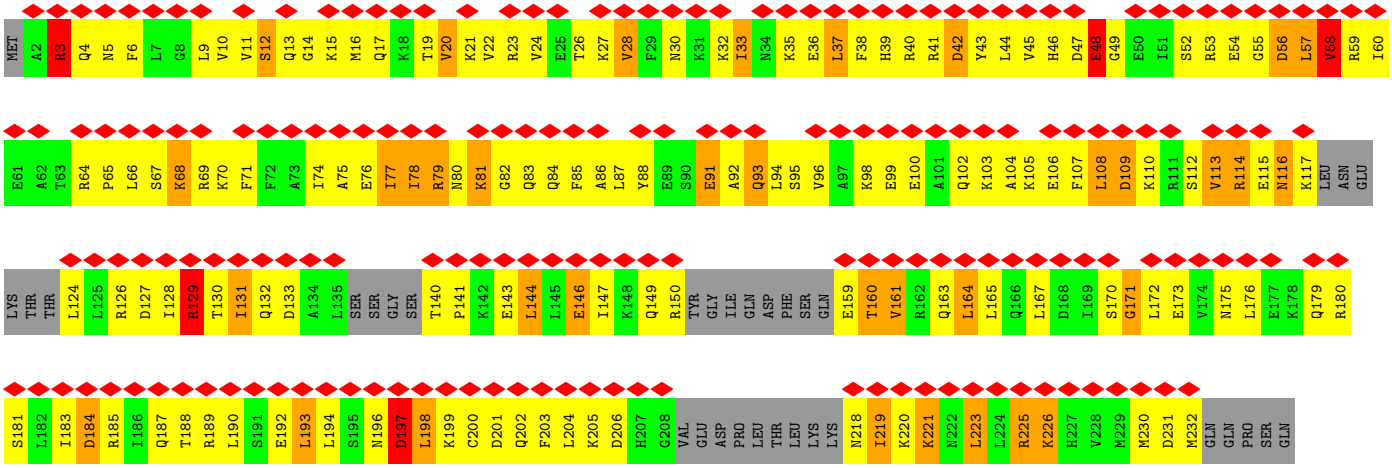
Chain v:



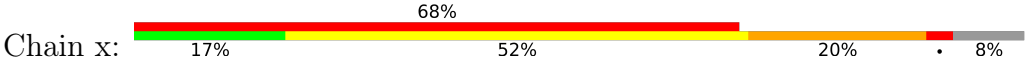


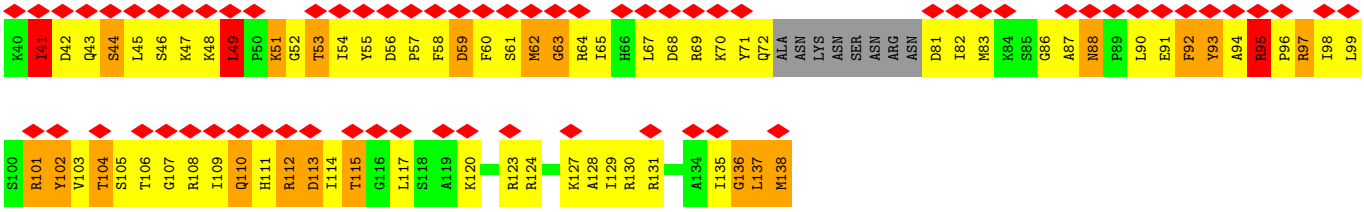
• Molecule 32: 37S ribosomal protein S17, mitochondrial



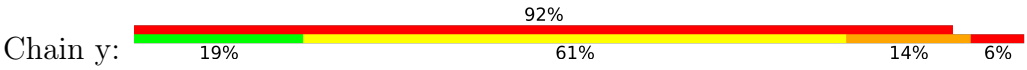


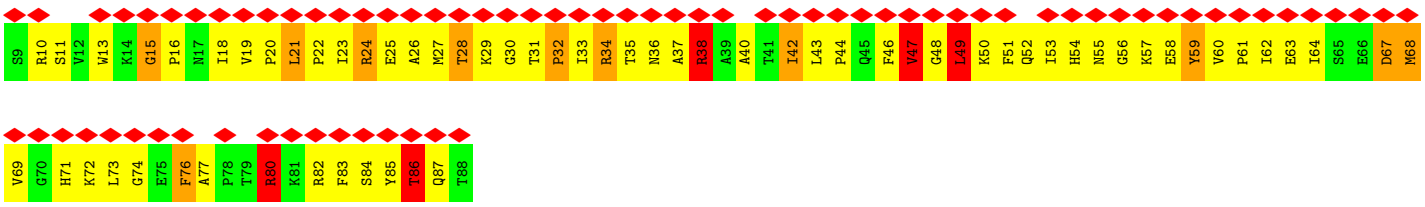
• Molecule 33: Small ribosomal subunit protein bS18m



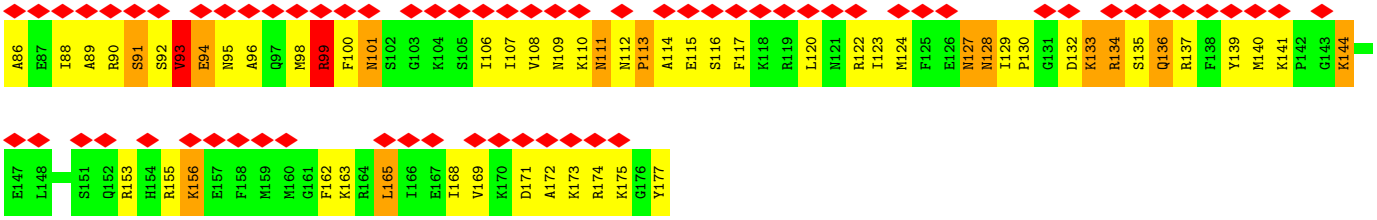


• Molecule 34: Small ribosomal subunit protein uS19m

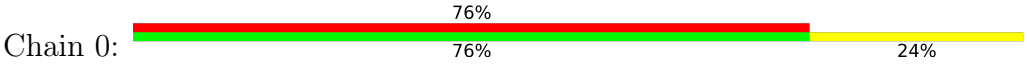




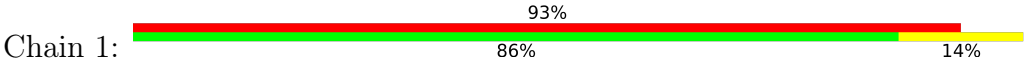
• Molecule 35: Small ribosomal subunit protein bS21m

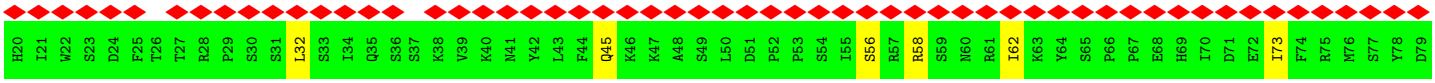


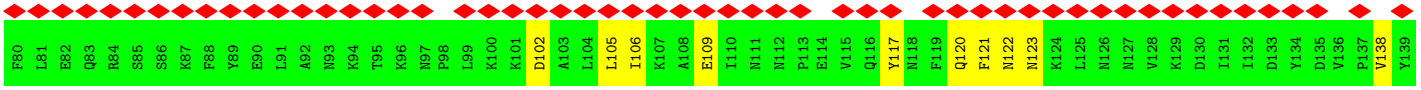
• Molecule 36: Large ribosomal subunit protein bL36m

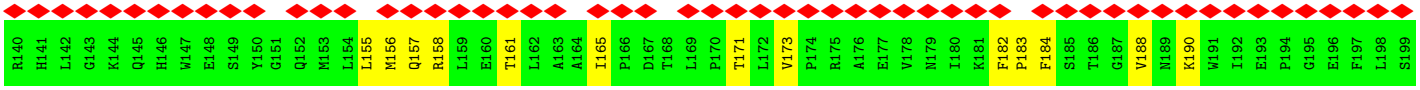


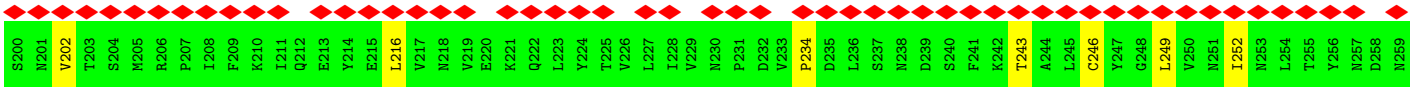
• Molecule 37: Large ribosomal subunit protein mL38

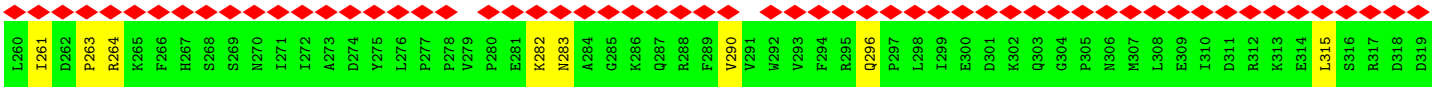


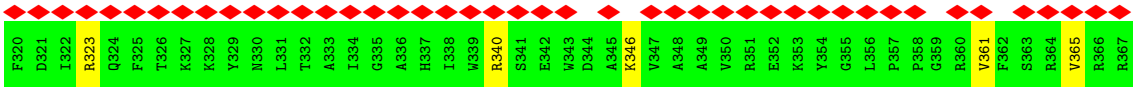




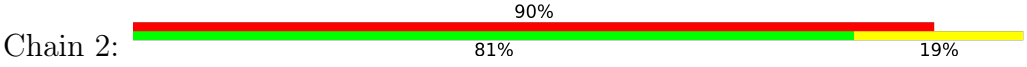


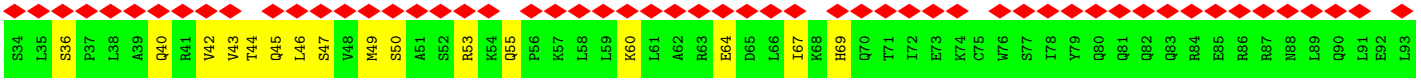


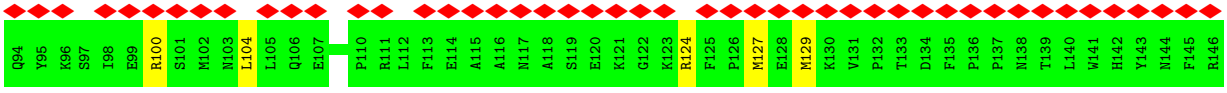




• Molecule 38: Large ribosomal subunit protein mL40

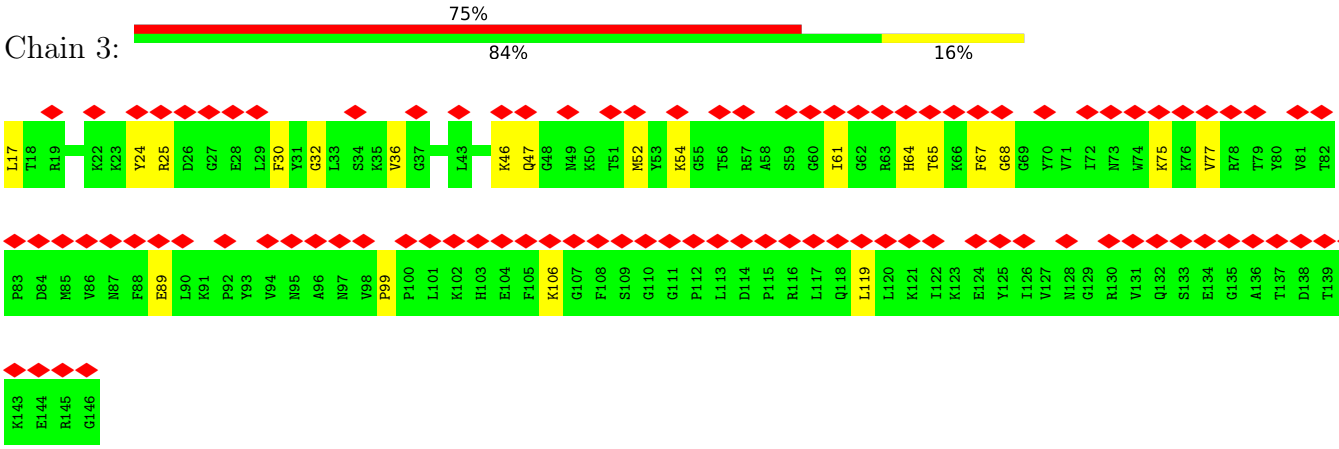






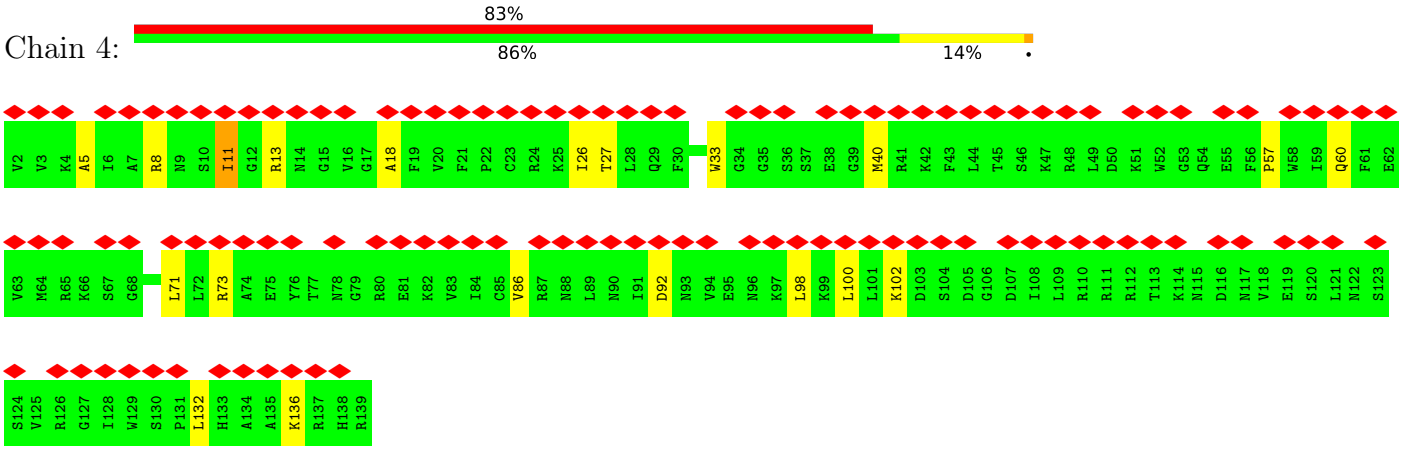
• Molecule 39: Large ribosomal subunit protein mL41

Chain 3:



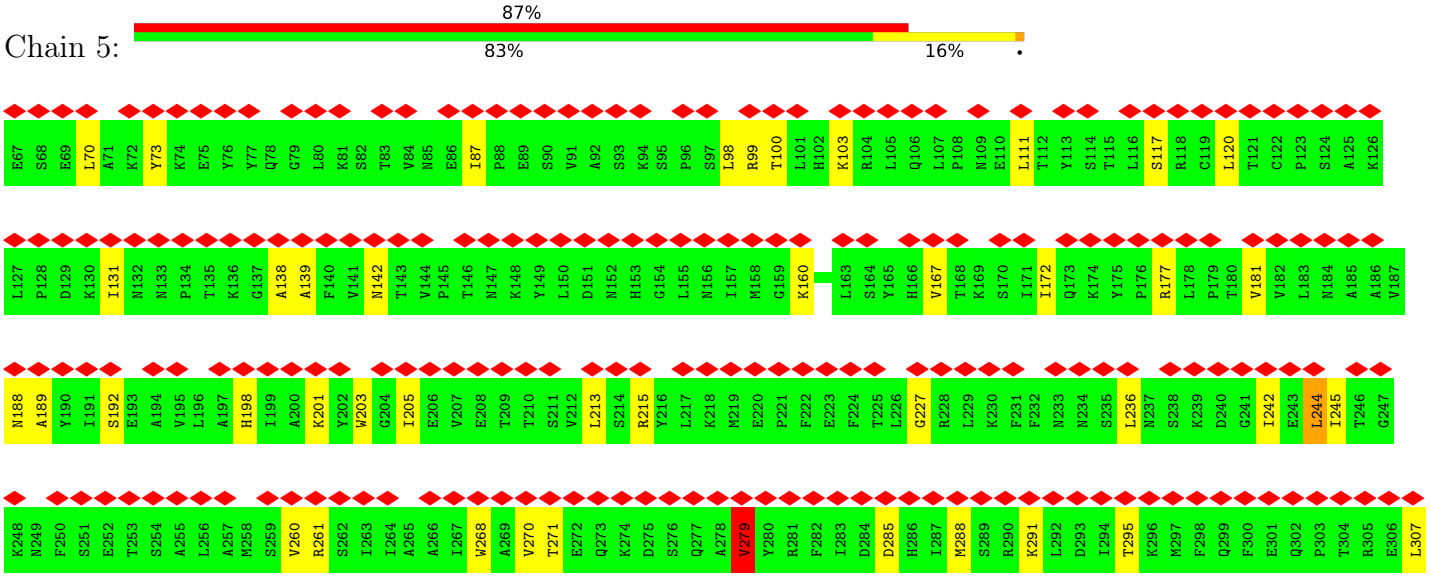
• Molecule 40: Large ribosomal subunit protein mL43

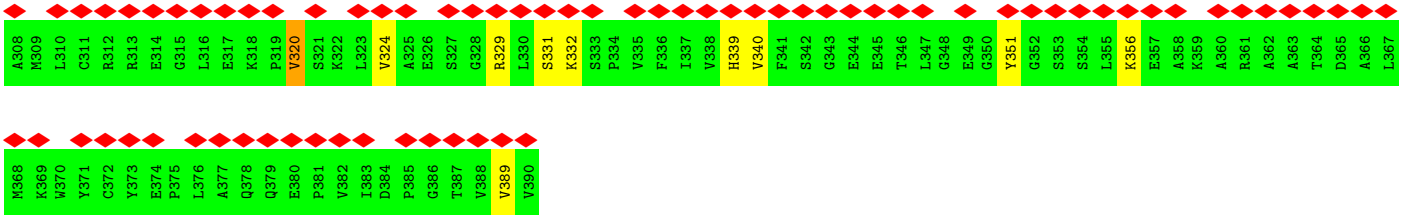
Chain 4:



• Molecule 41: Large ribosomal subunit protein mL44

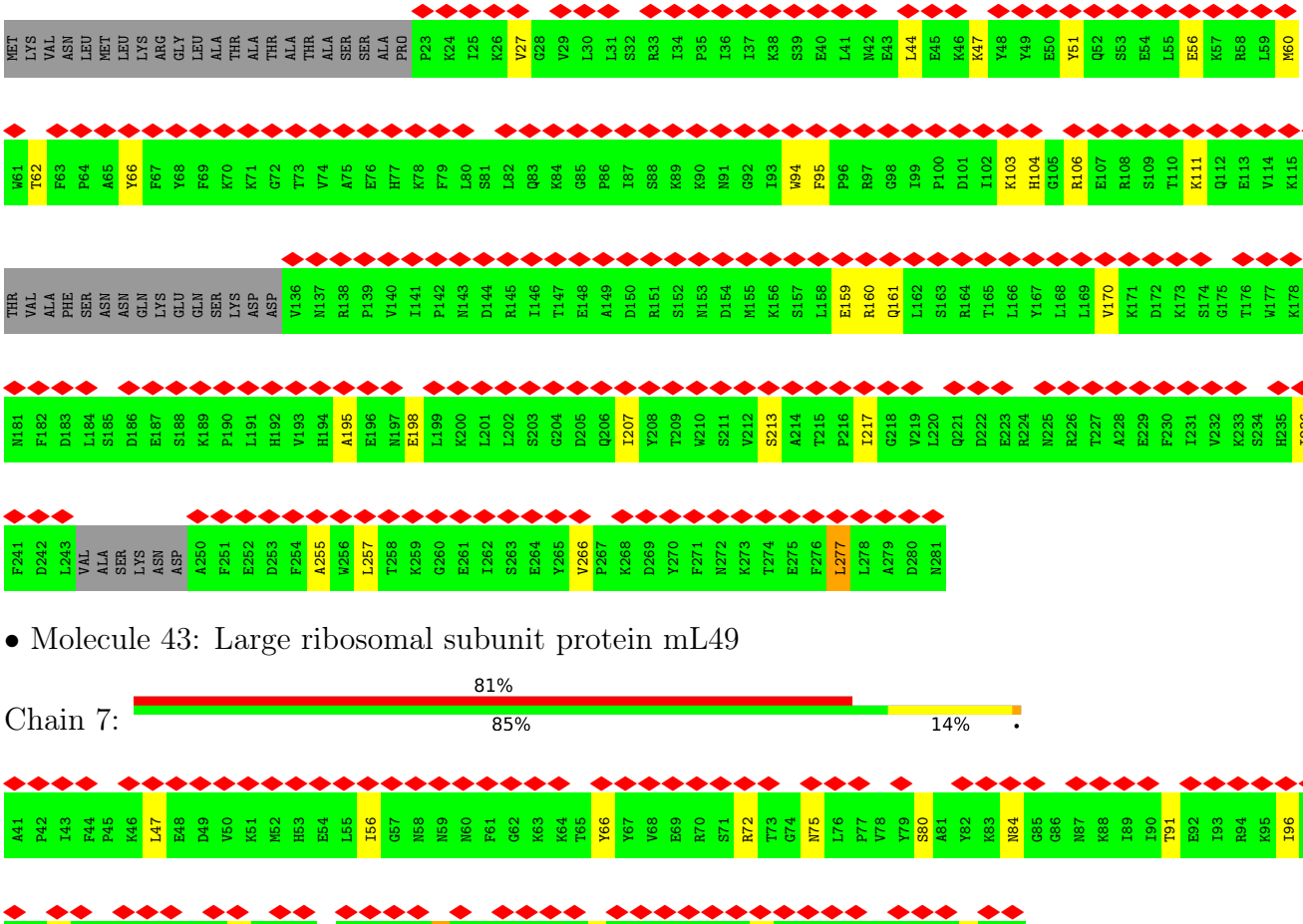
Chain 5:





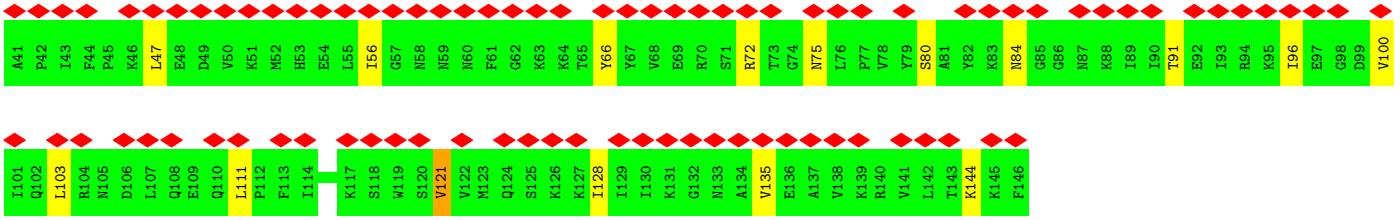
• Molecule 42: Large ribosomal subunit protein mL46

Chain 6:



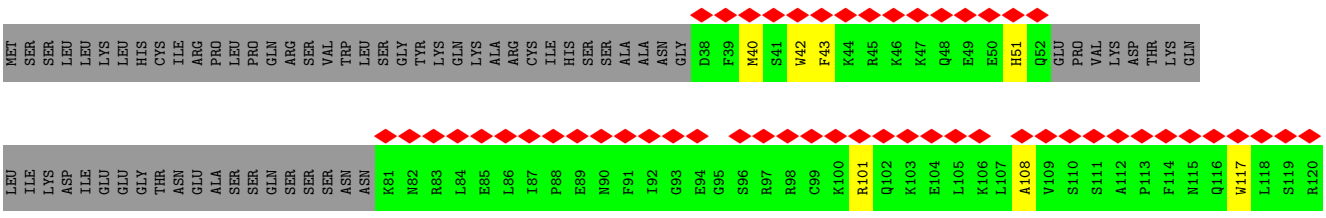
• Molecule 43: Large ribosomal subunit protein mL49

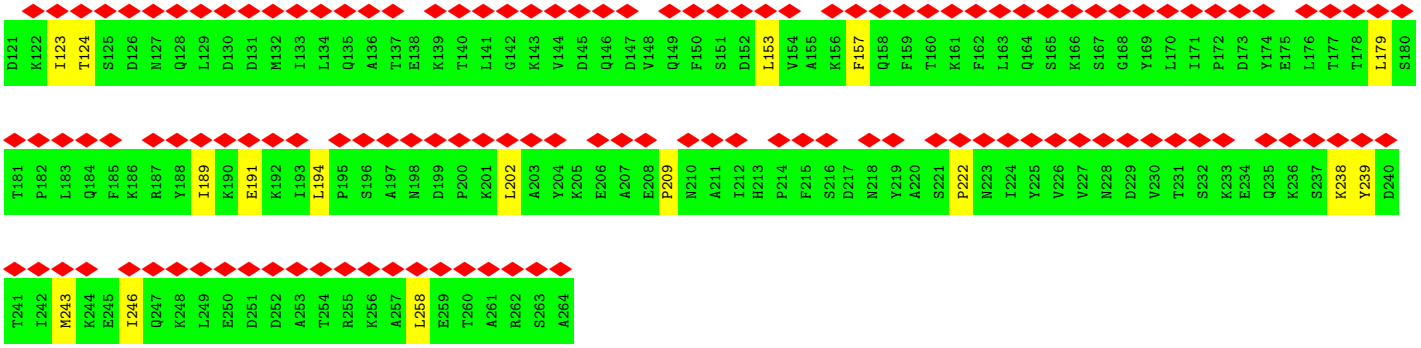
Chain 7:



• Molecule 44: Large ribosomal subunit protein mL50

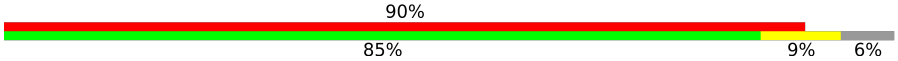
Chain 8:

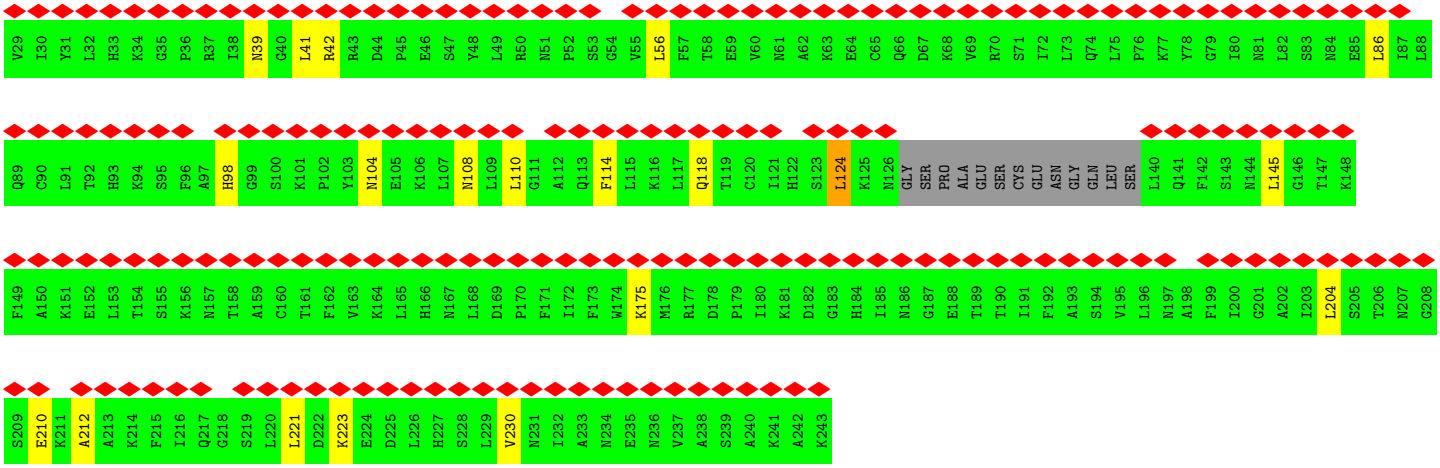




• Molecule 45: Large ribosomal subunit protein mL57

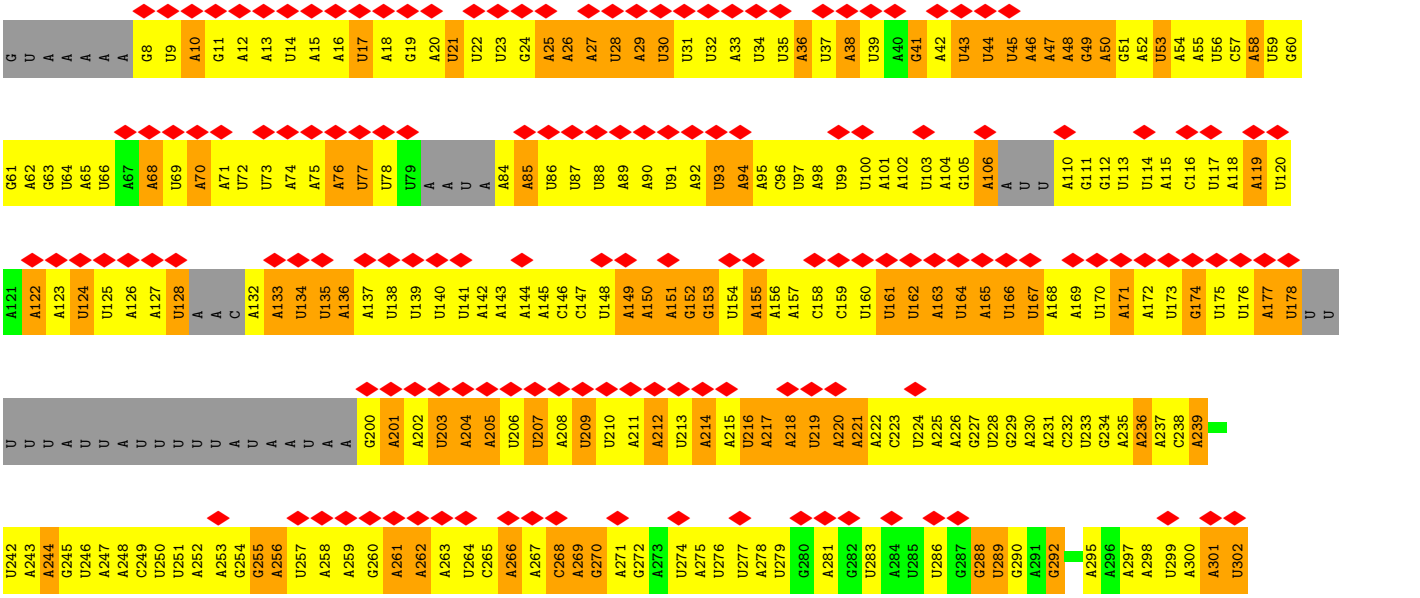
Chain 9:

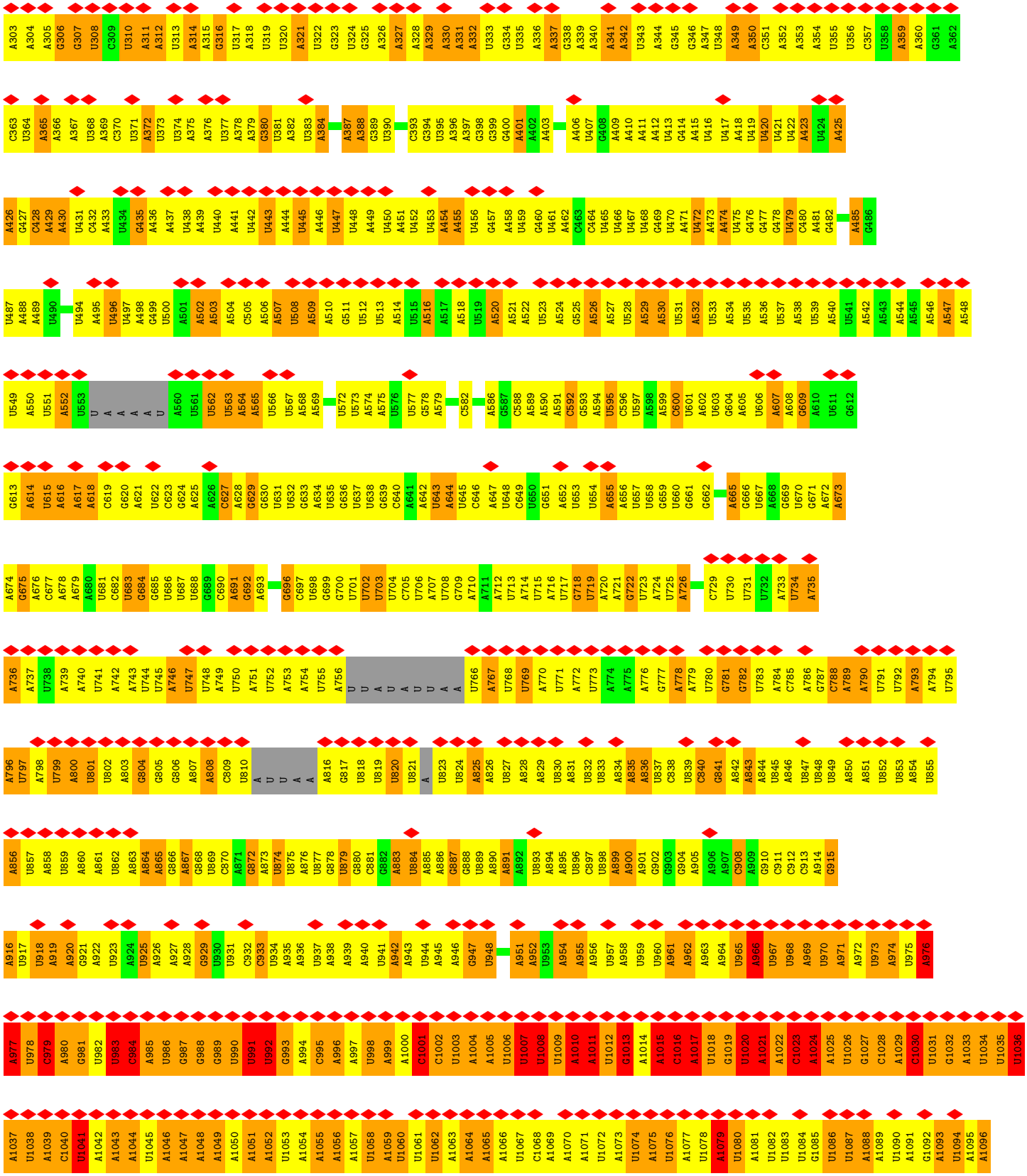


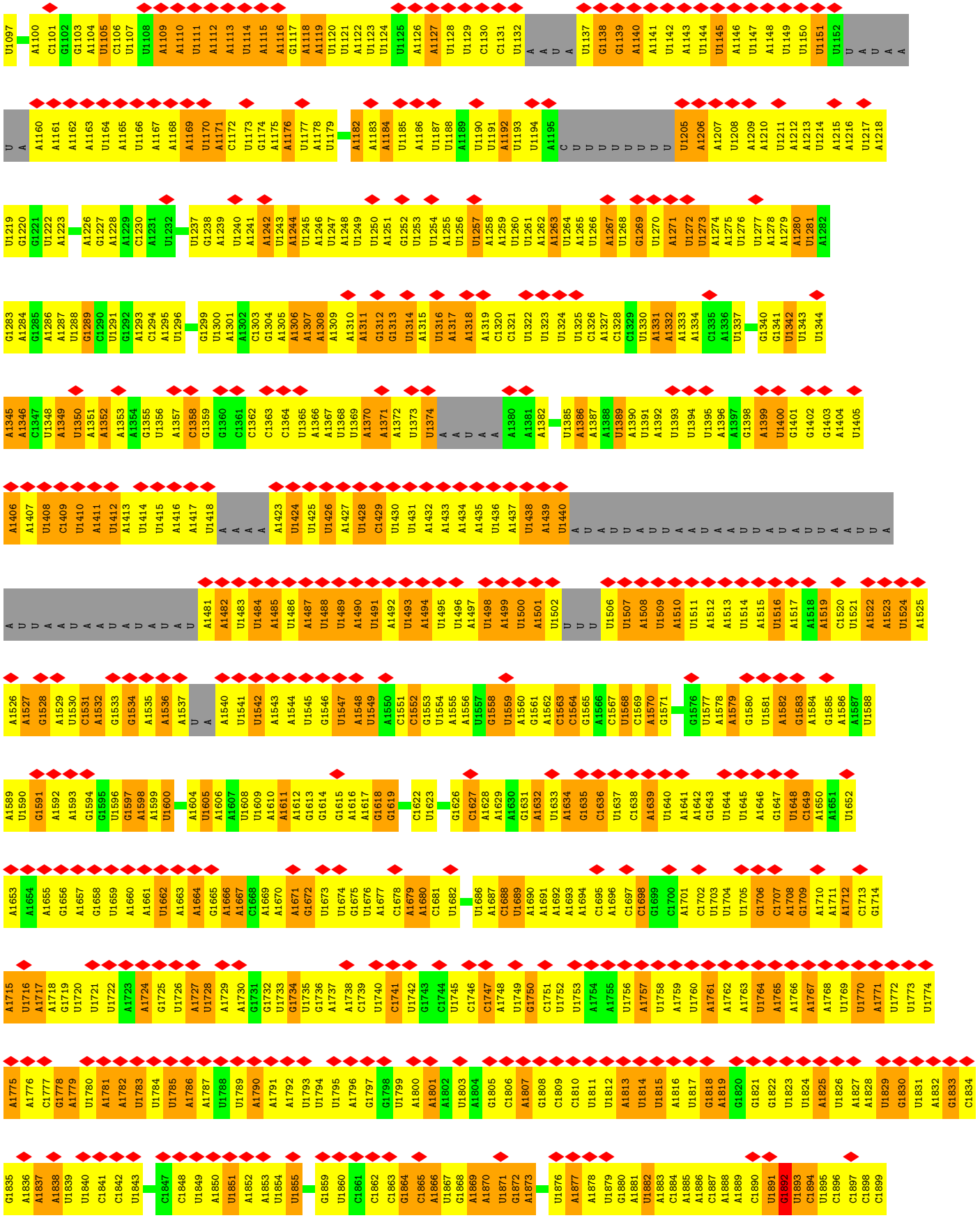


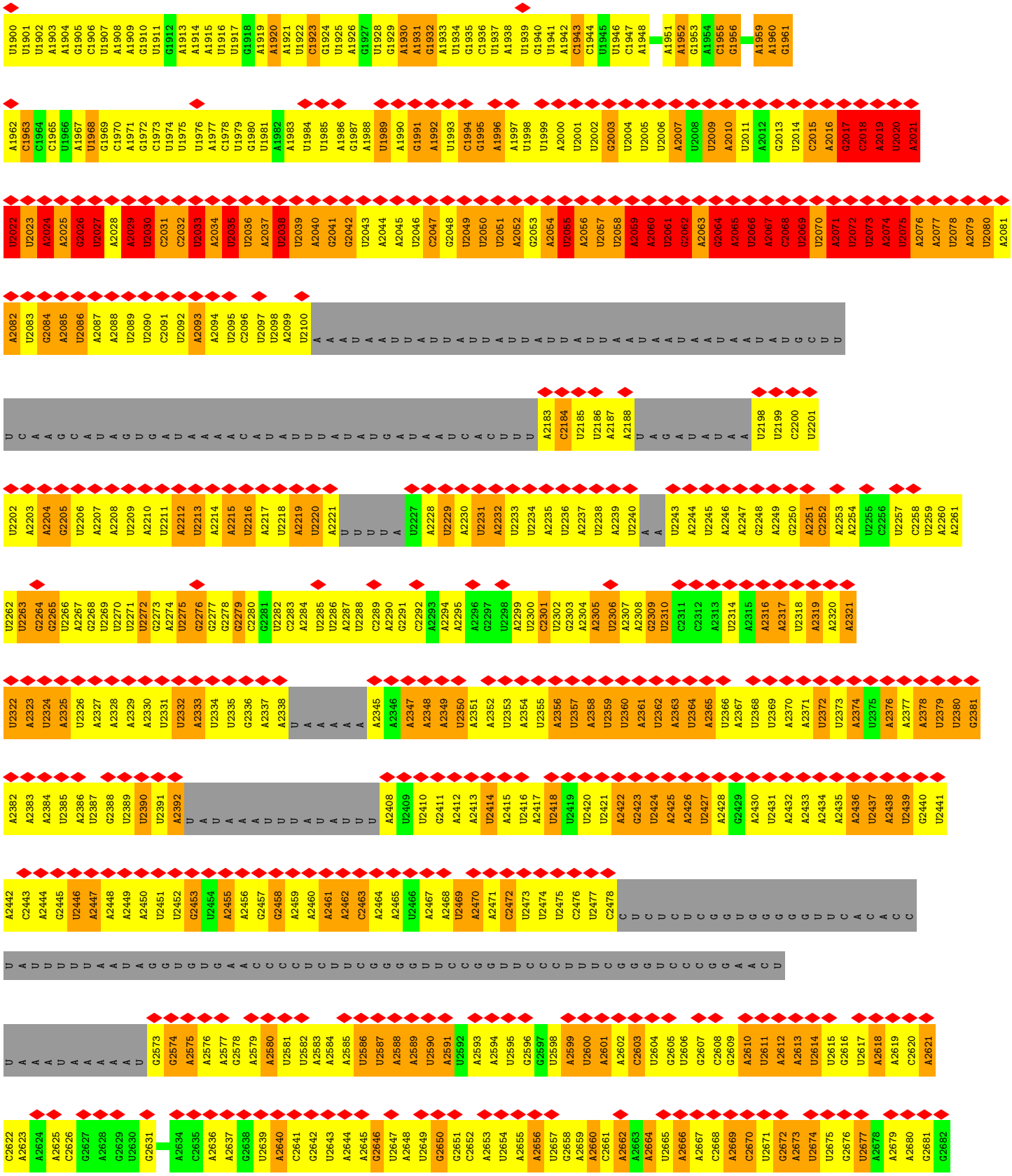
• Molecule 46: Large ribosomal subunit rRNA

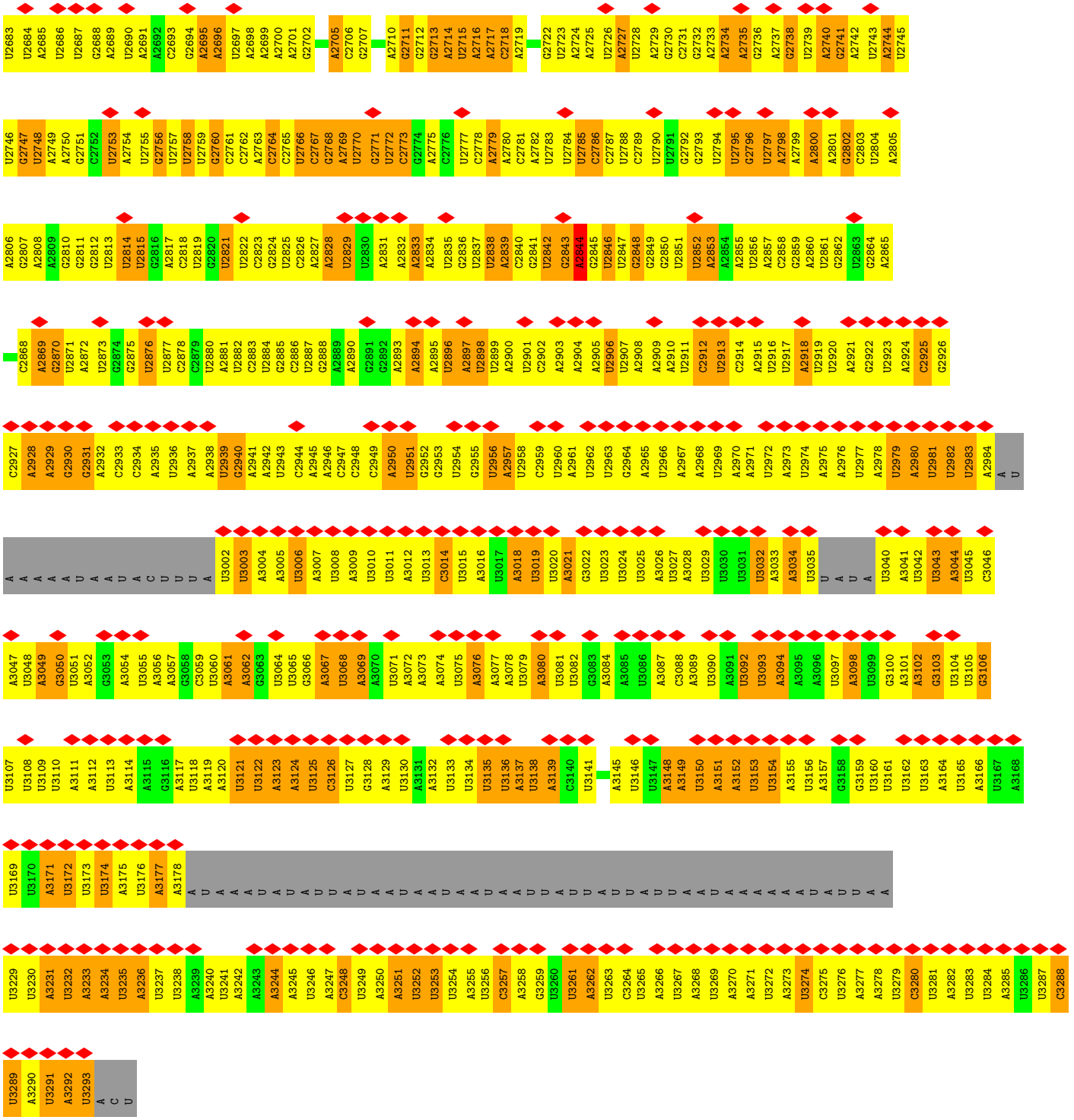
Chain A:





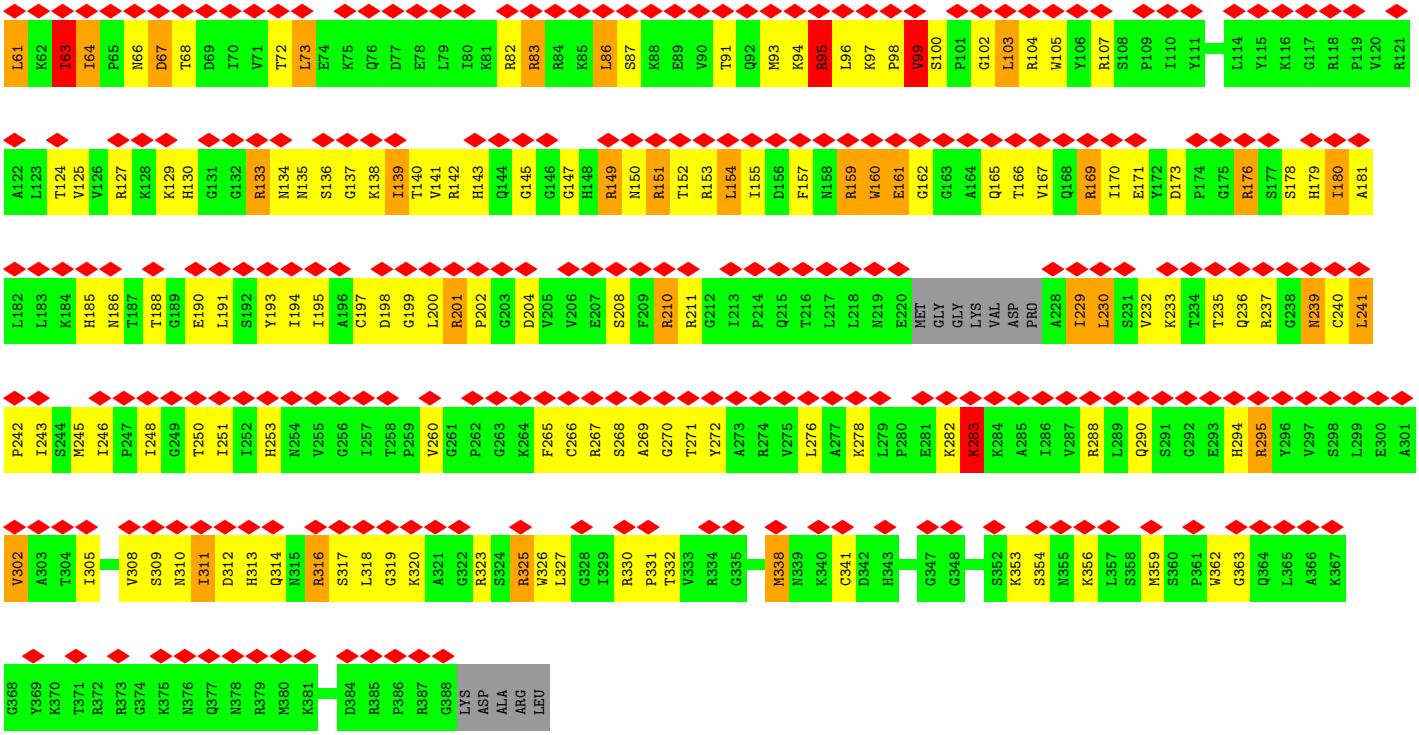



U1900 U1901 U1902 A1903 A1904 G1905 C1906 U1907 A1908 A1909 G1910 U1911 G1912 A1913 A1914 A1915 U1916 U1917 G1918 A1919 A1920 A1921 U1922 C1923 G1924 U1925 A1926 G1927 U1928 G1929 A1930 A1931 G1932 A1933 U1934 G1935 C1936 U1937 A1938 U1939 G1940 U1941 A1942 C1943 C1944 U1945 U1946 C1947 A1948 A1951 A1952 G1953 A1954 C1955 G1956 A1959 A1960 G1961
A1962 C1963 C1964 C1965 U1966 A1967 U1968 G1969 C1970 A1971 G1972 C1973 U1974 U1975 U1976 A1977 C1978 U1979 G1980 U1981 A1982 A1983 U1984 U1985 A1986 G1987 A1988 U1989 A1990 G1991 A1992 U1993 C1994 G1995 A1996 A1997 U1998 U1999 A2000 U2001 U2002 G2003 U2004 U2005 U2006 A2007 U2008 U2009 A2010 U2011 A2012 G2013 U2014 C2015 A2016 G2017 C2018 A2019 U2020 A2021
U2022 U2023 A2024 A2025 G2026 U2027 A2028 A2029 U2030 C2031 C2032 U2033 A2034 U2035 U2036 A2037 U2038 U2039 A2040 G2041 G2042 U2043 A2044 A2045 U2046 C2047 G2048 U2049 U2050 U2051 A2052 G2053 A2054 U2055 A2056 U2057 U2058 A2059 A2060 U2061 G2062 A2063 G2064 A2065 U2066 A2067 C2068 U2069 U2070 A2071 U2072 U2073 A2074 U2075 A2076 A2077 U2078 A2079 U2080 A2081
A2082 U2083 G2084 A2085 U2086 A2087 A2088 U2089 U2090 C2091 U2092 A2093 A2094 U2095 C2096 U2097 U2098 A2099 U2100
U C A A G C A U A G U G A U A A A C A U A U U A A U U G A U U A A U U A U U A A U U A U U A A U U



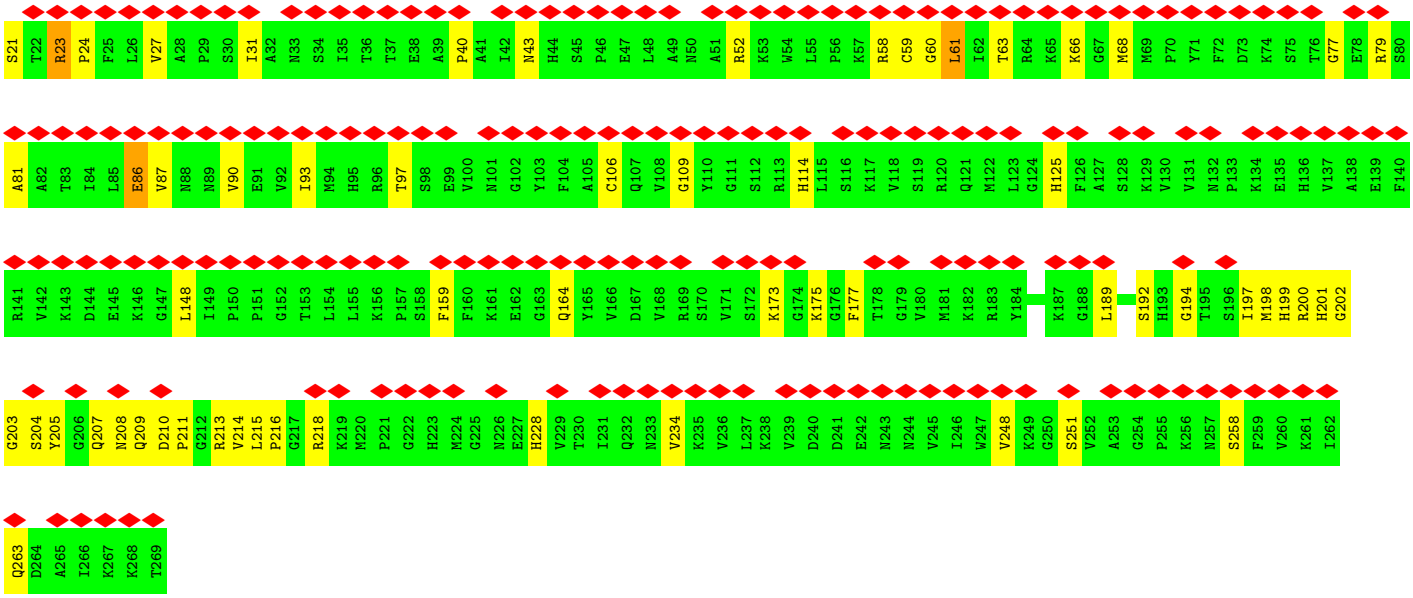
• Molecule 47: Large ribosomal subunit protein uL2m

Chain B:



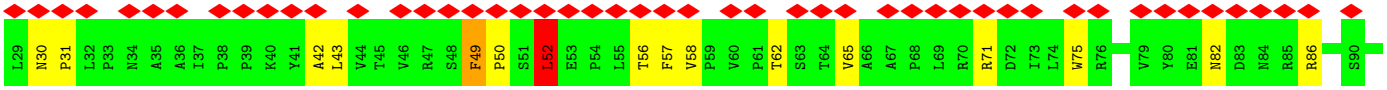
• Molecule 48: Large ribosomal subunit protein uL3m

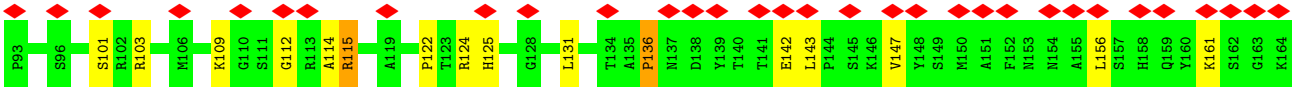
Chain C:

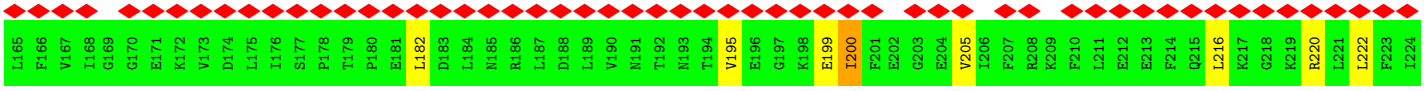


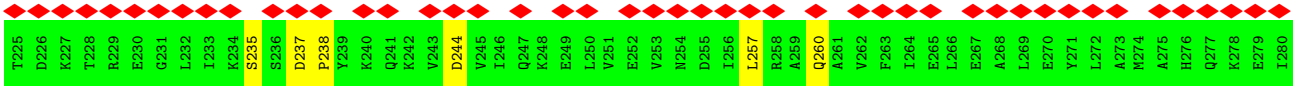
• Molecule 49: Large ribosomal subunit protein uL4m

Chain D:



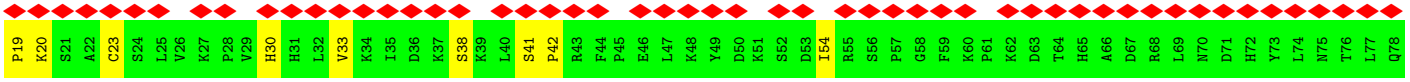


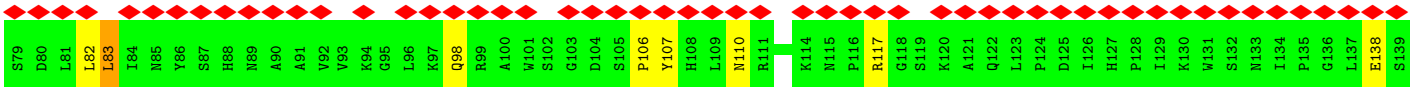


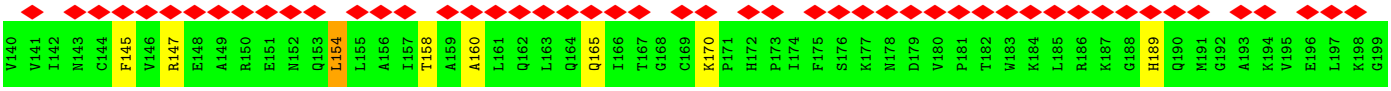


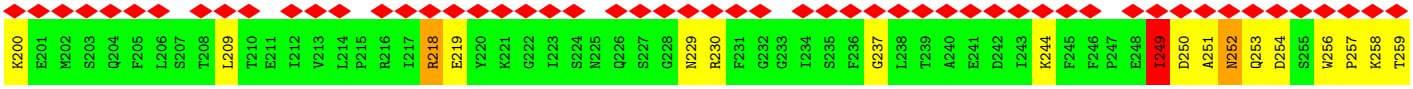
• Molecule 50: Large ribosomal subunit protein uL5m

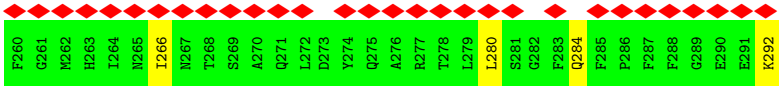
Chain E:





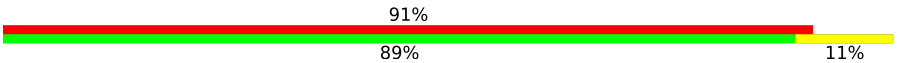


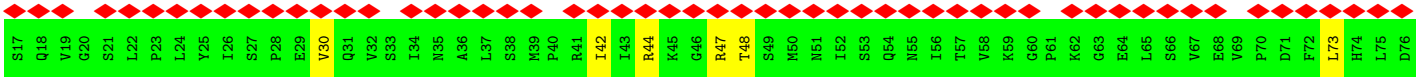


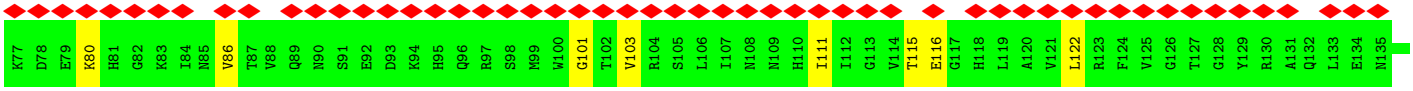


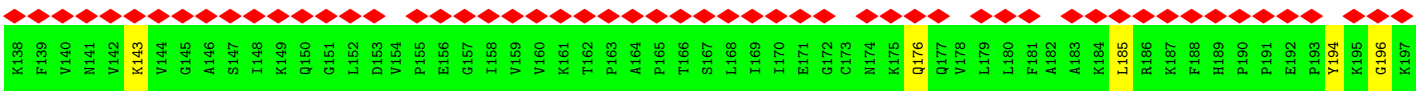
• Molecule 51: Large ribosomal subunit protein uL6m

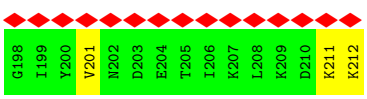
Chain F:





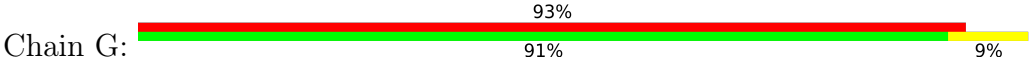


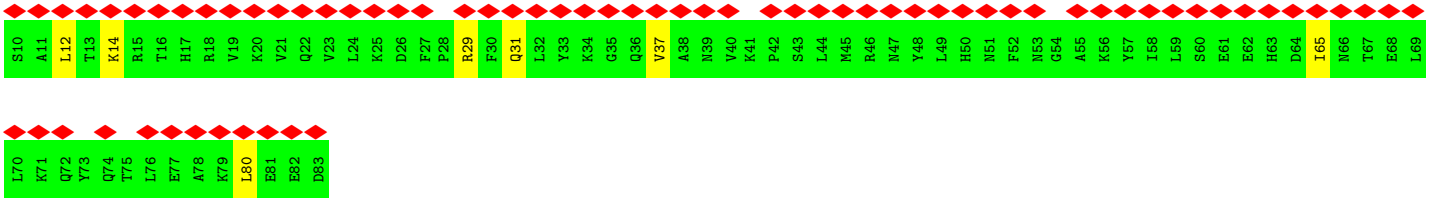




• Molecule 52: Large ribosomal subunit protein bL9m

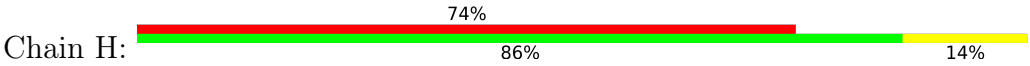
Chain G:

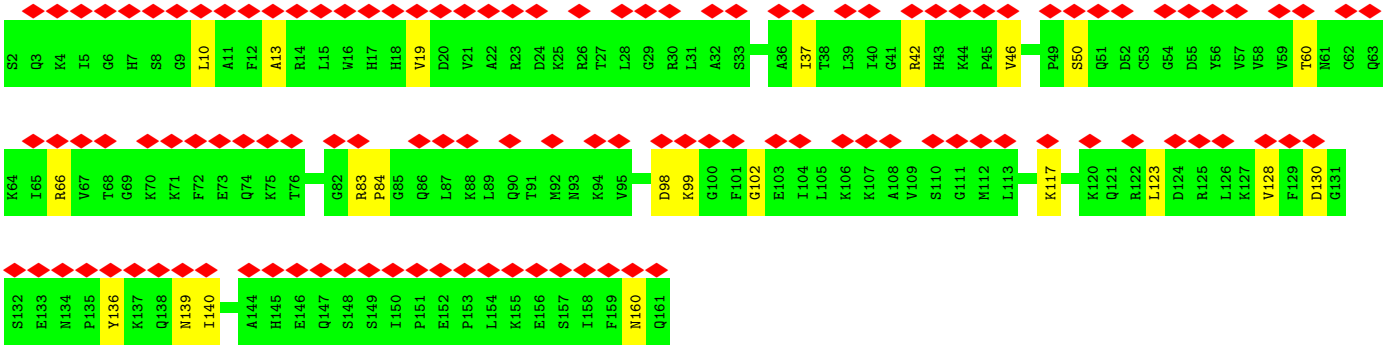




• Molecule 53: Large ribosomal subunit protein uL13m

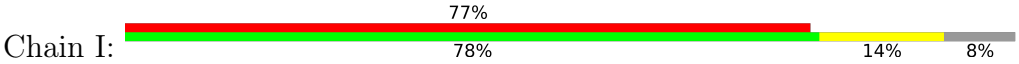
Chain H:

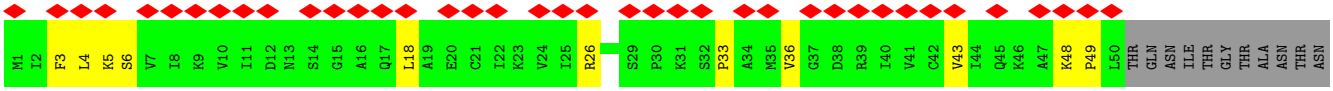


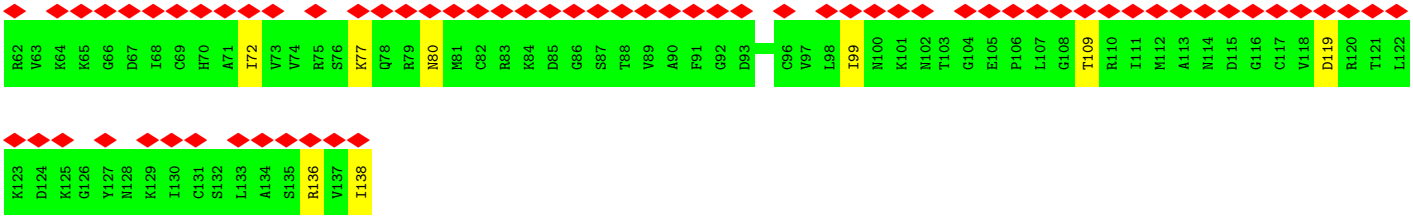


• Molecule 54: Large ribosomal subunit protein uL14m

Chain I:

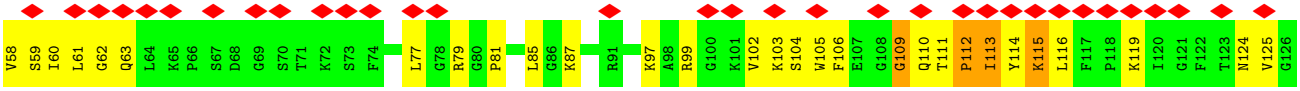


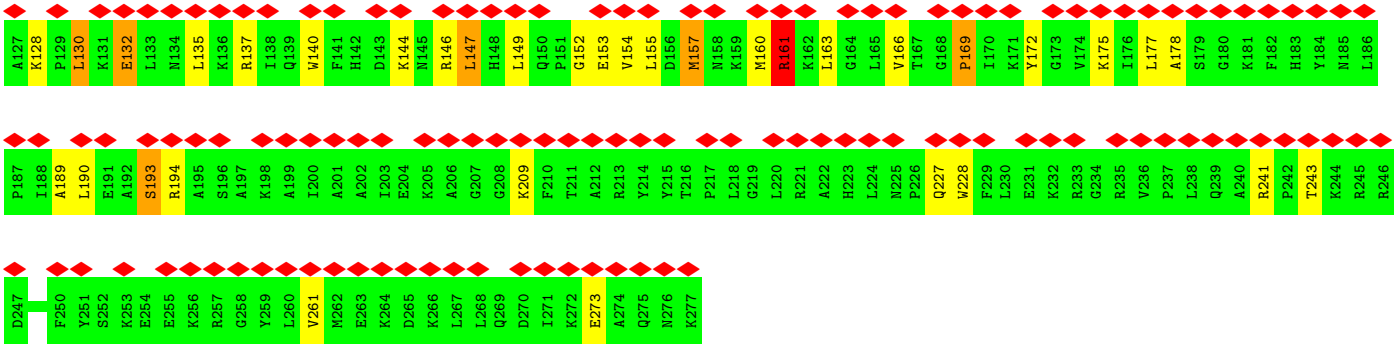




• Molecule 55: Large ribosomal subunit protein uL15m

Chain J:



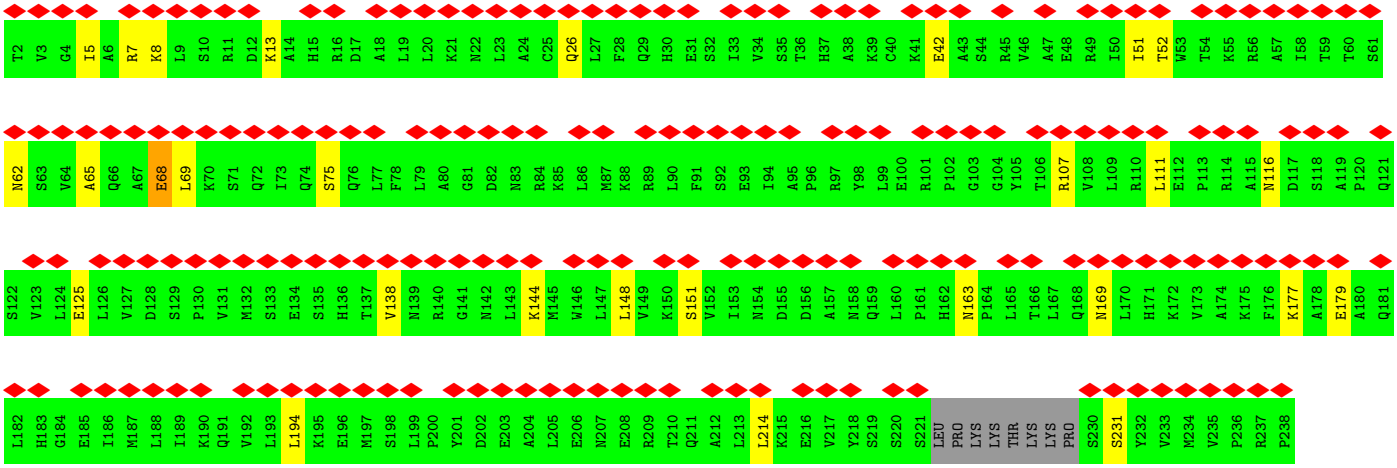


• Molecule 56: Large ribosomal subunit protein uL16m

Chain K:

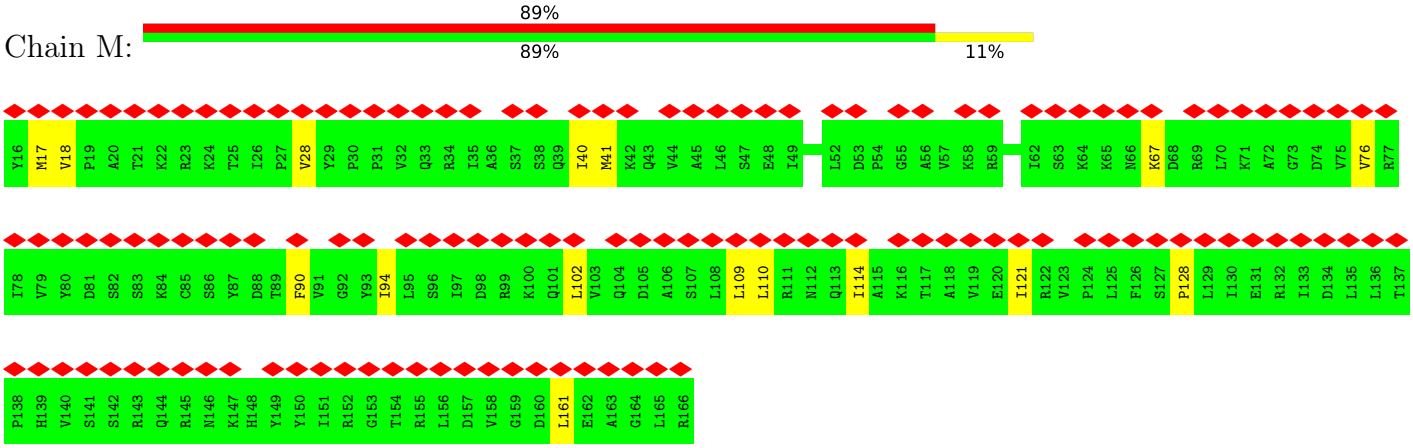
• Molecule 57: Large ribosomal subunit protein bL17m

Chain L:



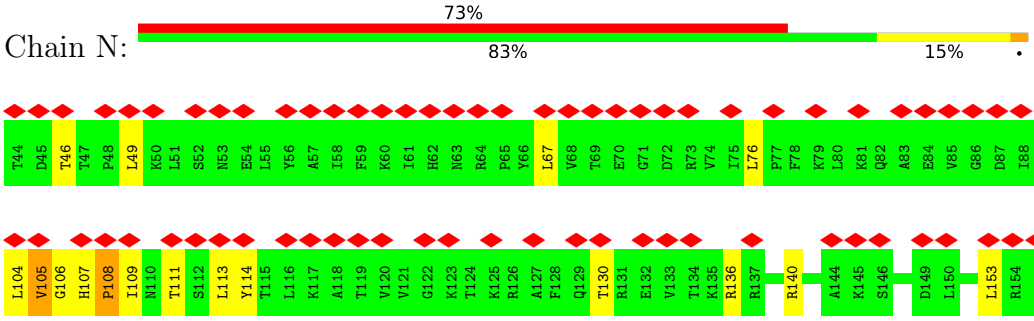
• Molecule 58: Large ribosomal subunit protein bL19m

Chain M:



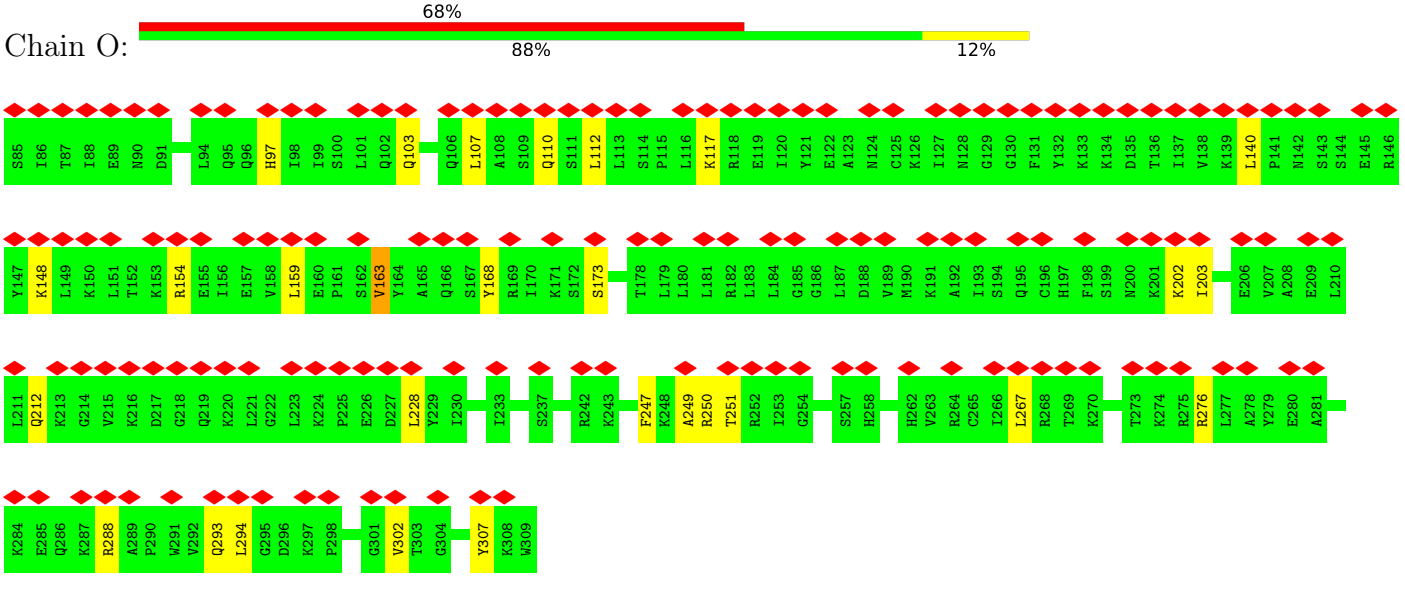
• Molecule 59: Large ribosomal subunit protein bL21m

Chain N:



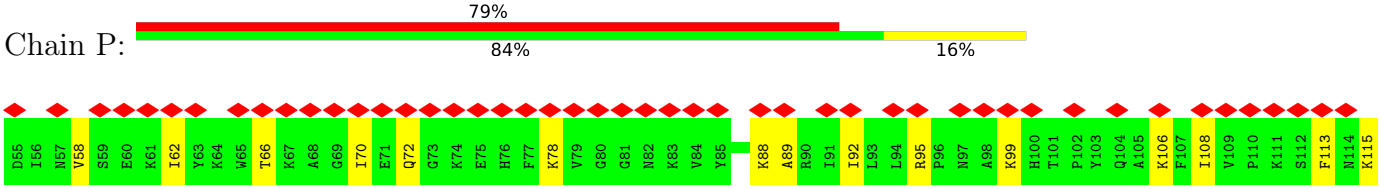
• Molecule 60: Large ribosomal subunit protein uL22m

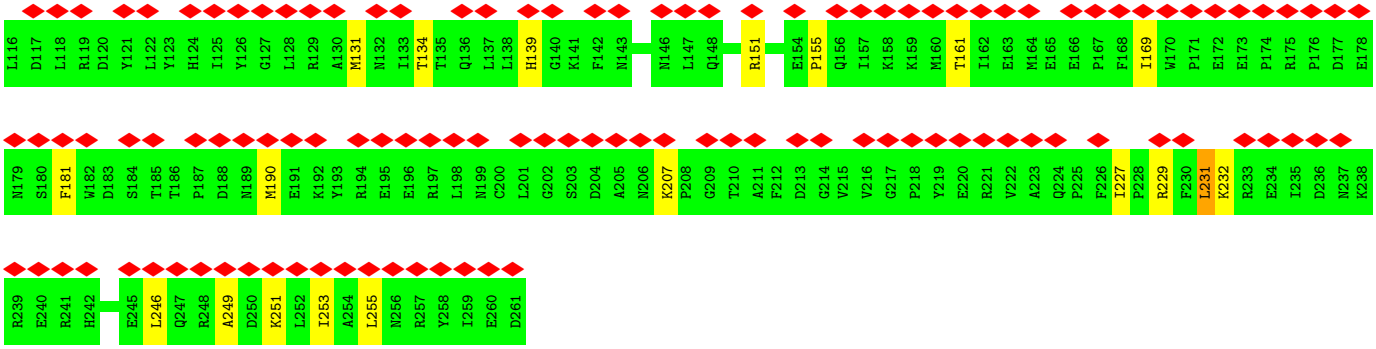
Chain O:



• Molecule 61: Large ribosomal subunit protein uL23m

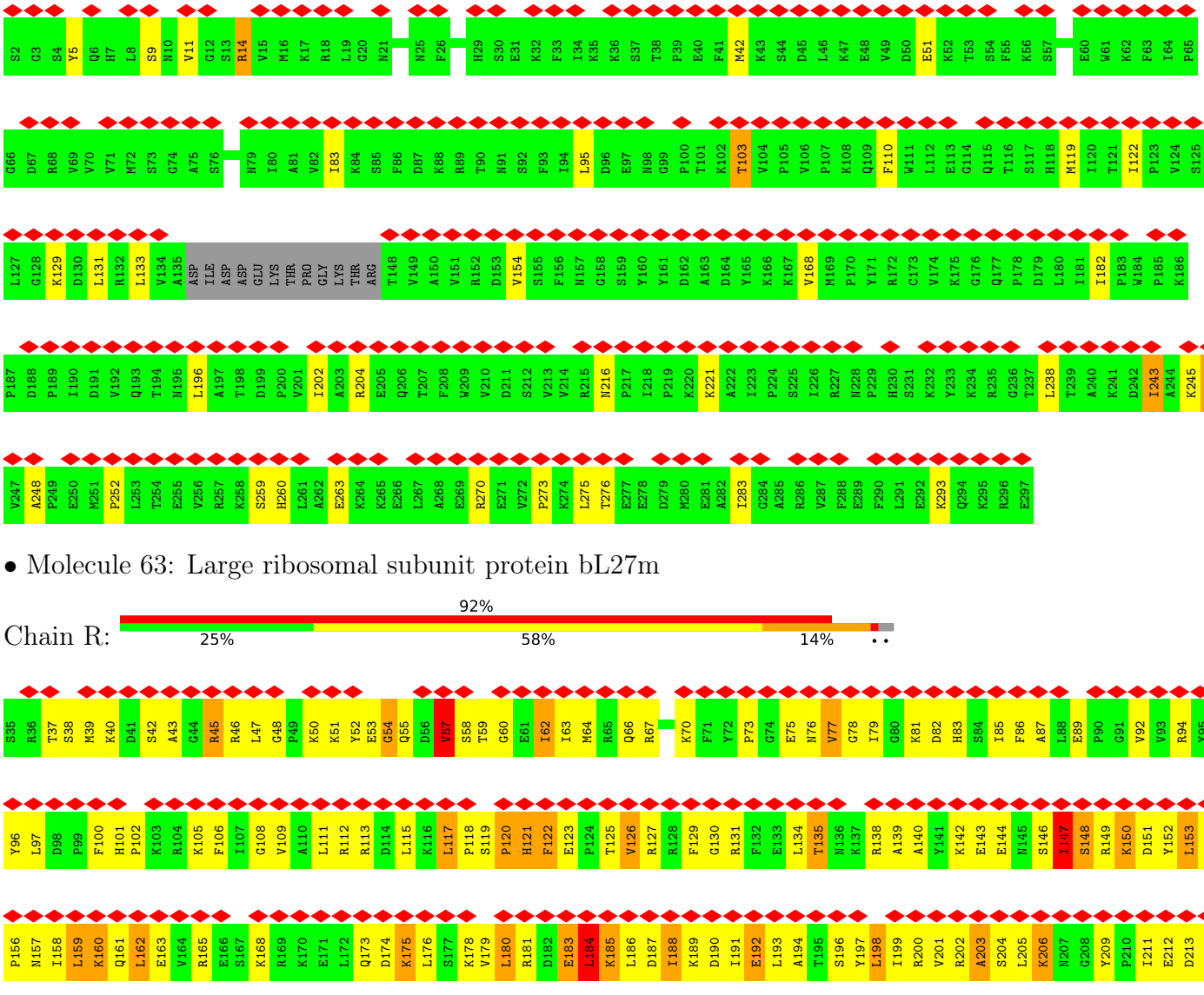
Chain P:





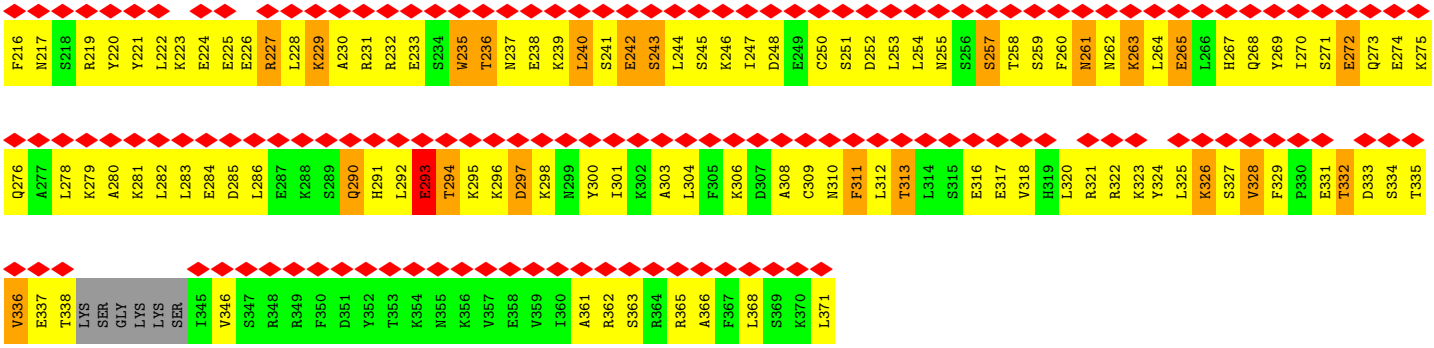
• Molecule 62: Large ribosomal subunit protein uL24m

Chain Q:

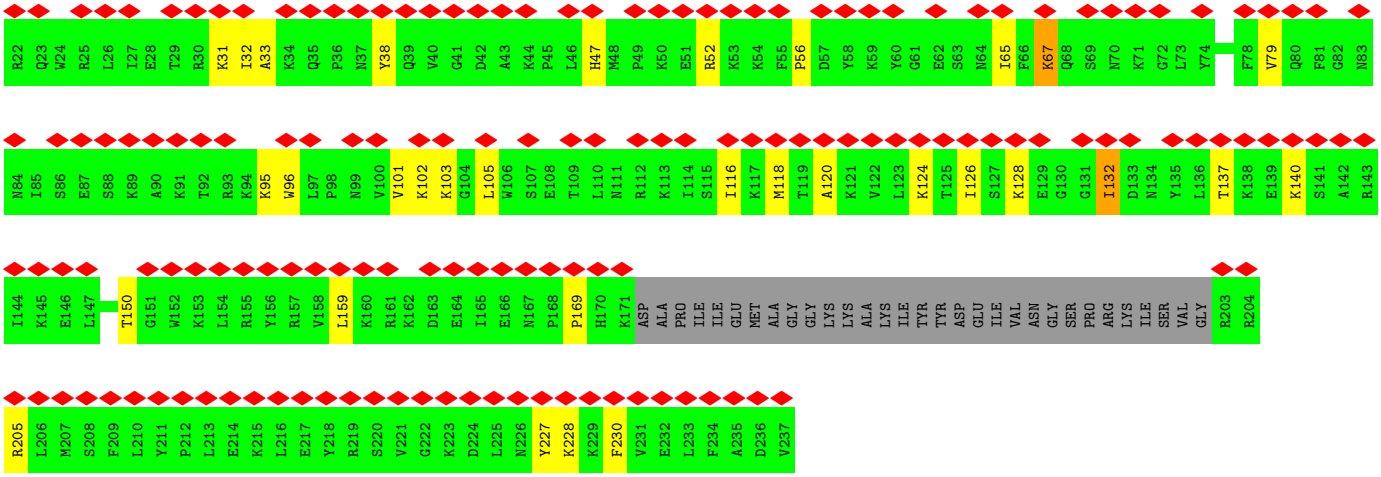


• Molecule 63: Large ribosomal subunit protein bL27m

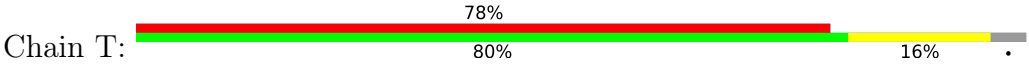
Chain R:

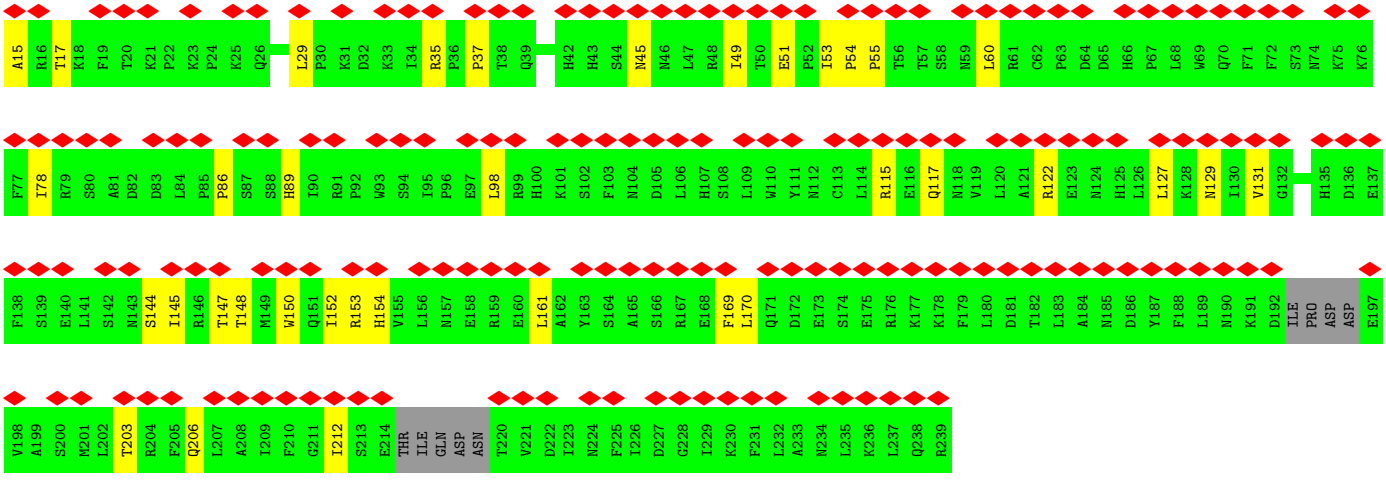


• Molecule 64: Large ribosomal subunit protein bL28m



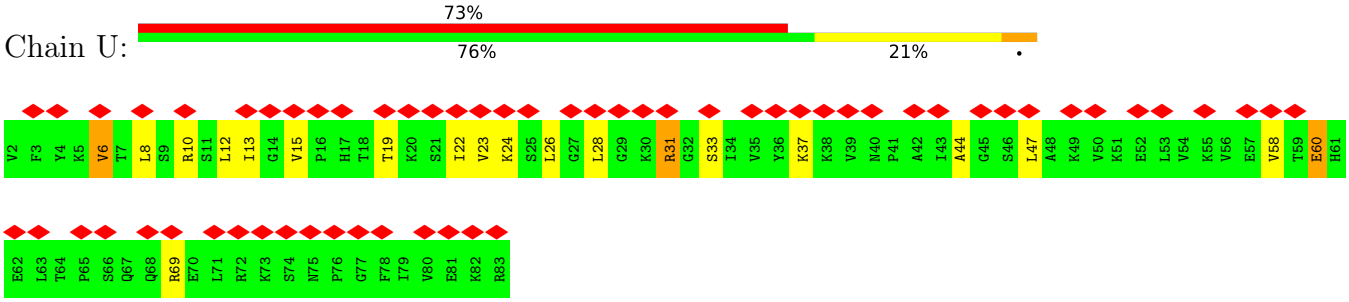
• Molecule 65: Large ribosomal subunit protein uL29m





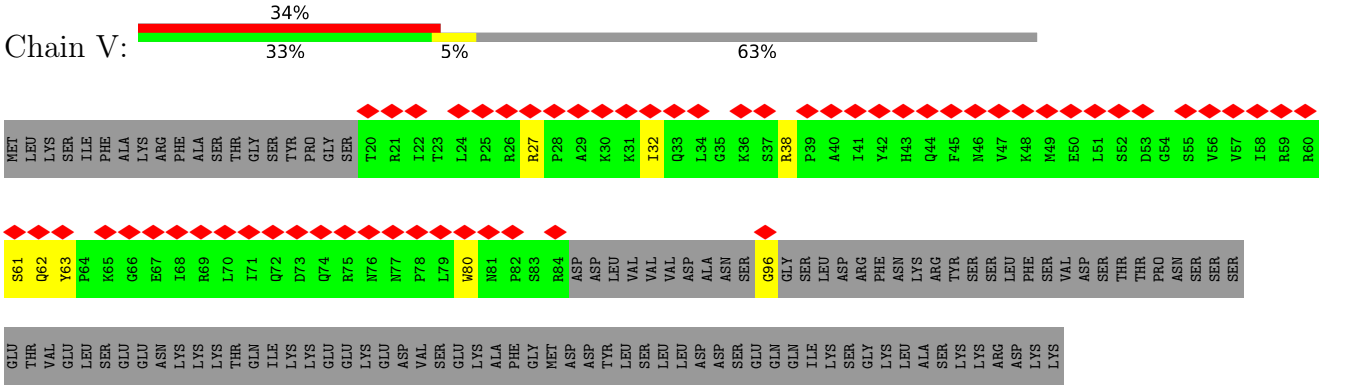
• Molecule 66: Large ribosomal subunit protein uL30m

Chain U:



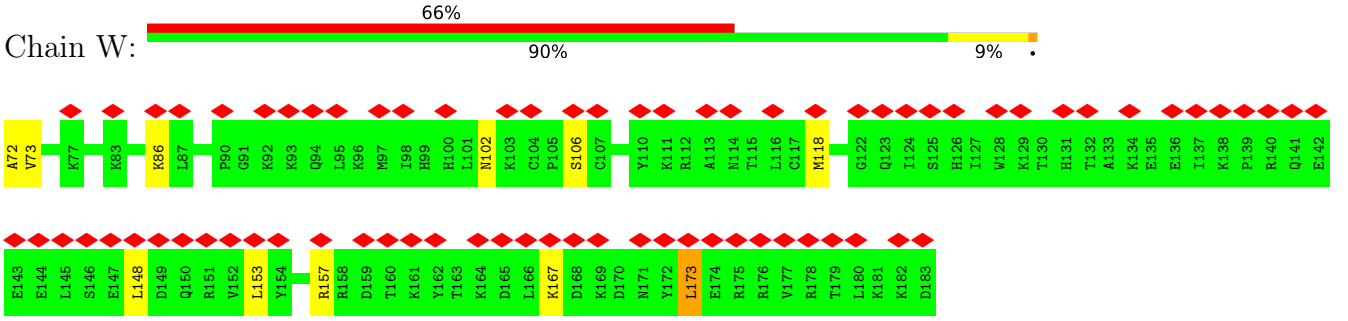
• Molecule 67: Large ribosomal subunit protein bL31m

Chain V:



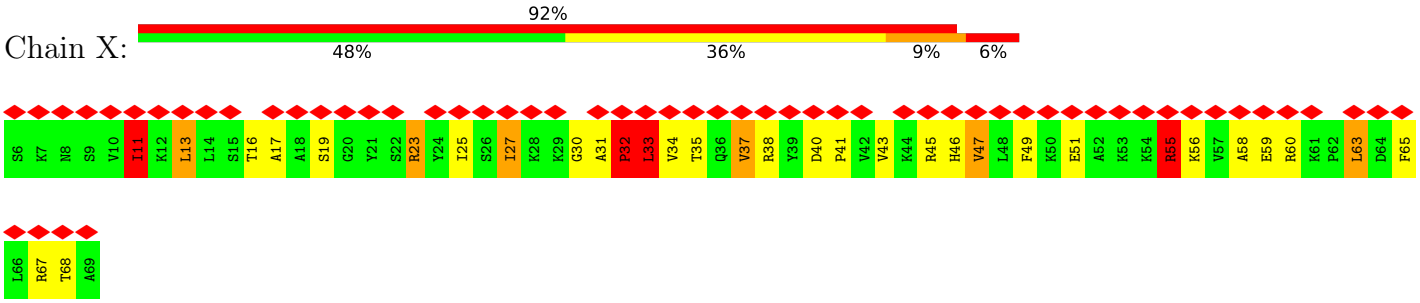
• Molecule 68: Large ribosomal subunit protein bL32m

Chain W:



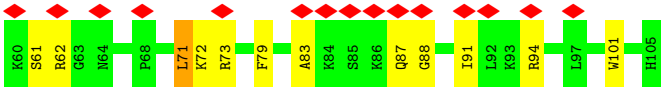
• Molecule 69: Large ribosomal subunit protein bL33m

Chain X:



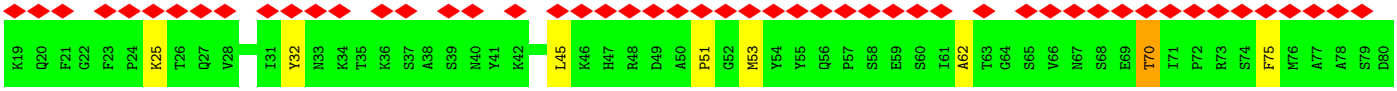
• Molecule 70: Large ribosomal subunit protein bL34m

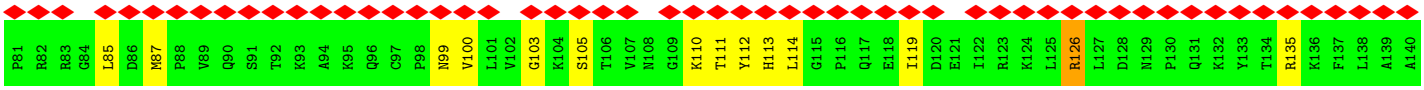
Chain Y:

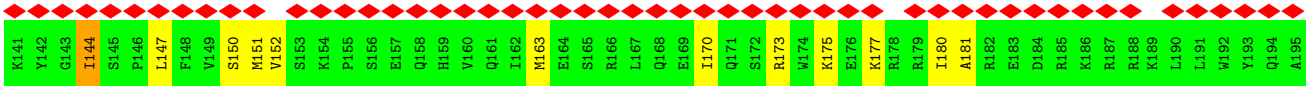


• Molecule 71: Large ribosomal subunit protein mL58

Chain a:

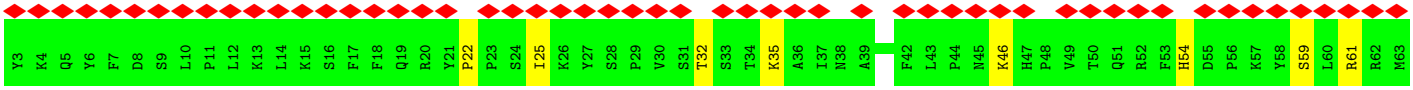


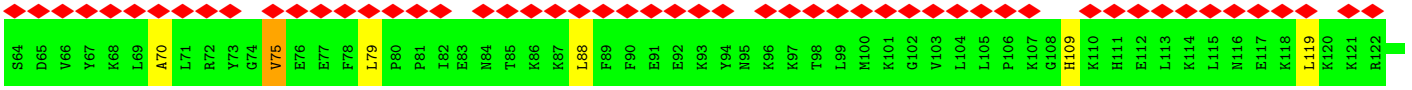


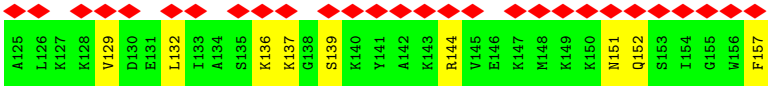


• Molecule 72: Large ribosomal subunit protein mL59

Chain b:

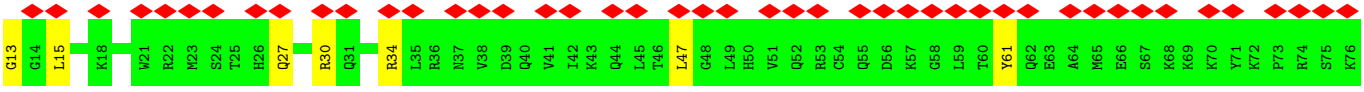


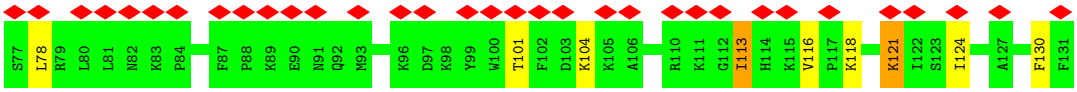




• Molecule 73: Large ribosomal subunit protein mL60

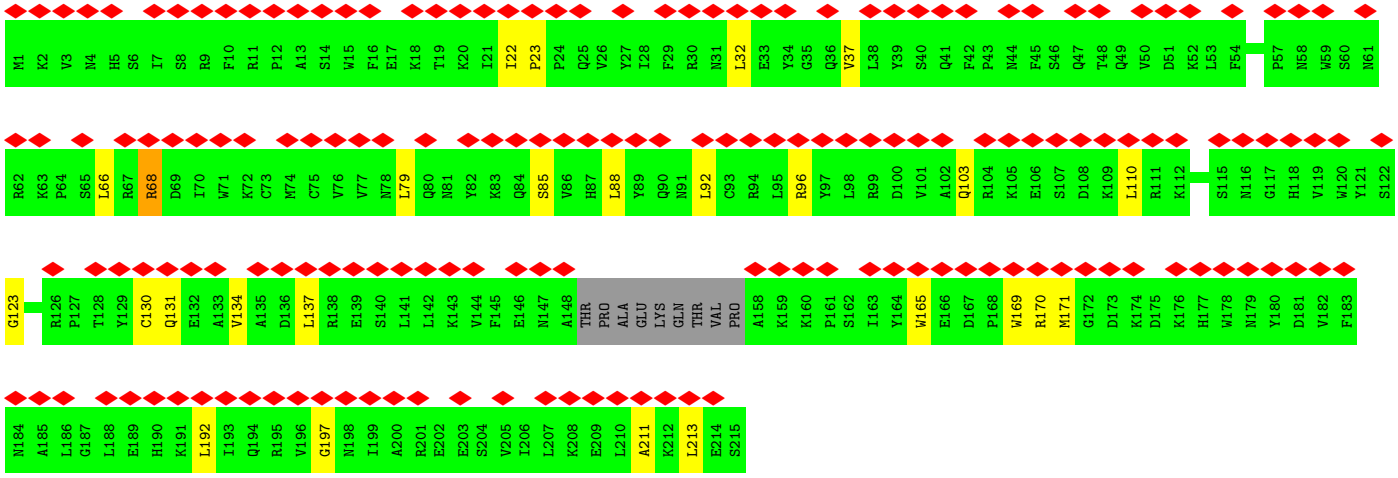
Chain c:





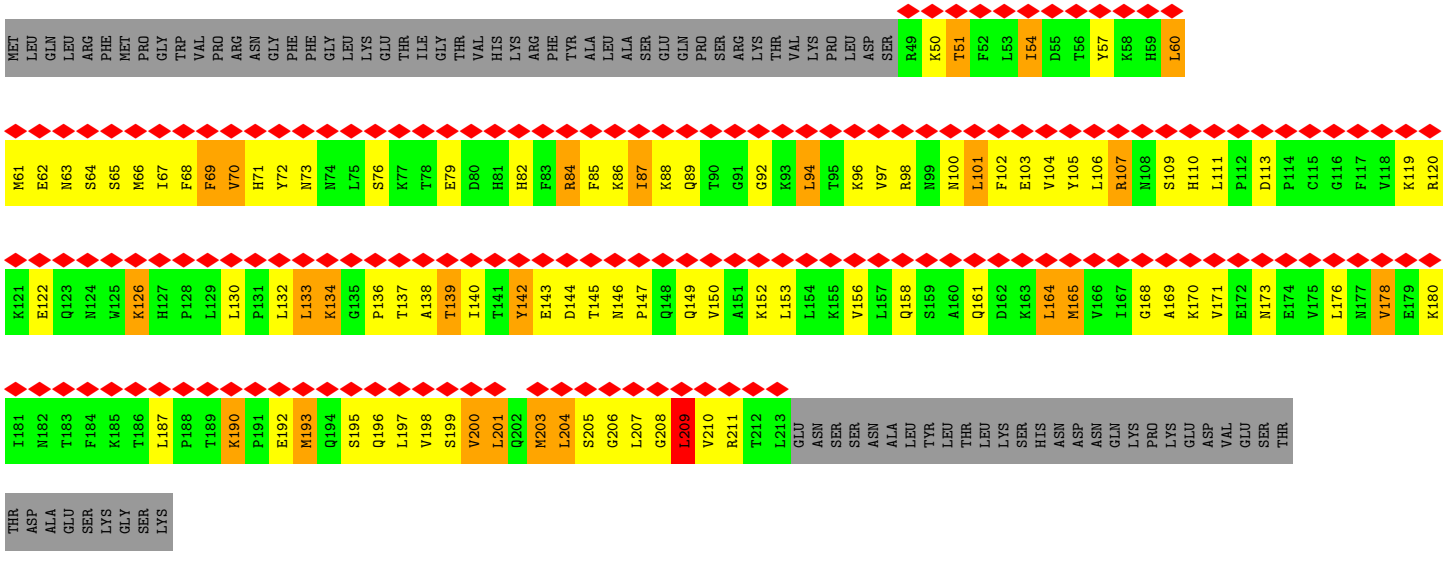
• Molecule 74: Large ribosomal subunit protein mL67

Chain d:



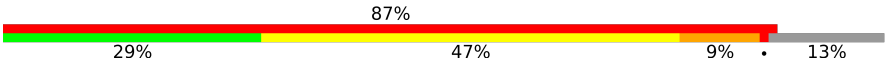
• Molecule 75: Large ribosomal subunit protein uL10m

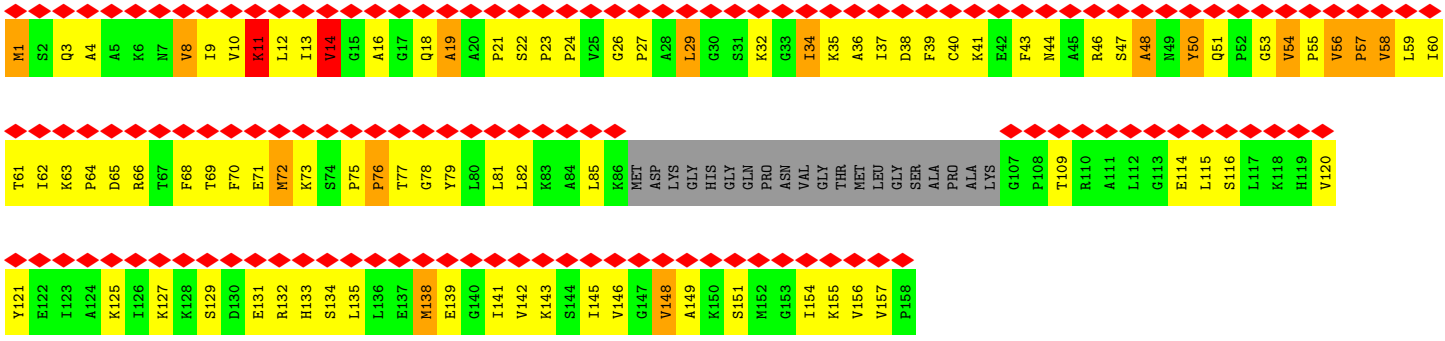
Chain e:



• Molecule 76: Large ribosomal subunit protein uL11m

Chain f:





4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, Not provided	
Number of particles used	12907	Depositor
Resolution determination method	FSC 0.143 CUT-OFF	Depositor
CTF correction method	NONE	Depositor
Microscope	FEI TECNAI ARCTICA	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	60	Depositor
Minimum defocus (nm)	800	Depositor
Maximum defocus (nm)	2000	Depositor
Magnification	Not provided	
Image detector	GATAN K3 (6k x 4k)	Depositor
Maximum map value	19.881	Depositor
Minimum map value	-12.977	Depositor
Average map value	0.066	Depositor
Map value standard deviation	1.736	Depositor
Recommended contour level	4.3	Depositor
Map size (Å)	427.52, 427.52, 427.52	wwPDB
Map dimensions	512, 512, 512	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	0.835, 0.835, 0.835	Depositor

5 Model quality

5.1 Standard geometry

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	AA	0.84	0/304	1.30	1/386 (0.3%)
2	AB	0.78	0/825	1.05	4/1101 (0.4%)
3	AC	0.89	0/2130	1.21	1/2891 (0.0%)
4	AD	0.89	0/2472	1.24	4/3338 (0.1%)
5	AE	0.84	0/2490	1.27	35/3372 (1.0%)
6	AF	0.88	0/2130	1.20	4/2867 (0.1%)
7	AG	0.88	0/1974	1.20	1/2668 (0.0%)
8	AH	0.92	0/1915	1.23	3/2559 (0.1%)
9	AI	0.94	0/3309	1.13	19/4472 (0.4%)
10	AJ	0.75	0/788	1.08	1/1052 (0.1%)
11	AK	0.94	0/2268	1.13	4/3058 (0.1%)
12	AL	0.49	1/35699 (0.0%)	0.83	182/55529 (0.3%)
13	AM	0.72	0/1805	0.96	3/2811 (0.1%)
14	AN	0.70	0/301	1.13	0/466
15	Z	0.90	0/702	1.24	5/945 (0.5%)
16	g	0.91	0/1610	1.16	2/2168 (0.1%)
17	h	0.88	0/2138	1.27	2/2903 (0.1%)
18	i	0.88	0/2503	1.14	1/3375 (0.0%)
19	j	0.91	0/2435	1.19	4/3281 (0.1%)
20	k	0.89	0/2360	1.21	7/3180 (0.2%)
21	l	0.97	0/1068	1.13	2/1430 (0.1%)
22	m	1.01	0/1305	1.29	13/1763 (0.7%)
23	n	0.73	0/1240	1.20	1/1670 (0.1%)
24	o	0.65	0/1855	1.04	0/2492
25	p	0.88	0/1140	1.17	0/1547
26	q	1.06	2/1228 (0.2%)	1.09	5/1638 (0.3%)
27	r	0.92	0/970	1.20	7/1300 (0.5%)
28	s	0.90	0/957	1.35	3/1277 (0.2%)
29	t	0.96	1/961 (0.1%)	1.19	4/1285 (0.3%)
30	u	1.00	0/2094	1.12	10/2796 (0.4%)
31	v	0.88	0/845	1.10	1/1143 (0.1%)
32	w	0.91	0/1694	1.18	9/2252 (0.4%)
33	x	0.90	0/749	1.25	7/998 (0.7%)
34	y	0.91	0/652	1.18	1/882 (0.1%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
35	z	0.87	0/771	1.20	5/1019 (0.5%)
36	0	0.41	0/329	0.57	0/432
37	1	0.48	0/2949	0.84	0/3998
38	2	0.44	0/963	0.95	0/1295
39	3	0.48	0/1072	0.79	0/1442
40	4	0.47	0/1138	0.88	0/1526
41	5	0.46	0/2604	0.92	1/3526 (0.0%)
42	6	0.48	0/1978	0.83	0/2664
43	7	0.51	0/873	0.84	0/1170
44	8	0.46	0/1659	0.95	0/2230
45	9	0.48	0/1616	0.95	0/2177
46	A	0.45	0/68489	0.75	114/106553 (0.1%)
47	B	0.80	0/2573	1.18	3/3456 (0.1%)
48	C	0.50	0/1975	0.79	0/2657
49	D	0.52	0/2028	0.92	1/2746 (0.0%)
50	E	0.48	0/2244	0.82	1/3033 (0.0%)
51	F	0.50	0/1551	0.82	0/2093
52	G	0.44	0/628	0.88	0/844
53	H	0.48	0/1302	0.90	0/1749
54	I	0.46	0/962	0.80	0/1285
55	J	0.62	0/1783	1.03	1/2384 (0.0%)
56	K	0.50	0/1606	0.93	0/2148
57	L	0.45	0/1845	0.96	0/2489
58	M	0.51	0/1224	0.83	0/1651
59	N	0.50	0/961	0.75	0/1295
60	O	0.45	0/1859	0.89	0/2495
61	P	0.44	0/1773	0.89	0/2390
62	Q	0.51	0/2323	0.84	0/3135
63	R	0.96	1/2783 (0.0%)	1.13	20/3723 (0.5%)
64	S	0.48	0/1576	0.88	0/2104
65	T	0.49	0/1837	0.96	0/2486
66	U	0.60	0/648	0.89	2/870 (0.2%)
67	V	0.48	0/553	0.69	0/742
68	W	0.44	0/955	0.84	0/1273
69	X	0.93	0/520	1.25	0/696
70	Y	0.43	0/392	0.98	0/515
71	a	0.48	0/1471	0.97	0/1976
72	b	0.46	0/1333	0.92	0/1783
73	c	0.46	0/1028	0.91	0/1372
74	d	0.44	0/1791	0.90	0/2415
75	e	0.97	0/1367	1.12	1/1844 (0.1%)
76	f	0.97	0/1051	1.19	0/1416
All	All	0.62	5/215299 (0.0%)	0.92	495/311992 (0.2%)

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	AB	0	1
3	AC	0	4
4	AD	0	7
5	AE	0	5
6	AF	0	6
7	AG	0	8
8	AH	0	8
9	AI	0	2
10	AJ	0	3
11	AK	0	9
15	Z	0	2
16	g	0	5
17	h	0	5
18	i	0	1
19	j	0	10
20	k	0	5
21	l	0	1
22	m	0	3
24	o	0	6
25	p	0	5
26	q	0	1
27	r	0	2
28	s	0	6
29	t	0	5
30	u	0	2
31	v	0	2
32	w	0	3
33	x	0	1
34	y	0	5
35	z	0	1
47	B	0	16
48	C	0	1
55	J	0	1
56	K	0	1
63	R	0	1
69	X	0	3
75	e	0	2
76	f	0	1
All	All	0	150

All (5) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
12	AL	482	U	O3'-P	-19.09	1.32	1.61
63	R	148	SER	CA-C	-6.40	1.49	1.52
26	q	147	THR	CA-C	-5.19	1.46	1.52
29	t	47	ASN	CA-C	5.07	1.59	1.53
26	q	142	GLU	CA-C	-5.05	1.46	1.52

All (495) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	AL	44	U	C3'-C2'-O2'	16.77	135.86	110.70
12	AL	44	U	C2'-C3'-O3'	-16.37	89.15	113.70
46	A	2067	A	P-O3'-C3'	-15.88	96.38	120.20
46	A	2072	U	P-O3'-C3'	-15.36	97.16	120.20
46	A	2018	C	P-O3'-C3'	-13.26	100.31	120.20
46	A	2064	G	P-O3'-C3'	-12.81	100.99	120.20
46	A	2023	U	P-O3'-C3'	-12.80	101.00	120.20
32	w	171	GLY	N-CA-C	-12.34	97.71	112.64
12	AL	482	U	O3'-P-O5'	12.24	122.35	104.00
46	A	2073	U	P-O3'-C3'	-11.87	102.39	120.20
12	AL	507	C	O3'-P-O5'	-11.38	86.93	104.00
46	A	2061	U	P-O3'-C3'	-11.30	103.25	120.20
46	A	1007	U	P-O3'-C3'	11.08	136.82	120.20
46	A	2030	U	P-O3'-C3'	-10.98	103.73	120.20
46	A	2060	A	P-O3'-C3'	-10.67	104.20	120.20
46	A	2846	U	P-O3'-C3'	-10.65	104.23	120.20
32	w	197	ASP	N-CA-C	-10.55	99.94	112.92
46	A	2021	A	P-O3'-C3'	-10.30	104.75	120.20
46	A	2071	A	P-O3'-C3'	-10.23	104.85	120.20
32	w	219	ILE	N-CA-C	-10.14	99.81	113.00
63	R	184	LEU	N-CA-C	-9.99	99.89	113.18
12	AL	1526	A	P-O3'-C3'	-9.98	105.22	120.20
46	A	2032	C	P-O3'-C3'	-9.95	105.28	120.20
11	AK	69	TYR	N-CA-C	-9.94	100.43	111.07
46	A	2055	U	P-O3'-C3'	-9.92	105.31	120.20
12	AL	1506	U	P-O3'-C3'	-9.90	105.35	120.20
12	AL	1624	U	P-O3'-C3'	-9.89	105.36	120.20
46	A	2042	G	P-O3'-C3'	-9.88	105.39	120.20
30	u	246	ASN	N-CA-C	-9.76	95.32	109.18
12	AL	392	G	C2'-C3'-O3'	9.75	124.12	109.50
46	A	2066	U	P-O3'-C3'	-9.56	105.87	120.20
46	A	2024	A	P-O3'-C3'	-9.55	105.87	120.20
46	A	1024	A	P-O3'-C3'	-9.52	105.91	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
19	j	420	PRO	N-CA-CB	-9.48	93.30	103.25
46	A	2017	G	P-O3'-C3'	-9.44	106.05	120.20
46	A	2842	U	P-O3'-C3'	-9.43	106.05	120.20
12	AL	1466	A	P-O3'-C3'	-9.34	106.19	120.20
12	AL	1572	U	P-O3'-C3'	-9.20	106.40	120.20
12	AL	1477	C	P-O3'-C3'	-9.20	106.40	120.20
12	AL	1581	G	P-O3'-C3'	-9.18	106.43	120.20
12	AL	1485	A	P-O3'-C3'	-9.12	106.52	120.20
5	AE	78	ASP	N-CA-C	-9.11	99.14	111.54
12	AL	1551	U	P-O3'-C3'	-9.11	106.53	120.20
12	AL	1587	U	P-O3'-C3'	-9.04	106.64	120.20
46	A	2020	U	P-O3'-C3'	-9.03	106.66	120.20
12	AL	1618	G	P-O3'-C3'	-9.02	106.67	120.20
12	AL	1476	A	P-O3'-C3'	-8.96	106.77	120.20
12	AL	1519	U	P-O3'-C3'	-8.95	106.77	120.20
12	AL	1570	U	P-O3'-C3'	-8.93	106.81	120.20
46	A	2074	A	P-O3'-C3'	-8.87	106.90	120.20
12	AL	1601	C	P-O3'-C3'	-8.86	106.91	120.20
12	AL	1606	G	P-O3'-C3'	-8.84	106.93	120.20
12	AL	1608	G	P-O3'-C3'	-8.82	106.98	120.20
46	A	2065	A	P-O3'-C3'	-8.79	107.01	120.20
12	AL	554	A	P-O3'-C3'	-8.78	107.03	120.20
12	AL	1537	U	P-O3'-C3'	-8.77	107.05	120.20
12	AL	91	A	P-O3'-C3'	-8.74	107.09	120.20
12	AL	1480	G	P-O3'-C3'	-8.69	107.16	120.20
46	A	965	U	P-O3'-C3'	-8.69	107.16	120.20
12	AL	1640	U	P-O3'-C3'	-8.69	107.17	120.20
46	A	966	A	P-O3'-C3'	-8.69	107.17	120.20
12	AL	822	U	O3'-P-O5'	8.67	117.00	104.00
55	J	169	PRO	N-CA-CB	-8.66	94.16	103.25
46	A	2035	U	P-O3'-C3'	-8.66	107.21	120.20
12	AL	1544	U	P-O3'-C3'	-8.63	107.25	120.20
63	R	185	LYS	N-CA-C	-8.62	100.53	111.90
46	A	1038	U	P-O3'-C3'	-8.61	107.29	120.20
12	AL	1546	U	P-O3'-C3'	-8.60	107.30	120.20
12	AL	1563	G	P-O3'-C3'	-8.60	107.31	120.20
13	AM	39	U	P-O3'-C3'	-8.55	107.37	120.20
46	A	2070	U	P-O3'-C3'	-8.53	107.40	120.20
12	AL	1567	U	P-O3'-C3'	-8.51	107.44	120.20
12	AL	1565	A	P-O3'-C3'	-8.49	107.47	120.20
12	AL	1458	U	P-O3'-C3'	-8.45	107.52	120.20
12	AL	1560	U	P-O3'-C3'	-8.44	107.54	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	AL	1470	C	P-O3'-C3'	-8.43	107.56	120.20
12	AL	1616	C	P-O3'-C3'	-8.42	107.57	120.20
12	AL	1460	G	P-O3'-C3'	-8.42	107.58	120.20
46	A	2075	U	P-O3'-C3'	-8.41	107.59	120.20
46	A	1040	C	P-O3'-C3'	-8.40	107.59	120.20
12	AL	1527	A	P-O3'-C3'	-8.38	107.63	120.20
12	AL	1607	G	P-O3'-C3'	-8.38	107.63	120.20
46	A	981	G	P-O3'-C3'	-8.38	107.63	120.20
12	AL	1582	C	P-O3'-C3'	-8.36	107.65	120.20
46	A	2059	A	P-O3'-C3'	-8.36	107.65	120.20
63	R	202	ARG	N-CA-C	-8.35	102.11	111.71
12	AL	1499	U	P-O3'-C3'	-8.28	107.78	120.20
46	A	980	A	P-O3'-C3'	-8.25	107.82	120.20
12	AL	1612	C	P-O3'-C3'	-8.24	107.83	120.20
12	AL	1500	U	P-O3'-C3'	-8.21	107.88	120.20
46	A	2062	G	P-O3'-C3'	-8.20	107.90	120.20
22	m	238	ILE	N-CA-C	-8.19	102.35	110.30
46	A	990	U	P-O3'-C3'	-8.19	107.92	120.20
9	AI	347	GLY	N-CA-C	8.16	122.37	112.49
5	AE	279	LEU	N-CA-C	-8.15	102.43	112.38
46	A	1027	G	P-O3'-C3'	-8.14	107.98	120.20
12	AL	1604	U	P-O3'-C3'	-8.11	108.03	120.20
12	AL	1538	U	P-O3'-C3'	-8.07	108.10	120.20
46	A	1005	A	P-O3'-C3'	-8.03	108.15	120.20
12	AL	1510	A	P-O3'-C3'	-8.03	108.16	120.20
12	AL	1504	A	P-O3'-C3'	-8.02	108.17	120.20
32	w	221	LYS	N-CA-C	-8.01	102.63	111.36
12	AL	1487	C	P-O3'-C3'	-8.01	108.19	120.20
12	AL	1475	C	P-O3'-C3'	-8.00	108.20	120.20
12	AL	1569	A	P-O3'-C3'	-7.99	108.21	120.20
12	AL	122	U	C2'-C3'-O3'	7.97	121.45	109.50
5	AE	325	LEU	N-CA-C	-7.95	102.61	111.28
12	AL	1580	U	P-O3'-C3'	-7.95	108.27	120.20
46	A	2775	A	P-O3'-C3'	-7.95	108.28	120.20
12	AL	1471	U	P-O3'-C3'	-7.94	108.28	120.20
46	A	2027	U	P-O3'-C3'	-7.94	108.29	120.20
12	AL	1615	G	P-O3'-C3'	-7.92	108.32	120.20
5	AE	33	VAL	N-CA-C	7.91	125.79	109.34
19	j	420	PRO	CB-CA-C	7.90	124.60	111.56
46	A	1008	U	P-O3'-C3'	-7.88	108.38	120.20
12	AL	971	G	C2'-C3'-O3'	7.87	125.50	113.70
12	AL	1508	A	P-O3'-C3'	-7.86	108.40	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
5	AE	47	LYS	N-CA-C	-7.86	102.71	111.28
12	AL	1591	A	P-O3'-C3'	-7.86	108.41	120.20
12	AL	856	G	P-O3'-C3'	-7.86	108.41	120.20
12	AL	1571	A	P-O3'-C3'	-7.86	108.41	120.20
12	AL	1478	G	P-O3'-C3'	-7.85	108.42	120.20
12	AL	1558	U	P-O3'-C3'	-7.85	108.42	120.20
4	AD	120	PRO	N-CA-C	-7.84	96.31	112.47
46	A	2844	A	P-O3'-C3'	-7.83	108.46	120.20
35	z	94	GLU	N-CA-C	-7.83	100.59	111.39
5	AE	217	LYS	N-CA-C	-7.81	102.86	112.38
12	AL	1573	G	P-O3'-C3'	-7.79	108.51	120.20
46	A	2038	U	P-O3'-C3'	-7.77	108.55	120.20
12	AL	153	C	P-O3'-C3'	-7.75	108.58	120.20
12	AL	1576	U	P-O3'-C3'	-7.71	108.63	120.20
46	A	2022	U	C2'-C3'-O3'	7.69	121.03	109.50
12	AL	1557	A	P-O3'-C3'	-7.68	108.69	120.20
12	AL	1479	C	P-O3'-C3'	-7.67	108.70	120.20
12	AL	1461	C	P-O3'-C3'	-7.63	108.75	120.20
5	AE	267	LEU	N-CA-C	-7.62	102.98	111.28
63	R	150	LYS	N-CA-C	-7.62	102.11	111.33
12	AL	1636	U	P-O3'-C3'	-7.61	108.79	120.20
12	AL	1549	A	P-O3'-C3'	-7.60	108.80	120.20
9	AI	156	LYS	N-CA-C	-7.58	104.03	113.28
12	AL	1602	C	P-O3'-C3'	-7.58	108.83	120.20
12	AL	1564	A	P-O3'-C3'	-7.57	108.85	120.20
12	AL	1643	U	P-O3'-C3'	-7.55	108.87	120.20
12	AL	1513	A	P-O3'-C3'	-7.54	108.88	120.20
12	AL	1498	C	P-O3'-C3'	-7.54	108.89	120.20
12	AL	1619	U	P-O3'-C3'	-7.54	108.89	120.20
46	A	984	C	P-O3'-C3'	-7.53	108.91	120.20
46	A	994	A	P-O3'-C3'	-7.51	108.94	120.20
12	AL	1554	U	P-O3'-C3'	-7.49	108.97	120.20
5	AE	260	ASN	N-CA-C	-7.48	103.26	112.38
33	x	49	LEU	CA-C-N	-7.48	112.62	120.03
33	x	49	LEU	C-N-CA	-7.48	112.62	120.03
31	v	100	TRP	N-CA-C	-7.45	103.09	113.37
12	AL	1507	U	P-O3'-C3'	-7.45	109.03	120.20
46	A	1001	C	P-O3'-C3'	-7.45	109.03	120.20
46	A	2019	A	P-O3'-C3'	-7.44	109.04	120.20
46	A	2025	A	P-O3'-C3'	-7.44	109.04	120.20
12	AL	1561	C	P-O3'-C3'	-7.44	109.05	120.20
12	AL	1613	C	P-O3'-C3'	-7.41	109.09	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	AL	1603	G	P-O3'-C3'	-7.38	109.13	120.20
12	AL	1645	U	P-O3'-C3'	-7.38	109.14	120.20
46	A	2033	U	C2'-C3'-O3'	7.37	120.56	109.50
12	AL	1490	A	P-O3'-C3'	-7.37	109.15	120.20
5	AE	77	LYS	N-CA-C	-7.33	103.94	113.17
46	A	998	U	P-O3'-C3'	-7.33	109.21	120.20
12	AL	154	U	P-O3'-C3'	-7.32	109.22	120.20
46	A	1030	C	P-O3'-C3'	-7.32	109.22	120.20
12	AL	1484	A	P-O3'-C3'	-7.32	109.22	120.20
22	m	241	ARG	N-CA-C	-7.29	103.35	112.90
46	A	999	A	P-O3'-C3'	-7.29	109.26	120.20
20	k	105	ILE	N-CA-C	-7.29	105.42	111.91
12	AL	543	U	P-O3'-C3'	-7.28	109.27	120.20
20	k	137	PRO	CB-CA-C	-7.28	100.89	113.20
12	AL	1489	U	P-O3'-C3'	-7.27	109.30	120.20
12	AL	1555	U	P-O3'-C3'	-7.26	109.31	120.20
13	AM	38	A	P-O3'-C3'	-7.25	109.32	120.20
46	A	1020	U	P-O3'-C3'	-7.22	109.37	120.20
35	z	127	ASN	N-CA-C	-7.22	103.57	112.88
12	AL	1562	A	P-O3'-C3'	-7.21	109.38	120.20
12	AL	1614	U	P-O3'-C3'	-7.21	109.39	120.20
46	A	985	A	P-O3'-C3'	-7.18	109.43	120.20
46	A	2031	C	P-O3'-C3'	-7.17	109.44	120.20
46	A	2047	C	P-O3'-C3'	-7.17	109.44	120.20
12	AL	1483	G	P-O3'-C3'	-7.17	109.45	120.20
46	A	1022	A	P-O3'-C3'	-7.16	109.46	120.20
46	A	997	A	P-O3'-C3'	-7.16	109.46	120.20
12	AL	1642	U	P-O3'-C3'	-7.16	109.46	120.20
12	AL	1577	U	P-O3'-C3'	-7.16	109.47	120.20
12	AL	1520	U	P-O3'-C3'	-7.15	109.48	120.20
12	AL	1626	A	P-O3'-C3'	-7.13	109.50	120.20
12	AL	133	U	C2'-C3'-O3'	7.12	120.18	109.50
12	AL	152	G	P-O3'-C3'	-7.10	109.55	120.20
12	AL	1556	U	P-O3'-C3'	-7.09	109.56	120.20
12	AL	1579	A	P-O3'-C3'	-7.08	109.57	120.20
12	AL	739	G	C2'-C3'-O3'	7.08	124.31	113.70
5	AE	233	ALA	N-CA-C	-7.07	103.58	111.28
12	AL	1503	U	P-O3'-C3'	-7.06	109.61	120.20
46	A	995	C	P-O3'-C3'	-7.06	109.61	120.20
5	AE	290	HIS	N-CA-C	-7.06	104.79	113.19
22	m	211	ARG	N-CA-C	-7.05	103.78	112.38
46	A	976	A	P-O3'-C3'	-7.05	109.62	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	AL	1559	A	P-O3'-C3'	-7.04	109.63	120.20
2	AB	47	LYS	N-CA-C	-7.04	104.57	113.02
12	AL	855	C	P-O3'-C3'	-7.04	109.64	120.20
5	AE	280	ILE	N-CA-C	-7.02	102.93	110.23
5	AE	272	SER	N-CA-C	-7.00	102.86	111.33
12	AL	1646	U	C2'-C3'-O3'	7.00	119.99	109.50
12	AL	1481	U	P-O3'-C3'	-6.99	109.71	120.20
63	R	152	TYR	N-CA-C	-6.98	103.72	111.82
12	AL	285	C	C2'-C3'-O3'	6.98	119.97	109.50
12	AL	1605	A	P-O3'-C3'	-6.97	109.74	120.20
12	AL	1599	U	P-O3'-C3'	-6.96	109.75	120.20
46	A	2036	U	P-O3'-C3'	-6.96	109.75	120.20
46	A	2052	A	P-O3'-C3'	-6.96	109.77	120.20
12	AL	1575	A	P-O3'-C3'	-6.95	109.78	120.20
35	z	90	ARG	N-CA-C	-6.95	103.71	111.28
63	R	290	GLN	N-CA-C	-6.92	105.77	114.56
12	AL	853	U	P-O3'-C3'	-6.92	109.82	120.20
46	A	1034	U	P-O3'-C3'	-6.92	109.82	120.20
46	A	1002	C	P-O3'-C3'	-6.92	109.83	120.20
46	A	1016	C	P-O3'-C3'	-6.88	109.87	120.20
8	AH	203	TYR	CB-CA-C	6.88	123.36	110.63
30	u	38	VAL	N-CA-C	-6.86	103.62	110.62
9	AI	162	GLN	N-CA-C	-6.86	103.89	111.36
12	AL	1545	U	P-O3'-C3'	-6.85	109.93	120.20
46	A	1039	A	P-O3'-C3'	-6.83	109.96	120.20
5	AE	301	ILE	N-CA-C	-6.82	104.14	113.00
46	A	986	U	P-O3'-C3'	-6.81	109.98	120.20
12	AL	1596	A	P-O3'-C3'	-6.81	109.98	120.20
5	AE	274	TYR	N-CA-C	-6.80	104.95	113.18
12	AL	1501	A	P-O3'-C3'	-6.80	110.00	120.20
29	t	47	ASN	N-CA-C	6.80	120.35	108.52
12	AL	1467	U	P-O3'-C3'	-6.79	110.02	120.20
12	AL	1486	A	P-O3'-C3'	-6.78	110.04	120.20
46	A	979	C	P-O3'-C3'	-6.77	110.05	120.20
46	A	1041	U	P-O3'-C3'	-6.76	110.06	120.20
22	m	239	ALA	N-CA-C	-6.76	101.61	110.53
12	AL	1491	U	P-O3'-C3'	-6.75	110.07	120.20
12	AL	1493	A	P-O3'-C3'	-6.74	110.08	120.20
46	A	2026	G	P-O3'-C3'	-6.74	110.08	120.20
12	AL	1509	U	P-O3'-C3'	-6.74	110.09	120.20
12	AL	1516	U	P-O3'-C3'	-6.73	110.11	120.20
46	A	989	G	P-O3'-C3'	-6.72	110.11	120.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
27	r	95	ILE	N-CA-C	6.72	114.55	107.76
46	A	2041	G	P-O3'-C3'	-6.71	110.14	120.20
12	AL	1568	A	P-O3'-C3'	-6.68	110.17	120.20
46	A	1003	U	P-O3'-C3'	-6.68	110.17	120.20
12	AL	1518	U	P-O3'-C3'	-6.68	110.19	120.20
12	AL	1541	U	P-O3'-C3'	-6.67	110.19	120.20
2	AB	41	VAL	N-CA-C	6.66	117.42	110.62
63	R	243	SER	N-CA-C	-6.65	103.95	111.07
63	R	203	ALA	CA-C-N	-6.64	111.28	120.38
63	R	203	ALA	C-N-CA	-6.64	111.28	120.38
12	AL	1536	A	P-O3'-C3'	-6.63	110.25	120.20
12	AL	1492	U	P-O3'-C3'	-6.60	110.30	120.20
30	u	128	ILE	N-CA-C	-6.60	103.10	110.62
12	AL	1497	U	P-O3'-C3'	-6.58	110.33	120.20
12	AL	1617	G	P-O3'-C3'	-6.57	110.34	120.20
33	x	53	THR	N-CA-C	6.57	118.33	110.19
5	AE	312	SER	N-CA-C	6.56	120.22	109.06
12	AL	1522	A	P-O3'-C3'	-6.56	110.36	120.20
12	AL	1631	U	P-O3'-C3'	-6.55	110.37	120.20
12	AL	1593	U	P-O3'-C3'	-6.55	110.37	120.20
12	AL	1574	A	P-O3'-C3'	-6.55	110.38	120.20
35	z	98	MET	N-CA-C	-6.55	103.26	113.02
12	AL	1542	A	P-O3'-C3'	-6.55	110.38	120.20
46	A	1013	G	P-O3'-C3'	-6.54	110.38	120.20
12	AL	1583	G	P-O3'-C3'	6.54	130.01	120.20
46	A	987	G	P-O3'-C3'	-6.53	110.40	120.20
12	AL	297	G	C4'-C3'-O3'	-6.53	103.21	113.00
12	AL	854	U	P-O3'-C3'	-6.52	110.42	120.20
46	A	1023	C	P-O3'-C3'	-6.51	110.44	120.20
46	A	2029	A	C3'-C2'-C1'	-6.50	95.00	101.50
46	A	991	U	P-O3'-C3'	-6.50	110.45	120.20
10	AJ	61	THR	N-CA-C	-6.50	104.97	114.39
5	AE	74	LEU	N-CA-C	-6.49	103.47	111.33
46	A	988	G	P-O3'-C3'	-6.49	110.46	120.20
46	A	1007	U	O3'-P-O5'	6.49	113.73	104.00
63	R	296	LYS	N-CA-C	-6.46	104.15	111.07
12	AL	553	U	P-O3'-C3'	-6.45	110.52	120.20
12	AL	1588	U	P-O3'-C3'	-6.45	110.53	120.20
12	AL	1597	G	P-O3'-C3'	-6.44	110.53	120.20
12	AL	1592	A	P-O3'-C3'	-6.44	110.55	120.20
22	m	178	VAL	CA-C-N	-6.43	117.73	123.33
22	m	178	VAL	C-N-CA	-6.43	117.73	123.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
63	R	215	ARG	N-CA-C	-6.43	103.39	111.11
12	AL	552	A	P-O3'-C3'	-6.42	110.57	120.20
33	x	63	GLY	N-CA-C	-6.41	104.88	112.64
28	s	117	ILE	CA-C-N	-6.41	112.88	122.24
28	s	117	ILE	C-N-CA	-6.41	112.88	122.24
12	AL	1610	A	P-O3'-C3'	-6.40	110.60	120.20
22	m	98	TRP	N-CA-C	-6.37	103.62	111.33
46	A	1037	A	P-O3'-C3'	-6.34	110.69	120.20
23	n	14	GLN	OE1-CD-NE2	-6.34	116.26	122.60
32	w	113	VAL	N-CA-C	-6.32	104.35	110.42
46	A	967	U	P-O3'-C3'	-6.32	110.73	120.20
12	AL	937	A	C2'-C3'-O3'	6.31	118.97	109.50
63	R	263	LYS	N-CA-C	-6.31	105.64	113.15
20	k	107	PRO	N-CA-C	-6.31	103.00	110.70
30	u	225	GLU	N-CA-C	-6.31	104.32	111.07
27	r	133	SER	CB-CA-C	-6.30	106.52	114.40
12	AL	1512	A	P-O3'-C3'	-6.26	110.81	120.20
12	AL	550	U	P-O3'-C3'	-6.26	110.81	120.20
22	m	116	HIS	N-CA-C	-6.25	103.61	111.11
12	AL	1482	U	P-O3'-C3'	-6.24	110.83	120.20
33	x	113	ASP	N-CA-C	-6.24	106.20	113.88
12	AL	1639	A	P-O3'-C3'	-6.24	110.84	120.20
12	AL	1637	A	P-O3'-C3'	-6.24	110.84	120.20
49	D	136	PRO	N-CA-CB	6.23	109.80	103.25
46	A	2069	U	P-O3'-C3'	-6.23	110.86	120.20
12	AL	1502	U	P-O3'-C3'	-6.22	110.86	120.20
46	A	992	U	P-O3'-C3'	-6.22	110.87	120.20
46	A	996	A	P-O3'-C3'	-6.22	110.88	120.20
6	AF	67	TYR	CB-CA-C	-6.21	100.88	110.81
46	A	1033	A	P-O3'-C3'	-6.21	110.89	120.20
46	A	1036	U	P-O3'-C3'	-6.20	110.90	120.20
12	AL	1641	A	P-O3'-C3'	-6.20	110.91	120.20
12	AL	1623	C	P-O3'-C3'	-6.16	110.96	120.20
46	A	974	A	P-O3'-C3'	-6.16	110.96	120.20
46	A	1031	U	P-O3'-C3'	-6.13	111.00	120.20
46	A	1004	A	P-O3'-C3'	-6.13	111.01	120.20
5	AE	305	GLN	N-CA-C	-6.11	104.62	111.28
5	AE	108	SER	N-CA-C	-6.11	104.93	112.38
18	i	340	GLY	O-C-N	6.08	128.69	122.24
3	AC	98	PRO	N-CA-C	-6.08	105.09	113.53
12	AL	1548	U	P-O3'-C3'	-6.07	111.10	120.20
33	x	41	ILE	N-CA-C	6.05	118.95	108.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
12	AL	1474	U	P-O3'-C3'	-6.05	111.13	120.20
46	A	2064	G	C3'-C2'-C1'	-6.05	95.25	101.30
30	u	257	PHE	N-CA-C	-6.04	104.60	111.07
46	A	1032	G	P-O3'-C3'	-6.04	111.14	120.20
12	AL	1553	A	P-O3'-C3'	-6.04	111.15	120.20
9	AI	331	GLU	N-CA-C	-6.03	105.41	112.89
46	A	2051	U	P-O3'-C3'	-6.01	111.18	120.20
12	AL	131	A	P-O3'-C3'	-5.99	111.21	120.20
12	AL	1511	U	P-O3'-C3'	-5.99	111.21	120.20
46	A	1079	A	O3'-P-O5'	-5.99	95.02	104.00
46	A	2019	A	C1'-O4'-C4'	-5.96	103.94	109.90
46	A	993	G	P-O3'-C3'	-5.96	111.27	120.20
22	m	120	MET	N-CA-C	-5.94	105.61	112.92
12	AL	1521	U	P-O3'-C3'	-5.94	111.29	120.20
1	AA	85	LYS	N-CA-C	-5.93	103.99	111.11
17	h	207	GLN	N-CA-C	-5.93	105.90	113.01
12	AL	1594	A	P-O3'-C3'	-5.91	111.33	120.20
12	AL	1540	U	P-O3'-C3'	-5.91	111.34	120.20
12	AL	1463	C	P-O3'-C3'	-5.91	111.34	120.20
2	AB	56	LYS	N-CA-C	-5.91	105.78	112.87
5	AE	35	ARG	N-CA-C	-5.91	104.19	111.33
30	u	285	THR	N-CA-C	-5.91	104.19	111.33
9	AI	195	ASP	N-CA-C	-5.90	105.66	112.92
47	B	313	HIS	N-CA-C	-5.88	105.81	112.87
32	w	93	GLN	N-CA-C	-5.88	104.06	111.11
9	AI	252	LYS	N-CA-C	-5.88	106.15	113.38
9	AI	398	GLU	N-CA-C	-5.87	104.88	111.28
9	AI	365	ASP	CA-C-N	-5.87	112.87	118.97
9	AI	365	ASP	C-N-CA	-5.87	112.87	118.97
17	h	352	PRO	CB-CA-C	-5.86	105.12	113.09
46	A	1010	A	C2'-C3'-O3'	5.86	118.29	109.50
46	A	978	U	P-O3'-C3'	-5.85	111.42	120.20
46	A	1011	A	P-O3'-C3'	-5.85	111.42	120.20
5	AE	292	ALA	N-CA-C	-5.85	106.38	112.93
15	Z	52	ALA	N-CA-C	-5.84	104.10	111.11
19	j	468	PRO	N-CA-C	-5.82	108.63	114.68
12	AL	1515	A	P-O3'-C3'	-5.81	111.48	120.20
12	AL	937	A	C4'-C3'-O3'	5.79	118.08	109.40
12	AL	551	U	P-O3'-C3'	-5.78	111.54	120.20
46	A	1017	A	P-O3'-C3'	-5.78	111.54	120.20
47	B	103	LEU	N-CA-C	-5.76	106.29	113.38
6	AF	90	PRO	N-CA-C	-5.76	106.49	114.27

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
63	R	293	GLU	N-CA-C	5.74	117.53	111.28
6	AF	61	PHE	N-CA-C	-5.72	106.01	112.87
46	A	2050	U	P-O3'-C3'	-5.72	111.62	120.20
5	AE	82	PRO	N-CA-C	-5.72	107.36	114.68
12	AL	1494	U	P-O3'-C3'	-5.71	111.63	120.20
5	AE	306	ASN	N-CA-C	-5.70	105.07	111.28
26	q	98	LYS	N-CA-C	-5.69	103.48	110.65
20	k	29	LEU	N-CA-C	-5.69	104.92	112.94
9	AI	297	VAL	N-CA-C	-5.68	107.20	112.83
63	R	135	THR	N-CA-C	-5.68	106.36	113.28
27	r	32	ASN	N-CA-C	-5.66	105.11	111.28
13	AM	73	A	O3'-P-O5'	5.65	112.47	104.00
15	Z	20	LYS	CA-C-N	-5.65	112.78	119.84
15	Z	20	LYS	C-N-CA	-5.65	112.78	119.84
5	AE	275	GLU	N-CA-C	-5.64	104.34	111.11
9	AI	309	GLU	N-CA-C	-5.63	104.16	111.71
5	AE	320	LYS	N-CA-C	-5.61	105.26	111.71
12	AL	1524	U	P-O3'-C3'	-5.60	111.80	120.20
26	q	148	SER	N-CA-C	-5.60	105.24	112.68
46	A	975	U	P-O3'-C3'	-5.60	111.81	120.20
27	r	87	ASN	N-CA-C	-5.59	105.65	113.37
29	t	54	LEU	N-CA-C	-5.59	105.18	111.28
9	AI	189	ASP	N-CA-C	5.59	117.90	110.53
9	AI	129	ASP	N-CA-C	-5.57	106.48	113.28
15	Z	22	ILE	CB-CA-C	-5.56	105.90	111.80
5	AE	266	GLU	N-CA-C	-5.54	104.65	111.40
12	AL	44	U	O4'-C1'-N1	5.51	116.77	108.50
5	AE	38	ALA	N-CA-C	-5.50	104.31	111.02
32	w	109	ASP	N-CA-C	-5.50	105.28	111.28
8	AH	201	ASN	N-CA-C	-5.50	106.70	113.41
12	AL	1496	A	P-O3'-C3'	-5.49	111.96	120.20
22	m	161	ALA	CA-C-N	-5.49	114.12	119.78
22	m	161	ALA	C-N-CA	-5.49	114.12	119.78
9	AI	56	LEU	N-CA-C	-5.48	106.44	114.39
22	m	140	LEU	N-CA-C	-5.47	105.31	111.28
63	R	244	LEU	N-CA-C	-5.47	105.32	111.28
12	AL	1204	U	O3'-P-O5'	-5.46	95.80	104.00
12	AL	1472	C	P-O3'-C3'	-5.46	112.00	120.20
46	A	2068	C	P-O3'-C3'	-5.46	112.00	120.20
6	AF	306	GLN	N-CA-C	-5.45	104.73	111.33
16	g	61	ARG	N-CA-C	-5.45	105.85	112.88
5	AE	315	TYR	CA-CB-CG	-5.45	104.09	113.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
11	AK	224	ARG	CB-CA-C	-5.45	110.31	116.63
41	5	279	VAL	CB-CA-C	-5.45	104.99	111.97
4	AD	116	LEU	N-CA-C	-5.43	107.02	113.38
46	A	2072	U	C4'-C3'-C2'	-5.42	97.18	102.60
27	r	133	SER	N-CA-C	5.42	116.92	109.29
32	w	58	VAL	N-CA-C	5.41	114.30	107.70
30	u	97	GLU	N-CA-C	-5.41	105.39	111.28
20	k	187	ARG	N-CA-C	-5.40	106.61	114.12
46	A	977	A	P-O3'-C3'	-5.39	112.11	120.20
5	AE	302	ARG	N-CA-C	-5.39	105.10	110.97
26	q	184	VAL	N-CA-C	5.38	115.58	110.53
47	B	130	HIS	N-CA-C	-5.37	106.89	113.50
28	s	106	ASN	O-C-N	5.37	124.80	120.83
12	AL	1543	A	P-O3'-C3'	-5.36	112.16	120.20
29	t	39	LYS	N-CA-C	-5.36	105.35	111.14
12	AL	44	U	O3'-P-O5'	5.36	112.03	104.00
12	AL	544	A	P-O3'-C3'	-5.36	112.17	120.20
63	R	130	GLY	N-CA-C	5.36	123.15	114.90
2	AB	49	GLY	N-CA-C	5.35	125.86	113.18
12	AL	1622	G	P-O3'-C3'	-5.35	112.18	120.20
9	AI	273	LYS	N-CA-C	-5.33	104.71	111.11
12	AL	196	A	O3'-P-O5'	-5.33	96.00	104.00
46	A	1015	A	P-O3'-C3'	-5.33	112.21	120.20
27	r	141	SER	N-CA-C	-5.33	105.42	112.24
9	AI	164	HIS	N-CA-C	-5.32	106.06	112.54
20	k	249	ILE	N-CA-C	-5.32	105.32	110.42
5	AE	44	ALA	N-CA-C	-5.31	104.91	111.33
12	AL	977	C	C4'-C3'-O3'	-5.31	105.04	113.00
20	k	121	LYS	N-CA-C	-5.29	104.76	111.11
21	l	26	SER	N-CA-C	-5.29	104.94	111.40
46	A	983	U	P-O3'-C3'	-5.29	112.26	120.20
27	r	68	LEU	N-CA-C	5.29	117.72	109.52
63	R	162	LEU	N-CA-C	-5.29	105.42	111.07
32	w	160	THR	N-CA-C	-5.28	106.34	112.89
12	AL	25	G	O4'-C1'-C2'	-5.28	102.32	107.60
46	A	2049	U	P-O3'-C3'	-5.28	112.29	120.20
5	AE	159	MET	N-CA-C	-5.27	105.57	113.89
30	u	261	LYS	CA-C-N	-5.25	116.19	122.22
30	u	261	LYS	C-N-CA	-5.25	116.19	122.22
63	R	70	LYS	N-CA-C	-5.24	105.65	111.36
35	z	91	SER	N-CA-C	-5.23	105.48	111.07
34	y	67	ASP	N-CA-C	-5.22	106.97	113.55

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
63	R	236	THR	N-CA-C	-5.22	99.68	110.80
12	AL	1469	A	P-O3'-C3'	-5.22	112.37	120.20
22	m	240	HIS	N-CA-C	-5.21	106.87	113.23
46	A	2040	A	P-O3'-C3'	-5.20	112.40	120.20
4	AD	215	VAL	N-CA-C	-5.19	108.23	113.47
9	AI	160	LEU	N-CA-C	-5.18	105.06	111.33
46	A	1892	G	C2'-C3'-O3'	5.17	117.26	109.50
46	A	1021	A	P-O3'-C3'	-5.17	112.45	120.20
21	l	39	VAL	N-CA-C	-5.16	102.94	109.80
63	R	336	VAL	N-CA-C	5.16	118.28	111.17
12	AL	1550	U	P-O3'-C3'	-5.15	112.47	120.20
12	AL	1609	G	P-O3'-C3'	-5.15	112.47	120.20
4	AD	225	ASN	N-CA-C	-5.13	105.12	111.33
12	AL	1552	U	P-O3'-C3'	-5.13	112.50	120.20
33	x	46	SER	N-CA-C	5.13	115.78	107.32
66	U	33	SER	CA-C-N	5.13	129.40	121.71
66	U	33	SER	C-N-CA	5.13	129.40	121.71
7	AG	49	LYS	N-CA-C	5.12	117.77	109.06
15	Z	22	ILE	N-CA-C	5.12	114.64	107.37
46	A	1012	U	P-O3'-C3'	-5.12	112.52	120.20
8	AH	89	ASN	N-CA-C	-5.12	106.35	112.59
26	q	147	THR	N-CA-C	-5.12	105.72	112.94
12	AL	243	A	C2'-C3'-O3'	-5.10	106.05	113.70
50	E	249	ILE	N-CA-C	-5.10	105.87	110.82
16	g	14	GLN	N-CA-C	-5.09	105.17	111.33
12	AL	1590	A	P-O3'-C3'	-5.08	112.58	120.20
12	AL	285	C	C4'-C3'-O3'	5.08	117.02	109.40
19	j	6	ASN	O-C-N	5.08	128.87	122.37
9	AI	388	GLU	N-CA-C	5.07	117.24	109.07
5	AE	246	THR	N-CA-C	5.07	117.02	108.96
5	AE	54	TYR	N-CA-C	-5.06	105.65	111.07
5	AE	32	THR	CA-C-N	5.06	131.08	121.97
5	AE	32	THR	C-N-CA	5.06	131.08	121.97
46	A	2009	U	C2'-C3'-O3'	5.03	117.04	109.50
29	t	72	THR	O-C-N	5.01	128.09	122.22
75	e	196	GLN	CB-CA-C	-5.01	110.42	117.23
9	AI	436	GLY	N-CA-C	5.01	125.05	113.18
30	u	67	VAL	CB-CA-C	-5.01	106.59	111.05
11	AK	98	ASN	CA-C-N	-5.00	118.98	123.33
11	AK	98	ASN	C-N-CA	-5.00	118.98	123.33
12	AL	1376	U	C4'-C3'-C2'	-5.00	97.60	102.60
26	q	142	GLU	N-CA-C	-5.00	105.11	111.11

There are no chirality outliers.

All (150) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	AB	117	ARG	Sidechain
3	AC	117	ARG	Sidechain
3	AC	142	ARG	Sidechain
3	AC	240	ARG	Sidechain
3	AC	259	ARG	Sidechain
4	AD	110	ARG	Sidechain
4	AD	153	ARG	Sidechain
4	AD	16	ARG	Sidechain
4	AD	175	ARG	Sidechain
4	AD	189	ARG	Sidechain
4	AD	290	ARG	Sidechain
4	AD	312	ARG	Sidechain
5	AE	131	ARG	Sidechain
5	AE	197	ARG	Sidechain
5	AE	30	ARG	Peptide
5	AE	32	THR	Peptide
5	AE	67	ARG	Sidechain
6	AF	124	ARG	Sidechain
6	AF	200	ARG	Sidechain
6	AF	214	ARG	Sidechain
6	AF	29	ARG	Sidechain
6	AF	304	ARG	Sidechain
6	AF	94	ARG	Sidechain
7	AG	105	ARG	Sidechain
7	AG	118	ARG	Sidechain
7	AG	142	ARG	Sidechain
7	AG	180	ARG	Sidechain
7	AG	234	ARG	Sidechain
7	AG	44	ARG	Sidechain
7	AG	47	ARG	Sidechain
7	AG	90	ARG	Sidechain
8	AH	104	ARG	Sidechain
8	AH	112	ARG	Sidechain
8	AH	117	ARG	Sidechain
8	AH	128	ARG	Sidechain
8	AH	166	ARG	Sidechain
8	AH	180	ARG	Sidechain
8	AH	184	ARG	Sidechain
8	AH	96	ARG	Sidechain
9	AI	210	ARG	Sidechain

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Mol	Chain	Res	Type	Group
9	AI	50	ARG	Sidechain
10	AJ	29	ARG	Sidechain
10	AJ	38	ARG	Sidechain
10	AJ	57	ARG	Sidechain
11	AK	110	ARG	Sidechain
11	AK	125	ARG	Sidechain
11	AK	130	ARG	Sidechain
11	AK	152	ARG	Sidechain
11	AK	174	ARG	Sidechain
11	AK	185	ARG	Sidechain
11	AK	198	ARG	Sidechain
11	AK	249	ARG	Sidechain
11	AK	286	ARG	Sidechain
47	B	104	ARG	Sidechain
47	B	107	ARG	Sidechain
47	B	133	ARG	Sidechain
47	B	142	ARG	Sidechain
47	B	149	ARG	Sidechain
47	B	151	ARG	Sidechain
47	B	159	ARG	Sidechain
47	B	201	ARG	Sidechain
47	B	210	ARG	Sidechain
47	B	267	ARG	Sidechain
47	B	295	ARG	Sidechain
47	B	316	ARG	Sidechain
47	B	325	ARG	Sidechain
47	B	82	ARG	Sidechain
47	B	83	ARG	Sidechain
47	B	95	ARG	Sidechain
48	C	200	ARG	Sidechain
55	J	161	ARG	Sidechain
56	K	127	ARG	Sidechain
63	R	235	TRP	Mainchain
69	X	23	ARG	Sidechain
69	X	38	ARG	Sidechain
69	X	55	ARG	Sidechain
15	Z	70	ARG	Sidechain
15	Z	9	ARG	Sidechain
75	e	107	ARG	Sidechain
75	e	84	ARG	Sidechain
76	f	23	PRO	Peptide
16	g	230	ARG	Sidechain

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Mol	Chain	Res	Type	Group
16	g	296	ARG	Sidechain
16	g	73	ARG	Sidechain
16	g	80	ARG	Sidechain
16	g	87	ARG	Sidechain
17	h	203	ARG	Sidechain
17	h	231	ARG	Sidechain
17	h	304	ARG	Sidechain
17	h	387	ARG	Sidechain
17	h	390	ARG	Sidechain
18	i	334	ARG	Sidechain
19	j	111	ARG	Sidechain
19	j	119	ARG	Sidechain
19	j	122	ARG	Sidechain
19	j	13	ARG	Sidechain
19	j	3	ARG	Sidechain
19	j	399	ARG	Sidechain
19	j	423	THR	Peptide
19	j	476	ARG	Sidechain
19	j	483	ARG	Sidechain
19	j	53	ARG	Sidechain
20	k	153	ARG	Sidechain
20	k	187	ARG	Sidechain
20	k	210	ARG	Sidechain
20	k	232	ARG	Sidechain
20	k	50	ARG	Sidechain
21	l	113	ARG	Sidechain
22	m	186	ARG	Sidechain
22	m	203	ARG	Sidechain
22	m	211	ARG	Sidechain
24	o	153	ARG	Sidechain
24	o	160	ARG	Sidechain
24	o	245	ARG	Sidechain
24	o	261	ARG	Sidechain
24	o	270	ARG	Sidechain
24	o	63	ARG	Sidechain
25	p	104	ARG	Sidechain
25	p	112	ARG	Sidechain
25	p	18	ARG	Sidechain
25	p	48	ARG	Sidechain
25	p	64	ARG	Sidechain
26	q	138	ARG	Sidechain
27	r	114	ARG	Sidechain

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Mol	Chain	Res	Type	Group
27	r	72	LYS	Peptide
28	s	100	ARG	Sidechain
28	s	105	ARG	Sidechain
28	s	119	ARG	Sidechain
28	s	120	ARG	Sidechain
28	s	72	ARG	Sidechain
28	s	92	ARG	Sidechain
29	t	23	ARG	Sidechain
29	t	5	ARG	Sidechain
29	t	70	ARG	Sidechain
29	t	77	ARG	Sidechain
29	t	92	ARG	Sidechain
30	u	145	ARG	Sidechain
30	u	46	ARG	Sidechain
31	v	7	ARG	Sidechain
31	v	71	ARG	Sidechain
32	w	129	ARG	Sidechain
32	w	150	ARG	Sidechain
32	w	3	ARG	Sidechain
33	x	97	ARG	Sidechain
34	y	10	ARG	Sidechain
34	y	15	GLY	Peptide
34	y	34	ARG	Sidechain
34	y	38	ARG	Sidechain
34	y	80	ARG	Sidechain
35	z	134	ARG	Sidechain

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	AA	304	0	357	64	0
2	AB	808	0	809	138	0
3	AC	2079	0	2057	482	0
4	AD	2422	0	2395	424	0
5	AE	2432	0	2480	451	0
6	AF	2079	0	2104	448	0
7	AG	1931	0	1923	588	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
8	AH	1887	0	1994	495	0
9	AI	3243	0	3342	494	0
10	AJ	774	0	821	183	0
11	AK	2212	0	2170	524	0
12	AL	31883	0	15998	2046	0
13	AM	1615	0	820	84	0
14	AN	270	0	141	41	0
15	Z	687	0	719	154	0
16	g	1577	0	1611	527	0
17	h	2095	0	2101	535	0
18	i	2461	0	2450	637	0
19	j	2370	0	2435	364	0
20	k	2306	0	2323	428	0
21	l	1055	0	1129	281	0
22	m	1282	0	1342	253	0
23	n	1221	0	1287	167	0
24	o	1820	0	1906	331	0
25	p	1108	0	1115	369	0
26	q	1208	0	1262	206	0
27	r	955	0	1010	109	0
28	s	942	0	1001	194	0
29	t	942	0	992	254	0
30	u	2070	0	2138	327	0
31	v	830	0	890	258	0
32	w	1683	0	1769	330	0
33	x	738	0	771	240	0
34	y	636	0	654	87	0
35	z	760	0	791	157	0
36	0	324	0	347	20	0
37	1	2875	0	2881	79	0
38	2	944	0	969	38	0
39	3	1046	0	1071	32	0
40	4	1117	0	1142	19	0
41	5	2552	0	2600	47	0
42	6	1932	0	1950	43	0
43	7	858	0	908	10	0
44	8	1629	0	1633	15	0
45	9	1587	0	1628	17	0
46	A	61141	0	30666	4457	0
47	B	2527	0	2649	197	0
48	C	1932	0	1969	109	0
49	D	1989	0	2026	38	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
50	E	2187	0	2203	56	0
51	F	1524	0	1587	24	0
52	G	617	0	626	6	0
53	H	1275	0	1310	18	0
54	I	956	0	1037	13	0
55	J	1746	0	1840	80	0
56	K	1573	0	1628	35	0
57	L	1817	0	1878	22	0
58	M	1206	0	1283	13	0
59	N	948	0	1006	19	0
60	O	1826	0	1933	19	0
61	P	1729	0	1724	42	0
62	Q	2272	0	2334	43	0
63	R	2738	0	2811	405	0
64	S	1543	0	1621	43	0
65	T	1792	0	1782	29	0
66	U	639	0	699	16	0
67	V	543	0	568	39	0
68	W	937	0	978	13	0
69	X	512	0	563	47	0
70	Y	385	0	423	22	0
71	a	1440	0	1473	44	0
72	b	1299	0	1367	42	0
73	c	1004	0	1065	21	0
74	d	1746	0	1743	20	0
75	e	1340	0	1397	158	0
76	f	1032	0	1115	126	0
All	All	201764	0	157540	14173	0

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 40.

All (14173) 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)
3:AC:9:HIS:CE1	17:h:164:ILE:CD1	1.76	1.65
8:AH:210:ILE:CG2	21:l:39:VAL:HB	1.29	1.62
17:h:247:LEU:HD11	24:o:45:TYR:CD2	1.28	1.61
18:i:180:MET:HG2	20:k:92:TRP:CG	1.33	1.60
7:AG:114:TRP:CZ2	16:g:87:ARG:HB2	1.31	1.59
7:AG:166:VAL:CG2	16:g:195:LYS:HE2	1.31	1.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:198:GLU:CB	21:l:105:LEU:HD23	1.29	1.59
11:AK:132:PHE:CD1	18:i:248:MET:CE	1.83	1.59
16:g:7:LEU:HD12	17:h:189:MET:CE	1.21	1.59
8:AH:223:VAL:CG1	21:l:44:PRO:HG2	1.25	1.58
15:Z:94:HIS:CD2	17:h:203:ARG:HG3	1.33	1.58
8:AH:104:ARG:HD2	12:AL:143:A:C4'	1.27	1.58
18:i:368:LEU:HD12	29:t:111:LYS:CD	1.16	1.58
16:g:7:LEU:CD1	17:h:189:MET:HE1	1.33	1.58
8:AH:16:PRO:HG3	31:v:35:LYS:CE	1.21	1.58
7:AG:3:ILE:HG21	23:n:20:ARG:CZ	1.26	1.56
7:AG:114:TRP:HE1	16:g:87:ARG:CG	1.04	1.56
18:i:302:ILE:HD12	25:p:20:TYR:CD2	1.37	1.56
18:i:180:MET:HG2	20:k:92:TRP:CD2	1.08	1.56
7:AG:217:LEU:HD13	16:g:273:MET:CG	1.32	1.55
7:AG:224:VAL:HG12	33:x:45:LEU:CD1	1.32	1.55
3:AC:90:HIS:CD2	17:h:160:LEU:HD12	1.41	1.55
6:AF:146:ASN:HB2	19:j:439:HIS:CD2	1.37	1.54
10:AJ:69:VAL:HB	18:i:124:THR:CG2	1.10	1.54
11:AK:154:TYR:HD2	25:p:57:PHE:CZ	1.22	1.54
9:AI:57:TYR:HA	22:m:205:SER:CA	1.35	1.54
30:u:87:LEU:HD12	32:w:114:ARG:CZ	1.38	1.54
9:AI:431:PHE:CD1	24:o:176:ILE:HD11	1.39	1.53
18:i:368:LEU:CD1	29:t:111:LYS:CD	1.85	1.53
3:AC:217:TRP:NE1	17:h:146:LEU:HD21	1.23	1.53
25:p:85:ARG:NE	29:t:115:TRP:CZ2	1.73	1.53
11:AK:174:ARG:HD3	25:p:38:TYR:CD2	1.43	1.52
18:i:176:MET:HE1	20:k:92:TRP:C	1.33	1.52
9:AI:187:ARG:HD2	28:s:44:TRP:CD1	1.41	1.52
4:AD:123:ASN:ND2	16:g:105:ASN:HB3	1.18	1.51
18:i:100:TYR:CE1	25:p:48:ARG:HD3	1.45	1.51
30:u:100:LYS:CB	32:w:167:LEU:HD21	1.33	1.50
18:i:368:LEU:CA	29:t:111:LYS:HG2	1.04	1.50
16:g:200:ILE:HD11	16:g:287:LYS:CE	1.40	1.50
10:AJ:69:VAL:CB	18:i:124:THR:HG21	1.02	1.50
6:AF:308:LYS:CD	31:v:62:ILE:HD12	1.39	1.49
4:AD:67:LEU:CA	4:AD:77:LYS:NZ	1.72	1.49
3:AC:227:TRP:CH2	4:AD:164:SER:O	1.64	1.48
17:h:247:LEU:CD1	24:o:45:TYR:CD2	1.95	1.48
46:A:2376:A:H61	69:X:68:THR:CG2	1.25	1.48
8:AH:198:GLU:HB3	21:l:105:LEU:CD2	1.44	1.48
16:g:200:ILE:CD1	16:g:287:LYS:HG2	1.41	1.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:i:93:TRP:CD1	29:t:109:GLY:H	1.30	1.47
3:AC:62:TYR:CD2	17:h:159:LYS:CG	1.98	1.47
13:AM:36:U:H3	14:AN:8:A:N6	0.97	1.46
15:Z:66:ALA:HB2	22:m:184:ASN:CB	1.46	1.46
7:AG:166:VAL:HG11	16:g:195:LYS:CG	1.42	1.46
8:AH:21:ILE:HG13	31:v:74:TYR:CD1	1.47	1.46
18:i:180:MET:CG	20:k:92:TRP:CD2	1.94	1.46
8:AH:224:PHE:CD2	21:l:18:LYS:HD3	1.49	1.45
10:AJ:53:ILE:CG1	29:t:14:PRO:HB3	1.45	1.45
4:AD:258:LYS:HE2	16:g:226:VAL:CG2	1.46	1.45
8:AH:184:ARG:CD	12:AL:814:A:H4'	1.47	1.45
11:AK:154:TYR:CD2	25:p:57:PHE:CE2	2.02	1.45
16:g:68:LEU:CD1	17:h:217:ILE:HD12	1.47	1.44
10:AJ:19:PHE:CD1	11:AK:226:ARG:NH1	1.85	1.44
11:AK:70:TRP:HE1	18:i:173:MET:CE	1.27	1.44
8:AH:223:VAL:CG1	21:l:44:PRO:CG	1.93	1.44
8:AH:103:ARG:NH2	31:v:79:GLY:CA	1.79	1.44
10:AJ:53:ILE:HG12	29:t:14:PRO:CB	1.45	1.44
9:AI:367:TYR:HD1	10:AJ:1:MET:SD	1.40	1.43
17:h:290:TRP:CH2	24:o:49:PRO:HD2	1.53	1.43
18:i:93:TRP:CG	29:t:109:GLY:H	1.33	1.43
30:u:275:ARG:NH1	30:u:278:ILE:HD12	1.22	1.43
7:AG:166:VAL:HG21	16:g:195:LYS:CE	1.45	1.43
16:g:200:ILE:HD11	16:g:287:LYS:CD	1.44	1.43
4:AD:67:LEU:CB	4:AD:77:LYS:NZ	1.81	1.43
4:AD:162:ALA:CB	7:AG:189:VAL:HG21	1.43	1.43
6:AF:137:PHE:CE1	19:j:468:PRO:HB3	1.52	1.43
11:AK:154:TYR:CE2	25:p:57:PHE:HE2	1.37	1.43
28:s:67:ILE:HG21	67:V:96:GLY:C	1.00	1.43
25:p:85:ARG:CZ	29:t:115:TRP:CZ2	2.01	1.43
11:AK:174:ARG:CD	25:p:38:TYR:CD2	2.03	1.42
12:AL:13:U:H5'	20:k:238:PHE:CE2	1.53	1.41
6:AF:136:PRO:HB3	19:j:436:ILE:CD1	1.47	1.41
9:AI:431:PHE:CE1	24:o:176:ILE:HD11	1.51	1.41
46:A:1010:A:C4'	76:f:129:SER:HB2	1.46	1.41
18:i:368:LEU:HA	29:t:111:LYS:CG	1.48	1.41
7:AG:217:LEU:HD13	16:g:273:MET:CB	1.48	1.40
18:i:93:TRP:CE2	29:t:109:GLY:HA2	1.55	1.40
9:AI:367:TYR:CD1	10:AJ:1:MET:SD	2.15	1.40
12:AL:13:U:C5'	20:k:238:PHE:HE2	1.33	1.40
6:AF:70:GLU:HG3	19:j:426:LYS:NZ	1.26	1.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:i:316:MET:HG3	20:k:69:TRP:CZ2	1.55	1.40
3:AC:188:ALA:CB	4:AD:73:LYS:HB3	1.51	1.40
3:AC:62:TYR:CD2	17:h:159:LYS:HG3	1.54	1.40
33:x:106:THR:HG21	35:z:127:ASN:ND2	1.34	1.39
18:i:176:MET:CE	20:k:92:TRP:O	1.68	1.39
9:AI:431:PHE:CE1	24:o:176:ILE:CD1	2.02	1.39
4:AD:260:PHE:CE2	16:g:222:ILE:HA	1.55	1.39
21:l:36:ARG:O	30:u:146:ASN:ND2	1.56	1.39
7:AG:1:MET:SD	17:h:329:ARG:NH1	1.97	1.38
3:AC:265:SER:O	17:h:128:PRO:CD	1.71	1.38
3:AC:9:HIS:CE1	17:h:164:ILE:HD13	1.47	1.38
9:AI:187:ARG:O	28:s:42:TYR:CE2	1.74	1.38
11:AK:140:GLN:NE2	18:i:321:TYR:CD2	1.91	1.38
5:AE:93:PRO:HD2	5:AE:95:LYS:NZ	1.33	1.38
8:AH:198:GLU:CG	21:l:105:LEU:HD23	1.53	1.38
17:h:144:GLN:NE2	24:o:119:GLN:CB	1.84	1.38
6:AF:146:ASN:HD22	19:j:439:HIS:CD2	1.43	1.37
11:AK:132:PHE:CG	18:i:248:MET:HE3	1.57	1.37
16:g:7:LEU:HD21	17:h:219:ILE:CD1	1.52	1.37
46:A:1728:U:N3	47:B:270:GLY:HA3	1.37	1.37
46:A:2376:A:N6	69:X:68:THR:HG22	1.35	1.37
3:AC:261:PHE:CB	17:h:149:ARG:HG3	1.55	1.36
8:AH:16:PRO:CG	31:v:35:LYS:CE	2.02	1.36
28:s:67:ILE:CG2	67:V:96:GLY:C	1.95	1.36
18:i:303:ASN:ND2	25:p:18:ARG:O	1.59	1.36
7:AG:224:VAL:CG1	33:x:45:LEU:HD13	1.55	1.36
3:AC:54:ALA:C	7:AG:143:PRO:HB3	1.51	1.36
18:i:148:LYS:NZ	20:k:78:LEU:HA	1.04	1.36
7:AG:114:TRP:CE2	16:g:87:ARG:HB2	1.61	1.35
8:AH:103:ARG:HH21	31:v:79:GLY:CA	1.38	1.35
8:AH:198:GLU:CB	21:l:105:LEU:CD2	1.96	1.35
11:AK:75:ARG:NH2	20:k:85:ASN:O	1.58	1.35
7:AG:217:LEU:CD1	16:g:273:MET:HA	1.56	1.35
7:AG:3:ILE:HG21	23:n:20:ARG:NH1	1.05	1.35
25:p:103:GLU:CD	29:t:113:GLY:HA2	1.50	1.35
8:AH:37:LYS:CE	12:AL:182:A:OP1	1.74	1.35
30:u:225:GLU:HG3	32:w:88:TYR:CD1	1.60	1.35
8:AH:210:ILE:HG21	21:l:39:VAL:CB	1.55	1.35
3:AC:217:TRP:CD1	17:h:146:LEU:HD21	1.61	1.34
6:AF:308:LYS:HD2	31:v:62:ILE:CD1	1.53	1.34
6:AF:212:LEU:HD13	19:j:445:PHE:CD2	1.62	1.34

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:21:ILE:CG1	31:v:74:TYR:CD1	2.10	1.34
11:AK:161:GLU:CB	25:p:127:TYR:OH	1.76	1.34
11:AK:70:TRP:NE1	18:i:173:MET:HE3	1.04	1.34
18:i:368:LEU:CB	29:t:111:LYS:CG	2.03	1.34
12:AL:232:U:O2'	31:v:78:VAL:CG1	1.73	1.34
8:AH:50:ALA:HB2	32:w:75:ALA:C	1.53	1.34
10:AJ:14:LEU:CD1	11:AK:222:LEU:HD22	1.55	1.34
46:A:2436:A:H5'	46:A:2437:U:OP2	1.26	1.34
18:i:100:TYR:CE1	25:p:48:ARG:NH1	1.88	1.33
18:i:368:LEU:CB	29:t:111:LYS:HG2	1.57	1.33
8:AH:16:PRO:CG	31:v:35:LYS:HE3	1.58	1.33
15:Z:94:HIS:CD2	17:h:203:ARG:CG	2.08	1.33
22:m:109:ARG:NH2	24:o:228:MET:CE	1.90	1.33
16:g:200:ILE:CD1	16:g:287:LYS:CG	2.05	1.33
46:A:1006:U:C5	76:f:135:LEU:HD22	1.62	1.33
1:AA:89:LYS:NZ	12:AL:1604:U:OP2	1.62	1.33
25:p:85:ARG:HD3	29:t:115:TRP:CH2	1.64	1.33
3:AC:261:PHE:HB2	17:h:149:ARG:CG	1.56	1.32
8:AH:21:ILE:HG13	31:v:74:TYR:CG	1.61	1.32
11:AK:182:VAL:CG2	25:p:148:ILE:HG22	1.56	1.32
15:Z:16:LEU:HD11	35:z:162:PHE:CD1	1.62	1.32
9:AI:431:PHE:CE1	24:o:176:ILE:CG1	2.10	1.32
3:AC:62:TYR:CG	17:h:159:LYS:HG3	1.64	1.32
3:AC:217:TRP:NE1	17:h:146:LEU:CD2	1.90	1.32
28:s:62:LEU:HD23	67:V:96:GLY:C	1.43	1.32
7:AG:3:ILE:CG2	23:n:20:ARG:NH1	1.91	1.31
9:AI:57:TYR:CA	22:m:205:SER:HA	1.59	1.31
11:AK:143:GLU:OE1	18:i:91:ASN:ND2	1.63	1.31
11:AK:154:TYR:HD2	25:p:57:PHE:CE2	1.41	1.31
16:g:7:LEU:CD2	17:h:219:ILE:CD1	2.09	1.31
17:h:276:ILE:HD11	24:o:47:ALA:CA	1.60	1.31
17:h:276:ILE:CD1	24:o:47:ALA:HA	1.58	1.31
25:p:103:GLU:OE1	29:t:113:GLY:CA	1.79	1.31
8:AH:223:VAL:HG11	21:l:44:PRO:CG	1.54	1.31
20:k:16:TYR:OH	20:k:20:LEU:CG	1.75	1.31
25:p:85:ARG:NH2	29:t:115:TRP:NE1	1.78	1.31
30:u:276:LYS:HD2	30:u:279:ARG:NH2	1.41	1.31
75:e:66:MET:HB3	75:e:149:GLN:OE1	1.20	1.31
9:AI:187:ARG:O	28:s:42:TYR:HE2	1.03	1.30
11:AK:154:TYR:CD2	25:p:57:PHE:CZ	2.15	1.30
20:k:54:PHE:HD1	25:p:57:PHE:CE1	1.49	1.30

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:14:LEU:HD11	11:AK:222:LEU:CD2	1.60	1.30
10:AJ:14:LEU:HD21	11:AK:222:LEU:CD2	1.60	1.30
18:i:211:SER:O	18:i:212:TYR:CG	1.84	1.30
8:AH:93:GLN:HE21	12:AL:222:U:P	1.54	1.30
46:A:2611:U:OP2	69:X:37:VAL:HG12	1.14	1.30
3:AC:9:HIS:ND1	17:h:164:ILE:HD13	1.47	1.30
8:AH:184:ARG:CG	12:AL:814:A:H4'	1.61	1.30
11:AK:185:ARG:HG3	25:p:143:PHE:CE1	1.67	1.30
7:AG:49:LYS:HE3	23:n:58:LYS:NZ	1.45	1.29
11:AK:134:PHE:CZ	20:k:110:VAL:HG23	1.67	1.29
8:AH:229:GLU:OE2	21:l:43:VAL:HG12	1.16	1.29
11:AK:132:PHE:CD1	18:i:248:MET:HE3	1.50	1.29
22:m:109:ARG:HH22	24:o:228:MET:CE	1.42	1.29
46:A:600:C:C4'	47:B:133:ARG:HH12	1.43	1.29
3:AC:265:SER:C	17:h:128:PRO:HD2	1.58	1.29
4:AD:123:ASN:HD22	16:g:105:ASN:CB	1.46	1.29
5:AE:50:GLU:CG	5:AE:66:TYR:OH	1.80	1.29
6:AF:146:ASN:CB	19:j:439:HIS:CD2	2.13	1.29
18:i:368:LEU:CA	29:t:111:LYS:CG	1.99	1.29
7:AG:75:TYR:O	8:AH:183:ASN:ND2	1.64	1.28
13:AM:13:C:H4'	46:A:1824:U:C5'	1.63	1.28
18:i:176:MET:HE1	20:k:92:TRP:O	1.13	1.28
10:AJ:63:TYR:CD1	18:i:182:ILE:HG23	1.67	1.28
7:AG:147:GLU:OE2	16:g:14:GLN:HG2	1.25	1.28
21:l:2:LEU:CD1	21:l:72:ASP:OD1	1.82	1.28
46:A:1439:A:H2'	46:A:1440:U:C6	1.67	1.28
3:AC:237:VAL:CG1	4:AD:44:ARG:HH11	1.44	1.28
18:i:302:ILE:CD1	25:p:20:TYR:CD2	2.15	1.28
16:g:246:ALA:HB1	33:x:55:TYR:CE1	1.69	1.27
18:i:368:LEU:CD1	29:t:111:LYS:HD2	1.49	1.27
27:r:35:LYS:CE	32:w:37:LEU:HD22	1.63	1.27
3:AC:90:HIS:CD2	17:h:161:GLY:HA2	1.67	1.27
17:h:129:TYR:OH	24:o:120:LEU:HD13	1.26	1.27
6:AF:137:PHE:CD1	19:j:468:PRO:HB3	1.69	1.27
7:AG:114:TRP:NE1	16:g:87:ARG:HG3	0.95	1.27
20:k:54:PHE:CD1	25:p:57:PHE:CE1	2.22	1.27
20:k:59:LEU:HG	25:p:20:TYR:CE2	1.67	1.27
4:AD:67:LEU:HB3	4:AD:77:LYS:NZ	1.35	1.27
9:AI:57:TYR:HA	22:m:205:SER:CB	1.64	1.27
30:u:87:LEU:CD1	32:w:114:ARG:NH2	1.98	1.27
7:AG:3:ILE:CD1	23:n:20:ARG:HD2	1.62	1.27

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:19:PHE:CE1	11:AK:226:ARG:NH1	2.01	1.27
16:g:251:VAL:CG1	33:x:51:LYS:HB2	1.63	1.27
12:AL:409:G:H4'	19:j:123:GLN:NE2	1.49	1.26
75:e:66:MET:CB	75:e:149:GLN:OE1	1.81	1.26
7:AG:217:LEU:CD1	16:g:273:MET:HG3	1.65	1.26
8:AH:37:LYS:HE3	12:AL:182:A:P	1.75	1.26
18:i:93:TRP:CD1	29:t:109:GLY:N	2.01	1.26
18:i:100:TYR:CZ	25:p:48:ARG:HD3	1.68	1.26
16:g:45:ARG:HG3	17:h:170:PRO:CB	1.65	1.26
25:p:103:GLU:OE1	29:t:113:GLY:HA2	1.11	1.26
37:1:190:LYS:HE3	46:A:2363:A:OP1	1.23	1.26
11:AK:172:TYR:HB3	25:p:116:THR:O	1.30	1.26
7:AG:114:TRP:CZ2	16:g:87:ARG:CB	2.19	1.26
11:AK:153:PHE:HZ	20:k:81:GLN:OE1	1.11	1.26
12:AL:1103:U:OP1	18:i:341:ARG:HA	1.30	1.26
12:AL:1496:A:C2	30:u:41:LEU:HD21	1.71	1.25
42:6:66:TYR:CG	46:A:2424:U:C5	2.22	1.25
3:AC:55:GLY:HA2	7:AG:121:ILE:CG2	1.64	1.25
3:AC:217:TRP:CE2	17:h:146:LEU:HD21	1.71	1.25
3:AC:200:MET:HB3	7:AG:200:LEU:CD1	1.67	1.25
7:AG:3:ILE:CG2	23:n:20:ARG:CZ	2.13	1.25
6:AF:61:PHE:CD1	19:j:29:TYR:CZ	2.24	1.25
11:AK:172:TYR:CE2	25:p:115:ASP:HB3	1.71	1.25
18:i:146:LEU:HD11	25:p:132:SER:OG	1.26	1.25
8:AH:229:GLU:OE2	21:l:43:VAL:CG1	1.83	1.25
9:AI:431:PHE:CE1	24:o:176:ILE:HG12	1.72	1.25
18:i:211:SER:O	18:i:212:TYR:CD2	1.90	1.25
26:q:108:TYR:CE2	35:z:89:ALA:HB2	1.70	1.25
8:AH:103:ARG:NH2	31:v:79:GLY:HA2	0.92	1.24
15:Z:16:LEU:CD1	35:z:162:PHE:CE1	2.21	1.24
21:l:63:ARG:NH2	26:q:108:TYR:OH	1.69	1.24
11:AK:304:ALA:HB2	24:o:152:GLY:CA	1.66	1.24
46:A:1010:A:H4'	76:f:129:SER:CB	1.66	1.24
46:A:1531:C:C4	47:B:326:TRP:CH2	2.25	1.24
9:AI:151:GLU:O	9:AI:154:VAL:HG12	1.09	1.24
12:AL:700:U:OP2	23:n:1:MET:HE3	1.36	1.24
16:g:200:ILE:CD1	16:g:287:LYS:HE2	1.67	1.24
26:q:214:MET:HE1	35:z:140:MET:CG	1.67	1.24
3:AC:179:ARG:CZ	7:AG:201:PHE:HE1	1.50	1.24
8:AH:231:PHE:CZ	21:l:48:ARG:CD	2.21	1.24
12:AL:1344:A:H5"	28:s:49:GLN:CD	1.62	1.24

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:600:C:O4'	47:B:133:ARG:NH1	1.67	1.24
11:AK:132:PHE:CD1	18:i:248:MET:HE1	1.53	1.23
12:AL:232:U:O2'	31:v:78:VAL:HG11	1.12	1.23
13:AM:13:C:H5'	46:A:1823:U:O2'	1.37	1.23
6:AF:314:VAL:CG1	31:v:71:ARG:HD3	1.66	1.23
7:AG:1:MET:SD	17:h:354:LEU:HD11	1.76	1.23
12:AL:1416:U:C4'	24:o:270:ARG:HD3	1.69	1.23
18:i:86:HIS:CE1	25:p:53:GLU:OE1	1.89	1.23
18:i:180:MET:HG2	20:k:92:TRP:CE2	1.72	1.23
22:m:123:ARG:HB3	22:m:126:LYS:NZ	1.51	1.23
16:g:3:LEU:HD12	17:h:211:TYR:CD2	1.72	1.23
8:AH:37:LYS:HE3	12:AL:182:A:OP1	1.08	1.23
11:AK:132:PHE:CB	18:i:248:MET:HA	1.69	1.23
18:i:146:LEU:CD1	25:p:132:SER:OG	1.84	1.23
18:i:148:LYS:NZ	20:k:78:LEU:CA	1.99	1.23
42:6:66:TYR:HB2	46:A:2424:U:O4	1.38	1.23
46:A:1608:U:O3'	48:C:201:HIS:NE2	1.70	1.23
75:e:54:ILE:CD1	75:e:105:TYR:HB2	1.68	1.23
3:AC:232:LEU:HD21	4:AD:278:LYS:CA	1.66	1.23
16:g:7:LEU:CD2	17:h:219:ILE:HD13	1.67	1.23
16:g:3:LEU:CD1	17:h:211:TYR:CD2	2.22	1.22
25:p:85:ARG:CZ	29:t:115:TRP:CE2	2.22	1.22
30:u:74:PRO:HB2	32:w:100:GLU:OE1	1.38	1.22
6:AF:146:ASN:ND2	19:j:439:HIS:CD2	2.07	1.22
8:AH:93:GLN:NE2	12:AL:222:U:OP2	1.70	1.22
9:AI:367:TYR:CE1	10:AJ:1:MET:HE1	1.73	1.22
12:AL:1105:G:C5'	18:i:390:ASN:HD22	1.51	1.22
15:Z:66:ALA:CB	22:m:184:ASN:HB2	1.67	1.22
17:h:290:TRP:CZ3	24:o:49:PRO:HD2	1.74	1.22
6:AF:321:TYR:CE2	31:v:35:LYS:HA	1.75	1.22
7:AG:49:LYS:CE	23:n:58:LYS:NZ	2.02	1.22
46:A:1932:G:N2	48:C:209:GLN:HG3	1.53	1.22
6:AF:62:LEU:HD11	19:j:26:PHE:CZ	1.73	1.22
7:AG:33:VAL:HG13	17:h:357:TYR:OH	1.40	1.22
16:g:68:LEU:CB	17:h:217:ILE:HD11	1.69	1.22
12:AL:1397:A:OP1	28:s:31:THR:HG23	1.38	1.21
17:h:144:GLN:NE2	24:o:119:GLN:HB3	0.90	1.21
18:i:95:THR:O	29:t:108:PRO:HB3	1.38	1.21
26:q:198:ILE:CG2	35:z:106:ILE:HD11	1.69	1.21
3:AC:148:LEU:CD1	4:AD:82:ASN:HB3	1.68	1.21
16:g:200:ILE:CD1	16:g:287:LYS:CD	2.18	1.21

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:i:316:MET:HG3	20:k:69:TRP:CH2	1.76	1.21
46:A:1059:A:O2'	46:A:1060:U:OP1	1.55	1.21
10:AJ:1:MET:SD	11:AK:278:ARG:NH2	2.13	1.21
11:AK:174:ARG:CD	25:p:38:TYR:CG	2.24	1.21
18:i:93:TRP:HB3	29:t:108:PRO:CA	1.69	1.21
10:AJ:63:TYR:CE1	18:i:182:ILE:CG2	2.22	1.21
18:i:100:TYR:CD1	25:p:48:ARG:NH1	2.05	1.21
6:AF:136:PRO:CB	19:j:436:ILE:HD12	1.70	1.20
11:AK:162:LEU:HB3	25:p:68:TYR:CD2	1.77	1.20
18:i:93:TRP:CE2	29:t:109:GLY:CA	2.24	1.20
20:k:59:LEU:HB3	25:p:20:TYR:OH	1.05	1.20
46:A:2611:U:OP2	69:X:37:VAL:CG1	1.89	1.20
7:AG:91:LEU:HD21	23:n:54:MET:O	1.41	1.20
21:l:66:HIS:ND1	33:x:137:LEU:HD23	1.56	1.20
16:g:200:ILE:HD13	16:g:287:LYS:CG	1.70	1.20
30:u:87:LEU:HD12	32:w:114:ARG:NH2	1.56	1.20
46:A:2276:G:N2	56:K:128:MET:HG3	1.55	1.20
3:AC:90:HIS:NE2	17:h:160:LEU:CD1	2.03	1.20
7:AG:217:LEU:CD1	16:g:273:MET:CA	2.19	1.20
12:AL:739:G:H5"	21:l:52:LYS:NZ	1.53	1.20
15:Z:16:LEU:HD11	35:z:162:PHE:CE1	1.77	1.20
46:A:1010:A:O4'	76:f:129:SER:HB2	1.41	1.20
16:g:12:ILE:CD1	17:h:195:LEU:HD21	1.70	1.20
42:6:66:TYR:CD1	46:A:2424:U:C4	2.30	1.20
6:AF:144:LYS:NZ	19:j:461:GLY:O	1.76	1.19
12:AL:1416:U:H4'	24:o:270:ARG:CD	1.69	1.19
18:i:100:TYR:CE1	25:p:48:ARG:CD	2.23	1.19
3:AC:148:LEU:HD13	4:AD:82:ASN:ND2	1.55	1.19
10:AJ:54:LEU:O	18:i:118:LEU:HD21	1.40	1.19
20:k:59:LEU:CB	25:p:20:TYR:OH	1.90	1.19
8:AH:16:PRO:HG3	31:v:35:LYS:CD	1.70	1.19
3:AC:265:SER:O	17:h:128:PRO:HD2	1.04	1.18
7:AG:92:TYR:OH	23:n:23:LEU:O	1.58	1.18
11:AK:155:ASN:ND2	20:k:56:PRO:HD3	1.54	1.18
18:i:93:TRP:CZ2	29:t:109:GLY:HA2	1.77	1.18
46:A:2079:A:H2'	46:A:2080:U:C6	1.78	1.18
5:AE:88:LEU:CD1	5:AE:90:PRO:HG3	1.73	1.18
7:AG:166:VAL:CG1	16:g:195:LYS:HG2	1.73	1.18
16:g:51:LYS:HD3	17:h:196:GLY:O	1.44	1.18
5:AE:271:LEU:HA	5:AE:274:TYR:HB2	1.24	1.18
8:AH:50:ALA:HB2	32:w:75:ALA:O	1.38	1.18

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:304:ALA:HB2	24:o:152:GLY:N	1.59	1.18
16:g:7:LEU:CD1	17:h:189:MET:CE	1.97	1.18
8:AH:224:PHE:HD2	21:l:18:LYS:CD	1.55	1.18
16:g:51:LYS:NZ	17:h:364:ASP:OD2	1.76	1.18
8:AH:167:ASN:HA	23:n:65:PRO:HG3	1.19	1.18
8:AH:198:GLU:CG	21:l:105:LEU:CD2	2.21	1.18
11:AK:196:ASN:ND2	12:AL:1318:U:H5'	1.56	1.18
12:AL:636:C:H5"	27:r:145:TYR:OH	1.40	1.18
26:q:108:TYR:HE2	35:z:89:ALA:CB	1.56	1.18
3:AC:195:ALA:HA	4:AD:223:TYR:CE2	1.76	1.17
12:AL:1237:U:H4'	18:i:383:ILE:CD1	1.72	1.17
16:g:273:MET:CE	33:x:60:PHE:HE1	1.56	1.17
18:i:369:ASN:HB3	29:t:114:ILE:CD1	1.74	1.17
25:p:85:ARG:CD	29:t:115:TRP:CH2	2.26	1.17
29:t:23:ARG:NH1	29:t:26:PHE:CD2	2.11	1.17
3:AC:94:GLU:OE1	17:h:160:LEU:HD11	1.40	1.17
7:AG:184:GLU:CG	16:g:209:SER:HB3	1.73	1.17
18:i:93:TRP:CG	29:t:109:GLY:N	2.12	1.17
26:q:203:LYS:O	35:z:133:LYS:NZ	1.77	1.17
12:AL:749:A:H4'	26:q:121:LYS:NZ	1.60	1.17
18:i:368:LEU:HD12	29:t:111:LYS:CG	1.74	1.17
29:t:23:ARG:NH1	29:t:26:PHE:HB3	1.56	1.17
30:u:100:LYS:CB	32:w:167:LEU:CD2	2.23	1.17
46:A:1531:C:C5	47:B:326:TRP:CZ3	2.33	1.17
46:A:1706:G:N3	47:B:265:PHE:CE1	2.13	1.17
18:i:302:ILE:HD12	25:p:20:TYR:CG	1.80	1.17
21:l:114:SER:OG	33:x:95:ARG:NE	1.77	1.17
22:m:98:TRP:CB	24:o:242:LEU:HD21	1.74	1.17
22:m:109:ARG:NH2	24:o:228:MET:HE2	1.51	1.17
28:s:62:LEU:HD22	67:V:96:GLY:N	1.51	1.17
37:1:58:ARG:NH2	46:A:2336:G:O6	1.78	1.17
46:A:1712:A:N3	47:B:140:THR:CG2	2.08	1.17
6:AF:212:LEU:HD13	19:j:445:PHE:CG	1.79	1.16
7:AG:227:GLU:OE1	33:x:62:MET:SD	2.02	1.16
11:AK:132:PHE:CE2	18:i:251:LEU:HD21	1.78	1.16
8:AH:210:ILE:CG2	21:l:39:VAL:CB	2.15	1.16
11:AK:134:PHE:CE1	20:k:110:VAL:CG2	2.27	1.16
5:AE:88:LEU:HD11	5:AE:90:PRO:HG3	1.26	1.16
6:AF:146:ASN:HB2	19:j:439:HIS:NE2	1.58	1.16
7:AG:217:LEU:CD1	16:g:273:MET:CB	2.24	1.16
13:AM:36:U:O4	14:AN:8:A:N1	1.79	1.16

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:1:190:LYS:CE	46:A:2363:A:OP1	1.91	1.16
46:A:600:C:C1'	47:B:133:ARG:NH1	2.08	1.16
1:AA:83:LYS:HG2	12:AL:1601:C:C5'	1.74	1.16
7:AG:217:LEU:HD22	16:g:273:MET:CE	1.74	1.16
8:AH:184:ARG:HD3	12:AL:814:A:C4'	1.75	1.16
8:AH:231:PHE:CZ	21:l:48:ARG:HD2	1.80	1.16
11:AK:150:GLU:HB2	20:k:71:TYR:OH	1.45	1.16
18:i:93:TRP:CB	29:t:108:PRO:HA	1.75	1.16
7:AG:74:LEU:HD11	8:AH:187:LEU:HD21	1.27	1.16
11:AK:161:GLU:HB3	25:p:127:TYR:OH	1.30	1.16
17:h:247:LEU:CD1	24:o:45:TYR:CE2	2.27	1.16
18:i:95:THR:O	29:t:108:PRO:CB	1.93	1.16
46:A:1531:C:C4	47:B:326:TRP:CZ3	2.34	1.16
75:e:54:ILE:HD11	75:e:105:TYR:HB2	1.27	1.16
4:AD:162:ALA:HB1	7:AG:189:VAL:CG2	1.75	1.15
6:AF:58:MET:CG	19:j:26:PHE:CD2	2.28	1.15
10:AJ:14:LEU:CD2	11:AK:222:LEU:CD2	2.23	1.15
7:AG:147:GLU:OE2	16:g:14:GLN:CG	1.93	1.15
8:AH:224:PHE:CE1	21:l:22:LYS:HG3	1.81	1.15
17:h:290:TRP:CH2	24:o:49:PRO:CD	2.30	1.15
46:A:1439:A:O2'	46:A:1440:U:O5'	1.64	1.15
10:AJ:63:TYR:CZ	18:i:182:ILE:HG22	1.81	1.15
16:g:68:LEU:CD1	17:h:217:ILE:CD1	2.23	1.15
75:e:54:ILE:CG1	75:e:105:TYR:HB2	1.74	1.15
6:AF:212:LEU:CD1	19:j:445:PHE:CB	2.25	1.15
8:AH:104:ARG:CD	12:AL:143:A:C4'	2.24	1.15
18:i:100:TYR:OH	25:p:48:ARG:CD	1.93	1.15
6:AF:58:MET:HE1	19:j:30:LYS:CE	1.77	1.15
11:AK:154:TYR:CE2	25:p:57:PHE:CE2	2.28	1.15
27:r:35:LYS:HB2	32:w:33:ILE:HD12	1.28	1.14
46:A:1725:G:OP1	47:B:176:ARG:NH2	1.80	1.14
15:Z:95:ASP:CA	17:h:203:ARG:HH12	1.61	1.14
11:AK:182:VAL:CG2	25:p:148:ILE:CG2	2.24	1.14
12:AL:1639:A:C4'	17:h:150:GLN:HE22	1.58	1.14
17:h:144:GLN:CD	24:o:119:GLN:HB3	1.72	1.14
28:s:26:GLY:HA3	28:s:67:ILE:HA	1.19	1.14
11:AK:182:VAL:HG21	25:p:148:ILE:HA	1.29	1.14
21:l:114:SER:HB2	33:x:92:PHE:CE2	1.81	1.13
22:m:98:TRP:HB2	24:o:242:LEU:HD21	1.27	1.13
15:Z:16:LEU:CD1	35:z:162:PHE:CD1	2.32	1.13
3:AC:62:TYR:CD2	17:h:159:LYS:HG2	1.67	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:179:ARG:NH2	7:AG:201:PHE:CE1	2.15	1.13
6:AF:136:PRO:HB3	19:j:436:ILE:HD11	1.20	1.13
18:i:303:ASN:HD21	25:p:18:ARG:C	1.55	1.13
6:AF:58:MET:CE	19:j:30:LYS:HE3	1.78	1.13
21:l:2:LEU:HD12	21:l:72:ASP:OD1	0.97	1.13
25:p:103:GLU:CG	29:t:113:GLY:HA2	1.79	1.13
7:AG:217:LEU:CD2	16:g:273:MET:HE3	1.78	1.13
8:AH:50:ALA:CB	32:w:75:ALA:C	2.21	1.13
46:A:1728:U:C2	47:B:269:ALA:O	2.01	1.13
12:AL:1237:U:H4'	18:i:383:ILE:HD13	1.21	1.12
1:AA:105:ARG:HH11	1:AA:107:LEU:HD23	1.15	1.12
6:AF:320:ARG:HH12	8:AH:15:PHE:HB2	1.02	1.12
9:AI:431:PHE:CD1	24:o:176:ILE:CD1	2.28	1.12
10:AJ:57:ARG:HD2	12:AL:1061:U:H5"	1.22	1.12
16:g:200:ILE:CD1	16:g:287:LYS:CE	2.25	1.12
18:i:180:MET:CG	20:k:92:TRP:CG	2.18	1.12
1:AA:83:LYS:HD3	12:AL:1601:C:O5'	1.49	1.12
4:AD:199:LEU:HB3	16:g:214:LEU:HD22	1.16	1.12
5:AE:88:LEU:HD13	5:AE:90:PRO:CD	1.79	1.12
5:AE:181:ILE:HA	5:AE:185:PHE:HB3	1.29	1.12
6:AF:198:ARG:HH22	12:AL:552:A:H4'	1.02	1.12
8:AH:199:LEU:HD21	30:u:93:TYR:CE2	1.84	1.12
10:AJ:14:LEU:CD2	11:AK:222:LEU:HD23	1.80	1.12
11:AK:153:PHE:CZ	20:k:81:GLN:OE1	2.02	1.12
29:t:56:LEU:CD1	34:y:18:ILE:HG12	1.78	1.12
29:t:89:SER:HB2	29:t:92:ARG:HH12	1.13	1.12
63:R:335:THR:HG22	63:R:363:SER:HB3	1.31	1.12
3:AC:9:HIS:CE1	17:h:164:ILE:HD12	1.65	1.12
5:AE:149:SER:CB	5:AE:159:MET:CE	2.27	1.12
10:AJ:63:TYR:CD1	18:i:182:ILE:CG2	2.32	1.12
5:AE:50:GLU:HG3	5:AE:66:TYR:OH	1.41	1.12
6:AF:61:PHE:CD1	19:j:29:TYR:CE2	2.38	1.12
9:AI:187:ARG:CD	28:s:44:TRP:CD1	2.32	1.12
26:q:198:ILE:HG21	35:z:106:ILE:HD11	1.14	1.12
46:A:1010:A:C4'	76:f:129:SER:CB	2.24	1.12
3:AC:185:LEU:HD12	7:AG:196:MET:CA	1.79	1.11
7:AG:36:ILE:HD11	17:h:234:LYS:HG2	1.16	1.11
18:i:303:ASN:ND2	25:p:18:ARG:C	2.07	1.11
46:A:2324:U:H2'	46:A:2325:A:H8	1.08	1.11
3:AC:90:HIS:CD2	17:h:160:LEU:CD1	2.31	1.11
11:AK:145:VAL:HG21	20:k:68:PHE:CE1	1.84	1.11

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:151:GLN:NE2	18:i:83:LYS:HZ1	1.48	1.11
11:AK:174:ARG:HD3	25:p:38:TYR:CG	1.81	1.11
11:AK:174:ARG:HD2	25:p:38:TYR:CB	1.79	1.11
15:Z:89:ILE:CD1	35:z:168:ILE:HG22	1.79	1.11
3:AC:217:TRP:CD1	17:h:146:LEU:CD2	2.32	1.11
6:AF:62:LEU:CD1	19:j:26:PHE:HZ	1.64	1.11
8:AH:224:PHE:CZ	21:l:22:LYS:HG3	1.85	1.11
19:j:7:LEU:HB2	19:j:10:SER:HB2	1.33	1.11
28:s:62:LEU:CD2	67:V:96:GLY:N	2.10	1.11
10:AJ:48:TYR:CE2	29:t:28:ARG:NH1	2.19	1.11
16:g:3:LEU:HD12	17:h:211:TYR:CE2	1.84	1.11
17:h:293:GLN:N	24:o:38:VAL:O	1.82	1.11
18:i:368:LEU:CB	29:t:111:LYS:HG3	1.72	1.11
21:l:6:ILE:CD1	33:x:94:ALA:HB2	1.79	1.11
46:A:1020:U:C5	75:e:134:LYS:O	2.02	1.11
3:AC:54:ALA:HB1	7:AG:143:PRO:CA	1.80	1.11
5:AE:149:SER:OG	5:AE:159:MET:HE3	1.48	1.11
6:AF:198:ARG:HH12	12:AL:552:A:H5'	1.12	1.11
8:AH:223:VAL:HG12	21:l:44:PRO:HG2	1.23	1.11
9:AI:449:HIS:O	22:m:114:LEU:HD13	1.49	1.11
10:AJ:58:HIS:O	10:AJ:59:LEU:HG	1.51	1.11
15:Z:88:ARG:HH21	16:g:74:ILE:HG21	0.97	1.11
17:h:290:TRP:CE3	24:o:49:PRO:HG2	1.86	1.11
18:i:148:LYS:HZ1	20:k:78:LEU:CA	1.58	1.11
18:i:311:ILE:CG1	20:k:58:TYR:CE2	2.34	1.11
8:AH:104:ARG:CD	12:AL:143:A:H4'	1.79	1.10
8:AH:199:LEU:CD2	30:u:93:TYR:CZ	2.33	1.10
12:AL:1105:G:H5"	18:i:390:ASN:HD22	1.08	1.10
12:AL:1436:U:H4'	25:p:87:THR:HG21	1.25	1.10
46:A:1932:G:N2	48:C:209:GLN:CG	2.14	1.10
7:AG:206:ILE:HD13	16:g:92:GLU:CD	1.77	1.10
7:AG:206:ILE:HD13	16:g:92:GLU:OE1	1.50	1.10
16:g:251:VAL:HG12	33:x:51:LYS:HB2	1.27	1.10
21:l:8:LEU:HD11	33:x:136:GLY:HA3	1.24	1.10
46:A:1007:U:H2'	75:e:161:GLN:HG3	1.24	1.10
3:AC:148:LEU:HD11	4:AD:82:ASN:CB	1.80	1.10
9:AI:351:THR:OG1	12:AL:1280:U:OP1	1.65	1.10
11:AK:151:GLN:HG3	18:i:83:LYS:HE2	1.10	1.10
18:i:302:ILE:HB	25:p:20:TYR:CD1	1.86	1.10
6:AF:321:TYR:OH	31:v:36:PRO:HD3	1.48	1.10
12:AL:13:U:C5'	20:k:238:PHE:CE2	2.20	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:l:113:ARG:NE	33:x:91:GLU:OE1	1.83	1.10
26:q:198:ILE:HG22	35:z:106:ILE:HG13	1.25	1.10
26:q:214:MET:HE1	35:z:140:MET:HG3	1.12	1.09
11:AK:162:LEU:HD22	25:p:65:THR:HA	1.22	1.09
15:Z:89:ILE:HD11	35:z:168:ILE:HG22	1.17	1.09
16:g:71:LEU:HD23	17:h:201:LEU:HD21	1.24	1.09
22:m:90:PRO:CG	24:o:241:LEU:HD11	1.82	1.09
4:AD:67:LEU:HA	4:AD:77:LYS:NZ	1.46	1.09
7:AG:3:ILE:HD12	23:n:20:ARG:HD2	1.32	1.09
10:AJ:14:LEU:CD1	11:AK:222:LEU:CD2	2.23	1.09
10:AJ:16:ALA:HA	10:AJ:21:GLN:HB2	1.12	1.09
15:Z:16:LEU:HD12	35:z:162:PHE:HE1	1.13	1.09
18:i:368:LEU:HB3	29:t:111:LYS:CG	1.79	1.09
33:x:106:THR:CG2	35:z:127:ASN:ND2	2.14	1.09
4:AD:122:PHE:CD2	7:AG:178:ALA:HB2	1.86	1.09
6:AF:58:MET:HG3	19:j:26:PHE:CG	1.86	1.09
12:AL:270:G:H3'	32:w:68:LYS:HB3	1.25	1.09
13:AM:13:C:C4'	46:A:1824:U:H5'	1.82	1.09
15:Z:94:HIS:CD2	17:h:203:ARG:CB	2.35	1.09
18:i:302:ILE:HG21	25:p:20:TYR:CZ	1.87	1.09
22:m:90:PRO:CB	24:o:241:LEU:HD11	1.81	1.09
28:s:67:ILE:HD13	67:V:96:GLY:N	1.68	1.09
30:u:275:ARG:NH1	30:u:278:ILE:CD1	2.15	1.09
46:A:2725:A:O2'	56:K:124:ASN:ND2	1.84	1.09
75:e:54:ILE:HD11	75:e:105:TYR:CB	1.81	1.09
16:g:273:MET:HE3	33:x:60:PHE:HE1	1.16	1.09
26:q:214:MET:CE	35:z:140:MET:HG3	1.82	1.09
5:AE:149:SER:HB3	5:AE:159:MET:HE2	1.09	1.08
6:AF:136:PRO:CB	19:j:436:ILE:CD1	2.29	1.08
12:AL:749:A:H4'	26:q:121:LYS:HZ1	1.08	1.08
75:e:66:MET:HG2	75:e:149:GLN:HB3	1.14	1.08
3:AC:90:HIS:CD2	17:h:161:GLY:CA	2.34	1.08
30:u:100:LYS:HB3	32:w:167:LEU:HD21	1.16	1.08
3:AC:237:VAL:HG13	4:AD:44:ARG:HH11	1.02	1.08
6:AF:328:ASN:O	12:AL:403:U:O2'	1.70	1.08
11:AK:70:TRP:NE1	18:i:173:MET:CE	1.96	1.08
17:h:247:LEU:HD11	24:o:45:TYR:CG	1.88	1.08
20:k:81:GLN:OE1	25:p:131:HIS:ND1	1.83	1.08
46:A:1961:G:H5'	49:D:109:LYS:HE2	1.09	1.08
7:AG:184:GLU:HG2	16:g:209:SER:HB3	1.10	1.08
8:AH:46:GLY:HA3	32:w:5:ASN:CB	1.84	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:69:VAL:CG2	18:i:124:THR:CG2	2.31	1.08
18:i:100:TYR:OH	25:p:48:ARG:HD2	1.48	1.08
21:l:113:ARG:NH2	33:x:93:TYR:OH	1.86	1.08
25:p:85:ARG:NE	29:t:115:TRP:CH2	2.22	1.08
3:AC:90:HIS:CG	17:h:161:GLY:HA2	1.87	1.08
4:AD:123:ASN:HB3	16:g:105:ASN:HA	1.34	1.08
4:AD:162:ALA:HB3	7:AG:189:VAL:HG21	1.33	1.08
5:AE:149:SER:CB	5:AE:159:MET:HE2	1.82	1.08
18:i:311:ILE:HG12	20:k:58:TYR:CE2	1.89	1.08
21:l:114:SER:HB2	33:x:92:PHE:CZ	1.89	1.08
30:u:87:LEU:HD12	32:w:114:ARG:NH1	1.68	1.08
46:A:30:U:H3	48:C:21:SER:CA	1.67	1.08
46:A:1727:A:H3'	47:B:290:GLN:HG2	1.31	1.08
5:AE:149:SER:OG	5:AE:159:MET:CE	2.01	1.07
11:AK:144:LEU:HD12	18:i:319:LEU:HD11	1.35	1.07
16:g:3:LEU:CG	17:h:211:TYR:CE2	2.35	1.07
18:i:369:ASN:HB3	29:t:114:ILE:HD11	1.33	1.07
25:p:85:ARG:NH2	29:t:115:TRP:CE2	2.21	1.07
75:e:94:LEU:HA	75:e:140:ILE:HA	1.35	1.07
2:AB:105:LEU:HD22	12:AL:390:U:P	1.93	1.07
4:AD:258:LYS:HE3	16:g:226:VAL:HG13	1.32	1.07
6:AF:314:VAL:HG22	8:AH:18:THR:OG1	1.53	1.07
8:AH:223:VAL:HG13	21:l:44:PRO:HG2	1.27	1.07
10:AJ:63:TYR:CE1	18:i:182:ILE:HG23	1.86	1.07
12:AL:1496:A:H2	30:u:41:LEU:HD21	1.02	1.07
18:i:180:MET:CG	20:k:92:TRP:CE2	2.30	1.07
30:u:100:LYS:HB3	32:w:167:LEU:CD2	1.84	1.07
46:A:1706:G:N3	47:B:265:PHE:HE1	1.49	1.07
3:AC:90:HIS:HD2	17:h:161:GLY:N	1.50	1.07
8:AH:168:ARG:NH1	23:n:66:ASP:OD2	1.87	1.07
11:AK:153:PHE:HZ	20:k:81:GLN:CD	1.61	1.07
13:AM:13:C:C5'	46:A:1823:U:O2'	2.02	1.07
46:A:1712:A:N3	47:B:140:THR:HG21	1.65	1.07
8:AH:16:PRO:CD	31:v:35:LYS:HE3	1.83	1.07
9:AI:57:TYR:CA	22:m:205:SER:CA	2.25	1.07
10:AJ:69:VAL:CG2	18:i:124:THR:HG22	1.85	1.07
46:A:2029:A:H1'	46:A:2030:U:H4'	1.37	1.07
46:A:2436:A:C5'	46:A:2437:U:OP2	2.00	1.07
3:AC:40:ASP:CG	4:AD:286:VAL:HG21	1.79	1.07
3:AC:90:HIS:NE2	17:h:160:LEU:HD12	1.65	1.07
3:AC:229:HIS:ND1	4:AD:281:LEU:HD21	1.69	1.07

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:217:LEU:HD22	16:g:273:MET:HE3	1.12	1.07
7:AG:217:LEU:HD11	16:g:273:MET:CA	1.82	1.07
8:AH:16:PRO:HG3	31:v:35:LYS:CG	1.84	1.07
30:u:74:PRO:HG2	32:w:100:GLU:HG3	1.37	1.07
30:u:87:LEU:CD1	32:w:114:ARG:CZ	2.28	1.07
30:u:275:ARG:HH12	30:u:278:ILE:CD1	1.66	1.07
46:A:1961:G:C5'	49:D:109:LYS:HE2	1.84	1.07
4:AD:258:LYS:HE2	16:g:226:VAL:HG22	1.12	1.06
6:AF:314:VAL:HG11	31:v:71:ARG:HD3	1.36	1.06
7:AG:49:LYS:HE3	23:n:58:LYS:HZ3	1.00	1.06
11:AK:132:PHE:HB3	18:i:248:MET:HA	1.33	1.06
18:i:368:LEU:CD1	29:t:111:LYS:CG	2.30	1.06
18:i:368:LEU:HD13	29:t:111:LYS:HD2	1.08	1.06
5:AE:94:VAL:HG23	5:AE:97:LEU:HD12	1.09	1.06
5:AE:94:VAL:CG2	5:AE:97:LEU:HD12	1.86	1.06
9:AI:413:LEU:HD21	22:m:149:PRO:HD2	1.37	1.06
9:AI:413:LEU:CD2	22:m:149:PRO:HD2	1.84	1.06
10:AJ:53:ILE:HD12	10:AJ:55:LYS:HE3	1.37	1.06
11:AK:112:GLU:N	18:i:172:TYR:CE2	2.24	1.06
16:g:12:ILE:HD12	17:h:195:LEU:HD21	1.12	1.06
3:AC:227:TRP:CZ2	4:AD:164:SER:O	2.08	1.06
7:AG:124:GLU:HB3	16:g:11:ARG:HD2	1.33	1.06
8:AH:184:ARG:CG	12:AL:814:A:C4'	2.32	1.06
9:AI:151:GLU:O	9:AI:154:VAL:CG1	2.02	1.06
10:AJ:59:LEU:HD11	18:i:122:MET:HE3	1.34	1.06
11:AK:135:ASP:OD1	20:k:103:GLY:O	1.72	1.06
25:p:85:ARG:CD	29:t:115:TRP:CZ2	2.38	1.06
46:A:2611:U:H5'	69:X:37:VAL:HG13	1.24	1.06
3:AC:55:GLY:CA	7:AG:121:ILE:HG23	1.85	1.06
6:AF:136:PRO:HB3	19:j:436:ILE:HD12	1.25	1.06
6:AF:212:LEU:CD1	19:j:445:PHE:CG	2.37	1.06
12:AL:409:G:H4'	19:j:123:GLN:HE22	0.90	1.06
28:s:62:LEU:CD2	67:V:96:GLY:C	2.29	1.06
46:A:600:C:C1'	47:B:133:ARG:HH12	1.66	1.06
75:e:66:MET:HB2	75:e:149:GLN:HB2	1.37	1.06
17:h:247:LEU:HD12	24:o:45:TYR:CE2	1.89	1.06
21:l:114:SER:OG	33:x:95:ARG:CD	2.02	1.06
3:AC:90:HIS:NE2	17:h:160:LEU:HD13	1.70	1.05
4:AD:162:ALA:HB1	7:AG:189:VAL:HG21	1.07	1.05
5:AE:129:ARG:HG2	12:AL:155:A:O3'	1.50	1.05
9:AI:367:TYR:HE1	10:AJ:1:MET:HE1	1.05	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:i:100:TYR:CZ	25:p:48:ARG:CD	2.35	1.05
21:l:8:LEU:HD11	33:x:136:GLY:CA	1.86	1.05
37:1:58:ARG:NH1	46:A:2336:G:C5	2.22	1.05
3:AC:148:LEU:HD21	4:AD:204:ALA:HB2	1.37	1.05
6:AF:209:ASP:HB2	19:j:446:LYS:HG2	1.10	1.05
8:AH:223:VAL:HG11	21:l:44:PRO:HG3	1.28	1.05
11:AK:154:TYR:CD2	25:p:57:PHE:HE2	1.52	1.05
11:AK:170:GLN:HE21	25:p:120:VAL:CG2	1.68	1.05
18:i:82:ASN:ND2	20:k:57:PRO:HB3	1.70	1.05
26:q:198:ILE:CG2	35:z:106:ILE:CD1	2.32	1.05
3:AC:55:GLY:CA	7:AG:121:ILE:CG2	2.33	1.05
3:AC:185:LEU:CD1	7:AG:195:GLU:O	2.04	1.05
11:AK:174:ARG:HD2	25:p:38:TYR:CG	1.89	1.05
11:AK:192:GLU:OE2	18:i:100:TYR:HB2	1.57	1.05
16:g:273:MET:HE3	33:x:60:PHE:CE1	1.90	1.05
26:q:198:ILE:HG22	35:z:106:ILE:CG1	1.86	1.05
29:t:23:ARG:CZ	29:t:26:PHE:HD2	1.68	1.05
46:A:1010:A:H4'	76:f:129:SER:HB3	1.37	1.05
4:AD:155:LEU:CB	16:g:210:LEU:HG	1.85	1.05
5:AE:88:LEU:HD13	5:AE:90:PRO:HD3	1.05	1.05
8:AH:16:PRO:HG3	31:v:35:LYS:HE2	1.28	1.05
15:Z:94:HIS:HD2	17:h:203:ARG:CG	1.59	1.05
17:h:290:TRP:CD2	24:o:49:PRO:HG3	1.91	1.05
18:i:180:MET:HG2	20:k:92:TRP:CD1	1.92	1.05
30:u:100:LYS:HB2	32:w:167:LEU:CD2	1.84	1.05
16:g:200:ILE:HD11	16:g:287:LYS:HE2	1.08	1.04
20:k:48:VAL:HA	25:p:30:ALA:CB	1.87	1.04
46:A:1013:G:H4'	76:f:125:LYS:NZ	1.72	1.04
3:AC:55:GLY:C	7:AG:121:ILE:HG23	1.82	1.04
5:AE:149:SER:HB3	5:AE:159:MET:CE	1.87	1.04
6:AF:70:GLU:CG	19:j:426:LYS:NZ	2.19	1.04
7:AG:166:VAL:HG22	16:g:196:PHE:CE1	1.91	1.04
8:AH:16:PRO:HG3	31:v:35:LYS:HE3	1.13	1.04
8:AH:46:GLY:HA2	32:w:59:ARG:HD2	1.35	1.04
12:AL:1436:U:C4'	25:p:87:THR:HG21	1.85	1.04
29:t:23:ARG:NH1	29:t:26:PHE:HD2	1.47	1.04
46:A:2276:G:H21	56:K:128:MET:CG	1.69	1.04
8:AH:54:LYS:O	32:w:48:GLU:OE1	1.75	1.04
8:AH:184:ARG:HD3	12:AL:814:A:H4'	1.05	1.04
10:AJ:35:LEU:HD21	29:t:43:PHE:CE2	1.93	1.04
11:AK:135:ASP:H	20:k:105:ILE:HG12	1.17	1.04

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1496:A:C2	30:u:41:LEU:CD2	2.40	1.04
15:Z:94:HIS:CE1	17:h:203:ARG:HA	1.91	1.04
5:AE:93:PRO:CD	5:AE:95:LYS:NZ	2.20	1.04
7:AG:122:LEU:CD2	16:g:15:VAL:HG21	1.88	1.04
11:AK:70:TRP:CE2	18:i:173:MET:HE3	1.92	1.04
16:g:68:LEU:HB3	17:h:217:ILE:HD11	1.29	1.04
21:l:38:VAL:HG11	30:u:141:ILE:HD11	1.39	1.04
22:m:219:ILE:HG12	22:m:224:SER:HB2	1.38	1.04
3:AC:232:LEU:CD2	4:AD:278:LYS:HA	1.87	1.04
8:AH:70:ASP:HB2	8:AH:73:ASN:HB2	1.39	1.04
10:AJ:57:ARG:CD	12:AL:1061:U:H5"	1.87	1.04
12:AL:1096:C:N4	29:t:20:ARG:HH12	1.56	1.04
16:g:272:ARG:CB	33:x:60:PHE:HZ	1.71	1.04
17:h:290:TRP:CE3	24:o:49:PRO:CG	2.41	1.04
18:i:88:ASN:ND2	25:p:53:GLU:OE2	1.89	1.04
18:i:100:TYR:CE1	25:p:48:ARG:HH11	1.12	1.04
18:i:302:ILE:HG21	25:p:20:TYR:CE2	1.93	1.04
3:AC:179:ARG:CZ	7:AG:201:PHE:CE1	2.40	1.03
3:AC:237:VAL:HG13	4:AD:44:ARG:NH1	1.73	1.03
6:AF:329:LYS:O	12:AL:404:U:H4'	1.56	1.03
10:AJ:14:LEU:HD21	11:AK:222:LEU:HD23	1.05	1.03
11:AK:138:PRO:HG2	18:i:322:LYS:HA	1.04	1.03
11:AK:150:GLU:HB2	20:k:71:TYR:HH	1.13	1.03
16:g:45:ARG:HG3	17:h:170:PRO:HB3	1.04	1.03
17:h:129:TYR:OH	24:o:120:LEU:CD1	2.05	1.03
6:AF:70:GLU:HG3	19:j:426:LYS:HZ3	1.21	1.03
7:AG:3:ILE:CG2	23:n:20:ARG:NH2	2.20	1.03
7:AG:22:LEU:HD23	20:k:139:TYR:CD2	1.93	1.03
12:AL:550:U:C5'	19:j:131:ARG:NH1	2.21	1.03
15:Z:88:ARG:NH2	16:g:74:ILE:HG21	1.71	1.03
3:AC:54:ALA:CB	7:AG:143:PRO:HA	1.88	1.03
6:AF:58:MET:HG3	19:j:26:PHE:HB3	1.40	1.03
8:AH:93:GLN:NE2	12:AL:222:U:P	2.31	1.03
8:AH:168:ARG:HG3	23:n:65:PRO:HG2	1.39	1.03
18:i:93:TRP:HB3	29:t:108:PRO:HA	1.04	1.03
18:i:146:LEU:CD1	25:p:132:SER:CB	2.36	1.03
18:i:369:ASN:O	29:t:114:ILE:HD11	1.58	1.03
29:t:60:LEU:HD13	34:y:18:ILE:CG2	1.87	1.03
46:A:1439:A:C2'	46:A:1440:U:H6	1.70	1.03
7:AG:177:TYR:CE2	16:g:107:PHE:CZ	2.47	1.03
11:AK:299:LYS:HG2	24:o:151:PHE:HB3	1.39	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:i:242:ARG:NH1	20:k:124:ASP:OD2	1.90	1.03
46:A:1439:A:H2'	46:A:1440:U:H6	0.91	1.03
10:AJ:69:VAL:CB	18:i:124:THR:CG2	1.88	1.03
11:AK:135:ASP:N	20:k:105:ILE:HG12	1.74	1.03
15:Z:89:ILE:CD1	35:z:168:ILE:CG2	2.36	1.03
18:i:176:MET:CE	20:k:92:TRP:C	2.25	1.03
20:k:54:PHE:HD1	25:p:57:PHE:CD1	1.76	1.03
4:AD:155:LEU:HD22	16:g:210:LEU:HB3	1.35	1.02
30:u:87:LEU:HD11	32:w:114:ARG:NH2	1.69	1.02
37:1:264:ARG:NH2	63:R:213:ASP:OD2	1.91	1.02
46:A:1288:U:C5	49:D:114:ALA:HA	1.93	1.02
7:AG:1:MET:HE3	17:h:351:GLU:HG2	1.39	1.02
10:AJ:91:PRO:HD2	12:AL:1243:U:H5	1.21	1.02
11:AK:169:ARG:HB3	25:p:70:GLY:HA3	1.40	1.02
18:i:302:ILE:CG2	25:p:20:TYR:CZ	2.42	1.02
3:AC:90:HIS:HD2	17:h:161:GLY:CA	1.71	1.02
3:AC:237:VAL:CG1	4:AD:44:ARG:NH1	2.22	1.02
3:AC:266:LYS:CA	17:h:128:PRO:HG2	1.88	1.02
4:AD:162:ALA:CB	7:AG:189:VAL:CG2	2.35	1.02
4:AD:260:PHE:HA	16:g:223:GLN:CG	1.88	1.02
7:AG:174:TYR:CE1	16:g:107:PHE:CZ	2.48	1.02
12:AL:1429:A:C8	29:t:72:THR:HG22	1.93	1.02
2:AB:105:LEU:HD22	12:AL:390:U:OP1	1.60	1.02
3:AC:9:HIS:HE1	17:h:164:ILE:HD11	1.22	1.02
7:AG:36:ILE:CG2	17:h:231:ARG:HG3	1.90	1.02
8:AH:208:GLU:HG2	30:u:134:ARG:NH1	1.74	1.02
10:AJ:40:LYS:HE2	10:AJ:42:PRO:HG2	1.40	1.02
11:AK:150:GLU:OE1	25:p:133:MET:SD	2.18	1.02
18:i:316:MET:CG	20:k:69:TRP:CZ2	2.41	1.02
27:r:35:LYS:HE3	32:w:37:LEU:HD22	1.35	1.02
8:AH:162:GLN:NE2	23:n:60:PHE:CD1	2.28	1.02
10:AJ:63:TYR:CE1	18:i:182:ILE:HG22	1.89	1.02
11:AK:134:PHE:CG	20:k:106:LEU:HA	1.94	1.02
22:m:90:PRO:HG3	24:o:241:LEU:HD11	1.36	1.02
1:AA:83:LYS:HG2	12:AL:1601:C:H5'	1.05	1.01
5:AE:274:TYR:HA	5:AE:277:ILE:HB	1.41	1.01
6:AF:321:TYR:HE2	31:v:35:LYS:HA	0.86	1.01
7:AG:114:TRP:NE1	16:g:87:ARG:CG	1.81	1.01
9:AI:393:LYS:HZ1	24:o:182:GLN:HG3	1.24	1.01
11:AK:112:GLU:HG3	18:i:127:LEU:HD21	1.40	1.01
46:A:30:U:H3	48:C:21:SER:HA	1.19	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:68:PRO:HG3	12:AL:1542:A:O3'	1.57	1.01
6:AF:212:LEU:HD12	19:j:445:PHE:HB2	1.40	1.01
8:AH:103:ARG:HD2	31:v:100:TRP:HH2	1.22	1.01
8:AH:164:LEU:O	23:n:63:VAL:HB	1.61	1.01
12:AL:698:A:OP1	23:n:2:SER:HB2	1.60	1.01
46:A:30:U:N3	48:C:21:SER:HA	1.75	1.01
7:AG:122:LEU:HD21	16:g:15:VAL:HG21	1.05	1.01
11:AK:132:PHE:HB2	18:i:248:MET:HA	1.40	1.01
12:AL:1105:G:H5"	18:i:390:ASN:ND2	1.76	1.01
12:AL:1214:A:H4'	24:o:252:LEU:O	1.61	1.01
22:m:133:ILE:HG23	22:m:209:ALA:HA	1.05	1.01
3:AC:185:LEU:HD12	7:AG:196:MET:C	1.83	1.01
4:AD:155:LEU:HB2	16:g:210:LEU:CG	1.90	1.01
6:AF:58:MET:HG3	19:j:26:PHE:CB	1.91	1.01
11:AK:137:LEU:HD11	20:k:68:PHE:CE1	1.95	1.01
30:u:101:PHE:N	32:w:167:LEU:HD11	1.75	1.01
2:AB:74:LEU:HD13	2:AB:88:LEU:HD22	1.41	1.01
6:AF:146:ASN:CB	19:j:439:HIS:HD2	1.60	1.01
6:AF:314:VAL:HG12	31:v:71:ARG:HD3	1.38	1.01
10:AJ:14:LEU:CG	11:AK:222:LEU:HD22	1.89	1.01
11:AK:134:PHE:CE1	20:k:110:VAL:HG21	1.92	1.01
12:AL:500:A:C5'	19:j:7:LEU:HD11	1.90	1.01
12:AL:1220:A:H4'	29:t:112:LYS:NZ	1.75	1.01
17:h:295:ILE:N	24:o:36:ARG:O	1.93	1.01
18:i:95:THR:OG1	29:t:108:PRO:HD3	1.61	1.01
26:q:108:TYR:HE2	35:z:89:ALA:HB2	0.88	1.01
2:AB:45:LEU:HB3	2:AB:53:ASN:HA	1.41	1.00
8:AH:16:PRO:CG	31:v:35:LYS:CG	2.39	1.00
8:AH:53:VAL:HG11	32:w:74:ILE:O	1.59	1.00
16:g:7:LEU:CD2	17:h:219:ILE:HD12	1.89	1.00
42:6:66:TYR:CG	46:A:2424:U:C4	2.49	1.00
46:A:2917:U:O2'	46:A:2918:A:H5'	1.58	1.00
6:AF:62:LEU:HD21	19:j:26:PHE:CE1	1.96	1.00
6:AF:88:ILE:CD1	19:j:28:LEU:HG	1.90	1.00
7:AG:147:GLU:CD	16:g:14:GLN:HG2	1.86	1.00
8:AH:199:LEU:HD21	30:u:93:TYR:CZ	1.95	1.00
8:AH:199:LEU:HD23	30:u:93:TYR:CZ	1.97	1.00
13:AM:13:C:H5'	46:A:1823:U:C2'	1.91	1.00
13:AM:36:U:N3	14:AN:8:A:N6	1.68	1.00
46:A:290:G:O5'	55:J:115:LYS:HE3	1.61	1.00
46:A:1006:U:C5	76:f:135:LEU:CD2	2.43	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:175:ARG:HD2	4:AD:191:ILE:HG13	1.38	1.00
7:AG:114:TRP:CD1	16:g:87:ARG:HG3	1.96	1.00
9:AI:367:TYR:CE1	10:AJ:1:MET:CE	2.45	1.00
10:AJ:40:LYS:CE	10:AJ:42:PRO:HG2	1.91	1.00
15:Z:38:LEU:HD21	22:m:164:MET:SD	2.01	1.00
16:g:3:LEU:HB3	17:h:211:TYR:CE2	1.95	1.00
17:h:129:TYR:HH	24:o:120:LEU:CD1	1.75	1.00
17:h:129:TYR:HH	24:o:120:LEU:HD13	0.96	1.00
18:i:368:LEU:HA	29:t:111:LYS:CD	1.91	1.00
46:A:600:C:C4'	47:B:133:ARG:NH1	2.20	1.00
46:A:2017:G:H21	46:A:2018:C:H5"	1.27	1.00
46:A:2079:A:H2'	46:A:2080:U:H6	1.13	1.00
63:R:53:GLU:OE2	63:R:94:ARG:HA	1.60	1.00
15:Z:16:LEU:HD12	35:z:162:PHE:CE1	1.89	1.00
46:A:1013:G:H4'	76:f:125:LYS:HZ3	1.24	1.00
46:A:1049:A:C8	75:e:111:LEU:HD21	1.95	1.00
5:AE:50:GLU:HG2	5:AE:66:TYR:OH	1.61	1.00
10:AJ:53:ILE:HD12	10:AJ:55:LYS:CE	1.91	1.00
46:A:1048:A:H5"	75:e:110:HIS:HB3	1.39	1.00
3:AC:161:LYS:HD3	17:h:141:TYR:CD2	1.97	1.00
5:AE:80:ARG:HB3	5:AE:85:ARG:HA	1.44	1.00
16:g:246:ALA:HB1	33:x:55:TYR:CZ	1.97	1.00
3:AC:188:ALA:HB1	4:AD:73:LYS:HB3	1.43	1.00
5:AE:258:ILE:HB	5:AE:303:GLN:CB	1.91	1.00
7:AG:49:LYS:CE	23:n:58:LYS:HZ3	1.64	1.00
11:AK:143:GLU:OE2	18:i:87:LEU:CD2	2.09	1.00
16:g:3:LEU:CB	17:h:211:TYR:CE2	2.43	1.00
16:g:68:LEU:HD13	17:h:217:ILE:CD1	1.91	1.00
18:i:176:MET:HE2	20:k:92:TRP:O	1.62	1.00
28:s:67:ILE:CD1	67:V:96:GLY:N	2.25	1.00
46:A:3151:A:H3'	46:A:3152:A:H5"	1.41	1.00
6:AF:198:ARG:HG3	12:AL:545:U:H5"	1.44	0.99
7:AG:2:LYS:HB2	12:AL:926:A:H5"	1.43	0.99
11:AK:132:PHE:HD2	18:i:249:PRO:CD	1.75	0.99
3:AC:150:GLN:OE1	4:AD:166:ASP:N	1.95	0.99
7:AG:166:VAL:CG1	16:g:195:LYS:CG	2.35	0.99
8:AH:162:GLN:NE2	23:n:60:PHE:CE1	2.29	0.99
1:AA:80:VAL:HG22	12:AL:1462:A:C6	1.98	0.99
3:AC:200:MET:HB3	7:AG:200:LEU:HD12	1.44	0.99
8:AH:103:ARG:HH22	31:v:79:GLY:C	1.70	0.99
9:AI:187:ARG:HD2	28:s:44:TRP:CG	1.96	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:13:C:H4'	46:A:1824:U:H5'	0.99	0.99
22:m:109:ARG:HH22	24:o:228:MET:HE1	0.88	0.99
29:t:23:ARG:NH2	29:t:26:PHE:HD2	1.59	0.99
6:AF:88:ILE:CD1	19:j:28:LEU:CD2	2.40	0.99
6:AF:136:PRO:CG	19:j:436:ILE:HD12	1.92	0.99
7:AG:114:TRP:CE2	16:g:87:ARG:CB	2.42	0.99
7:AG:174:TYR:CE1	16:g:107:PHE:CE1	2.50	0.99
11:AK:150:GLU:CB	20:k:71:TYR:OH	2.09	0.99
16:g:251:VAL:CB	33:x:51:LYS:HA	1.93	0.99
9:AI:98:ASN:HB3	12:AL:1350:U:O4	1.62	0.99
46:A:2072:U:H2'	46:A:2073:U:H4'	1.43	0.99
3:AC:264:ILE:HG22	17:h:132:LEU:HD21	1.43	0.99
6:AF:212:LEU:HD12	19:j:445:PHE:CB	1.90	0.99
6:AF:314:VAL:CG1	31:v:71:ARG:CD	2.41	0.99
21:l:6:ILE:HB	33:x:135:ILE:HG23	1.41	0.99
46:A:1531:C:N4	47:B:326:TRP:CH2	2.28	0.99
46:A:1960:A:H3'	49:D:109:LYS:NZ	1.75	0.99
75:e:66:MET:HG2	75:e:149:GLN:CB	1.92	0.99
75:e:132:LEU:HD11	75:e:170:LYS:HG2	1.44	0.99
3:AC:200:MET:CB	7:AG:200:LEU:CD1	2.40	0.99
4:AD:253:TYR:CE2	16:g:298:LEU:O	2.15	0.99
6:AF:198:ARG:NH1	12:AL:552:A:H5'	1.77	0.99
27:r:35:LYS:NZ	32:w:37:LEU:HD22	1.77	0.99
46:A:2332:U:C5'	63:R:322:ARG:HH11	1.76	0.99
6:AF:62:LEU:HD11	19:j:26:PHE:HZ	0.84	0.99
8:AH:18:THR:HG23	31:v:38:GLU:CD	1.87	0.99
16:g:3:LEU:CD1	17:h:211:TYR:CE2	2.45	0.99
8:AH:21:ILE:CG1	31:v:74:TYR:CG	2.36	0.99
8:AH:104:ARG:HD2	12:AL:143:A:C5'	1.93	0.99
11:AK:151:GLN:HG3	18:i:83:LYS:CE	1.92	0.99
16:g:45:ARG:CG	17:h:170:PRO:HB3	1.91	0.99
46:A:1761:A:H2'	46:A:1762:A:C8	1.98	0.99
69:X:47:VAL:HG12	72:b:129:VAL:CG1	1.93	0.99
3:AC:191:ILE:HD13	4:AD:222:GLN:HG3	1.45	0.98
4:AD:155:LEU:HD22	16:g:210:LEU:CB	1.91	0.98
8:AH:103:ARG:HD2	31:v:100:TRP:CH2	1.98	0.98
3:AC:228:ASP:OD2	4:AD:277:PRO:HB2	1.63	0.98
4:AD:123:ASN:ND2	16:g:105:ASN:CB	2.14	0.98
8:AH:162:GLN:CG	23:n:60:PHE:CE1	2.46	0.98
11:AK:149:ARG:CG	20:k:69:TRP:O	2.12	0.98
18:i:316:MET:CG	20:k:69:TRP:HZ2	1.75	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:g:68:LEU:HD12	17:h:217:ILE:HD12	1.02	0.98
3:AC:232:LEU:CD2	4:AD:278:LYS:CA	2.42	0.98
4:AD:260:PHE:CE2	16:g:222:ILE:CA	2.44	0.98
6:AF:295:ILE:HD11	31:v:93:ALA:CB	1.93	0.98
11:AK:138:PRO:CG	18:i:322:LYS:HA	1.92	0.98
12:AL:784:A:C4	26:q:206:PHE:HE2	1.80	0.98
20:k:54:PHE:CD1	25:p:57:PHE:HE1	1.78	0.98
3:AC:188:ALA:CB	4:AD:73:LYS:CB	2.41	0.98
4:AD:258:LYS:CE	16:g:226:VAL:HG22	1.93	0.98
7:AG:1:MET:HE1	17:h:351:GLU:HB3	1.43	0.98
11:AK:134:PHE:HE1	20:k:110:VAL:HG21	1.23	0.98
18:i:368:LEU:CG	29:t:111:LYS:HG3	1.92	0.98
46:A:2842:U:H5"	48:C:208:ASN:HD22	1.28	0.98
6:AF:90:PRO:HG3	19:j:29:TYR:HB2	1.46	0.98
16:g:273:MET:CE	33:x:60:PHE:CE1	2.46	0.98
30:u:100:LYS:HB2	32:w:167:LEU:HD21	1.00	0.98
76:f:76:PRO:HB2	76:f:79:TYR:HB3	1.40	0.98
5:AE:258:ILE:HB	5:AE:303:GLN:HB2	1.46	0.98
6:AF:137:PHE:CE1	19:j:468:PRO:CB	2.46	0.98
6:AF:314:VAL:HG11	31:v:71:ARG:CD	1.94	0.98
7:AG:3:ILE:CD1	23:n:20:ARG:CD	2.41	0.98
7:AG:74:LEU:HD11	8:AH:187:LEU:CD2	1.94	0.98
11:AK:134:PHE:CE1	20:k:110:VAL:HG23	1.95	0.98
12:AL:1214:A:H5"	24:o:247:HIS:NE2	1.78	0.98
4:AD:213:SER:HA	4:AD:216:MET:HB3	1.39	0.98
8:AH:231:PHE:CE1	21:l:48:ARG:CD	2.46	0.98
16:g:249:GLY:HA2	33:x:55:TYR:CE1	1.99	0.98
30:u:275:ARG:HH11	30:u:278:ILE:HD12	1.17	0.98
46:A:1020:U:H5"	75:e:134:LYS:HB2	1.44	0.98
46:A:1932:G:H22	48:C:209:GLN:HG3	1.15	0.98
9:AI:310:ASN:CG	28:s:34:LYS:HB3	1.88	0.98
15:Z:94:HIS:NE2	17:h:203:ARG:HA	1.78	0.98
46:A:2625:A:H61	55:J:110:GLN:NE2	1.60	0.98
28:s:98:PRO:HG2	28:s:104:THR:HG22	1.46	0.97
6:AF:54:LEU:HD22	19:j:12:ALA:HA	1.45	0.97
9:AI:435:ASN:HD21	24:o:176:ILE:H	1.06	0.97
11:AK:196:ASN:HD21	12:AL:1318:U:C5'	1.76	0.97
20:k:48:VAL:CA	25:p:30:ALA:HB2	1.93	0.97
4:AD:258:LYS:HE2	16:g:226:VAL:HG21	1.42	0.97
18:i:93:TRP:CD2	29:t:109:GLY:N	2.30	0.97
25:p:103:GLU:OE1	29:t:113:GLY:C	2.06	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:61:PHE:CG	19:j:29:TYR:CZ	2.51	0.97
10:AJ:48:TYR:CD2	29:t:28:ARG:NH1	2.32	0.97
11:AK:149:ARG:HG2	20:k:70:ASP:CA	1.95	0.97
37:1:182:PHE:O	46:A:2361:A:N6	1.98	0.97
46:A:1166:U:H2'	46:A:1167:A:H8	1.25	0.97
3:AC:55:GLY:HA2	7:AG:121:ILE:HG12	1.44	0.97
3:AC:195:ALA:HA	4:AD:223:TYR:HE2	1.17	0.97
5:AE:88:LEU:CD1	5:AE:90:PRO:CG	2.41	0.97
9:AI:57:TYR:HA	22:m:205:SER:HA	1.02	0.97
18:i:369:ASN:CB	29:t:114:ILE:HD11	1.95	0.97
46:A:2376:A:N6	69:X:68:THR:CG2	2.04	0.97
3:AC:228:ASP:OD2	4:AD:277:PRO:CB	2.12	0.97
12:AL:1362:A:H5"	28:s:11:LYS:HG3	1.45	0.97
20:k:40:ILE:HG21	25:p:22:VAL:HG13	1.45	0.97
1:AA:105:ARG:HH11	1:AA:107:LEU:CD2	1.78	0.97
6:AF:58:MET:HE1	19:j:30:LYS:CG	1.95	0.97
10:AJ:91:PRO:HD2	12:AL:1243:U:C5	1.98	0.97
11:AK:153:PHE:CZ	20:k:81:GLN:CD	2.39	0.97
5:AE:93:PRO:CD	5:AE:95:LYS:HZ3	1.74	0.97
11:AK:174:ARG:HD2	25:p:38:TYR:HB2	1.44	0.97
18:i:303:ASN:HD21	25:p:19:PRO:CA	1.76	0.97
46:A:316:G:N7	64:S:128:LYS:HD2	1.79	0.97
5:AE:94:VAL:HG23	5:AE:97:LEU:CD1	1.93	0.96
6:AF:198:ARG:NH2	12:AL:552:A:H4'	1.78	0.96
8:AH:97:LEU:O	8:AH:100:ALA:HB3	1.65	0.96
11:AK:138:PRO:HG2	18:i:322:LYS:CA	1.94	0.96
11:AK:151:GLN:HE21	18:i:83:LYS:NZ	1.61	0.96
12:AL:80:U:H3'	12:AL:81:U:H6	1.26	0.96
15:Z:95:ASP:H	17:h:203:ARG:HH22	1.12	0.96
30:u:87:LEU:HD11	32:w:114:ARG:HH22	1.22	0.96
3:AC:179:ARG:NH1	7:AG:201:PHE:HE1	1.61	0.96
6:AF:295:ILE:CD1	31:v:93:ALA:HB1	1.95	0.96
10:AJ:53:ILE:CD1	10:AJ:55:LYS:HE3	1.95	0.96
2:AB:93:ASN:HB3	2:AB:98:ARG:HB2	1.46	0.96
7:AG:217:LEU:HD13	16:g:273:MET:HG3	0.97	0.96
11:AK:132:PHE:HD1	18:i:248:MET:HE1	0.80	0.96
3:AC:53:THR:HB	3:AC:59:GLU:HB2	1.45	0.96
7:AG:184:GLU:HG2	16:g:209:SER:CB	1.95	0.96
11:AK:132:PHE:CD2	18:i:249:PRO:HD2	2.01	0.96
7:AG:181:MET:HA	16:g:208:TYR:O	1.66	0.96
10:AJ:69:VAL:CA	18:i:124:THR:HG21	1.95	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:174:ARG:HD2	25:p:38:TYR:CD2	1.97	0.96
20:k:48:VAL:HA	25:p:30:ALA:HB2	0.98	0.96
3:AC:200:MET:CB	7:AG:200:LEU:HD11	1.94	0.96
22:m:98:TRP:CA	24:o:242:LEU:HD21	1.96	0.96
46:A:305:A:H2'	46:A:306:G:C8	2.01	0.96
46:A:2324:U:H2'	46:A:2325:A:C8	2.00	0.96
1:AA:83:LYS:CG	12:AL:1601:C:H5'	1.96	0.96
6:AF:61:PHE:CE1	19:j:29:TYR:CE2	2.53	0.96
7:AG:3:ILE:HG21	23:n:20:ARG:HH12	1.24	0.96
8:AH:160:MET:HE1	23:n:37:TYR:CE1	2.00	0.96
22:m:109:ARG:HH21	24:o:228:MET:HE2	1.13	0.96
46:A:1048:A:OP1	75:e:110:HIS:HB2	1.66	0.96
6:AF:88:ILE:HD13	19:j:28:LEU:HD23	1.44	0.96
6:AF:314:VAL:CG2	8:AH:18:THR:OG1	2.12	0.96
9:AI:192:TYR:HD1	9:AI:193:ASP:H	1.12	0.96
11:AK:155:ASN:HD21	20:k:56:PRO:HD3	1.11	0.96
16:g:3:LEU:HG	17:h:211:TYR:CD2	2.01	0.96
18:i:148:LYS:CE	20:k:78:LEU:HA	1.96	0.96
8:AH:50:ALA:HB2	32:w:76:GLU:N	1.81	0.96
11:AK:143:GLU:OE2	18:i:87:LEU:HD21	1.66	0.96
11:AK:182:VAL:HG23	25:p:148:ILE:CG2	1.96	0.96
12:AL:1031:A:N3	13:AM:34:C:H4'	1.80	0.96
15:Z:41:TRP:HH2	22:m:163:LEU:HD12	1.28	0.96
16:g:12:ILE:CD1	17:h:195:LEU:CD2	2.43	0.96
17:h:290:TRP:CD2	24:o:49:PRO:CG	2.49	0.96
21:l:38:VAL:CG1	30:u:141:ILE:HD11	1.96	0.96
5:AE:286:ASP:HB2	5:AE:315:TYR:HE2	1.25	0.95
8:AH:210:ILE:HG23	21:l:39:VAL:HB	1.43	0.95
9:AI:431:PHE:HE1	24:o:176:ILE:CG1	1.65	0.95
11:AK:304:ALA:CB	24:o:152:GLY:CA	2.43	0.95
29:t:23:ARG:NH1	29:t:26:PHE:CB	2.29	0.95
5:AE:283:THR:HA	5:AE:315:TYR:CZ	2.02	0.95
11:AK:164:LEU:HB2	20:k:32:SER:CB	1.97	0.95
18:i:93:TRP:NE1	29:t:109:GLY:CA	2.29	0.95
18:i:93:TRP:NE1	29:t:109:GLY:N	2.15	0.95
22:m:90:PRO:HB3	24:o:241:LEU:HD11	1.48	0.95
30:u:232:GLN:HG3	32:w:96:VAL:HG21	1.48	0.95
7:AG:122:LEU:HD21	16:g:15:VAL:CG2	1.95	0.95
12:AL:240:A:H5"	32:w:43:TYR:OH	1.66	0.95
16:g:3:LEU:HB3	17:h:211:TYR:HE2	1.24	0.95
18:i:303:ASN:HD21	25:p:19:PRO:N	1.62	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:m:203:ARG:HB3	22:m:211:ARG:HH21	1.30	0.95
3:AC:9:HIS:HE1	17:h:164:ILE:CD1	1.37	0.95
6:AF:146:ASN:CG	19:j:439:HIS:CD2	2.44	0.95
8:AH:46:GLY:HA2	32:w:59:ARG:CD	1.95	0.95
8:AH:198:GLU:CB	21:l:105:LEU:HD21	1.96	0.95
10:AJ:1:MET:CE	11:AK:278:ARG:NH2	2.29	0.95
12:AL:739:G:H5"	21:l:52:LYS:HZ2	1.19	0.95
19:j:125:ILE:HG12	19:j:130:VAL:HG21	1.47	0.95
55:J:103:LYS:HB3	55:J:106:PHE:HB2	1.48	0.95
3:AC:266:LYS:HA	17:h:128:PRO:C	1.91	0.95
6:AF:209:ASP:CB	19:j:446:LYS:HG2	1.95	0.95
18:i:93:TRP:CE2	29:t:109:GLY:N	2.32	0.95
63:R:259:SER:CB	63:R:269:TYR:HA	1.97	0.95
5:AE:88:LEU:CD1	5:AE:90:PRO:HD3	1.96	0.95
6:AF:303:GLU:N	6:AF:304:ARG:NH2	2.13	0.95
3:AC:232:LEU:HD21	4:AD:278:LYS:HA	0.96	0.95
9:AI:57:TYR:HA	22:m:205:SER:HB2	1.45	0.95
16:g:3:LEU:CG	17:h:211:TYR:CD2	2.50	0.95
25:p:85:ARG:NE	29:t:115:TRP:CE2	2.31	0.95
26:q:193:LYS:O	35:z:110:LYS:HE2	1.66	0.95
46:A:1020:U:OP1	75:e:134:LYS:HG3	1.67	0.95
46:A:1728:U:C4	47:B:270:GLY:HA3	2.01	0.95
46:A:3160:U:H5"	57:L:52:THR:HG21	1.45	0.95
75:e:66:MET:CE	75:e:142:TYR:CE2	2.49	0.95
9:AI:310:ASN:OD1	28:s:34:LYS:HB3	1.67	0.95
12:AL:550:U:H5'	19:j:131:ARG:HH11	1.32	0.95
17:h:269:TYR:OH	24:o:38:VAL:CG1	2.13	0.95
6:AF:88:ILE:HD13	19:j:28:LEU:CD2	1.95	0.95
11:AK:112:GLU:HA	18:i:172:TYR:OH	1.64	0.95
12:AL:627:U:H2'	12:AL:628:U:H6	1.29	0.95
12:AL:828:A:OP1	30:u:249:ARG:HG3	1.67	0.95
12:AL:71:A:H61	12:AL:99:U:H3'	1.32	0.95
15:Z:94:HIS:NE2	17:h:203:ARG:HG3	1.80	0.95
20:k:59:LEU:HB3	25:p:20:TYR:HH	1.23	0.95
12:AL:25:G:H4'	20:k:267:ASN:HD21	1.31	0.94
17:h:290:TRP:CZ3	24:o:49:PRO:CD	2.50	0.94
6:AF:61:PHE:CE1	19:j:29:TYR:CD2	2.54	0.94
7:AG:3:ILE:HD12	23:n:20:ARG:CD	1.97	0.94
7:AG:114:TRP:HZ2	16:g:87:ARG:CA	1.78	0.94
8:AH:104:ARG:HD2	12:AL:143:A:H4'	0.95	0.94
11:AK:170:GLN:NE2	25:p:120:VAL:CG2	2.30	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:m:123:ARG:CB	22:m:126:LYS:NZ	2.29	0.94
22:m:133:ILE:HG23	22:m:209:ALA:CA	1.95	0.94
3:AC:62:TYR:CB	17:h:159:LYS:HG3	1.96	0.94
4:AD:155:LEU:HB2	16:g:210:LEU:HG	0.95	0.94
5:AE:50:GLU:HG3	5:AE:66:TYR:HH	1.26	0.94
6:AF:70:GLU:CG	19:j:426:LYS:HZ1	1.77	0.94
7:AG:166:VAL:HG11	16:g:195:LYS:HG3	1.48	0.94
9:AI:367:TYR:HD1	11:AK:278:ARG:HH21	0.96	0.94
10:AJ:69:VAL:HG23	18:i:124:THR:HG22	1.49	0.94
11:AK:145:VAL:HG21	20:k:68:PHE:CZ	2.02	0.94
11:AK:294:PHE:HZ	24:o:170:VAL:HG11	1.32	0.94
15:Z:94:HIS:CD2	17:h:203:ARG:HA	2.01	0.94
18:i:114:LEU:HD11	29:t:15:GLY:N	1.81	0.94
18:i:368:LEU:C	29:t:111:LYS:HG2	1.91	0.94
21:l:38:VAL:HG21	30:u:141:ILE:HD11	1.45	0.94
46:A:171:A:H2'	46:A:172:A:C8	2.02	0.94
46:A:172:A:H2'	46:A:173:U:C6	2.03	0.94
9:AI:431:PHE:CG	24:o:176:ILE:HD11	2.03	0.94
16:g:68:LEU:HD12	17:h:217:ILE:CD1	1.93	0.94
18:i:95:THR:OG1	29:t:108:PRO:CD	2.16	0.94
46:A:2794:U:H2'	46:A:2797:U:H5"	1.49	0.94
4:AD:258:LYS:CE	16:g:226:VAL:CG2	2.43	0.94
8:AH:231:PHE:CE1	21:l:48:ARG:HD3	2.01	0.94
9:AI:187:ARG:HD2	28:s:44:TRP:HD1	1.20	0.94
11:AK:97:SER:HB2	18:i:171:TYR:OH	1.66	0.94
12:AL:1415:G:H2'	24:o:258:HIS:O	1.66	0.94
17:h:144:GLN:HE22	24:o:119:GLN:HB3	1.27	0.94
17:h:295:ILE:HG22	24:o:36:ARG:HB2	1.48	0.94
17:h:313:LYS:HG3	20:k:131:LYS:HA	1.48	0.94
4:AD:28:LEU:HB3	4:AD:32:PHE:HB2	1.49	0.94
6:AF:58:MET:HB3	19:j:26:PHE:CD2	2.03	0.94
6:AF:204:ASP:OD2	19:j:158:LEU:HD11	1.67	0.94
11:AK:294:PHE:CD2	24:o:153:ARG:NH1	2.36	0.94
3:AC:62:TYR:CE2	17:h:159:LYS:HG2	2.01	0.94
3:AC:228:ASP:OD2	4:AD:277:PRO:CG	2.15	0.94
4:AD:254:GLU:HG3	16:g:226:VAL:HG21	1.49	0.94
6:AF:58:MET:CE	19:j:30:LYS:CE	2.40	0.94
6:AF:204:ASP:OD2	19:j:158:LEU:CD1	2.16	0.94
9:AI:393:LYS:NZ	24:o:182:GLN:HG3	1.83	0.94
11:AK:154:TYR:HE2	25:p:57:PHE:HE2	1.10	0.94
38:2:53:ARG:NH1	69:X:67:ARG:NH1	2.15	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:45:LEU:HG	2:AB:56:LYS:HG2	1.47	0.94
3:AC:90:HIS:HD2	17:h:160:LEU:C	1.74	0.94
3:AC:179:ARG:NH2	7:AG:201:PHE:CD1	2.34	0.94
7:AG:3:ILE:HG21	23:n:20:ARG:NH2	1.79	0.94
7:AG:174:TYR:HE1	16:g:107:PHE:CE1	1.84	0.94
8:AH:167:ASN:CA	23:n:65:PRO:HG3	1.89	0.94
8:AH:202:LEU:HD11	21:l:105:LEU:HB3	1.49	0.94
9:AI:153:GLY:C	9:AI:155:GLY:H	1.76	0.94
9:AI:276:ILE:HG13	9:AI:323:LEU:HD11	1.50	0.94
10:AJ:14:LEU:HD11	11:AK:222:LEU:HD22	0.96	0.94
10:AJ:60:LYS:O	10:AJ:60:LYS:HG2	1.67	0.94
11:AK:112:GLU:CA	18:i:172:TYR:CE2	2.51	0.94
16:g:7:LEU:HD23	17:h:219:ILE:CD1	1.98	0.94
46:A:438:U:H2'	46:A:439:A:H8	1.33	0.94
46:A:1727:A:C3'	47:B:290:GLN:HG2	1.96	0.94
75:e:54:ILE:HG12	75:e:105:TYR:HB2	1.48	0.94
75:e:67:ILE:HA	75:e:142:TYR:HB3	1.47	0.94
3:AC:266:LYS:HB3	17:h:128:PRO:HG2	1.50	0.94
6:AF:88:ILE:HD11	19:j:28:LEU:HG	1.47	0.94
8:AH:103:ARG:HH22	31:v:79:GLY:HA2	1.26	0.94
12:AL:232:U:HO2'	31:v:78:VAL:HG11	1.26	0.94
12:AL:1344:A:H5"	28:s:49:GLN:OE1	1.66	0.94
6:AF:58:MET:SD	19:j:30:LYS:HE3	2.08	0.94
7:AG:4:GLN:HG3	17:h:354:LEU:HD23	1.49	0.94
16:g:3:LEU:CD1	17:h:211:TYR:HD2	1.65	0.94
22:m:109:ARG:NH2	24:o:228:MET:HE1	1.69	0.94
46:A:1011:A:N7	76:f:50:TYR:OH	2.01	0.94
63:R:259:SER:HB3	63:R:269:TYR:HA	1.50	0.94
75:e:66:MET:CG	75:e:149:GLN:HB3	1.98	0.94
3:AC:148:LEU:CD1	4:AD:82:ASN:CB	2.43	0.93
11:AK:134:PHE:CZ	20:k:110:VAL:CG2	2.49	0.93
17:h:302:THR:HG23	24:o:35:ARG:NE	1.83	0.93
3:AC:179:ARG:NH2	7:AG:201:PHE:HE1	1.56	0.93
5:AE:93:PRO:HD2	5:AE:95:LYS:HZ3	1.20	0.93
11:AK:196:ASN:HD21	12:AL:1318:U:H5'	0.80	0.93
12:AL:1496:A:H2	30:u:41:LEU:CD2	1.80	0.93
18:i:93:TRP:NE1	29:t:109:GLY:H	1.65	0.93
18:i:100:TYR:HE1	25:p:48:ARG:CD	1.71	0.93
21:l:38:VAL:CB	30:u:141:ILE:HD11	1.97	0.93
46:A:2384:A:H2'	46:A:2385:U:C6	2.04	0.93
7:AG:22:LEU:O	20:k:135:VAL:HA	1.69	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:49:LYS:CE	23:n:58:LYS:HZ1	1.80	0.93
16:g:272:ARG:HB2	33:x:60:PHE:HZ	1.28	0.93
3:AC:55:GLY:HA2	7:AG:121:ILE:HG23	1.42	0.93
7:AG:217:LEU:CD1	16:g:273:MET:CG	2.27	0.93
11:AK:182:VAL:HG21	25:p:148:ILE:HG22	1.48	0.93
16:g:6:LEU:HB3	17:h:189:MET:SD	2.08	0.93
21:l:8:LEU:CD1	33:x:136:GLY:HA3	1.98	0.93
37:1:58:ARG:NH1	46:A:2336:G:N7	2.17	0.93
3:AC:55:GLY:C	7:AG:121:ILE:CG2	2.41	0.93
7:AG:174:TYR:HE1	16:g:107:PHE:CZ	1.85	0.93
8:AH:60:HIS:HB3	12:AL:133:U:O4	1.67	0.93
12:AL:675:U:C6	20:k:263:TYR:CE2	2.56	0.93
18:i:180:MET:HB3	20:k:92:TRP:NE1	1.83	0.93
26:q:108:TYR:CE2	35:z:89:ALA:CB	2.39	0.93
1:AA:80:VAL:CG2	12:AL:1462:A:C6	2.51	0.93
3:AC:195:ALA:CA	4:AD:223:TYR:CE2	2.46	0.93
5:AE:93:PRO:HD2	5:AE:95:LYS:HZ2	1.22	0.93
11:AK:91:LEU:HD22	11:AK:101:VAL:HG13	1.47	0.93
46:A:533:U:H5	63:R:135:THR:H	1.11	0.93
46:A:1009:U:O2	76:f:131:GLU:HB2	1.67	0.93
46:A:1522:A:H2'	46:A:1523:A:C8	2.02	0.93
46:A:2771:G:C6	48:C:208:ASN:ND2	2.35	0.93
6:AF:61:PHE:CG	19:j:29:TYR:CE1	2.56	0.93
6:AF:88:ILE:HD11	19:j:28:LEU:CG	1.98	0.93
6:AF:321:TYR:HE2	31:v:35:LYS:CA	1.80	0.93
8:AH:53:VAL:HG13	32:w:48:GLU:OE2	1.69	0.93
16:g:251:VAL:CG1	33:x:51:LYS:CB	2.47	0.93
20:k:267:ASN:HB3	20:k:270:ASN:HB2	1.50	0.93
34:y:42:ILE:HD11	34:y:76:PHE:HE2	1.33	0.93
4:AD:201:THR:HB	4:AD:205:GLY:HA3	1.50	0.93
16:g:68:LEU:HD13	17:h:217:ILE:HD12	1.42	0.93
18:i:306:TYR:OH	20:k:59:LEU:HD23	1.67	0.93
29:t:23:ARG:HH12	29:t:26:PHE:CB	1.82	0.93
46:A:1728:U:H3	47:B:270:GLY:HA3	1.14	0.93
8:AH:198:GLU:HG2	21:l:105:LEU:CD2	1.98	0.93
21:l:114:SER:OG	33:x:95:ARG:HD3	1.66	0.93
22:m:90:PRO:CB	24:o:241:LEU:CD1	2.47	0.93
25:p:85:ARG:HD3	29:t:115:TRP:HH2	1.18	0.93
46:A:417:U:H2'	46:A:418:A:H8	1.33	0.93
46:A:1698:C:H5	46:A:1736:G:H21	1.14	0.93
4:AD:67:LEU:C	4:AD:77:LYS:NZ	2.26	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:231:PHE:HZ	21:l:48:ARG:HD2	1.31	0.93
18:i:303:ASN:OD1	25:p:19:PRO:HA	1.70	0.93
50:E:23:CYS:HB2	63:R:79:ILE:HD13	1.51	0.93
3:AC:54:ALA:CB	7:AG:143:PRO:CA	2.46	0.92
12:AL:739:G:C5'	21:l:52:LYS:NZ	2.32	0.92
12:AL:1437:A:H5'	24:o:261:ARG:HH12	1.32	0.92
3:AC:55:GLY:HA2	7:AG:121:ILE:HG21	1.51	0.92
12:AL:304:A:H2'	12:AL:305:A:C8	2.03	0.92
26:q:183:LEU:HD22	35:z:117:PHE:HZ	1.35	0.92
46:A:1007:U:C2'	75:e:161:GLN:HG3	1.98	0.92
6:AF:61:PHE:HB2	19:j:29:TYR:OH	1.70	0.92
11:AK:137:LEU:HD11	20:k:68:PHE:HE1	1.34	0.92
15:Z:89:ILE:HD11	35:z:168:ILE:CG2	1.98	0.92
16:g:71:LEU:HD23	17:h:201:LEU:CD2	1.99	0.92
16:g:249:GLY:CA	33:x:55:TYR:CE1	2.52	0.92
18:i:88:ASN:HD22	25:p:53:GLU:CD	1.78	0.92
6:AF:319:TYR:CD1	31:v:42:THR:HG21	2.05	0.92
11:AK:140:GLN:NE2	18:i:321:TYR:CE2	2.36	0.92
12:AL:80:U:H3'	12:AL:81:U:C6	2.04	0.92
18:i:148:LYS:HE3	20:k:78:LEU:HD12	1.49	0.92
22:m:123:ARG:HB3	22:m:126:LYS:HZ3	1.16	0.92
38:2:53:ARG:NH1	69:X:67:ARG:HH12	1.66	0.92
46:A:1720:U:H1'	47:B:135:ASN:ND2	1.85	0.92
4:AD:111:LEU:HA	4:AD:114:GLU:HB2	1.48	0.92
18:i:368:LEU:HB3	29:t:111:LYS:HG3	1.34	0.92
18:i:383:ILE:HA	18:i:388:LYS:HA	1.51	0.92
4:AD:122:PHE:HD2	7:AG:178:ALA:HB2	1.28	0.92
9:AI:413:LEU:HD21	22:m:149:PRO:CD	2.00	0.92
12:AL:628:U:H2'	12:AL:629:G:C8	2.05	0.92
12:AL:1105:G:C5'	18:i:390:ASN:ND2	2.33	0.92
24:o:156:ALA:HB1	24:o:233:LYS:HB2	1.51	0.92
29:t:56:LEU:HD13	34:y:18:ILE:HG12	1.49	0.92
46:A:841:G:O2'	50:E:106:PRO:HB2	1.69	0.92
9:AI:154:VAL:HG22	9:AI:154:VAL:O	1.69	0.92
12:AL:502:A:OP1	19:j:7:LEU:HB3	1.70	0.92
12:AL:508:C:C5'	19:j:420:PRO:HB2	1.99	0.92
18:i:100:TYR:CE1	25:p:48:ARG:CZ	2.52	0.92
19:j:7:LEU:CB	19:j:10:SER:HB2	2.00	0.92
46:A:2205:G:H2'	46:A:2206:U:C6	2.05	0.92
3:AC:40:ASP:OD1	4:AD:286:VAL:CB	2.18	0.92
4:AD:244:ALA:HA	4:AD:247:ALA:HB3	1.51	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:189:PHE:CE1	32:w:173:GLU:HG2	2.05	0.92
12:AL:13:U:H5'	20:k:238:PHE:HE2	0.78	0.92
18:i:368:LEU:HD12	29:t:111:LYS:HD3	0.92	0.92
30:u:225:GLU:HG3	32:w:88:TYR:HD1	1.02	0.92
46:A:2771:G:N1	48:C:208:ASN:ND2	2.17	0.92
3:AC:148:LEU:HD13	4:AD:82:ASN:HD22	1.16	0.92
5:AE:283:THR:HA	5:AE:315:TYR:CE2	2.05	0.92
10:AJ:67:GLU:HB2	18:i:126:LYS:HB3	1.51	0.92
16:g:246:ALA:HB1	33:x:55:TYR:CD1	2.05	0.92
19:j:10:SER:HB3	19:j:13:ARG:HB2	1.51	0.92
23:n:1:MET:HG2	23:n:31:LEU:HB2	1.52	0.92
3:AC:54:ALA:O	7:AG:143:PRO:HB3	1.70	0.91
7:AG:1:MET:CE	17:h:351:GLU:CB	2.48	0.91
11:AK:162:LEU:HB3	25:p:68:TYR:HD2	1.13	0.91
26:q:198:ILE:HG21	35:z:106:ILE:CD1	1.95	0.91
46:A:1010:A:O5'	76:f:129:SER:HA	1.69	0.91
11:AK:294:PHE:CE2	24:o:153:ARG:NH1	2.38	0.91
12:AL:675:U:H5	20:k:263:TYR:CZ	1.88	0.91
17:h:302:THR:HG23	24:o:35:ARG:HE	1.35	0.91
3:AC:188:ALA:HB2	4:AD:73:LYS:HB3	1.48	0.91
6:AF:37:TYR:OH	19:j:29:TYR:CZ	2.23	0.91
6:AF:58:MET:HG2	19:j:26:PHE:HD2	1.35	0.91
20:k:45:LYS:HD2	20:k:47:ARG:HH21	1.35	0.91
76:f:16:ALA:HA	76:f:55:PRO:HA	1.52	0.91
3:AC:90:HIS:CD2	17:h:161:GLY:N	2.37	0.91
3:AC:264:ILE:CG2	17:h:132:LEU:CD2	2.49	0.91
11:AK:112:GLU:HA	18:i:172:TYR:CE2	2.05	0.91
17:h:290:TRP:CZ2	24:o:49:PRO:CD	2.53	0.91
18:i:95:THR:O	29:t:108:PRO:CG	2.18	0.91
22:m:90:PRO:HB3	24:o:241:LEU:CD1	2.00	0.91
30:u:225:GLU:CG	32:w:88:TYR:CD1	2.52	0.91
7:AG:166:VAL:CG2	16:g:195:LYS:CE	2.20	0.91
8:AH:16:PRO:CB	31:v:35:LYS:HE2	1.99	0.91
11:AK:154:TYR:HD2	25:p:57:PHE:HZ	1.03	0.91
12:AL:25:G:HO2'	12:AL:1125:C:H5	1.05	0.91
21:l:38:VAL:CG2	30:u:141:ILE:HD11	2.00	0.91
29:t:23:ARG:NH2	29:t:26:PHE:CD2	2.36	0.91
46:A:1193:U:H2'	46:A:1194:U:C6	2.05	0.91
46:A:3003:U:H2'	46:A:3004:A:C8	2.05	0.91
75:e:54:ILE:HD11	75:e:105:TYR:CA	2.00	0.91
5:AE:73:ILE:HA	5:AE:76:THR:HG23	1.51	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:49:LYS:HD2	12:AL:1341:U:H5'	1.50	0.91
11:AK:112:GLU:HA	18:i:172:TYR:CZ	2.05	0.91
46:A:1725:G:C5'	47:B:176:ARG:NH2	2.34	0.91
6:AF:146:ASN:HB2	19:j:439:HIS:HD2	1.18	0.91
8:AH:21:ILE:HG23	31:v:74:TYR:CE1	2.06	0.91
11:AK:174:ARG:HD3	25:p:38:TYR:CE2	2.06	0.91
12:AL:326:C:H3'	12:AL:334:U:H5	1.32	0.91
12:AL:409:G:C4'	19:j:123:GLN:HE22	1.82	0.91
12:AL:784:A:C4	26:q:206:PHE:CE2	2.58	0.91
15:Z:46:HIS:CE1	22:m:234:HIS:HB3	2.04	0.91
46:A:1010:A:P	76:f:129:SER:HA	2.09	0.91
7:AG:224:VAL:CG1	33:x:45:LEU:CD1	2.26	0.91
12:AL:232:U:C2'	31:v:78:VAL:HG11	2.00	0.91
46:A:2332:U:H5'	63:R:322:ARG:HH11	1.34	0.91
46:A:2917:U:O2'	46:A:2918:A:C5'	2.18	0.91
46:A:3161:U:H2'	46:A:3162:U:C6	2.05	0.91
3:AC:228:ASP:OD2	4:AD:277:PRO:CD	2.19	0.91
3:AC:266:LYS:CB	17:h:128:PRO:HG2	2.00	0.91
15:Z:95:ASP:C	17:h:203:ARG:HH12	1.78	0.91
46:A:1358:C:H5	46:A:1553:G:H1	1.12	0.91
7:AG:124:GLU:OE2	17:h:190:SER:HA	1.70	0.90
11:AK:170:GLN:HE21	25:p:120:VAL:HG23	1.34	0.90
12:AL:232:U:C1'	31:v:78:VAL:HG13	2.01	0.90
16:g:3:LEU:HG	17:h:211:TYR:CE2	2.05	0.90
16:g:228:PRO:HA	16:g:277:LEU:HA	1.53	0.90
17:h:247:LEU:HD11	24:o:45:TYR:HD2	1.31	0.90
46:A:1059:A:O2'	46:A:1060:U:P	2.29	0.90
46:A:1166:U:H2'	46:A:1167:A:C8	2.04	0.90
46:A:2845:G:O6	48:C:204:SER:OG	1.88	0.90
4:AD:260:PHE:HA	16:g:223:GLN:HG3	1.50	0.90
6:AF:198:ARG:HH22	12:AL:552:A:C4'	1.85	0.90
8:AH:162:GLN:HG3	23:n:60:PHE:CE1	2.06	0.90
10:AJ:19:PHE:CD1	11:AK:226:ARG:CZ	2.53	0.90
12:AL:628:U:H2'	12:AL:629:G:H8	1.35	0.90
18:i:369:ASN:HB3	29:t:114:ILE:HD12	1.53	0.90
9:AI:295:SER:HB3	9:AI:345:ILE:HG23	1.52	0.90
6:AF:198:ARG:HH12	12:AL:552:A:C5'	1.84	0.90
8:AH:231:PHE:CZ	21:l:48:ARG:HD3	2.05	0.90
12:AL:1437:A:OP2	24:o:262:LYS:HE3	1.69	0.90
42:6:66:TYR:CD1	46:A:2424:U:C5	2.56	0.90
46:A:849:U:H2'	46:A:850:A:C8	2.05	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1250:U:H2'	46:A:1251:A:C8	2.07	0.90
8:AH:16:PRO:CG	31:v:35:LYS:HE2	1.86	0.90
10:AJ:69:VAL:O	18:i:124:THR:OG1	1.90	0.90
28:s:26:GLY:HA3	28:s:67:ILE:CA	2.01	0.90
46:A:1006:U:H5	76:f:135:LEU:CD2	1.82	0.90
75:e:66:MET:SD	75:e:150:VAL:N	2.44	0.90
6:AF:321:TYR:CE1	31:v:13:PHE:CZ	2.59	0.90
46:A:371:U:H2'	46:A:372:A:C8	2.07	0.90
5:AE:88:LEU:HD11	5:AE:90:PRO:CG	1.99	0.90
6:AF:37:TYR:OH	19:j:29:TYR:OH	1.89	0.90
6:AF:137:PHE:CD1	19:j:468:PRO:CB	2.55	0.90
7:AG:1:MET:CE	17:h:351:GLU:HB3	2.01	0.90
9:AI:60:TRP:CD1	22:m:210:VAL:HG11	2.07	0.90
12:AL:897:U:H4'	15:Z:7:VAL:HG21	1.53	0.90
12:AL:1045:C:O2	29:t:73:GLN:HA	1.72	0.90
12:AL:1362:A:C5'	28:s:11:LYS:HG3	2.01	0.90
26:q:198:ILE:HD12	35:z:117:PHE:CD1	2.06	0.90
63:R:331:GLU:HB3	63:R:362:ARG:NH1	1.87	0.90
3:AC:185:LEU:HD12	7:AG:197:PHE:N	1.87	0.90
7:AG:36:ILE:CD1	17:h:234:LYS:HG2	2.02	0.90
11:AK:182:VAL:HG22	25:p:148:ILE:HG22	1.51	0.90
12:AL:1411:G:O3'	24:o:272:MET:HB2	1.72	0.90
21:l:63:ARG:NH2	26:q:108:TYR:HH	1.68	0.90
22:m:97:GLN:NE2	24:o:208:LYS:NZ	2.19	0.90
28:s:84:LYS:HE2	34:y:67:ASP:OD2	1.69	0.90
3:AC:265:SER:C	17:h:128:PRO:CD	2.35	0.90
6:AF:58:MET:HG2	19:j:26:PHE:CD2	2.06	0.90
12:AL:749:A:H4'	26:q:121:LYS:CE	2.02	0.90
12:AL:1220:A:H4'	29:t:112:LYS:HZ2	1.29	0.90
12:AL:1287:A:OP1	25:p:83:ARG:HB2	1.72	0.90
12:AL:1639:A:H4'	17:h:150:GLN:HE22	1.34	0.90
15:Z:89:ILE:HD13	35:z:168:ILE:HB	1.50	0.90
21:l:66:HIS:CE1	33:x:137:LEU:HB3	2.05	0.90
38:2:50:SER:HB2	46:A:2426:A:H5'	1.54	0.90
46:A:1142:U:H2'	46:A:1143:A:C8	2.05	0.90
46:A:1250:U:H2'	46:A:1251:A:H8	1.37	0.90
3:AC:59:GLU:O	17:h:164:ILE:HG13	1.70	0.90
3:AC:148:LEU:HD23	4:AD:203:ASN:HB3	1.50	0.90
4:AD:260:PHE:CZ	16:g:222:ILE:HA	2.07	0.90
9:AI:182:LEU:CD1	12:AL:1353:U:H5'	2.02	0.90
9:AI:431:PHE:HE1	24:o:176:ILE:HG12	1.05	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:160:TYR:CZ	20:k:29:LEU:HD23	2.06	0.90
7:AG:217:LEU:CG	16:g:273:MET:HG3	2.01	0.89
8:AH:50:ALA:CB	32:w:76:GLU:HA	2.02	0.89
10:AJ:63:TYR:CZ	18:i:182:ILE:CG2	2.52	0.89
12:AL:65:C:H2'	12:AL:66:G:H8	1.35	0.89
11:AK:161:GLU:HB2	25:p:127:TYR:OH	1.70	0.89
16:g:78:GLU:OE2	35:z:174:ARG:NH1	2.05	0.89
46:A:266:A:H2'	46:A:267:A:C8	2.07	0.89
2:AB:108:LYS:HE2	12:AL:68:A:OP1	1.73	0.89
3:AC:266:LYS:N	17:h:128:PRO:HG2	1.88	0.89
6:AF:58:MET:CB	19:j:26:PHE:CD2	2.56	0.89
8:AH:224:PHE:CD2	21:l:18:LYS:CD	2.39	0.89
21:l:2:LEU:HD12	21:l:72:ASP:CG	1.98	0.89
3:AC:148:LEU:CD2	4:AD:204:ALA:HB2	2.02	0.89
5:AE:68:PRO:CG	12:AL:1542:A:O3'	2.20	0.89
9:AI:310:ASN:ND2	28:s:34:LYS:HB3	1.88	0.89
12:AL:232:U:H1'	31:v:78:VAL:HG13	1.55	0.89
46:A:100:U:H2'	46:A:101:A:C8	2.08	0.89
46:A:125:U:H2'	46:A:126:A:C8	2.07	0.89
46:A:1439:A:C2'	46:A:1440:U:C6	2.50	0.89
8:AH:184:ARG:CD	12:AL:814:A:C4'	2.38	0.89
9:AI:57:TYR:CA	22:m:205:SER:CB	2.49	0.89
12:AL:44:U:H3	12:AL:401:A:N6	1.71	0.89
16:g:200:ILE:HD13	16:g:287:LYS:HG2	0.91	0.89
26:q:214:MET:CE	35:z:140:MET:CG	2.44	0.89
30:u:276:LYS:HD2	30:u:279:ARG:HH22	1.07	0.89
46:A:1540:A:H2'	46:A:1541:U:H6	1.35	0.89
3:AC:264:ILE:CG2	17:h:132:LEU:HD21	2.03	0.89
13:AM:13:C:H4'	46:A:1824:U:C4'	2.02	0.89
16:g:251:VAL:HB	33:x:51:LYS:CA	2.02	0.89
18:i:316:MET:HG3	20:k:69:TRP:HZ2	1.16	0.89
6:AF:137:PHE:CD2	19:j:468:PRO:HA	2.06	0.89
8:AH:50:ALA:HB2	32:w:76:GLU:CA	2.02	0.89
11:AK:134:PHE:HZ	20:k:110:VAL:HG23	1.36	0.89
12:AL:899:U:H2'	12:AL:900:A:H8	1.37	0.89
16:g:75:THR:HG22	35:z:177:TYR:OH	1.71	0.89
28:s:62:LEU:HD23	67:V:96:GLY:O	1.70	0.89
46:A:2625:A:N6	55:J:110:GLN:HE22	1.71	0.89
7:AG:122:LEU:CD2	16:g:36:ILE:HD12	2.01	0.89
8:AH:100:ALA:HB1	12:AL:143:A:O5'	1.72	0.89
11:AK:132:PHE:HE2	18:i:251:LEU:HD21	1.35	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1608:U:O3'	48:C:201:HIS:CD2	2.26	0.89
46:A:2461:A:H3'	46:A:2462:A:C8	2.08	0.89
1:AA:92:LYS:HE2	12:AL:956:U:H4'	1.51	0.89
3:AC:54:ALA:HB1	7:AG:143:PRO:N	1.88	0.89
4:AD:122:PHE:CE2	7:AG:174:TYR:O	2.26	0.89
6:AF:58:MET:HB3	19:j:26:PHE:CE2	2.07	0.89
12:AL:1258:U:C6	28:s:105:ARG:HA	2.07	0.89
21:l:71:PHE:O	21:l:72:ASP:OD1	1.91	0.89
30:u:276:LYS:CD	30:u:279:ARG:NH2	2.34	0.89
3:AC:228:ASP:CB	4:AD:277:PRO:HB2	2.03	0.88
7:AG:114:TRP:NE1	16:g:87:ARG:CB	2.36	0.88
7:AG:217:LEU:HD11	16:g:273:MET:HA	0.90	0.88
9:AI:367:TYR:CE2	11:AK:274:PRO:HB2	2.08	0.88
12:AL:305:A:H2'	12:AL:306:A:C8	2.08	0.88
12:AL:1105:G:H5'	18:i:390:ASN:HD22	1.36	0.88
12:AL:1397:A:OP1	28:s:31:THR:CG2	2.20	0.88
13:AM:13:C:H2'	13:AM:14:A:H4'	1.55	0.88
15:Z:66:ALA:HB2	22:m:184:ASN:CA	2.03	0.88
17:h:144:GLN:HE21	24:o:119:GLN:HB3	1.11	0.88
46:A:2300:U:H3'	63:R:39:MET:HE2	1.53	0.88
46:A:2611:U:C5'	69:X:37:VAL:HG13	2.02	0.88
6:AF:163:VAL:HG12	6:AF:164:GLU:HG2	1.56	0.88
10:AJ:69:VAL:HB	18:i:124:THR:HG23	1.53	0.88
11:AK:132:PHE:HB2	18:i:248:MET:SD	2.14	0.88
11:AK:132:PHE:CD2	18:i:249:PRO:CD	2.55	0.88
16:g:12:ILE:HD12	17:h:195:LEU:CD2	2.03	0.88
16:g:272:ARG:HB3	33:x:60:PHE:CZ	2.08	0.88
17:h:290:TRP:CZ2	24:o:49:PRO:HD3	2.08	0.88
46:A:2016:A:H61	46:A:2021:A:H3'	1.38	0.88
46:A:2922:G:H22	46:A:2931:G:H2'	1.36	0.88
9:AI:57:TYR:CA	22:m:205:SER:HB2	2.03	0.88
11:AK:151:GLN:HE21	18:i:83:LYS:HZ1	0.93	0.88
12:AL:44:U:H3	12:AL:401:A:H61	0.93	0.88
46:A:2079:A:C2'	46:A:2080:U:C6	2.57	0.88
75:e:66:MET:CB	75:e:149:GLN:HB2	2.04	0.88
6:AF:320:ARG:NH1	8:AH:15:PHE:HB2	1.87	0.88
7:AG:33:VAL:CG1	17:h:357:TYR:OH	2.22	0.88
18:i:93:TRP:HE1	29:t:111:LYS:HE2	1.38	0.88
22:m:160:LEU:HD11	22:m:226:ALA:HB3	1.55	0.88
6:AF:313:LYS:HA	31:v:68:ASP:OD2	1.72	0.88
7:AG:3:ILE:CG2	23:n:20:ARG:HH12	1.73	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:173:ARG:HH21	16:g:107:PHE:HE2	1.20	0.88
7:AG:206:ILE:CD1	16:g:92:GLU:OE1	2.20	0.88
8:AH:210:ILE:HD12	21:l:40:ARG:O	1.73	0.88
11:AK:135:ASP:HB2	20:k:104:ASN:HA	1.56	0.88
12:AL:521:A:H4'	31:v:45:PRO:HB2	1.53	0.88
18:i:146:LEU:HD11	25:p:132:SER:HG	1.12	0.88
21:l:2:LEU:CD1	21:l:72:ASP:CG	2.47	0.88
25:p:85:ARG:NH2	29:t:115:TRP:HE1	1.71	0.88
27:r:35:LYS:CE	32:w:37:LEU:CD2	2.50	0.88
8:AH:46:GLY:CA	32:w:59:ARG:HD2	2.03	0.88
12:AL:71:A:H5'	12:AL:100:A:H62	1.38	0.88
16:g:7:LEU:HD21	17:h:219:ILE:HD13	0.88	0.88
36:0:73:ARG:HB3	46:A:3093:U:C6	2.08	0.88
46:A:1775:A:H2'	46:A:1776:A:C8	2.08	0.88
46:A:2006:U:H2'	46:A:2007:A:C8	2.09	0.88
8:AH:198:GLU:HB3	21:l:105:LEU:CG	2.02	0.88
11:AK:112:GLU:CG	18:i:127:LEU:HD21	2.04	0.88
12:AL:899:U:H2'	12:AL:900:A:C8	2.09	0.88
18:i:303:ASN:ND2	25:p:19:PRO:HA	1.88	0.88
26:q:204:LEU:HD11	35:z:129:ILE:HG23	1.55	0.88
27:r:35:LYS:HD2	32:w:37:LEU:CD2	2.04	0.88
46:A:290:G:P	55:J:115:LYS:HE3	2.13	0.88
11:AK:161:GLU:HB3	25:p:127:TYR:CZ	2.07	0.88
46:A:2210:A:H2'	46:A:2211:U:C6	2.09	0.88
4:AD:167:GLY:HA2	4:AD:202:TYR:HA	1.56	0.88
12:AL:675:U:H6	20:k:263:TYR:CE2	1.92	0.88
15:Z:95:ASP:H	17:h:203:ARG:NH2	1.72	0.88
18:i:302:ILE:HD12	25:p:20:TYR:HD2	1.37	0.88
18:i:311:ILE:HD11	20:k:58:TYR:OH	1.74	0.88
21:l:38:VAL:HG21	30:u:141:ILE:CD1	2.03	0.88
26:q:183:LEU:HD22	35:z:117:PHE:CZ	2.09	0.88
46:A:2086:U:H2'	46:A:2087:A:C8	2.09	0.88
46:A:2845:G:O2'	48:C:198:MET:SD	2.32	0.88
46:A:3278:A:H2'	46:A:3279:U:H6	1.37	0.88
2:AB:70:ASP:HB3	2:AB:73:ILE:HG12	1.56	0.88
4:AD:258:LYS:HE3	16:g:226:VAL:CG1	2.04	0.88
9:AI:310:ASN:HD21	28:s:34:LYS:HG2	1.39	0.88
10:AJ:35:LEU:HD21	29:t:43:PHE:CD2	2.08	0.88
11:AK:115:ALA:HB2	18:i:172:TYR:CE1	2.09	0.88
16:g:200:ILE:HD11	16:g:287:LYS:HD3	1.51	0.88
18:i:95:THR:OG1	29:t:108:PRO:HG3	1.73	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:6:66:TYR:CD2	46:A:2424:U:C5	2.61	0.88
46:A:231:A:H2'	46:A:232:C:C6	2.09	0.88
8:AH:50:ALA:CB	32:w:75:ALA:O	2.20	0.87
9:AI:450:ARG:C	22:m:114:LEU:HD12	1.99	0.87
11:AK:74:ALA:HA	18:i:181:ASN:OD1	1.74	0.87
46:A:1764:U:H3	46:A:1786:A:H61	1.21	0.87
4:AD:253:TYR:CZ	16:g:298:LEU:O	2.28	0.87
10:AJ:57:ARG:HD2	12:AL:1061:U:C5'	2.02	0.87
12:AL:1031:A:C2	13:AM:34:C:H4'	2.10	0.87
17:h:144:GLN:OE1	24:o:119:GLN:OE1	1.92	0.87
46:A:37:U:H2'	46:A:38:A:H8	1.38	0.87
46:A:945:A:C2	51:F:47:ARG:HB2	2.09	0.87
4:AD:186:MET:HB3	4:AD:189:ARG:HB2	1.54	0.87
6:AF:314:VAL:HG11	8:AH:18:THR:HG21	1.55	0.87
6:AF:321:TYR:CD1	31:v:13:PHE:CZ	2.62	0.87
26:q:184:VAL:HG13	35:z:113:PRO:HG2	1.52	0.87
46:A:1426:U:H2'	46:A:1427:A:H8	1.39	0.87
46:A:3281:U:H2'	46:A:3282:A:H8	1.38	0.87
75:e:66:MET:HE3	75:e:142:TYR:CE2	2.07	0.87
8:AH:103:ARG:HG2	31:v:76:ILE:HG22	1.55	0.87
11:AK:149:ARG:HG2	20:k:69:TRP:O	1.75	0.87
12:AL:627:U:H2'	12:AL:628:U:C6	2.09	0.87
16:g:7:LEU:CD1	17:h:189:MET:HE3	2.04	0.87
16:g:68:LEU:HB2	17:h:217:ILE:HD11	1.54	0.87
46:A:2017:G:H22	46:A:2065:A:H61	1.17	0.87
63:R:235:TRP:O	63:R:236:THR:C	2.15	0.87
3:AC:219:MET:HE1	17:h:153:HIS:NE2	1.90	0.87
7:AG:206:ILE:HB	16:g:92:GLU:OE2	1.74	0.87
8:AH:21:ILE:HG12	31:v:74:TYR:CD1	2.07	0.87
11:AK:136:GLU:HG2	18:i:212:TYR:CE2	2.09	0.87
11:AK:172:TYR:CE2	25:p:115:ASP:CB	2.57	0.87
12:AL:500:A:H5'	19:j:7:LEU:HD11	1.56	0.87
46:A:2842:U:H5'	48:C:208:ASN:HB3	1.57	0.87
4:AD:199:LEU:CB	16:g:214:LEU:HD22	2.03	0.87
6:AF:58:MET:CE	19:j:30:LYS:HG2	2.03	0.87
12:AL:71:A:N6	12:AL:99:U:H3'	1.89	0.87
46:A:1727:A:H3'	47:B:290:GLN:CG	2.03	0.87
46:A:1728:U:N3	47:B:270:GLY:CA	2.32	0.87
63:R:335:THR:HG21	63:R:366:ALA:HB2	1.54	0.87
3:AC:191:ILE:HD13	4:AD:222:GLN:CG	2.05	0.87
7:AG:78:ARG:HH12	8:AH:176:LEU:HD11	1.40	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:114:TRP:HZ2	16:g:87:ARG:CB	1.69	0.87
8:AH:198:GLU:HB3	21:l:105:LEU:HD23	0.90	0.87
11:AK:132:PHE:HD1	18:i:248:MET:CE	1.50	0.87
11:AK:149:ARG:HG3	20:k:69:TRP:O	1.73	0.87
12:AL:709:A:H2'	12:AL:710:U:H6	1.39	0.87
18:i:368:LEU:CG	29:t:111:LYS:CG	2.50	0.87
46:A:292:G:OP1	55:J:105:TRP:CZ2	2.27	0.87
4:AD:38:GLN:HA	4:AD:42:PHE:HB2	1.55	0.87
6:AF:58:MET:CG	19:j:11:LEU:HD13	2.04	0.87
12:AL:258:G:P	32:w:68:LYS:HD2	2.14	0.87
18:i:311:ILE:HG13	20:k:58:TYR:CE2	2.08	0.87
22:m:133:ILE:CG2	22:m:209:ALA:HA	1.98	0.87
46:A:801:U:H2'	46:A:802:U:C6	2.10	0.87
7:AG:75:TYR:CE2	8:AH:182:TYR:CE2	2.63	0.87
12:AL:757:U:H5	26:q:85:ASN:HD21	1.16	0.87
18:i:93:TRP:CG	29:t:108:PRO:HA	2.10	0.87
20:k:59:LEU:HG	25:p:20:TYR:CZ	2.09	0.87
25:p:85:ARG:CZ	29:t:115:TRP:HZ2	1.80	0.87
3:AC:90:HIS:CE1	17:h:160:LEU:CD1	2.58	0.86
7:AG:213:GLU:CD	16:g:230:ARG:HE	1.82	0.86
8:AH:93:GLN:HG3	12:AL:222:U:OP1	1.74	0.86
12:AL:666:U:H2'	12:AL:667:A:H8	1.39	0.86
31:v:8:ILE:HB	31:v:82:PRO:HA	1.56	0.86
46:A:2376:A:H61	69:X:68:THR:HG22	0.70	0.86
75:e:66:MET:CG	75:e:149:GLN:CB	2.52	0.86
6:AF:306:GLN:O	31:v:62:ILE:HA	1.74	0.86
9:AI:147:ILE:HA	9:AI:343:LEU:O	1.72	0.86
10:AJ:59:LEU:CD1	18:i:122:MET:HE3	2.04	0.86
16:g:45:ARG:CG	17:h:170:PRO:CB	2.50	0.86
46:A:417:U:H2'	46:A:418:A:C8	2.10	0.86
46:A:1006:U:H5	76:f:135:LEU:HD22	1.07	0.86
46:A:1348:U:H5"	46:A:1349:A:H3'	1.56	0.86
46:A:1426:U:H2'	46:A:1427:A:C8	2.09	0.86
6:AF:295:ILE:CD1	31:v:93:ALA:CB	2.52	0.86
7:AG:36:ILE:HD11	17:h:234:LYS:CG	2.03	0.86
7:AG:114:TRP:HZ2	16:g:87:ARG:HB2	1.17	0.86
8:AH:50:ALA:CB	32:w:76:GLU:N	2.36	0.86
18:i:303:ASN:CG	25:p:19:PRO:HA	2.01	0.86
20:k:292:GLY:O	23:n:78:LYS:HE2	1.75	0.86
30:u:85:GLU:OE1	32:w:107:PHE:CZ	2.28	0.86
46:A:210:U:H2'	46:A:211:A:H8	1.40	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:219:MET:HE1	17:h:153:HIS:CD2	2.09	0.86
11:AK:299:LYS:CE	24:o:151:PHE:HD1	1.88	0.86
12:AL:700:U:OP2	23:n:1:MET:CE	2.21	0.86
18:i:95:THR:O	29:t:108:PRO:HG3	1.75	0.86
18:i:148:LYS:HE3	20:k:79:HIS:H	1.39	0.86
18:i:238:THR:HB	20:k:121:LYS:NZ	1.89	0.86
20:k:16:TYR:HH	20:k:20:LEU:HG	1.11	0.86
39:3:30:PHE:HB2	46:A:1568:U:C6	2.09	0.86
46:A:1511:U:H2'	46:A:1512:A:C8	2.10	0.86
46:A:1698:C:O3'	47:B:318:LEU:O	1.92	0.86
46:A:1725:G:H5"	47:B:176:ARG:NH2	1.90	0.86
3:AC:266:LYS:HB3	17:h:128:PRO:CG	2.05	0.86
6:AF:88:ILE:CD1	19:j:28:LEU:CG	2.53	0.86
12:AL:1031:A:C2	13:AM:34:C:C4'	2.58	0.86
12:AL:1627:U:O4	15:Z:13:LEU:HB3	1.75	0.86
17:h:302:THR:CG2	24:o:35:ARG:HD3	2.05	0.86
28:s:67:ILE:HG21	67:V:96:GLY:O	1.76	0.86
46:A:1111:U:H3'	46:A:1112:A:H5"	1.57	0.86
46:A:1779:A:H2'	46:A:1780:U:C6	2.11	0.86
4:AD:111:LEU:HB3	4:AD:115:ALA:HB2	1.57	0.86
5:AE:68:PRO:HG2	12:AL:1543:A:OP1	1.74	0.86
7:AG:67:PRO:CB	32:w:187:GLN:HE22	1.87	0.86
8:AH:46:GLY:HA3	32:w:5:ASN:HB3	1.56	0.86
9:AI:431:PHE:CZ	24:o:176:ILE:CD1	2.57	0.86
12:AL:412:U:H2'	12:AL:413:G:C8	2.11	0.86
15:Z:94:HIS:CD2	17:h:203:ARG:CA	2.59	0.86
16:g:68:LEU:CB	17:h:217:ILE:CD1	2.54	0.86
16:g:272:ARG:CB	33:x:60:PHE:CZ	2.57	0.86
25:p:103:GLU:CG	29:t:113:GLY:CA	2.54	0.86
31:v:90:LEU:HB3	31:v:96:LEU:HG	1.57	0.86
46:A:1865:C:H3'	46:A:1866:A:H8	1.40	0.86
46:A:3174:U:H2'	46:A:3175:A:C8	2.10	0.86
46:A:3278:A:H2'	46:A:3279:U:C6	2.09	0.86
75:e:66:MET:HB2	75:e:149:GLN:OE1	1.73	0.86
11:AK:294:PHE:HD2	24:o:153:ARG:HH12	1.22	0.86
21:l:6:ILE:CD1	33:x:94:ALA:CB	2.53	0.86
30:u:66:PRO:HD2	30:u:251:TYR:HE2	1.40	0.86
31:v:12:ARG:HH22	31:v:21:TYR:HA	1.41	0.86
37:1:56:SER:N	46:A:2369:U:OP1	2.08	0.86
46:A:1486:U:H2'	46:A:1487:A:C8	2.11	0.86
5:AE:88:LEU:CD1	5:AE:90:PRO:CD	2.52	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:75:LYS:HB2	6:AF:97:SER:HB2	1.56	0.86
8:AH:231:PHE:CE2	33:x:96:PRO:HD2	2.11	0.86
10:AJ:58:HIS:O	10:AJ:59:LEU:CG	2.23	0.86
12:AL:20:A:C2'	12:AL:21:U:H5'	2.05	0.86
46:A:2319:A:H2'	46:A:2320:A:C8	2.11	0.86
8:AH:184:ARG:HG2	12:AL:814:A:C4'	2.04	0.86
9:AI:187:ARG:O	28:s:42:TYR:CD2	2.27	0.86
12:AL:1436:U:H4'	25:p:87:THR:CG2	2.06	0.86
15:Z:89:ILE:CG2	35:z:165:LEU:HD12	2.06	0.86
42:6:66:TYR:CB	46:A:2424:U:O4	2.21	0.86
46:A:140:U:H2'	46:A:141:U:C6	2.11	0.86
46:A:457:G:H2'	46:A:458:A:H8	1.41	0.86
69:X:47:VAL:HG12	72:b:129:VAL:HG11	1.54	0.86
75:e:66:MET:SD	75:e:150:VAL:CA	2.64	0.86
3:AC:188:ALA:HB3	4:AD:73:LYS:HB3	1.58	0.86
8:AH:231:PHE:CE1	21:l:48:ARG:HD2	2.07	0.86
46:A:1541:U:H2'	46:A:1542:U:C6	2.10	0.86
3:AC:61:TYR:OH	16:g:40:PRO:HD2	1.75	0.85
6:AF:62:LEU:HD21	19:j:26:PHE:HE1	1.35	0.85
8:AH:103:ARG:CD	31:v:100:TRP:HH2	1.88	0.85
9:AI:311:LYS:HD2	12:AL:1303:U:C5	2.11	0.85
10:AJ:1:MET:CE	11:AK:278:ARG:HH22	1.87	0.85
12:AL:836:U:H2'	12:AL:837:A:H8	1.40	0.85
16:g:200:ILE:HD12	16:g:287:LYS:HG2	1.56	0.85
46:A:2231:U:H2'	46:A:2232:A:C8	2.11	0.85
1:AA:83:LYS:CD	12:AL:1601:C:O5'	2.23	0.85
8:AH:198:GLU:HG3	21:l:105:LEU:HD23	1.58	0.85
11:AK:151:GLN:CG	18:i:83:LYS:HE2	2.01	0.85
12:AL:517:U:H2'	12:AL:518:U:C2	2.11	0.85
13:AM:72:C:H4'	13:AM:73:A:H2'	1.55	0.85
46:A:3003:U:H2'	46:A:3004:A:H8	1.40	0.85
3:AC:86:ILE:CG2	17:h:162:ALA:HB2	2.05	0.85
7:AG:206:ILE:HD13	16:g:92:GLU:CG	2.06	0.85
8:AH:16:PRO:CG	31:v:35:LYS:HG3	2.06	0.85
8:AH:104:ARG:HD2	12:AL:143:A:O4'	1.74	0.85
12:AL:698:A:OP1	23:n:2:SER:CB	2.25	0.85
18:i:148:LYS:CE	20:k:78:LEU:HD12	2.05	0.85
18:i:368:LEU:O	29:t:111:LYS:HB3	1.75	0.85
22:m:98:TRP:HA	24:o:242:LEU:HD21	1.58	0.85
46:A:420:U:H2'	46:A:421:U:C6	2.11	0.85
46:A:2590:U:H3'	46:A:2591:A:C5'	2.06	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2625:A:H61	55:J:110:GLN:HE22	1.20	0.85
46:A:2941:A:H2'	46:A:2942:A:C8	2.11	0.85
15:Z:95:ASP:C	17:h:203:ARG:NH1	2.34	0.85
31:v:99:ALA:C	31:v:101:ALA:H	1.82	0.85
38:2:43:VAL:HG13	46:A:2425:A:C8	2.11	0.85
46:A:804:G:H22	46:A:823:U:H3	1.25	0.85
63:R:198:LEU:HA	63:R:201:VAL:HG12	1.56	0.85
75:e:66:MET:HE2	75:e:142:TYR:CE2	2.10	0.85
7:AG:36:ILE:HG21	17:h:231:ARG:HG3	1.55	0.85
11:AK:304:ALA:HB2	24:o:152:GLY:HA3	1.57	0.85
20:k:262:VAL:HG11	20:k:271:ILE:HD12	1.58	0.85
26:q:198:ILE:CG2	35:z:106:ILE:CG1	2.53	0.85
46:A:1162:A:H2'	46:A:1163:A:C8	2.11	0.85
46:A:2075:U:H2'	46:A:2076:A:C8	2.10	0.85
6:AF:88:ILE:HD11	19:j:28:LEU:CD2	2.05	0.85
8:AH:182:TYR:OH	32:w:180:ARG:HD2	1.75	0.85
9:AI:447:LEU:O	22:m:135:SER:HB2	1.76	0.85
11:AK:170:GLN:NE2	25:p:120:VAL:HG23	1.91	0.85
12:AL:550:U:H5'	19:j:131:ARG:NH1	1.89	0.85
17:h:302:THR:HG21	24:o:35:ARG:CD	2.06	0.85
32:w:160:THR:HA	32:w:163:GLN:HG2	1.57	0.85
46:A:895:A:H2'	46:A:896:U:C6	2.11	0.85
46:A:1531:C:C2	47:B:326:TRP:CE3	2.64	0.85
6:AF:58:MET:CG	19:j:26:PHE:HB3	2.07	0.85
8:AH:167:ASN:HA	23:n:65:PRO:CG	2.05	0.85
10:AJ:59:LEU:CD1	18:i:122:MET:HG2	2.07	0.85
21:l:2:LEU:HD13	21:l:72:ASP:OD2	1.77	0.85
46:A:3281:U:H2'	46:A:3282:A:C8	2.11	0.85
46:A:135:U:H2'	46:A:136:A:C8	2.11	0.85
46:A:2644:A:H2'	46:A:2645:A:C8	2.11	0.85
7:AG:75:TYR:CE2	32:w:183:ILE:HD12	2.11	0.85
9:AI:126:VAL:HA	9:AI:131:THR:HG21	1.56	0.85
18:i:99:ASN:HB2	18:i:105:GLU:HB2	1.58	0.85
18:i:176:MET:HE1	20:k:93:ASP:N	1.90	0.85
18:i:180:MET:HG3	20:k:92:TRP:CD2	2.12	0.85
18:i:251:LEU:HD22	20:k:107:PRO:HG2	1.57	0.85
75:e:66:MET:CE	75:e:153:LEU:HD22	2.07	0.85
6:AF:308:LYS:HD3	31:v:62:ILE:HD12	1.54	0.85
7:AG:206:ILE:HB	16:g:92:GLU:CD	2.02	0.85
11:AK:54:PRO:HG2	11:AK:83:ASN:HD22	1.41	0.85
46:A:800:A:H2'	46:A:801:U:C6	2.12	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:R:312:LEU:HD21	63:R:320:LEU:HD12	1.58	0.85
4:AD:151:GLU:OE1	16:g:106:PRO:HA	1.77	0.84
6:AF:198:ARG:HG3	12:AL:545:U:C5'	2.05	0.84
8:AH:60:HIS:H	12:AL:133:U:H5	1.25	0.84
12:AL:13:U:H5"	20:k:238:PHE:CE2	2.12	0.84
12:AL:1214:A:O3'	24:o:253:THR:HG22	1.77	0.84
26:q:198:ILE:HD12	35:z:117:PHE:CE1	2.12	0.84
46:A:3282:A:H2'	46:A:3283:U:C6	2.12	0.84
3:AC:54:ALA:HB3	7:AG:143:PRO:HA	1.58	0.84
3:AC:188:ALA:HB1	4:AD:73:LYS:CB	2.06	0.84
7:AG:67:PRO:CB	32:w:187:GLN:NE2	2.40	0.84
18:i:86:HIS:HE1	25:p:53:GLU:OE1	1.33	0.84
46:A:53:U:H2'	46:A:54:A:H8	1.40	0.84
46:A:1009:U:O2	76:f:131:GLU:CB	2.24	0.84
4:AD:258:LYS:CE	16:g:226:VAL:HG13	2.07	0.84
7:AG:177:TYR:HE2	16:g:107:PHE:CZ	1.91	0.84
9:AI:302:TYR:HD1	9:AI:312:GLN:HB2	1.42	0.84
11:AK:132:PHE:HB2	18:i:248:MET:CA	2.07	0.84
11:AK:132:PHE:O	20:k:113:PRO:HG2	1.75	0.84
15:Z:41:TRP:CH2	22:m:163:LEU:HD12	2.11	0.84
46:A:1901:U:H2'	46:A:1902:U:C6	2.12	0.84
3:AC:90:HIS:CE1	17:h:160:LEU:HD13	2.12	0.84
6:AF:303:GLU:H	6:AF:304:ARG:NH2	1.74	0.84
7:AG:33:VAL:HG13	17:h:357:TYR:HH	1.37	0.84
12:AL:1436:U:O2'	25:p:87:THR:CG2	2.26	0.84
17:h:293:GLN:HB2	24:o:40:LYS:HG2	1.59	0.84
17:h:302:THR:CG2	24:o:35:ARG:CD	2.56	0.84
18:i:93:TRP:HB3	29:t:108:PRO:CB	2.06	0.84
26:q:198:ILE:HG22	35:z:106:ILE:CD1	2.05	0.84
6:AF:312:ALA:O	31:v:68:ASP:OD2	1.94	0.84
11:AK:172:TYR:CB	25:p:116:THR:O	2.23	0.84
11:AK:303:ASP:OD2	24:o:171:ARG:HB3	1.76	0.84
18:i:82:ASN:HD21	20:k:57:PRO:CB	1.90	0.84
18:i:82:ASN:HD21	20:k:57:PRO:HB3	1.36	0.84
24:o:151:PHE:HB2	24:o:153:ARG:HE	1.42	0.84
46:A:225:A:H2'	46:A:226:A:H8	1.42	0.84
2:AB:65:ASN:HB3	2:AB:69:TRP:CE2	2.13	0.84
3:AC:181:GLN:HG3	7:AG:197:PHE:O	1.77	0.84
4:AD:199:LEU:HD23	16:g:214:LEU:CD2	2.07	0.84
5:AE:190:MET:HG3	5:AE:283:THR:HG21	1.59	0.84
9:AI:57:TYR:CB	22:m:205:SER:HA	2.07	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:107:LEU:HD12	18:i:171:TYR:HB2	1.58	0.84
12:AL:20:A:H2'	12:AL:21:U:H5'	1.59	0.84
12:AL:675:U:C5	20:k:263:TYR:CZ	2.66	0.84
46:A:874:U:H2'	46:A:875:U:C6	2.13	0.84
4:AD:258:LYS:CE	16:g:226:VAL:CG1	2.54	0.84
12:AL:409:G:C4'	19:j:123:GLN:NE2	2.40	0.84
19:j:127:HIS:HB2	19:j:129:ASN:ND2	1.92	0.84
21:l:6:ILE:HD11	33:x:94:ALA:HB2	1.58	0.84
22:m:98:TRP:HA	24:o:242:LEU:CD2	2.07	0.84
32:w:6:PHE:HD2	32:w:60:ILE:HD11	1.40	0.84
46:A:1007:U:C5	75:e:158:GLN:HG2	2.12	0.84
46:A:1048:A:C5'	75:e:110:HIS:HB3	2.07	0.84
46:A:1222:U:H2'	46:A:1223:A:H8	1.42	0.84
46:A:2017:G:N2	46:A:2018:C:H5"	1.93	0.84
1:AA:79:SER:HG	12:AL:1621:G:H8	1.22	0.84
7:AG:4:GLN:HG3	17:h:354:LEU:CD2	2.06	0.84
7:AG:86:VAL:HG22	23:n:72:ARG:NH1	1.92	0.84
11:AK:97:SER:CB	18:i:171:TYR:OH	2.25	0.84
20:k:16:TYR:OH	20:k:20:LEU:HG	0.81	0.84
20:k:36:ALA:CB	25:p:23:ASN:HD22	1.90	0.84
46:A:3026:A:H2'	46:A:3027:U:C6	2.13	0.84
3:AC:90:HIS:CB	17:h:161:GLY:HA2	2.07	0.84
7:AG:3:ILE:HG22	23:n:20:ARG:NH2	1.91	0.84
8:AH:168:ARG:HG3	23:n:65:PRO:CG	2.07	0.84
9:AI:367:TYR:CD1	10:AJ:1:MET:CE	2.58	0.84
12:AL:44:U:O2'	12:AL:45:A:P	2.35	0.84
18:i:148:LYS:HZ3	20:k:78:LEU:HA	1.05	0.84
46:A:1808:G:H2'	46:A:1809:C:C6	2.13	0.84
63:R:336:VAL:HG13	63:R:337:GLU:HG3	1.58	0.84
3:AC:40:ASP:OD1	4:AD:286:VAL:HB	1.78	0.84
17:h:269:TYR:OH	24:o:38:VAL:HG13	1.77	0.84
46:A:2416:U:H2'	46:A:2417:A:C8	2.13	0.84
6:AF:58:MET:CE	19:j:26:PHE:HB3	2.07	0.83
8:AH:103:ARG:HH22	31:v:79:GLY:CA	1.73	0.83
8:AH:229:GLU:CD	21:l:43:VAL:HG12	2.01	0.83
12:AL:757:U:H5	26:q:85:ASN:ND2	1.76	0.83
12:AL:1639:A:H1'	17:h:150:GLN:NE2	1.92	0.83
46:A:1439:A:HO2'	46:A:1440:U:P	2.01	0.83
46:A:1706:G:H4'	46:A:1707:C:O5'	1.76	0.83
8:AH:189:PHE:CZ	32:w:173:GLU:HG2	2.13	0.83
12:AL:1011:A:H2'	12:AL:1012:G:H8	1.42	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:k:293:ARG:O	23:n:43:GLY:HA3	1.78	0.83
37:1:58:ARG:NH1	46:A:2336:G:C6	2.44	0.83
46:A:600:C:H1'	47:B:133:ARG:NH1	1.91	0.83
46:A:2018:C:H2'	46:A:2019:A:C8	2.12	0.83
4:AD:120:PRO:HB2	7:AG:178:ALA:HB1	1.60	0.83
7:AG:114:TRP:CD1	16:g:205:GLY:O	2.32	0.83
7:AG:122:LEU:HD22	16:g:36:ILE:HD12	1.60	0.83
8:AH:168:ARG:NH1	23:n:66:ASP:CG	2.37	0.83
8:AH:210:ILE:HG21	21:l:39:VAL:CA	2.08	0.83
11:AK:294:PHE:HZ	24:o:170:VAL:CG1	1.91	0.83
34:y:68:MET:HE2	34:y:76:PHE:CG	2.13	0.83
46:A:1020:U:H5"	75:e:134:LYS:CB	2.08	0.83
7:AG:75:TYR:CD2	8:AH:182:TYR:CD2	2.66	0.83
11:AK:67:GLU:HA	11:AK:70:TRP:HE3	1.43	0.83
46:A:536:A:H2'	46:A:537:U:C6	2.13	0.83
46:A:962:A:H61	46:A:1062:U:H3	1.23	0.83
4:AD:255:THR:HA	4:AD:258:LYS:HB2	1.60	0.83
11:AK:112:GLU:CA	18:i:172:TYR:HE2	1.89	0.83
11:AK:185:ARG:HG3	25:p:143:PHE:HE1	1.43	0.83
20:k:292:GLY:O	23:n:78:LYS:CE	2.26	0.83
46:A:37:U:H2'	46:A:38:A:C8	2.14	0.83
6:AF:212:LEU:CD1	19:j:445:PHE:HB3	2.07	0.83
6:AF:295:ILE:HD12	31:v:93:ALA:HB1	1.59	0.83
11:AK:134:PHE:CD1	20:k:106:LEU:HA	2.13	0.83
17:h:129:TYR:CE1	24:o:119:GLN:O	2.32	0.83
34:y:68:MET:HE2	34:y:76:PHE:CD2	2.14	0.83
46:A:100:U:H2'	46:A:101:A:H8	1.41	0.83
46:A:1706:G:C2	47:B:265:PHE:HD1	1.95	0.83
63:R:333:ASP:HA	63:R:336:VAL:HG12	1.59	0.83
3:AC:148:LEU:HD11	4:AD:82:ASN:HB3	0.87	0.83
15:Z:95:ASP:N	17:h:203:ARG:HH12	1.76	0.83
19:j:111:ARG:HD2	19:j:466:ILE:HD12	1.61	0.83
5:AE:198:LEU:HD11	5:AE:322:LEU:HD21	1.60	0.83
5:AE:254:SER:HA	5:AE:296:GLU:HG2	1.60	0.83
7:AG:166:VAL:HG22	16:g:196:PHE:CZ	2.12	0.83
8:AH:202:LEU:HB3	21:l:121:LEU:HD23	1.61	0.83
12:AL:1103:U:OP1	18:i:341:ARG:CA	2.23	0.83
12:AL:1153:A:H5"	18:i:351:THR:OG1	1.78	0.83
12:AL:1524:U:H2'	12:AL:1525:A:C8	2.13	0.83
18:i:95:THR:OG1	29:t:108:PRO:CG	2.27	0.83
37:1:188:VAL:HG11	46:A:2358:A:H2	1.42	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:525:G:N2	55:J:132:GLU:OE1	2.10	0.83
46:A:789:A:H2'	46:A:790:A:C8	2.13	0.83
46:A:875:U:H2'	46:A:876:A:H8	1.43	0.83
6:AF:319:TYR:HD1	31:v:42:THR:HG21	1.40	0.83
8:AH:104:ARG:NH1	31:v:77:GLY:O	2.12	0.83
10:AJ:59:LEU:HD11	18:i:122:MET:CE	2.08	0.83
46:A:503:A:OP2	55:J:146:ARG:NH1	2.09	0.83
2:AB:105:LEU:CD2	12:AL:389:A:O3'	2.27	0.83
3:AC:62:TYR:HD2	17:h:159:LYS:CG	1.82	0.83
4:AD:123:ASN:HB3	16:g:105:ASN:CA	2.09	0.83
6:AF:307:TYR:HA	31:v:63:LYS:HG2	1.60	0.83
12:AL:785:A:H1'	33:x:108:ARG:HG3	1.61	0.83
46:A:85:A:H2'	46:A:86:U:C6	2.13	0.83
46:A:476:G:H2'	46:A:477:G:C8	2.13	0.83
46:A:1706:G:N3	47:B:265:PHE:CD1	2.46	0.83
6:AF:50:HIS:HA	12:AL:492:G:O6	1.79	0.82
10:AJ:69:VAL:H	18:i:124:THR:HB	1.42	0.82
16:g:7:LEU:HD11	17:h:189:MET:CE	2.07	0.82
18:i:302:ILE:HB	25:p:20:TYR:CE1	2.14	0.82
25:p:103:GLU:HG2	29:t:113:GLY:CA	2.09	0.82
37:1:121:PHE:C	46:A:2349:A:C8	2.56	0.82
46:A:31:U:OP2	48:C:23:ARG:NH1	2.11	0.82
46:A:885:A:H2'	46:A:886:A:C8	2.14	0.82
46:A:1914:A:H2'	46:A:1915:A:C8	2.14	0.82
46:A:2611:U:P	69:X:37:VAL:CG1	2.67	0.82
3:AC:185:LEU:HD12	7:AG:196:MET:HA	1.59	0.82
3:AC:264:ILE:HG21	17:h:132:LEU:HD23	1.59	0.82
5:AE:168:HIS:HA	5:AE:171:LEU:HB2	1.62	0.82
7:AG:114:TRP:HB2	16:g:204:GLY:O	1.79	0.82
7:AG:224:VAL:HG12	33:x:45:LEU:HD12	1.55	0.82
8:AH:37:LYS:HE2	12:AL:182:A:OP1	1.79	0.82
10:AJ:19:PHE:HD1	11:AK:226:ARG:NH1	1.76	0.82
11:AK:182:VAL:HG23	25:p:148:ILE:HG23	1.60	0.82
16:g:251:VAL:CG2	33:x:51:LYS:HA	2.08	0.82
18:i:180:MET:HB3	20:k:92:TRP:CE2	2.14	0.82
46:A:2017:G:N2	46:A:2065:A:H61	1.77	0.82
46:A:2609:G:H2'	46:A:2610:A:C8	2.14	0.82
1:AA:90:LYS:CD	12:AL:1612:C:H41	1.91	0.82
7:AG:22:LEU:HD23	20:k:139:TYR:HD2	1.39	0.82
7:AG:116:LEU:HD22	16:g:34:GLN:HB2	1.59	0.82
10:AJ:40:LYS:HE2	10:AJ:42:PRO:CG	2.10	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:205:LYS:HG2	11:AK:233:ILE:HG12	1.61	0.82
12:AL:1639:A:C4'	17:h:150:GLN:NE2	2.42	0.82
12:AL:1647:A:H1'	17:h:176:TYR:CG	2.14	0.82
25:p:102:PHE:HD2	29:t:111:LYS:O	1.61	0.82
46:A:3027:U:H2'	46:A:3028:A:C8	2.14	0.82
63:R:46:ARG:HD2	63:R:46:ARG:H	1.43	0.82
4:AD:174:ARG:HA	4:AD:267:TYR:HA	1.61	0.82
6:AF:344:TYR:CB	31:v:15:ARG:NH1	2.42	0.82
7:AG:75:TYR:CD2	8:AH:182:TYR:HD2	1.96	0.82
7:AG:75:TYR:HD2	8:AH:182:TYR:HD2	1.27	0.82
9:AI:151:GLU:H	9:AI:154:VAL:HG11	1.44	0.82
12:AL:265:U:H2'	12:AL:267:A:OP2	1.79	0.82
16:g:251:VAL:HB	33:x:51:LYS:HA	1.58	0.82
18:i:180:MET:CB	20:k:92:TRP:NE1	2.42	0.82
46:A:1712:A:C2	47:B:140:THR:HG21	2.13	0.82
46:A:2975:A:H2'	46:A:2976:A:C8	2.14	0.82
2:AB:82:GLN:NE2	12:AL:375:A:H5"	1.94	0.82
11:AK:149:ARG:HD3	20:k:68:PHE:O	1.79	0.82
12:AL:1215:A:P	24:o:253:THR:HG22	2.20	0.82
32:w:200:CYS:HA	32:w:203:PHE:CD2	2.14	0.82
46:A:88:U:H2'	46:A:89:A:C8	2.15	0.82
46:A:88:U:H2'	46:A:89:A:H8	1.42	0.82
1:AA:90:LYS:HD2	12:AL:1612:C:N4	1.94	0.82
2:AB:124:TRP:CH2	12:AL:101:U:O2	2.33	0.82
12:AL:749:A:O4'	26:q:121:LYS:HE3	1.80	0.82
12:AL:1418:A:OP2	24:o:268:LYS:HE2	1.78	0.82
16:g:251:VAL:HG11	33:x:51:LYS:HB2	1.62	0.82
18:i:302:ILE:HD11	25:p:25:GLU:HB2	1.59	0.82
20:k:59:LEU:HG	25:p:20:TYR:HE2	1.08	0.82
46:A:1010:A:H2	76:f:50:TYR:OH	1.61	0.82
3:AC:179:ARG:NH1	7:AG:201:PHE:CE1	2.45	0.82
12:AL:550:U:H5"	19:j:131:ARG:NH1	1.92	0.82
12:AL:1214:A:H5"	24:o:247:HIS:CD2	2.15	0.82
26:q:193:LYS:HA	35:z:110:LYS:HE2	1.60	0.82
44:8:246:ILE:HD11	61:P:255:LEU:HD13	1.62	0.82
46:A:135:U:H2'	46:A:136:A:H8	1.44	0.82
46:A:1415:U:H2'	46:A:1416:A:C8	2.15	0.82
1:AA:90:LYS:CE	12:AL:1612:C:H41	1.93	0.82
12:AL:232:U:C1'	31:v:78:VAL:CG1	2.58	0.82
25:p:102:PHE:CD2	29:t:111:LYS:O	2.33	0.82
37:1:109:GLU:HB3	37:1:138:VAL:HG21	1.60	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:64:U:H2'	46:A:65:A:C8	2.14	0.82
46:A:1009:U:C4'	76:f:134:SER:HB2	2.08	0.82
46:A:1168:A:H2'	46:A:1169:A:C8	2.14	0.82
46:A:1510:A:H2'	46:A:1511:U:H6	1.45	0.82
46:A:1728:U:O2	47:B:269:ALA:O	1.96	0.82
46:A:2207:A:H2'	46:A:2208:A:H8	1.44	0.82
63:R:329:PHE:HB2	63:R:366:ALA:O	1.80	0.82
6:AF:344:TYR:CB	31:v:15:ARG:HH12	1.93	0.82
7:AG:1:MET:CE	17:h:351:GLU:HG2	2.10	0.82
7:AG:75:TYR:CE2	8:AH:182:TYR:CD2	2.68	0.82
7:AG:217:LEU:HD13	16:g:273:MET:CA	1.97	0.82
8:AH:22:LEU:HB2	8:AH:114:GLU:HB3	1.62	0.82
11:AK:149:ARG:HG2	20:k:69:TRP:C	2.04	0.82
12:AL:232:U:O2'	31:v:78:VAL:HG12	1.75	0.82
12:AL:1071:A:N1	12:AL:1081:U:C4	2.47	0.82
18:i:303:ASN:HD21	25:p:19:PRO:HA	1.41	0.82
24:o:63:ARG:HH21	24:o:66:ILE:HD12	1.45	0.82
25:p:103:GLU:CD	29:t:113:GLY:CA	2.41	0.82
46:A:837:U:O4	56:K:51:LYS:NZ	2.12	0.82
3:AC:90:HIS:CD2	17:h:160:LEU:C	2.57	0.82
4:AD:155:LEU:HD13	16:g:210:LEU:HB2	1.62	0.82
5:AE:286:ASP:HB2	5:AE:315:TYR:CE2	2.14	0.82
6:AF:137:PHE:CZ	19:j:468:PRO:HB3	2.15	0.82
7:AG:60:LEU:HD21	23:n:70:THR:HG21	1.62	0.82
8:AH:224:PHE:CE2	21:l:18:LYS:HD3	2.14	0.82
12:AL:75:G:H1	12:AL:99:U:H3	1.25	0.82
12:AL:1516:U:H3'	12:AL:1517:U:H5"	1.61	0.82
37:1:157:GLN:NE2	46:A:2643:U:O4	2.09	0.82
63:R:219:ARG:NH2	63:R:248:ASP:HA	1.95	0.82
5:AE:69:LYS:HE2	5:AE:72:GLN:HB2	1.60	0.81
7:AG:67:PRO:HB3	32:w:187:GLN:NE2	1.95	0.81
36:0:73:ARG:HB3	46:A:3093:U:C5	2.14	0.81
37:1:202:VAL:HG22	46:A:2361:A:C8	2.14	0.81
46:A:457:G:H2'	46:A:458:A:C8	2.15	0.81
46:A:475:U:H2'	46:A:476:G:C8	2.15	0.81
46:A:1664:A:H3'	46:A:1665:G:H21	1.45	0.81
46:A:1769:U:H3'	46:A:1770:U:H5"	1.61	0.81
6:AF:58:MET:HG2	19:j:11:LEU:CD1	2.09	0.81
11:AK:150:GLU:CA	20:k:71:TYR:OH	2.27	0.81
30:u:275:ARG:HH12	30:u:278:ILE:HD12	1.01	0.81
3:AC:54:ALA:HB1	7:AG:143:PRO:HA	1.53	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:14:LEU:CD2	11:AK:222:LEU:HD22	1.99	0.81
12:AL:116:A:H2'	12:AL:117:G:C8	2.16	0.81
12:AL:784:A:N1	33:x:107:GLY:O	2.13	0.81
12:AL:788:U:H5'	35:z:153:ARG:HG3	1.62	0.81
12:AL:1011:A:H2'	12:AL:1012:G:C8	2.15	0.81
12:AL:1040:C:O2'	29:t:86:PHE:HA	1.81	0.81
13:AM:12:U:O2'	46:A:1823:U:C4'	2.26	0.81
18:i:90:MET:SD	25:p:134:ALA:O	2.39	0.81
46:A:30:U:O4	48:C:21:SER:N	2.12	0.81
46:A:1343:U:C5	61:P:139:HIS:CD2	2.68	0.81
46:A:2058:U:H3'	46:A:2059:A:C5	2.15	0.81
46:A:2578:G:H2'	46:A:2579:A:C8	2.15	0.81
46:A:2640:A:H2'	46:A:2641:C:C6	2.15	0.81
46:A:2917:U:C2'	46:A:2918:A:O5'	2.27	0.81
20:k:40:ILE:HG21	25:p:22:VAL:CG1	2.09	0.81
20:k:54:PHE:CE1	25:p:57:PHE:CE1	2.68	0.81
46:A:438:U:H2'	46:A:439:A:C8	2.15	0.81
46:A:1706:G:C2	47:B:265:PHE:CD1	2.68	0.81
46:A:2428:A:OP2	50:E:170:LYS:NZ	2.11	0.81
46:A:2839:A:OP1	48:C:208:ASN:O	1.99	0.81
11:AK:111:GLY:C	18:i:172:TYR:CE2	2.58	0.81
11:AK:115:ALA:HB3	18:i:172:TYR:OH	1.79	0.81
11:AK:132:PHE:HB3	18:i:249:PRO:HD3	1.60	0.81
11:AK:154:TYR:CD2	25:p:57:PHE:HZ	1.79	0.81
11:AK:182:VAL:HG21	25:p:148:ILE:CA	2.10	0.81
15:Z:38:LEU:HD12	22:m:238:ILE:HA	1.63	0.81
18:i:100:TYR:OH	25:p:48:ARG:HD3	1.65	0.81
26:q:210:ARG:HE	35:z:139:TYR:HD2	1.28	0.81
37:1:121:PHE:HA	46:A:2349:A:C8	2.14	0.81
46:A:300:A:OP1	55:J:228:TRP:HZ2	1.64	0.81
7:AG:36:ILE:HD13	17:h:234:LYS:HB3	1.61	0.81
33:x:106:THR:HG21	35:z:127:ASN:HD22	0.99	0.81
46:A:1482:A:H2'	46:A:1483:U:C6	2.16	0.81
4:AD:74:SER:HB3	4:AD:77:LYS:HB2	1.60	0.81
5:AE:107:TYR:CE2	5:AE:152:LYS:HB3	2.16	0.81
7:AG:213:GLU:CD	16:g:230:ARG:NE	2.38	0.81
12:AL:330:G:H22	12:AL:332:A:H3'	1.45	0.81
46:A:568:A:H2'	46:A:569:A:H8	1.44	0.81
46:A:2200:C:H2'	46:A:2201:U:H6	1.44	0.81
46:A:2332:U:H4'	63:R:322:ARG:HD3	1.63	0.81
3:AC:54:ALA:C	7:AG:143:PRO:CB	2.47	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:253:TYR:OH	16:g:298:LEU:O	1.97	0.81
12:AL:901:U:H2'	12:AL:902:A:C8	2.14	0.81
18:i:180:MET:CB	20:k:92:TRP:CE2	2.64	0.81
46:A:479:U:H2'	46:A:480:C:C6	2.16	0.81
46:A:1584:A:H2'	46:A:1585:G:C8	2.16	0.81
3:AC:55:GLY:HA2	7:AG:121:ILE:CG1	2.10	0.81
3:AC:55:GLY:CA	7:AG:143:PRO:HG3	2.11	0.81
12:AL:272:U:H2'	12:AL:273:A:H8	1.43	0.81
12:AL:348:A:H8	12:AL:349:U:H3	1.28	0.81
19:j:423:THR:HA	19:j:425:TRP:H	1.46	0.81
3:AC:60:SER:O	17:h:169:TYR:OH	1.97	0.81
7:AG:147:GLU:CG	16:g:14:GLN:HG2	2.11	0.81
9:AI:187:ARG:CD	28:s:44:TRP:CG	2.60	0.81
17:h:255:GLN:HB3	17:h:259:LEU:HD13	1.63	0.81
18:i:180:MET:CG	20:k:92:TRP:CD1	2.58	0.81
46:A:1761:A:H2'	46:A:1762:A:H8	1.46	0.81
11:AK:158:ALA:CB	25:p:27:VAL:HG22	2.11	0.80
20:k:59:LEU:CG	25:p:20:TYR:HE2	1.93	0.80
32:w:13:GLN:HG3	32:w:53:ARG:HA	1.60	0.80
46:A:2330:A:C2	63:R:317:GLU:CG	2.64	0.80
3:AC:59:GLU:O	17:h:164:ILE:HG21	1.81	0.80
3:AC:232:LEU:HD22	4:AD:278:LYS:HB3	1.60	0.80
6:AF:321:TYR:OH	31:v:36:PRO:CD	2.29	0.80
11:AK:132:PHE:CG	18:i:248:MET:CE	2.40	0.80
12:AL:666:U:H2'	12:AL:667:A:C8	2.15	0.80
12:AL:1213:G:C8	24:o:247:HIS:CE1	2.70	0.80
3:AC:40:ASP:CG	4:AD:286:VAL:CG2	2.53	0.80
3:AC:55:GLY:HA3	7:AG:143:PRO:HG3	1.62	0.80
30:u:276:LYS:CD	30:u:279:ARG:HH22	1.92	0.80
46:A:26:A:C5	71:a:112:TYR:HA	2.16	0.80
46:A:26:A:N1	71:a:113:HIS:N	2.29	0.80
46:A:53:U:H2'	46:A:54:A:C8	2.15	0.80
46:A:1706:G:H1'	47:B:265:PHE:CZ	2.16	0.80
7:AG:3:ILE:HG22	23:n:20:ARG:HH22	1.46	0.80
9:AI:288:MET:HG2	9:AI:290:THR:HG23	1.60	0.80
22:m:123:ARG:HB3	22:m:126:LYS:HZ2	1.46	0.80
46:A:225:A:H2'	46:A:226:A:C8	2.17	0.80
46:A:568:A:H2'	46:A:569:A:C8	2.17	0.80
46:A:1907:U:H2'	46:A:1908:A:H8	1.45	0.80
46:A:2099:A:H2'	46:A:2100:U:C6	2.17	0.80
9:AI:367:TYR:HE2	11:AK:274:PRO:HB2	1.46	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:h:259:LEU:HD11	17:h:323:LEU:HD12	1.63	0.80
29:t:23:ARG:HH11	29:t:26:PHE:HB3	1.45	0.80
46:A:1147:U:H2'	46:A:1148:A:H8	1.46	0.80
46:A:2673:A:C5	55:J:125:VAL:HG21	2.16	0.80
46:A:3062:A:O2'	54:I:80:ASN:ND2	2.12	0.80
6:AF:54:LEU:CD2	19:j:12:ALA:HA	2.12	0.80
6:AF:137:PHE:CG	19:j:468:PRO:HA	2.17	0.80
8:AH:164:LEU:O	23:n:63:VAL:CB	2.28	0.80
13:AM:36:U:C2	14:AN:7:C:C5	2.70	0.80
15:Z:23:ILE:HD12	15:Z:23:ILE:H	1.44	0.80
15:Z:88:ARG:HH21	16:g:74:ILE:CG2	1.87	0.80
46:A:2330:A:C2	63:R:317:GLU:HG2	2.16	0.80
5:AE:285:LEU:HD21	5:AE:297:LEU:HB3	1.63	0.80
6:AF:58:MET:HE1	19:j:30:LYS:HE2	1.64	0.80
7:AG:78:ARG:HH22	8:AH:176:LEU:HD21	1.45	0.80
7:AG:127:ILE:CD1	16:g:11:ARG:HH12	1.95	0.80
7:AG:166:VAL:HG11	16:g:195:LYS:HG2	0.81	0.80
8:AH:50:ALA:HB1	32:w:76:GLU:HA	1.61	0.80
11:AK:286:ARG:HD3	12:AL:1323:A:OP2	1.81	0.80
12:AL:898:U:H3'	12:AL:899:U:H6	1.46	0.80
31:v:10:LEU:HB3	31:v:21:TYR:HB3	1.63	0.80
46:A:142:A:H2'	46:A:143:A:C8	2.17	0.80
46:A:292:G:OP1	55:J:105:TRP:HZ2	1.64	0.80
46:A:371:U:H2'	46:A:372:A:H8	1.47	0.80
46:A:826:A:H2'	46:A:827:U:C6	2.17	0.80
46:A:1608:U:O2'	48:C:201:HIS:CE1	2.33	0.80
3:AC:45:LEU:HA	3:AC:48:LYS:HB2	1.64	0.80
5:AE:251:VAL:HG12	5:AE:252:ASP:H	1.45	0.80
7:AG:117:SER:HB3	16:g:83:THR:CG2	2.11	0.80
8:AH:50:ALA:CB	32:w:76:GLU:CA	2.58	0.80
11:AK:135:ASP:H	20:k:105:ILE:H	1.28	0.80
15:Z:16:LEU:HD22	35:z:165:LEU:HD23	1.62	0.80
18:i:98:TYR:CE2	25:p:48:ARG:HB2	2.17	0.80
46:A:210:U:H2'	46:A:211:A:C8	2.15	0.80
46:A:809:C:H2'	46:A:810:U:H6	1.45	0.80
46:A:1006:U:H1'	46:A:1007:U:H4'	1.64	0.80
46:A:1186:A:H2'	46:A:1187:U:C6	2.16	0.80
5:AE:258:ILE:HB	5:AE:303:GLN:HB3	1.63	0.80
7:AG:221:GLU:HG3	16:g:270:PHE:HE2	1.45	0.80
8:AH:21:ILE:HD11	31:v:71:ARG:HH12	1.46	0.80
12:AL:259:G:O4'	32:w:17:GLN:HB2	1.80	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:i:368:LEU:HA	29:t:111:LYS:HG2	0.81	0.80
29:t:60:LEU:CD1	34:y:18:ILE:HG22	2.12	0.80
29:t:89:SER:HB2	29:t:92:ARG:NH1	1.95	0.80
32:w:130:THR:HB	32:w:144:LEU:HB2	1.63	0.80
39:3:54:LYS:HE3	46:A:157:A:P	2.22	0.80
46:A:1865:C:H3'	46:A:1866:A:C8	2.16	0.80
46:A:3108:U:H2'	46:A:3109:U:C6	2.16	0.80
3:AC:40:ASP:OD1	4:AD:286:VAL:HG21	1.82	0.80
3:AC:200:MET:HB2	7:AG:200:LEU:HD11	1.63	0.80
4:AD:122:PHE:O	16:g:106:PRO:HD3	1.82	0.80
11:AK:182:VAL:HG21	25:p:148:ILE:CG2	2.01	0.80
12:AL:1135:G:O3'	15:Z:79:ASN:HB2	1.81	0.80
29:t:60:LEU:CD1	34:y:18:ILE:CG2	2.60	0.80
46:A:2236:U:H2'	46:A:2237:A:H8	1.47	0.80
46:A:2838:U:O3'	48:C:210:ASP:HB2	1.80	0.80
1:AA:90:LYS:HE3	12:AL:1612:C:H41	1.47	0.79
3:AC:264:ILE:HG21	17:h:132:LEU:CD2	2.10	0.79
8:AH:162:GLN:CD	23:n:60:PHE:CE1	2.60	0.79
11:AK:135:ASP:CG	20:k:99:LEU:HD13	2.07	0.79
11:AK:162:LEU:CD1	25:p:64:ARG:HB3	2.13	0.79
17:h:295:ILE:O	24:o:36:ARG:N	2.12	0.79
46:A:1510:A:H2'	46:A:1511:U:C6	2.16	0.79
46:A:1768:A:H2'	46:A:1769:U:C6	2.15	0.79
46:A:2079:A:C2'	46:A:2080:U:O5'	2.30	0.79
46:A:2262:U:H2'	46:A:2263:U:C6	2.16	0.79
46:A:2332:U:O3'	63:R:322:ARG:HD2	1.82	0.79
1:AA:83:LYS:CG	12:AL:1601:C:C5'	2.57	0.79
8:AH:199:LEU:HD13	8:AH:203:TYR:HD2	1.45	0.79
11:AK:132:PHE:CB	18:i:248:MET:HE3	2.10	0.79
13:AM:13:C:H5'	46:A:1823:U:H2'	1.64	0.79
18:i:316:MET:HE3	20:k:69:TRP:CZ2	2.17	0.79
25:p:92:PRO:HA	29:t:96:TYR:CE2	2.17	0.79
46:A:17:U:H2'	46:A:18:A:H8	1.46	0.79
46:A:601:U:H2'	46:A:602:A:H8	1.45	0.79
46:A:1703:U:H2'	46:A:1704:U:C6	2.16	0.79
46:A:1717:A:H2'	46:A:1718:A:C8	2.17	0.79
46:A:2588:A:H3'	46:A:2589:A:H8	1.46	0.79
46:A:3018:A:H61	46:A:3027:U:H3	1.30	0.79
3:AC:169:ASN:CB	7:AG:197:PHE:CE1	2.65	0.79
7:AG:49:LYS:HE3	23:n:58:LYS:HZ1	1.37	0.79
7:AG:213:GLU:OE2	16:g:230:ARG:NE	2.14	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:94:TYR:O	2:AB:96:ASN:N	2.16	0.79
3:AC:148:LEU:HD13	4:AD:82:ASN:CG	2.07	0.79
8:AH:60:HIS:HB2	12:AL:133:U:C5	2.18	0.79
8:AH:174:GLU:N	8:AH:174:GLU:OE1	2.15	0.79
8:AH:210:ILE:HG21	21:l:39:VAL:C	2.07	0.79
9:AI:393:LYS:HB3	9:AI:436:GLY:O	1.82	0.79
10:AJ:19:PHE:CZ	11:AK:226:ARG:HD2	2.18	0.79
10:AJ:54:LEU:O	18:i:118:LEU:CD2	2.28	0.79
12:AL:1632:A:C5	33:x:67:LEU:HD12	2.16	0.79
37:1:158:ARG:NH2	46:A:2643:U:O2	2.15	0.79
6:AF:58:MET:HG3	19:j:26:PHE:CD2	2.03	0.79
6:AF:208:MET:HB2	19:j:425:TRP:CZ3	2.17	0.79
7:AG:22:LEU:CD2	20:k:139:TYR:CD2	2.66	0.79
8:AH:46:GLY:HA3	32:w:5:ASN:HB2	1.65	0.79
8:AH:167:ASN:CA	23:n:65:PRO:CG	2.52	0.79
12:AL:232:U:C2'	31:v:78:VAL:CG1	2.58	0.79
12:AL:1237:U:H4'	18:i:383:ILE:HD11	1.64	0.79
18:i:100:TYR:HE1	25:p:48:ARG:HD3	1.07	0.79
42:6:66:TYR:HB2	46:A:2424:U:C4	2.17	0.79
46:A:355:U:H2'	46:A:356:U:C6	2.18	0.79
46:A:2797:U:O2	51:F:194:TYR:HE2	1.66	0.79
7:AG:120:LYS:CD	16:g:34:GLN:HE22	1.95	0.79
12:AL:539:C:H2'	12:AL:540:A:C8	2.18	0.79
17:h:144:GLN:CD	24:o:119:GLN:OE1	2.26	0.79
17:h:314:GLN:HG3	17:h:316:LYS:HG2	1.64	0.79
18:i:150:ASN:CB	20:k:78:LEU:HB2	2.12	0.79
30:u:103:ALA:CB	32:w:165:LEU:HD22	2.12	0.79
46:A:1436:U:H3	46:A:1485:A:H2	1.28	0.79
46:A:1996:A:H61	46:A:2090:U:H3	1.28	0.79
46:A:2461:A:H3'	46:A:2462:A:H8	1.43	0.79
46:A:3254:U:O4	57:L:163:ASN:HB3	1.82	0.79
7:AG:124:GLU:CB	16:g:11:ARG:HH11	1.96	0.79
8:AH:42:LYS:HG2	8:AH:48:GLY:HA3	1.62	0.79
11:AK:144:LEU:HD12	18:i:319:LEU:CD1	2.11	0.79
17:h:144:GLN:HE21	24:o:119:GLN:CB	1.74	0.79
46:A:2951:U:H2'	46:A:2952:G:H8	1.46	0.79
7:AG:124:GLU:HB3	16:g:11:ARG:CD	2.12	0.79
9:AI:435:ASN:ND2	24:o:176:ILE:H	1.79	0.79
12:AL:1108:G:O4'	25:p:95:HIS:HD2	1.66	0.79
46:A:27:A:C2	71:a:147:LEU:HD21	2.18	0.79
46:A:1387:A:H5'	64:S:65:ILE:O	1.82	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1808:G:H2'	46:A:1809:C:H6	1.46	0.79
3:AC:194:PHE:HE2	4:AD:223:TYR:HB2	1.48	0.79
3:AC:217:TRP:CG	17:h:146:LEU:HD21	2.18	0.79
7:AG:3:ILE:HD13	23:n:20:ARG:NH1	1.97	0.79
15:Z:89:ILE:HD13	35:z:168:ILE:CB	2.12	0.79
18:i:180:MET:CB	20:k:92:TRP:CD1	2.66	0.79
46:A:140:U:H2'	46:A:141:U:H6	1.47	0.79
3:AC:217:TRP:NE1	17:h:146:LEU:HD22	1.98	0.79
6:AF:314:VAL:HG12	31:v:71:ARG:CD	2.09	0.79
7:AG:122:LEU:HD13	16:g:36:ILE:HG23	1.63	0.79
8:AH:138:LEU:HA	8:AH:141:GLU:HB2	1.64	0.79
17:h:269:TYR:CE2	24:o:39:PRO:HG2	2.18	0.79
32:w:220:LYS:HA	32:w:223:LEU:HB2	1.64	0.79
46:A:1531:C:C6	47:B:326:TRP:CZ3	2.69	0.79
46:A:2453:G:OP1	50:E:292:LYS:NZ	2.15	0.79
3:AC:55:GLY:CA	7:AG:121:ILE:HG21	2.09	0.78
6:AF:198:ARG:CG	12:AL:545:U:H5"	2.13	0.78
9:AI:49:LYS:CD	12:AL:1341:U:H5'	2.13	0.78
37:1:283:ASN:ND2	63:R:143:GLU:OE1	2.14	0.78
46:A:90:A:H2'	46:A:91:U:C6	2.18	0.78
46:A:613:G:O2'	47:B:97:LYS:HE2	1.83	0.78
46:A:1007:U:H5	75:e:158:GLN:HG2	1.47	0.78
46:A:1127:A:H61	46:A:1142:U:H3	1.30	0.78
46:A:1989:U:H4'	46:A:1990:A:H5"	1.65	0.78
46:A:2412:A:H2'	46:A:2413:A:C8	2.18	0.78
5:AE:68:PRO:HG2	12:AL:1543:A:P	2.23	0.78
46:A:3161:U:H2'	46:A:3162:U:H6	1.44	0.78
3:AC:159:ASN:ND2	3:AC:160:GLU:OE1	2.16	0.78
6:AF:307:TYR:HA	31:v:63:LYS:CG	2.12	0.78
11:AK:162:LEU:CD2	25:p:65:THR:HA	2.10	0.78
12:AL:26:U:P	20:k:267:ASN:HD22	2.06	0.78
12:AL:744:A:H2'	12:AL:745:U:C6	2.17	0.78
17:h:247:LEU:HD12	24:o:45:TYR:CD2	2.06	0.78
21:l:66:HIS:HE1	33:x:137:LEU:HB3	1.46	0.78
22:m:98:TRP:HB2	24:o:242:LEU:CD2	2.11	0.78
46:A:1216:A:H2'	46:A:1217:U:C6	2.17	0.78
46:A:2302:U:OP2	56:K:129:GLY:O	2.01	0.78
46:A:3288:C:H2'	46:A:3289:U:C6	2.19	0.78
3:AC:74:PRO:HB2	7:AG:191:LEU:HD13	1.65	0.78
11:AK:132:PHE:CB	18:i:248:MET:CA	2.58	0.78
12:AL:1215:A:OP1	24:o:253:THR:CG2	2.32	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1218:G:H4'	24:o:260:GLU:OE2	1.83	0.78
18:i:82:ASN:HD21	20:k:57:PRO:CG	1.95	0.78
21:l:6:ILE:HD12	33:x:135:ILE:HG21	1.65	0.78
21:l:45:MET:HB3	21:l:48:ARG:HH12	1.47	0.78
28:s:85:ILE:CG1	34:y:67:ASP:OD2	2.29	0.78
30:u:238:ASP:O	30:u:242:THR:HG23	1.83	0.78
63:R:219:ARG:HH21	63:R:248:ASP:HA	1.48	0.78
6:AF:308:LYS:CB	31:v:62:ILE:HB	2.13	0.78
7:AG:74:LEU:HG	8:AH:186:LEU:HD11	1.64	0.78
9:AI:179:TYR:CD2	9:AI:182:LEU:HG	2.18	0.78
10:AJ:53:ILE:HG21	18:i:114:LEU:HD13	1.65	0.78
11:AK:134:PHE:CD1	20:k:107:PRO:HD2	2.18	0.78
11:AK:135:ASP:OD1	20:k:99:LEU:HD13	1.82	0.78
42:6:66:TYR:CG	46:A:2424:U:H5	1.97	0.78
7:AG:124:GLU:HB2	16:g:11:ARG:HH11	1.48	0.78
8:AH:200:LEU:HA	8:AH:204:HIS:HB3	1.63	0.78
46:A:2063:A:H3'	46:A:2064:G:C8	2.19	0.78
46:A:2300:U:H3'	63:R:39:MET:CE	2.14	0.78
46:A:2982:U:H2'	46:A:2983:U:O4'	1.83	0.78
8:AH:103:ARG:HH22	31:v:80:ALA:N	1.81	0.78
12:AL:607:U:H2'	12:AL:608:U:C6	2.18	0.78
12:AL:1639:A:C1'	17:h:150:GLN:NE2	2.46	0.78
46:A:2352:A:H2'	46:A:2353:U:C6	2.17	0.78
3:AC:228:ASP:CG	4:AD:277:PRO:HB2	2.08	0.78
5:AE:189:ILE:HG21	5:AE:235:LEU:HD22	1.66	0.78
6:AF:70:GLU:CG	19:j:426:LYS:HZ3	1.89	0.78
6:AF:212:LEU:CD1	19:j:445:PHE:CD2	2.56	0.78
9:AI:345:ILE:HD12	9:AI:355:LEU:HD22	1.64	0.78
12:AL:757:U:C5	26:q:85:ASN:ND2	2.48	0.78
12:AL:836:U:H2'	12:AL:837:A:C8	2.17	0.78
12:AL:1412:C:C5'	24:o:270:ARG:O	2.32	0.78
18:i:97:ILE:HB	18:i:144:HIS:HB2	1.65	0.78
25:p:63:LEU:HD11	25:p:76:PRO:HD3	1.65	0.78
38:2:47:SER:HA	46:A:2425:A:C5'	2.14	0.78
46:A:9:U:H2'	46:A:10:A:C8	2.18	0.78
46:A:1288:U:H5"	46:A:1289:G:H5"	1.65	0.78
46:A:1486:U:H2'	46:A:1487:A:H8	1.48	0.78
46:A:1719:G:H2'	46:A:1720:U:C6	2.18	0.78
69:X:47:VAL:HG12	72:b:129:VAL:HG13	1.64	0.78
6:AF:212:LEU:CD1	19:j:445:PHE:HB2	2.04	0.78
6:AF:314:VAL:HB	31:v:71:ARG:HG3	1.66	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:299:LYS:HE3	24:o:151:PHE:HD1	1.48	0.78
12:AL:406:U:H2'	12:AL:407:U:H6	1.48	0.78
12:AL:1031:A:C2	13:AM:34:C:O4'	2.37	0.78
15:Z:16:LEU:CD1	35:z:162:PHE:HD1	1.97	0.78
17:h:276:ILE:HD11	24:o:47:ALA:HA	0.81	0.78
21:l:6:ILE:HB	33:x:135:ILE:CG2	2.13	0.78
21:l:38:VAL:HG11	30:u:141:ILE:CD1	2.12	0.78
22:m:98:TRP:CB	24:o:242:LEU:CD2	2.59	0.78
46:A:175:U:H2'	46:A:176:U:C6	2.18	0.78
50:E:251:ALA:HB1	67:V:63:TYR:CE2	2.18	0.78
63:R:235:TRP:CE3	63:R:239:LYS:HG2	2.19	0.78
75:e:66:MET:CE	75:e:142:TYR:HE2	1.94	0.78
75:e:69:PHE:HA	75:e:139:THR:HB	1.65	0.78
2:AB:74:LEU:O	2:AB:77:LYS:HB2	1.84	0.78
8:AH:162:GLN:HB3	23:n:60:PHE:CE1	2.19	0.78
8:AH:184:ARG:HG3	12:AL:814:A:H4'	1.65	0.78
12:AL:305:A:H2'	12:AL:306:A:H8	1.46	0.78
12:AL:330:G:N2	12:AL:332:A:H3'	1.99	0.78
12:AL:561:U:H2'	12:AL:562:A:C8	2.19	0.78
12:AL:1415:G:C2'	24:o:258:HIS:O	2.32	0.78
17:h:302:THR:CG2	24:o:35:ARG:NE	2.47	0.78
18:i:251:LEU:HD13	18:i:323:TYR:HB3	1.64	0.78
75:e:66:MET:HE1	75:e:153:LEU:HD22	1.66	0.78
3:AC:40:ASP:OD1	4:AD:286:VAL:CG2	2.32	0.77
6:AF:198:ARG:CG	12:AL:545:U:C5'	2.62	0.77
9:AI:172:GLN:HG2	9:AI:286:PRO:HG2	1.65	0.77
11:AK:134:PHE:CE2	20:k:112:LEU:HD23	2.18	0.77
12:AL:13:U:H5'	20:k:238:PHE:CD2	2.19	0.77
12:AL:522:A:H61	12:AL:527:G:H5'	1.49	0.77
30:u:82:GLU:HG2	32:w:107:PHE:CE1	2.19	0.77
30:u:222:ASP:O	30:u:224:PRO:HD3	1.84	0.77
38:2:47:SER:OG	46:A:2424:U:O2'	1.77	0.77
46:A:1322:U:H2'	46:A:1323:U:H6	1.49	0.77
75:e:192:GLU:HG2	76:f:1:MET:H3	1.49	0.77
3:AC:90:HIS:CG	17:h:160:LEU:HD12	2.16	0.77
5:AE:255:LEU:HD13	5:AE:300:PHE:CB	2.15	0.77
12:AL:319:A:H2'	12:AL:320:C:C6	2.19	0.77
12:AL:665:U:H2'	12:AL:666:U:C6	2.19	0.77
19:j:125:ILE:CG1	19:j:130:VAL:HG21	2.13	0.77
20:k:45:LYS:CD	20:k:47:ARG:HH21	1.96	0.77
46:A:231:A:H2'	46:A:232:C:H6	1.49	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1720:U:H1'	47:B:135:ASN:HD21	1.46	0.77
46:A:2428:A:O2'	67:V:38:ARG:O	2.01	0.77
63:R:53:GLU:O	63:R:55:GLN:N	2.17	0.77
6:AF:44:ARG:NH2	12:AL:495:U:H5'	1.98	0.77
6:AF:146:ASN:CB	19:j:439:HIS:NE2	2.37	0.77
11:AK:112:GLU:N	18:i:172:TYR:HE2	1.77	0.77
12:AL:553:U:H2'	12:AL:554:A:C8	2.18	0.77
29:t:60:LEU:HD11	34:y:20:PRO:HG3	1.64	0.77
46:A:874:U:H2'	46:A:875:U:H6	1.48	0.77
46:A:926:A:H2'	46:A:927:A:C8	2.18	0.77
46:A:1493:U:H2'	46:A:1494:A:C8	2.19	0.77
46:A:2611:U:H5'	69:X:37:VAL:CG1	2.12	0.77
46:A:2951:U:H2'	46:A:2952:G:C8	2.19	0.77
3:AC:114:GLU:HB2	3:AC:115:PRO:HD2	1.66	0.77
7:AG:147:GLU:HG2	16:g:14:GLN:HG2	1.66	0.77
7:AG:221:GLU:HG3	16:g:270:PHE:CE2	2.19	0.77
9:AI:367:TYR:CD1	10:AJ:1:MET:HE1	2.19	0.77
12:AL:803:A:H4'	21:l:78:GLN:HE22	1.50	0.77
12:AL:1633:U:N3	16:g:80:ARG:HD2	1.99	0.77
30:u:74:PRO:HG2	32:w:100:GLU:CG	2.14	0.77
46:A:2600:U:O4	63:R:101:HIS:HB3	1.84	0.77
3:AC:175:TYR:HD2	12:AL:1639:A:H61	1.30	0.77
7:AG:49:LYS:NZ	23:n:58:LYS:NZ	2.32	0.77
9:AI:60:TRP:CG	22:m:210:VAL:HG11	2.20	0.77
9:AI:449:HIS:O	22:m:114:LEU:CD1	2.29	0.77
12:AL:1646:U:H1'	12:AL:1647:A:H4'	1.64	0.77
17:h:129:TYR:CZ	24:o:120:LEU:HA	2.20	0.77
46:A:235:A:H61	46:A:238:C:H3'	1.48	0.77
46:A:1007:U:H2'	75:e:161:GLN:CG	2.10	0.77
75:e:192:GLU:HG2	76:f:1:MET:N	2.00	0.77
6:AF:44:ARG:NH2	12:AL:495:U:C5'	2.48	0.77
7:AG:78:ARG:NH1	8:AH:176:LEU:HD11	1.99	0.77
7:AG:174:TYR:CD1	16:g:107:PHE:HE1	2.01	0.77
7:AG:213:GLU:CD	16:g:230:ARG:HD2	2.10	0.77
18:i:180:MET:CG	20:k:92:TRP:CE3	2.64	0.77
46:A:620:G:OP1	47:B:100:SER:OG	2.01	0.77
46:A:2029:A:C4	46:A:2030:U:H1'	2.20	0.77
47:B:311:ILE:HD12	47:B:311:ILE:H	1.49	0.77
50:E:252:ASN:OD1	67:V:63:TYR:CE1	2.38	0.77
4:AD:199:LEU:HB3	16:g:214:LEU:CD2	2.07	0.77
5:AE:218:VAL:HG11	5:AE:221:ARG:CZ	2.14	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:308:LYS:CD	31:v:62:ILE:CD1	2.33	0.77
6:AF:344:TYR:HB2	31:v:15:ARG:NH1	2.00	0.77
8:AH:21:ILE:HG13	31:v:74:TYR:CE1	2.19	0.77
8:AH:83:GLN:HB2	12:AL:145:A:OP1	1.84	0.77
18:i:100:TYR:CE1	25:p:48:ARG:NE	2.51	0.77
18:i:148:LYS:HZ3	20:k:78:LEU:CA	1.77	0.77
19:j:76:VAL:HG23	20:k:306:SER:O	1.84	0.77
22:m:106:ILE:HG12	24:o:245:ARG:NH1	2.00	0.77
22:m:106:ILE:HG23	24:o:245:ARG:HH12	1.48	0.77
30:u:82:GLU:HG2	32:w:107:PHE:CD1	2.20	0.77
46:A:1439:A:H2'	46:A:1440:U:O4'	1.85	0.77
46:A:2443:C:H2'	46:A:2444:A:H8	1.50	0.77
46:A:2976:A:H2'	46:A:2977:U:C6	2.19	0.77
2:AB:105:LEU:CD2	12:AL:390:U:P	2.72	0.77
3:AC:177:PHE:HE1	3:AC:200:MET:HG2	1.50	0.77
5:AE:62:LYS:HB2	5:AE:63:PRO:HD3	1.65	0.77
11:AK:185:ARG:HG3	25:p:143:PHE:CD1	2.19	0.77
12:AL:147:A:H61	12:AL:225:U:H3	1.30	0.77
12:AL:258:G:OP2	32:w:68:LYS:HD2	1.84	0.77
12:AL:675:U:H6	20:k:263:TYR:HE2	1.30	0.77
12:AL:708:U:OP1	12:AL:709:A:OP2	2.03	0.77
12:AL:1436:U:O2'	25:p:87:THR:HG22	1.84	0.77
26:q:96:GLU:HA	26:q:114:TYR:OH	1.84	0.77
46:A:10:A:H2'	46:A:11:G:H8	1.50	0.77
46:A:98:A:H2'	46:A:99:U:H6	1.49	0.77
46:A:1129:U:H2'	46:A:1130:C:H6	1.49	0.77
46:A:2205:G:H2'	46:A:2206:U:O4'	1.85	0.77
46:A:2208:A:H2'	46:A:2209:U:C6	2.20	0.77
46:A:3251:A:H5'	46:A:3252:U:H2'	1.65	0.77
3:AC:169:ASN:OD1	7:AG:197:PHE:HE1	1.67	0.77
3:AC:185:LEU:HB2	7:AG:196:MET:O	1.83	0.77
5:AE:65:ILE:HG23	5:AE:90:PRO:HA	1.65	0.77
5:AE:214:ALA:O	5:AE:217:LYS:HB2	1.85	0.77
12:AL:632:C:H4'	12:AL:633:C:H5"	1.67	0.77
12:AL:809:U:H2'	12:AL:810:A:C8	2.20	0.77
12:AL:1572:U:H2'	12:AL:1573:G:H8	1.49	0.77
16:g:251:VAL:HG21	33:x:51:LYS:HA	1.65	0.77
30:u:276:LYS:HD2	30:u:279:ARG:HH21	1.45	0.77
46:A:2200:C:H2'	46:A:2201:U:C6	2.19	0.77
5:AE:223:ASN:HD22	5:AE:251:VAL:HG21	1.50	0.77
7:AG:124:GLU:OE2	17:h:189:MET:O	2.03	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:206:ILE:CD1	16:g:92:GLU:CD	2.58	0.77
12:AL:419:U:H2'	12:AL:420:A:C8	2.20	0.77
16:g:6:LEU:HD21	17:h:186:GLU:OE1	1.84	0.77
17:h:315:VAL:HG11	24:o:39:PRO:HD3	1.67	0.77
46:A:10:A:H2'	46:A:11:G:C8	2.20	0.77
46:A:723:U:H4'	55:J:102:VAL:HG21	1.66	0.77
46:A:1757:A:H5'	46:A:1757:A:C8	2.19	0.77
3:AC:217:TRP:CE2	17:h:146:LEU:CD2	2.53	0.76
5:AE:215:TRP:CH2	5:AE:248:LEU:HB2	2.20	0.76
12:AL:1172:A:N1	25:p:39:GLY:HA3	1.99	0.76
46:A:64:U:H2'	46:A:65:A:H8	1.49	0.76
46:A:795:U:H2'	46:A:796:A:C8	2.20	0.76
46:A:984:C:OP1	46:A:993:G:H5"	1.85	0.76
46:A:1010:A:C2	46:A:1011:A:N6	2.35	0.76
46:A:1433:A:H2'	46:A:1434:A:C8	2.19	0.76
63:R:147:ILE:H	63:R:147:ILE:HD13	1.49	0.76
3:AC:90:HIS:CB	17:h:161:GLY:CA	2.63	0.76
8:AH:164:LEU:HD21	23:n:33:LEU:CD2	2.15	0.76
9:AI:431:PHE:CZ	24:o:176:ILE:HD11	2.18	0.76
12:AL:1259:A:H5'	28:s:112:ARG:HH12	1.49	0.76
16:g:254:VAL:HA	16:g:295:ALA:HB3	1.67	0.76
17:h:129:TYR:HD2	17:h:148:LEU:HD11	1.49	0.76
37:1:188:VAL:HG11	46:A:2358:A:C2	2.19	0.76
46:A:262:A:OP1	72:b:59:SER:OG	2.02	0.76
46:A:575:A:OP1	55:J:104:SER:HB2	1.86	0.76
46:A:3264:C:H2'	46:A:3265:U:C6	2.21	0.76
7:AG:127:ILE:CD1	16:g:11:ARG:NH1	2.48	0.76
15:Z:33:LEU:HD13	15:Z:57:GLU:HB3	1.66	0.76
26:q:198:ILE:CD1	35:z:117:PHE:CD1	2.68	0.76
46:A:818:U:H2'	46:A:819:U:O4'	1.84	0.76
46:A:2593:A:H2'	46:A:2594:A:C8	2.21	0.76
46:A:3282:A:H2'	46:A:3283:U:H6	1.48	0.76
6:AF:308:LYS:HB3	31:v:62:ILE:HB	1.66	0.76
7:AG:173:ARG:NH2	16:g:107:PHE:CZ	2.53	0.76
8:AH:210:ILE:HG21	21:l:39:VAL:HB	0.78	0.76
11:AK:294:PHE:CZ	24:o:170:VAL:HG11	2.20	0.76
11:AK:299:LYS:HE3	24:o:151:PHE:CD1	2.20	0.76
21:l:13:ASN:HB3	21:l:16:ALA:O	1.86	0.76
22:m:238:ILE:O	22:m:241:ARG:HB3	1.85	0.76
34:y:24:ARG:HA	34:y:27:MET:HE2	1.66	0.76
46:A:98:A:H2'	46:A:99:U:C6	2.20	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1109:A:C2	51:F:44:ARG:NH1	2.53	0.76
46:A:1528:G:H2'	46:A:1529:A:C8	2.21	0.76
1:AA:80:VAL:CG2	12:AL:1462:A:C5	2.68	0.76
12:AL:748:U:H2'	12:AL:749:A:C8	2.20	0.76
18:i:302:ILE:HA	18:i:305:ILE:HB	1.66	0.76
46:A:149:A:H2'	46:A:150:A:C8	2.21	0.76
46:A:2473:U:H2'	46:A:2474:U:C6	2.20	0.76
3:AC:185:LEU:HD13	7:AG:195:GLU:O	1.86	0.76
5:AE:105:PHE:O	5:AE:109:VAL:HG23	1.86	0.76
7:AG:3:ILE:HD13	23:n:20:ARG:HD2	1.64	0.76
11:AK:165:LEU:HD22	25:p:127:TYR:CE2	2.20	0.76
12:AL:784:A:C5	26:q:206:PHE:HE2	2.02	0.76
15:Z:66:ALA:HB2	22:m:184:ASN:HB2	0.78	0.76
30:u:64:VAL:HB	30:u:237:ASN:HD22	1.50	0.76
46:A:465:U:H5"	55:J:87:LYS:HZ2	1.51	0.76
46:A:1521:U:H2'	46:A:1522:A:C8	2.20	0.76
46:A:1719:G:H2'	46:A:1720:U:H6	1.50	0.76
46:A:1901:U:H2'	46:A:1902:U:H6	1.48	0.76
46:A:2246:A:H2'	46:A:2247:A:H8	1.49	0.76
46:A:2288:U:H2'	46:A:2289:C:C6	2.20	0.76
46:A:2332:U:H2'	46:A:2333:A:H8	1.50	0.76
46:A:3117:A:H2'	46:A:3118:U:C6	2.21	0.76
46:A:3171:A:C8	58:M:67:LYS:HD3	2.20	0.76
3:AC:185:LEU:HB2	7:AG:196:MET:C	2.11	0.76
5:AE:65:ILE:CG2	5:AE:90:PRO:HA	2.16	0.76
7:AG:166:VAL:CG2	16:g:196:PHE:CZ	2.69	0.76
8:AH:16:PRO:CB	31:v:35:LYS:CE	2.61	0.76
12:AL:634:A:N1	12:AL:650:C:H1'	2.00	0.76
20:k:289:VAL:HG11	23:n:124:GLY:HA3	1.68	0.76
26:q:214:MET:SD	35:z:140:MET:HG3	2.26	0.76
27:r:114:ARG:HG3	27:r:116:GLN:H	1.50	0.76
31:v:23:ILE:HD12	31:v:67:LEU:HB2	1.67	0.76
41:5:329:ARG:O	53:H:139:ASN:HB3	1.86	0.76
46:A:2882:U:H2'	46:A:2883:C:H6	1.51	0.76
5:AE:66:TYR:O	5:AE:93:PRO:HG3	1.86	0.76
5:AE:149:SER:CB	5:AE:159:MET:HE3	2.07	0.76
7:AG:217:LEU:HD13	16:g:273:MET:HB3	1.66	0.76
9:AI:311:LYS:HB3	12:AL:1303:U:H5	1.48	0.76
11:AK:162:LEU:CB	25:p:68:TYR:CD2	2.66	0.76
46:A:125:U:H2'	46:A:126:A:H8	1.50	0.76
46:A:2853:A:H8	46:A:2853:A:H5'	1.51	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:3280:C:H2'	46:A:3281:U:C6	2.19	0.76
3:AC:191:ILE:HD13	4:AD:222:GLN:CD	2.11	0.76
7:AG:174:TYR:CE1	16:g:107:PHE:HZ	2.04	0.76
12:AL:749:A:C4'	26:q:121:LYS:CE	2.63	0.76
12:AL:811:U:H2'	12:AL:812:U:C6	2.21	0.76
12:AL:1642:U:O2	24:o:66:ILE:CG2	2.33	0.76
13:AM:36:U:C4	14:AN:8:A:N1	2.54	0.76
46:A:1540:A:H2'	46:A:1541:U:C6	2.20	0.76
46:A:1932:G:H22	48:C:209:GLN:CG	1.89	0.76
46:A:2016:A:N6	46:A:2021:A:H3'	1.99	0.76
46:A:2275:U:H3'	46:A:2276:G:H5"	1.68	0.76
46:A:3160:U:H5"	57:L:52:THR:CG2	2.16	0.76
8:AH:53:VAL:HG21	32:w:74:ILE:HG22	1.67	0.76
9:AI:226:LEU:HD13	9:AI:230:TYR:HD2	1.51	0.76
12:AL:271:U:OP1	32:w:68:LYS:HB3	1.86	0.76
16:g:7:LEU:HD11	17:h:189:MET:HE3	1.67	0.76
16:g:28:LYS:O	33:x:53:THR:HA	1.86	0.76
18:i:148:LYS:CE	20:k:79:HIS:H	1.99	0.76
21:l:114:SER:CB	33:x:92:PHE:CZ	2.69	0.76
28:s:27:ILE:HG21	67:V:96:GLY:O	1.86	0.76
38:2:60:LYS:HE3	46:A:2372:U:O4	1.86	0.76
45:9:98:HIS:CE1	46:A:3276:U:O2	2.39	0.76
46:A:17:U:H2'	46:A:18:A:C8	2.21	0.76
46:A:26:A:N1	71:a:114:LEU:N	2.33	0.76
46:A:54:A:H2'	46:A:55:A:C8	2.21	0.76
46:A:1140:A:H2'	46:A:1141:A:C8	2.21	0.76
46:A:1322:U:H2'	46:A:1323:U:C6	2.21	0.76
46:A:1703:U:H2'	46:A:1704:U:H6	1.51	0.76
46:A:1808:G:H1	46:A:1823:U:H3	1.32	0.76
5:AE:286:ASP:CB	5:AE:315:TYR:HE2	1.99	0.75
8:AH:21:ILE:HD11	31:v:71:ARG:NH1	2.01	0.75
12:AL:991:G:O2'	12:AL:992:U:OP2	2.04	0.75
19:j:419:LYS:HG3	19:j:421:PHE:H	1.48	0.75
20:k:36:ALA:HB2	25:p:23:ASN:HD22	1.50	0.75
22:m:203:ARG:HB3	22:m:211:ARG:NH2	2.00	0.75
27:r:58:ARG:NH1	27:r:87:ASN:HB3	1.99	0.75
30:u:101:PHE:CA	32:w:167:LEU:HD11	2.16	0.75
32:w:27:LYS:HE2	32:w:36:GLU:HB3	1.66	0.75
46:A:52:A:H2'	46:A:53:U:C6	2.21	0.75
46:A:743:A:H2'	46:A:744:U:H6	1.51	0.75
46:A:2085:A:H2'	46:A:2086:U:C6	2.21	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2420:U:H2'	46:A:2421:U:C6	2.21	0.75
46:A:2845:G:C6	48:C:204:SER:OG	2.39	0.75
2:AB:82:GLN:HG2	12:AL:376:C:P	2.26	0.75
8:AH:23:LYS:CE	31:v:74:TYR:OH	2.34	0.75
12:AL:405:A:OP1	19:j:64:ARG:NH2	2.19	0.75
12:AL:1639:A:C3'	17:h:150:GLN:HE22	1.99	0.75
15:Z:37:LEU:HD13	15:Z:54:LEU:HD13	1.67	0.75
30:u:73:THR:O	30:u:74:PRO:C	2.29	0.75
32:w:11:VAL:HG21	32:w:23:ARG:HG3	1.69	0.75
38:2:47:SER:HA	46:A:2425:A:H5"	1.67	0.75
39:3:17:LEU:HD21	46:A:1319:A:C2	2.21	0.75
46:A:126:A:H2'	46:A:127:A:C8	2.20	0.75
46:A:1024:A:O2'	46:A:1026:U:N3	2.18	0.75
46:A:2824:G:H2'	46:A:2825:U:C6	2.20	0.75
3:AC:265:SER:C	17:h:128:PRO:HG2	2.11	0.75
5:AE:227:LEU:HB3	5:AE:231:LEU:HB2	1.68	0.75
6:AF:321:TYR:CD1	31:v:13:PHE:HZ	2.03	0.75
7:AG:166:VAL:CG2	16:g:196:PHE:CE1	2.69	0.75
12:AL:479:A:N1	19:j:181:LEU:HD13	2.02	0.75
22:m:205:SER:HB3	22:m:211:ARG:HD2	1.68	0.75
46:A:1531:C:C5	47:B:326:TRP:HZ3	2.04	0.75
46:A:2220:U:H2'	46:A:2220:U:O2	1.85	0.75
69:X:16:THR:HG21	72:b:132:LEU:HD13	1.66	0.75
3:AC:55:GLY:CA	7:AG:121:ILE:HG12	2.16	0.75
5:AE:255:LEU:CD1	5:AE:300:PHE:HB2	2.15	0.75
6:AF:28:SER:HB3	19:j:43:GLN:OE1	1.85	0.75
12:AL:826:G:H2'	12:AL:827:G:H8	1.52	0.75
15:Z:89:ILE:HD13	35:z:168:ILE:CG2	2.15	0.75
16:g:246:ALA:CB	33:x:55:TYR:CZ	2.70	0.75
46:A:985:A:H4'	76:f:151:SER:HA	1.68	0.75
46:A:2330:A:H2	63:R:317:GLU:CG	1.98	0.75
5:AE:182:GLU:HB2	5:AE:183:HIS:CE1	2.22	0.75
11:AK:159:ALA:HA	25:p:23:ASN:HB2	1.69	0.75
12:AL:1644:C:C4	17:h:171:HIS:HB2	2.21	0.75
19:j:7:LEU:HB2	19:j:10:SER:CB	2.15	0.75
27:r:93:ALA:HA	27:r:123:TYR:O	1.86	0.75
46:A:254:G:H2'	46:A:255:G:C8	2.21	0.75
46:A:536:A:H2'	46:A:537:U:H6	1.51	0.75
46:A:1010:A:C2	76:f:50:TYR:OH	2.39	0.75
46:A:1533:G:C5'	47:B:149:ARG:O	2.34	0.75
46:A:1999:U:H2'	46:A:2000:A:C8	2.22	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2416:U:H2'	46:A:2417:A:H8	1.50	0.75
1:AA:79:SER:OG	12:AL:1621:G:H8	1.70	0.75
2:AB:81:ILE:HA	2:AB:84:ARG:HH12	1.51	0.75
5:AE:302:ARG:HE	5:AE:303:GLN:HG3	1.51	0.75
16:g:228:PRO:HG3	16:g:277:LEU:HG	1.68	0.75
33:x:58:PHE:CE2	33:x:64:ARG:HB2	2.21	0.75
46:A:497:U:H2'	46:A:498:A:H8	1.50	0.75
46:A:600:C:H4'	47:B:133:ARG:NH1	2.02	0.75
46:A:1167:A:H3'	46:A:1168:A:H8	1.52	0.75
46:A:1589:A:H2'	46:A:1590:U:H6	1.52	0.75
46:A:2420:U:H2'	46:A:2421:U:H6	1.52	0.75
46:A:2966:U:H2'	46:A:2967:A:C8	2.22	0.75
75:e:71:HIS:HB2	75:e:165:MET:HB2	1.67	0.75
3:AC:62:TYR:CG	17:h:159:LYS:CG	2.48	0.75
3:AC:191:ILE:HG22	4:AD:223:TYR:CE1	2.22	0.75
3:AC:265:SER:C	17:h:128:PRO:CG	2.60	0.75
10:AJ:67:GLU:CB	18:i:126:LYS:HB3	2.16	0.75
12:AL:740:A:H2	26:q:208:GLY:HA3	1.52	0.75
12:AL:803:A:H2'	12:AL:804:U:C6	2.21	0.75
12:AL:1548:U:H2'	12:AL:1549:A:H8	1.52	0.75
16:g:272:ARG:HH22	33:x:48:LYS:HA	1.50	0.75
18:i:332:LYS:HG3	18:i:344:THR:HG22	1.69	0.75
30:u:161:ARG:HD2	30:u:171:THR:HG22	1.67	0.75
46:A:744:U:H2'	46:A:745:U:C6	2.21	0.75
46:A:1147:U:H2'	46:A:1148:A:C8	2.22	0.75
46:A:1728:U:C5	47:B:314:GLN:NE2	2.55	0.75
46:A:1806:C:H2'	46:A:1830:G:C8	2.22	0.75
46:A:2088:A:H2'	46:A:2089:U:C6	2.21	0.75
3:AC:227:TRP:HH2	4:AD:164:SER:O	1.19	0.75
6:AF:209:ASP:HB2	19:j:446:LYS:CG	2.04	0.75
15:Z:66:ALA:CB	22:m:184:ASN:CB	2.42	0.75
20:k:54:PHE:CD1	25:p:57:PHE:CD1	2.67	0.75
22:m:97:GLN:NE2	24:o:208:LYS:HZ2	1.81	0.75
25:p:85:ARG:HH21	29:t:115:TRP:NE1	1.85	0.75
32:w:188:THR:O	32:w:192:GLU:HB3	1.87	0.75
46:A:743:A:H2'	46:A:744:U:C6	2.21	0.75
46:A:2917:U:H2'	46:A:2918:A:O5'	1.87	0.75
3:AC:232:LEU:HD21	4:AD:278:LYS:CB	2.16	0.75
6:AF:58:MET:CE	19:j:30:LYS:CG	2.63	0.75
6:AF:58:MET:SD	19:j:11:LEU:HD13	2.25	0.75
6:AF:295:ILE:HG23	6:AF:309:PHE:HB2	1.69	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:508:C:H5”	19:j:420:PRO:HB2	1.67	0.75
12:AL:767:A:H5”	12:AL:767:A:H8	1.52	0.75
18:i:80:ILE:HG21	20:k:51:ASN:OD1	1.87	0.75
24:o:160:ARG:HD3	24:o:225:GLU:HB3	1.68	0.75
46:A:449:A:H2’	46:A:450:U:C6	2.22	0.75
46:A:1324:U:H2’	46:A:1325:U:H6	1.50	0.75
46:A:2365:A:H2’	46:A:2366:U:C6	2.22	0.75
3:AC:217:TRP:O	17:h:149:ARG:NH2	2.18	0.74
4:AD:258:LYS:C	4:AD:260:PHE:H	1.95	0.74
8:AH:155:THR:CG2	23:n:40:TYR:HE2	1.99	0.74
8:AH:162:GLN:NE2	23:n:60:PHE:CG	2.52	0.74
29:t:5:ARG:HG3	29:t:6:PHE:N	2.02	0.74
30:u:144:MET:HB2	30:u:145:ARG:NH2	2.02	0.74
46:A:71:A:H2’	46:A:72:U:C6	2.21	0.74
46:A:1932:G:C2	48:C:209:GLN:CG	2.69	0.74
46:A:2594:A:H2’	46:A:2595:U:C6	2.20	0.74
46:A:3234:A:H4’	46:A:3235:U:OP1	1.84	0.74
6:AF:344:TYR:HB3	31:v:15:ARG:HH12	1.52	0.74
8:AH:16:PRO:HG2	31:v:35:LYS:CG	2.16	0.74
8:AH:162:GLN:NE2	23:n:60:PHE:CZ	2.55	0.74
9:AI:367:TYR:HE1	10:AJ:1:MET:CE	1.89	0.74
12:AL:1259:A:C2	34:y:86:THR:HB	2.23	0.74
16:g:6:LEU:CB	17:h:189:MET:SD	2.75	0.74
17:h:129:TYR:HE1	24:o:119:GLN:O	1.68	0.74
21:l:38:VAL:HG21	30:u:137:ALA:HB1	1.68	0.74
46:A:1501:A:H2’	46:A:1502:U:O4’	1.86	0.74
46:A:2332:U:H2’	46:A:2333:A:C8	2.22	0.74
5:AE:271:LEU:CA	5:AE:274:TYR:HB2	2.13	0.74
7:AG:173:ARG:NH2	16:g:107:PHE:CE2	2.54	0.74
8:AH:202:LEU:HD13	21:l:106:ASP:HB2	1.69	0.74
11:AK:172:TYR:CZ	25:p:115:ASP:HB3	2.23	0.74
12:AL:44:U:O2’	12:AL:45:A:O5’	2.05	0.74
32:w:45:VAL:HG11	32:w:74:ILE:HG13	1.69	0.74
46:A:446:A:H4’	46:A:447:U:OP1	1.85	0.74
46:A:1013:G:C4’	76:f:125:LYS:NZ	2.50	0.74
46:A:1139:G:H2’	46:A:1140:A:C8	2.23	0.74
46:A:2899:U:H2’	46:A:2900:A:H8	1.53	0.74
4:AD:122:PHE:CE2	7:AG:178:ALA:HB2	2.23	0.74
6:AF:58:MET:CG	19:j:26:PHE:CB	2.64	0.74
7:AG:166:VAL:HG22	16:g:196:PHE:HE1	1.50	0.74
9:AI:49:LYS:HE2	9:AI:50:ARG:HB3	1.70	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:118:LEU:HD22	9:AI:411:VAL:HG13	1.68	0.74
24:o:239:ASN:HB3	24:o:242:LEU:HB2	1.68	0.74
46:A:200:G:H2'	46:A:200:G:N3	2.00	0.74
46:A:1003:U:C5'	76:f:143:LYS:HD3	2.17	0.74
46:A:2331:U:H5	63:R:318:VAL:HG11	1.51	0.74
3:AC:217:TRP:CD2	17:h:146:LEU:HD21	2.22	0.74
3:AC:228:ASP:CG	4:AD:277:PRO:HG2	2.12	0.74
4:AD:260:PHE:CZ	16:g:222:ILE:CA	2.69	0.74
6:AF:198:ARG:NH2	12:AL:552:A:C4'	2.46	0.74
9:AI:153:GLY:O	9:AI:155:GLY:N	2.20	0.74
9:AI:188:ASN:O	28:s:42:TYR:CD2	2.40	0.74
10:AJ:57:ARG:O	10:AJ:58:HIS:C	2.30	0.74
18:i:311:ILE:HG13	20:k:58:TYR:HE2	1.49	0.74
21:l:48:ARG:HH21	33:x:137:LEU:HD23	1.52	0.74
27:r:35:LYS:CD	32:w:37:LEU:CD2	2.65	0.74
46:A:1142:U:H2'	46:A:1143:A:H8	1.48	0.74
46:A:1310:A:H2'	46:A:1311:A:H8	1.51	0.74
46:A:1784:U:H3'	46:A:1785:U:H6	1.51	0.74
46:A:2018:C:H2'	46:A:2019:A:H8	1.50	0.74
63:R:261:ASN:HB3	63:R:267:HIS:NE2	2.02	0.74
4:AD:260:PHE:CD2	16:g:222:ILE:HA	2.19	0.74
7:AG:120:LYS:HE3	16:g:14:GLN:CB	2.16	0.74
8:AH:229:GLU:OE2	21:l:43:VAL:C	2.30	0.74
9:AI:154:VAL:O	9:AI:154:VAL:CG2	2.36	0.74
9:AI:434:GLY:HA3	24:o:184:ASN:OD1	1.87	0.74
10:AJ:1:MET:HE2	11:AK:278:ARG:HH22	1.53	0.74
10:AJ:14:LEU:CD1	11:AK:222:LEU:HD21	2.17	0.74
10:AJ:47:TYR:OH	12:AL:1291:U:C6	2.39	0.74
11:AK:67:GLU:HA	11:AK:70:TRP:CE3	2.22	0.74
11:AK:299:LYS:CE	24:o:151:PHE:CD1	2.71	0.74
12:AL:81:U:C2'	12:AL:82:A:H5'	2.17	0.74
12:AL:769:A:H4'	12:AL:770:A:H5'	1.70	0.74
12:AL:1220:A:C5'	29:t:112:LYS:HZ1	2.01	0.74
16:g:12:ILE:O	17:h:215:LYS:NZ	2.19	0.74
17:h:299:ASP:OD1	24:o:36:ARG:NH2	2.21	0.74
22:m:161:ALA:HB1	22:m:188:ARG:HB3	1.70	0.74
28:s:12:GLY:C	28:s:14:GLU:H	1.94	0.74
30:u:99:ASP:HB3	32:w:124:LEU:HD13	1.70	0.74
46:A:1724:A:H62	47:B:154:LEU:HD11	1.53	0.74
46:A:2649:U:OP1	50:E:19:PRO:N	2.21	0.74
46:A:30:U:N3	48:C:21:SER:CA	2.43	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:370:C:H2'	46:A:371:U:C6	2.22	0.74
46:A:372:A:H2'	46:A:373:U:H6	1.53	0.74
46:A:1068:C:H2'	46:A:1069:A:C8	2.22	0.74
46:A:2410:U:H2'	46:A:2411:G:C8	2.22	0.74
46:A:2922:G:N2	46:A:2931:G:H2'	2.03	0.74
46:A:3280:C:H2'	46:A:3281:U:H6	1.52	0.74
75:e:66:MET:HE2	75:e:142:TYR:HE2	1.51	0.74
2:AB:105:LEU:HD22	12:AL:389:A:O3'	1.86	0.74
3:AC:266:LYS:C	17:h:129:TYR:HB2	2.12	0.74
9:AI:68:GLN:NE2	12:AL:1351:U:C5	2.56	0.74
18:i:98:TYR:HE2	25:p:48:ARG:HB2	1.53	0.74
27:r:35:LYS:NZ	32:w:37:LEU:CD2	2.50	0.74
75:e:66:MET:CB	75:e:149:GLN:CB	2.66	0.74
10:AJ:53:ILE:CD1	10:AJ:55:LYS:CE	2.58	0.74
12:AL:809:U:H2'	12:AL:810:A:H8	1.52	0.74
20:k:81:GLN:OE1	25:p:131:HIS:CE1	2.41	0.74
32:w:170:SER:HA	32:w:173:GLU:HB2	1.70	0.74
46:A:1350:U:O4	62:Q:5:TYR:HE2	1.70	0.74
46:A:2065:A:H1'	46:A:2066:U:C4	2.23	0.74
75:e:66:MET:HB2	75:e:149:GLN:CB	2.17	0.74
3:AC:265:SER:O	17:h:128:PRO:N	2.19	0.74
8:AH:184:ARG:HD3	12:AL:814:A:C3'	2.17	0.74
12:AL:826:G:H21	30:u:246:ASN:HD21	1.34	0.74
12:AL:1064:U:C4	12:AL:1088:A:N1	2.56	0.74
21:l:98:LYS:NZ	30:u:148:GLU:OE1	2.17	0.74
27:r:35:LYS:HB2	32:w:33:ILE:CD1	2.14	0.74
30:u:87:LEU:CD1	32:w:114:ARG:NH1	2.46	0.74
46:A:99:U:H2'	46:A:100:U:C6	2.23	0.74
46:A:2473:U:H2'	46:A:2474:U:H6	1.53	0.74
46:A:2882:U:H2'	46:A:2883:C:C6	2.22	0.74
46:A:3024:U:H2'	46:A:3025:U:C6	2.23	0.74
3:AC:185:LEU:CD1	7:AG:196:MET:HA	2.17	0.73
4:AD:260:PHE:HA	16:g:223:GLN:HG2	1.70	0.73
5:AE:47:LYS:HG3	5:AE:99:LYS:HB2	1.70	0.73
7:AG:75:TYR:CE2	32:w:183:ILE:CD1	2.71	0.73
9:AI:310:ASN:HD21	28:s:34:LYS:CG	2.00	0.73
11:AK:185:ARG:CG	25:p:143:PHE:CE1	2.61	0.73
12:AL:226:C:H2'	12:AL:227:U:C5	2.22	0.73
12:AL:698:A:P	23:n:2:SER:HB2	2.27	0.73
12:AL:700:U:P	23:n:1:MET:HE3	2.28	0.73
12:AL:835:C:O2'	12:AL:836:U:H5'	1.88	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:g:273:MET:HE1	33:x:60:PHE:HE1	1.53	0.73
30:u:120:THR:HG23	30:u:123:VAL:HG23	1.70	0.73
30:u:224:PRO:HB3	32:w:85:PHE:HE1	1.53	0.73
46:A:747:U:H2'	46:A:748:U:C6	2.23	0.73
8:AH:202:LEU:HD21	21:l:105:LEU:HB2	1.69	0.73
11:AK:144:LEU:HD22	18:i:84:LEU:O	1.88	0.73
12:AL:807:A:H2'	12:AL:808:A:C8	2.22	0.73
12:AL:1104:U:H5'	18:i:333:GLY:HA2	1.69	0.73
12:AL:1147:A:N6	12:AL:1150:C:OP1	2.21	0.73
15:Z:16:LEU:CD1	35:z:162:PHE:HE1	1.75	0.73
17:h:171:HIS:HE2	17:h:176:TYR:HE2	1.33	0.73
17:h:313:LYS:CG	20:k:131:LYS:HA	2.18	0.73
18:i:114:LEU:HD11	29:t:15:GLY:CA	2.18	0.73
32:w:47:ASP:C	32:w:49:GLY:H	1.96	0.73
50:E:23:CYS:CB	63:R:79:ILE:HD13	2.17	0.73
55:J:111:THR:HB	55:J:116:LEU:HG	1.70	0.73
63:R:335:THR:HB	63:R:363:SER:H	1.52	0.73
5:AE:47:LYS:NZ	5:AE:98:SER:HB2	2.04	0.73
8:AH:104:ARG:CD	12:AL:143:A:C5'	2.64	0.73
9:AI:127:ARG:O	9:AI:131:THR:HG23	1.88	0.73
12:AL:116:A:H2'	12:AL:117:G:H8	1.51	0.73
12:AL:604:A:H3'	12:AL:605:U:C6	2.22	0.73
12:AL:785:A:N3	33:x:108:ARG:HA	2.02	0.73
12:AL:1064:U:O4	12:AL:1088:A:C6	2.41	0.73
16:g:251:VAL:HG11	33:x:51:LYS:CB	2.17	0.73
26:q:184:VAL:CG2	35:z:117:PHE:CE2	2.72	0.73
46:A:1009:U:H4'	76:f:134:SER:HB2	1.70	0.73
46:A:2205:G:H2'	46:A:2206:U:H6	1.51	0.73
46:A:2441:U:H2'	46:A:2442:A:H8	1.52	0.73
46:A:3027:U:H2'	46:A:3028:A:H8	1.50	0.73
50:E:251:ALA:HB1	67:V:63:TYR:CZ	2.23	0.73
2:AB:71:SER:HA	2:AB:74:LEU:HD12	1.70	0.73
5:AE:316:ASP:HA	5:AE:319:LEU:HD12	1.70	0.73
6:AF:146:ASN:HD22	19:j:439:HIS:CG	2.02	0.73
7:AG:96:LYS:HE2	12:AL:916:A:OP1	1.88	0.73
8:AH:53:VAL:CG1	32:w:48:GLU:OE2	2.36	0.73
8:AH:198:GLU:HB2	21:l:105:LEU:HD21	1.71	0.73
11:AK:76:LEU:HD22	11:AK:79:GLU:HB2	1.69	0.73
11:AK:149:ARG:HG2	20:k:70:ASP:HA	1.69	0.73
12:AL:326:C:H3'	12:AL:334:U:C5	2.20	0.73
12:AL:835:C:H2'	12:AL:836:U:C6	2.23	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:o:158:GLY:H	24:o:230:ALA:HB2	1.53	0.73
30:u:232:GLN:HE21	32:w:96:VAL:HG11	1.52	0.73
40:4:18:ALA:HB2	41:5:285:ASP:HB3	1.69	0.73
46:A:1165:A:H2'	46:A:1166:U:C6	2.23	0.73
46:A:1427:A:H2'	46:A:1428:U:C6	2.23	0.73
46:A:1712:A:N3	47:B:140:THR:HG23	2.01	0.73
46:A:2090:U:H2'	46:A:2091:C:C6	2.23	0.73
5:AE:41:GLY:HA3	5:AE:108:SER:HB2	1.68	0.73
5:AE:283:THR:HG23	5:AE:315:TYR:CE1	2.24	0.73
7:AG:118:ARG:HE	16:g:87:ARG:HD3	1.54	0.73
10:AJ:63:TYR:CG	18:i:182:ILE:CG2	2.71	0.73
11:AK:136:GLU:HG2	18:i:212:TYR:CD2	2.23	0.73
12:AL:644:G:H1	14:AN:2:U:H2'	1.52	0.73
18:i:93:TRP:CB	29:t:108:PRO:CA	2.51	0.73
18:i:150:ASN:CG	20:k:78:LEU:H	1.97	0.73
25:p:18:ARG:O	25:p:18:ARG:HG3	1.87	0.73
25:p:20:TYR:HB3	25:p:25:GLU:HB3	1.71	0.73
46:A:44:U:H2'	46:A:45:U:C6	2.24	0.73
46:A:103:U:H2'	46:A:104:A:C8	2.22	0.73
46:A:2332:U:H5"	63:R:322:ARG:HH11	1.52	0.73
46:A:2585:A:H2'	46:A:2586:U:C5	2.23	0.73
76:f:116:SER:HA	76:f:157:VAL:HB	1.68	0.73
3:AC:219:MET:CE	17:h:153:HIS:CD2	2.70	0.73
5:AE:146:LEU:HB3	5:AE:156:TYR:HE1	1.54	0.73
6:AF:58:MET:HE1	19:j:30:LYS:CD	2.19	0.73
7:AG:122:LEU:O	16:g:11:ARG:CB	2.37	0.73
9:AI:60:TRP:HB2	22:m:210:VAL:HG11	1.71	0.73
12:AL:1033:U:H5"	25:p:97:LYS:HZ2	1.52	0.73
16:g:45:ARG:HG3	17:h:170:PRO:CG	2.19	0.73
18:i:104:MET:SD	18:i:107:MET:CE	2.76	0.73
31:v:99:ALA:C	31:v:101:ALA:N	2.46	0.73
46:A:300:A:OP1	55:J:228:TRP:CZ2	2.40	0.73
5:AE:279:LEU:CD2	5:AE:315:TYR:HB2	2.19	0.73
10:AJ:57:ARG:NH2	12:AL:1061:U:OP1	2.21	0.73
21:l:55:LYS:HA	21:l:60:LYS:HA	1.70	0.73
46:A:172:A:H2'	46:A:173:U:H6	1.52	0.73
46:A:796:A:H2'	46:A:797:U:C6	2.24	0.73
46:A:1531:C:C2	47:B:326:TRP:CD2	2.77	0.73
63:R:92:VAL:HG21	63:R:113:ARG:HG2	1.71	0.73
63:R:230:ALA:HA	63:R:235:TRP:CD1	2.24	0.73
5:AE:285:LEU:HD21	5:AE:297:LEU:CB	2.18	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:286:ARG:NE	12:AL:1323:A:OP1	2.21	0.73
12:AL:629:G:H2'	12:AL:630:U:C6	2.22	0.73
18:i:176:MET:SD	20:k:92:TRP:HB2	2.28	0.73
46:A:149:A:C2	46:A:1371:A:H2'	2.24	0.73
46:A:1411:A:N7	61:P:58:VAL:HB	2.04	0.73
46:A:1932:G:N2	48:C:209:GLN:NE2	2.37	0.73
46:A:2737:A:H3'	46:A:2738:G:H8	1.54	0.73
63:R:282:LEU:O	63:R:286:LEU:HG	1.88	0.73
2:AB:82:GLN:NE2	12:AL:375:A:C5'	2.52	0.73
3:AC:65:HIS:NE2	17:h:159:LYS:HD2	2.03	0.73
3:AC:185:LEU:CD1	7:AG:196:MET:C	2.62	0.73
3:AC:228:ASP:HB2	4:AD:277:PRO:CB	2.19	0.73
6:AF:58:MET:SD	19:j:30:LYS:CE	2.76	0.73
8:AH:23:LYS:HE2	31:v:74:TYR:OH	1.88	0.73
9:AI:283:SER:HB3	9:AI:335:ALA:HB3	1.70	0.73
11:AK:149:ARG:HD2	20:k:71:TYR:HA	1.71	0.73
12:AL:406:U:OP1	19:j:64:ARG:HD2	1.88	0.73
12:AL:1100:A:N1	12:AL:1104:U:O4	2.21	0.73
12:AL:1135:G:H5"	15:Z:17:LYS:NZ	2.04	0.73
18:i:368:LEU:HD12	29:t:111:LYS:HG3	1.66	0.73
21:l:113:ARG:CZ	33:x:91:GLU:OE1	2.37	0.73
22:m:123:ARG:HE	22:m:123:ARG:HA	1.54	0.73
25:p:103:GLU:OE1	29:t:114:ILE:N	2.21	0.73
29:t:60:LEU:HD13	34:y:18:ILE:HG23	1.71	0.73
46:A:9:U:H2'	46:A:10:A:H8	1.53	0.73
46:A:606:U:H2'	46:A:607:A:C8	2.24	0.73
46:A:984:C:H2'	46:A:985:A:H8	1.52	0.73
46:A:3269:U:H2'	46:A:3270:A:C8	2.23	0.73
47:B:165:GLN:HG2	47:B:185:HIS:HA	1.70	0.73
69:X:11:ILE:HD13	69:X:27:ILE:HG12	1.70	0.73
7:AG:213:GLU:CD	16:g:230:ARG:CD	2.62	0.73
18:i:119:LEU:HD21	18:i:183:MET:HE1	1.70	0.73
30:u:74:PRO:CB	32:w:100:GLU:OE1	2.29	0.73
42:6:66:TYR:CB	46:A:2424:U:C4	2.72	0.73
46:A:226:A:H2'	46:A:227:G:H8	1.53	0.73
46:A:1140:A:H2'	46:A:1141:A:H8	1.53	0.73
46:A:2063:A:H2'	46:A:2064:G:O4'	1.89	0.73
46:A:2083:U:H2'	46:A:2084:G:C8	2.24	0.73
46:A:2334:U:OP1	63:R:326:LYS:NZ	2.21	0.73
46:A:2927:C:H2'	46:A:2928:A:O4'	1.88	0.73
3:AC:62:TYR:CD1	17:h:159:LYS:HE3	2.23	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:185:LEU:CD1	7:AG:197:PHE:N	2.52	0.72
3:AC:204:ILE:HD11	7:AG:200:LEU:HD12	1.70	0.72
5:AE:315:TYR:O	5:AE:319:LEU:HG	1.89	0.72
6:AF:29:ARG:HG3	6:AF:30:ARG:H	1.54	0.72
7:AG:118:ARG:NE	16:g:87:ARG:HD3	2.04	0.72
8:AH:154:MET:HG3	8:AH:157:ASP:OD2	1.89	0.72
17:h:129:TYR:OH	24:o:120:LEU:HA	1.89	0.72
20:k:45:LYS:HD2	20:k:47:ARG:NH2	2.04	0.72
26:q:94:VAL:HG12	26:q:95:VAL:H	1.54	0.72
46:A:675:G:C6	47:B:341:CYS:SG	2.81	0.72
46:A:1757:A:H3'	46:A:1758:U:C6	2.24	0.72
46:A:2299:A:H2'	46:A:2300:U:C6	2.25	0.72
46:A:2734:A:H5"	56:K:167:LYS:HE3	1.69	0.72
4:AD:253:TYR:HH	16:g:299:GLU:HA	1.52	0.72
7:AG:36:ILE:CG2	17:h:231:ARG:CG	2.67	0.72
8:AH:162:GLN:CB	23:n:60:PHE:CE1	2.72	0.72
18:i:176:MET:CE	20:k:93:ASP:HA	2.19	0.72
46:A:2384:A:H2'	46:A:2385:U:H6	1.53	0.72
46:A:2899:U:H2'	46:A:2900:A:C8	2.24	0.72
3:AC:194:PHE:CE2	4:AD:223:TYR:HB2	2.24	0.72
6:AF:306:GLN:HG2	31:v:61:PRO:O	1.89	0.72
6:AF:329:LYS:O	12:AL:404:U:C4'	2.36	0.72
7:AG:174:TYR:CD1	16:g:107:PHE:CE1	2.76	0.72
12:AL:709:A:H2'	12:AL:710:U:C6	2.22	0.72
12:AL:784:A:C5	26:q:206:PHE:CE2	2.77	0.72
27:r:51:GLN:C	27:r:53:ASP:H	1.97	0.72
46:A:1245:U:H2'	46:A:1246:A:H8	1.54	0.72
46:A:1728:U:O2	47:B:269:ALA:C	2.32	0.72
46:A:2576:A:H2'	46:A:2577:A:C8	2.23	0.72
2:AB:41:VAL:HG23	2:AB:63:TRP:HE3	1.54	0.72
5:AE:274:TYR:CA	5:AE:277:ILE:HB	2.19	0.72
6:AF:198:ARG:HG2	12:AL:545:U:O5'	1.90	0.72
11:AK:130:ARG:O	18:i:214:TYR:HE2	1.72	0.72
12:AL:632:C:C4	12:AL:644:G:C6	2.77	0.72
12:AL:665:U:H2'	12:AL:666:U:H6	1.51	0.72
12:AL:803:A:H4'	21:l:78:GLN:NE2	2.04	0.72
12:AL:1516:U:H3'	12:AL:1517:U:C5'	2.20	0.72
17:h:276:ILE:HD11	24:o:47:ALA:N	2.03	0.72
18:i:105:GLU:HA	18:i:108:ASN:HD22	1.54	0.72
18:i:311:ILE:HG12	20:k:58:TYR:CZ	2.24	0.72
21:l:48:ARG:HH21	33:x:137:LEU:CD2	2.03	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:23:U:H2'	46:A:24:G:C8	2.24	0.72
46:A:686:U:H2'	46:A:687:U:C6	2.24	0.72
46:A:875:U:H2'	46:A:876:A:C8	2.24	0.72
46:A:1310:A:H2'	46:A:1311:A:C8	2.24	0.72
46:A:2441:U:H2'	46:A:2442:A:C8	2.24	0.72
46:A:3235:U:H2'	46:A:3236:A:C8	2.25	0.72
75:e:66:MET:SD	75:e:150:VAL:HA	2.28	0.72
3:AC:232:LEU:CD2	4:AD:278:LYS:CB	2.66	0.72
4:AD:73:LYS:HE2	4:AD:215:VAL:HG13	1.71	0.72
10:AJ:45:ALA:HB2	29:t:32:LYS:HD3	1.71	0.72
12:AL:740:A:C2	26:q:208:GLY:CA	2.73	0.72
12:AL:1071:A:O2'	12:AL:1072:U:OP1	2.05	0.72
12:AL:1437:A:H5'	24:o:261:ARG:NH1	2.04	0.72
15:Z:94:HIS:CG	17:h:203:ARG:HA	2.24	0.72
37:1:73:ILE:HG12	42:6:47:LYS:HB3	1.71	0.72
46:A:277:U:H2'	46:A:278:A:H8	1.54	0.72
46:A:749:A:H2'	46:A:750:U:C6	2.25	0.72
46:A:1288:U:C6	49:D:114:ALA:HA	2.25	0.72
46:A:1952:A:H4'	48:C:208:ASN:HA	1.72	0.72
46:A:2065:A:H1'	46:A:2066:U:O4	1.89	0.72
12:AL:740:A:N1	26:q:208:GLY:HA2	2.04	0.72
12:AL:806:A:H2'	12:AL:807:A:C8	2.25	0.72
22:m:127:LYS:NZ	24:o:191:LYS:HZ2	1.88	0.72
27:r:104:GLU:O	27:r:105:HIS:HB2	1.90	0.72
29:t:101:ASN:HA	29:t:106:ASN:HD22	1.53	0.72
46:A:26:A:C6	71:a:112:TYR:C	2.66	0.72
46:A:1003:U:H5"	76:f:143:LYS:HD3	1.71	0.72
46:A:1193:U:H2'	46:A:1194:U:H6	1.54	0.72
46:A:2209:U:H2'	46:A:2210:A:C8	2.25	0.72
46:A:2982:U:C2	46:A:2983:U:H1'	2.24	0.72
5:AE:322:LEU:O	5:AE:326:GLU:HG2	1.89	0.72
7:AG:177:TYR:CE2	16:g:107:PHE:CE1	2.78	0.72
9:AI:56:LEU:C	22:m:205:SER:HB2	2.15	0.72
12:AL:257:A:H2'	12:AL:258:G:C8	2.25	0.72
12:AL:533:A:H2'	12:AL:534:A:O4'	1.89	0.72
12:AL:1639:A:H4'	17:h:150:GLN:NE2	2.05	0.72
15:Z:46:HIS:CE1	22:m:234:HIS:CB	2.73	0.72
32:w:185:ARG:HA	32:w:188:THR:OG1	1.89	0.72
37:1:190:LYS:NZ	46:A:2363:A:OP1	2.22	0.72
37:1:283:ASN:HD21	63:R:143:GLU:CD	1.97	0.72
46:A:895:A:H2'	46:A:896:U:H6	1.55	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1549:U:C5	61:P:62:ILE:HD13	2.24	0.72
46:A:1589:A:H2'	46:A:1590:U:C6	2.25	0.72
46:A:3162:U:H2'	46:A:3163:U:C6	2.25	0.72
1:AA:90:LYS:CD	12:AL:1612:C:N4	2.53	0.72
3:AC:148:LEU:HD23	4:AD:203:ASN:C	2.14	0.72
6:AF:58:MET:HE1	19:j:30:LYS:CB	2.19	0.72
9:AI:178:SER:O	9:AI:179:TYR:C	2.32	0.72
10:AJ:14:LEU:HD21	11:AK:222:LEU:HD22	1.57	0.72
12:AL:524:A:H2'	12:AL:525:A:C8	2.24	0.72
12:AL:1327:A:H2'	12:AL:1328:A:C8	2.23	0.72
15:Z:19:LYS:O	15:Z:21:PRO:HD3	1.90	0.72
16:g:58:ILE:HD12	35:z:175:LYS:O	1.88	0.72
22:m:97:GLN:HE21	24:o:208:LYS:NZ	1.85	0.72
43:7:72:ARG:NH2	46:A:504:A:OP1	2.20	0.72
46:A:3110:U:H2'	46:A:3111:A:C8	2.24	0.72
7:AG:220:TRP:NE1	33:x:45:LEU:O	2.18	0.72
10:AJ:16:ALA:CA	10:AJ:21:GLN:HB2	2.06	0.72
12:AL:826:G:H21	30:u:246:ASN:ND2	1.88	0.72
16:g:231:ILE:HD12	16:g:267:MET:HE1	1.72	0.72
19:j:114:PHE:HE2	19:j:450:ALA:HB2	1.55	0.72
28:s:27:ILE:HD12	28:s:35:ILE:HD12	1.70	0.72
46:A:175:U:H3	46:A:203:U:H3	1.38	0.72
46:A:661:G:H5"	70:Y:71:LEU:HD12	1.72	0.72
63:R:292:LEU:HA	63:R:297:ASP:HB3	1.71	0.72
76:f:120:VAL:HG21	76:f:156:VAL:HG13	1.71	0.72
11:AK:128:SER:HA	18:i:156:TYR:OH	1.90	0.72
12:AL:84:U:H2'	12:AL:85:G:H4'	1.70	0.72
12:AL:550:U:P	19:j:131:ARG:HH12	2.13	0.72
16:g:68:LEU:HB3	17:h:217:ILE:CD1	2.16	0.72
17:h:178:PRO:HG2	17:h:375:VAL:HG22	1.72	0.72
25:p:91:SER:C	29:t:96:TYR:HE2	1.98	0.72
34:y:42:ILE:HD11	34:y:76:PHE:CE2	2.22	0.72
46:A:1072:U:C2	46:A:1073:A:C8	2.78	0.72
75:e:169:ALA:HB1	75:e:176:LEU:HB3	1.72	0.72
4:AD:117:LEU:HG	4:AD:118:GLN:HG3	1.71	0.71
4:AD:195:LYS:HD3	4:AD:196:LEU:H	1.54	0.71
5:AE:274:TYR:HA	5:AE:277:ILE:CB	2.18	0.71
12:AL:34:G:H5'	19:j:486:LYS:HG3	1.72	0.71
12:AL:225:U:H2'	12:AL:226:C:C6	2.24	0.71
12:AL:406:U:H2'	12:AL:407:U:C6	2.24	0.71
12:AL:511:A:H2'	12:AL:512:A:O4'	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:749:A:C4'	26:q:121:LYS:HE3	2.20	0.71
15:Z:27:ALA:O	15:Z:28:ASN:C	2.30	0.71
21:l:38:VAL:HB	30:u:141:ILE:HG12	1.72	0.71
26:q:193:LYS:CA	35:z:110:LYS:HE2	2.19	0.71
29:t:50:LEU:HB3	29:t:51:PRO:HD2	1.72	0.71
46:A:465:U:H5"	55:J:87:LYS:NZ	2.05	0.71
46:A:479:U:H2'	46:A:480:C:H6	1.52	0.71
46:A:1010:A:O4'	76:f:129:SER:CB	2.30	0.71
46:A:1129:U:H2'	46:A:1130:C:C6	2.24	0.71
46:A:2477:U:H2'	46:A:2478:C:C6	2.24	0.71
46:A:2580:A:H2'	46:A:2581:U:C6	2.25	0.71
3:AC:232:LEU:CD2	4:AD:278:LYS:HB3	2.19	0.71
4:AD:199:LEU:HD23	16:g:214:LEU:HD21	1.71	0.71
8:AH:199:LEU:HD13	8:AH:203:TYR:CD2	2.25	0.71
12:AL:675:U:C5	20:k:263:TYR:CE2	2.78	0.71
18:i:148:LYS:HZ1	20:k:78:LEU:CB	2.03	0.71
18:i:369:ASN:O	29:t:114:ILE:CD1	2.37	0.71
19:j:411:VAL:HG23	19:j:414:ARG:HB2	1.72	0.71
32:w:33:ILE:HG23	32:w:35:LYS:H	1.54	0.71
46:A:497:U:H2'	46:A:498:A:C8	2.25	0.71
46:A:2016:A:H5'	46:A:2016:A:C4	2.25	0.71
76:f:10:VAL:HG21	76:f:29:LEU:HG	1.71	0.71
3:AC:78:ASN:HA	7:AG:190:ALA:HB2	1.72	0.71
4:AD:155:LEU:HD22	16:g:210:LEU:CG	2.20	0.71
5:AE:314:PRO:HB2	5:AE:318:HIS:CG	2.24	0.71
17:h:296:ASP:O	24:o:36:ARG:NH1	2.23	0.71
46:A:54:A:H2'	46:A:55:A:H8	1.52	0.71
46:A:936:A:H5"	71:a:32:TYR:CG	2.24	0.71
46:A:1416:A:H2'	46:A:1417:A:C8	2.25	0.71
46:A:2004:U:H2'	46:A:2005:U:H5	1.54	0.71
46:A:3230:U:H2'	46:A:3231:A:C8	2.25	0.71
46:A:3269:U:H2'	46:A:3270:A:H8	1.55	0.71
48:C:31:ILE:HD13	53:H:140:ILE:CD1	2.20	0.71
12:AL:271:U:H4'	12:AL:272:U:OP1	1.90	0.71
12:AL:644:G:C6	14:AN:2:U:C6	2.77	0.71
37:1:121:PHE:O	46:A:2349:A:C8	2.44	0.71
46:A:43:U:H2'	46:A:44:U:C6	2.25	0.71
46:A:976:A:H2'	46:A:977:A:C8	2.25	0.71
46:A:1757:A:H5'	46:A:1757:A:H8	1.55	0.71
46:A:2091:C:H2'	46:A:2092:U:C6	2.26	0.71
46:A:2185:U:H2'	46:A:2186:U:H6	1.55	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:R:175:LYS:HB2	63:R:175:LYS:NZ	2.05	0.71
63:R:338:THR:C	63:R:361:ALA:HB1	2.15	0.71
69:X:13:LEU:HD11	69:X:34:VAL:HG13	1.73	0.71
5:AE:74:LEU:HD21	5:AE:88:LEU:HD21	1.73	0.71
7:AG:2:LYS:HB2	12:AL:926:A:C5'	2.19	0.71
7:AG:166:VAL:HG23	16:g:195:LYS:HE2	1.63	0.71
11:AK:134:PHE:CG	20:k:106:LEU:CA	2.72	0.71
11:AK:183:THR:HG22	25:p:145:ARG:HG2	1.73	0.71
12:AL:550:U:C5'	19:j:131:ARG:HH12	2.04	0.71
22:m:88:ILE:O	22:m:89:LYS:HB2	1.90	0.71
27:r:35:LYS:HZ2	32:w:37:LEU:CD2	2.04	0.71
27:r:127:ARG:HD2	27:r:132:LEU:HD13	1.72	0.71
28:s:85:ILE:HG12	34:y:67:ASP:OD2	1.90	0.71
56:K:229:PHE:CG	63:R:122:PHE:HZ	2.09	0.71
4:AD:162:ALA:HB1	7:AG:189:VAL:CB	2.19	0.71
7:AG:60:LEU:CD2	23:n:70:THR:HB	2.21	0.71
7:AG:77:THR:CG2	8:AH:179:LYS:HD2	2.20	0.71
9:AI:355:LEU:HB3	9:AI:356:PRO:HD3	1.72	0.71
12:AL:1179:U:H1'	24:o:164:THR:OG1	1.90	0.71
12:AL:1416:U:H4'	24:o:270:ARG:HD3	0.82	0.71
29:t:48:MET:O	29:t:50:LEU:N	2.23	0.71
46:A:74:A:H2'	46:A:75:A:C8	2.26	0.71
46:A:2245:U:H2'	46:A:2246:A:H8	1.55	0.71
6:AF:58:MET:CG	19:j:11:LEU:CD1	2.66	0.71
7:AG:67:PRO:HB2	32:w:187:GLN:NE2	2.05	0.71
8:AH:104:ARG:CZ	12:AL:142:U:O2'	2.39	0.71
16:g:25:THR:HG21	33:x:71:TYR:O	1.91	0.71
21:l:32:ILE:HG12	21:l:81:ILE:HD11	1.73	0.71
22:m:142:TYR:CZ	22:m:146:ARG:HD2	2.25	0.71
45:9:175:LYS:CE	46:A:23:U:H5'	2.21	0.71
46:A:595:U:O4	70:Y:73:ARG:HB2	1.91	0.71
46:A:2442:A:H2'	46:A:2443:C:C6	2.25	0.71
46:A:2601:A:H3'	46:A:2603:C:N4	2.05	0.71
46:A:2972:U:H2'	46:A:2973:A:H8	1.55	0.71
2:AB:92:HIS:CD2	12:AL:524:A:H2	2.09	0.71
12:AL:331:A:H3'	12:AL:332:A:C8	2.26	0.71
12:AL:485:A:H2'	12:AL:486:U:C6	2.25	0.71
12:AL:1525:A:H2'	12:AL:1526:A:H1'	1.73	0.71
22:m:106:ILE:HA	24:o:245:ARG:HH22	1.54	0.71
22:m:127:LYS:NZ	24:o:191:LYS:NZ	2.39	0.71
29:t:11:LYS:HD2	29:t:11:LYS:H	1.55	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1428:U:H5”	46:A:1429:C:H5’	1.73	0.71
46:A:2861:U:H2’	46:A:2862:G:C8	2.25	0.71
46:A:2918:A:H2’	46:A:2919:U:H6	1.56	0.71
69:X:35:THR:O	72:b:136:LYS:HE3	1.90	0.71
7:AG:122:LEU:HA	16:g:11:ARG:HB3	1.72	0.71
8:AH:164:LEU:HB3	23:n:28:TYR:OH	1.90	0.71
8:AH:184:ARG:HG3	12:AL:814:A:C5’	2.21	0.71
11:AK:149:ARG:HG2	20:k:70:ASP:C	2.15	0.71
12:AL:524:A:H2’	12:AL:525:A:H8	1.56	0.71
12:AL:904:U:H3	12:AL:913:U:H3	1.39	0.71
12:AL:1609:G:H2’	12:AL:1610:A:C8	2.26	0.71
22:m:106:ILE:HG12	24:o:245:ARG:CZ	2.20	0.71
31:v:11:ALA:HB3	31:v:22:ASN:HB2	1.71	0.71
31:v:12:ARG:NH2	31:v:21:TYR:HA	2.06	0.71
46:A:723:U:H2’	46:A:724:A:H8	1.56	0.71
46:A:1313:G:H5”	46:A:1314:U:H5”	1.72	0.71
46:A:1344:U:H2’	46:A:1562:A:C2	2.25	0.71
46:A:1899:C:H2’	46:A:1900:U:H6	1.56	0.71
3:AC:163:LEU:HD21	3:AC:221:ILE:HG13	1.73	0.71
7:AG:120:LYS:HB3	16:g:34:GLN:HE21	1.53	0.71
11:AK:134:PHE:CD2	20:k:112:LEU:HD23	2.26	0.71
12:AL:644:G:C4	14:AN:2:U:C5	2.79	0.71
18:i:311:ILE:CG1	20:k:58:TYR:HE2	2.02	0.71
30:u:253:GLN:NE2	30:u:264:ILE:H	1.89	0.71
46:A:201:A:H2’	46:A:202:A:C8	2.26	0.71
46:A:1247:U:H2’	46:A:1248:A:H8	1.53	0.71
46:A:2027:U:H3’	46:A:2028:A:H8	1.56	0.71
2:AB:48:ILE:HG22	2:AB:90:GLN:HE21	1.55	0.70
5:AE:221:ARG:HD2	5:AE:249:GLN:HE21	1.55	0.70
12:AL:257:A:H2’	12:AL:258:G:H8	1.56	0.70
12:AL:258:G:P	32:w:68:LYS:CD	2.79	0.70
12:AL:1215:A:OP1	24:o:253:THR:HG21	1.91	0.70
12:AL:1376:U:P	28:s:100:ARG:HE	2.13	0.70
16:g:58:ILE:CD1	35:z:175:LYS:O	2.39	0.70
18:i:320:MET:HE1	18:i:362:ILE:HG21	1.72	0.70
37:1:58:ARG:NH2	46:A:2336:G:C6	2.53	0.70
38:2:53:ARG:CZ	69:X:67:ARG:HH12	2.03	0.70
46:A:12:A:H2’	46:A:13:A:C8	2.26	0.70
46:A:320:U:H2’	46:A:321:A:C8	2.26	0.70
46:A:873:A:H2’	46:A:874:U:C6	2.25	0.70
46:A:3237:U:H4’	57:L:65:ALA:HB2	1.72	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:R:242:GLU:HA	63:R:245:SER:CB	2.20	0.70
76:f:127:LYS:HD3	76:f:141:ILE:HG23	1.71	0.70
3:AC:78:ASN:CA	7:AG:190:ALA:HB2	2.20	0.70
3:AC:266:LYS:HA	17:h:128:PRO:O	1.90	0.70
11:AK:134:PHE:HB3	20:k:106:LEU:N	2.07	0.70
12:AL:500:A:H4'	19:j:7:LEU:HD11	1.74	0.70
25:p:92:PRO:CA	29:t:96:TYR:CE2	2.73	0.70
32:w:205:LYS:O	32:w:206:ASP:C	2.34	0.70
46:A:816:A:H2'	46:A:817:G:C8	2.26	0.70
46:A:1344:U:H2'	46:A:1562:A:N3	2.05	0.70
46:A:2411:G:H2'	46:A:2412:A:H8	1.55	0.70
46:A:2443:C:H2'	46:A:2444:A:C8	2.26	0.70
6:AF:137:PHE:CD2	19:j:468:PRO:CA	2.73	0.70
6:AF:303:GLU:N	6:AF:304:ARG:HH21	1.89	0.70
7:AG:117:SER:HB3	16:g:83:THR:HG21	1.74	0.70
12:AL:232:U:H1'	31:v:78:VAL:CG1	2.20	0.70
12:AL:561:U:H3	12:AL:602:A:H61	1.38	0.70
25:p:85:ARG:NH1	29:t:115:TRP:HZ2	1.89	0.70
46:A:575:A:P	55:J:104:SER:HB2	2.30	0.70
46:A:1898:C:H2'	46:A:1899:C:H6	1.54	0.70
46:A:2455:A:C5'	50:E:237:GLY:HA3	2.21	0.70
6:AF:85:PRO:HG3	6:AF:134:LEU:HD23	1.74	0.70
9:AI:367:TYR:HD1	11:AK:278:ARG:NH2	1.81	0.70
11:AK:304:ALA:CA	24:o:152:GLY:HA3	2.22	0.70
16:g:251:VAL:CB	33:x:51:LYS:CA	2.64	0.70
16:g:278:PHE:HB3	16:g:296:ARG:H	1.57	0.70
21:l:4:GLU:O	21:l:96:ILE:HA	1.92	0.70
26:q:158:LYS:HB3	26:q:160:MET:HE3	1.71	0.70
31:v:49:PRO:HA	31:v:61:PRO:HB3	1.74	0.70
46:A:75:A:H2'	46:A:76:A:C8	2.26	0.70
46:A:1249:U:H2'	46:A:1250:U:C6	2.26	0.70
46:A:2853:A:H5'	46:A:2853:A:C8	2.26	0.70
1:AA:83:LYS:O	1:AA:86:LYS:HB3	1.91	0.70
3:AC:264:ILE:HG22	17:h:132:LEU:CD2	2.16	0.70
5:AE:45:LYS:HA	5:AE:48:LEU:HD12	1.72	0.70
7:AG:217:LEU:CD1	16:g:273:MET:HB3	2.21	0.70
9:AI:305:TYR:HD1	28:s:43:PRO:HD2	1.56	0.70
12:AL:1544:U:H2'	12:AL:1545:U:C6	2.26	0.70
13:AM:36:U:C2	14:AN:8:A:N6	2.55	0.70
18:i:146:LEU:HD13	25:p:132:SER:HB2	1.73	0.70
32:w:76:GLU:HG2	32:w:77:ILE:H	1.55	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:z:89:ALA:O	35:z:92:SER:HB2	1.91	0.70
46:A:142:A:H2'	46:A:143:A:H8	1.57	0.70
46:A:217:A:H5'	64:S:47:HIS:HE1	1.57	0.70
46:A:265:C:H2'	46:A:266:A:O4'	1.91	0.70
46:A:511:G:H2'	46:A:512:U:C6	2.25	0.70
5:AE:278:TYR:CZ	5:AE:282:ARG:HG2	2.27	0.70
8:AH:208:GLU:CB	30:u:134:ARG:HD3	2.21	0.70
10:AJ:19:PHE:HD1	11:AK:226:ARG:HH12	1.34	0.70
11:AK:112:GLU:CG	18:i:127:LEU:CD2	2.69	0.70
11:AK:299:LYS:HE2	24:o:151:PHE:HD1	1.55	0.70
12:AL:514:U:H2'	12:AL:515:A:H8	1.56	0.70
12:AL:521:A:H5'	31:v:46:VAL:HA	1.74	0.70
12:AL:758:G:H5'	14:AN:12:A:H2'	1.72	0.70
18:i:88:ASN:HA	25:p:53:GLU:OE2	1.92	0.70
20:k:169:LEU:HD22	20:k:181:LEU:HD12	1.72	0.70
21:l:6:ILE:HD13	33:x:94:ALA:CB	2.21	0.70
32:w:20:VAL:O	32:w:45:VAL:N	2.22	0.70
46:A:636:G:O2'	46:A:639:G:H1'	1.91	0.70
46:A:854:A:H2'	46:A:855:U:C6	2.27	0.70
46:A:2410:U:H2'	46:A:2411:G:H8	1.55	0.70
63:R:259:SER:HB2	63:R:269:TYR:HA	1.72	0.70
69:X:47:VAL:CG1	72:b:129:VAL:HG11	2.22	0.70
75:e:66:MET:CE	75:e:150:VAL:HA	2.21	0.70
3:AC:191:ILE:CD1	4:AD:222:GLN:HG3	2.20	0.70
4:AD:163:ILE:HG23	7:AG:193:GLU:OE1	1.92	0.70
11:AK:142:GLN:HE22	18:i:210:LEU:CD2	2.04	0.70
11:AK:145:VAL:CG2	20:k:68:PHE:CZ	2.73	0.70
11:AK:161:GLU:CG	25:p:127:TYR:OH	2.40	0.70
12:AL:1436:U:O2'	25:p:87:THR:HG21	1.92	0.70
19:j:100:VAL:HA	19:j:103:LYS:HD3	1.72	0.70
22:m:123:ARG:CB	22:m:126:LYS:HZ3	1.94	0.70
32:w:189:ARG:NH1	32:w:203:PHE:HB3	2.05	0.70
46:A:2259:U:H2'	46:A:2260:A:C8	2.27	0.70
46:A:2731:C:H2'	46:A:2732:G:H8	1.57	0.70
46:A:3010:U:H2'	46:A:3011:U:C6	2.26	0.70
61:P:169:ILE:HD12	68:W:148:LEU:HD11	1.74	0.70
2:AB:44:PHE:HA	2:AB:47:LYS:HB3	1.73	0.70
6:AF:88:ILE:CD1	19:j:28:LEU:HD21	2.21	0.70
7:AG:213:GLU:OE1	16:g:230:ARG:HD2	1.91	0.70
11:AK:165:LEU:HD22	25:p:127:TYR:HE2	1.56	0.70
12:AL:44:U:O4	12:AL:401:A:N1	2.25	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:532:U:H2'	12:AL:533:A:H8	1.57	0.70
12:AL:656:G:H2'	12:AL:657:G:H8	1.56	0.70
12:AL:785:A:C2	33:x:109:ILE:HG13	2.27	0.70
12:AL:828:A:H2'	12:AL:829:U:C6	2.27	0.70
12:AL:1424:A:H2'	12:AL:1425:A:C8	2.27	0.70
32:w:196:ASN:HB3	32:w:199:LYS:HB2	1.73	0.70
37:1:121:PHE:CA	46:A:2349:A:C8	2.75	0.70
46:A:941:U:H2'	46:A:942:A:C8	2.27	0.70
18:i:146:LEU:HD13	25:p:132:SER:CB	2.19	0.70
27:r:115:CYS:O	27:r:117:ASP:N	2.25	0.70
46:A:547:A:H2'	46:A:548:A:C8	2.27	0.70
46:A:2234:U:H2'	46:A:2235:A:O4'	1.92	0.70
46:A:2477:U:H2'	46:A:2478:C:C5	2.27	0.70
46:A:3108:U:H2'	46:A:3109:U:H6	1.56	0.70
2:AB:79:VAL:O	2:AB:80:ASN:C	2.34	0.70
4:AD:231:ALA:HB3	4:AD:235:GLY:HA2	1.74	0.70
6:AF:178:LYS:NZ	19:j:459:ARG:HH22	1.88	0.70
6:AF:314:VAL:CG1	8:AH:18:THR:HG21	2.21	0.70
7:AG:29:TRP:CE2	17:h:341:PRO:HD3	2.27	0.70
8:AH:231:PHE:C	8:AH:233:ASP:H	2.00	0.70
9:AI:367:TYR:CD1	11:AK:278:ARG:NH2	2.57	0.70
12:AL:1059:A:OP1	29:t:5:ARG:HB3	1.91	0.70
12:AL:1378:U:H2'	12:AL:1379:A:H8	1.55	0.70
15:Z:23:ILE:O	15:Z:24:ARG:HB2	1.91	0.70
21:l:2:LEU:HD13	21:l:72:ASP:CG	2.16	0.70
21:l:2:LEU:HA	21:l:72:ASP:OD1	1.91	0.70
27:r:61:VAL:HG22	27:r:107:ILE:HG12	1.73	0.70
46:A:85:A:H2'	46:A:86:U:H6	1.57	0.70
46:A:1006:U:H1'	46:A:1007:U:C4'	2.22	0.70
46:A:1059:A:H2'	46:A:1060:U:C6	2.27	0.70
46:A:1619:G:H5"	54:I:5:LYS:O	1.92	0.70
46:A:1706:G:C4	47:B:265:PHE:CE1	2.79	0.70
46:A:2303:G:H5'	56:K:132:LYS:HD2	1.73	0.70
6:AF:88:ILE:HD11	19:j:28:LEU:HD21	1.73	0.69
9:AI:151:GLU:N	9:AI:154:VAL:HG11	2.06	0.69
12:AL:1632:A:C6	33:x:67:LEU:CD1	2.74	0.69
18:i:93:TRP:NE1	29:t:109:GLY:HA2	1.95	0.69
25:p:85:ARG:NH1	29:t:115:TRP:CZ2	2.59	0.69
38:2:47:SER:CA	46:A:2425:A:H5'	2.21	0.69
46:A:1009:U:O4'	76:f:134:SER:HB2	1.92	0.69
46:A:2332:U:H5'	63:R:322:ARG:NH1	2.07	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2378:A:N6	46:A:2422:A:C5	2.60	0.69
46:A:2739:U:O4	51:F:212:LYS:NZ	2.25	0.69
46:A:2861:U:H2'	46:A:2862:G:H8	1.57	0.69
46:A:3151:A:H3'	46:A:3152:A:C5'	2.19	0.69
4:AD:151:GLU:O	16:g:210:LEU:HD21	1.92	0.69
6:AF:70:GLU:HG3	19:j:426:LYS:HZ1	0.87	0.69
7:AG:32:VAL:CG1	17:h:235:VAL:HA	2.21	0.69
12:AL:485:A:H2'	12:AL:486:U:H6	1.56	0.69
12:AL:507:C:OP1	19:j:167:SER:HA	1.92	0.69
12:AL:794:A:H2'	12:AL:795:A:C8	2.27	0.69
12:AL:994:A:H2'	12:AL:995:C:H5"	1.73	0.69
18:i:146:LEU:HD12	25:p:132:SER:CB	2.21	0.69
18:i:153:PHE:CE1	18:i:207:PRO:HB3	2.27	0.69
18:i:302:ILE:CG2	25:p:20:TYR:CE1	2.75	0.69
18:i:302:ILE:HD13	25:p:20:TYR:CD2	2.23	0.69
21:l:6:ILE:HG23	21:l:45:MET:HE1	1.73	0.69
26:q:76:TYR:O	26:q:165:ILE:HA	1.92	0.69
46:A:136:A:H2'	46:A:137:A:C8	2.27	0.69
46:A:1932:G:C2	48:C:209:GLN:CD	2.70	0.69
3:AC:86:ILE:HG22	17:h:162:ALA:HB2	1.75	0.69
3:AC:169:ASN:HB3	7:AG:197:PHE:CZ	2.27	0.69
3:AC:228:ASP:CB	4:AD:277:PRO:CB	2.70	0.69
8:AH:16:PRO:HB3	31:v:35:LYS:HE2	1.71	0.69
12:AL:1009:G:N1	12:AL:1406:G:OP2	2.23	0.69
30:u:66:PRO:HD2	30:u:251:TYR:CE2	2.27	0.69
41:5:201:LYS:HB3	46:A:443:U:C2	2.26	0.69
46:A:137:A:H2'	46:A:138:U:C6	2.27	0.69
46:A:834:A:HO2'	46:A:835:A:H8	1.40	0.69
46:A:1932:G:H21	48:C:209:GLN:HE21	1.40	0.69
46:A:2210:A:H2'	46:A:2211:U:H6	1.56	0.69
46:A:2857:A:H2'	46:A:2858:C:C6	2.27	0.69
63:R:295:LYS:N	63:R:371:LEU:HB3	2.06	0.69
7:AG:3:ILE:HD13	23:n:20:ARG:CD	2.19	0.69
7:AG:127:ILE:CG1	16:g:11:ARG:HH12	2.05	0.69
7:AG:206:ILE:CG1	16:g:92:GLU:OE1	2.39	0.69
8:AH:224:PHE:HB2	21:l:18:LYS:HG2	1.75	0.69
11:AK:107:LEU:HB3	18:i:172:TYR:HB3	1.73	0.69
11:AK:137:LEU:O	18:i:215:LEU:HD21	1.92	0.69
12:AL:825:G:H2'	12:AL:826:G:H5'	1.75	0.69
15:Z:62:THR:HA	15:Z:66:ALA:HA	1.73	0.69
18:i:302:ILE:HD11	25:p:25:GLU:CB	2.22	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:i:368:LEU:CD1	29:t:111:LYS:HG3	2.11	0.69
34:y:36:ASN:HB2	34:y:59:TYR:HE2	1.56	0.69
40:4:33:TRP:CH2	46:A:1274:A:C8	2.80	0.69
46:A:370:C:H2'	46:A:371:U:H6	1.56	0.69
46:A:1523:A:C2'	46:A:1524:U:H5'	2.22	0.69
46:A:1657:A:H2'	46:A:1658:G:H8	1.58	0.69
46:A:2824:G:H2'	46:A:2825:U:H6	1.56	0.69
8:AH:199:LEU:CD2	30:u:93:TYR:OH	2.39	0.69
8:AH:199:LEU:HD23	30:u:93:TYR:OH	1.92	0.69
8:AH:223:VAL:HG11	21:l:44:PRO:CD	2.22	0.69
9:AI:310:ASN:ND2	28:s:34:LYS:HG2	2.06	0.69
11:AK:99:VAL:CB	18:i:171:TYR:HE2	2.04	0.69
12:AL:863:G:H2'	12:AL:864:U:H6	1.57	0.69
15:Z:89:ILE:CG2	35:z:165:LEU:CD1	2.70	0.69
18:i:238:THR:HB	20:k:121:LYS:HZ3	1.58	0.69
39:3:24:TYR:CG	46:A:1911:U:H4'	2.27	0.69
42:6:66:TYR:CB	46:A:2424:U:C5	2.76	0.69
46:A:1350:U:O4	62:Q:5:TYR:CE2	2.45	0.69
46:A:2442:A:H2'	46:A:2443:C:H6	1.58	0.69
75:e:66:MET:CG	75:e:149:GLN:HB2	2.21	0.69
3:AC:169:ASN:OD1	7:AG:197:PHE:CE1	2.45	0.69
7:AG:1:MET:CE	17:h:351:GLU:CG	2.69	0.69
10:AJ:24:ASN:HB3	12:AL:1312:U:O2'	1.93	0.69
10:AJ:58:HIS:O	10:AJ:59:LEU:CB	2.41	0.69
11:AK:115:ALA:CB	18:i:172:TYR:OH	2.41	0.69
11:AK:134:PHE:CE2	20:k:106:LEU:HB2	2.27	0.69
11:AK:142:GLN:HE22	18:i:210:LEU:HD21	1.58	0.69
30:u:127:ASP:HB3	30:u:130:LYS:HD3	1.73	0.69
32:w:115:GLU:O	32:w:116:ASN:C	2.35	0.69
46:A:375:A:H2'	46:A:376:A:C8	2.27	0.69
46:A:1490:A:H2	46:A:1523:A:H2	1.39	0.69
46:A:1664:A:H3'	46:A:1665:G:N2	2.06	0.69
46:A:2245:U:H2'	46:A:2246:A:C8	2.28	0.69
63:R:331:GLU:HB3	63:R:362:ARG:HH11	1.55	0.69
3:AC:59:GLU:O	17:h:164:ILE:CG1	2.40	0.69
3:AC:72:GLY:O	3:AC:73:ASN:C	2.36	0.69
6:AF:308:LYS:HD2	31:v:62:ILE:HD12	0.70	0.69
8:AH:50:ALA:HB3	32:w:75:ALA:C	2.15	0.69
8:AH:231:PHE:HZ	21:l:48:ARG:CD	1.88	0.69
11:AK:75:ARG:NH1	18:i:185:ASN:O	2.25	0.69
12:AL:239:A:H5"	32:w:71:PHE:CD2	2.28	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:692:A:H61	12:AL:823:G:H1'	1.57	0.69
17:h:299:ASP:OD1	24:o:36:ARG:NH1	2.24	0.69
21:l:6:ILE:HG12	21:l:68:LEU:HD12	1.73	0.69
21:l:95:SER:OG	33:x:135:ILE:HD13	1.91	0.69
27:r:85:LEU:HD21	27:r:110:VAL:HG21	1.74	0.69
30:u:74:PRO:O	30:u:75:PHE:C	2.36	0.69
32:w:160:THR:HA	32:w:163:GLN:CG	2.22	0.69
46:A:8:G:H2'	46:A:9:U:C6	2.27	0.69
46:A:425:A:H62	46:A:1943:C:H5'	1.56	0.69
46:A:1009:U:O4'	76:f:134:SER:CB	2.41	0.69
46:A:1439:A:C2	46:A:1440:U:C2	2.81	0.69
46:A:1775:A:H2'	46:A:1776:A:H8	1.55	0.69
1:AA:105:ARG:NH1	1:AA:107:LEU:HD23	1.99	0.69
2:AB:114:GLU:HG2	12:AL:67:A:O2'	1.92	0.69
4:AD:118:GLN:HB3	4:AD:124:ARG:HH12	1.56	0.69
5:AE:149:SER:HA	5:AE:153:ILE:HB	1.75	0.69
6:AF:62:LEU:CD1	19:j:26:PHE:CZ	2.51	0.69
6:AF:216:PHE:CE2	19:j:437:LEU:HD11	2.28	0.69
7:AG:3:ILE:HD13	23:n:20:ARG:HH11	1.55	0.69
9:AI:102:LYS:HA	12:AL:1350:U:O2	1.92	0.69
9:AI:106:HIS:HB2	9:AI:215:ALA:HB2	1.75	0.69
9:AI:186:GLY:O	28:s:43:PRO:HG2	1.92	0.69
9:AI:435:ASN:HD21	24:o:176:ILE:N	1.85	0.69
12:AL:632:C:H5'	12:AL:633:C:C6	2.27	0.69
12:AL:1384:G:H5"	29:t:42:LYS:NZ	2.08	0.69
12:AL:1642:U:O2	24:o:66:ILE:HG21	1.91	0.69
18:i:204:THR:HG22	20:k:84:ASN:HD21	1.56	0.69
20:k:25:TYR:HB3	20:k:26:PRO:HD2	1.73	0.69
22:m:101:LEU:O	22:m:102:LYS:C	2.36	0.69
30:u:174:SER:HA	30:u:215:ILE:HD11	1.74	0.69
46:A:160:U:H2'	46:A:161:U:O4'	1.93	0.69
46:A:311:A:H5"	62:Q:260:HIS:CD2	2.27	0.69
46:A:702:U:C4	55:J:79:ARG:CZ	2.76	0.69
46:A:801:U:H2'	46:A:802:U:H6	1.54	0.69
46:A:853:U:H2'	46:A:854:A:C8	2.27	0.69
46:A:947:G:C6	46:A:1107:U:C5	2.81	0.69
46:A:1131:C:H1'	46:A:1139:G:N2	2.07	0.69
46:A:1746:C:N4	46:A:1799:U:H2'	2.07	0.69
46:A:2350:U:H2'	46:A:2351:A:C8	2.28	0.69
46:A:2576:A:H2'	46:A:2577:A:H8	1.58	0.69
46:A:2876:U:H3'	46:A:2876:U:P	2.33	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:3109:U:H2'	46:A:3110:U:C6	2.28	0.69
63:R:46:ARG:HD2	63:R:46:ARG:N	2.07	0.69
76:f:51:GLN:HB3	76:f:54:VAL:HG13	1.74	0.69
3:AC:217:TRP:CD1	17:h:146:LEU:HD11	2.27	0.69
3:AC:217:TRP:HE1	17:h:146:LEU:CD2	1.99	0.69
7:AG:67:PRO:HB2	32:w:187:GLN:HE22	1.58	0.69
9:AI:287:ILE:HG13	9:AI:334:PHE:CD1	2.27	0.69
10:AJ:84:LYS:CE	12:AL:1091:A:O2'	2.41	0.69
12:AL:44:U:C2'	12:AL:45:A:OP2	2.40	0.69
12:AL:863:G:H2'	12:AL:864:U:C6	2.28	0.69
21:l:1:MET:SD	30:u:148:GLU:HG2	2.33	0.69
27:r:55:CYS:SG	27:r:58:ARG:HD2	2.32	0.69
28:s:109:LYS:HA	28:s:112:ARG:HD2	1.73	0.69
46:A:1249:U:H2'	46:A:1250:U:H6	1.58	0.69
46:A:1649:C:H5'	46:A:1649:C:H6	1.58	0.69
46:A:1770:U:OP1	46:A:1770:U:H4'	1.92	0.69
46:A:2069:U:H2'	46:A:2070:U:H6	1.56	0.69
56:K:58:VAL:HG11	73:c:104:LYS:HB2	1.74	0.69
63:R:193:LEU:HD21	63:R:250:CYS:HB3	1.75	0.69
3:AC:9:HIS:HD1	17:h:164:ILE:HD13	1.51	0.69
3:AC:156:VAL:HG12	3:AC:220:PRO:HA	1.74	0.69
7:AG:120:LYS:HE3	16:g:14:GLN:HB3	1.74	0.69
11:AK:206:THR:HA	11:AK:209:LEU:HD12	1.73	0.69
12:AL:761:A:H3'	12:AL:762:U:H6	1.57	0.69
12:AL:1555:U:H2'	12:AL:1556:U:H5"	1.75	0.69
16:g:272:ARG:HH12	33:x:48:LYS:HA	1.56	0.69
18:i:211:SER:C	18:i:212:TYR:CG	2.71	0.69
46:A:320:U:H2'	46:A:321:A:H8	1.58	0.69
46:A:951:A:H4'	46:A:952:A:OP1	1.93	0.69
46:A:1485:A:H2'	46:A:1486:U:C6	2.28	0.69
46:A:1521:U:H2'	46:A:1522:A:H8	1.57	0.69
46:A:1815:U:H2'	46:A:1816:A:H8	1.57	0.69
46:A:2247:A:H4'	47:B:260:VAL:HG23	1.75	0.69
46:A:2941:A:H2'	46:A:2942:A:H8	1.57	0.69
63:R:261:ASN:HD22	63:R:267:HIS:HD2	1.41	0.69
7:AG:120:LYS:HB3	16:g:34:GLN:NE2	2.07	0.68
17:h:290:TRP:CZ3	24:o:49:PRO:CG	2.75	0.68
17:h:302:THR:HG21	24:o:35:ARG:HD3	1.69	0.68
20:k:59:LEU:CG	25:p:20:TYR:OH	2.41	0.68
26:q:193:LYS:C	35:z:110:LYS:HE2	2.17	0.68
33:x:103:VAL:C	33:x:105:SER:H	2.00	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:5:242:ILE:HD11	60:O:117:LYS:HB2	1.74	0.68
46:A:991:U:H1'	46:A:1036:U:H4'	1.75	0.68
46:A:1411:A:C8	61:P:58:VAL:CG2	2.76	0.68
46:A:1865:C:H5"	46:A:1866:A:H2'	1.75	0.68
46:A:2246:A:H2'	46:A:2247:A:C8	2.28	0.68
46:A:2748:U:H2'	46:A:2749:A:C8	2.28	0.68
47:B:145:GLY:HA3	47:B:330:ARG:HG3	1.75	0.68
3:AC:185:LEU:CD1	7:AG:196:MET:CA	2.65	0.68
6:AF:58:MET:HG2	19:j:11:LEU:CD2	2.24	0.68
12:AL:782:C:H2'	12:AL:783:U:C6	2.27	0.68
12:AL:1497:U:H2'	12:AL:1498:C:C6	2.28	0.68
18:i:251:LEU:CD2	20:k:107:PRO:HG2	2.23	0.68
18:i:367:LYS:HG3	18:i:373:SER:HA	1.75	0.68
20:k:59:LEU:CG	25:p:20:TYR:CE2	2.62	0.68
37:1:184:PHE:O	63:R:200:ARG:NH1	2.25	0.68
46:A:2220:U:H2'	46:A:2221:A:H5"	1.76	0.68
2:AB:38:VAL:HG13	2:AB:43:ALA:HB3	1.74	0.68
6:AF:37:TYR:OH	19:j:29:TYR:CE2	2.45	0.68
6:AF:67:TYR:CE2	19:j:181:LEU:HD11	2.29	0.68
6:AF:137:PHE:CE2	19:j:468:PRO:N	2.60	0.68
8:AH:189:PHE:CE1	32:w:173:GLU:CG	2.76	0.68
9:AI:118:LEU:HD22	9:AI:411:VAL:CG1	2.24	0.68
11:AK:135:ASP:N	20:k:105:ILE:H	1.90	0.68
12:AL:637:A:C2	27:r:116:GLN:CB	2.76	0.68
12:AL:976:U:OP1	27:r:122:LYS:HD3	1.93	0.68
16:g:272:ARG:NH2	33:x:48:LYS:HA	2.07	0.68
16:g:281:LEU:HB2	16:g:294:HIS:HB2	1.75	0.68
25:p:102:PHE:HE2	29:t:103:LEU:CD2	2.06	0.68
46:A:14:U:H2'	46:A:15:A:H8	1.57	0.68
46:A:1266:U:H2'	46:A:1267:A:C8	2.27	0.68
46:A:1752:U:H2'	46:A:1753:U:C6	2.29	0.68
46:A:1920:A:H61	46:A:1934:U:H3	1.41	0.68
46:A:2088:A:H2'	46:A:2089:U:H6	1.57	0.68
46:A:2317:A:C2	69:X:65:PHE:CD1	2.81	0.68
46:A:2705:A:H5'	46:A:2705:A:H8	1.58	0.68
4:AD:253:TYR:HE2	16:g:298:LEU:O	1.73	0.68
6:AF:44:ARG:HH22	12:AL:495:U:H5'	1.56	0.68
12:AL:764:A:H62	12:AL:864:U:H4'	1.59	0.68
16:g:3:LEU:HD12	17:h:211:TYR:HE2	1.56	0.68
18:i:82:ASN:ND2	20:k:57:PRO:CB	2.49	0.68
18:i:101:ASN:HB2	18:i:104:MET:HB3	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:i:180:MET:SD	20:k:92:TRP:CG	2.87	0.68
30:u:174:SER:HB2	30:u:219:LEU:HD22	1.75	0.68
30:u:220:LYS:HB2	30:u:227:TYR:CD1	2.28	0.68
35:z:110:LYS:O	35:z:111:ASN:C	2.36	0.68
46:A:218:A:C2	46:A:219:U:H1'	2.28	0.68
46:A:418:A:H2'	46:A:419:U:C6	2.28	0.68
46:A:1960:A:H3'	49:D:109:LYS:HZ1	1.55	0.68
46:A:2090:U:H2'	46:A:2091:C:H6	1.57	0.68
55:J:144:LYS:HB3	55:J:146:ARG:HG3	1.76	0.68
75:e:65:SER:O	75:e:143:GLU:OE2	2.11	0.68
4:AD:67:LEU:HB3	4:AD:77:LYS:CE	2.22	0.68
7:AG:117:SER:OG	16:g:31:PRO:HG3	1.94	0.68
7:AG:204:SER:H	7:AG:207:GLU:HB2	1.56	0.68
11:AK:134:PHE:CD2	20:k:106:LEU:CB	2.77	0.68
11:AK:172:TYR:HD2	25:p:116:THR:N	1.91	0.68
12:AL:940:U:H1'	23:n:15:ASN:OD1	1.94	0.68
12:AL:1220:A:C4'	29:t:112:LYS:NZ	2.53	0.68
26:q:126:LEU:HD21	26:q:131:LEU:HD23	1.76	0.68
34:y:71:HIS:HB3	34:y:76:PHE:HE1	1.59	0.68
37:1:73:ILE:CG1	42:6:47:LYS:HB3	2.24	0.68
37:1:234:PRO:HB3	63:R:129:PHE:CE1	2.29	0.68
46:A:217:A:H5'	64:S:47:HIS:CE1	2.29	0.68
46:A:614:A:H3'	46:A:614:A:OP2	1.93	0.68
46:A:657:U:H2'	46:A:658:U:H6	1.57	0.68
46:A:2062:G:H3'	46:A:2063:A:C5'	2.23	0.68
46:A:2644:A:H2'	46:A:2645:A:H8	1.55	0.68
5:AE:68:PRO:CG	12:AL:1543:A:P	2.82	0.68
5:AE:248:LEU:HD12	5:AE:249:GLN:H	1.58	0.68
5:AE:286:ASP:CB	5:AE:315:TYR:CE2	2.76	0.68
6:AF:62:LEU:CG	19:j:26:PHE:CZ	2.76	0.68
7:AG:60:LEU:CD2	23:n:70:THR:CB	2.72	0.68
7:AG:77:THR:HG22	8:AH:179:LYS:HD2	1.75	0.68
11:AK:304:ALA:CA	24:o:152:GLY:CA	2.72	0.68
12:AL:720:U:H2'	12:AL:721:U:C6	2.29	0.68
12:AL:740:A:C2	26:q:208:GLY:HA3	2.27	0.68
12:AL:1213:G:C8	24:o:247:HIS:HE1	2.11	0.68
32:w:12:SER:O	32:w:20:VAL:HG22	1.94	0.68
42:6:95:PHE:N	46:A:2324:U:O2	2.16	0.68
46:A:827:U:H2'	46:A:828:A:H8	1.57	0.68
46:A:931:U:C4	46:A:1119:A:C4	2.82	0.68
46:A:1105:U:H2'	46:A:1106:C:C6	2.28	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1509:U:H2'	46:A:1510:A:H8	1.59	0.68
46:A:1516:U:H5"	65:T:29:LEU:HD22	1.76	0.68
46:A:1657:A:H2'	46:A:1658:G:C8	2.29	0.68
46:A:1871:U:H5"	47:B:353:LYS:HE3	1.75	0.68
46:A:1925:U:H2'	46:A:1926:A:C8	2.29	0.68
46:A:2004:U:H2'	46:A:2005:U:C5	2.28	0.68
46:A:2415:A:H2'	46:A:2416:U:C5	2.28	0.68
62:Q:270:ARG:NH2	72:b:35:LYS:O	2.25	0.68
3:AC:78:ASN:N	7:AG:190:ALA:CB	2.57	0.68
5:AE:87:PRO:O	5:AE:89:GLN:HG3	1.92	0.68
5:AE:211:LEU:HD13	5:AE:235:LEU:HD23	1.74	0.68
8:AH:103:ARG:NH2	31:v:79:GLY:C	2.37	0.68
8:AH:223:VAL:HG12	21:l:44:PRO:CG	1.96	0.68
8:AH:224:PHE:O	21:l:18:LYS:NZ	2.27	0.68
11:AK:155:ASN:HD21	20:k:56:PRO:CD	2.00	0.68
12:AL:77:U:H2'	12:AL:78:U:C6	2.28	0.68
15:Z:88:ARG:HH12	35:z:172:ALA:CB	2.07	0.68
15:Z:89:ILE:CD1	35:z:168:ILE:CB	2.71	0.68
18:i:150:ASN:OD1	20:k:78:LEU:N	2.26	0.68
21:l:8:LEU:HD11	33:x:136:GLY:C	2.17	0.68
29:t:42:LYS:HB3	29:t:46:ARG:NH1	2.08	0.68
46:A:224:U:H2'	46:A:225:A:H8	1.59	0.68
46:A:1105:U:H2'	46:A:1106:C:H6	1.59	0.68
46:A:2026:G:H22	46:A:2070:U:H3	1.40	0.68
46:A:2232:A:H2'	46:A:2233:U:C6	2.28	0.68
46:A:2927:C:OP1	51:F:211:LYS:HE2	1.93	0.68
46:A:3139:A:OP1	48:C:177:PHE:HB2	1.94	0.68
3:AC:228:ASP:OD2	4:AD:277:PRO:HD2	1.91	0.68
4:AD:123:ASN:HD22	16:g:105:ASN:CA	2.06	0.68
7:AG:22:LEU:CD2	20:k:139:TYR:CE2	2.77	0.68
8:AH:22:LEU:H	8:AH:114:GLU:HG2	1.59	0.68
8:AH:202:LEU:HB3	21:l:121:LEU:CD2	2.23	0.68
8:AH:231:PHE:HE2	33:x:96:PRO:HD2	1.56	0.68
18:i:206:GLU:HB3	20:k:76:PRO:O	1.93	0.68
19:j:69:PHE:HZ	19:j:482:LEU:HD23	1.57	0.68
29:t:60:LEU:HB2	34:y:18:ILE:HG21	1.76	0.68
39:3:67:PHE:HB3	46:A:1404:A:N7	2.08	0.68
46:A:547:A:H2'	46:A:548:A:H8	1.56	0.68
46:A:1006:U:O4	76:f:135:LEU:HD21	1.93	0.68
46:A:1324:U:H2'	46:A:1325:U:C6	2.28	0.68
46:A:1780:U:H2'	46:A:1781:A:C8	2.29	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1932:G:N2	48:C:209:GLN:HE21	1.92	0.68
46:A:1996:A:N6	46:A:2090:U:H3	1.91	0.68
46:A:2259:U:H2'	46:A:2260:A:H8	1.56	0.68
46:A:2333:A:O2'	63:R:326:LYS:HB3	1.94	0.68
7:AG:117:SER:HB3	16:g:83:THR:HG22	1.75	0.68
17:h:294:GLU:HA	24:o:37:ILE:HA	1.74	0.68
21:l:56:LYS:HB2	21:l:92:ILE:HG23	1.76	0.68
22:m:97:GLN:HA	22:m:100:ALA:HB3	1.74	0.68
31:v:25:VAL:HG21	31:v:75:TRP:CD1	2.28	0.68
46:A:311:A:H5"	62:Q:260:HIS:NE2	2.09	0.68
46:A:939:A:H2'	46:A:940:A:H8	1.59	0.68
46:A:1011:A:C5	76:f:50:TYR:OH	2.43	0.68
46:A:1059:A:H2'	46:A:1060:U:H6	1.57	0.68
46:A:1766:A:H2'	46:A:1767:A:C8	2.29	0.68
46:A:2943:U:H2'	46:A:2944:C:H6	1.58	0.68
46:A:3152:A:H2'	46:A:3153:U:C6	2.28	0.68
46:A:3171:A:H5"	46:A:3173:U:O4'	1.94	0.68
3:AC:61:TYR:OH	16:g:40:PRO:CD	2.42	0.68
4:AD:210:PHE:C	4:AD:212:THR:N	2.51	0.68
11:AK:174:ARG:CG	25:p:38:TYR:CD2	2.76	0.68
12:AL:44:U:O2'	12:AL:45:A:H8	1.76	0.68
12:AL:271:U:OP1	32:w:68:LYS:HA	1.94	0.68
13:AM:62:C:H2'	13:AM:63:C:C6	2.29	0.68
17:h:316:LYS:NZ	20:k:134:GLY:HA3	2.08	0.68
29:t:63:ASN:ND2	34:y:18:ILE:O	2.27	0.68
35:z:96:ALA:O	35:z:100:PHE:HB2	1.93	0.68
46:A:1006:U:C1'	46:A:1007:U:H4'	2.23	0.68
46:A:1978:C:H2'	46:A:1979:U:C6	2.29	0.68
46:A:2089:U:H2'	46:A:2090:U:H6	1.57	0.68
46:A:2330:A:N1	63:R:317:GLU:HG2	2.08	0.68
46:A:2352:A:H2'	46:A:2353:U:H6	1.57	0.68
46:A:2839:A:OP2	48:C:209:GLN:HB3	1.94	0.68
63:R:231:ARG:O	63:R:232:ARG:C	2.36	0.68
9:AI:56:LEU:CD1	22:m:211:ARG:HD2	2.24	0.67
9:AI:224:ILE:CG2	9:AI:282:GLN:HG2	2.24	0.67
9:AI:224:ILE:HG21	9:AI:282:GLN:HG2	1.76	0.67
11:AK:158:ALA:HB1	25:p:27:VAL:HG22	1.74	0.67
11:AK:165:LEU:CD2	25:p:127:TYR:CE2	2.77	0.67
12:AL:691:U:H2'	12:AL:692:A:H8	1.59	0.67
18:i:100:TYR:CZ	25:p:48:ARG:NH1	2.39	0.67
21:l:36:ARG:HB3	30:u:146:ASN:ND2	2.09	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:u:204:ASN:O	30:u:205:LEU:C	2.34	0.67
46:A:55:A:H2'	46:A:56:U:H6	1.58	0.67
46:A:71:A:H2'	46:A:72:U:H6	1.59	0.67
46:A:316:G:C8	64:S:128:LYS:HD2	2.29	0.67
46:A:356:U:H2'	46:A:357:C:C6	2.29	0.67
46:A:601:U:H3	46:A:661:G:H1	1.41	0.67
46:A:956:A:H2'	46:A:957:U:O4'	1.93	0.67
46:A:1163:A:H2'	46:A:1164:U:C6	2.29	0.67
46:A:1493:U:H2'	46:A:1494:A:H8	1.57	0.67
46:A:1523:A:H2'	46:A:1524:U:H5'	1.75	0.67
46:A:1728:U:C2	47:B:269:ALA:C	2.71	0.67
46:A:3014:C:H3'	46:A:3015:U:H6	1.59	0.67
46:A:3088:C:H2'	46:A:3089:A:O4'	1.95	0.67
46:A:3110:U:H2'	46:A:3111:A:H8	1.57	0.67
63:R:286:LEU:O	63:R:290:GLN:HB3	1.94	0.67
8:AH:49:TYR:C	32:w:59:ARG:NH2	2.52	0.67
11:AK:132:PHE:CE2	18:i:251:LEU:CD2	2.69	0.67
11:AK:304:ALA:CB	24:o:152:GLY:HA3	2.20	0.67
12:AL:226:C:H2'	12:AL:227:U:C6	2.29	0.67
12:AL:494:U:H4'	12:AL:495:U:OP1	1.94	0.67
12:AL:1172:A:N1	25:p:39:GLY:CA	2.57	0.67
12:AL:1373:A:O2'	12:AL:1399:G:N2	2.26	0.67
16:g:231:ILE:HG12	16:g:278:PHE:HZ	1.59	0.67
17:h:134:PRO:O	17:h:135:SER:C	2.37	0.67
18:i:368:LEU:CD1	29:t:111:LYS:HD3	1.79	0.67
46:A:2198:U:O4	64:S:227:TYR:HE2	1.78	0.67
46:A:2411:G:H2'	46:A:2412:A:C8	2.28	0.67
46:A:2470:A:H2'	46:A:2471:A:C8	2.29	0.67
47:B:201:ARG:HB3	47:B:202:PRO:HD2	1.75	0.67
59:N:103:LYS:HE2	59:N:105:VAL:HG11	1.75	0.67
76:f:63:LYS:HB3	76:f:64:PRO:HD2	1.76	0.67
3:AC:8:ILE:O	17:h:165:SER:N	2.24	0.67
3:AC:185:LEU:HD12	7:AG:195:GLU:O	1.92	0.67
6:AF:62:LEU:HD21	19:j:26:PHE:CZ	2.29	0.67
8:AH:60:HIS:HB3	12:AL:133:U:C4	2.29	0.67
9:AI:413:LEU:HD11	9:AI:449:HIS:CE1	2.29	0.67
11:AK:112:GLU:HG2	18:i:127:LEU:CD2	2.24	0.67
11:AK:169:ARG:HB3	25:p:70:GLY:CA	2.21	0.67
12:AL:271:U:OP1	32:w:68:LYS:CB	2.41	0.67
12:AL:1194:U:H2'	12:AL:1195:A:H8	1.57	0.67
16:g:199:GLU:HG3	16:g:200:ILE:HG12	1.76	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:v:12:ARG:NH2	31:v:12:ARG:HA	2.09	0.67
46:A:2301:C:C4’	63:R:37:THR:HG21	2.24	0.67
46:A:2918:A:H2’	46:A:2919:U:C6	2.29	0.67
4:AD:199:LEU:HD23	16:g:214:LEU:HD22	1.76	0.67
7:AG:22:LEU:HA	20:k:135:VAL:HG13	1.76	0.67
11:AK:152:ARG:NH1	18:i:311:ILE:CD1	2.57	0.67
12:AL:702:A:H2’	12:AL:703:U:C6	2.29	0.67
12:AL:1228:A:C5	18:i:341:ARG:NH2	2.58	0.67
16:g:85:TRP:CD1	16:g:86:ASN:N	2.63	0.67
19:j:144:LEU:HB3	19:j:452:TYR:CD2	2.29	0.67
26:q:188:GLY:O	26:q:192:VAL:HG23	1.95	0.67
26:q:198:ILE:CG2	35:z:106:ILE:HG13	2.12	0.67
28:s:2:VAL:HB	28:s:47:MET:HB3	1.76	0.67
32:w:88:TYR:O	32:w:91:GLU:HG2	1.95	0.67
39:3:36:VAL:HG11	46:A:393:C:OP1	1.95	0.67
46:A:1725:G:H5”	47:B:176:ARG:HH21	1.58	0.67
46:A:1827:A:H2’	46:A:1828:A:C8	2.29	0.67
46:A:2069:U:H2’	46:A:2070:U:C6	2.30	0.67
46:A:2842:U:H5”	48:C:208:ASN:ND2	2.08	0.67
3:AC:148:LEU:HD23	4:AD:203:ASN:CB	2.23	0.67
3:AC:169:ASN:CB	7:AG:197:PHE:HE1	2.08	0.67
7:AG:114:TRP:HZ2	16:g:87:ARG:HA	1.57	0.67
8:AH:209:PHE:HB3	8:AH:215:GLN:CD	2.20	0.67
8:AH:231:PHE:HB2	33:x:97:ARG:HD3	1.76	0.67
10:AJ:16:ALA:HA	10:AJ:21:GLN:CB	2.07	0.67
11:AK:140:GLN:NE2	18:i:321:TYR:CG	2.60	0.67
12:AL:911:U:H4’	12:AL:912:A:OP1	1.92	0.67
12:AL:1244:U:H4’	12:AL:1245:A:O5’	1.93	0.67
12:AL:1451:A:H2’	12:AL:1452:A:H8	1.58	0.67
19:j:416:ASP:HB3	19:j:423:THR:HG21	1.76	0.67
21:l:38:VAL:HB	30:u:141:ILE:CG1	2.24	0.67
27:r:86:THR:C	27:r:88:GLY:H	2.01	0.67
31:v:43:TYR:HE1	31:v:63:LYS:HD3	1.60	0.67
46:A:521:A:H2’	46:A:522:A:C8	2.29	0.67
46:A:666:G:N2	46:A:684:G:H1’	2.09	0.67
5:AE:218:VAL:HG22	5:AE:221:ARG:HG2	1.76	0.67
8:AH:21:ILE:HD11	31:v:74:TYR:HB2	1.76	0.67
9:AI:305:TYR:CD1	28:s:43:PRO:HD2	2.30	0.67
10:AJ:14:LEU:HD11	11:AK:222:LEU:HD21	1.72	0.67
11:AK:132:PHE:HD2	18:i:249:PRO:HD3	1.60	0.67
11:AK:142:GLN:OE1	18:i:154:TYR:HE2	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:252:HIS:CE1	25:p:150:LEU:H	2.11	0.67
12:AL:412:U:H2'	12:AL:413:G:H8	1.58	0.67
12:AL:500:A:C4'	19:j:7:LEU:HD11	2.24	0.67
12:AL:1558:U:H2'	12:AL:1559:A:C8	2.29	0.67
32:w:27:LYS:HG2	32:w:38:PHE:CE2	2.29	0.67
46:A:73:U:H2'	46:A:74:A:C8	2.28	0.67
46:A:1519:A:H8	46:A:3022:G:H22	1.38	0.67
47:B:197:CYS:SG	47:B:198:ASP:N	2.62	0.67
63:R:154:ALA:O	63:R:155:LYS:C	2.36	0.67
3:AC:217:TRP:HB3	17:h:149:ARG:NH2	2.10	0.67
8:AH:21:ILE:HG23	31:v:74:TYR:CD1	2.30	0.67
9:AI:298:LEU:HD22	9:AI:354:THR:HB	1.77	0.67
9:AI:450:ARG:O	22:m:114:LEU:HB2	1.95	0.67
11:AK:134:PHE:CD2	20:k:106:LEU:HB2	2.30	0.67
12:AL:658:G:OP1	19:j:50:GLN:CG	2.42	0.67
12:AL:811:U:H2'	12:AL:812:U:H6	1.59	0.67
12:AL:1214:A:C4'	24:o:252:LEU:O	2.40	0.67
12:AL:1548:U:H2'	12:AL:1549:A:C8	2.30	0.67
18:i:150:ASN:CG	20:k:78:LEU:N	2.53	0.67
19:j:404:LEU:HB2	19:j:407:GLN:HB2	1.77	0.67
25:p:104:ARG:NH1	29:t:91:PHE:CE1	2.62	0.67
46:A:92:A:O2'	46:A:93:U:H5"	1.95	0.67
46:A:750:U:H2'	46:A:751:A:C8	2.29	0.67
46:A:941:U:H2'	46:A:942:A:H8	1.58	0.67
46:A:1058:U:H2'	46:A:1059:A:O4'	1.94	0.67
46:A:1413:A:H61	46:A:1545:U:H3	1.41	0.67
46:A:1424:U:H2'	46:A:1425:U:O4'	1.94	0.67
46:A:1715:A:H5"	46:A:1716:U:C6	2.29	0.67
46:A:2323:A:N1	46:A:2370:A:H1'	2.10	0.67
1:AA:80:VAL:HG21	12:AL:1462:A:C5	2.30	0.67
2:AB:81:ILE:O	2:AB:84:ARG:N	2.24	0.67
3:AC:217:TRP:CG	17:h:146:LEU:HD11	2.29	0.67
5:AE:45:LYS:HB2	5:AE:105:PHE:CD2	2.30	0.67
5:AE:73:ILE:HA	5:AE:76:THR:CG2	2.24	0.67
8:AH:83:GLN:CG	12:AL:145:A:H5"	2.24	0.67
9:AI:177:ILE:HD13	9:AI:320:MET:HE1	1.77	0.67
12:AL:40:G:H2'	12:AL:41:C:C6	2.30	0.67
12:AL:656:G:H2'	12:AL:657:G:C8	2.30	0.67
14:AN:2:U:O2'	27:r:72:LYS:HE3	1.94	0.67
16:g:3:LEU:HD11	17:h:211:TYR:HD2	1.54	0.67
22:m:203:ARG:HB3	22:m:211:ARG:HD3	1.77	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:w:37:LEU:H	32:w:37:LEU:HD12	1.60	0.67
46:A:873:A:H2'	46:A:874:U:H6	1.58	0.67
46:A:1579:A:H5'	46:A:1579:A:H8	1.60	0.67
46:A:2231:U:H2'	46:A:2232:A:H8	1.56	0.67
50:E:249:ILE:HG22	50:E:253:GLN:OE1	1.94	0.67
3:AC:55:GLY:HA2	7:AG:121:ILE:CB	2.23	0.67
3:AC:228:ASP:CG	4:AD:277:PRO:CG	2.67	0.67
4:AD:213:SER:HA	4:AD:216:MET:CB	2.21	0.67
5:AE:69:LYS:HE2	5:AE:72:GLN:CB	2.25	0.67
5:AE:226:GLY:HA3	5:AE:252:ASP:O	1.95	0.67
7:AG:59:LYS:O	23:n:54:MET:HG3	1.95	0.67
7:AG:217:LEU:HD21	33:x:60:PHE:CE1	2.30	0.67
12:AL:46:A:H61	12:AL:407:U:H3	1.41	0.67
12:AL:691:U:H2'	12:AL:692:A:C8	2.30	0.67
12:AL:1251:U:OP1	29:t:67:ASN:HB3	1.94	0.67
15:Z:95:ASP:N	17:h:203:ARG:NH1	2.43	0.67
20:k:292:GLY:O	23:n:78:LYS:NZ	2.28	0.67
24:o:203:ILE:HD11	24:o:246:LEU:HD21	1.75	0.67
25:p:92:PRO:N	29:t:96:TYR:HE2	1.92	0.67
30:u:87:LEU:CD1	32:w:114:ARG:HH22	1.79	0.67
46:A:226:A:H2'	46:A:227:G:C8	2.30	0.67
46:A:756:A:C2	46:A:767:A:C4	2.82	0.67
6:AF:61:PHE:CD2	19:j:29:TYR:CE1	2.83	0.67
6:AF:204:ASP:OD2	19:j:158:LEU:HD13	1.94	0.67
7:AG:60:LEU:HD21	23:n:70:THR:CG2	2.23	0.67
8:AH:168:ARG:CG	23:n:65:PRO:HG2	2.21	0.67
12:AL:20:A:H2'	12:AL:21:U:C5'	2.24	0.67
12:AL:44:U:H2'	12:AL:45:A:OP2	1.94	0.67
12:AL:239:A:C5'	32:w:71:PHE:CD2	2.78	0.67
12:AL:804:U:H2'	12:AL:805:U:C6	2.30	0.67
12:AL:1215:A:OP1	24:o:253:THR:HG22	1.95	0.67
17:h:144:GLN:HE21	24:o:119:GLN:C	2.02	0.67
18:i:176:MET:HE1	20:k:93:ASP:CA	2.24	0.67
29:t:104:LYS:HD3	29:t:106:ASN:HD21	1.59	0.67
46:A:351:C:H2'	46:A:352:A:H8	1.59	0.67
46:A:601:U:H2'	46:A:602:A:C8	2.27	0.67
46:A:1128:U:H2'	46:A:1129:U:C6	2.29	0.67
46:A:1727:A:O3'	47:B:290:GLN:HG2	1.95	0.67
9:AI:107:LEU:HD11	9:AI:174:ILE:HD12	1.77	0.66
12:AL:71:A:H5'	12:AL:100:A:N6	2.07	0.66
12:AL:514:U:H2'	12:AL:515:A:C8	2.30	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1184:U:H4'	20:k:51:ASN:HD22	1.60	0.66
15:Z:94:HIS:HD2	17:h:203:ARG:HG3	0.92	0.66
17:h:293:GLN:O	24:o:38:VAL:N	2.28	0.66
30:u:169:GLY:O	30:u:171:THR:HG23	1.95	0.66
46:A:26:A:C6	71:a:112:TYR:HA	2.30	0.66
46:A:61:G:H1'	46:A:410:A:N6	2.10	0.66
46:A:375:A:H2'	46:A:376:A:H8	1.59	0.66
46:A:2089:U:H2'	46:A:2090:U:C6	2.29	0.66
46:A:2475:U:H2'	46:A:2476:C:H6	1.60	0.66
63:R:235:TRP:O	63:R:237:ASN:N	2.28	0.66
63:R:298:LYS:HB2	63:R:371:LEU:HD12	1.75	0.66
75:e:65:SER:O	75:e:149:GLN:OE1	2.14	0.66
4:AD:92:PHE:CZ	4:AD:269:PRO:HB2	2.30	0.66
5:AE:204:ALA:HB1	5:AE:205:GLU:OE1	1.95	0.66
8:AH:16:PRO:HG2	31:v:35:LYS:HG3	1.77	0.66
8:AH:199:LEU:HD11	30:u:142:LEU:HD11	1.77	0.66
11:AK:304:ALA:CB	24:o:152:GLY:HA2	2.25	0.66
12:AL:629:G:H2'	12:AL:630:U:H6	1.60	0.66
18:i:146:LEU:HD12	25:p:132:SER:OG	1.92	0.66
18:i:302:ILE:HG22	25:p:20:TYR:CZ	2.29	0.66
18:i:316:MET:HG3	20:k:69:TRP:HH2	1.55	0.66
22:m:203:ARG:CB	22:m:211:ARG:HD3	2.25	0.66
24:o:160:ARG:O	24:o:161:LYS:C	2.38	0.66
46:A:962:A:N6	46:A:1062:U:H3	1.91	0.66
46:A:1259:A:H2'	46:A:1260:U:C6	2.31	0.66
46:A:1648:U:OP1	47:B:97:LYS:NZ	2.26	0.66
47:B:210:ARG:HE	47:B:302:VAL:HB	1.60	0.66
7:AG:1:MET:CE	17:h:354:LEU:HD11	2.25	0.66
8:AH:29:GLN:HB3	8:AH:32:ILE:HB	1.76	0.66
10:AJ:84:LYS:NZ	12:AL:1091:A:O2'	2.29	0.66
12:AL:225:U:H2'	12:AL:226:C:H6	1.60	0.66
12:AL:419:U:H2'	12:AL:420:A:H8	1.59	0.66
12:AL:1524:U:H2'	12:AL:1525:A:H8	1.58	0.66
18:i:302:ILE:CD1	25:p:20:TYR:CE2	2.77	0.66
26:q:128:THR:HA	26:q:147:THR:HG21	1.77	0.66
28:s:26:GLY:CA	28:s:67:ILE:HA	2.13	0.66
45:9:98:HIS:HE1	46:A:3276:U:O2	1.78	0.66
46:A:659:G:H2'	46:A:660:U:C6	2.30	0.66
46:A:817:G:H8	46:A:817:G:O5'	1.79	0.66
46:A:1110:A:H2'	46:A:1111:U:O4'	1.94	0.66
46:A:2063:A:H3'	46:A:2064:G:H8	1.60	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2288:U:H2'	46:A:2289:C:H6	1.59	0.66
46:A:2839:A:H8	48:C:209:GLN:HG2	1.61	0.66
63:R:242:GLU:HA	63:R:245:SER:HB3	1.77	0.66
4:AD:143:ILE:HG23	4:AD:148:SER:HA	1.77	0.66
7:AG:213:GLU:OE2	16:g:230:ARG:CD	2.44	0.66
8:AH:224:PHE:CE1	21:l:22:LYS:CG	2.70	0.66
16:g:50:LEU:HD12	16:g:54:ILE:HD11	1.78	0.66
18:i:303:ASN:ND2	25:p:19:PRO:CA	2.50	0.66
18:i:311:ILE:HA	18:i:315:PRO:HG2	1.77	0.66
25:p:18:ARG:HG2	25:p:18:ARG:HH21	1.61	0.66
27:r:74:ASN:ND2	27:r:117:ASP:OD1	2.29	0.66
46:A:818:U:H3'	46:A:819:U:C6	2.31	0.66
46:A:1083:U:H2'	46:A:1084:U:H6	1.59	0.66
46:A:1533:G:H5'	47:B:149:ARG:O	1.94	0.66
46:A:1706:G:H1'	47:B:265:PHE:CE1	2.31	0.66
46:A:1725:G:C5'	47:B:176:ARG:HH21	2.08	0.66
46:A:1899:C:H2'	46:A:1900:U:C6	2.31	0.66
46:A:1907:U:H2'	46:A:1908:A:C8	2.30	0.66
46:A:2883:C:H2'	46:A:2884:U:C6	2.31	0.66
63:R:220:TYR:O	63:R:221:TYR:C	2.38	0.66
73:c:101:THR:HG23	73:c:113:ILE:HD13	1.78	0.66
75:e:66:MET:HE3	75:e:142:TYR:CD2	2.30	0.66
75:e:132:LEU:HD11	75:e:170:LYS:CG	2.24	0.66
5:AE:93:PRO:HD3	5:AE:95:LYS:HZ3	1.61	0.66
7:AG:124:GLU:OE2	17:h:190:SER:CA	2.44	0.66
8:AH:75:ILE:HG23	8:AH:108:ILE:HG12	1.76	0.66
8:AH:104:ARG:CD	12:AL:143:A:O4'	2.37	0.66
10:AJ:57:ARG:CG	12:AL:1061:U:H5"	2.25	0.66
11:AK:99:VAL:HB	18:i:171:TYR:HE2	1.58	0.66
12:AL:24:U:H1'	12:AL:1127:A:H1'	1.77	0.66
12:AL:25:G:H22	12:AL:983:A:H2	1.43	0.66
12:AL:1100:A:N1	12:AL:1104:U:C4	2.63	0.66
13:AM:12:U:O2'	46:A:1823:U:O4'	2.06	0.66
21:l:40:ARG:NE	21:l:72:ASP:OD2	2.28	0.66
37:1:121:PHE:CE1	46:A:2349:A:N6	2.64	0.66
46:A:985:A:H4'	76:f:151:SER:CA	2.26	0.66
46:A:1013:G:H4'	76:f:125:LYS:HZ1	1.59	0.66
46:A:2016:A:H1'	46:A:2019:A:H5"	1.78	0.66
46:A:2943:U:H2'	46:A:2944:C:C6	2.30	0.66
5:AE:65:ILE:HG23	5:AE:90:PRO:CA	2.25	0.66
7:AG:114:TRP:HD1	7:AG:118:ARG:HH21	1.44	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:127:ILE:HG12	16:g:11:ARG:HH12	1.60	0.66
8:AH:185:SER:CB	32:w:176:LEU:HD21	2.25	0.66
12:AL:515:A:H3'	12:AL:516:A:C8	2.31	0.66
12:AL:1385:A:H5"	29:t:42:LYS:HE3	1.78	0.66
18:i:148:LYS:HZ1	20:k:78:LEU:HA	0.84	0.66
18:i:211:SER:O	18:i:212:TYR:CD1	2.46	0.66
46:A:89:A:H2'	46:A:90:A:H8	1.60	0.66
46:A:200:G:C2'	46:A:201:A:H5'	2.26	0.66
46:A:657:U:H2'	46:A:658:U:C6	2.31	0.66
46:A:992:U:H2'	46:A:1037:A:H4'	1.75	0.66
46:A:1049:A:N7	75:e:111:LEU:HD21	2.10	0.66
46:A:1128:U:H2'	46:A:1129:U:H6	1.61	0.66
46:A:1319:A:N7	57:L:116:ASN:ND2	2.44	0.66
46:A:1531:C:N1	47:B:326:TRP:CE3	2.64	0.66
46:A:1720:U:C1'	47:B:135:ASN:ND2	2.57	0.66
46:A:1986:A:H2'	46:A:1987:G:C8	2.31	0.66
3:AC:93:VAL:HA	3:AC:96:ILE:HG12	1.77	0.66
4:AD:146:PHE:CZ	4:AD:198:ILE:HG13	2.29	0.66
6:AF:321:TYR:CE1	31:v:13:PHE:HZ	2.10	0.66
9:AI:413:LEU:HD11	9:AI:449:HIS:ND1	2.11	0.66
12:AL:340:C:H4'	12:AL:1502:U:H4'	1.76	0.66
12:AL:1376:U:OP1	28:s:99:VAL:HG22	1.95	0.66
15:Z:16:LEU:HD21	35:z:165:LEU:HB3	1.78	0.66
16:g:272:ARG:NH1	33:x:48:LYS:HA	2.11	0.66
18:i:207:PRO:HG2	20:k:92:TRP:CZ3	2.30	0.66
25:p:85:ARG:CZ	29:t:115:TRP:NE1	2.43	0.66
28:s:51:SER:O	28:s:54:GLN:N	2.23	0.66
33:x:56:ASP:H	33:x:59:ASP:HB3	1.60	0.66
46:A:1083:U:H2'	46:A:1084:U:C6	2.31	0.66
46:A:1167:A:H2'	46:A:1168:A:O4'	1.96	0.66
46:A:1395:U:H2'	46:A:1396:A:C8	2.31	0.66
46:A:1438:U:H5"	46:A:1439:A:C8	2.30	0.66
46:A:1764:U:H3	46:A:1786:A:N6	1.91	0.66
46:A:2286:U:H2'	46:A:2287:A:H8	1.60	0.66
46:A:2415:A:H2'	46:A:2416:U:C6	2.30	0.66
47:B:317:SER:O	47:B:318:LEU:C	2.39	0.66
52:G:37:VAL:HG21	52:G:65:ILE:HD11	1.76	0.66
63:R:117:LEU:C	63:R:119:SER:H	2.03	0.66
63:R:272:GLU:HA	63:R:275:LYS:CG	2.26	0.66
2:AB:41:VAL:HG23	2:AB:63:TRP:HA	1.78	0.66
3:AC:123:ILE:HG23	3:AC:127:PHE:HD2	1.61	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:213:GLU:HB3	16:g:230:ARG:CZ	2.26	0.66
12:AL:658:G:OP1	19:j:50:GLN:HG3	1.95	0.66
12:AL:755:G:H2'	12:AL:756:A:H8	1.61	0.66
20:k:45:LYS:CD	20:k:47:ARG:NH2	2.57	0.66
21:l:3:TYR:CD2	21:l:78:GLN:HG3	2.31	0.66
24:o:248:LYS:C	24:o:250:GLY:N	2.54	0.66
27:r:94:TYR:HB2	27:r:121:VAL:HG11	1.78	0.66
46:A:268:C:H5"	46:A:269:A:C8	2.31	0.66
46:A:416:U:H2'	46:A:417:U:C6	2.31	0.66
46:A:421:U:H2'	46:A:422:U:C6	2.30	0.66
46:A:1020:U:H5"	75:e:134:LYS:CG	2.24	0.66
46:A:1581:U:H2'	46:A:1582:A:H5"	1.78	0.66
46:A:2236:U:H2'	46:A:2237:A:C8	2.30	0.66
4:AD:149:LEU:HD12	4:AD:152:PHE:HD2	1.61	0.66
4:AD:260:PHE:CZ	16:g:222:ILE:N	2.64	0.66
6:AF:61:PHE:CD1	19:j:29:TYR:CE1	2.83	0.66
7:AG:60:LEU:HD21	23:n:70:THR:CB	2.26	0.66
7:AG:122:LEU:CD1	16:g:36:ILE:HD12	2.26	0.66
8:AH:165:LEU:HD12	12:AL:700:U:H4'	1.77	0.66
8:AH:210:ILE:CD1	21:l:40:ARG:O	2.44	0.66
9:AI:310:ASN:ND2	28:s:34:LYS:CB	2.59	0.66
11:AK:133:MET:HE3	18:i:212:TYR:OH	1.96	0.66
11:AK:158:ALA:HB3	25:p:27:VAL:HG22	1.77	0.66
12:AL:1033:U:H5"	25:p:97:LYS:NZ	2.11	0.66
17:h:295:ILE:CG2	24:o:36:ARG:CZ	2.74	0.66
20:k:293:ARG:HH21	23:n:42:GLN:HB3	1.61	0.66
46:A:55:A:H2'	46:A:56:U:C6	2.31	0.66
46:A:149:A:H5'	70:Y:83:ALA:HB1	1.78	0.66
46:A:800:A:H2'	46:A:801:U:H6	1.61	0.66
46:A:808:A:H3'	46:A:809:C:H6	1.60	0.66
46:A:1020:U:H5	75:e:134:LYS:O	1.76	0.66
46:A:1932:G:N2	48:C:209:GLN:CD	2.53	0.66
46:A:2581:U:H2'	46:A:2582:U:C6	2.30	0.66
46:A:2675:U:H2'	46:A:2676:G:H8	1.59	0.66
6:AF:212:LEU:HD11	19:j:445:PHE:HB3	1.77	0.66
7:AG:69:ALA:HB1	7:AG:74:LEU:N	2.11	0.66
7:AG:92:TYR:OH	23:n:21:VAL:CG1	2.45	0.66
8:AH:60:HIS:CB	12:AL:133:U:C5	2.79	0.66
11:AK:189:TYR:HB3	11:AK:192:GLU:HB2	1.77	0.66
12:AL:25:G:O3'	20:k:267:ASN:ND2	2.29	0.66
12:AL:1108:G:H1'	25:p:95:HIS:CD2	2.31	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:h:129:TYR:CE1	24:o:120:LEU:HA	2.29	0.66
21:l:17:PRO:HB2	21:l:47:ILE:HD11	1.78	0.66
25:p:92:PRO:CA	29:t:96:TYR:HE2	2.09	0.66
46:A:86:U:H2'	46:A:87:U:H6	1.61	0.66
46:A:110:A:H5'	46:A:110:A:H8	1.61	0.66
46:A:464:C:H2'	46:A:465:U:C6	2.31	0.66
46:A:599:A:O2'	47:B:133:ARG:NH2	2.29	0.66
46:A:723:U:H2'	46:A:724:A:C8	2.29	0.66
46:A:772:A:H2'	46:A:773:U:C6	2.30	0.66
46:A:2029:A:H1'	46:A:2030:U:C4'	2.22	0.66
46:A:2079:A:O2'	46:A:2080:U:O5'	1.99	0.66
46:A:2972:U:H2'	46:A:2973:A:C8	2.30	0.66
76:f:81:LEU:HD11	76:f:145:ILE:HG23	1.78	0.66
2:AB:81:ILE:O	2:AB:83:GLN:N	2.29	0.65
3:AC:169:ASN:HB3	7:AG:197:PHE:CE1	2.29	0.65
4:AD:260:PHE:HD1	16:g:223:GLN:NE2	1.95	0.65
6:AF:58:MET:HE2	19:j:26:PHE:HB3	1.76	0.65
8:AH:16:PRO:CG	31:v:35:LYS:HG2	2.24	0.65
8:AH:21:ILE:HG23	31:v:74:TYR:HE1	1.56	0.65
8:AH:224:PHE:CZ	21:l:22:LYS:CG	2.74	0.65
12:AL:502:A:OP1	19:j:7:LEU:HD13	1.95	0.65
12:AL:622:A:H5"	19:j:43:GLN:HG2	1.77	0.65
12:AL:1096:C:N4	29:t:20:ARG:NH1	2.38	0.65
16:g:47:GLU:OE2	17:h:366:LEU:HB3	1.97	0.65
22:m:203:ARG:CB	22:m:211:ARG:HH21	2.07	0.65
35:z:123:ILE:HG22	35:z:124:MET:HE2	1.77	0.65
38:2:42:VAL:HG11	50:E:154:LEU:HG	1.78	0.65
46:A:595:U:H2'	46:A:595:U:O2	1.95	0.65
46:A:809:C:H2'	46:A:810:U:C6	2.31	0.65
46:A:1697:C:H2'	46:A:1698:C:C6	2.31	0.65
46:A:1794:U:H2'	46:A:1795:U:C6	2.31	0.65
46:A:2417:A:H2'	46:A:2418:U:O4'	1.95	0.65
46:A:2445:G:H2'	46:A:2446:U:C6	2.32	0.65
46:A:2585:A:H2'	46:A:2586:U:H5	1.60	0.65
46:A:2713:G:N7	46:A:2767:C:H3'	2.11	0.65
46:A:3287:U:H2'	46:A:3288:C:H6	1.61	0.65
4:AD:175:ARG:H	4:AD:268:ILE:HG12	1.61	0.65
6:AF:58:MET:HE2	19:j:30:LYS:HG2	1.78	0.65
6:AF:146:ASN:CG	19:j:439:HIS:HD2	1.91	0.65
7:AG:116:LEU:CD2	16:g:34:GLN:HB2	2.27	0.65
7:AG:120:LYS:CB	16:g:34:GLN:NE2	2.59	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:164:LEU:HB2	20:k:32:SER:CA	2.26	0.65
12:AL:267:A:HO2'	12:AL:268:G:H8	1.44	0.65
12:AL:508:C:H5'	19:j:420:PRO:HG2	1.79	0.65
15:Z:85:LEU:HB3	15:Z:88:ARG:HH11	1.60	0.65
16:g:284:SER:O	16:g:291:VAL:HA	1.96	0.65
19:j:391:LEU:HD22	19:j:398:ALA:HA	1.78	0.65
25:p:102:PHE:CE2	29:t:103:LEU:HD21	2.31	0.65
26:q:191:VAL:O	26:q:192:VAL:C	2.38	0.65
26:q:193:LYS:HA	35:z:110:LYS:CE	2.26	0.65
31:v:71:ARG:HH22	31:v:74:TYR:HB3	1.61	0.65
39:3:67:PHE:C	46:A:1403:G:N2	2.55	0.65
46:A:275:A:H2'	46:A:276:U:C6	2.31	0.65
46:A:725:U:H1'	46:A:2625:A:N3	2.10	0.65
46:A:955:A:H2'	46:A:956:A:C8	2.31	0.65
46:A:2203:A:H2'	46:A:2204:A:C8	2.31	0.65
46:A:2317:A:C2	69:X:65:PHE:HD1	2.15	0.65
46:A:3288:C:H2'	46:A:3289:U:H6	1.61	0.65
63:R:193:LEU:CD2	63:R:250:CYS:HB3	2.26	0.65
3:AC:237:VAL:HG11	4:AD:44:ARG:HD2	1.78	0.65
5:AE:308:LEU:CD2	5:AE:313:ASP:HB3	2.26	0.65
5:AE:309:SER:O	5:AE:310:GLU:C	2.37	0.65
7:AG:77:THR:CG2	8:AH:179:LYS:CD	2.74	0.65
7:AG:121:ILE:HG12	7:AG:143:PRO:HG3	1.77	0.65
9:AI:135:LEU:O	9:AI:139:VAL:HG23	1.96	0.65
9:AI:279:LEU:O	9:AI:282:GLN:HG3	1.96	0.65
9:AI:350:ARG:HG2	9:AI:351:THR:N	2.11	0.65
11:AK:143:GLU:CD	18:i:87:LEU:CD2	2.69	0.65
11:AK:162:LEU:HD13	25:p:64:ARG:HB3	1.77	0.65
12:AL:64:G:H2'	12:AL:65:C:C6	2.31	0.65
12:AL:270:G:C3'	32:w:68:LYS:HB3	2.15	0.65
12:AL:1003:A:H8	12:AL:1445:U:HO2'	1.44	0.65
12:AL:1213:G:N7	24:o:247:HIS:CE1	2.65	0.65
12:AL:1319:A:OP1	25:p:139:LYS:NZ	2.27	0.65
12:AL:1384:G:O3'	29:t:42:LYS:NZ	2.28	0.65
12:AL:1440:G:O3'	24:o:219:GLY:HA3	1.95	0.65
12:AL:1466:A:C2	20:k:157:GLN:OE1	2.49	0.65
19:j:98:PHE:HB3	19:j:101:LEU:HD12	1.78	0.65
22:m:106:ILE:HA	24:o:245:ARG:NH2	2.11	0.65
29:t:60:LEU:CD1	34:y:20:PRO:HG3	2.25	0.65
30:u:90:SER:C	30:u:91:LYS:HG2	2.21	0.65
46:A:480:C:H2'	46:A:481:A:C8	2.32	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:717:U:O2'	55:J:109:GLY:HA3	1.96	0.65
46:A:2839:A:OP2	48:C:209:GLN:CG	2.44	0.65
46:A:3005:A:H2'	46:A:3006:U:C6	2.32	0.65
2:AB:81:ILE:O	2:AB:82:GLN:C	2.38	0.65
5:AE:299:GLU:O	5:AE:302:ARG:HB3	1.96	0.65
8:AH:71:VAL:HG13	8:AH:111:PHE:HB3	1.78	0.65
8:AH:162:GLN:CG	23:n:60:PHE:HE1	2.07	0.65
8:AH:162:GLN:CB	23:n:60:PHE:HE1	2.08	0.65
12:AL:138:G:H1'	12:AL:139:A:C8	2.32	0.65
12:AL:331:A:H3'	12:AL:332:A:H8	1.61	0.65
12:AL:687:U:H2'	12:AL:688:C:C6	2.31	0.65
12:AL:1103:U:O3'	18:i:342:THR:HG22	1.96	0.65
15:Z:95:ASP:O	17:h:329:ARG:NH2	2.29	0.65
16:g:251:VAL:CB	33:x:51:LYS:HB2	2.24	0.65
33:x:94:ALA:O	33:x:95:ARG:C	2.39	0.65
46:A:505:C:H4'	46:A:567:U:H4'	1.78	0.65
46:A:1773:U:H2'	46:A:1774:U:C6	2.31	0.65
46:A:2748:U:H2'	46:A:2749:A:H8	1.62	0.65
3:AC:55:GLY:N	7:AG:143:PRO:HB3	2.09	0.65
6:AF:34:TYR:HE1	6:AF:53:ASN:HB3	1.62	0.65
7:AG:166:VAL:CG1	16:g:195:LYS:HG3	2.16	0.65
8:AH:231:PHE:CZ	21:l:48:ARG:NE	2.64	0.65
10:AJ:51:PRO:C	10:AJ:52:ASP:CG	2.62	0.65
12:AL:532:U:H2'	12:AL:533:A:C8	2.31	0.65
12:AL:1378:U:H2'	12:AL:1379:A:C8	2.32	0.65
21:l:71:PHE:C	21:l:72:ASP:OD1	2.38	0.65
28:s:67:ILE:HG21	67:V:96:GLY:CA	2.18	0.65
32:w:47:ASP:O	32:w:49:GLY:N	2.29	0.65
37:1:121:PHE:HA	46:A:2349:A:C5	2.31	0.65
46:A:411:A:H2'	46:A:412:A:C8	2.32	0.65
46:A:925:U:H5"	46:A:1174:G:O6	1.97	0.65
46:A:1356:U:OP2	74:d:68:ARG:NH2	2.28	0.65
46:A:1747:C:O2	46:A:1747:C:H2'	1.95	0.65
46:A:2328:A:H1'	63:R:327:SER:OG	1.97	0.65
63:R:175:LYS:HB2	63:R:175:LYS:HZ2	1.60	0.65
75:e:66:MET:HE1	75:e:153:LEU:CD2	2.25	0.65
2:AB:85:LYS:NZ	12:AL:375:A:O3'	2.30	0.65
5:AE:255:LEU:HD13	5:AE:300:PHE:CD2	2.31	0.65
6:AF:198:ARG:CG	12:AL:545:U:O5'	2.45	0.65
9:AI:56:LEU:HD13	22:m:205:SER:CB	2.26	0.65
9:AI:301:ALA:O	9:AI:302:TYR:C	2.40	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:307:ASN:HD21	9:AI:311:LYS:HB2	1.61	0.65
11:AK:87:LEU:HD21	11:AK:105:LYS:HG3	1.78	0.65
12:AL:902:A:H2'	12:AL:903:A:O4'	1.97	0.65
12:AL:1071:A:N1	12:AL:1081:U:O4	2.29	0.65
25:p:74:THR:HG21	25:p:112:ARG:HG3	1.78	0.65
30:u:196:ARG:HH12	30:u:261:LYS:HE3	1.62	0.65
32:w:103:LYS:HA	32:w:106:GLU:CD	2.21	0.65
37:1:58:ARG:CZ	46:A:2336:G:O6	2.44	0.65
46:A:704:U:H2'	46:A:705:C:C6	2.30	0.65
46:A:741:U:H2'	46:A:742:A:H8	1.62	0.65
46:A:905:A:H2'	46:A:908:C:H42	1.62	0.65
46:A:985:A:H4'	76:f:151:SER:CB	2.26	0.65
46:A:1081:A:H2'	46:A:1082:U:C6	2.31	0.65
46:A:1712:A:H2'	46:A:1713:C:C6	2.32	0.65
46:A:3081:U:H2'	46:A:3082:U:C6	2.31	0.65
59:N:107:HIS:O	59:N:108:PRO:C	2.40	0.65
6:AF:295:ILE:HD11	31:v:93:ALA:CA	2.26	0.65
7:AG:11:LEU:H	7:AG:11:LEU:HD23	1.61	0.65
7:AG:191:LEU:O	7:AG:192:GLU:C	2.39	0.65
7:AG:227:GLU:HA	7:AG:230:LEU:HD23	1.78	0.65
8:AH:16:PRO:HD3	31:v:35:LYS:HE3	1.75	0.65
8:AH:202:LEU:HD21	21:l:105:LEU:CB	2.27	0.65
9:AI:131:THR:OG1	9:AI:132:ASN:N	2.29	0.65
11:AK:164:LEU:HB2	20:k:32:SER:HA	1.79	0.65
12:AL:696:U:H5'	23:n:96:ASN:HA	1.79	0.65
12:AL:826:G:H2'	12:AL:827:G:C8	2.32	0.65
12:AL:1153:A:H5"	18:i:351:THR:CB	2.26	0.65
12:AL:1375:U:H5"	28:s:100:ARG:NH2	2.11	0.65
15:Z:89:ILE:HG21	35:z:165:LEU:HD12	1.78	0.65
16:g:270:PHE:HB3	16:g:273:MET:HB2	1.77	0.65
18:i:148:LYS:HZ1	20:k:78:LEU:CD1	2.09	0.65
18:i:306:TYR:HB2	18:i:309:MET:HE2	1.78	0.65
19:j:116:SER:HB2	19:j:428:ARG:HH21	1.61	0.65
35:z:94:GLU:O	35:z:95:ASN:C	2.38	0.65
46:A:1015:A:C5	46:A:1016:C:H1'	2.31	0.65
46:A:1535:A:H2'	46:A:1536:A:C8	2.31	0.65
46:A:1986:A:H2'	46:A:1987:G:H8	1.61	0.65
46:A:3274:U:O5'	71:a:150:SER:OG	2.14	0.65
3:AC:217:TRP:CB	17:h:149:ARG:NH2	2.59	0.65
3:AC:226:LEU:HD22	3:AC:240:ARG:HE	1.62	0.65
4:AD:170:TRP:HB2	4:AD:199:LEU:HD12	1.77	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:63:TYR:CG	18:i:182:ILE:HG21	2.30	0.65
11:AK:99:VAL:HB	18:i:171:TYR:CE2	2.31	0.65
12:AL:258:G:OP1	32:w:68:LYS:HD3	1.95	0.65
16:g:51:LYS:NZ	17:h:364:ASP:CG	2.53	0.65
29:t:48:MET:C	29:t:50:LEU:H	2.04	0.65
42:6:103:LYS:CG	46:A:2422:A:OP1	2.45	0.65
46:A:211:A:H2'	46:A:212:A:C8	2.32	0.65
46:A:533:U:C6	63:R:134:LEU:HA	2.32	0.65
46:A:2378:A:N6	46:A:2422:A:C8	2.64	0.65
46:A:2759:U:H2'	46:A:2760:G:O4'	1.96	0.65
46:A:3064:U:H2'	46:A:3065:U:C6	2.32	0.65
1:AA:94:ARG:HH21	12:AL:1608:G:H1	1.45	0.65
7:AG:36:ILE:HG21	17:h:231:ARG:CG	2.25	0.65
8:AH:103:ARG:HB3	8:AH:104:ARG:HH11	1.61	0.65
12:AL:327:U:H2'	12:AL:328:C:H6	1.62	0.65
12:AL:745:U:H2'	12:AL:746:A:C8	2.32	0.65
18:i:150:ASN:CG	20:k:78:LEU:HB2	2.21	0.65
30:u:127:ASP:HB2	30:u:130:LYS:HB2	1.79	0.65
42:6:104:HIS:ND1	46:A:2422:A:H5"	2.11	0.65
46:A:511:G:H2'	46:A:512:U:H6	1.60	0.65
46:A:2594:A:H2'	46:A:2595:U:H6	1.62	0.65
46:A:2777:U:H2'	46:A:2778:C:O4'	1.96	0.65
46:A:3265:U:H2'	46:A:3266:A:H8	1.62	0.65
9:AI:115:PHE:CZ	9:AI:447:LEU:HD11	2.31	0.65
11:AK:132:PHE:CB	18:i:248:MET:CE	2.74	0.65
11:AK:164:LEU:HB2	20:k:32:SER:HB2	1.77	0.65
12:AL:804:U:OP1	21:l:98:LYS:HD2	1.97	0.65
12:AL:1356:U:H2'	12:AL:1357:A:C8	2.32	0.65
13:AM:36:U:C2	14:AN:7:C:C4	2.85	0.65
18:i:93:TRP:CG	29:t:108:PRO:CA	2.79	0.65
20:k:289:VAL:HG11	23:n:124:GLY:CA	2.26	0.65
32:w:102:GLN:OE1	32:w:106:GLU:OE2	2.15	0.65
46:A:89:A:H2'	46:A:90:A:C8	2.31	0.65
46:A:351:C:H2'	46:A:352:A:C8	2.32	0.65
46:A:964:A:H2'	46:A:965:U:C6	2.31	0.65
46:A:1368:U:H2'	46:A:1369:U:C6	2.32	0.65
46:A:1759:A:H2'	46:A:1760:U:O4'	1.96	0.65
46:A:2771:G:H5'	46:A:2772:U:H4'	1.79	0.65
46:A:3240:A:H2'	46:A:3241:U:O2	1.97	0.65
3:AC:37:VAL:HA	3:AC:41:TYR:HB3	1.79	0.64
8:AH:180:ARG:HD2	8:AH:181:ASN:N	2.11	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:286:PRO:HB3	9:AI:338:GLU:HB3	1.78	0.64
9:AI:345:ILE:HD11	9:AI:355:LEU:HD13	1.77	0.64
10:AJ:14:LEU:HD21	11:AK:222:LEU:HA	1.79	0.64
16:g:249:GLY:HA2	33:x:55:TYR:CD1	2.32	0.64
18:i:302:ILE:HB	25:p:20:TYR:CG	2.31	0.64
19:j:149:MET:HA	19:j:451:VAL:HA	1.79	0.64
28:s:92:ARG:HH22	28:s:104:THR:HG21	1.60	0.64
29:t:47:ASN:O	29:t:48:MET:C	2.38	0.64
46:A:14:U:H2'	46:A:15:A:C8	2.30	0.64
46:A:26:A:N1	71:a:112:TYR:C	2.55	0.64
46:A:1068:C:H2'	46:A:1069:A:H8	1.60	0.64
46:A:1248:A:H2'	46:A:1249:U:C6	2.31	0.64
46:A:1332:A:H2	46:A:1578:A:N3	1.96	0.64
46:A:1663:A:H2'	46:A:1664:A:C8	2.31	0.64
46:A:1779:A:H2'	46:A:1780:U:H6	1.60	0.64
46:A:2027:U:H3'	46:A:2028:A:C8	2.31	0.64
46:A:2455:A:H5'	50:E:237:GLY:HA3	1.79	0.64
46:A:2845:G:H21	48:C:189:LEU:HD21	1.61	0.64
61:P:181:PHE:HB3	65:T:127:LEU:HD11	1.78	0.64
3:AC:12:PRO:HG2	17:h:160:LEU:O	1.97	0.64
3:AC:150:GLN:NE2	4:AD:277:PRO:HD2	2.11	0.64
4:AD:168:PHE:N	4:AD:201:THR:O	2.30	0.64
6:AF:208:MET:SD	19:j:425:TRP:CH2	2.90	0.64
9:AI:56:LEU:HD12	22:m:211:ARG:NE	2.12	0.64
10:AJ:84:LYS:HE3	12:AL:1091:A:O2'	1.96	0.64
11:AK:135:ASP:H	20:k:105:ILE:CG1	2.04	0.64
11:AK:150:GLU:HA	20:k:71:TYR:OH	1.98	0.64
12:AL:625:A:N6	12:AL:655:A:H5'	2.13	0.64
12:AL:728:A:H5'	12:AL:729:U:OP2	1.97	0.64
13:AM:11:C:H2'	13:AM:12:U:C6	2.33	0.64
16:g:48:TRP:CE3	16:g:63:LEU:HD22	2.33	0.64
20:k:15:HIS:CD2	20:k:15:HIS:H	2.14	0.64
21:l:114:SER:OG	33:x:95:ARG:CZ	2.45	0.64
30:u:103:ALA:HB1	32:w:165:LEU:HD22	1.77	0.64
38:2:53:ARG:N	46:A:2374:A:OP1	2.30	0.64
46:A:600:C:C1'	47:B:133:ARG:HH11	2.10	0.64
46:A:781:G:N3	46:A:2294:A:H2'	2.12	0.64
46:A:854:A:H2'	46:A:855:U:H6	1.60	0.64
46:A:1020:U:H3'	75:e:134:LYS:HB2	1.78	0.64
46:A:2185:U:H2'	46:A:2186:U:C6	2.32	0.64
76:f:14:VAL:HG23	76:f:57:PRO:HA	1.76	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:278:TYR:OH	5:AE:282:ARG:HG2	1.98	0.64
6:AF:54:LEU:HD22	19:j:12:ALA:CA	2.24	0.64
6:AF:178:LYS:NZ	19:j:459:ARG:NH2	2.44	0.64
8:AH:59:SER:HB2	12:AL:132:A:OP1	1.98	0.64
8:AH:182:TYR:OH	32:w:180:ARG:CD	2.45	0.64
8:AH:208:GLU:HG2	30:u:134:ARG:HH11	1.59	0.64
12:AL:272:U:H2'	12:AL:273:A:C8	2.29	0.64
12:AL:637:A:C2	27:r:116:GLN:HB2	2.32	0.64
12:AL:1044:C:H42	29:t:72:THR:HB	1.62	0.64
12:AL:1220:A:C4'	29:t:112:LYS:HZ2	2.09	0.64
12:AL:1358:U:H2'	12:AL:1359:U:C6	2.32	0.64
18:i:191:LEU:O	18:i:193:ASN:N	2.30	0.64
28:s:67:ILE:HG12	67:V:96:GLY:CA	2.26	0.64
33:x:69:ARG:HA	33:x:72:GLN:CD	2.21	0.64
46:A:73:U:H2'	46:A:74:A:H8	1.61	0.64
46:A:805:G:H1	46:A:821:U:H3	1.45	0.64
46:A:1164:U:H2'	46:A:1165:A:H8	1.62	0.64
46:A:1608:U:C3'	48:C:201:HIS:NE2	2.60	0.64
46:A:1898:C:H2'	46:A:1899:C:C6	2.32	0.64
46:A:2412:A:H2'	46:A:2413:A:H8	1.59	0.64
46:A:2827:A:O2'	46:A:2828:A:H5'	1.98	0.64
46:A:3071:U:H2'	46:A:3072:A:O4'	1.98	0.64
6:AF:44:ARG:HH21	12:AL:495:U:C5'	2.07	0.64
7:AG:91:LEU:CD1	23:n:74:TRP:CH2	2.80	0.64
7:AG:120:LYS:NZ	16:g:14:GLN:OE1	2.25	0.64
7:AG:217:LEU:CD2	16:g:273:MET:HG3	2.27	0.64
7:AG:217:LEU:HD21	33:x:60:PHE:CD1	2.33	0.64
9:AI:329:SER:HB2	9:AI:383:LYS:HE2	1.80	0.64
12:AL:46:A:N6	12:AL:407:U:H3	1.96	0.64
12:AL:1028:G:C2	12:AL:1029:A:C8	2.86	0.64
12:AL:1632:A:C6	33:x:67:LEU:HD12	2.31	0.64
16:g:272:ARG:HB2	33:x:60:PHE:CZ	2.21	0.64
19:j:125:ILE:HG12	19:j:130:VAL:CG2	2.26	0.64
19:j:428:ARG:HD3	19:j:431:LEU:HD21	1.80	0.64
30:u:156:ALA:O	30:u:157:VAL:C	2.40	0.64
37:1:106:ILE:HA	37:1:138:VAL:HG22	1.78	0.64
37:1:121:PHE:CD1	46:A:2349:A:N6	2.65	0.64
46:A:15:A:H2'	46:A:16:A:O4'	1.97	0.64
46:A:829:A:OP1	50:E:117:ARG:O	2.14	0.64
46:A:948:U:H5'	46:A:948:U:H6	1.62	0.64
46:A:1737:A:HO2'	47:B:105:TRP:CD1	2.15	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2332:U:H4'	63:R:322:ARG:CD	2.26	0.64
46:A:3073:A:C2	46:A:3105:U:C2	2.86	0.64
63:R:60:GLY:N	63:R:87:ALA:O	2.28	0.64
69:X:31:ALA:O	69:X:32:PRO:C	2.41	0.64
2:AB:81:ILE:HA	2:AB:84:ARG:NH1	2.13	0.64
5:AE:227:LEU:HD11	5:AE:280:ILE:CG2	2.28	0.64
6:AF:307:TYR:HA	31:v:63:LYS:HD2	1.79	0.64
7:AG:212:LYS:HE3	12:AL:1634:C:H4'	1.80	0.64
8:AH:164:LEU:CB	23:n:28:TYR:OH	2.45	0.64
12:AL:632:C:H5'	12:AL:633:C:H6	1.62	0.64
13:AM:36:U:O2	14:AN:7:C:C5	2.50	0.64
18:i:216:ASN:HB3	18:i:219:ILE:HB	1.78	0.64
21:l:114:SER:HB2	33:x:92:PHE:CD2	2.29	0.64
26:q:70:LYS:HB3	26:q:97:ASP:OD1	1.97	0.64
26:q:165:ILE:O	26:q:195:VAL:HA	1.96	0.64
28:s:51:SER:O	28:s:52:GLU:C	2.41	0.64
32:w:16:MET:HE3	32:w:19:THR:HB	1.79	0.64
34:y:42:ILE:CD1	34:y:76:PHE:HE2	2.07	0.64
38:2:53:ARG:CA	46:A:2374:A:OP1	2.46	0.64
46:A:224:U:H2'	46:A:225:A:C8	2.33	0.64
46:A:1245:U:H2'	46:A:1246:A:C8	2.32	0.64
46:A:1520:C:H42	46:A:3021:A:H61	1.42	0.64
63:R:261:ASN:HB3	63:R:267:HIS:CD2	2.32	0.64
63:R:308:ALA:HA	63:R:311:PHE:CE2	2.32	0.64
75:e:65:SER:HB2	75:e:146:ASN:HB2	1.79	0.64
2:AB:50:ARG:NH2	2:AB:105:LEU:HG	2.12	0.64
3:AC:208:THR:HA	3:AC:212:GLY:H	1.61	0.64
4:AD:258:LYS:HE2	16:g:226:VAL:CB	2.26	0.64
7:AG:122:LEU:CD2	16:g:15:VAL:CG2	2.67	0.64
7:AG:224:VAL:HG12	33:x:45:LEU:HD13	0.65	0.64
9:AI:310:ASN:HD21	28:s:34:LYS:HB3	1.61	0.64
12:AL:1639:A:O3'	17:h:150:GLN:NE2	2.31	0.64
15:Z:94:HIS:CD2	17:h:203:ARG:HB2	2.29	0.64
16:g:246:ALA:HA	16:g:251:VAL:HA	1.79	0.64
17:h:197:GLN:H	17:h:348:THR:HG1	1.44	0.64
18:i:82:ASN:HB3	18:i:85:GLN:HG3	1.79	0.64
18:i:104:MET:SD	18:i:107:MET:HE1	2.37	0.64
18:i:176:MET:HE3	20:k:93:ASP:HA	1.80	0.64
18:i:180:MET:SD	20:k:92:TRP:CB	2.86	0.64
18:i:209:LYS:HD2	20:k:93:ASP:O	1.97	0.64
27:r:74:ASN:HD22	27:r:117:ASP:CG	2.05	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:1:234:PRO:HB3	63:R:129:PHE:CD1	2.33	0.64
46:A:645:U:H2'	46:A:646:C:C6	2.33	0.64
46:A:1348:U:O2'	65:T:129:ASN:OD1	2.14	0.64
46:A:1391:U:H2'	46:A:1392:A:H8	1.61	0.64
46:A:2085:A:H2'	46:A:2086:U:H6	1.62	0.64
46:A:2608:C:H2'	46:A:2609:G:O4'	1.97	0.64
46:A:2674:U:C2	46:A:2675:U:C5	2.86	0.64
46:A:3019:U:H5"	65:T:35:ARG:HH21	1.62	0.64
63:R:129:PHE:CE2	63:R:131:ARG:HB2	2.32	0.64
76:f:16:ALA:CA	76:f:55:PRO:HA	2.26	0.64
2:AB:108:LYS:O	2:AB:109:SER:C	2.40	0.64
4:AD:173:ALA:HB1	4:AD:193:TYR:HB2	1.79	0.64
5:AE:47:LYS:HZ2	5:AE:98:SER:CB	2.10	0.64
5:AE:227:LEU:O	5:AE:228:ALA:C	2.39	0.64
6:AF:52:THR:HG23	12:AL:498:A:H5"	1.78	0.64
8:AH:208:GLU:HB3	30:u:134:ARG:HD3	1.77	0.64
9:AI:188:ASN:O	28:s:42:TYR:HD2	1.80	0.64
9:AI:297:VAL:HG12	9:AI:325:MET:HE2	1.79	0.64
11:AK:161:GLU:O	11:AK:165:LEU:HB3	1.98	0.64
11:AK:199:LYS:HZ1	12:AL:1317:U:P	2.20	0.64
12:AL:279:A:O2'	12:AL:280:G:H8	1.81	0.64
12:AL:339:U:H2'	12:AL:340:C:C6	2.33	0.64
12:AL:630:U:H3'	12:AL:631:G:C8	2.33	0.64
12:AL:940:U:H4'	23:n:18:LYS:NZ	2.13	0.64
12:AL:942:U:O3'	23:n:95:PRO:HD2	1.97	0.64
18:i:303:ASN:HB3	25:p:17:THR:HG23	1.80	0.64
24:o:248:LYS:O	24:o:250:GLY:N	2.31	0.64
26:q:137:ALA:C	26:q:139:GLY:H	2.05	0.64
40:4:60:GLN:HB3	41:5:100:THR:HG21	1.79	0.64
46:A:1411:A:C5	61:P:58:VAL:HB	2.33	0.64
46:A:2408:A:H2'	46:A:2408:A:N3	2.13	0.64
63:R:45:ARG:HB2	63:R:47:LEU:HG	1.79	0.64
5:AE:68:PRO:HD3	12:AL:1542:A:H5"	1.80	0.64
5:AE:120:PHE:HB3	5:AE:162:LEU:HD13	1.80	0.64
7:AG:114:TRP:CE2	16:g:87:ARG:CG	2.70	0.64
8:AH:182:TYR:CZ	32:w:180:ARG:HD2	2.33	0.64
11:AK:143:GLU:OE1	18:i:91:ASN:CG	2.36	0.64
11:AK:160:TYR:CE1	20:k:29:LEU:HD23	2.32	0.64
11:AK:164:LEU:HB2	20:k:32:SER:HB3	1.80	0.64
11:AK:209:LEU:HD22	11:AK:259:LEU:HD21	1.79	0.64
12:AL:752:A:O2'	12:AL:767:A:N6	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1183:A:OP1	25:p:109:ARG:NH2	2.31	0.64
18:i:379:ASN:HB3	18:i:392:LYS:HG2	1.79	0.64
22:m:113:THR:HG22	22:m:185:LYS:HZ1	1.61	0.64
46:A:502:A:H4'	46:A:503:A:OP1	1.96	0.64
46:A:730:U:H2'	46:A:731:U:C6	2.33	0.64
46:A:1088:A:H2'	46:A:1089:A:H8	1.63	0.64
46:A:1386:A:O3'	64:S:65:ILE:O	2.15	0.64
46:A:1728:U:H3	47:B:270:GLY:CA	2.01	0.64
46:A:2007:A:N6	46:A:2080:U:H3	1.96	0.64
46:A:2068:C:H2'	46:A:2069:U:C6	2.32	0.64
46:A:2883:C:H2'	46:A:2884:U:H6	1.61	0.64
8:AH:21:ILE:HA	31:v:74:TYR:CE1	2.33	0.64
8:AH:208:GLU:HB3	30:u:134:ARG:HH11	1.62	0.64
9:AI:70:GLN:O	9:AI:71:GLN:C	2.41	0.64
12:AL:690:G:H4'	30:u:210:GLN:OE1	1.97	0.64
12:AL:699:A:C2	12:AL:714:U:C2	2.85	0.64
12:AL:1272:U:OP2	22:m:207:ASP:HA	1.98	0.64
12:AL:1284:A:H2'	12:AL:1285:A:C8	2.33	0.64
16:g:71:LEU:CD2	17:h:201:LEU:HD21	2.15	0.64
16:g:273:MET:HE1	33:x:60:PHE:CE1	2.30	0.64
18:i:150:ASN:ND2	20:k:78:LEU:H	1.96	0.64
19:j:442:GLU:HB3	19:j:451:VAL:HB	1.79	0.64
24:o:264:PRO:HG3	25:p:101:ASN:HD21	1.63	0.64
26:q:184:VAL:HG23	35:z:117:PHE:CE2	2.32	0.64
45:9:41:LEU:HD13	71:a:119:ILE:HD11	1.80	0.64
46:A:537:U:H2'	46:A:538:A:C8	2.32	0.64
46:A:1707:C:OP2	47:B:265:PHE:HZ	1.80	0.64
46:A:2001:U:H3'	46:A:2002:U:H6	1.63	0.64
46:A:2270:U:H2'	46:A:2271:U:C6	2.33	0.64
46:A:2659:A:H2'	46:A:2660:A:C8	2.33	0.64
46:A:3007:A:H2'	46:A:3008:U:C6	2.32	0.64
4:AD:77:LYS:HB3	4:AD:81:VAL:HG23	1.80	0.64
4:AD:199:LEU:HB2	4:AD:208:PHE:CD1	2.33	0.64
5:AE:301:ILE:O	5:AE:305:GLN:HB2	1.98	0.64
9:AI:186:GLY:O	28:s:43:PRO:O	2.16	0.64
11:AK:140:GLN:CD	18:i:321:TYR:CD2	2.72	0.64
12:AL:405:A:H2'	12:AL:406:U:C6	2.33	0.64
12:AL:739:G:H2'	12:AL:740:A:C8	2.32	0.64
12:AL:898:U:H3'	12:AL:899:U:C6	2.32	0.64
15:Z:94:HIS:NE2	17:h:203:ARG:CA	2.56	0.64
16:g:251:VAL:HB	33:x:51:LYS:CB	2.28	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:k:140:ILE:HA	20:k:144:LEU:HD12	1.78	0.64
21:l:125:ASN:HA	21:l:128:TYR:HB3	1.80	0.64
30:u:105:ILE:HG22	30:u:109:LYS:HE2	1.80	0.64
32:w:35:LYS:HG3	32:w:37:LEU:HG	1.80	0.64
46:A:214:A:H2'	46:A:215:A:H8	1.63	0.64
46:A:741:U:H2'	46:A:742:A:C8	2.33	0.64
46:A:1069:A:H2'	46:A:1070:A:C8	2.32	0.64
46:A:1284:A:H2'	46:A:1284:A:N3	2.12	0.64
46:A:1530:U:OP1	47:B:94:LYS:NZ	2.30	0.64
46:A:1725:G:P	47:B:176:ARG:NH2	2.71	0.64
46:A:1961:G:C5'	49:D:109:LYS:CE	2.71	0.64
46:A:3023:U:H2'	46:A:3024:U:C6	2.33	0.64
59:N:106:GLY:HA3	71:a:51:PRO:HA	1.80	0.64
63:R:155:LYS:HG3	63:R:159:LEU:HD23	1.80	0.64
76:f:16:ALA:HA	76:f:55:PRO:CA	2.25	0.64
2:AB:90:GLN:HB3	2:AB:100:ILE:CG2	2.29	0.63
5:AE:31:SER:HA	5:AE:33:VAL:CG2	2.27	0.63
6:AF:149:LEU:HB3	6:AF:153:LEU:HD23	1.80	0.63
7:AG:147:GLU:OE2	16:g:14:GLN:HA	1.97	0.63
7:AG:213:GLU:HB3	16:g:230:ARG:NE	2.13	0.63
8:AH:21:ILE:CG2	31:v:74:TYR:CD1	2.81	0.63
9:AI:49:LYS:O	9:AI:50:ARG:C	2.41	0.63
9:AI:368:VAL:HG12	9:AI:369:THR:H	1.62	0.63
11:AK:145:VAL:HG11	20:k:68:PHE:CD1	2.33	0.63
12:AL:40:G:H2'	12:AL:41:C:H6	1.63	0.63
12:AL:270:G:H3'	32:w:68:LYS:CB	2.15	0.63
12:AL:1179:U:H6	24:o:216:SER:HG	1.45	0.63
13:AM:36:U:N3	14:AN:7:C:C4	2.65	0.63
18:i:302:ILE:CD1	25:p:20:TYR:CG	2.68	0.63
20:k:295:LYS:HD2	23:n:42:GLN:O	1.98	0.63
32:w:189:ARG:O	32:w:193:LEU:HD23	1.98	0.63
41:5:138:ALA:HB2	41:5:244:LEU:HD12	1.80	0.63
46:A:19:G:H2'	46:A:20:A:H8	1.63	0.63
46:A:588:C:H2'	46:A:589:A:H8	1.62	0.63
46:A:730:U:H2'	46:A:731:U:H6	1.63	0.63
46:A:1020:U:C5'	75:e:134:LYS:HG3	2.28	0.63
46:A:1435:A:H2'	46:A:1436:U:C6	2.33	0.63
46:A:2205:G:C2'	46:A:2206:U:O4'	2.45	0.63
46:A:2332:U:C5'	63:R:322:ARG:NH1	2.57	0.63
46:A:2662:A:H2	46:A:2688:G:H22	1.46	0.63
46:A:2717:A:H2'	46:A:2717:A:N3	2.13	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2961:A:H2'	46:A:2962:U:C6	2.33	0.63
63:R:100:PHE:O	63:R:102:PRO:HD3	1.99	0.63
66:U:58:VAL:HG21	73:c:47:LEU:CD1	2.28	0.63
76:f:19:ALA:HA	76:f:43:PHE:HD1	1.63	0.63
2:AB:94:TYR:C	2:AB:96:ASN:N	2.54	0.63
4:AD:172:VAL:HG12	4:AD:269:PRO:HA	1.79	0.63
6:AF:314:VAL:HG12	31:v:71:ARG:CG	2.29	0.63
9:AI:56:LEU:HD12	22:m:211:ARG:NH1	2.13	0.63
10:AJ:63:TYR:OH	18:i:191:LEU:N	2.31	0.63
11:AK:172:TYR:CD2	25:p:116:THR:N	2.66	0.63
12:AL:728:A:P	33:x:123:ARG:HH21	2.20	0.63
15:Z:81:HIS:CE1	35:z:173:LYS:HD2	2.33	0.63
15:Z:88:ARG:HD2	16:g:74:ILE:CG2	2.29	0.63
18:i:303:ASN:HB3	25:p:17:THR:CG2	2.28	0.63
22:m:98:TRP:CD1	24:o:242:LEU:CD2	2.81	0.63
29:t:60:LEU:HD12	34:y:18:ILE:HG22	1.81	0.63
32:w:128:ILE:C	32:w:130:THR:H	2.06	0.63
46:A:203:U:H2'	46:A:204:A:N9	2.13	0.63
46:A:253:A:H2'	46:A:254:G:C8	2.34	0.63
46:A:480:C:H2'	46:A:481:A:H8	1.63	0.63
46:A:2063:A:N3	46:A:2064:G:H1'	2.13	0.63
63:R:155:LYS:NZ	72:b:157:PHE:CE2	2.65	0.63
2:AB:124:TRP:CZ2	12:AL:101:U:O2	2.52	0.63
4:AD:175:ARG:HA	4:AD:193:TYR:HA	1.81	0.63
5:AE:47:LYS:HD2	5:AE:98:SER:H	1.63	0.63
7:AG:3:ILE:HD12	23:n:20:ARG:NE	2.13	0.63
7:AG:127:ILE:HD13	16:g:11:ARG:HH12	1.61	0.63
11:AK:194:HIS:CE1	12:AL:1318:U:O2'	2.51	0.63
12:AL:835:C:H2'	12:AL:836:U:H6	1.63	0.63
12:AL:1492:U:H2'	12:AL:1493:A:C8	2.33	0.63
17:h:131:ASN:HB2	24:o:119:GLN:O	1.97	0.63
18:i:145:SER:O	18:i:146:LEU:C	2.41	0.63
22:m:141:VAL:HA	22:m:217:THR:HG22	1.81	0.63
25:p:92:PRO:O	29:t:95:ARG:NH2	2.31	0.63
28:s:67:ILE:CB	67:V:96:GLY:C	2.69	0.63
32:w:13:GLN:HB2	32:w:54:GLU:HB2	1.81	0.63
46:A:468:U:H1'	46:A:873:A:O4'	1.98	0.63
46:A:929:G:C8	73:c:30:ARG:NH2	2.66	0.63
46:A:1499:A:H2'	46:A:1500:U:C6	2.33	0.63
46:A:1688:C:N4	70:Y:62:ARG:CG	2.62	0.63
46:A:1892:G:H5'	46:A:1894:C:N4	2.13	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2331:U:OP2	63:R:322:ARG:HD3	1.99	0.63
46:A:2444:A:H2'	46:A:2445:G:C8	2.34	0.63
46:A:2712:G:H2'	46:A:2713:G:O4'	1.97	0.63
46:A:2744:A:C8	46:A:2796:G:C5	2.87	0.63
47:B:241:LEU:HD13	47:B:246:ILE:HG12	1.80	0.63
63:R:215:ARG:HD3	63:R:255:ASN:CG	2.24	0.63
3:AC:90:HIS:HB2	17:h:161:GLY:CA	2.28	0.63
4:AD:193:TYR:HD2	4:AD:310:PRO:HG2	1.62	0.63
7:AG:125:ASN:O	7:AG:126:GLU:C	2.41	0.63
7:AG:213:GLU:OE2	16:g:230:ARG:HD2	1.97	0.63
9:AI:311:LYS:HB3	12:AL:1303:U:C5	2.32	0.63
11:AK:132:PHE:HB3	18:i:249:PRO:CD	2.26	0.63
12:AL:1003:A:H8	12:AL:1445:U:O2'	1.82	0.63
12:AL:1313:U:O2'	12:AL:1314:U:O5'	2.17	0.63
12:AL:1385:A:H5"	29:t:42:LYS:CE	2.29	0.63
12:AL:1627:U:H6	15:Z:16:LEU:HD12	1.64	0.63
16:g:3:LEU:CB	17:h:211:TYR:HE2	1.92	0.63
17:h:290:TRP:CE2	24:o:49:PRO:HG3	2.32	0.63
17:h:314:GLN:CG	17:h:316:LYS:HG2	2.28	0.63
18:i:82:ASN:HD21	20:k:57:PRO:HG3	1.61	0.63
18:i:191:LEU:O	18:i:192:CYS:C	2.41	0.63
18:i:316:MET:CE	20:k:69:TRP:CZ2	2.81	0.63
21:l:6:ILE:CG2	33:x:135:ILE:CG2	2.76	0.63
31:v:43:TYR:CE1	31:v:63:LYS:HD3	2.33	0.63
46:A:969:A:H5'	46:A:1056:A:C2	2.33	0.63
46:A:1091:A:H2'	46:A:1092:G:O4'	1.99	0.63
46:A:1310:A:O2'	46:A:1311:A:H5'	1.97	0.63
46:A:1627:C:O2	48:C:192:SER:OG	2.16	0.63
46:A:2839:A:OP2	48:C:209:GLN:HG3	1.98	0.63
46:A:2857:A:H2'	46:A:2858:C:H6	1.63	0.63
46:A:3265:U:H2'	46:A:3266:A:C8	2.32	0.63
69:X:32:PRO:O	69:X:33:LEU:C	2.41	0.63
3:AC:60:SER:HB2	17:h:169:TYR:HE1	1.64	0.63
5:AE:215:TRP:CH2	5:AE:248:LEU:HD13	2.33	0.63
9:AI:249:ASN:O	9:AI:253:ASN:HB2	1.99	0.63
12:AL:329:U:H3'	12:AL:330:G:H8	1.62	0.63
20:k:36:ALA:CB	25:p:23:ASN:ND2	2.60	0.63
22:m:183:LEU:HA	22:m:187:GLN:OE1	1.98	0.63
23:n:103:MET:HG3	23:n:145:LYS:HA	1.81	0.63
32:w:76:GLU:HG2	32:w:77:ILE:N	2.13	0.63
34:y:32:PRO:HA	34:y:50:LYS:O	1.97	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:z:135:SER:C	35:z:137:ARG:H	2.06	0.63
46:A:620:G:H4'	46:A:654:U:H5'	1.80	0.63
46:A:807:A:H2	46:A:818:U:H3	1.45	0.63
46:A:888:G:H2'	46:A:889:U:C6	2.33	0.63
46:A:1306:A:C4	46:A:1598:A:N6	2.67	0.63
46:A:1544:A:H2'	46:A:1545:U:C6	2.34	0.63
46:A:2425:A:C2	67:V:27:ARG:HD2	2.34	0.63
46:A:2444:A:H2'	46:A:2445:G:H8	1.62	0.63
46:A:3279:U:H2'	46:A:3280:C:C6	2.33	0.63
63:R:117:LEU:C	63:R:119:SER:N	2.54	0.63
63:R:219:ARG:HG2	63:R:223:LYS:HD3	1.80	0.63
63:R:294:THR:CA	63:R:371:LEU:HD22	2.28	0.63
3:AC:161:LYS:CD	17:h:141:TYR:CD2	2.80	0.63
3:AC:206:LYS:HA	3:AC:209:LYS:HB2	1.81	0.63
6:AF:110:ARG:HH21	6:AF:117:PRO:HD2	1.62	0.63
7:AG:1:MET:HE1	17:h:351:GLU:CB	2.18	0.63
9:AI:69:LEU:O	9:AI:70:GLN:C	2.40	0.63
12:AL:652:A:OP1	27:r:139:ILE:N	2.32	0.63
13:AM:33:U:C5	24:o:278:ARG:HD3	2.33	0.63
15:Z:88:ARG:NH1	35:z:172:ALA:CB	2.61	0.63
32:w:6:PHE:CD2	32:w:60:ILE:HD11	2.29	0.63
38:2:43:VAL:HG13	46:A:2425:A:H8	1.61	0.63
46:A:19:G:H2'	46:A:20:A:C8	2.33	0.63
46:A:167:U:H2'	46:A:168:A:O4'	1.99	0.63
46:A:780:U:O2'	46:A:781:G:H5'	1.99	0.63
46:A:1110:A:C2'	46:A:1111:U:H5'	2.29	0.63
46:A:1327:A:H2'	46:A:1328:C:C6	2.34	0.63
46:A:1837:A:H62	46:A:1840:U:H5	1.45	0.63
46:A:2731:C:H2'	46:A:2732:G:C8	2.34	0.63
2:AB:124:TRP:HH2	12:AL:101:U:O2	1.80	0.63
3:AC:265:SER:O	17:h:128:PRO:CG	2.45	0.63
5:AE:124:THR:HG22	5:AE:137:ILE:HD12	1.81	0.63
9:AI:314:TYR:HD2	9:AI:316:LEU:HB2	1.64	0.63
12:AL:258:G:OP1	32:w:69:ARG:HG2	1.98	0.63
12:AL:1388:U:N3	12:AL:1389:U:O4	2.32	0.63
15:Z:95:ASP:CA	17:h:203:ARG:NH1	2.46	0.63
16:g:85:TRP:CD1	16:g:89:ARG:CZ	2.81	0.63
22:m:137:ALA:HB2	22:m:209:ALA:O	1.99	0.63
40:4:136:LYS:HD2	46:A:1114:U:H3	1.64	0.63
46:A:944:U:H2'	46:A:945:A:C8	2.34	0.63
46:A:1069:A:H2'	46:A:1070:A:H8	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1368:U:H2'	46:A:1369:U:H6	1.64	0.63
46:A:1430:U:H3'	46:A:1431:U:C6	2.34	0.63
46:A:2018:C:H5'	46:A:2019:A:OP2	1.98	0.63
46:A:3150:U:N3	46:A:3153:U:H5	1.96	0.63
46:A:3174:U:H2'	46:A:3175:A:H8	1.61	0.63
2:AB:107:LYS:HD3	2:AB:107:LYS:H	1.63	0.63
3:AC:229:HIS:CE1	4:AD:281:LEU:HD21	2.33	0.63
4:AD:127:SER:O	4:AD:129:GLU:HG3	1.98	0.63
6:AF:147:TYR:HB3	6:AF:217:PRO:HB2	1.79	0.63
9:AI:56:LEU:HD23	9:AI:63:THR:HG21	1.81	0.63
9:AI:366:PRO:HG3	11:AK:274:PRO:HB3	1.81	0.63
11:AK:132:PHE:HB2	18:i:248:MET:CE	2.28	0.63
12:AL:744:A:H2'	12:AL:745:U:H6	1.61	0.63
12:AL:949:U:C2	27:r:41:PRO:HG3	2.33	0.63
15:Z:95:ASP:HA	17:h:203:ARG:HH12	1.62	0.63
17:h:247:LEU:CD1	24:o:45:TYR:CG	2.64	0.63
17:h:290:TRP:CZ3	24:o:49:PRO:HG2	2.34	0.63
18:i:93:TRP:NE1	29:t:111:LYS:HE2	2.11	0.63
22:m:117:ILE:HD11	22:m:157:LEU:HD21	1.81	0.63
31:v:22:ASN:HA	31:v:42:THR:HA	1.81	0.63
46:A:171:A:H2'	46:A:172:A:H8	1.58	0.63
46:A:425:A:N3	46:A:425:A:H2'	2.11	0.63
46:A:685:G:H2'	46:A:686:U:C6	2.34	0.63
46:A:825:A:H2'	46:A:826:A:C8	2.33	0.63
46:A:926:A:H2'	46:A:927:A:H8	1.63	0.63
46:A:1259:A:H2'	46:A:1260:U:H6	1.63	0.63
46:A:1431:U:H2'	46:A:1432:A:C8	2.34	0.63
46:A:1604:A:H2'	46:A:1605:U:O4'	1.99	0.63
46:A:1849:U:H2'	46:A:1850:A:C8	2.34	0.63
46:A:2916:U:H2'	46:A:2917:U:C6	2.33	0.63
63:R:294:THR:HA	63:R:371:LEU:HD22	1.81	0.63
3:AC:44:TYR:HB2	4:AD:287:PHE:CD2	2.33	0.63
3:AC:153:LEU:HB3	3:AC:224:VAL:HB	1.79	0.63
5:AE:279:LEU:HD21	5:AE:315:TYR:N	2.13	0.63
7:AG:33:VAL:HG22	17:h:357:TYR:OH	1.99	0.63
7:AG:60:LEU:HD22	23:n:70:THR:HB	1.81	0.63
9:AI:413:LEU:HD21	22:m:149:PRO:CG	2.28	0.63
12:AL:718:A:H61	12:AL:816:U:H3	1.47	0.63
12:AL:759:A:H2'	12:AL:760:A:O4'	1.99	0.63
12:AL:1384:G:C3'	29:t:42:LYS:NZ	2.62	0.63
12:AL:1525:A:H2'	12:AL:1526:A:C1'	2.29	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:g:252:ALA:HB2	16:g:293:MET:HE2	1.81	0.63
30:u:268:LYS:O	30:u:269:LYS:C	2.41	0.63
34:y:71:HIS:HB3	34:y:76:PHE:CE1	2.34	0.63
46:A:2079:A:H2'	46:A:2080:U:O5'	1.98	0.63
3:AC:148:LEU:HB3	4:AD:203:ASN:HB3	1.80	0.62
5:AE:118:ASP:O	5:AE:122:GLU:HG3	1.99	0.62
8:AH:142:LYS:HA	8:AH:145:LYS:HE2	1.81	0.62
11:AK:304:ALA:CB	24:o:152:GLY:N	2.51	0.62
12:AL:803:A:H2'	12:AL:804:U:H6	1.64	0.62
17:h:129:TYR:CD2	17:h:148:LEU:HD11	2.31	0.62
34:y:42:ILE:CD1	34:y:76:PHE:CE2	2.81	0.62
46:A:372:A:H2'	46:A:373:U:C6	2.33	0.62
46:A:714:A:H2'	46:A:715:U:C6	2.33	0.62
46:A:1812:U:H2'	46:A:1818:G:N2	2.13	0.62
46:A:2019:A:H62	46:A:2061:U:H3	1.46	0.62
46:A:2779:A:H2'	46:A:2780:A:C8	2.34	0.62
3:AC:261:PHE:CD1	17:h:149:ARG:HA	2.33	0.62
4:AD:199:LEU:CD2	16:g:214:LEU:HD22	2.28	0.62
4:AD:277:PRO:HB3	4:AD:281:LEU:HD22	1.81	0.62
8:AH:180:ARG:HG3	12:AL:815:C:OP1	1.99	0.62
11:AK:51:TYR:HD2	11:AK:72:ARG:HA	1.64	0.62
12:AL:724:U:C2	12:AL:725:A:C8	2.86	0.62
12:AL:804:U:H2'	12:AL:805:U:H6	1.64	0.62
12:AL:1237:U:C4'	18:i:383:ILE:HD13	2.14	0.62
15:Z:94:HIS:NE2	17:h:203:ARG:CG	2.48	0.62
17:h:136:ALA:HB3	17:h:139:LYS:HG2	1.80	0.62
22:m:124:HIS:O	22:m:125:GLY:C	2.40	0.62
46:A:74:A:H2'	46:A:75:A:H8	1.64	0.62
46:A:1073:A:H2'	46:A:1074:U:C6	2.34	0.62
46:A:1239:A:N6	46:A:1271:A:H62	1.96	0.62
46:A:1666:A:H2'	46:A:1667:A:C8	2.34	0.62
2:AB:47:LYS:HE3	2:AB:100:ILE:O	1.99	0.62
3:AC:90:HIS:HB2	17:h:161:GLY:HA2	1.78	0.62
5:AE:267:LEU:O	5:AE:271:LEU:N	2.30	0.62
5:AE:276:GLY:HA2	5:AE:279:LEU:HB2	1.81	0.62
8:AH:223:VAL:CG1	21:l:44:PRO:CD	2.74	0.62
12:AL:417:U:H2'	12:AL:418:A:C8	2.33	0.62
30:u:252:MET:SD	30:u:257:PHE:HB2	2.39	0.62
32:w:131:ILE:HG22	32:w:144:LEU:HD12	1.80	0.62
46:A:1006:U:C4	76:f:135:LEU:CD2	2.82	0.62
46:A:1029:A:H4'	46:A:1030:C:OP2	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1424:U:H2'	46:A:1425:U:C6	2.34	0.62
46:A:1871:U:H5"	47:B:353:LYS:CE	2.30	0.62
46:A:2323:A:H3'	46:A:2324:U:H5'	1.80	0.62
46:A:2330:A:C2	63:R:317:GLU:HG3	2.34	0.62
46:A:2470:A:H2'	46:A:2471:A:H8	1.64	0.62
46:A:2694:G:H21	55:J:116:LEU:HD11	1.63	0.62
46:A:2716:A:N3	46:A:2717:A:H3'	2.14	0.62
46:A:2797:U:O2	51:F:194:TYR:CE2	2.50	0.62
46:A:2814:U:H5'	46:A:2833:A:C2	2.34	0.62
46:A:3018:A:N6	46:A:3027:U:H3	1.97	0.62
4:AD:261:SER:N	16:g:223:GLN:NE2	2.48	0.62
5:AE:227:LEU:O	5:AE:231:LEU:N	2.27	0.62
8:AH:75:ILE:HD13	8:AH:108:ILE:HG23	1.81	0.62
12:AL:536:U:H2'	12:AL:537:A:C8	2.34	0.62
12:AL:1589:G:H1'	12:AL:1610:A:H2	1.64	0.62
17:h:194:HIS:HB3	17:h:222:LEU:HD11	1.82	0.62
21:l:95:SER:OG	33:x:135:ILE:CD1	2.48	0.62
22:m:160:LEU:HD11	22:m:226:ALA:CB	2.29	0.62
27:r:59:LYS:O	27:r:86:THR:HG23	1.99	0.62
31:v:23:ILE:HG21	31:v:67:LEU:HD13	1.82	0.62
32:w:128:ILE:HG13	32:w:147:ILE:HG21	1.80	0.62
33:x:106:THR:CG2	35:z:127:ASN:HD22	1.93	0.62
42:6:66:TYR:CD1	46:A:2424:U:O4	2.52	0.62
46:A:1351:A:OP2	61:P:106:LYS:NZ	2.32	0.62
46:A:1638:C:C2'	46:A:1639:A:H5'	2.29	0.62
46:A:1757:A:H3'	46:A:1758:U:H6	1.64	0.62
46:A:2321:A:N3	46:A:2322:U:H5	1.97	0.62
46:A:2712:G:H2'	46:A:2713:G:C1'	2.29	0.62
50:E:251:ALA:HB1	67:V:63:TYR:CD2	2.34	0.62
55:J:157:MET:HA	55:J:160:MET:HB2	1.81	0.62
63:R:138:ARG:HG3	63:R:142:LYS:HZ2	1.63	0.62
3:AC:179:ARG:NH2	7:AG:201:PHE:HD1	1.96	0.62
3:AC:217:TRP:CD1	17:h:146:LEU:CD1	2.83	0.62
4:AD:105:PRO:HG2	4:AD:283:ASP:HB3	1.80	0.62
6:AF:102:VAL:HG23	12:AL:480:U:H5"	1.79	0.62
6:AF:319:TYR:CE1	31:v:42:THR:HG21	2.35	0.62
7:AG:91:LEU:HD12	23:n:74:TRP:CH2	2.35	0.62
12:AL:325:A:H2'	12:AL:326:C:C6	2.35	0.62
12:AL:653:A:H2'	12:AL:654:G:C8	2.35	0.62
12:AL:725:A:H3'	12:AL:726:A:H8	1.64	0.62
12:AL:1030:U:H5"	12:AL:1031:A:OP1	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1172:A:H61	25:p:39:GLY:CA	2.12	0.62
12:AL:1344:A:C5'	28:s:49:GLN:OE1	2.45	0.62
15:Z:89:ILE:CD1	35:z:168:ILE:HB	2.27	0.62
16:g:85:TRP:HZ2	33:x:56:ASP:CG	2.07	0.62
18:i:93:TRP:HE1	29:t:111:LYS:CE	2.12	0.62
18:i:148:LYS:NZ	20:k:78:LEU:HD12	2.14	0.62
19:j:78:GLN:O	19:j:79:LEU:C	2.41	0.62
21:l:6:ILE:CB	33:x:135:ILE:CG2	2.77	0.62
21:l:38:VAL:CB	30:u:141:ILE:CD1	2.75	0.62
37:1:121:PHE:HA	46:A:2349:A:N7	2.14	0.62
46:A:1057:A:C2'	46:A:1058:U:H5'	2.29	0.62
46:A:1187:U:H2'	46:A:1188:U:C6	2.34	0.62
46:A:1343:U:C4	61:P:139:HIS:CD2	2.88	0.62
46:A:1786:A:H8	46:A:1786:A:O5'	1.82	0.62
46:A:1817:U:H3'	46:A:1818:G:H8	1.62	0.62
46:A:1892:G:H5'	46:A:1894:C:H41	1.64	0.62
46:A:2063:A:C4	46:A:2064:G:H1'	2.35	0.62
46:A:2330:A:C2	63:R:321:ARG:HD2	2.34	0.62
46:A:2388:G:H2'	46:A:2388:G:N3	2.14	0.62
46:A:2414:U:H2'	46:A:2415:A:H8	1.64	0.62
46:A:2665:U:H2'	46:A:2666:A:O4'	1.99	0.62
46:A:3287:U:H2'	46:A:3288:C:C6	2.34	0.62
6:AF:153:LEU:HD21	6:AF:177:LEU:HD11	1.81	0.62
9:AI:188:ASN:C	28:s:42:TYR:CD2	2.78	0.62
9:AI:294:PHE:CE2	9:AI:298:LEU:HG	2.35	0.62
10:AJ:66:ILE:H	10:AJ:66:ILE:HD12	1.64	0.62
12:AL:1377:A:H4'	28:s:75:VAL:HG13	1.79	0.62
12:AL:1463:C:H5"	12:AL:1470:C:H4'	1.80	0.62
12:AL:1642:U:O2'	24:o:66:ILE:HD13	1.99	0.62
13:AM:51:A:H3'	13:AM:52:G:H8	1.65	0.62
30:u:75:PHE:HE2	30:u:164:PHE:CE1	2.18	0.62
46:A:330:A:HO2'	46:A:331:A:H8	1.46	0.62
46:A:1163:A:H2'	46:A:1164:U:H6	1.64	0.62
46:A:1816:A:H2'	46:A:1817:U:C6	2.33	0.62
46:A:2301:C:H4'	63:R:37:THR:HG21	1.80	0.62
46:A:2730:G:H2'	46:A:2731:C:C6	2.35	0.62
63:R:117:LEU:O	63:R:119:SER:N	2.29	0.62
63:R:174:ASP:CG	63:R:178:LYS:HE3	2.24	0.62
63:R:298:LYS:O	63:R:301:ILE:HG22	2.00	0.62
7:AG:49:LYS:NZ	23:n:58:LYS:HZ3	1.92	0.62
8:AH:21:ILE:CB	31:v:74:TYR:CD1	2.82	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:49:TYR:C	32:w:59:ARG:HH22	2.08	0.62
8:AH:185:SER:HB3	32:w:176:LEU:HD21	1.82	0.62
9:AI:351:THR:CB	12:AL:1280:U:OP1	2.47	0.62
12:AL:414:A:H61	12:AL:501:U:C5'	2.13	0.62
12:AL:492:G:C2	12:AL:498:A:C5	2.87	0.62
12:AL:779:A:H2'	12:AL:780:G:C8	2.34	0.62
16:g:251:VAL:CG1	33:x:51:LYS:HA	2.29	0.62
26:q:214:MET:SD	35:z:140:MET:CG	2.87	0.62
30:u:58:LYS:O	30:u:59:ALA:C	2.43	0.62
46:A:200:G:C3'	46:A:201:A:H5'	2.30	0.62
46:A:217:A:C4	64:S:47:HIS:CE1	2.87	0.62
46:A:592:C:H2'	46:A:593:G:C8	2.35	0.62
46:A:861:A:H2'	46:A:862:U:C6	2.34	0.62
46:A:1760:U:O2'	46:A:1761:A:H5'	2.00	0.62
46:A:1815:U:H2'	46:A:1816:A:C8	2.35	0.62
46:A:1871:U:H5"	47:B:353:LYS:NZ	2.14	0.62
46:A:2202:U:C2	46:A:2203:A:C8	2.87	0.62
46:A:2598:U:H4'	46:A:2602:A:H62	1.63	0.62
46:A:2905:A:H2'	46:A:2906:U:O4'	1.99	0.62
56:K:121:ILE:O	56:K:121:ILE:HG13	1.99	0.62
75:e:87:ILE:HD12	75:e:92:GLY:HA3	1.82	0.62
3:AC:78:ASN:ND2	7:AG:186:GLU:HB3	2.15	0.62
3:AC:114:GLU:O	3:AC:115:PRO:C	2.42	0.62
3:AC:185:LEU:HD12	7:AG:195:GLU:C	2.24	0.62
7:AG:52:SER:C	7:AG:54:GLY:H	2.08	0.62
7:AG:59:LYS:HG2	7:AG:60:LEU:N	2.15	0.62
8:AH:37:LYS:HE3	12:AL:182:A:O5'	1.98	0.62
8:AH:162:GLN:HB3	23:n:60:PHE:CZ	2.35	0.62
11:AK:99:VAL:CG2	18:i:171:TYR:HE2	2.13	0.62
11:AK:132:PHE:HB2	18:i:248:MET:CB	2.30	0.62
11:AK:136:GLU:CG	18:i:212:TYR:CE2	2.83	0.62
16:g:48:TRP:HE3	16:g:63:LEU:HD22	1.65	0.62
19:j:175:ASP:HB3	19:j:402:ILE:HG21	1.81	0.62
21:l:111:LEU:HD12	33:x:95:ARG:HH11	1.65	0.62
21:l:120:ILE:O	21:l:124:VAL:N	2.33	0.62
24:o:238:PHE:O	24:o:239:ASN:C	2.43	0.62
29:t:70:ARG:HB3	29:t:73:GLN:HG3	1.81	0.62
37:1:365:VAL:HG21	46:A:546:A:H5"	1.81	0.62
39:3:52:MET:HB2	46:A:155:A:N1	2.13	0.62
46:A:1932:G:C2	48:C:209:GLN:NE2	2.67	0.62
46:A:2216:U:H3	46:A:2232:A:H61	1.48	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:40:ASP:OD1	4:AD:286:VAL:CG1	2.47	0.62
6:AF:74:ASN:O	6:AF:75:LYS:C	2.43	0.62
9:AI:335:ALA:O	9:AI:336:ASN:C	2.40	0.62
11:AK:196:ASN:ND2	12:AL:1318:U:C5'	2.48	0.62
12:AL:25:G:C4'	20:k:267:ASN:HD21	2.10	0.62
12:AL:501:U:H4'	12:AL:502:A:O5'	1.99	0.62
19:j:4:LYS:HG3	19:j:5:ALA:H	1.65	0.62
21:l:40:ARG:NH2	30:u:141:ILE:HG21	2.15	0.62
46:A:750:U:H2'	46:A:751:A:H8	1.63	0.62
46:A:986:U:H2'	46:A:987:G:C8	2.34	0.62
46:A:1020:U:H5"	75:e:134:LYS:HG3	1.82	0.62
46:A:1144:U:C2'	46:A:1145:U:H5'	2.30	0.62
46:A:1411:A:C8	61:P:58:VAL:HG21	2.35	0.62
46:A:1536:A:H2'	46:A:1537:A:C8	2.34	0.62
46:A:2301:C:H5"	63:R:39:MET:SD	2.39	0.62
46:A:2674:U:H2'	46:A:2675:U:H6	1.65	0.62
46:A:3160:U:C5'	57:L:52:THR:HG21	2.24	0.62
5:AE:45:LYS:O	5:AE:49:ASP:N	2.32	0.62
5:AE:123:TRP:HD1	5:AE:124:THR:HG23	1.63	0.62
7:AG:120:LYS:HD3	16:g:34:GLN:HE22	1.63	0.62
8:AH:184:ARG:HG2	12:AL:814:A:O4'	1.99	0.62
11:AK:134:PHE:CD1	20:k:107:PRO:CD	2.82	0.62
12:AL:268:G:O2'	32:w:64:ARG:NH2	2.31	0.62
12:AL:740:A:H2	26:q:208:GLY:CA	2.12	0.62
12:AL:828:A:OP1	30:u:249:ARG:CG	2.47	0.62
17:h:292:LYS:HA	24:o:39:PRO:HA	1.81	0.62
19:j:104:ARG:HA	19:j:143:THR:HA	1.81	0.62
32:w:57:LEU:HB3	32:w:78:ILE:HG22	1.82	0.62
33:x:70:LYS:HD2	33:x:71:TYR:CZ	2.35	0.62
39:3:64:HIS:CG	46:A:1362:C:H4'	2.35	0.62
46:A:656:A:H2'	46:A:657:U:C6	2.35	0.62
46:A:920:A:H2'	46:A:921:G:C8	2.35	0.62
46:A:969:A:H3'	46:A:969:A:OP2	1.99	0.62
46:A:1048:A:OP1	75:e:110:HIS:CB	2.45	0.62
46:A:1323:U:H2'	46:A:1324:U:C6	2.35	0.62
46:A:2006:U:H2'	46:A:2007:A:N7	2.14	0.62
46:A:2258:C:H2'	46:A:2259:U:H6	1.65	0.62
46:A:2782:A:H2'	46:A:2783:U:C6	2.35	0.62
1:AA:92:LYS:HE2	12:AL:956:U:C4'	2.25	0.61
2:AB:41:VAL:O	2:AB:44:PHE:HB2	2.00	0.61
8:AH:83:GLN:HG3	12:AL:145:A:H5"	1.81	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:143:GLU:OE2	18:i:87:LEU:HD23	1.99	0.61
11:AK:152:ARG:HG3	20:k:70:ASP:OD1	1.99	0.61
12:AL:258:G:OP1	32:w:68:LYS:CD	2.48	0.61
12:AL:637:A:N1	27:r:116:GLN:HB2	2.15	0.61
12:AL:653:A:H2'	12:AL:654:G:H8	1.65	0.61
12:AL:692:A:N6	12:AL:823:G:H1'	2.15	0.61
12:AL:1374:A:C2	12:AL:1375:U:H1'	2.35	0.61
12:AL:1419:U:H5'	22:m:124:HIS:ND1	2.15	0.61
18:i:180:MET:SD	20:k:92:TRP:HB2	2.40	0.61
28:s:98:PRO:HG2	28:s:104:THR:CG2	2.27	0.61
31:v:7:ARG:HB2	31:v:9:ARG:HH21	1.65	0.61
32:w:117:LYS:HD3	32:w:117:LYS:C	2.24	0.61
46:A:290:G:O5'	55:J:115:LYS:CE	2.43	0.61
46:A:1222:U:H2'	46:A:1223:A:C8	2.31	0.61
46:A:1558:G:H5"	46:A:1558:G:H8	1.64	0.61
46:A:2207:A:H2'	46:A:2208:A:C8	2.30	0.61
46:A:2358:A:H2'	46:A:2359:U:C6	2.35	0.61
46:A:2727:A:H1'	46:A:2758:U:N3	2.15	0.61
2:AB:94:TYR:O	2:AB:95:ARG:C	2.42	0.61
4:AD:27:PRO:O	4:AD:28:LEU:C	2.42	0.61
6:AF:314:VAL:CG1	31:v:71:ARG:CG	2.78	0.61
8:AH:99:LYS:HB3	31:v:100:TRP:CZ3	2.35	0.61
8:AH:233:ASP:O	8:AH:234:ALA:C	2.42	0.61
9:AI:56:LEU:HD13	22:m:205:SER:HB2	1.83	0.61
10:AJ:63:TYR:CD2	18:i:182:ILE:HG21	2.35	0.61
12:AL:217:U:H2'	12:AL:218:A:H8	1.64	0.61
12:AL:607:U:H2'	12:AL:608:U:H6	1.63	0.61
12:AL:845:G:H21	12:AL:867:A:H62	1.48	0.61
12:AL:871:C:H2'	12:AL:872:U:C6	2.34	0.61
16:g:214:LEU:O	16:g:215:LYS:C	2.43	0.61
16:g:272:ARG:HB3	33:x:60:PHE:CE2	2.35	0.61
18:i:237:LEU:HB2	18:i:240:TYR:HB3	1.82	0.61
22:m:141:VAL:HA	22:m:217:THR:CG2	2.30	0.61
22:m:207:ASP:OD1	22:m:209:ALA:HB3	2.00	0.61
23:n:128:LEU:O	23:n:151:LEU:HB2	2.00	0.61
28:s:46:ARG:HB2	28:s:48:HIS:CE1	2.35	0.61
29:t:42:LYS:HD3	29:t:46:ARG:HH22	1.65	0.61
30:u:107:SER:HA	30:u:110:ARG:NH2	2.15	0.61
34:y:86:THR:OG1	34:y:87:GLN:N	2.33	0.61
37:1:123:ASN:HA	46:A:2349:A:O2'	1.99	0.61
46:A:24:G:H2'	46:A:25:A:C8	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:742:A:H2'	46:A:743:A:C8	2.35	0.61
46:A:1253:U:H2'	46:A:1254:U:C6	2.35	0.61
46:A:1391:U:H2'	46:A:1392:A:C8	2.35	0.61
46:A:1961:G:O5'	49:D:109:LYS:NZ	2.33	0.61
46:A:2232:A:H2'	46:A:2233:U:H6	1.64	0.61
63:R:200:ARG:NH1	63:R:221:TYR:CG	2.68	0.61
6:AF:123:LYS:O	6:AF:125:LEU:N	2.31	0.61
7:AG:120:LYS:HE3	16:g:14:GLN:HB2	1.82	0.61
8:AH:64:PRO:HG3	12:AL:133:U:N3	2.15	0.61
8:AH:83:GLN:HB2	12:AL:145:A:H5"	1.81	0.61
9:AI:68:GLN:NE2	12:AL:1351:U:C4	2.68	0.61
9:AI:422:TRP:CD1	9:AI:426:ILE:HD11	2.35	0.61
10:AJ:14:LEU:CG	11:AK:222:LEU:CD2	2.64	0.61
11:AK:170:GLN:NE2	25:p:120:VAL:HG22	2.15	0.61
12:AL:271:U:H2'	12:AL:272:U:C6	2.35	0.61
12:AL:282:C:H5'	32:w:69:ARG:HH12	1.65	0.61
12:AL:323:U:O2'	12:AL:324:G:H5'	1.99	0.61
12:AL:323:U:C2	12:AL:324:G:C8	2.88	0.61
12:AL:537:A:H8	12:AL:537:A:OP2	1.84	0.61
12:AL:622:A:N3	12:AL:657:G:O2'	2.33	0.61
16:g:63:LEU:HD12	16:g:77:PHE:CD2	2.35	0.61
17:h:313:LYS:HG3	20:k:131:LYS:CA	2.25	0.61
18:i:155:TYR:HE2	18:i:176:MET:HE2	1.65	0.61
20:k:36:ALA:HB2	25:p:23:ASN:ND2	2.15	0.61
21:l:6:ILE:HG21	33:x:135:ILE:CG2	2.31	0.61
21:l:74:SER:HB3	30:u:146:ASN:OD1	1.99	0.61
26:q:97:ASP:CG	26:q:99:ASN:HB2	2.25	0.61
28:s:15:VAL:HA	28:s:46:ARG:HA	1.81	0.61
29:t:60:LEU:HD11	34:y:20:PRO:CG	2.30	0.61
30:u:60:SER:O	30:u:61:THR:C	2.44	0.61
30:u:72:ASP:O	30:u:73:THR:C	2.43	0.61
30:u:253:GLN:HE21	30:u:263:LEU:N	1.98	0.61
46:A:600:C:H1'	47:B:133:ARG:HH11	1.64	0.61
46:A:940:A:H2'	46:A:941:U:C6	2.35	0.61
46:A:1534:G:OP1	47:B:151:ARG:HD2	2.00	0.61
46:A:2059:A:H5'	46:A:2060:A:C5	2.36	0.61
46:A:2936:U:H2'	46:A:2937:A:C8	2.35	0.61
46:A:2937:A:H2'	46:A:2938:A:C8	2.35	0.61
46:A:2977:U:O5'	46:A:2977:U:H6	1.83	0.61
3:AC:161:LYS:HD3	17:h:141:TYR:CE2	2.34	0.61
5:AE:33:VAL:HG12	5:AE:34:TRP:HD1	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:41:GLY:HA3	5:AE:108:SER:CB	2.31	0.61
7:AG:49:LYS:HE2	23:n:58:LYS:HZ1	1.65	0.61
7:AG:74:LEU:CD1	8:AH:187:LEU:HD21	2.17	0.61
7:AG:184:GLU:HG3	16:g:209:SER:HB3	1.75	0.61
7:AG:228:THR:HG22	33:x:42:ASP:OD2	2.01	0.61
9:AI:189:ASP:OD2	9:AI:202:PRO:HB2	1.99	0.61
12:AL:24:U:H2'	12:AL:25:G:C1'	2.29	0.61
12:AL:25:G:N1	12:AL:983:A:N1	2.47	0.61
12:AL:482:U:N3	12:AL:483:A:N7	2.48	0.61
12:AL:1159:C:O2	18:i:364:ASN:HB3	2.00	0.61
12:AL:1590:A:H2'	14:AN:8:A:H5"	1.82	0.61
18:i:95:THR:HG22	18:i:142:ASN:HD22	1.66	0.61
18:i:100:TYR:CG	25:p:48:ARG:NH1	2.66	0.61
20:k:102:GLU:CD	20:k:102:GLU:H	2.08	0.61
26:q:214:MET:CE	35:z:140:MET:HG2	2.28	0.61
30:u:162:LYS:HA	30:u:165:GLU:CD	2.25	0.61
32:w:193:LEU:HD13	32:w:200:CYS:HB3	1.82	0.61
32:w:200:CYS:O	32:w:204:LEU:HG	2.01	0.61
46:A:880:G:C6	46:A:890:A:C6	2.88	0.61
46:A:1439:A:C2'	46:A:1440:U:O5'	2.47	0.61
46:A:1735:U:H2'	46:A:1736:G:O4'	1.98	0.61
46:A:1765:A:N6	46:A:1786:A:C6	2.69	0.61
46:A:1924:G:H2'	46:A:1925:U:C6	2.35	0.61
46:A:2016:A:H5'	46:A:2016:A:N3	2.15	0.61
46:A:2198:U:O4	64:S:227:TYR:CE2	2.54	0.61
46:A:2261:A:H2'	46:A:2262:U:C6	2.35	0.61
46:A:2476:C:H2'	46:A:2477:U:O4'	2.00	0.61
46:A:2581:U:H2'	46:A:2582:U:H6	1.63	0.61
46:A:3065:U:H2'	46:A:3066:G:C8	2.35	0.61
63:R:193:LEU:HD11	63:R:247:ILE:HA	1.82	0.61
63:R:332:THR:O	63:R:336:VAL:N	2.28	0.61
1:AA:91:HIS:HD1	1:AA:94:ARG:NH1	1.99	0.61
1:AA:102:ALA:HA	1:AA:105:ARG:CZ	2.30	0.61
3:AC:8:ILE:HA	3:AC:50:THR:CG2	2.29	0.61
3:AC:265:SER:CA	17:h:128:PRO:HD2	2.27	0.61
4:AD:45:VAL:HA	4:AD:48:LEU:HB2	1.82	0.61
8:AH:184:ARG:CG	12:AL:814:A:C5'	2.79	0.61
8:AH:229:GLU:OE2	21:l:43:VAL:HG13	1.94	0.61
11:AK:304:ALA:N	24:o:152:GLY:HA3	2.16	0.61
12:AL:739:G:H5"	21:l:52:LYS:HZ1	1.63	0.61
12:AL:911:U:H2'	12:AL:912:A:C8	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1108:G:C1'	25:p:95:HIS:CD2	2.83	0.61
15:Z:36:ASN:HA	15:Z:39:GLN:HB2	1.82	0.61
21:l:128:TYR:O	21:l:129:GLN:C	2.43	0.61
27:r:96:PRO:HG2	27:r:127:ARG:HG2	1.82	0.61
46:A:643:U:H4'	46:A:644:A:O5'	1.98	0.61
46:A:2062:G:H22	46:A:2065:A:P	2.22	0.61
46:A:2837:U:H2'	46:A:2838:U:C6	2.36	0.61
63:R:329:PHE:O	63:R:362:ARG:NH2	2.34	0.61
5:AE:278:TYR:CE1	5:AE:301:ILE:HG12	2.35	0.61
8:AH:64:PRO:HG3	12:AL:133:U:H3	1.64	0.61
9:AI:60:TRP:CB	22:m:210:VAL:HG11	2.30	0.61
9:AI:162:GLN:O	9:AI:165:ALA:HB3	2.00	0.61
11:AK:211:LEU:HD22	11:AK:219:PHE:HB2	1.83	0.61
11:AK:241:PHE:HE2	11:AK:250:TYR:HB2	1.64	0.61
12:AL:401:A:H3'	12:AL:401:A:N3	2.14	0.61
12:AL:405:A:H2'	12:AL:406:U:H6	1.64	0.61
16:g:41:SER:O	16:g:45:ARG:HG2	2.01	0.61
16:g:246:ALA:CB	33:x:55:TYR:CE1	2.64	0.61
18:i:302:ILE:CB	25:p:20:TYR:CE1	2.83	0.61
18:i:303:ASN:HD22	25:p:17:THR:HG23	1.63	0.61
31:v:7:ARG:HA	31:v:81:GLN:H	1.66	0.61
46:A:525:G:O6	55:J:175:LYS:HD3	2.01	0.61
46:A:799:U:H3'	46:A:800:A:H8	1.66	0.61
46:A:1265:A:H2'	46:A:1266:U:C6	2.36	0.61
46:A:1265:A:H2'	46:A:1266:U:H6	1.64	0.61
46:A:2333:A:N3	63:R:328:VAL:HG12	2.16	0.61
63:R:180:LEU:HD23	63:R:184:LEU:HD13	1.82	0.61
3:AC:191:ILE:HG21	4:AD:222:GLN:OE1	2.00	0.61
5:AE:195:ARG:HG3	5:AE:199:LYS:HD2	1.82	0.61
5:AE:266:GLU:HA	5:AE:269:ASP:OD2	2.00	0.61
7:AG:174:TYR:CE1	16:g:107:PHE:HE1	2.10	0.61
9:AI:179:TYR:HD2	9:AI:182:LEU:HG	1.65	0.61
11:AK:155:ASN:ND2	20:k:56:PRO:CD	2.48	0.61
12:AL:273:A:O2'	12:AL:274:A:H5'	2.00	0.61
12:AL:491:U:C2	12:AL:499:A:C2	2.88	0.61
12:AL:752:A:HO2'	12:AL:767:A:H61	1.48	0.61
12:AL:855:C:H2'	12:AL:856:G:C8	2.35	0.61
17:h:302:THR:HG23	24:o:35:ARG:CD	2.28	0.61
18:i:302:ILE:HD13	25:p:20:TYR:CE2	2.36	0.61
21:l:104:GLN:NE2	21:l:119:SER:HB2	2.16	0.61
21:l:125:ASN:HA	21:l:128:TYR:CB	2.30	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:m:101:LEU:HD21	24:o:203:ILE:HG23	1.82	0.61
46:A:278:A:N6	46:A:300:A:C6	2.69	0.61
46:A:316:G:C5	64:S:128:LYS:HD2	2.35	0.61
46:A:326:A:H2'	46:A:329:A:H61	1.66	0.61
46:A:841:G:OP1	50:E:110:ASN:HB2	1.99	0.61
46:A:913:C:OP1	73:c:118:LYS:HA	2.01	0.61
46:A:1088:A:H2'	46:A:1089:A:C8	2.36	0.61
46:A:1358:C:O2'	46:A:1359:G:H5"	2.01	0.61
46:A:1531:C:C6	47:B:326:TRP:CE3	2.87	0.61
46:A:1904:A:H2'	46:A:1905:G:O4'	2.00	0.61
46:A:1988:A:H2'	46:A:1991:G:C8	2.36	0.61
46:A:2276:G:H21	56:K:128:MET:HG3	0.72	0.61
63:R:338:THR:N	63:R:361:ALA:HB3	2.16	0.61
3:AC:148:LEU:CD1	4:AD:82:ASN:CG	2.71	0.61
3:AC:152:TRP:HE1	3:AC:171:ASN:HA	1.66	0.61
5:AE:324:LEU:HA	5:AE:327:THR:HG23	1.83	0.61
8:AH:91:SER:HA	8:AH:94:LYS:HD2	1.81	0.61
8:AH:103:ARG:O	31:v:77:GLY:HA2	2.00	0.61
9:AI:220:LEU:HD11	9:AI:285:VAL:HG11	1.83	0.61
9:AI:311:LYS:HD2	12:AL:1303:U:C6	2.36	0.61
11:AK:190:VAL:HG21	25:p:138:MET:CE	2.31	0.61
12:AL:20:A:H2'	12:AL:21:U:O4'	2.00	0.61
12:AL:44:U:C2	12:AL:45:A:C8	2.89	0.61
12:AL:1272:U:O4	22:m:201:ASN:ND2	2.34	0.61
17:h:307:SER:HB2	17:h:310:GLU:HG3	1.82	0.61
24:o:248:LYS:C	24:o:250:GLY:H	2.09	0.61
32:w:85:PHE:HA	32:w:88:TYR:HD2	1.65	0.61
32:w:189:ARG:O	32:w:192:GLU:HG3	2.00	0.61
46:A:795:U:H2'	46:A:796:A:H8	1.60	0.61
46:A:1109:A:N3	51:F:44:ARG:NH1	2.48	0.61
46:A:1349:A:N7	61:P:95:ARG:CZ	2.63	0.61
46:A:2362:U:C4	72:b:151:ASN:OD1	2.53	0.61
46:A:2474:U:H2'	46:A:2475:U:C6	2.36	0.61
46:A:2674:U:H2'	46:A:2675:U:C6	2.36	0.61
4:AD:98:GLN:HB3	4:AD:301:GLU:HB2	1.82	0.61
5:AE:166:ILE:O	5:AE:170:PHE:HB2	2.00	0.61
8:AH:174:GLU:OE1	8:AH:174:GLU:CA	2.46	0.61
8:AH:209:PHE:C	8:AH:215:GLN:HG2	2.26	0.61
9:AI:56:LEU:HD12	22:m:211:ARG:CZ	2.30	0.61
9:AI:153:GLY:C	9:AI:155:GLY:N	2.43	0.61
9:AI:182:LEU:HD11	12:AL:1353:U:C4'	2.31	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:134:PHE:CE1	20:k:107:PRO:HD2	2.36	0.61
11:AK:144:LEU:CD1	18:i:319:LEU:HD11	2.23	0.61
12:AL:413:G:H2'	12:AL:501:U:C5	2.36	0.61
12:AL:1168:U:O4	12:AL:1169:A:N6	2.34	0.61
12:AL:1272:U:H5'	22:m:208:PHE:HB3	1.81	0.61
12:AL:1328:A:N3	12:AL:1421:C:O2'	2.34	0.61
13:AM:14:A:H1'	13:AM:22:G:N1	2.15	0.61
18:i:167:ASN:HA	18:i:170:ASN:HD21	1.65	0.61
18:i:329:ILE:HG23	18:i:347:LEU:HB2	1.81	0.61
39:3:67:PHE:CD1	46:A:1404:A:C8	2.88	0.61
46:A:203:U:H2'	46:A:204:A:C8	2.36	0.61
46:A:1141:A:H2'	46:A:1142:U:O4'	2.01	0.61
46:A:1267:A:H3'	46:A:1268:U:H6	1.65	0.61
46:A:1746:C:H42	46:A:1799:U:H2'	1.64	0.61
46:A:2975:A:H2'	46:A:2976:A:H8	1.62	0.61
46:A:3059:C:H2'	46:A:3060:U:C6	2.36	0.61
63:R:242:GLU:O	63:R:246:LYS:HG3	1.99	0.61
4:AD:210:PHE:O	4:AD:212:THR:N	2.34	0.61
5:AE:323:GLY:O	5:AE:327:THR:N	2.31	0.61
6:AF:314:VAL:HG11	31:v:71:ARG:NE	2.14	0.61
6:AF:329:LYS:C	12:AL:404:U:H4'	2.24	0.61
8:AH:21:ILE:CG1	31:v:74:TYR:CB	2.79	0.61
9:AI:57:TYR:HB2	22:m:205:SER:HA	1.83	0.61
9:AI:102:LYS:CA	12:AL:1350:U:O2	2.49	0.61
11:AK:199:LYS:CE	12:AL:1317:U:OP2	2.49	0.61
12:AL:617:U:N3	12:AL:656:G:C2	2.69	0.61
12:AL:755:G:H2'	12:AL:756:A:C8	2.36	0.61
18:i:153:PHE:O	18:i:207:PRO:HA	2.01	0.61
18:i:331:PHE:HB3	18:i:335:LEU:HD12	1.83	0.61
27:r:43:ARG:HA	27:r:43:ARG:HH11	1.66	0.61
32:w:47:ASP:C	32:w:49:GLY:N	2.58	0.61
46:A:1178:A:H2'	46:A:1179:U:H6	1.65	0.61
46:A:1311:A:H2'	46:A:1312:G:C8	2.36	0.61
5:AE:304:TYR:HA	5:AE:307:ALA:HB3	1.83	0.60
6:AF:158:PHE:HB2	6:AF:189:VAL:HG11	1.83	0.60
6:AF:302:GLY:C	6:AF:304:ARG:HH22	2.09	0.60
7:AG:154:MET:HB3	7:AG:158:LYS:HE3	1.83	0.60
7:AG:222:LYS:O	7:AG:225:VAL:HB	2.00	0.60
9:AI:164:HIS:CE1	9:AI:176:ASN:HB2	2.35	0.60
10:AJ:56:PHE:N	18:i:118:LEU:HD21	2.16	0.60
12:AL:502:A:P	19:j:7:LEU:HD13	2.41	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1182:U:O2'	12:AL:1183:A:OP1	2.11	0.60
12:AL:1425:A:H2'	12:AL:1426:A:C8	2.36	0.60
15:Z:46:HIS:ND1	22:m:234:HIS:HB3	2.16	0.60
30:u:78:ARG:HH12	30:u:163:GLU:CD	2.08	0.60
37:1:73:ILE:CD1	42:6:51:TYR:HB2	2.31	0.60
41:5:320:VAL:HA	46:A:28:U:O2	2.01	0.60
46:A:824:U:H2'	46:A:825:A:C8	2.36	0.60
46:A:1184:A:H2'	46:A:1185:U:C6	2.35	0.60
46:A:1415:U:H2'	46:A:1416:A:H8	1.61	0.60
46:A:1618:G:OP2	54:I:77:LYS:HD3	2.01	0.60
46:A:1712:A:H1'	47:B:140:THR:HG23	1.83	0.60
46:A:2590:U:H3'	46:A:2591:A:H5'	1.81	0.60
46:A:3064:U:H2'	46:A:3065:U:H6	1.66	0.60
46:A:3109:U:H2'	46:A:3110:U:H6	1.65	0.60
1:AA:78:ASP:HB2	12:AL:982:C:OP1	2.01	0.60
4:AD:202:TYR:O	4:AD:203:ASN:C	2.42	0.60
9:AI:283:SER:HB3	9:AI:335:ALA:CB	2.30	0.60
10:AJ:40:LYS:HE3	10:AJ:42:PRO:HG2	1.79	0.60
12:AL:502:A:O5'	19:j:7:LEU:HD13	2.00	0.60
12:AL:632:C:N4	12:AL:644:G:C6	2.69	0.60
13:AM:13:C:H4'	46:A:1824:U:H4'	1.81	0.60
15:Z:94:HIS:ND1	17:h:203:ARG:HA	2.16	0.60
18:i:148:LYS:HZ1	20:k:78:LEU:HD12	1.66	0.60
18:i:212:TYR:C	18:i:214:TYR:H	2.08	0.60
18:i:368:LEU:HA	29:t:111:LYS:HD2	1.78	0.60
25:p:18:ARG:CG	25:p:18:ARG:NH2	2.64	0.60
26:q:96:GLU:HG2	26:q:97:ASP:H	1.65	0.60
27:r:80:ALA:HB1	27:r:93:ALA:O	2.02	0.60
30:u:225:GLU:HG3	32:w:88:TYR:CE1	2.29	0.60
46:A:666:G:H21	46:A:684:G:H1'	1.65	0.60
46:A:823:U:H2'	46:A:823:U:O2	2.01	0.60
46:A:2001:U:H2'	46:A:2002:U:O4'	2.01	0.60
46:A:2024:A:H2'	46:A:2025:A:O4'	2.01	0.60
46:A:2084:G:H2'	46:A:2085:A:O4'	2.01	0.60
46:A:2087:A:H2'	46:A:2088:A:C8	2.36	0.60
46:A:2869:A:H3'	46:A:2870:G:H5"	1.82	0.60
76:f:38:ASP:HA	76:f:41:LYS:HD3	1.81	0.60
2:AB:42:ASP:CG	2:AB:56:LYS:HD3	2.26	0.60
2:AB:82:GLN:HG2	12:AL:376:C:OP1	2.01	0.60
3:AC:194:PHE:HD1	3:AC:197:LEU:HD23	1.66	0.60
5:AE:50:GLU:OE2	5:AE:97:LEU:CD2	2.49	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:253:ILE:HG12	5:AE:254:SER:N	2.16	0.60
6:AF:302:GLY:CA	6:AF:304:ARG:HH22	2.13	0.60
6:AF:308:LYS:HB2	31:v:62:ILE:HB	1.81	0.60
8:AH:16:PRO:HG2	31:v:35:LYS:HG2	1.82	0.60
10:AJ:93:LYS:NZ	12:AL:1090:U:OP2	2.34	0.60
11:AK:149:ARG:CG	20:k:69:TRP:C	2.68	0.60
11:AK:152:ARG:HH22	20:k:69:TRP:HB3	1.67	0.60
12:AL:81:U:O2'	12:AL:82:A:H5'	2.00	0.60
12:AL:697:G:H5"	23:n:4:VAL:HG23	1.83	0.60
12:AL:1415:G:C3'	24:o:258:HIS:O	2.49	0.60
13:AM:34:C:H2'	13:AM:35:A:C8	2.36	0.60
16:g:272:ARG:NH1	33:x:47:LYS:O	2.35	0.60
24:o:159:LYS:HD3	24:o:164:THR:HG22	1.83	0.60
25:p:85:ARG:HH22	29:t:115:TRP:NE1	1.93	0.60
28:s:67:ILE:HG12	67:V:96:GLY:HA2	1.82	0.60
28:s:98:PRO:HB3	28:s:102:GLN:H	1.66	0.60
30:u:111:GLU:HA	30:u:114:GLU:HG3	1.83	0.60
43:7:75:ASN:OD1	55:J:144:LYS:HE2	2.01	0.60
46:A:74:A:O2'	49:D:238:PRO:O	2.19	0.60
46:A:214:A:H2'	46:A:215:A:C8	2.37	0.60
46:A:418:A:H2'	46:A:419:U:H6	1.63	0.60
46:A:1768:A:H2'	46:A:1769:U:C5	2.36	0.60
46:A:1972:G:H2'	46:A:1973:C:C6	2.37	0.60
46:A:2016:A:H61	46:A:2022:U:P	2.24	0.60
46:A:2795:U:H5'	46:A:2796:G:H5"	1.82	0.60
75:e:66:MET:HE1	75:e:150:VAL:HA	1.82	0.60
3:AC:185:LEU:HG	7:AG:198:GLY:H	1.67	0.60
5:AE:32:THR:HG23	5:AE:35:ARG:NH2	2.16	0.60
5:AE:215:TRP:HH2	5:AE:248:LEU:HD13	1.67	0.60
7:AG:127:ILE:HD13	16:g:11:ARG:NH1	2.15	0.60
8:AH:210:ILE:HD12	21:l:40:ARG:C	2.26	0.60
11:AK:154:TYR:HE2	25:p:57:PHE:CE2	1.97	0.60
12:AL:479:A:N1	19:j:181:LEU:CD1	2.64	0.60
12:AL:739:G:OP1	21:l:52:LYS:NZ	2.34	0.60
12:AL:1497:U:H2'	12:AL:1498:C:H6	1.62	0.60
26:q:164:ASP:HB3	26:q:196:VAL:CG2	2.31	0.60
28:s:12:GLY:C	28:s:14:GLU:N	2.59	0.60
32:w:26:THR:O	32:w:38:PHE:HA	2.01	0.60
34:y:21:LEU:HB3	34:y:23:ILE:HG13	1.82	0.60
46:A:319:U:H2'	46:A:320:U:H6	1.67	0.60
46:A:824:U:H2'	46:A:825:A:H8	1.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:894:A:H2'	46:A:895:A:C8	2.36	0.60
46:A:1048:A:C5'	75:e:110:HIS:CB	2.77	0.60
46:A:1542:U:H2'	46:A:1543:A:C8	2.36	0.60
46:A:1704:U:H2'	46:A:1705:U:C6	2.37	0.60
46:A:2016:A:C1'	46:A:2019:A:H5"	2.31	0.60
46:A:2198:U:C5	64:S:227:TYR:CD2	2.89	0.60
46:A:2724:A:HO2'	46:A:2756:G:H1	1.50	0.60
46:A:2858:C:H2'	46:A:2859:G:C8	2.37	0.60
46:A:2894:A:H4'	46:A:2895:A:O5'	2.02	0.60
46:A:2917:U:H2'	46:A:2918:A:H8	1.66	0.60
46:A:2966:U:H2'	46:A:2967:A:H8	1.66	0.60
2:AB:46:ASN:CA	2:AB:53:ASN:HB3	2.32	0.60
4:AD:71:ASN:HD21	4:AD:77:LYS:HD2	1.65	0.60
6:AF:108:GLN:N	6:AF:116:GLY:O	2.34	0.60
6:AF:143:CYS:O	6:AF:143:CYS:SG	2.59	0.60
6:AF:336:PHE:CZ	19:j:139:HIS:CB	2.78	0.60
9:AI:182:LEU:HD13	12:AL:1353:U:H5'	1.84	0.60
9:AI:226:LEU:HD22	9:AI:278:GLU:HG3	1.83	0.60
9:AI:310:ASN:HD21	28:s:34:LYS:CB	2.14	0.60
12:AL:1172:A:H61	25:p:39:GLY:N	2.00	0.60
17:h:314:GLN:HG3	17:h:316:LYS:CG	2.31	0.60
19:j:160:ALA:O	19:j:428:ARG:HD2	2.00	0.60
46:A:508:U:H2'	46:A:509:A:O4'	2.01	0.60
46:A:2054:A:H4'	46:A:2055:U:C5'	2.31	0.60
46:A:2590:U:H3'	46:A:2591:A:H5"	1.84	0.60
46:A:2661:C:H5"	55:J:119:LYS:HD3	1.83	0.60
46:A:2971:A:H2'	46:A:2972:U:C6	2.36	0.60
63:R:155:LYS:HB3	63:R:156:PRO:CD	2.31	0.60
63:R:155:LYS:HD2	72:b:157:PHE:CD2	2.37	0.60
63:R:200:ARG:NH1	63:R:221:TYR:CD1	2.69	0.60
63:R:272:GLU:HA	63:R:275:LYS:HB2	1.83	0.60
63:R:286:LEU:CD2	63:R:304:LEU:HD13	2.32	0.60
2:AB:63:TRP:O	2:AB:67:PHE:HB2	2.00	0.60
4:AD:67:LEU:O	4:AD:70:GLU:HB2	2.02	0.60
6:AF:34:TYR:HE1	6:AF:53:ASN:CB	2.14	0.60
6:AF:333:ARG:N	6:AF:333:ARG:HE	1.99	0.60
8:AH:46:GLY:HA2	32:w:59:ARG:NE	2.16	0.60
9:AI:57:TYR:N	22:m:205:SER:HB2	2.15	0.60
9:AI:236:ASN:O	9:AI:240:ALA:HB2	2.00	0.60
9:AI:449:HIS:HE1	22:m:149:PRO:HG3	1.67	0.60
12:AL:335:A:C2	12:AL:337:A:H1'	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:828:A:H2'	12:AL:829:U:H6	1.67	0.60
12:AL:943:U:OP1	23:n:95:PRO:HD2	2.01	0.60
15:Z:94:HIS:HB2	17:h:203:ARG:NH2	2.17	0.60
18:i:100:TYR:HE2	25:p:139:LYS:CB	2.14	0.60
18:i:180:MET:HG3	20:k:92:TRP:CE3	2.34	0.60
18:i:325:VAL:HB	18:i:396:ASN:HD22	1.67	0.60
32:w:170:SER:O	32:w:171:GLY:C	2.44	0.60
33:x:101:ARG:O	33:x:103:VAL:N	2.33	0.60
46:A:1003:U:H4'	76:f:143:LYS:HD3	1.82	0.60
46:A:1247:U:H2'	46:A:1248:A:C8	2.36	0.60
46:A:1439:A:C2'	46:A:1440:U:O4'	2.49	0.60
46:A:1676:U:H2'	46:A:1677:A:H8	1.66	0.60
46:A:1727:A:H3'	47:B:290:GLN:CB	2.31	0.60
46:A:2016:A:N6	46:A:2022:U:O5'	2.33	0.60
46:A:2917:U:O2'	46:A:2918:A:O5'	2.15	0.60
46:A:3008:U:H2'	46:A:3009:A:H8	1.65	0.60
46:A:3050:G:H2'	46:A:3051:U:C6	2.36	0.60
46:A:3261:U:OP1	71:a:175:LYS:HE3	2.02	0.60
75:e:168:GLY:CA	75:e:178:VAL:HG13	2.31	0.60
2:AB:37:GLN:HA	2:AB:37:GLN:HE21	1.66	0.60
3:AC:155:LEU:O	3:AC:221:ILE:N	2.34	0.60
3:AC:169:ASN:CG	7:AG:197:PHE:HE1	2.10	0.60
3:AC:237:VAL:HG12	4:AD:44:ARG:NH1	2.15	0.60
5:AE:277:ILE:O	5:AE:280:ILE:HB	2.02	0.60
5:AE:279:LEU:HD23	5:AE:315:TYR:HB2	1.83	0.60
7:AG:22:LEU:O	20:k:135:VAL:CA	2.48	0.60
8:AH:102:LEU:HD21	31:v:96:LEU:HB2	1.84	0.60
8:AH:104:ARG:CG	12:AL:143:A:H4'	2.30	0.60
8:AH:180:ARG:HD3	8:AH:184:ARG:HH11	1.67	0.60
8:AH:231:PHE:O	8:AH:233:ASP:N	2.31	0.60
9:AI:225:GLU:O	9:AI:226:LEU:C	2.45	0.60
9:AI:226:LEU:HD13	9:AI:230:TYR:CD2	2.34	0.60
11:AK:187:THR:HB	11:AK:197:SER:HA	1.83	0.60
12:AL:401:A:N7	12:AL:661:A:O2'	2.35	0.60
17:h:154:SER:O	17:h:156:ARG:N	2.35	0.60
21:l:32:ILE:HD13	21:l:71:PHE:CG	2.36	0.60
25:p:85:ARG:NH2	29:t:115:TRP:CD1	2.64	0.60
30:u:100:LYS:C	32:w:167:LEU:HD11	2.26	0.60
35:z:106:ILE:HD13	35:z:120:LEU:HB2	1.83	0.60
46:A:704:U:H2'	46:A:705:C:H6	1.66	0.60
46:A:767:A:H2'	46:A:767:A:N3	2.16	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1711:A:O2'	46:A:1712:A:H5'	2.02	0.60
46:A:1928:U:H2'	46:A:1929:G:C8	2.37	0.60
46:A:2300:U:C6	63:R:39:MET:HE1	2.36	0.60
46:A:2906:U:H2'	46:A:2907:U:C6	2.36	0.60
56:K:121:ILE:HG12	56:K:136:ASP:HB2	1.84	0.60
4:AD:157:ILE:HG12	4:AD:293:LEU:HB3	1.84	0.60
5:AE:278:TYR:HE1	5:AE:301:ILE:HG12	1.66	0.60
6:AF:58:MET:HB2	19:j:11:LEU:CD1	2.31	0.60
6:AF:295:ILE:HD11	31:v:93:ALA:HA	1.82	0.60
6:AF:313:LYS:CA	31:v:68:ASP:OD2	2.47	0.60
8:AH:97:LEU:CD1	12:AL:144:U:OP1	2.50	0.60
8:AH:210:ILE:CG2	21:l:39:VAL:CA	2.76	0.60
15:Z:66:ALA:CB	22:m:184:ASN:CA	2.77	0.60
21:l:1:MET:SD	30:u:148:GLU:CG	2.90	0.60
23:n:1:MET:HE2	23:n:30:LYS:HB3	1.84	0.60
26:q:183:LEU:O	26:q:188:GLY:HA3	2.01	0.60
46:A:863:A:H2'	46:A:864:A:C8	2.36	0.60
46:A:1075:A:C6	46:A:1076:U:H1'	2.37	0.60
46:A:1146:A:H2'	46:A:1147:U:C6	2.35	0.60
46:A:1186:A:H2'	46:A:1187:U:H6	1.63	0.60
46:A:1883:A:H2'	46:A:1884:C:C6	2.37	0.60
46:A:2205:G:O2'	46:A:2206:U:O4'	2.20	0.60
46:A:2364:U:H2'	46:A:2365:A:H5'	1.83	0.60
46:A:2728:U:H3	46:A:2754:A:H61	1.50	0.60
3:AC:40:ASP:OD1	4:AD:286:VAL:HG11	2.01	0.60
3:AC:86:ILE:HG21	17:h:162:ALA:HB2	1.82	0.60
3:AC:162:LYS:O	3:AC:163:LEU:C	2.43	0.60
5:AE:127:SER:C	5:AE:129:ARG:H	2.10	0.60
5:AE:285:LEU:HD22	5:AE:292:ALA:HA	1.84	0.60
6:AF:28:SER:O	6:AF:30:ARG:N	2.34	0.60
6:AF:137:PHE:CZ	19:j:468:PRO:CB	2.82	0.60
7:AG:22:LEU:HD11	20:k:205:LEU:HD12	1.84	0.60
9:AI:49:LYS:O	9:AI:51:VAL:N	2.35	0.60
9:AI:118:LEU:HD13	9:AI:411:VAL:HG11	1.83	0.60
10:AJ:57:ARG:CZ	12:AL:1061:U:OP1	2.50	0.60
11:AK:75:ARG:HD3	18:i:185:ASN:O	2.00	0.60
12:AL:109:A:H2	12:AL:332:A:H2'	1.66	0.60
12:AL:220:A:H2'	12:AL:221:U:C6	2.37	0.60
12:AL:491:U:H3	12:AL:498:A:H61	1.48	0.60
12:AL:610:A:H1'	12:AL:611:U:C4	2.37	0.60
12:AL:1195:A:O2'	12:AL:1196:U:OP1	2.20	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1590:A:C5	14:AN:8:A:OP2	2.54	0.60
12:AL:1647:A:H1'	17:h:176:TYR:CD2	2.37	0.60
21:l:38:VAL:CG2	30:u:141:ILE:CD1	2.73	0.60
25:p:47:LEU:HD11	25:p:62:ILE:HD12	1.83	0.60
26:q:169:MET:HE2	26:q:169:MET:H	1.66	0.60
26:q:176:ARG:O	26:q:180:ILE:HG13	2.02	0.60
28:s:16:ILE:O	28:s:17:LYS:C	2.44	0.60
35:z:93:VAL:O	35:z:94:GLU:C	2.43	0.60
46:A:469:G:H2'	46:A:1930:A:N7	2.17	0.60
46:A:496:U:H2'	46:A:497:U:C6	2.37	0.60
46:A:753:A:H2'	46:A:754:A:C8	2.37	0.60
46:A:1997:A:C6	46:A:1998:U:C4	2.90	0.60
46:A:2273:G:H2'	46:A:2274:A:C8	2.35	0.60
46:A:2381:G:C6	46:A:2382:A:C5	2.89	0.60
46:A:2939:U:H5'	46:A:2940:G:OP2	2.02	0.60
46:A:2978:A:H2'	46:A:2979:U:O4'	2.02	0.60
7:AG:67:PRO:HB2	32:w:187:GLN:CD	2.27	0.60
9:AI:70:GLN:O	9:AI:72:THR:N	2.34	0.60
9:AI:147:ILE:CD1	9:AI:355:LEU:HD11	2.31	0.60
12:AL:510:U:H2'	12:AL:511:A:C8	2.37	0.60
12:AL:1639:A:N3	17:h:150:GLN:HB2	2.17	0.60
17:h:155:MET:O	17:h:156:ARG:HB2	2.01	0.60
30:u:238:ASP:OD1	30:u:238:ASP:C	2.43	0.60
46:A:77:U:H2'	46:A:78:U:H6	1.67	0.60
46:A:87:U:H2'	46:A:88:U:C6	2.36	0.60
46:A:220:A:H3'	46:A:221:A:C8	2.37	0.60
46:A:228:U:H2'	46:A:229:G:O4'	2.01	0.60
46:A:929:G:N7	73:c:30:ARG:NH2	2.47	0.60
46:A:1011:A:C8	76:f:50:TYR:OH	2.54	0.60
46:A:1346:A:H1'	74:d:123:GLY:O	2.02	0.60
46:A:1432:A:H2'	46:A:1433:A:C8	2.37	0.60
46:A:1959:A:OP1	49:D:112:GLY:CA	2.50	0.60
46:A:2026:G:H1	46:A:2070:U:H3	1.50	0.60
46:A:2087:A:H2'	46:A:2088:A:H8	1.67	0.60
46:A:2243:U:O2'	46:A:2244:A:H5'	2.02	0.60
46:A:2842:U:C5'	48:C:208:ASN:HB3	2.31	0.60
46:A:3235:U:H2'	46:A:3236:A:H8	1.66	0.60
46:A:3267:U:H2'	46:A:3268:A:H8	1.67	0.60
63:R:149:ARG:O	63:R:150:LYS:C	2.44	0.60
63:R:198:LEU:O	63:R:199:ILE:C	2.44	0.60
63:R:245:SER:O	63:R:248:ASP:HB2	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:R:295:LYS:HE2	63:R:371:LEU:C	2.26	0.60
63:R:316:GLU:O	63:R:317:GLU:C	2.44	0.60
4:AD:253:TYR:OH	16:g:299:GLU:HA	2.02	0.59
5:AE:209:ARG:HA	5:AE:212:GLN:HB2	1.84	0.59
5:AE:227:LEU:HD11	5:AE:280:ILE:HG23	1.84	0.59
11:AK:149:ARG:HG2	20:k:70:ASP:N	2.15	0.59
12:AL:25:G:N2	12:AL:930:A:O2'	2.35	0.59
12:AL:65:C:H2'	12:AL:66:G:C8	2.26	0.59
12:AL:740:A:H1'	26:q:206:PHE:HD1	1.67	0.59
17:h:144:GLN:O	24:o:120:LEU:HD11	2.01	0.59
21:l:6:ILE:CB	33:x:135:ILE:HG23	2.25	0.59
22:m:127:LYS:HZ3	24:o:191:LYS:NZ	2.00	0.59
27:r:64:ARG:NH2	27:r:82:ARG:HG2	2.17	0.59
46:A:159:C:H2'	46:A:160:U:H6	1.67	0.59
46:A:215:A:C5	46:A:216:U:C4	2.90	0.59
46:A:1183:A:O2'	46:A:1184:A:H5'	2.02	0.59
46:A:2578:G:H2'	46:A:2579:A:H8	1.67	0.59
46:A:2798:A:H5"	51:F:194:TYR:CZ	2.36	0.59
46:A:3024:U:H2'	46:A:3025:U:H6	1.62	0.59
63:R:269:TYR:CZ	63:R:271:SER:HA	2.37	0.59
1:AA:92:LYS:CE	12:AL:956:U:H4'	2.30	0.59
1:AA:105:ARG:NH1	1:AA:107:LEU:CD2	2.59	0.59
4:AD:244:ALA:O	4:AD:248:LYS:N	2.30	0.59
4:AD:258:LYS:C	4:AD:260:PHE:N	2.60	0.59
5:AE:194:HIS:CE1	5:AE:315:TYR:OH	2.55	0.59
5:AE:315:TYR:CG	5:AE:316:ASP:N	2.61	0.59
6:AF:321:TYR:CZ	31:v:36:PRO:HD3	2.36	0.59
8:AH:103:ARG:CZ	31:v:76:ILE:O	2.49	0.59
9:AI:70:GLN:HE21	9:AI:70:GLN:H	1.50	0.59
12:AL:93:A:H2'	12:AL:94:A:C8	2.36	0.59
12:AL:315:G:H2'	12:AL:316:A:C8	2.37	0.59
12:AL:414:A:N6	12:AL:501:U:O4'	2.35	0.59
17:h:129:TYR:HH	17:h:144:GLN:HG2	1.68	0.59
18:i:82:ASN:HD22	20:k:57:PRO:HB3	1.61	0.59
19:j:20:PHE:HB2	19:j:428:ARG:CZ	2.31	0.59
30:u:85:GLU:OE1	32:w:107:PHE:HZ	1.84	0.59
30:u:238:ASP:O	30:u:238:ASP:OD1	2.19	0.59
37:1:121:PHE:O	46:A:2349:A:H8	1.85	0.59
38:2:42:VAL:HG21	50:E:154:LEU:HB3	1.83	0.59
46:A:16:A:H2'	46:A:17:U:C6	2.37	0.59
46:A:831:A:O2'	46:A:832:U:H5'	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1137:U:O2'	46:A:1138:G:H5'	2.02	0.59
46:A:1216:A:H2'	46:A:1217:U:H6	1.64	0.59
46:A:1413:A:H2'	46:A:1414:U:C6	2.37	0.59
46:A:1978:C:H2'	46:A:1979:U:H6	1.65	0.59
50:E:252:ASN:OD1	67:V:63:TYR:CD1	2.54	0.59
75:e:103:GLU:HB2	75:e:130:LEU:HB3	1.83	0.59
3:AC:217:TRP:HB3	17:h:149:ARG:HH21	1.65	0.59
3:AC:219:MET:HE1	17:h:153:HIS:CE1	2.38	0.59
6:AF:307:TYR:HA	31:v:63:LYS:CD	2.32	0.59
9:AI:288:MET:HA	9:AI:340:SER:O	2.02	0.59
12:AL:484:U:C2	12:AL:485:A:C8	2.91	0.59
12:AL:1443:A:OP1	22:m:127:LYS:NZ	2.31	0.59
12:AL:1642:U:O2	24:o:66:ILE:HG23	2.01	0.59
13:AM:27:C:H2'	13:AM:28:A:H8	1.67	0.59
16:g:210:LEU:HD22	16:g:211:PRO:HD2	1.84	0.59
17:h:129:TYR:CZ	24:o:120:LEU:CD1	2.86	0.59
18:i:93:TRP:HB3	29:t:108:PRO:HB3	1.83	0.59
18:i:397:PHE:O	18:i:398:ILE:C	2.44	0.59
21:l:56:LYS:HB3	21:l:61:HIS:HD2	1.67	0.59
21:l:110:SER:CA	33:x:93:TYR:OH	2.46	0.59
26:q:99:ASN:O	26:q:100:PHE:C	2.44	0.59
26:q:214:MET:HE1	35:z:140:MET:CA	2.31	0.59
46:A:537:U:H2'	46:A:538:A:H8	1.67	0.59
46:A:746:A:O2'	46:A:747:U:H5'	2.02	0.59
46:A:995:C:H2'	46:A:996:A:C8	2.37	0.59
46:A:1697:C:H2'	46:A:1698:C:C5	2.37	0.59
46:A:2071:A:H2'	46:A:2072:U:H5'	1.84	0.59
46:A:2455:A:H5"	50:E:237:GLY:HA3	1.84	0.59
46:A:2675:U:H2'	46:A:2676:G:C8	2.37	0.59
46:A:2814:U:C2	46:A:2815:U:C5	2.89	0.59
46:A:2900:A:H2'	46:A:2901:U:O4'	2.02	0.59
46:A:3026:A:H2'	46:A:3027:U:H6	1.67	0.59
46:A:3290:A:H8	46:A:3290:A:O5'	1.86	0.59
63:R:178:LYS:HB2	63:R:178:LYS:NZ	2.17	0.59
63:R:197:TYR:HD2	63:R:198:LEU:HD13	1.67	0.59
64:S:105:LEU:HD12	64:S:118:MET:HE1	1.84	0.59
4:AD:249:THR:HA	4:AD:252:ILE:HB	1.83	0.59
5:AE:314:PRO:HB2	5:AE:318:HIS:HB2	1.84	0.59
6:AF:295:ILE:HD11	31:v:93:ALA:HB2	1.84	0.59
7:AG:228:THR:HG22	33:x:42:ASP:CG	2.28	0.59
8:AH:64:PRO:HD3	12:AL:133:U:O4	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:93:GLN:NE2	12:AL:221:U:O3'	2.35	0.59
11:AK:65:ILE:O	11:AK:66:LEU:C	2.44	0.59
12:AL:46:A:N1	12:AL:407:U:O2	2.35	0.59
12:AL:636:C:H1'	12:AL:650:C:H5"	1.84	0.59
12:AL:813:A:H2'	12:AL:814:A:C8	2.38	0.59
16:g:225:THR:O	16:g:226:VAL:C	2.44	0.59
16:g:228:PRO:CA	16:g:277:LEU:HA	2.30	0.59
18:i:369:ASN:C	29:t:114:ILE:HD11	2.27	0.59
19:j:144:LEU:CB	19:j:452:TYR:CD2	2.84	0.59
34:y:33:ILE:O	34:y:35:THR:N	2.35	0.59
40:4:33:TRP:CH2	46:A:1274:A:N7	2.71	0.59
46:A:299:U:H2'	46:A:300:A:O4'	2.02	0.59
46:A:690:C:H2'	46:A:691:A:C8	2.36	0.59
46:A:1130:C:H2'	46:A:1131:C:C6	2.38	0.59
46:A:1528:G:H2'	46:A:1529:A:H8	1.66	0.59
46:A:1543:A:H2'	46:A:1544:A:H8	1.67	0.59
46:A:2586:U:H4'	46:A:2587:U:O5'	2.02	0.59
46:A:3135:U:H4'	46:A:3136:U:OP1	2.02	0.59
64:S:227:TYR:O	64:S:230:PHE:N	2.35	0.59
6:AF:136:PRO:CG	19:j:436:ILE:CD1	2.72	0.59
7:AG:67:PRO:HD2	7:AG:68:HIS:HD2	1.66	0.59
7:AG:166:VAL:HG21	16:g:195:LYS:CD	2.26	0.59
8:AH:49:TYR:CD2	8:AH:61:ARG:HG2	2.38	0.59
9:AI:130:ALA:O	9:AI:131:THR:C	2.45	0.59
12:AL:685:G:N1	12:AL:824:A:OP1	2.33	0.59
12:AL:1104:U:C5'	18:i:333:GLY:HA2	2.32	0.59
19:j:6:ASN:O	19:j:7:LEU:HG	2.01	0.59
25:p:92:PRO:C	29:t:95:ARG:HH21	2.10	0.59
29:t:56:LEU:HD11	34:y:18:ILE:HG12	1.78	0.59
35:z:106:ILE:CD1	35:z:120:LEU:HB2	2.33	0.59
37:1:183:PRO:HB3	63:R:209:TYR:OH	2.02	0.59
45:9:39:ASN:ND2	46:A:3274:U:O4	2.29	0.59
46:A:271:A:H2'	46:A:272:G:C8	2.38	0.59
46:A:306:G:C6	46:A:365:A:C4	2.90	0.59
46:A:414:G:H2'	46:A:415:A:C8	2.37	0.59
46:A:419:U:H2'	46:A:420:U:C6	2.37	0.59
46:A:851:A:H2'	46:A:852:U:C6	2.38	0.59
46:A:1646:A:H5"	47:B:98:PRO:HG3	1.83	0.59
46:A:1750:G:H2'	46:A:1751:C:C6	2.36	0.59
46:A:2421:U:C2	46:A:2422:A:N7	2.70	0.59
46:A:2716:A:H1'	46:A:2717:A:O5'	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:J:112:PRO:O	55:J:113:ILE:C	2.46	0.59
63:R:333:ASP:HA	63:R:336:VAL:CG1	2.29	0.59
75:e:132:LEU:HD21	75:e:170:LYS:HD3	1.84	0.59
1:AA:83:LYS:HG2	12:AL:1601:C:C4'	2.32	0.59
2:AB:48:ILE:HG22	2:AB:90:GLN:NE2	2.17	0.59
3:AC:194:PHE:CE2	4:AD:223:TYR:CG	2.90	0.59
4:AD:67:LEU:O	4:AD:77:LYS:NZ	2.34	0.59
4:AD:171:LEU:HD23	4:AD:271:LEU:HB3	1.84	0.59
5:AE:87:PRO:O	5:AE:88:LEU:C	2.45	0.59
6:AF:178:LYS:HZ1	19:j:459:ARG:HH22	1.47	0.59
7:AG:77:THR:HG22	8:AH:179:LYS:CD	2.33	0.59
7:AG:91:LEU:CD2	23:n:54:MET:O	2.35	0.59
8:AH:21:ILE:CG1	31:v:74:TYR:HB2	2.32	0.59
8:AH:21:ILE:CG2	31:v:74:TYR:CE1	2.85	0.59
10:AJ:19:PHE:O	10:AJ:21:GLN:N	2.36	0.59
12:AL:16:G:H5'	20:k:266:ARG:HD3	1.84	0.59
12:AL:81:U:H2'	12:AL:82:A:H5'	1.85	0.59
12:AL:258:G:OP2	32:w:68:LYS:CD	2.51	0.59
12:AL:269:A:H2'	12:AL:271:U:C5	2.36	0.59
12:AL:837:A:H3'	12:AL:838:G:H8	1.68	0.59
12:AL:1071:A:C6	12:AL:1081:U:O4	2.55	0.59
15:Z:88:ARG:HH12	35:z:172:ALA:HB2	1.67	0.59
17:h:308:PRO:HG2	20:k:111:SER:HB3	1.84	0.59
20:k:27:GLU:O	20:k:29:LEU:N	2.36	0.59
21:l:6:ILE:HD13	33:x:94:ALA:HB1	1.84	0.59
21:l:29:GLY:O	21:l:33:ILE:HG13	2.02	0.59
28:s:75:VAL:HA	28:s:78:ASN:HD22	1.67	0.59
31:v:85:THR:O	31:v:89:LEU:HG	2.03	0.59
32:w:80:ASN:C	32:w:82:GLY:H	2.10	0.59
46:A:1358:C:H5	46:A:1553:G:N1	1.94	0.59
46:A:1488:U:H2'	46:A:1489:U:C6	2.37	0.59
46:A:2625:A:N1	55:J:110:GLN:NE2	2.50	0.59
46:A:3014:C:C4	46:A:3033:A:C5	2.91	0.59
46:A:3119:A:H4'	48:C:125:HIS:HA	1.85	0.59
50:E:23:CYS:SG	63:R:73:PRO:HD2	2.43	0.59
62:Q:252:PRO:HG2	64:S:159:LEU:HB3	1.85	0.59
63:R:121:HIS:O	63:R:123:GLU:N	2.34	0.59
63:R:272:GLU:CD	63:R:276:GLN:HE22	2.10	0.59
1:AA:92:LYS:HE2	12:AL:956:U:H5"	1.85	0.59
3:AC:175:TYR:HD2	12:AL:1639:A:N6	1.99	0.59
5:AE:271:LEU:O	5:AE:275:GLU:N	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:320:LYS:O	5:AE:324:LEU:HG	2.03	0.59
7:AG:75:TYR:HE2	8:AH:182:TYR:CD2	2.18	0.59
7:AG:120:LYS:CB	16:g:34:GLN:HE21	2.15	0.59
8:AH:117:ARG:HA	8:AH:120:HIS:CE1	2.38	0.59
8:AH:166:ARG:HD3	23:n:64:THR:HG22	1.85	0.59
12:AL:540:A:H2'	12:AL:541:U:C6	2.37	0.59
12:AL:859:A:H2'	12:AL:860:C:C6	2.37	0.59
26:q:215:ARG:NE	26:q:217:LEU:HD21	2.16	0.59
30:u:224:PRO:HB3	32:w:85:PHE:CE1	2.35	0.59
31:v:12:ARG:NH2	31:v:21:TYR:HD1	2.00	0.59
32:w:10:VAL:HA	32:w:22:VAL:HG22	1.84	0.59
46:A:620:G:H2'	46:A:1682:U:H1'	1.84	0.59
46:A:749:A:H2'	46:A:750:U:H6	1.63	0.59
46:A:1032:G:H3'	46:A:1033:A:H8	1.67	0.59
46:A:1245:U:C2	46:A:1246:A:C8	2.91	0.59
46:A:1786:A:C2	46:A:1787:A:C5	2.91	0.59
46:A:2600:U:O4	63:R:101:HIS:CB	2.51	0.59
46:A:3122:U:H4'	46:A:3123:A:O5'	2.02	0.59
46:A:3135:U:H2'	46:A:3137:A:N7	2.17	0.59
63:R:120:PRO:O	63:R:121:HIS:HB2	2.02	0.59
3:AC:150:GLN:HE21	4:AD:277:PRO:HD2	1.66	0.59
4:AD:119:THR:O	4:AD:120:PRO:C	2.46	0.59
5:AE:151:PHE:CE1	5:AE:319:LEU:HD23	2.38	0.59
5:AE:318:HIS:O	5:AE:321:ALA:HB3	2.02	0.59
6:AF:198:ARG:HB3	6:AF:200:ARG:HG3	1.84	0.59
7:AG:36:ILE:CD1	17:h:234:LYS:HB3	2.31	0.59
9:AI:57:TYR:C	22:m:205:SER:HA	2.25	0.59
10:AJ:59:LEU:HD12	18:i:122:MET:HG2	1.83	0.59
11:AK:174:ARG:CD	25:p:38:TYR:HD2	1.98	0.59
12:AL:612:A:C6	12:AL:661:A:C8	2.90	0.59
13:AM:26:A:H61	13:AM:44:G:H1	1.49	0.59
15:Z:46:HIS:CE1	22:m:238:ILE:HD11	2.37	0.59
16:g:272:ARG:HH22	33:x:48:LYS:CA	2.16	0.59
17:h:199:THR:HG21	17:h:213:GLU:HB2	1.84	0.59
17:h:275:TRP:HZ2	17:h:280:LEU:HG	1.68	0.59
18:i:128:ASN:O	18:i:129:ASN:C	2.46	0.59
18:i:180:MET:HG2	20:k:92:TRP:NE1	2.11	0.59
21:l:110:SER:HA	33:x:93:TYR:OH	2.03	0.59
30:u:279:ARG:O	30:u:283:ARG:HG3	2.03	0.59
33:x:106:THR:CG2	35:z:127:ASN:HD21	2.11	0.59
46:A:588:C:H2'	46:A:589:A:C8	2.38	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1880:G:H3'	46:A:1881:A:H5"	1.84	0.59
46:A:2022:U:H3	46:A:2064:G:H1	1.48	0.59
46:A:2030:U:O4	46:A:2032:C:N4	2.34	0.59
46:A:2895:A:H2'	46:A:2895:A:N3	2.16	0.59
3:AC:127:PHE:HZ	3:AC:165:ILE:HG13	1.68	0.59
4:AD:28:LEU:HD23	4:AD:32:PHE:CD1	2.38	0.59
6:AF:302:GLY:C	6:AF:304:ARG:NH2	2.60	0.59
7:AG:13:ARG:HH21	17:h:339:ARG:CG	2.15	0.59
11:AK:132:PHE:HB2	18:i:248:MET:HE3	1.84	0.59
11:AK:236:MET:HA	12:AL:1316:A:OP1	2.02	0.59
16:g:78:GLU:CD	35:z:174:ARG:HH12	2.07	0.59
16:g:249:GLY:C	33:x:55:TYR:CE1	2.80	0.59
18:i:261:ILE:HD11	18:i:356:LYS:HA	1.84	0.59
19:j:391:LEU:HD13	19:j:402:ILE:HD11	1.83	0.59
21:l:6:ILE:HD12	33:x:94:ALA:HB2	1.79	0.59
29:t:31:PHE:CE2	29:t:71:SER:HB3	2.37	0.59
32:w:76:GLU:CD	32:w:78:ILE:HB	2.28	0.59
46:A:202:A:C6	46:A:203:U:C4	2.91	0.59
46:A:714:A:H2'	46:A:715:U:H6	1.68	0.59
46:A:874:U:H1'	46:A:910:G:C8	2.38	0.59
46:A:1003:U:C4'	76:f:143:LYS:HD3	2.33	0.59
46:A:2058:U:H3'	46:A:2059:A:C6	2.37	0.59
46:A:2218:U:H2'	46:A:2219:A:O4'	2.02	0.59
46:A:2687:U:H2'	46:A:2688:G:C8	2.38	0.59
46:A:2769:A:N3	46:A:2769:A:H3'	2.18	0.59
48:C:24:PRO:HG3	71:a:100:VAL:HA	1.85	0.59
63:R:298:LYS:HD2	63:R:368:LEU:O	2.02	0.59
3:AC:91:LEU:O	3:AC:95:ASN:ND2	2.35	0.59
4:AD:167:GLY:CA	4:AD:202:TYR:HA	2.32	0.59
5:AE:111:PRO:HA	5:AE:153:ILE:O	2.03	0.59
10:AJ:63:TYR:CE2	18:i:182:ILE:CG2	2.86	0.59
12:AL:1172:A:N6	25:p:39:GLY:CA	2.65	0.59
12:AL:1412:C:H5'	24:o:270:ARG:O	2.03	0.59
19:j:129:ASN:HA	19:j:153:LYS:HD3	1.84	0.59
21:l:77:VAL:O	21:l:81:ILE:HG13	2.03	0.59
22:m:137:ALA:HB1	22:m:213:GLY:N	2.18	0.59
46:A:475:U:OP1	46:A:2768:G:N2	2.33	0.59
46:A:741:U:C2	46:A:742:A:C8	2.90	0.59
46:A:807:A:C2	46:A:819:U:O2	2.56	0.59
46:A:1239:A:H2'	46:A:1240:U:H5'	1.85	0.59
46:A:2276:G:H5'	46:A:2276:G:C8	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2356:A:N1	46:A:2363:A:N6	2.50	0.59
46:A:2467:A:O2'	46:A:2468:A:H5'	2.03	0.59
46:A:2885:G:H21	48:C:214:VAL:HG21	1.67	0.59
76:f:76:PRO:HB2	76:f:79:TYR:CB	2.26	0.59
3:AC:99:SER:HB2	3:AC:252:ASN:HD22	1.68	0.58
3:AC:135:VAL:HG12	3:AC:139:MET:HG3	1.83	0.58
8:AH:160:MET:CE	23:n:37:TYR:CE1	2.81	0.58
9:AI:181:GLU:OE2	9:AI:296:LYS:HE2	2.03	0.58
9:AI:223:SER:O	9:AI:284:LYS:HD3	2.03	0.58
10:AJ:91:PRO:CD	12:AL:1243:U:H5	2.06	0.58
12:AL:810:A:H2'	12:AL:811:U:C6	2.38	0.58
12:AL:1104:U:OP1	18:i:342:THR:HG21	2.03	0.58
12:AL:1632:A:C6	33:x:67:LEU:HD11	2.37	0.58
18:i:155:TYR:CD1	18:i:207:PRO:HB2	2.38	0.58
19:j:36:LEU:HD22	19:j:44:GLN:HG2	1.84	0.58
26:q:184:VAL:HG23	35:z:117:PHE:HE2	1.68	0.58
32:w:94:LEU:O	32:w:95:SER:C	2.46	0.58
46:A:52:A:H2'	46:A:53:U:H6	1.65	0.58
3:AC:217:TRP:CD1	17:h:146:LEU:HD22	2.36	0.58
4:AD:209:ASN:O	4:AD:212:THR:N	2.23	0.58
5:AE:33:VAL:HG12	5:AE:34:TRP:N	2.18	0.58
7:AG:22:LEU:O	20:k:136:ASP:N	2.35	0.58
9:AI:371:TYR:HD2	9:AI:372:HIS:CE1	2.20	0.58
11:AK:115:ALA:HB2	18:i:172:TYR:CZ	2.38	0.58
11:AK:132:PHE:CD2	18:i:249:PRO:HD3	2.35	0.58
11:AK:135:ASP:OD1	20:k:99:LEU:CD1	2.51	0.58
11:AK:298:TRP:CZ2	24:o:210:ASN:OD1	2.56	0.58
12:AL:222:U:H2'	12:AL:223:U:C6	2.38	0.58
12:AL:1105:G:H5'	18:i:390:ASN:ND2	2.09	0.58
12:AL:1384:G:H3'	29:t:42:LYS:HZ3	1.68	0.58
21:l:40:ARG:NH2	30:u:141:ILE:CG2	2.66	0.58
46:A:200:G:H2'	46:A:201:A:H5'	1.85	0.58
46:A:466:U:H2'	46:A:467:U:O4'	2.03	0.58
46:A:1184:A:H2'	46:A:1185:U:H6	1.68	0.58
46:A:1311:A:H2'	46:A:1312:G:H8	1.68	0.58
3:AC:54:ALA:CB	7:AG:143:PRO:CB	2.81	0.58
4:AD:143:ILE:HA	4:AD:148:SER:HA	1.85	0.58
6:AF:61:PHE:CZ	19:j:29:TYR:CG	2.91	0.58
7:AG:1:MET:HE2	17:h:351:GLU:CB	2.29	0.58
7:AG:85:ARG:O	7:AG:86:VAL:C	2.45	0.58
7:AG:174:TYR:HA	7:AG:177:TYR:CD2	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:196:ASN:ND2	12:AL:1318:U:H2'	2.19	0.58
12:AL:1580:U:H2'	12:AL:1581:G:C8	2.38	0.58
17:h:144:GLN:NE2	24:o:119:GLN:CA	2.63	0.58
25:p:92:PRO:C	29:t:95:ARG:NH2	2.61	0.58
30:u:220:LYS:HB2	30:u:227:TYR:CG	2.39	0.58
46:A:1937:U:H2'	46:A:1938:A:C8	2.38	0.58
46:A:1947:C:O2'	46:A:3139:A:N1	2.35	0.58
46:A:2016:A:C2	46:A:2021:A:H8	2.21	0.58
46:A:2600:U:O4	63:R:101:HIS:HA	2.04	0.58
46:A:2771:G:H8	46:A:2771:G:O5'	1.86	0.58
3:AC:93:VAL:O	3:AC:97:LEU:N	2.36	0.58
4:AD:126:ILE:HG23	4:AD:153:ARG:HD2	1.86	0.58
4:AD:309:LEU:HD12	4:AD:310:PRO:HD2	1.85	0.58
5:AE:50:GLU:OE2	5:AE:97:LEU:HD23	2.04	0.58
7:AG:49:LYS:HE2	7:AG:56:ILE:HG23	1.84	0.58
11:AK:182:VAL:HB	25:p:147:GLU:O	2.04	0.58
11:AK:205:LYS:HA	11:AK:233:ILE:HA	1.84	0.58
12:AL:562:A:H2'	12:AL:563:U:O4'	2.03	0.58
12:AL:1031:A:H2	13:AM:34:C:C4'	2.16	0.58
13:AM:36:U:C4	14:AN:8:A:N6	2.57	0.58
18:i:370:TYR:CZ	29:t:103:LEU:O	2.56	0.58
22:m:114:LEU:O	22:m:118:THR:HG23	2.03	0.58
30:u:232:GLN:CG	32:w:96:VAL:HG21	2.29	0.58
38:2:47:SER:HA	46:A:2425:A:H5'	1.84	0.58
46:A:30:U:H3	48:C:21:SER:C	2.11	0.58
46:A:1898:C:O2'	46:A:1899:C:H5'	2.04	0.58
46:A:2929:A:H2'	46:A:2930:G:O4'	2.03	0.58
46:A:2935:A:H2'	46:A:2936:U:C6	2.38	0.58
46:A:3065:U:H2'	46:A:3066:G:H8	1.68	0.58
63:R:94:ARG:O	63:R:96:TYR:HD1	1.85	0.58
63:R:335:THR:O	63:R:362:ARG:HA	2.02	0.58
76:f:63:LYS:HE3	76:f:69:THR:HG23	1.85	0.58
3:AC:157:GLU:HA	3:AC:163:LEU:HA	1.85	0.58
4:AD:209:ASN:HA	16:g:222:ILE:CG2	2.34	0.58
5:AE:107:TYR:CZ	5:AE:152:LYS:HB3	2.37	0.58
5:AE:228:ALA:O	5:AE:229:ASN:C	2.45	0.58
5:AE:274:TYR:O	5:AE:275:GLU:C	2.45	0.58
7:AG:122:LEU:O	16:g:11:ARG:HB2	2.03	0.58
8:AH:18:THR:HG23	31:v:38:GLU:OE2	2.02	0.58
11:AK:195:PRO:HG2	12:AL:1290:A:C8	2.39	0.58
12:AL:257:A:OP1	32:w:68:LYS:NZ	2.34	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:769:A:H4'	12:AL:770:A:C5'	2.32	0.58
12:AL:894:U:H4'	17:h:204:SER:OG	2.04	0.58
12:AL:1108:G:H1'	25:p:95:HIS:NE2	2.18	0.58
18:i:176:MET:HE1	20:k:93:ASP:HA	1.83	0.58
25:p:18:ARG:HH21	25:p:18:ARG:CG	2.17	0.58
25:p:34:LEU:HB3	25:p:35:PRO:HD2	1.84	0.58
26:q:149:GLY:O	26:q:150:ARG:C	2.45	0.58
30:u:132:GLU:HG2	32:w:126:ARG:HG2	1.84	0.58
30:u:175:GLU:HG2	30:u:226:LYS:HD3	1.85	0.58
32:w:160:THR:O	32:w:161:VAL:C	2.44	0.58
46:A:1647:G:O2'	47:B:99:VAL:HG12	2.03	0.58
46:A:2365:A:H2'	46:A:2366:U:H6	1.67	0.58
46:A:2641:C:OP1	72:b:144:ARG:NH1	2.37	0.58
46:A:3152:A:OP1	46:A:3152:A:H4'	2.04	0.58
63:R:229:LYS:HB2	63:R:229:LYS:NZ	2.19	0.58
63:R:326:LYS:O	63:R:327:SER:C	2.46	0.58
3:AC:54:ALA:CB	7:AG:143:PRO:HB3	2.33	0.58
3:AC:95:ASN:ND2	3:AC:223:CYS:H	2.01	0.58
3:AC:148:LEU:CD2	4:AD:203:ASN:HB3	2.30	0.58
5:AE:34:TRP:O	5:AE:35:ARG:C	2.43	0.58
5:AE:45:LYS:HB2	5:AE:105:PHE:HD2	1.67	0.58
8:AH:199:LEU:HD23	30:u:93:TYR:CE1	2.39	0.58
10:AJ:40:LYS:HE2	10:AJ:42:PRO:CD	2.33	0.58
12:AL:109:A:C2	12:AL:332:A:H2'	2.38	0.58
12:AL:868:G:H2'	12:AL:869:U:C6	2.37	0.58
21:l:3:TYR:CE2	21:l:78:GLN:HG3	2.38	0.58
21:l:119:SER:HB3	21:l:122:GLU:HG3	1.85	0.58
28:s:53:PRO:O	28:s:56:MET:HB2	2.02	0.58
30:u:174:SER:HB2	30:u:219:LEU:HD13	1.84	0.58
31:v:4:GLY:H	31:v:7:ARG:NE	2.02	0.58
32:w:198:LEU:O	32:w:201:ASP:HB2	2.04	0.58
33:x:44:SER:O	33:x:45:LEU:HD23	2.03	0.58
46:A:25:A:C2	71:a:151:MET:SD	2.97	0.58
46:A:416:U:H2'	46:A:417:U:H6	1.69	0.58
46:A:449:A:H2'	46:A:450:U:H6	1.69	0.58
46:A:742:A:H2'	46:A:743:A:H8	1.69	0.58
46:A:1003:U:H4'	76:f:143:LYS:CD	2.32	0.58
46:A:1509:U:H2'	46:A:1510:A:C8	2.37	0.58
46:A:1531:C:N3	47:B:326:TRP:CH2	2.71	0.58
46:A:2082:A:H2'	46:A:2083:U:O4'	2.03	0.58
46:A:2202:U:H2'	46:A:2203:A:H8	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2586:U:H5'	46:A:2586:U:H6	1.68	0.58
46:A:2974:U:H2'	46:A:2975:A:C8	2.39	0.58
63:R:240:LEU:HA	63:R:243:SER:HB3	1.86	0.58
63:R:301:ILE:HD12	63:R:304:LEU:HD12	1.86	0.58
2:AB:47:LYS:HG3	2:AB:100:ILE:HG13	1.85	0.58
3:AC:9:HIS:HD2	3:AC:50:THR:HG23	1.68	0.58
4:AD:28:LEU:CB	4:AD:32:PHE:HB2	2.28	0.58
4:AD:293:LEU:HA	4:AD:296:VAL:HB	1.84	0.58
7:AG:36:ILE:CD1	17:h:234:LYS:CG	2.74	0.58
7:AG:120:LYS:CE	16:g:14:GLN:HB3	2.34	0.58
9:AI:134:PHE:HB2	9:AI:389:PHE:CZ	2.38	0.58
9:AI:176:ASN:HA	9:AI:290:THR:O	2.02	0.58
9:AI:248:LEU:HA	9:AI:253:ASN:OD1	2.03	0.58
11:AK:145:VAL:CG2	20:k:68:PHE:CE1	2.75	0.58
11:AK:145:VAL:CG1	20:k:68:PHE:O	2.52	0.58
12:AL:258:G:OP2	32:w:68:LYS:CG	2.52	0.58
13:AM:2:G:H5"	13:AM:3:C:H5	1.68	0.58
13:AM:71:C:H3'	13:AM:72:C:C4	2.39	0.58
18:i:212:TYR:C	18:i:214:TYR:N	2.60	0.58
19:j:127:HIS:HB2	19:j:129:ASN:HD21	1.66	0.58
22:m:211:ARG:NE	22:m:211:ARG:HA	2.18	0.58
24:o:232:ALA:HB1	24:o:252:LEU:HG	1.86	0.58
35:z:92:SER:O	35:z:94:GLU:N	2.36	0.58
46:A:85:A:H8	46:A:85:A:O5'	1.86	0.58
46:A:1824:U:H2'	46:A:1825:A:H8	1.68	0.58
46:A:2025:A:C2	46:A:2072:U:C2	2.91	0.58
46:A:2031:C:H2'	46:A:2032:C:C6	2.39	0.58
46:A:2243:U:H2'	46:A:2244:A:H8	1.67	0.58
46:A:2264:G:H1'	46:A:2266:U:H5	1.69	0.58
75:e:66:MET:SD	75:e:149:GLN:C	2.87	0.58
3:AC:174:PRO:HB2	3:AC:220:PRO:HB3	1.86	0.58
3:AC:175:TYR:CD2	12:AL:1639:A:N6	2.70	0.58
4:AD:186:MET:HB3	4:AD:189:ARG:CB	2.33	0.58
4:AD:251:PHE:HA	4:AD:255:THR:HB	1.86	0.58
6:AF:150:SER:HB3	6:AF:218:VAL:HG21	1.86	0.58
8:AH:93:GLN:CD	12:AL:222:U:OP2	2.45	0.58
12:AL:110:A:H3'	12:AL:111:A:H8	1.68	0.58
12:AL:128:A:H1'	12:AL:129:G:H5'	1.85	0.58
12:AL:606:U:H2'	12:AL:607:U:C6	2.39	0.58
12:AL:785:A:O2'	33:x:108:ARG:CG	2.52	0.58
18:i:238:THR:HB	20:k:121:LYS:HZ1	1.66	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:j:41:LEU:HG	19:j:45:LYS:HE3	1.85	0.58
20:k:16:TYR:CZ	20:k:20:LEU:CD2	2.77	0.58
20:k:36:ALA:HB1	25:p:23:ASN:HD22	1.68	0.58
22:m:98:TRP:HA	24:o:242:LEU:HD22	1.83	0.58
22:m:113:THR:HG22	22:m:185:LYS:NZ	2.19	0.58
30:u:205:LEU:HD23	30:u:247:MET:HE1	1.85	0.58
46:A:674:A:H2'	46:A:674:A:N3	2.17	0.58
46:A:1164:U:C2	46:A:1165:A:C8	2.92	0.58
46:A:1608:U:C3'	48:C:201:HIS:HE2	2.14	0.58
46:A:1777:C:H5'	46:A:1778:G:OP2	2.03	0.58
46:A:2795:U:H5"	46:A:2796:G:C8	2.39	0.58
46:A:3011:U:H2'	46:A:3012:A:C8	2.39	0.58
63:R:259:SER:HB3	63:R:268:GLN:O	2.04	0.58
2:AB:73:ILE:O	2:AB:77:LYS:HG2	2.04	0.58
3:AC:25:VAL:HG12	3:AC:28:ILE:HD13	1.84	0.58
3:AC:54:ALA:HB1	7:AG:143:PRO:CB	2.33	0.58
3:AC:62:TYR:CE2	17:h:163:THR:HG22	2.39	0.58
4:AD:260:PHE:CA	16:g:223:GLN:HG3	2.30	0.58
6:AF:314:VAL:CB	31:v:71:ARG:HG3	2.32	0.58
7:AG:69:ALA:HB3	32:w:180:ARG:HH21	1.68	0.58
8:AH:164:LEU:CD2	23:n:33:LEU:HD22	2.34	0.58
8:AH:229:GLU:CD	21:l:43:VAL:CG1	2.71	0.58
11:AK:57:TRP:CZ3	11:AK:86:GLU:HG3	2.38	0.58
12:AL:325:A:H2'	12:AL:326:C:H6	1.67	0.58
12:AL:327:U:H2'	12:AL:328:C:C6	2.38	0.58
12:AL:767:A:H5"	12:AL:767:A:C8	2.36	0.58
12:AL:823:G:OP1	12:AL:886:G:N2	2.32	0.58
15:Z:63:SER:O	22:m:184:ASN:OD1	2.21	0.58
16:g:36:ILE:HB	16:g:63:LEU:HD23	1.84	0.58
16:g:245:ALA:HB2	16:g:254:VAL:HG13	1.85	0.58
18:i:173:MET:SD	20:k:91:ARG:HB2	2.43	0.58
20:k:241:ARG:O	20:k:259:SER:HA	2.03	0.58
22:m:90:PRO:HB3	24:o:241:LEU:CG	2.33	0.58
22:m:124:HIS:C	22:m:126:LYS:N	2.61	0.58
32:w:53:ARG:HH21	32:w:83:GLN:HG2	1.68	0.58
42:6:94:TRP:CH2	46:A:2334:U:N3	2.72	0.58
46:A:170:U:O2'	46:A:171:A:H5'	2.03	0.58
46:A:247:A:H2'	46:A:248:A:O4'	2.03	0.58
46:A:644:A:H5'	46:A:1571:G:O2'	2.04	0.58
46:A:861:A:H2'	46:A:862:U:H6	1.68	0.58
46:A:1118:A:O2'	46:A:1119:A:H3'	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1164:U:H2'	46:A:1165:A:C8	2.39	0.58
46:A:1748:A:H2'	46:A:1749:U:C6	2.39	0.58
46:A:2018:C:C6	46:A:2065:A:N6	2.71	0.58
46:A:3155:A:C6	46:A:3247:A:C4	2.91	0.58
5:AE:77:LYS:HB2	5:AE:79:ILE:HG12	1.86	0.58
5:AE:293:GLN:HG3	5:AE:294:TYR:N	2.18	0.58
5:AE:308:LEU:HD22	5:AE:313:ASP:H	1.69	0.58
7:AG:217:LEU:HD22	16:g:273:MET:HG3	1.85	0.58
12:AL:762:U:H2'	12:AL:762:U:O2	2.03	0.58
12:AL:1023:A:N1	34:y:56:GLY:HA3	2.19	0.58
12:AL:1045:C:H1'	29:t:73:GLN:HA	1.86	0.58
12:AL:1376:U:P	28:s:100:ARG:NE	2.76	0.58
21:l:6:ILE:CD1	33:x:135:ILE:HG21	2.34	0.58
22:m:124:HIS:O	22:m:126:LYS:N	2.37	0.58
29:t:23:ARG:CZ	29:t:26:PHE:CD2	2.58	0.58
33:x:103:VAL:O	33:x:105:SER:N	2.35	0.58
34:y:71:HIS:CB	34:y:76:PHE:HE1	2.17	0.58
37:1:323:ARG:HH12	63:R:123:GLU:HA	1.68	0.58
46:A:60:G:H2'	46:A:61:G:O4'	2.03	0.58
46:A:661:G:H5"	70:Y:71:LEU:CD1	2.33	0.58
46:A:1349:A:C2	68:W:157:ARG:HA	2.39	0.58
46:A:2187:A:H2'	46:A:2188:A:H8	1.67	0.58
46:A:2336:G:C4	46:A:2337:A:C8	2.92	0.58
46:A:2464:A:H2	50:E:229:ASN:ND2	2.01	0.58
46:A:2574:G:O2'	46:A:2575:A:H5'	2.02	0.58
46:A:2811:G:H2'	46:A:2812:G:H8	1.68	0.58
46:A:2886:C:H5"	48:C:216:PRO:HA	1.85	0.58
46:A:3150:U:C4	46:A:3153:U:H5	2.21	0.58
55:J:154:VAL:HG12	55:J:189:ALA:HB3	1.86	0.58
55:J:161:ARG:HA	55:J:166:VAL:O	2.03	0.58
63:R:184:LEU:C	63:R:186:LEU:N	2.56	0.58
63:R:203:ALA:O	63:R:204:SER:C	2.45	0.58
69:X:16:THR:CG2	72:b:132:LEU:HD13	2.34	0.58
75:e:144:ASP:OD1	75:e:173:ASN:ND2	2.37	0.58
2:AB:48:ILE:HB	2:AB:86:TYR:CE2	2.39	0.57
2:AB:94:TYR:O	2:AB:97:ASN:N	2.26	0.57
5:AE:101:THR:C	5:AE:103:ASN:H	2.12	0.57
6:AF:74:ASN:HA	6:AF:98:LEU:HD23	1.85	0.57
6:AF:344:TYR:HB3	31:v:15:ARG:NH1	2.15	0.57
7:AG:174:TYR:HD1	16:g:107:PHE:HE1	1.52	0.57
9:AI:57:TYR:HA	22:m:205:SER:N	2.13	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:196:LEU:O	9:AI:198:LEU:HG	2.04	0.57
9:AI:420:LYS:NZ	9:AI:428:GLU:OE2	2.35	0.57
11:AK:133:MET:CE	18:i:212:TYR:OH	2.50	0.57
12:AL:987:G:H2'	12:AL:988:A:C8	2.39	0.57
15:Z:89:ILE:HG22	35:z:165:LEU:CD1	2.34	0.57
17:h:183:ILE:HD11	17:h:375:VAL:HG11	1.86	0.57
20:k:219:ASP:CG	20:k:232:ARG:HG2	2.29	0.57
22:m:116:HIS:CE1	22:m:186:ARG:HB3	2.39	0.57
27:r:35:LYS:HE3	32:w:37:LEU:CD2	2.23	0.57
30:u:53:LYS:HD2	30:u:57:LEU:HD13	1.86	0.57
32:w:33:ILE:HG23	32:w:35:LYS:HG2	1.84	0.57
32:w:80:ASN:HB2	32:w:84:GLN:HE21	1.68	0.57
37:1:58:ARG:CZ	46:A:2336:G:C6	2.86	0.57
46:A:26:A:C4	71:a:112:TYR:HA	2.39	0.57
46:A:206:U:C4	46:A:207:U:C4	2.92	0.57
46:A:474:A:OP2	46:A:1955:C:N4	2.36	0.57
46:A:1020:U:C5'	75:e:134:LYS:HB2	2.27	0.57
46:A:2284:A:OP1	63:R:40:LYS:CE	2.51	0.57
46:A:2612:A:N3	46:A:2648:A:H2'	2.18	0.57
46:A:3268:A:H2'	46:A:3269:U:O4'	2.04	0.57
46:A:3274:U:H2'	46:A:3275:C:O4'	2.04	0.57
53:H:102:GLY:HA2	53:H:128:VAL:HG11	1.86	0.57
5:AE:124:THR:CG2	5:AE:137:ILE:HD12	2.34	0.57
6:AF:147:TYR:HA	6:AF:217:PRO:HD2	1.85	0.57
6:AF:321:TYR:CE2	31:v:36:PRO:HD2	2.39	0.57
7:AG:67:PRO:HG2	7:AG:68:HIS:CD2	2.39	0.57
7:AG:127:ILE:HG12	16:g:11:ARG:NH1	2.19	0.57
8:AH:29:GLN:CB	8:AH:32:ILE:HB	2.34	0.57
11:AK:174:ARG:NH1	25:p:38:TYR:HB3	2.18	0.57
12:AL:227:U:H2'	12:AL:228:A:C8	2.40	0.57
12:AL:846:A:N6	12:AL:867:A:H1'	2.19	0.57
15:Z:5:PRO:O	15:Z:7:VAL:HG12	2.04	0.57
18:i:184:ASN:ND2	20:k:87:PHE:CD2	2.72	0.57
20:k:59:LEU:HG	25:p:20:TYR:OH	2.04	0.57
20:k:105:ILE:O	20:k:106:LEU:C	2.47	0.57
28:s:69:GLY:HA2	28:s:72:ARG:HG3	1.85	0.57
31:v:12:ARG:CZ	31:v:21:TYR:HD1	2.17	0.57
46:A:132:A:H2'	46:A:133:A:C8	2.38	0.57
46:A:435:G:C2	46:A:455:A:C8	2.93	0.57
46:A:947:G:C6	46:A:1107:U:H5	2.22	0.57
46:A:959:U:H2'	46:A:960:U:C6	2.39	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1508:A:H2'	46:A:1509:U:C6	2.39	0.57
46:A:1665:G:N7	46:A:2961:A:O2'	2.37	0.57
46:A:1962:A:N7	46:A:1963:C:N4	2.52	0.57
46:A:2413:A:C5	46:A:2414:U:C4	2.93	0.57
63:R:193:LEU:HD22	63:R:250:CYS:SG	2.44	0.57
76:f:40:CYS:O	76:f:44:ASN:N	2.32	0.57
1:AA:90:LYS:CE	12:AL:1612:C:N4	2.65	0.57
2:AB:50:ARG:HH21	2:AB:105:LEU:HG	1.67	0.57
3:AC:148:LEU:HD21	4:AD:204:ALA:CB	2.25	0.57
3:AC:150:GLN:CD	4:AD:166:ASP:N	2.63	0.57
3:AC:169:ASN:O	3:AC:170:ASN:C	2.47	0.57
5:AE:47:LYS:CE	5:AE:98:SER:HB2	2.35	0.57
5:AE:65:ILE:HG23	5:AE:90:PRO:CB	2.33	0.57
5:AE:273:LYS:O	5:AE:277:ILE:HG13	2.03	0.57
5:AE:278:TYR:CE2	5:AE:282:ARG:HG2	2.38	0.57
7:AG:75:TYR:HE2	8:AH:182:TYR:CE2	2.19	0.57
7:AG:174:TYR:HA	7:AG:177:TYR:HD2	1.69	0.57
8:AH:203:TYR:HB3	30:u:138:ILE:HG12	1.85	0.57
12:AL:558:A:H3'	12:AL:559:U:H6	1.70	0.57
12:AL:901:U:H2'	12:AL:902:A:H8	1.67	0.57
12:AL:1004:G:N3	12:AL:1444:A:H2	2.02	0.57
12:AL:1043:A:N6	12:AL:1384:G:H21	2.01	0.57
12:AL:1295:A:H2'	12:AL:1296:A:H8	1.68	0.57
12:AL:1635:U:H3	16:g:85:TRP:HB3	1.68	0.57
13:AM:4:U:H2'	13:AM:5:A:C8	2.39	0.57
21:l:13:ASN:O	21:l:14:SER:C	2.47	0.57
21:l:43:VAL:O	21:l:44:PRO:C	2.48	0.57
46:A:818:U:H3'	46:A:819:U:H6	1.69	0.57
46:A:1013:G:C4'	76:f:125:LYS:HZ1	2.15	0.57
46:A:1439:A:C4	46:A:1440:U:C6	2.92	0.57
46:A:1487:A:H2'	46:A:1488:U:H5'	1.85	0.57
46:A:1662:U:H6	46:A:1662:U:H5"	1.70	0.57
46:A:1712:A:H2'	46:A:1713:C:H6	1.69	0.57
46:A:2302:U:P	56:K:129:GLY:O	2.63	0.57
46:A:2336:G:C5	46:A:2337:A:C5	2.92	0.57
46:A:2347:A:O2'	46:A:2348:A:H5'	2.04	0.57
46:A:2970:A:H2'	46:A:2971:A:C8	2.39	0.57
46:A:3273:A:OP2	71:a:135:ARG:HD3	2.03	0.57
47:B:248:ILE:HG12	47:B:278:LYS:HG3	1.86	0.57
4:AD:175:ARG:CD	4:AD:191:ILE:HG13	2.26	0.57
4:AD:284:TYR:HE1	4:AD:295:ARG:HD2	1.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:211:LEU:CD2	5:AE:245:LEU:HD21	2.34	0.57
5:AE:301:ILE:O	5:AE:305:GLN:N	2.35	0.57
6:AF:137:PHE:CZ	19:j:468:PRO:HD3	2.40	0.57
6:AF:314:VAL:CG1	31:v:71:ARG:HG3	2.34	0.57
7:AG:117:SER:CB	16:g:83:THR:HG21	2.33	0.57
8:AH:83:GLN:CB	12:AL:145:A:H5"	2.34	0.57
9:AI:287:ILE:HG21	9:AI:334:PHE:CZ	2.40	0.57
11:AK:145:VAL:HG21	20:k:68:PHE:HE1	1.62	0.57
11:AK:149:ARG:CG	20:k:70:ASP:C	2.78	0.57
12:AL:550:U:H5"	19:j:131:ARG:HH12	1.67	0.57
12:AL:826:G:N2	30:u:246:ASN:ND2	2.52	0.57
12:AL:958:C:H2'	12:AL:959:G:C8	2.40	0.57
12:AL:1271:A:H5'	12:AL:1273:A:O4'	2.04	0.57
12:AL:1627:U:C5	15:Z:16:LEU:HA	2.39	0.57
17:h:133:ILE:O	17:h:134:PRO:C	2.47	0.57
21:l:114:SER:CB	33:x:92:PHE:CE1	2.88	0.57
26:q:211:SER:HB3	35:z:137:ARG:O	2.05	0.57
26:q:214:MET:HE1	35:z:140:MET:CB	2.32	0.57
28:s:96:HIS:HB3	28:s:112:ARG:HA	1.85	0.57
33:x:70:LYS:HD2	33:x:71:TYR:CE2	2.38	0.57
37:1:188:VAL:CG1	46:A:2358:A:C2	2.87	0.57
46:A:170:U:C2'	46:A:171:A:H5'	2.34	0.57
46:A:931:U:H2'	46:A:932:C:C6	2.39	0.57
46:A:1032:G:H3'	46:A:1033:A:C8	2.39	0.57
46:A:1725:G:H2'	46:A:1726:U:H5'	1.86	0.57
46:A:2705:A:H5'	46:A:2705:A:C8	2.37	0.57
46:A:2977:U:C6	46:A:2977:U:O5'	2.57	0.57
46:A:3254:U:OP1	68:W:102:ASN:HB2	2.03	0.57
74:d:79:LEU:HD12	74:d:85:SER:HA	1.86	0.57
76:f:73:LYS:HB3	76:f:133:HIS:HE1	1.69	0.57
5:AE:104:ASP:O	5:AE:108:SER:HB3	2.05	0.57
5:AE:266:GLU:O	5:AE:270:LEU:HG	2.04	0.57
6:AF:67:TYR:CZ	19:j:181:LEU:HD11	2.39	0.57
6:AF:330:LYS:HZ3	12:AL:36:U:P	2.27	0.57
8:AH:46:GLY:N	32:w:59:ARG:HD2	2.19	0.57
9:AI:49:LYS:O	9:AI:49:LYS:HD3	2.04	0.57
11:AK:137:LEU:HD13	11:AK:142:GLN:HG2	1.87	0.57
11:AK:226:ARG:HD3	11:AK:236:MET:HB3	1.87	0.57
12:AL:79:A:H3'	12:AL:80:U:H6	1.68	0.57
12:AL:1051:A:H4'	34:y:57:LYS:HG3	1.86	0.57
15:Z:89:ILE:HD11	35:z:168:ILE:C	2.29	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:i:145:SER:HB2	25:p:134:ALA:HA	1.86	0.57
18:i:316:MET:HE3	20:k:69:TRP:CE2	2.39	0.57
46:A:165:A:H61	46:A:213:U:H3	1.51	0.57
46:A:990:U:H2'	46:A:991:U:C2	2.40	0.57
46:A:1530:U:P	47:B:94:LYS:HZ1	2.28	0.57
46:A:1769:U:C3'	46:A:1770:U:H5"	2.33	0.57
46:A:1815:U:C2	46:A:1816:A:C8	2.93	0.57
46:A:2029:A:N6	46:A:2059:A:N1	2.52	0.57
46:A:2072:U:C2'	46:A:2073:U:H4'	2.28	0.57
46:A:2349:A:H3'	46:A:2350:U:C6	2.40	0.57
2:AB:46:ASN:H	2:AB:46:ASN:ND2	2.01	0.57
3:AC:177:PHE:HA	3:AC:180:ASN:HD21	1.69	0.57
3:AC:261:PHE:CZ	17:h:148:LEU:HB2	2.39	0.57
5:AE:37:PHE:HA	5:AE:40:THR:HB	1.86	0.57
7:AG:2:LYS:O	7:AG:3:ILE:C	2.46	0.57
7:AG:96:LYS:HG3	12:AL:916:A:OP2	2.03	0.57
8:AH:162:GLN:HG3	23:n:60:PHE:HE1	1.64	0.57
10:AJ:45:ALA:CB	29:t:32:LYS:HD3	2.34	0.57
11:AK:162:LEU:CD1	25:p:64:ARG:CB	2.80	0.57
11:AK:304:ALA:HA	24:o:152:GLY:HA2	1.86	0.57
12:AL:511:A:H61	12:AL:608:U:H1'	1.69	0.57
12:AL:519:A:H2'	12:AL:519:A:N3	2.20	0.57
12:AL:761:A:C2	12:AL:851:G:H1'	2.39	0.57
12:AL:1412:C:H4'	24:o:270:ARG:O	2.05	0.57
14:AN:2:U:H1'	14:AN:3:G:H3'	1.87	0.57
18:i:141:ILE:HB	18:i:152:LYS:HG3	1.86	0.57
21:l:53:ILE:HA	21:l:62:PHE:HA	1.86	0.57
25:p:102:PHE:CZ	29:t:99:ARG:HG3	2.39	0.57
25:p:123:MET:O	25:p:124:LEU:C	2.46	0.57
27:r:52:LEU:O	27:r:53:ASP:C	2.48	0.57
27:r:86:THR:C	27:r:88:GLY:N	2.62	0.57
32:w:75:ALA:O	32:w:76:GLU:HB2	2.05	0.57
32:w:140:THR:HB	32:w:141:PRO:HD3	1.85	0.57
38:2:47:SER:CA	46:A:2425:A:C5'	2.80	0.57
38:2:55:GLN:NE2	46:A:2428:A:N1	2.45	0.57
46:A:771:U:H2'	46:A:772:A:C8	2.40	0.57
46:A:785:C:H2'	46:A:786:A:O4'	2.04	0.57
46:A:1173:U:H2'	46:A:1174:G:O4'	2.05	0.57
46:A:1484:U:C2'	46:A:1485:A:H5'	2.34	0.57
46:A:2062:G:N2	46:A:2065:A:OP1	2.36	0.57
46:A:2345:A:H2'	46:A:2345:A:N3	2.18	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2383:A:H2'	46:A:2384:A:C8	2.39	0.57
46:A:2590:U:H4'	46:A:2603:C:H5"	1.87	0.57
46:A:2740:A:C5	46:A:2795:U:C4	2.93	0.57
46:A:2827:A:C2'	46:A:2828:A:H5'	2.34	0.57
46:A:3137:A:H2'	46:A:3138:U:C6	2.39	0.57
46:A:3156:U:H2'	46:A:3157:A:H8	1.70	0.57
3:AC:54:ALA:O	7:AG:143:PRO:CB	2.49	0.57
3:AC:148:LEU:HD23	4:AD:204:ALA:N	2.20	0.57
3:AC:191:ILE:HG21	4:AD:222:GLN:CD	2.30	0.57
4:AD:212:THR:O	4:AD:216:MET:HB2	2.04	0.57
5:AE:77:LYS:C	5:AE:79:ILE:N	2.59	0.57
5:AE:95:LYS:HB2	5:AE:96:PRO:HD3	1.86	0.57
5:AE:319:LEU:O	5:AE:322:LEU:HB3	2.04	0.57
7:AG:132:TYR:CE2	7:AG:142:ARG:HB2	2.40	0.57
7:AG:142:ARG:NH1	7:AG:148:SER:HB3	2.19	0.57
9:AI:100:GLN:HA	9:AI:168:VAL:HG21	1.86	0.57
9:AI:182:LEU:HD11	12:AL:1353:U:O4'	2.05	0.57
10:AJ:55:LYS:O	10:AJ:56:PHE:C	2.47	0.57
12:AL:551:U:H2'	12:AL:552:A:C8	2.40	0.57
12:AL:786:U:H2'	12:AL:787:A:C2	2.39	0.57
12:AL:1181:A:C2	25:p:78:PRO:HG2	2.40	0.57
12:AL:1194:U:H2'	12:AL:1195:A:C8	2.39	0.57
12:AL:1337:A:H2'	12:AL:1338:A:C8	2.40	0.57
12:AL:1639:A:C1'	17:h:150:GLN:HE22	2.10	0.57
18:i:174:ASN:O	18:i:175:MET:C	2.47	0.57
19:j:438:PRO:HG3	19:j:466:ILE:HD11	1.86	0.57
20:k:196:LYS:O	20:k:199:TRP:HB3	2.04	0.57
26:q:67:TYR:HD2	26:q:68:LYS:O	1.87	0.57
46:A:26:A:C6	71:a:112:TYR:CA	2.88	0.57
46:A:945:A:C2	51:F:47:ARG:CB	2.86	0.57
46:A:1145:U:H2'	46:A:1146:A:H8	1.69	0.57
46:A:1344:U:C5	46:A:1555:A:N1	2.73	0.57
46:A:1358:C:H6	46:A:1553:G:H22	1.52	0.57
46:A:1664:A:H2'	46:A:1665:G:N3	2.19	0.57
46:A:2464:A:H2'	46:A:2465:A:C8	2.39	0.57
46:A:2926:G:C2	46:A:2928:A:H5"	2.39	0.57
46:A:3120:A:H8	46:A:3120:A:O5'	1.87	0.57
46:A:3263:U:H2'	46:A:3264:C:C6	2.39	0.57
63:R:53:GLU:C	63:R:55:GLN:H	2.12	0.57
63:R:138:ARG:HG3	63:R:142:LYS:NZ	2.20	0.57
76:f:56:VAL:O	76:f:57:PRO:C	2.48	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:90:HIS:CB	17:h:161:GLY:HA3	2.33	0.57
3:AC:155:LEU:HB3	3:AC:222:ILE:H	1.69	0.57
5:AE:58:ASP:HB3	5:AE:61:LEU:HG	1.87	0.57
6:AF:321:TYR:CE1	31:v:13:PHE:CE1	2.92	0.57
8:AH:104:ARG:NE	12:AL:143:A:C5'	2.68	0.57
9:AI:60:TRP:CE3	22:m:136:ARG:HD3	2.40	0.57
12:AL:728:A:OP1	33:x:123:ARG:NH2	2.33	0.57
12:AL:739:G:C5'	21:l:52:LYS:HZ3	2.13	0.57
12:AL:1415:G:H3'	24:o:258:HIS:O	2.05	0.57
17:h:129:TYR:OH	24:o:120:LEU:CA	2.53	0.57
19:j:168:PHE:CZ	19:j:395:GLU:HA	2.40	0.57
22:m:97:GLN:O	22:m:98:TRP:C	2.46	0.57
22:m:127:LYS:HZ1	24:o:191:LYS:NZ	2.03	0.57
24:o:155:ILE:HG12	24:o:168:PHE:CD2	2.39	0.57
25:p:102:PHE:CE2	29:t:103:LEU:CD2	2.87	0.57
29:t:98:PHE:O	29:t:99:ARG:C	2.45	0.57
32:w:170:SER:HA	32:w:173:GLU:CB	2.34	0.57
32:w:199:LYS:HA	32:w:202:GLN:HE21	1.69	0.57
39:3:17:LEU:HD21	46:A:1319:A:H2	1.69	0.57
46:A:29:A:H5"	71:a:103:GLY:CA	2.34	0.57
46:A:203:U:H2'	46:A:204:A:C1'	2.34	0.57
46:A:616:A:C8	46:A:1429:C:H1'	2.40	0.57
46:A:880:G:C5	46:A:890:A:C2	2.92	0.57
46:A:958:A:H2'	46:A:959:U:C6	2.39	0.57
46:A:1055:A:H5"	46:A:1055:A:C8	2.39	0.57
46:A:1169:A:OP1	46:A:1170:U:H5"	2.05	0.57
46:A:1497:A:H2'	46:A:1498:U:O4'	2.04	0.57
46:A:1873:A:H8	46:A:1873:A:H5'	1.70	0.57
46:A:2286:U:H2'	46:A:2287:A:C8	2.38	0.57
46:A:2801:A:C2	46:A:2802:G:H1'	2.38	0.57
63:R:204:SER:CB	63:R:214:ALA:HB1	2.34	0.57
5:AE:280:ILE:HG22	5:AE:281:ALA:N	2.19	0.57
6:AF:137:PHE:CG	19:j:468:PRO:CA	2.87	0.57
6:AF:333:ARG:HE	6:AF:333:ARG:H	1.52	0.57
8:AH:168:ARG:NH1	23:n:66:ASP:OD1	2.38	0.57
12:AL:333:A:C4	12:AL:335:A:C8	2.93	0.57
12:AL:510:U:O4	12:AL:608:U:H2'	2.05	0.57
12:AL:1356:U:H2'	12:AL:1357:A:H8	1.70	0.57
12:AL:1415:G:N7	24:o:161:LYS:HE3	2.20	0.57
20:k:16:TYR:CZ	20:k:20:LEU:HD23	2.40	0.57
21:l:38:VAL:CG2	30:u:137:ALA:HB1	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:q:76:TYR:HB2	26:q:165:ILE:HG12	1.86	0.57
26:q:184:VAL:HG22	35:z:117:PHE:CE2	2.39	0.57
28:s:27:ILE:CG2	67:V:96:GLY:O	2.52	0.57
46:A:25:A:H4'	46:A:26:A:OP1	2.05	0.57
46:A:248:A:H2'	46:A:249:C:C6	2.39	0.57
46:A:592:C:H2'	46:A:593:G:H8	1.68	0.57
46:A:716:A:O2'	55:J:110:GLN:HG2	2.05	0.57
46:A:725:U:H2'	46:A:726:A:O4'	2.05	0.57
46:A:1120:U:H2'	46:A:1121:U:H6	1.69	0.57
46:A:1385:U:H4'	46:A:1716:U:O2	2.05	0.57
46:A:1791:A:H2'	46:A:1792:A:H5'	1.85	0.57
46:A:2475:U:H2'	46:A:2476:C:C6	2.38	0.57
46:A:2744:A:N7	46:A:2796:G:C5	2.72	0.57
63:R:295:LYS:CA	63:R:371:LEU:HB3	2.35	0.57
3:AC:76:GLN:NE2	12:AL:1636:U:O4	2.34	0.57
4:AD:146:PHE:O	4:AD:148:SER:N	2.38	0.57
4:AD:209:ASN:HB2	4:AD:265:VAL:HG21	1.87	0.57
4:AD:210:PHE:O	4:AD:211:SER:C	2.48	0.57
4:AD:284:TYR:CE1	4:AD:295:ARG:HD2	2.39	0.57
5:AE:123:TRP:CD1	5:AE:124:THR:N	2.73	0.57
5:AE:291:ASN:HA	5:AE:294:TYR:CE2	2.40	0.57
6:AF:161:ILE:HG13	6:AF:186:VAL:HG22	1.86	0.57
7:AG:99:TYR:OH	16:g:4:ALA:HB1	2.05	0.57
8:AH:99:LYS:HG3	31:v:97:ASN:HD21	1.70	0.57
8:AH:210:ILE:O	8:AH:211:VAL:HB	2.04	0.57
9:AI:154:VAL:HA	9:AI:438:PRO:HD2	1.87	0.57
11:AK:144:LEU:CD1	18:i:319:LEU:CD1	2.82	0.57
11:AK:299:LYS:HE2	24:o:151:PHE:CD1	2.36	0.57
12:AL:77:U:H2'	12:AL:78:U:H6	1.69	0.57
12:AL:1362:A:H5'	28:s:11:LYS:HG3	1.86	0.57
16:g:68:LEU:HB2	17:h:217:ILE:CD1	2.30	0.57
16:g:251:VAL:HG11	33:x:51:LYS:CA	2.35	0.57
19:j:22:LYS:HB3	19:j:430:PHE:CE2	2.39	0.57
21:l:62:PHE:CD2	26:q:116:LEU:HD11	2.40	0.57
21:l:109:SER:O	21:l:110:SER:C	2.48	0.57
25:p:21:PRO:O	25:p:22:VAL:C	2.48	0.57
26:q:86:ASN:HA	26:q:138:ARG:O	2.05	0.57
28:s:16:ILE:HG23	28:s:47:MET:HE1	1.87	0.57
46:A:77:U:H2'	46:A:78:U:C6	2.39	0.57
46:A:678:A:H5"	46:A:679:A:H5'	1.86	0.57
46:A:984:C:H2'	46:A:985:A:C8	2.37	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1647:G:H1'	47:B:98:PRO:O	2.05	0.57
46:A:1998:U:H2'	46:A:1999:U:O4'	2.05	0.57
46:A:2839:A:C8	48:C:209:GLN:HG2	2.38	0.57
46:A:3229:U:H2'	46:A:3230:U:C6	2.40	0.57
48:C:43:ASN:HB2	53:H:98:ASP:HA	1.85	0.57
63:R:329:PHE:CG	63:R:366:ALA:O	2.58	0.57
75:e:193:MET:N	75:e:193:MET:SD	2.77	0.57
76:f:81:LEU:HD21	76:f:145:ILE:HG23	1.87	0.57
76:f:120:VAL:HG13	76:f:145:ILE:HG21	1.86	0.57
4:AD:151:GLU:OE1	16:g:106:PRO:CA	2.52	0.56
5:AE:77:LYS:O	5:AE:78:ASP:C	2.45	0.56
5:AE:275:GLU:O	5:AE:279:LEU:HG	2.04	0.56
6:AF:82:ASN:O	6:AF:83:HIS:HB2	2.04	0.56
8:AH:155:THR:CG2	23:n:40:TYR:CE2	2.85	0.56
9:AI:268:ARG:CZ	9:AI:268:ARG:HB2	2.35	0.56
11:AK:174:ARG:CD	25:p:38:TYR:CB	2.60	0.56
12:AL:128:A:N6	12:AL:239:A:H61	2.03	0.56
12:AL:396:C:H5'	31:v:16:LYS:HG3	1.86	0.56
12:AL:644:G:N1	14:AN:2:U:C6	2.74	0.56
12:AL:763:A:H8	12:AL:763:A:O5'	1.88	0.56
12:AL:1376:U:OP1	28:s:115:ASN:ND2	2.37	0.56
16:g:251:VAL:CG1	33:x:51:LYS:CA	2.82	0.56
21:l:6:ILE:HG21	33:x:135:ILE:HG22	1.87	0.56
21:l:113:ARG:NH2	33:x:91:GLU:OE1	2.38	0.56
25:p:49:SER:HB3	25:p:55:LEU:HG	1.87	0.56
30:u:279:ARG:HB3	30:u:283:ARG:HH21	1.70	0.56
32:w:189:ARG:HA	32:w:192:GLU:CG	2.35	0.56
37:1:340:ARG:NH2	46:A:2645:A:OP1	2.37	0.56
46:A:1006:U:H4'	46:A:1007:U:OP1	2.05	0.56
46:A:1020:U:OP1	75:e:134:LYS:CG	2.50	0.56
46:A:1092:G:H3'	46:A:1093:A:H8	1.70	0.56
46:A:1178:A:H2'	46:A:1179:U:C6	2.39	0.56
46:A:1636:C:H2'	46:A:1637:U:C6	2.40	0.56
46:A:1702:C:H2'	46:A:1703:U:C6	2.40	0.56
46:A:1728:U:C2	47:B:270:GLY:HA3	2.31	0.56
46:A:1817:U:H2'	46:A:1818:G:O4'	2.04	0.56
46:A:2077:A:H3'	46:A:2078:U:H5"	1.86	0.56
46:A:2236:U:C2	46:A:2237:A:C8	2.93	0.56
63:R:272:GLU:HA	63:R:275:LYS:HG3	1.85	0.56
71:a:119:ILE:HG23	71:a:152:VAL:HG13	1.87	0.56
74:d:171:MET:HA	74:d:171:MET:HE2	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:f:35:LYS:HD3	76:f:37:ILE:HG12	1.87	0.56
4:AD:206:THR:O	4:AD:207:PRO:C	2.48	0.56
4:AD:226:MET:O	4:AD:227:GLU:C	2.48	0.56
5:AE:109:VAL:HG12	5:AE:110:GLU:N	2.20	0.56
9:AI:309:GLU:C	9:AI:311:LYS:H	2.13	0.56
11:AK:135:ASP:CG	20:k:99:LEU:CD1	2.76	0.56
12:AL:114:U:H2'	12:AL:115:G:C8	2.40	0.56
12:AL:805:U:H2'	12:AL:806:A:C8	2.40	0.56
17:h:177:PRO:HG2	17:h:378:ARG:HB2	1.86	0.56
18:i:248:MET:HG3	18:i:324:LEU:HB3	1.86	0.56
32:w:57:LEU:HB3	32:w:78:ILE:CG2	2.35	0.56
42:6:103:LYS:HA	46:A:2422:A:OP1	2.05	0.56
46:A:99:U:H2'	46:A:100:U:H6	1.68	0.56
46:A:451:A:H2'	46:A:452:U:C6	2.40	0.56
46:A:1145:U:H2'	46:A:1146:A:C8	2.40	0.56
46:A:1267:A:H3'	46:A:1268:U:C6	2.40	0.56
46:A:1309:A:H2'	46:A:1310:A:H8	1.70	0.56
46:A:1490:A:O5'	46:A:1490:A:H8	1.88	0.56
46:A:1747:C:C2	46:A:1748:A:C8	2.92	0.56
46:A:1869:A:O2'	46:A:1872:G:N3	2.39	0.56
46:A:2842:U:H4'	48:C:208:ASN:HB2	1.87	0.56
46:A:2914:C:O2'	46:A:2915:A:H5'	2.05	0.56
46:A:3102:A:H2'	46:A:3102:A:N3	2.19	0.56
3:AC:17:SER:HA	3:AC:20:LEU:HG	1.87	0.56
3:AC:133:GLU:HG2	3:AC:136:LYS:HD3	1.87	0.56
3:AC:183:PHE:HZ	3:AC:196:THR:HB	1.70	0.56
3:AC:261:PHE:CG	17:h:149:ARG:HG3	2.35	0.56
4:AD:145:SER:CB	4:AD:196:LEU:HB2	2.35	0.56
5:AE:181:ILE:O	5:AE:183:HIS:N	2.39	0.56
6:AF:63:GLY:O	6:AF:64:PRO:C	2.49	0.56
6:AF:67:TYR:N	6:AF:67:TYR:CD1	2.73	0.56
6:AF:321:TYR:HH	31:v:36:PRO:HD3	1.66	0.56
6:AF:329:LYS:HE3	12:AL:300:A:O3'	2.05	0.56
7:AG:22:LEU:HD21	20:k:139:TYR:CE2	2.40	0.56
7:AG:120:LYS:CE	16:g:14:GLN:CB	2.83	0.56
8:AH:168:ARG:HG3	23:n:65:PRO:CB	2.34	0.56
9:AI:56:LEU:O	22:m:205:SER:HB2	2.06	0.56
10:AJ:57:ARG:O	10:AJ:58:HIS:O	2.22	0.56
11:AK:67:GLU:CD	11:AK:67:GLU:H	2.13	0.56
11:AK:142:GLN:OE1	18:i:154:TYR:CE2	2.59	0.56
12:AL:239:A:H5'	32:w:71:PHE:CD2	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:285:C:C2	12:AL:694:A:C2	2.94	0.56
12:AL:329:U:H2'	12:AL:330:G:O4'	2.06	0.56
12:AL:773:A:H2'	12:AL:774:U:C6	2.41	0.56
12:AL:1135:G:O3'	15:Z:79:ASN:CB	2.53	0.56
15:Z:89:ILE:HD12	35:z:169:VAL:HG23	1.87	0.56
17:h:283:SER:C	17:h:285:GLU:H	2.12	0.56
17:h:290:TRP:CE2	24:o:49:PRO:CD	2.88	0.56
17:h:290:TRP:HB2	24:o:44:PHE:CE1	2.39	0.56
19:j:76:VAL:CG2	20:k:306:SER:O	2.53	0.56
20:k:27:GLU:C	20:k:29:LEU:H	2.12	0.56
32:w:80:ASN:O	32:w:82:GLY:N	2.39	0.56
32:w:104:ALA:O	32:w:105:LYS:C	2.46	0.56
32:w:115:GLU:O	32:w:117:LYS:N	2.38	0.56
32:w:189:ARG:HH11	32:w:203:PHE:HB3	1.69	0.56
35:z:91:SER:O	35:z:92:SER:C	2.47	0.56
38:2:53:ARG:HA	46:A:2374:A:OP1	2.05	0.56
46:A:159:C:H2'	46:A:160:U:C6	2.40	0.56
46:A:426:A:C8	46:A:1923:C:C4	2.93	0.56
46:A:605:A:H2'	46:A:606:U:H6	1.70	0.56
46:A:631:U:H2'	46:A:632:U:C6	2.40	0.56
46:A:769:U:C2	46:A:770:A:C8	2.93	0.56
46:A:808:A:C4	46:A:809:C:H1'	2.40	0.56
46:A:887:G:C2	73:c:15:LEU:HB2	2.40	0.56
46:A:915:G:OP1	66:U:31:ARG:HB2	2.06	0.56
46:A:1244:A:H2'	46:A:1245:U:H6	1.69	0.56
46:A:1582:A:H2'	46:A:1583:G:O4'	2.05	0.56
46:A:2414:U:H2'	46:A:2415:A:C8	2.40	0.56
46:A:2839:A:OP2	48:C:209:GLN:CB	2.53	0.56
46:A:2901:U:H2'	46:A:2902:C:C6	2.40	0.56
46:A:2936:U:H2'	46:A:2937:A:H8	1.70	0.56
46:A:2937:A:H2'	46:A:2938:A:H8	1.71	0.56
46:A:3276:U:H2'	46:A:3277:A:H8	1.70	0.56
47:B:250:THR:HG21	47:B:305:ILE:HD12	1.86	0.56
63:R:300:TYR:CE2	63:R:304:LEU:HD11	2.40	0.56
75:e:66:MET:HE3	75:e:153:LEU:HD22	1.87	0.56
2:AB:46:ASN:HB3	2:AB:53:ASN:HD22	1.70	0.56
3:AC:185:LEU:HD12	7:AG:196:MET:N	2.21	0.56
5:AE:149:SER:HA	5:AE:153:ILE:CG2	2.35	0.56
7:AG:227:GLU:HB2	33:x:45:LEU:HD11	1.87	0.56
9:AI:49:LYS:HB3	12:AL:1341:U:OP1	2.05	0.56
9:AI:56:LEU:HG	22:m:214:GLU:CD	2.31	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:255:VAL:HG22	9:AI:259:LEU:HD13	1.86	0.56
11:AK:164:LEU:HD13	20:k:32:SER:HB3	1.88	0.56
12:AL:111:A:H2'	12:AL:112:C:C6	2.40	0.56
12:AL:520:A:H2'	12:AL:521:A:C8	2.41	0.56
12:AL:1469:A:H2'	12:AL:1470:C:O4'	2.05	0.56
13:AM:36:U:N3	14:AN:8:A:C6	2.49	0.56
20:k:50:ARG:O	20:k:51:ASN:C	2.49	0.56
46:A:114:U:O2	46:A:115:A:H1'	2.06	0.56
46:A:1139:G:H2'	46:A:1140:A:H8	1.69	0.56
46:A:1149:U:H2'	46:A:1150:U:C6	2.41	0.56
46:A:1692:A:P	46:A:1882:U:H5'	2.45	0.56
46:A:1902:U:H2'	46:A:1903:A:C8	2.40	0.56
46:A:1994:C:OP1	64:S:103:LYS:NZ	2.29	0.56
46:A:2206:U:C2	46:A:2207:A:C8	2.94	0.56
46:A:2376:A:N6	69:X:68:THR:HG23	2.13	0.56
46:A:2390:U:H3	46:A:2411:G:H1	1.52	0.56
46:A:2944:C:O2'	46:A:2945:A:H5'	2.06	0.56
46:A:3129:A:H2'	46:A:3130:U:H6	1.69	0.56
63:R:242:GLU:HA	63:R:245:SER:HB2	1.86	0.56
74:d:79:LEU:HD11	74:d:88:LEU:HD22	1.87	0.56
76:f:13:ILE:O	76:f:14:VAL:C	2.49	0.56
3:AC:113:THR:O	3:AC:253:TRP:HB2	2.05	0.56
3:AC:159:ASN:O	17:h:141:TYR:HB2	2.06	0.56
4:AD:130:PRO:HG2	4:AD:142:LEU:HD12	1.88	0.56
4:AD:197:PHE:HB3	16:g:214:LEU:HD11	1.86	0.56
4:AD:224:THR:HA	4:AD:227:GLU:HG2	1.87	0.56
4:AD:280:TRP:HZ3	4:AD:287:PHE:HA	1.69	0.56
5:AE:283:THR:HG23	5:AE:315:TYR:CZ	2.40	0.56
6:AF:61:PHE:CB	19:j:29:TYR:OH	2.48	0.56
6:AF:208:MET:CG	19:j:425:TRP:HH2	2.19	0.56
6:AF:321:TYR:HE1	31:v:13:PHE:CE1	2.23	0.56
7:AG:22:LEU:HD21	20:k:205:LEU:HD12	1.86	0.56
8:AH:60:HIS:CB	12:AL:133:U:C4	2.89	0.56
12:AL:25:G:N1	12:AL:983:A:C2	2.74	0.56
12:AL:482:U:C2	12:AL:483:A:C8	2.94	0.56
12:AL:794:A:OP1	30:u:203:ARG:NH2	2.39	0.56
12:AL:1384:G:H3'	29:t:42:LYS:NZ	2.21	0.56
12:AL:1397:A:OP1	28:s:28:GLY:O	2.24	0.56
12:AL:1644:C:N3	17:h:171:HIS:HB2	2.20	0.56
15:Z:85:LEU:HD12	35:z:169:VAL:HG13	1.88	0.56
18:i:306:TYR:OH	20:k:59:LEU:CD2	2.46	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:j:102:GLU:HG3	19:j:465:VAL:HG22	1.86	0.56
20:k:263:TYR:O	20:k:264:LYS:C	2.47	0.56
22:m:224:SER:O	22:m:226:ALA:N	2.38	0.56
25:p:71:ILE:HD11	25:p:120:VAL:HG12	1.87	0.56
38:2:60:LYS:NZ	46:A:2371:A:OP2	2.36	0.56
46:A:30:U:C4	48:C:21:SER:N	2.73	0.56
46:A:330:A:O2'	46:A:331:A:H8	1.89	0.56
46:A:604:G:C5	46:A:659:G:C6	2.93	0.56
46:A:651:G:H2'	46:A:652:A:O4'	2.06	0.56
46:A:685:G:H2'	46:A:686:U:H6	1.69	0.56
46:A:696:G:H4'	46:A:697:C:OP2	2.05	0.56
46:A:897:C:H2'	46:A:898:U:O4'	2.05	0.56
46:A:1543:A:H2'	46:A:1544:A:C8	2.41	0.56
46:A:1825:A:H2'	46:A:1826:U:H6	1.70	0.56
46:A:1907:U:C2	46:A:1908:A:N7	2.74	0.56
46:A:1959:A:OP1	49:D:112:GLY:HA3	2.05	0.56
46:A:2600:U:O4	63:R:101:HIS:CA	2.54	0.56
46:A:2698:A:H2'	46:A:2699:A:C8	2.40	0.56
46:A:2843:G:H1'	46:A:2846:U:OP2	2.06	0.56
46:A:3004:A:H2'	46:A:3005:A:C8	2.41	0.56
4:AD:211:SER:O	4:AD:212:THR:C	2.49	0.56
5:AE:316:ASP:HA	5:AE:319:LEU:CD1	2.34	0.56
7:AG:120:LYS:HD2	16:g:34:GLN:HE22	1.68	0.56
7:AG:217:LEU:CD2	33:x:60:PHE:CD1	2.89	0.56
9:AI:70:GLN:H	9:AI:70:GLN:NE2	2.03	0.56
12:AL:508:C:H5'	19:j:420:PRO:HB2	1.84	0.56
12:AL:814:A:H2'	12:AL:815:C:O4'	2.05	0.56
12:AL:826:G:N2	30:u:246:ASN:HD21	2.03	0.56
17:h:329:ARG:O	17:h:330:ASN:C	2.48	0.56
18:i:148:LYS:CE	20:k:79:HIS:N	2.67	0.56
19:j:20:PHE:HZ	19:j:113:MET:HG2	1.71	0.56
20:k:170:VAL:HG21	20:k:194:ILE:HG23	1.88	0.56
31:v:88:LYS:O	31:v:92:LYS:HG2	2.06	0.56
32:w:65:PRO:HA	32:w:71:PHE:CD1	2.41	0.56
32:w:92:ALA:O	32:w:93:GLN:C	2.47	0.56
46:A:151:A:H61	46:A:160:U:H3	1.53	0.56
46:A:202:A:C5	46:A:203:U:C4	2.93	0.56
46:A:850:A:H2'	46:A:851:A:C8	2.40	0.56
46:A:2026:G:N2	46:A:2070:U:H3	2.03	0.56
46:A:2664:A:H2'	46:A:2665:U:C6	2.41	0.56
46:A:3073:A:H2'	46:A:3074:A:C8	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:3087:A:H3'	46:A:3088:C:H6	1.70	0.56
46:A:3175:A:H2'	46:A:3176:U:C6	2.40	0.56
46:A:3268:A:H2'	46:A:3269:U:C6	2.41	0.56
63:R:313:THR:O	63:R:316:GLU:N	2.38	0.56
66:U:60:GLU:HG2	73:c:61:TYR:CG	2.39	0.56
3:AC:62:TYR:HB3	17:h:159:LYS:HG3	1.84	0.56
3:AC:139:MET:HE3	3:AC:165:ILE:HD13	1.88	0.56
4:AD:162:ALA:O	7:AG:189:VAL:HG11	2.06	0.56
5:AE:279:LEU:O	5:AE:280:ILE:C	2.46	0.56
5:AE:285:LEU:HD11	5:AE:298:GLN:N	2.20	0.56
7:AG:27:PRO:O	7:AG:28:ALA:C	2.49	0.56
12:AL:271:U:P	32:w:68:LYS:HB3	2.45	0.56
12:AL:1044:C:H42	29:t:72:THR:CB	2.18	0.56
18:i:102:LYS:O	18:i:103:ASN:C	2.48	0.56
26:q:76:TYR:HB3	26:q:91:PHE:CZ	2.41	0.56
26:q:77:ILE:HD12	26:q:120:GLN:OE1	2.06	0.56
28:s:52:GLU:O	28:s:53:PRO:C	2.48	0.56
46:A:548:A:H2'	46:A:549:U:C6	2.40	0.56
46:A:847:U:H2'	46:A:848:U:O4'	2.05	0.56
46:A:1548:A:O2'	61:P:78:LYS:N	2.20	0.56
46:A:1678:C:H2'	46:A:1679:A:C8	2.40	0.56
46:A:1701:A:H1'	46:A:1801:A:C2	2.41	0.56
46:A:1941:U:H2'	46:A:1942:A:C8	2.41	0.56
46:A:1976:U:H5"	46:A:2264:G:H22	1.70	0.56
46:A:2413:A:H2'	46:A:2414:U:O4'	2.06	0.56
46:A:2845:G:N3	48:C:203:GLY:HA3	2.20	0.56
46:A:3059:C:H2'	46:A:3060:U:H6	1.71	0.56
46:A:3156:U:H2'	46:A:3157:A:C8	2.41	0.56
46:A:3263:U:H5"	71:a:181:ALA:CB	2.36	0.56
63:R:294:THR:C	63:R:371:LEU:HB3	2.30	0.56
3:AC:57:SER:O	3:AC:59:GLU:N	2.38	0.56
7:AG:96:LYS:CG	12:AL:916:A:OP2	2.54	0.56
8:AH:165:LEU:HD12	12:AL:700:U:C4'	2.35	0.56
11:AK:63:GLN:O	11:AK:66:LEU:HB3	2.06	0.56
11:AK:132:PHE:O	20:k:113:PRO:CG	2.50	0.56
12:AL:541:U:H2'	12:AL:542:A:C4	2.41	0.56
12:AL:727:A:C2	12:AL:728:A:C5	2.94	0.56
12:AL:1339:U:H4'	12:AL:1340:U:H3'	1.87	0.56
13:AM:36:U:C2	14:AN:7:C:N4	2.74	0.56
20:k:237:GLY:O	20:k:238:PHE:C	2.49	0.56
21:l:66:HIS:CE1	33:x:137:LEU:CB	2.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:9:175:LYS:HE2	46:A:23:U:H5'	1.86	0.56
46:A:255:G:H8	46:A:255:G:OP2	1.88	0.56
46:A:1404:A:H2'	46:A:1405:U:C6	2.40	0.56
46:A:1993:U:H2'	46:A:1994:C:C6	2.40	0.56
46:A:2264:G:C1'	46:A:2266:U:H5	2.18	0.56
46:A:2811:G:H2'	46:A:2812:G:C8	2.40	0.56
46:A:3050:G:H2'	46:A:3051:U:H6	1.69	0.56
46:A:3125:U:H4'	46:A:3126:C:OP1	2.06	0.56
63:R:295:LYS:HB2	63:R:371:LEU:C	2.31	0.56
3:AC:59:GLU:O	17:h:164:ILE:CG2	2.53	0.56
3:AC:204:ILE:HD11	7:AG:200:LEU:CD1	2.36	0.56
5:AE:147:THR:HG23	5:AE:151:PHE:CD2	2.41	0.56
5:AE:216:LYS:C	5:AE:218:VAL:N	2.58	0.56
7:AG:206:ILE:CB	16:g:92:GLU:CD	2.77	0.56
8:AH:154:MET:HG2	8:AH:154:MET:O	2.05	0.56
8:AH:168:ARG:N	23:n:65:PRO:HG2	2.11	0.56
11:AK:112:GLU:HG2	18:i:127:LEU:HD22	1.88	0.56
11:AK:252:HIS:HE1	25:p:149:SER:HA	1.71	0.56
12:AL:315:G:H2'	12:AL:316:A:H8	1.71	0.56
12:AL:511:A:N6	12:AL:608:U:H1'	2.21	0.56
12:AL:1012:G:H2'	12:AL:1013:C:H6	1.71	0.56
17:h:295:ILE:HG21	24:o:36:ARG:CZ	2.35	0.56
18:i:93:TRP:CG	29:t:108:PRO:C	2.84	0.56
28:s:62:LEU:CD2	67:V:96:GLY:O	2.47	0.56
30:u:125:ILE:O	30:u:126:GLU:C	2.48	0.56
30:u:177:GLN:HB2	30:u:215:ILE:HD13	1.87	0.56
31:v:12:ARG:HA	31:v:12:ARG:HH21	1.71	0.56
32:w:78:ILE:O	32:w:79:ARG:HD2	2.05	0.56
33:x:96:PRO:HG3	33:x:137:LEU:HB2	1.88	0.56
46:A:15:A:C6	46:A:16:A:C5	2.94	0.56
46:A:132:A:C6	46:A:133:A:C6	2.94	0.56
46:A:268:C:H4'	46:A:269:A:O5'	2.05	0.56
46:A:544:A:N1	46:A:2636:A:H4'	2.20	0.56
46:A:787:G:O2'	46:A:788:C:H5'	2.05	0.56
46:A:826:A:H2'	46:A:827:U:H6	1.65	0.56
46:A:1210:A:H2'	46:A:1211:U:C6	2.40	0.56
46:A:1749:U:H2'	46:A:1750:G:C8	2.41	0.56
46:A:1848:C:H2'	46:A:1849:U:C6	2.41	0.56
46:A:2187:A:H2'	46:A:2188:A:C8	2.41	0.56
46:A:2378:A:N6	46:A:2422:A:C4	2.74	0.56
46:A:3264:C:H2'	46:A:3265:U:C5	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AB:80:ASN:O	2:AB:81:ILE:C	2.48	0.56
3:AC:91:LEU:HD23	3:AC:259:ARG:HH11	1.71	0.56
3:AC:114:GLU:CB	3:AC:115:PRO:HD2	2.33	0.56
3:AC:115:PRO:HG3	3:AC:132:TRP:CD1	2.41	0.56
3:AC:239:ASN:HA	3:AC:242:LYS:HB3	1.88	0.56
5:AE:263:SER:OG	5:AE:266:GLU:HB2	2.06	0.56
5:AE:281:ALA:HA	5:AE:284:LEU:HB2	1.86	0.56
6:AF:34:TYR:CZ	12:AL:496:A:H1'	2.41	0.56
6:AF:323:SER:O	6:AF:324:GLY:C	2.49	0.56
7:AG:32:VAL:HG11	17:h:235:VAL:HA	1.87	0.56
7:AG:67:PRO:HB2	32:w:187:GLN:OE1	2.06	0.56
8:AH:99:LYS:CG	31:v:97:ASN:HD21	2.19	0.56
12:AL:487:A:H3'	12:AL:488:A:H8	1.70	0.56
12:AL:743:U:C4	12:AL:744:A:N7	2.73	0.56
12:AL:761:A:H2	12:AL:851:G:H1'	1.70	0.56
12:AL:1031:A:H2	13:AM:34:C:O4'	1.88	0.56
12:AL:1059:A:H4'	29:t:12:LEU:HD11	1.88	0.56
12:AL:1340:U:OP2	28:s:13:LYS:HD2	2.05	0.56
12:AL:1636:U:OP2	16:g:61:ARG:NH1	2.38	0.56
17:h:347:ASP:CG	17:h:348:THR:H	2.14	0.56
18:i:146:LEU:CD1	25:p:132:SER:HG	1.90	0.56
20:k:40:ILE:HG23	20:k:41:PRO:HD2	1.88	0.56
20:k:181:LEU:HD23	20:k:276:ILE:HG21	1.87	0.56
34:y:53:ILE:C	34:y:59:TYR:HA	2.31	0.56
36:0:73:ARG:CB	46:A:3093:U:C5	2.88	0.56
46:A:1040:C:H2'	46:A:1041:U:C6	2.41	0.56
46:A:1352:A:C6	74:d:32:LEU:HB3	2.41	0.56
46:A:1358:C:O2	46:A:1358:C:H2'	2.06	0.56
46:A:1483:U:C4	46:A:1484:U:C4	2.93	0.56
63:R:53:GLU:HG3	63:R:54:GLY:N	2.20	0.56
75:e:102:PHE:HE1	75:e:132:LEU:HB2	1.69	0.56
75:e:211:ARG:HH11	75:e:211:ARG:HG3	1.70	0.56
3:AC:55:GLY:C	7:AG:121:ILE:HG21	2.30	0.55
3:AC:177:PHE:CE2	3:AC:214:VAL:HG21	2.41	0.55
4:AD:173:ALA:HB1	4:AD:193:TYR:CB	2.36	0.55
5:AE:306:ASN:C	5:AE:308:LEU:H	2.14	0.55
6:AF:36:PHE:HE1	19:j:29:TYR:O	1.88	0.55
6:AF:137:PHE:CE2	19:j:467:SER:C	2.85	0.55
7:AG:13:ARG:HH21	17:h:339:ARG:HG2	1.71	0.55
8:AH:162:GLN:CD	23:n:60:PHE:CZ	2.83	0.55
9:AI:145:LYS:HG2	9:AI:341:THR:HB	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:159:LEU:O	9:AI:160:LEU:C	2.46	0.55
11:AK:199:LYS:NZ	12:AL:1318:U:OP2	2.39	0.55
12:AL:81:U:C2	12:AL:82:A:C8	2.94	0.55
12:AL:254:A:H4'	12:AL:255:G:O5'	2.06	0.55
12:AL:318:C:H2'	12:AL:319:A:C8	2.41	0.55
12:AL:406:U:OP1	19:j:64:ARG:CD	2.54	0.55
12:AL:1082:U:H2'	12:AL:1083:A:C8	2.41	0.55
12:AL:1384:G:H5"	29:t:42:LYS:HZ3	1.69	0.55
15:Z:88:ARG:O	16:g:72:GLU:O	2.24	0.55
18:i:195:LEU:CB	18:i:203:VAL:HG11	2.35	0.55
20:k:267:ASN:O	20:k:268:ASP:C	2.49	0.55
21:l:13:ASN:HD22	21:l:16:ALA:HB3	1.70	0.55
21:l:66:HIS:ND1	33:x:137:LEU:CD2	2.49	0.55
29:t:56:LEU:O	29:t:57:GLU:C	2.48	0.55
30:u:161:ARG:CD	30:u:171:THR:HG22	2.36	0.55
30:u:192:ILE:HD12	30:u:205:LEU:HD22	1.88	0.55
32:w:85:PHE:HA	32:w:88:TYR:CD2	2.40	0.55
37:1:121:PHE:CE2	38:2:67:ILE:HD11	2.41	0.55
46:A:217:A:C8	64:S:47:HIS:CE1	2.94	0.55
46:A:454:A:C2	46:A:1921:A:C5	2.94	0.55
46:A:495:A:H2'	46:A:496:U:C6	2.41	0.55
46:A:513:U:H2'	46:A:514:A:C8	2.41	0.55
46:A:789:A:H2'	46:A:790:A:H8	1.68	0.55
46:A:827:U:H2'	46:A:828:A:C8	2.38	0.55
46:A:862:U:H2'	46:A:863:A:C8	2.41	0.55
46:A:1767:A:HO2'	46:A:1768:A:H8	1.51	0.55
46:A:1814:U:OP2	46:A:1814:U:H4'	2.06	0.55
46:A:1818:G:H21	46:A:1819:A:N6	2.04	0.55
46:A:1972:G:H2'	46:A:1973:C:H6	1.71	0.55
46:A:2211:U:H2'	46:A:2212:A:C1'	2.36	0.55
46:A:2257:U:H2'	46:A:2258:C:H6	1.71	0.55
46:A:2349:A:N3	46:A:2349:A:H2'	2.21	0.55
47:B:155:ILE:O	47:B:155:ILE:HG13	2.04	0.55
63:R:204:SER:HB2	63:R:214:ALA:HB1	1.88	0.55
63:R:329:PHE:CB	63:R:366:ALA:O	2.52	0.55
69:X:35:THR:O	72:b:136:LYS:CE	2.54	0.55
4:AD:161:LEU:HA	4:AD:289:LYS:HD3	1.87	0.55
5:AE:302:ARG:NE	5:AE:303:GLN:HG3	2.20	0.55
7:AG:111:GLN:O	16:g:201:ILE:HD12	2.06	0.55
8:AH:21:ILE:CD1	31:v:74:TYR:HB2	2.35	0.55
8:AH:164:LEU:HD21	23:n:33:LEU:HD22	1.87	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:164:LEU:HD23	23:n:28:TYR:OH	2.06	0.55
8:AH:231:PHE:CE2	33:x:96:PRO:CD	2.87	0.55
9:AI:447:LEU:O	9:AI:449:HIS:HD2	1.89	0.55
11:AK:107:LEU:HA	11:AK:111:GLY:HA2	1.87	0.55
12:AL:943:U:P	23:n:95:PRO:HD2	2.46	0.55
12:AL:1182:U:HO2'	12:AL:1183:A:P	2.27	0.55
12:AL:1629:A:H5'	35:z:163:LYS:HE2	1.87	0.55
15:Z:63:SER:HA	22:m:185:LYS:HB2	1.88	0.55
16:g:3:LEU:HD12	17:h:211:TYR:HD2	1.29	0.55
16:g:103:ARG:HD2	16:g:103:ARG:H	1.70	0.55
23:n:108:LYS:HB2	23:n:115:ILE:HD11	1.88	0.55
30:u:125:ILE:HB	30:u:128:ILE:HG13	1.87	0.55
30:u:245:PHE:CZ	30:u:247:MET:HG2	2.41	0.55
30:u:283:ARG:O	30:u:286:PHE:HB2	2.07	0.55
46:A:420:U:H2'	46:A:421:U:H6	1.67	0.55
46:A:437:A:H2'	46:A:438:U:H6	1.70	0.55
46:A:640:C:O2	46:A:1570:A:H2'	2.07	0.55
46:A:669:G:H2'	46:A:670:U:C6	2.41	0.55
46:A:843:A:H2'	46:A:844:A:O4'	2.06	0.55
46:A:1009:U:O2	76:f:131:GLU:CG	2.53	0.55
3:AC:176:TYR:CE1	3:AC:213:LYS:HB3	2.42	0.55
4:AD:111:LEU:HA	4:AD:114:GLU:CB	2.31	0.55
5:AE:191:CYS:O	5:AE:194:HIS:HB2	2.07	0.55
5:AE:211:LEU:HD21	5:AE:245:LEU:HD11	1.86	0.55
5:AE:315:TYR:CE1	5:AE:319:LEU:HD11	2.42	0.55
7:AG:72:LYS:O	7:AG:73:GLY:C	2.49	0.55
8:AH:210:ILE:CG2	21:l:39:VAL:CG2	2.83	0.55
9:AI:264:HIS:O	9:AI:265:PRO:C	2.49	0.55
10:AJ:33:LYS:O	10:AJ:37:GLU:HG3	2.06	0.55
12:AL:79:A:H61	12:AL:95:U:H3	1.54	0.55
12:AL:558:A:H3'	12:AL:559:U:C6	2.42	0.55
12:AL:992:U:O2	12:AL:993:U:N3	2.40	0.55
12:AL:1106:U:H1'	29:t:96:TYR:OH	2.06	0.55
12:AL:1148:A:N3	12:AL:1149:A:H1'	2.21	0.55
15:Z:89:ILE:CG1	35:z:168:ILE:HG22	2.35	0.55
30:u:37:ALA:O	30:u:41:LEU:HG	2.06	0.55
30:u:267:SER:HB3	30:u:270:VAL:HG23	1.88	0.55
31:v:21:TYR:CE2	31:v:45:PRO:HB3	2.41	0.55
32:w:13:GLN:HG3	32:w:54:GLU:H	1.71	0.55
33:x:62:MET:HA	33:x:65:ILE:HG13	1.88	0.55
41:5:177:ARG:NH2	71:a:75:PHE:O	2.31	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:153:G:H3'	46:A:154:U:H6	1.72	0.55
46:A:478:G:H2'	46:A:479:U:C6	2.40	0.55
46:A:534:A:H5"	63:R:142:LYS:NZ	2.22	0.55
46:A:789:A:C6	46:A:790:A:C6	2.94	0.55
46:A:1025:A:H4'	46:A:1026:U:H5'	1.87	0.55
46:A:1309:A:H2'	46:A:1310:A:C8	2.40	0.55
46:A:1316:U:H2'	46:A:1316:U:O2	2.05	0.55
46:A:2247:A:H2'	46:A:2248:G:C8	2.41	0.55
46:A:2318:U:H5'	72:b:139:SER:HB2	1.88	0.55
46:A:2383:A:H2'	46:A:2384:A:H8	1.71	0.55
46:A:3232:U:H3'	46:A:3233:A:H8	1.71	0.55
75:e:97:VAL:HG12	75:e:133:LEU:HD11	1.88	0.55
76:f:139:GLU:HG2	76:f:143:LYS:HE3	1.87	0.55
3:AC:99:SER:HB2	3:AC:252:ASN:ND2	2.22	0.55
3:AC:227:TRP:HH2	4:AD:164:SER:C	2.08	0.55
4:AD:146:PHE:CB	4:AD:152:PHE:HB2	2.37	0.55
4:AD:276:SER:O	4:AD:277:PRO:C	2.50	0.55
5:AE:119:TRP:O	5:AE:123:TRP:HB3	2.06	0.55
5:AE:227:LEU:O	5:AE:230:ILE:N	2.40	0.55
12:AL:47:A:H61	12:AL:406:U:H3	1.53	0.55
12:AL:669:U:H2'	12:AL:670:C:C6	2.41	0.55
12:AL:1380:A:H2'	12:AL:1381:U:C6	2.42	0.55
18:i:90:MET:SD	25:p:135:GLY:HA3	2.46	0.55
26:q:135:LYS:O	26:q:138:ARG:HG2	2.07	0.55
26:q:148:SER:O	26:q:149:GLY:C	2.47	0.55
40:4:136:LYS:HD3	46:A:1114:U:O4	2.06	0.55
41:5:73:TYR:CE2	61:P:255:LEU:HD21	2.40	0.55
46:A:237:A:N6	46:A:2696:A:H2'	2.21	0.55
46:A:505:C:H2'	46:A:506:A:O4'	2.07	0.55
46:A:2357:U:H3	46:A:2363:A:N6	2.04	0.55
46:A:2653:A:H2'	46:A:2654:U:C6	2.42	0.55
46:A:2845:G:OP2	46:A:2845:G:H4'	2.05	0.55
46:A:2983:U:H2'	46:A:2984:A:C8	2.41	0.55
47:B:181:ALA:O	47:B:193:TYR:HA	2.05	0.55
47:B:253:HIS:CD2	47:B:308:VAL:HG22	2.41	0.55
63:R:155:LYS:O	63:R:156:PRO:C	2.47	0.55
63:R:284:GLU:O	63:R:285:ASP:C	2.46	0.55
76:f:40:CYS:HA	76:f:43:PHE:HB3	1.87	0.55
2:AB:82:GLN:CD	12:AL:375:A:H5"	2.31	0.55
5:AE:279:LEU:HD21	5:AE:315:TYR:H	1.71	0.55
6:AF:137:PHE:CZ	19:j:468:PRO:CD	2.90	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:187:ARG:HD3	28:s:44:TRP:CB	2.36	0.55
9:AI:192:TYR:HE1	9:AI:197:LYS:HA	1.71	0.55
11:AK:150:GLU:HA	20:k:71:TYR:CE2	2.42	0.55
11:AK:154:TYR:OH	20:k:79:HIS:NE2	2.37	0.55
12:AL:44:U:HO2'	12:AL:45:A:P	2.24	0.55
12:AL:515:A:H3'	12:AL:516:A:H8	1.70	0.55
12:AL:1100:A:H61	12:AL:1235:A:H61	1.55	0.55
12:AL:1108:G:O4'	25:p:95:HIS:CD2	2.55	0.55
16:g:45:ARG:CD	17:h:170:PRO:HB2	2.37	0.55
18:i:177:ASN:OD1	18:i:177:ASN:N	2.40	0.55
21:l:27:THR:O	21:l:28:ILE:C	2.48	0.55
21:l:82:LEU:HD22	21:l:96:ILE:HD12	1.88	0.55
22:m:205:SER:HB3	22:m:211:ARG:HG2	1.87	0.55
32:w:201:ASP:O	32:w:205:LYS:HG2	2.07	0.55
37:1:346:LYS:HB2	46:A:2360:U:O4	2.06	0.55
46:A:366:A:H2'	46:A:367:A:C8	2.41	0.55
46:A:1352:A:O2'	61:P:134:THR:HG21	2.07	0.55
46:A:1658:G:H2'	46:A:1659:U:C6	2.42	0.55
46:A:2003:G:H2'	46:A:2004:U:O4'	2.07	0.55
46:A:2247:A:H2'	46:A:2248:G:H8	1.72	0.55
46:A:3175:A:H2'	46:A:3176:U:H6	1.71	0.55
63:R:120:PRO:HG2	63:R:123:GLU:OE1	2.05	0.55
75:e:72:TYR:HB3	75:e:136:PRO:HB2	1.89	0.55
76:f:81:LEU:HB3	76:f:154:ILE:HG21	1.89	0.55
2:AB:90:GLN:HB3	2:AB:100:ILE:HG22	1.88	0.55
3:AC:177:PHE:HE2	3:AC:214:VAL:HG21	1.71	0.55
3:AC:242:LYS:O	3:AC:245:LYS:HB3	2.07	0.55
4:AD:201:THR:HB	4:AD:205:GLY:CA	2.30	0.55
4:AD:226:MET:HG3	4:AD:230:ARG:HB2	1.87	0.55
4:AD:260:PHE:CD1	16:g:223:GLN:HG2	2.42	0.55
6:AF:134:LEU:HD22	6:AF:145:THR:HB	1.88	0.55
9:AI:325:MET:O	9:AI:326:ASP:C	2.47	0.55
10:AJ:53:ILE:HD12	10:AJ:55:LYS:HE2	1.85	0.55
10:AJ:60:LYS:O	10:AJ:60:LYS:CG	2.46	0.55
11:AK:86:GLU:HG2	11:AK:108:TYR:HE2	1.71	0.55
11:AK:172:TYR:HE2	25:p:115:ASP:CB	2.19	0.55
12:AL:20:A:O2'	12:AL:21:U:H5'	2.06	0.55
12:AL:239:A:H5"	32:w:71:PHE:HD2	1.70	0.55
12:AL:1424:A:H2'	12:AL:1425:A:H8	1.72	0.55
16:g:12:ILE:HD13	17:h:195:LEU:CD2	2.37	0.55
16:g:72:GLU:CD	16:g:72:GLU:H	2.14	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:g:221:VAL:HG21	16:g:224:ARG:HD3	1.88	0.55
20:k:111:SER:O	20:k:112:LEU:C	2.50	0.55
21:l:5:LEU:HA	21:l:95:SER:O	2.06	0.55
21:l:36:ARG:C	30:u:146:ASN:ND2	2.55	0.55
25:p:76:PRO:O	25:p:77:LYS:C	2.49	0.55
34:y:50:LYS:HA	34:y:63:GLU:HA	1.89	0.55
46:A:169:A:H2'	46:A:170:U:C6	2.42	0.55
46:A:304:A:C2	46:A:306:G:H2'	2.42	0.55
46:A:496:U:H2'	46:A:497:U:H6	1.71	0.55
46:A:944:U:C2	46:A:945:A:N7	2.75	0.55
46:A:968:U:O5'	46:A:968:U:H6	1.88	0.55
46:A:1035:U:H2'	46:A:1036:U:C2	2.42	0.55
46:A:2062:G:H2'	46:A:2062:G:N3	2.21	0.55
46:A:2474:U:H2'	46:A:2475:U:H6	1.72	0.55
46:A:2595:U:H2'	46:A:2596:G:H8	1.72	0.55
46:A:2777:U:H1'	46:A:2845:G:H22	1.72	0.55
47:B:173:ASP:HB3	47:B:176:ARG:HG3	1.88	0.55
63:R:117:LEU:N	63:R:118:PRO:HD2	2.21	0.55
63:R:261:ASN:ND2	63:R:267:HIS:HD2	2.03	0.55
2:AB:92:HIS:HD2	12:AL:524:A:H2	1.55	0.55
3:AC:54:ALA:CA	7:AG:143:PRO:HB3	2.32	0.55
3:AC:94:GLU:O	3:AC:97:LEU:HB2	2.05	0.55
3:AC:177:PHE:CE1	3:AC:200:MET:HG2	2.37	0.55
4:AD:209:ASN:O	4:AD:210:PHE:C	2.49	0.55
6:AF:102:VAL:CG2	12:AL:480:U:H5"	2.36	0.55
6:AF:150:SER:HB3	6:AF:218:VAL:CG2	2.37	0.55
7:AG:75:TYR:CD2	8:AH:182:TYR:CE2	2.94	0.55
9:AI:49:LYS:CG	12:AL:1341:U:H5'	2.37	0.55
9:AI:151:GLU:O	9:AI:152:PRO:C	2.50	0.55
11:AK:70:TRP:CE2	18:i:173:MET:CE	2.71	0.55
12:AL:34:G:H2'	12:AL:35:A:C8	2.42	0.55
12:AL:534:A:H2'	12:AL:535:U:H6	1.71	0.55
12:AL:801:U:C5'	33:x:130:ARG:HB3	2.37	0.55
12:AL:801:U:OP1	33:x:130:ARG:HD2	2.06	0.55
12:AL:1290:A:N7	12:AL:1318:U:N3	2.55	0.55
12:AL:1451:A:H2'	12:AL:1452:A:C8	2.40	0.55
16:g:6:LEU:CD2	17:h:186:GLU:OE1	2.54	0.55
27:r:127:ARG:O	27:r:146:GLY:HA3	2.05	0.55
30:u:128:ILE:O	30:u:132:GLU:HG3	2.06	0.55
42:6:66:TYR:CD2	46:A:2424:U:H5	2.17	0.55
46:A:600:C:O4'	47:B:133:ARG:CZ	2.52	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:872:G:H2'	46:A:873:A:H8	1.71	0.55
46:A:927:A:OP1	73:c:34:ARG:NH1	2.40	0.55
46:A:1531:C:N3	47:B:326:TRP:CZ3	2.74	0.55
46:A:1577:U:H3'	46:A:1578:A:H8	1.72	0.55
46:A:1711:A:C2'	46:A:1712:A:H5'	2.36	0.55
46:A:2318:U:H3	46:A:2374:A:H61	1.54	0.55
46:A:3238:U:O2	57:L:68:GLU:HG2	2.07	0.55
63:R:161:GLN:HB3	63:R:165:ARG:NH2	2.22	0.55
75:e:50:LYS:HA	75:e:54:ILE:HB	1.88	0.55
75:e:54:ILE:HG12	75:e:105:TYR:CB	2.30	0.55
2:AB:41:VAL:HG21	2:AB:62:ASN:O	2.07	0.55
2:AB:118:LYS:H	2:AB:118:LYS:HD2	1.72	0.55
3:AC:104:GLY:O	3:AC:106:ASN:N	2.40	0.55
3:AC:178:PRO:HG3	3:AC:204:ILE:HG12	1.89	0.55
4:AD:77:LYS:O	4:AD:78:LYS:C	2.49	0.55
4:AD:226:MET:CG	4:AD:230:ARG:HB2	2.37	0.55
4:AD:249:THR:O	4:AD:250:LYS:C	2.49	0.55
6:AF:208:MET:SD	19:j:425:TRP:HH2	2.29	0.55
7:AG:3:ILE:CD1	23:n:20:ARG:NE	2.68	0.55
7:AG:92:TYR:CZ	23:n:21:VAL:HG13	2.42	0.55
7:AG:173:ARG:NH2	16:g:107:PHE:HZ	2.05	0.55
8:AH:15:PHE:HE2	31:v:39:VAL:HG23	1.72	0.55
8:AH:93:GLN:CG	12:AL:222:U:P	2.95	0.55
9:AI:56:LEU:HD12	22:m:211:ARG:HD2	1.86	0.55
11:AK:149:ARG:CD	20:k:68:PHE:O	2.54	0.55
12:AL:561:U:H2'	12:AL:562:A:H8	1.70	0.55
12:AL:761:A:C6	12:AL:762:U:C4	2.95	0.55
12:AL:1616:C:H2'	12:AL:1617:G:C8	2.41	0.55
15:Z:86:TYR:C	15:Z:88:ARG:H	2.14	0.55
16:g:75:THR:CG2	35:z:177:TYR:OH	2.52	0.55
30:u:126:GLU:O	30:u:127:ASP:C	2.49	0.55
30:u:169:GLY:O	30:u:170:ASP:C	2.50	0.55
31:v:84:GLU:HG3	31:v:88:LYS:HE3	1.89	0.55
34:y:13:TRP:C	34:y:15:GLY:H	2.15	0.55
46:A:351:C:O2'	46:A:352:A:H5'	2.06	0.55
46:A:1262:A:O2'	46:A:1263:A:H5'	2.07	0.55
46:A:1288:U:H5	49:D:114:ALA:HA	1.66	0.55
46:A:1489:U:H4'	46:A:1490:A:OP1	2.07	0.55
46:A:1490:A:H2	46:A:1523:A:C2	2.21	0.55
46:A:1772:U:H2'	46:A:1773:U:C6	2.42	0.55
46:A:2183:A:H8	46:A:2183:A:O5'	1.90	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2982:U:C4	46:A:2983:U:C2	2.95	0.55
47:B:63:ILE:O	47:B:64:ILE:C	2.50	0.55
63:R:73:PRO:HD3	63:R:79:ILE:HD12	1.88	0.55
63:R:295:LYS:HA	63:R:371:LEU:HB3	1.87	0.55
5:AE:129:ARG:HD2	5:AE:130:LYS:H	1.70	0.55
8:AH:97:LEU:HD12	12:AL:144:U:OP1	2.06	0.55
9:AI:56:LEU:HD21	22:m:210:VAL:HB	1.89	0.55
12:AL:126:U:H2'	12:AL:127:U:C2	2.42	0.55
12:AL:796:A:H3'	12:AL:797:A:O4'	2.07	0.55
12:AL:1179:U:H6	24:o:216:SER:OG	1.90	0.55
12:AL:1344:A:C6	12:AL:1360:A:N1	2.75	0.55
15:Z:95:ASP:H	17:h:203:ARG:CZ	2.20	0.55
19:j:124:PHE:HA	19:j:129:ASN:HD22	1.72	0.55
20:k:267:ASN:O	20:k:270:ASN:N	2.40	0.55
27:r:51:GLN:C	27:r:53:ASP:N	2.63	0.55
37:1:156:MET:HG3	50:E:33:VAL:HG11	1.89	0.55
46:A:220:A:H3'	46:A:221:A:H8	1.72	0.55
46:A:406:A:H2'	46:A:407:U:O4'	2.06	0.55
46:A:604:G:C6	46:A:659:G:C6	2.95	0.55
46:A:1660:A:H2'	46:A:1661:A:C8	2.41	0.55
46:A:1765:A:N6	46:A:1786:A:N1	2.54	0.55
46:A:2064:G:H8	46:A:2064:G:O5'	1.89	0.55
46:A:2575:A:H2'	46:A:2576:A:H8	1.72	0.55
46:A:2713:G:C8	46:A:2767:C:H3'	2.42	0.55
46:A:2753:U:C2	46:A:2754:A:C8	2.95	0.55
46:A:2958:U:H4'	46:A:3240:A:O4'	2.07	0.55
46:A:2980:A:H3'	46:A:2981:U:H6	1.71	0.55
55:J:130:LEU:HD21	55:J:193:SER:HB3	1.88	0.55
63:R:205:LEU:HD11	63:R:211:ILE:HG22	1.89	0.55
63:R:335:THR:CG2	63:R:363:SER:HB3	2.21	0.55
76:f:115:LEU:HD23	76:f:120:VAL:HG22	1.89	0.55
76:f:149:ALA:HA	76:f:154:ILE:HB	1.89	0.55
3:AC:131:ASP:O	3:AC:134:VAL:HB	2.05	0.55
4:AD:21:HIS:CE1	4:AD:22:LEU:HG	2.42	0.55
4:AD:107:GLU:O	4:AD:108:CYS:C	2.49	0.55
6:AF:166:LEU:O	6:AF:167:SER:C	2.50	0.55
6:AF:312:ALA:O	31:v:68:ASP:CG	2.49	0.55
7:AG:1:MET:HE3	17:h:351:GLU:CG	2.22	0.55
7:AG:153:THR:HG22	7:AG:169:TYR:HA	1.88	0.55
9:AI:179:TYR:CD2	12:AL:1353:U:O2	2.60	0.55
9:AI:409:SER:HB3	9:AI:411:VAL:HG23	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:21:GLN:HA	12:AL:1314:U:OP1	2.07	0.55
10:AJ:56:PHE:N	18:i:118:LEU:CD2	2.69	0.55
10:AJ:57:ARG:HG2	12:AL:1061:U:H5"	1.87	0.55
12:AL:96:A:H2'	12:AL:97:A:O4'	2.07	0.55
12:AL:508:C:H5'	19:j:420:PRO:CG	2.37	0.55
12:AL:1375:U:H5"	28:s:100:ARG:HH21	1.71	0.55
18:i:100:TYR:CE2	25:p:139:LYS:HB2	2.42	0.55
21:l:119:SER:HB3	21:l:122:GLU:CG	2.37	0.55
24:o:66:ILE:HG22	24:o:67:LYS:HZ2	1.72	0.55
26:q:88:HIS:O	26:q:89:LEU:HD23	2.07	0.55
26:q:204:LEU:CD2	35:z:133:LYS:HG2	2.36	0.55
27:r:148:LYS:O	27:r:149:LYS:C	2.49	0.55
28:s:22:SER:OG	28:s:23:LYS:N	2.40	0.55
30:u:137:ALA:O	30:u:138:ILE:C	2.50	0.55
46:A:12:A:H2'	46:A:13:A:H8	1.72	0.55
46:A:166:U:H3'	46:A:167:U:C5	2.42	0.55
46:A:833:U:O2'	46:A:834:A:H5'	2.07	0.55
46:A:987:G:H1	46:A:995:C:H42	1.54	0.55
46:A:1093:A:H4'	46:A:1094:U:O5'	2.06	0.55
46:A:1430:U:H3'	46:A:1431:U:H6	1.71	0.55
46:A:1712:A:H1'	47:B:140:THR:CG2	2.37	0.55
46:A:1824:U:C2	46:A:1825:A:C8	2.94	0.55
46:A:2018:C:H1'	46:A:2062:G:H1'	1.88	0.55
46:A:2079:A:C2'	46:A:2080:U:H6	1.99	0.55
46:A:2199:U:H2'	46:A:2200:C:C6	2.41	0.55
46:A:2364:U:C2'	46:A:2365:A:H5'	2.37	0.55
46:A:2609:G:H2'	46:A:2610:A:H8	1.68	0.55
46:A:2765:C:H6	46:A:2765:C:H5"	1.71	0.55
46:A:3252:U:H4'	46:A:3253:U:O5'	2.07	0.55
47:B:312:ASP:C	47:B:314:GLN:H	2.13	0.55
75:e:152:LYS:HD2	75:e:152:LYS:H	1.71	0.55
1:AA:82:ARG:NH1	12:AL:1621:G:N7	2.55	0.54
2:AB:79:VAL:HB	2:AB:84:ARG:HB2	1.89	0.54
3:AC:148:LEU:CD2	4:AD:204:ALA:CB	2.81	0.54
4:AD:207:PRO:O	4:AD:208:PHE:HB2	2.06	0.54
5:AE:117:LEU:HD22	5:AE:162:LEU:HD12	1.89	0.54
5:AE:284:LEU:HG	5:AE:297:LEU:HD22	1.88	0.54
6:AF:178:LYS:HZ1	19:j:459:ARG:NH2	2.02	0.54
7:AG:122:LEU:O	16:g:11:ARG:CG	2.55	0.54
8:AH:103:ARG:CB	8:AH:104:ARG:HH11	2.20	0.54
9:AI:289:PHE:CE2	9:AI:324:MET:HA	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:162:LEU:HB2	11:AK:163:PRO:HD3	1.89	0.54
12:AL:1415:G:N2	12:AL:1443:A:OP2	2.40	0.54
18:i:180:MET:HB2	20:k:92:TRP:CD1	2.42	0.54
21:l:40:ARG:HH21	30:u:141:ILE:CG2	2.21	0.54
22:m:95:LEU:O	22:m:96:ALA:C	2.49	0.54
33:x:49:LEU:HD13	33:x:49:LEU:H	1.71	0.54
36:0:61:SER:CB	46:A:2732:G:H5"	2.37	0.54
46:A:70:A:C6	46:A:92:A:C6	2.95	0.54
46:A:87:U:H2'	46:A:88:U:H6	1.70	0.54
46:A:110:A:H2'	46:A:111:G:H8	1.71	0.54
46:A:250:U:H2'	46:A:251:U:C6	2.41	0.54
46:A:313:U:OP2	72:b:54:HIS:NE2	2.37	0.54
46:A:538:A:H2'	46:A:539:U:H6	1.71	0.54
46:A:639:G:C8	60:O:249:ALA:HB1	2.42	0.54
46:A:675:G:O6	47:B:341:CYS:HB3	2.07	0.54
46:A:929:G:OP2	73:c:27:GLN:HG3	2.07	0.54
46:A:1073:A:N1	46:A:1080:U:O4	2.40	0.54
46:A:1075:A:C2	46:A:1076:U:H1'	2.41	0.54
46:A:1343:U:C6	61:P:139:HIS:CD2	2.95	0.54
46:A:1432:A:H2'	46:A:1433:A:H8	1.72	0.54
46:A:1483:U:H2'	46:A:1484:U:C6	2.42	0.54
46:A:1753:U:H6	46:A:1753:U:O5'	1.89	0.54
46:A:2276:G:H2'	46:A:2276:G:N3	2.23	0.54
46:A:3018:A:C6	46:A:3019:U:C4	2.95	0.54
63:R:149:ARG:C	63:R:151:ASP:N	2.63	0.54
2:AB:68:GLN:HA	2:AB:95:ARG:HH22	1.73	0.54
3:AC:56:GLN:O	3:AC:57:SER:C	2.49	0.54
3:AC:112:LYS:HD2	3:AC:252:ASN:HA	1.89	0.54
3:AC:228:ASP:CG	4:AD:277:PRO:CB	2.73	0.54
4:AD:120:PRO:HG3	4:AD:290:ARG:HH12	1.72	0.54
5:AE:69:LYS:HE2	5:AE:72:GLN:CG	2.37	0.54
5:AE:255:LEU:CD1	5:AE:300:PHE:CB	2.79	0.54
6:AF:58:MET:HG2	19:j:11:LEU:HD11	1.90	0.54
6:AF:172:SER:HB2	6:AF:177:LEU:O	2.07	0.54
7:AG:74:LEU:HD23	8:AH:186:LEU:HD21	1.88	0.54
9:AI:276:ILE:HG13	9:AI:323:LEU:CD1	2.29	0.54
11:AK:99:VAL:HG21	18:i:171:TYR:HE2	1.73	0.54
11:AK:130:ARG:O	18:i:214:TYR:CE2	2.56	0.54
12:AL:328:C:O2'	12:AL:329:U:H5'	2.07	0.54
12:AL:347:U:O5'	12:AL:347:U:H6	1.91	0.54
12:AL:379:U:O2'	31:v:12:ARG:NH1	2.39	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:414:A:N6	12:AL:502:A:C8	2.76	0.54
12:AL:751:U:O4	12:AL:769:A:H1'	2.08	0.54
12:AL:756:A:H2'	12:AL:757:U:C6	2.43	0.54
12:AL:991:G:HO2'	12:AL:992:U:P	2.30	0.54
12:AL:1020:U:H2'	12:AL:1021:U:C6	2.42	0.54
12:AL:1343:U:O2'	12:AL:1344:A:OP1	2.20	0.54
12:AL:1624:U:OP2	35:z:155:ARG:NH2	2.37	0.54
18:i:311:ILE:CD1	20:k:58:TYR:OH	2.53	0.54
24:o:160:ARG:HG2	24:o:161:LYS:H	1.70	0.54
27:r:50:PRO:O	27:r:53:ASP:N	2.40	0.54
30:u:67:VAL:HG22	30:u:209:VAL:HG21	1.89	0.54
34:y:68:MET:HG2	34:y:76:PHE:CZ	2.41	0.54
39:3:61:ILE:HG23	39:3:77:VAL:HG22	1.89	0.54
46:A:261:A:C4	46:A:307:G:N7	2.75	0.54
46:A:487:U:H2'	46:A:488:A:C8	2.42	0.54
46:A:894:A:H2'	46:A:895:A:H8	1.71	0.54
46:A:1034:U:H1'	46:A:1037:A:N7	2.22	0.54
46:A:1215:A:H2'	46:A:1216:A:C8	2.41	0.54
46:A:1293:A:O2'	46:A:1294:C:H5'	2.07	0.54
46:A:1303:C:N4	46:A:1600:U:O4	2.41	0.54
46:A:1525:A:H2'	46:A:1526:A:C8	2.41	0.54
46:A:1775:A:C6	46:A:1776:A:C6	2.95	0.54
46:A:2332:U:H5"	63:R:322:ARG:NH1	2.21	0.54
46:A:2845:G:N2	48:C:189:LEU:HD21	2.22	0.54
46:A:2860:A:O2'	46:A:2861:U:H5'	2.06	0.54
57:L:111:LEU:HD22	68:W:118:MET:HE1	1.89	0.54
63:R:155:LYS:CE	72:b:157:PHE:CE2	2.90	0.54
76:f:34:ILE:HG13	76:f:66:ARG:HA	1.89	0.54
3:AC:55:GLY:O	7:AG:121:ILE:HG23	2.06	0.54
3:AC:190:SER:HB3	4:AD:78:LYS:HZ1	1.71	0.54
4:AD:119:THR:O	4:AD:121:ASP:N	2.40	0.54
4:AD:146:PHE:HB2	4:AD:152:PHE:HB2	1.89	0.54
4:AD:173:ALA:HB3	4:AD:268:ILE:HB	1.88	0.54
7:AG:52:SER:O	7:AG:54:GLY:N	2.41	0.54
9:AI:143:VAL:O	9:AI:144:LYS:C	2.50	0.54
9:AI:233:SER:O	9:AI:246:VAL:HB	2.08	0.54
9:AI:371:TYR:CD2	9:AI:372:HIS:CE1	2.95	0.54
9:AI:439:ARG:HD2	9:AI:443:LYS:HE3	1.90	0.54
10:AJ:35:LEU:CD2	29:t:43:PHE:CD2	2.87	0.54
11:AK:64:ARG:O	11:AK:65:ILE:C	2.50	0.54
12:AL:712:A:H2'	12:AL:713:U:H6	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:824:A:H2'	12:AL:825:G:O4'	2.07	0.54
12:AL:900:A:H2'	12:AL:901:U:C6	2.42	0.54
12:AL:1011:A:C2	12:AL:1012:G:C5	2.96	0.54
12:AL:1430:G:H2'	12:AL:1431:U:C6	2.43	0.54
13:AM:65:U:H2'	13:AM:66:C:C6	2.42	0.54
18:i:204:THR:HG22	20:k:84:ASN:ND2	2.20	0.54
20:k:91:ARG:HD2	20:k:93:ASP:H	1.71	0.54
21:l:50:LEU:H	21:l:63:ARG:HA	1.71	0.54
27:r:70:PRO:HG2	27:r:75:SER:HA	1.88	0.54
27:r:96:PRO:HG2	27:r:127:ARG:CG	2.37	0.54
29:t:58:ALA:O	29:t:59:GLN:C	2.50	0.54
30:u:268:LYS:O	30:u:271:ALA:N	2.41	0.54
46:A:13:A:H2'	46:A:14:U:C6	2.43	0.54
46:A:440:U:C2	46:A:441:A:C8	2.96	0.54
46:A:1192:A:H2'	46:A:1193:U:C6	2.43	0.54
46:A:1490:A:C2	46:A:1523:A:H2	2.24	0.54
46:A:1581:U:H2'	46:A:1582:A:C5'	2.36	0.54
46:A:1608:U:H2'	46:A:1609:U:C6	2.42	0.54
46:A:1981:U:O4	46:A:2263:U:C4	2.61	0.54
46:A:2269:U:H2'	46:A:2270:U:C6	2.43	0.54
46:A:2360:U:H5"	63:R:162:LEU:HD13	1.89	0.54
46:A:2446:U:H4'	46:A:2447:A:OP1	2.08	0.54
46:A:2660:A:H3'	46:A:2661:C:C6	2.42	0.54
46:A:3111:A:OP1	48:C:228:HIS:HB2	2.08	0.54
46:A:3254:U:H5"	46:A:3255:A:O4'	2.07	0.54
63:R:191:ILE:O	63:R:192:GLU:C	2.49	0.54
75:e:86:LYS:HE3	75:e:152:LYS:HB3	1.88	0.54
2:AB:48:ILE:HB	2:AB:86:TYR:HE2	1.72	0.54
4:AD:162:ALA:C	7:AG:189:VAL:HG11	2.32	0.54
5:AE:197:ARG:HH22	5:AE:319:LEU:HD13	1.72	0.54
5:AE:223:ASN:ND2	5:AE:251:VAL:HG21	2.22	0.54
7:AG:108:PHE:CE2	7:AG:149:VAL:HG21	2.42	0.54
7:AG:183:GLU:O	7:AG:187:GLN:HG2	2.08	0.54
7:AG:205:ALA:HB3	16:g:92:GLU:CB	2.38	0.54
7:AG:221:GLU:CG	16:g:270:PHE:HE2	2.16	0.54
9:AI:56:LEU:HD12	22:m:211:ARG:CD	2.38	0.54
9:AI:74:VAL:HG21	9:AI:409:SER:HA	1.89	0.54
10:AJ:53:ILE:CD1	10:AJ:55:LYS:HE2	2.37	0.54
11:AK:61:PRO:HG2	11:AK:64:ARG:HB2	1.88	0.54
12:AL:626:U:C4	12:AL:654:G:C2	2.96	0.54
12:AL:898:U:C4	12:AL:899:U:C4	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1419:U:O4'	22:m:124:HIS:HB3	2.08	0.54
26:q:101:HIS:C	26:q:103:ASN:H	2.14	0.54
26:q:147:THR:HG22	26:q:147:THR:O	2.07	0.54
37:1:264:ARG:NH2	63:R:213:ASP:CG	2.64	0.54
39:3:30:PHE:HA	46:A:1568:U:C5	2.42	0.54
46:A:9:U:O5'	46:A:9:U:H6	1.89	0.54
46:A:122:A:O2'	46:A:123:A:H5'	2.06	0.54
46:A:306:G:C2	46:A:365:A:C2	2.95	0.54
46:A:470:U:N3	46:A:1930:A:C5	2.75	0.54
46:A:766:U:H2'	46:A:767:A:H8	1.72	0.54
46:A:888:G:H2'	46:A:889:U:H6	1.72	0.54
46:A:940:A:H2'	46:A:941:U:H6	1.73	0.54
46:A:1006:U:C4	76:f:135:LEU:HD21	2.42	0.54
46:A:2063:A:H8	46:A:2063:A:O5'	1.89	0.54
47:B:312:ASP:C	47:B:314:GLN:N	2.65	0.54
63:R:267:HIS:CG	63:R:268:GLN:H	2.25	0.54
65:T:60:LEU:HD21	74:d:169:TRP:HB2	1.90	0.54
2:AB:94:TYR:C	2:AB:96:ASN:H	2.14	0.54
4:AD:199:LEU:HB2	4:AD:208:PHE:HD1	1.73	0.54
4:AD:246:GLN:O	4:AD:249:THR:HB	2.08	0.54
5:AE:308:LEU:HD21	5:AE:313:ASP:HB3	1.90	0.54
7:AG:3:ILE:CG2	23:n:20:ARG:HH22	2.04	0.54
8:AH:93:GLN:NE2	12:AL:221:U:H3'	2.22	0.54
9:AI:431:PHE:CZ	24:o:176:ILE:HD13	2.40	0.54
12:AL:314:C:H2'	12:AL:315:G:C8	2.43	0.54
12:AL:699:A:H2'	12:AL:700:U:C6	2.42	0.54
12:AL:898:U:C6	12:AL:898:U:H5"	2.42	0.54
12:AL:1020:U:H2'	12:AL:1021:U:H6	1.72	0.54
12:AL:1385:A:P	29:t:42:LYS:HZ1	2.30	0.54
12:AL:1553:A:H2'	12:AL:1554:U:C6	2.43	0.54
18:i:236:ILE:O	18:i:237:LEU:C	2.50	0.54
25:p:91:SER:C	29:t:96:TYR:CE2	2.85	0.54
28:s:46:ARG:H	28:s:49:GLN:HE21	1.55	0.54
28:s:51:SER:HB3	28:s:54:GLN:HG3	1.89	0.54
33:x:51:LYS:HD3	33:x:52:GLY:N	2.22	0.54
44:8:209:PRO:HG3	55:J:58:VAL:HG12	1.88	0.54
46:A:166:U:H3'	46:A:167:U:C6	2.42	0.54
46:A:494:U:H2'	46:A:495:A:C8	2.43	0.54
46:A:712:A:H2'	46:A:872:G:H5"	1.89	0.54
46:A:834:A:C2	46:A:835:A:C5	2.95	0.54
46:A:963:A:H61	46:A:1061:U:H3	1.55	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1496:U:H3	46:A:1512:A:H61	1.53	0.54
46:A:1579:A:H5'	46:A:1579:A:C8	2.42	0.54
46:A:1784:U:H3'	46:A:1785:U:C6	2.37	0.54
46:A:2670:C:H2'	46:A:2671:U:H6	1.72	0.54
46:A:2679:A:H2'	46:A:2680:A:O4'	2.08	0.54
46:A:3081:U:O2	51:F:176:GLN:OE1	2.25	0.54
62:Q:263:GLU:CD	72:b:35:LYS:HE2	2.32	0.54
1:AA:90:LYS:HG3	1:AA:94:ARG:NH1	2.23	0.54
3:AC:195:ALA:CA	4:AD:223:TYR:HE2	1.94	0.54
4:AD:171:LEU:N	4:AD:271:LEU:O	2.41	0.54
4:AD:258:LYS:HE2	16:g:226:VAL:CG1	2.28	0.54
5:AE:149:SER:HB2	5:AE:156:TYR:HA	1.88	0.54
6:AF:66:ASN:HB3	6:AF:72:VAL:HG23	1.89	0.54
6:AF:330:LYS:NZ	12:AL:36:U:OP2	2.41	0.54
9:AI:78:LEU:HD11	9:AI:405:TYR:CE1	2.43	0.54
9:AI:186:GLY:HA2	9:AI:305:TYR:CZ	2.42	0.54
10:AJ:5:LYS:HA	10:AJ:8:LEU:HD12	1.89	0.54
10:AJ:59:LEU:HD11	18:i:122:MET:SD	2.48	0.54
12:AL:279:A:HO2'	12:AL:280:G:H8	1.54	0.54
12:AL:506:U:H2'	12:AL:507:C:C6	2.42	0.54
12:AL:1193:A:H2'	12:AL:1194:U:C6	2.42	0.54
12:AL:1286:A:H61	12:AL:1325:A:H61	1.56	0.54
16:g:272:ARG:CZ	33:x:48:LYS:HA	2.37	0.54
17:h:269:TYR:OH	24:o:38:VAL:HG12	2.04	0.54
21:l:81:ILE:HG22	21:l:85:LEU:HD11	1.90	0.54
26:q:141:TYR:O	26:q:142:GLU:C	2.47	0.54
28:s:88:TYR:CE1	28:s:92:ARG:HD3	2.43	0.54
32:w:33:ILE:CG2	32:w:35:LYS:HG2	2.38	0.54
32:w:218:ASN:C	32:w:220:LYS:N	2.61	0.54
46:A:265:C:O2'	46:A:297:A:H4'	2.07	0.54
46:A:744:U:H2'	46:A:745:U:H6	1.70	0.54
46:A:1010:A:O5'	76:f:129:SER:CA	2.52	0.54
46:A:1192:A:H2'	46:A:1193:U:H6	1.72	0.54
46:A:1490:A:C2	46:A:1523:A:C2	2.95	0.54
46:A:2019:A:N6	46:A:2060:A:N7	2.55	0.54
46:A:2054:A:H4'	46:A:2055:U:O5'	2.08	0.54
46:A:2740:A:H61	46:A:2795:U:H2'	1.73	0.54
2:AB:48:ILE:HG13	2:AB:52:CYS:CB	2.38	0.54
2:AB:65:ASN:HB3	2:AB:69:TRP:CZ2	2.42	0.54
3:AC:213:LYS:O	3:AC:214:VAL:C	2.50	0.54
6:AF:344:TYR:O	6:AF:345:ILE:C	2.50	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:166:VAL:CB	16:g:195:LYS:CE	2.85	0.54
7:AG:178:ALA:HA	7:AG:181:MET:HE2	1.90	0.54
8:AH:60:HIS:N	12:AL:133:U:H5	2.01	0.54
8:AH:231:PHE:C	8:AH:233:ASP:N	2.65	0.54
9:AI:127:ARG:NH2	9:AI:392:PRO:O	2.38	0.54
9:AI:193:ASP:O	9:AI:195:ASP:N	2.41	0.54
11:AK:132:PHE:CD2	18:i:251:LEU:HD21	2.36	0.54
12:AL:418:A:H2'	12:AL:419:U:H6	1.73	0.54
12:AL:1442:G:H5"	22:m:127:LYS:HD2	1.89	0.54
12:AL:1572:U:H2'	12:AL:1573:G:C8	2.37	0.54
12:AL:1633:U:C5	33:x:58:PHE:CE2	2.95	0.54
13:AM:27:C:H2'	13:AM:28:A:C8	2.43	0.54
13:AM:43:G:H2'	13:AM:44:G:C8	2.42	0.54
18:i:93:TRP:CB	29:t:108:PRO:CB	2.83	0.54
22:m:184:ASN:N	22:m:187:GLN:HB2	2.23	0.54
27:r:35:LYS:HD2	32:w:37:LEU:HD23	1.88	0.54
27:r:60:GLY:O	27:r:107:ILE:HA	2.08	0.54
30:u:281:GLN:C	30:u:283:ARG:H	2.15	0.54
31:v:54:GLU:HB3	31:v:59:VAL:HB	1.88	0.54
34:y:38:ARG:HH11	34:y:77:ALA:HB3	1.73	0.54
46:A:148:U:H4'	70:Y:79:PHE:CZ	2.42	0.54
46:A:249:C:C4'	46:A:590:A:H4'	2.37	0.54
46:A:319:U:H2'	46:A:320:U:C6	2.43	0.54
46:A:1608:U:O2'	48:C:201:HIS:HE1	1.86	0.54
46:A:1757:A:H3'	46:A:1758:U:C5	2.42	0.54
46:A:2717:A:O2'	46:A:2718:C:H6	1.91	0.54
46:A:2845:G:C2	48:C:203:GLY:HA3	2.42	0.54
48:C:210:ASP:HB3	48:C:211:PRO:HD3	1.89	0.54
54:I:138:ILE:CG2	58:M:121:ILE:HD11	2.37	0.54
63:R:184:LEU:CD2	63:R:258:THR:HG22	2.37	0.54
2:AB:41:VAL:HG23	2:AB:63:TRP:CE3	2.40	0.54
2:AB:82:GLN:O	2:AB:83:GLN:C	2.48	0.54
3:AC:169:ASN:HB2	7:AG:197:PHE:CE1	2.42	0.54
3:AC:266:LYS:CB	17:h:128:PRO:CG	2.75	0.54
4:AD:302:TRP:O	4:AD:305:VAL:N	2.41	0.54
6:AF:148:VAL:HG23	6:AF:216:PHE:HB2	1.90	0.54
7:AG:213:GLU:CB	16:g:230:ARG:HE	2.21	0.54
8:AH:33:ILE:O	8:AH:37:LYS:HB3	2.08	0.54
8:AH:164:LEU:CD2	23:n:33:LEU:CD2	2.83	0.54
9:AI:236:ASN:HD21	9:AI:238:LYS:HD2	1.73	0.54
10:AJ:53:ILE:HD13	10:AJ:55:LYS:HE3	1.86	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:70:TRP:NE1	18:i:173:MET:SD	2.81	0.54
11:AK:134:PHE:CB	20:k:106:LEU:N	2.71	0.54
12:AL:98:A:H2'	12:AL:99:U:H5"	1.89	0.54
12:AL:193:A:H2'	12:AL:194:A:C8	2.42	0.54
12:AL:539:C:H2'	12:AL:540:A:H8	1.68	0.54
12:AL:714:U:O2'	12:AL:715:U:H5'	2.07	0.54
12:AL:999:C:H41	12:AL:1003:A:N6	2.05	0.54
12:AL:1344:A:H5"	28:s:49:GLN:CG	2.35	0.54
20:k:175:LYS:HG2	20:k:252:CYS:HA	1.89	0.54
20:k:236:PRO:HG3	20:k:301:ARG:HE	1.73	0.54
26:q:148:SER:O	26:q:151:MET:N	2.41	0.54
46:A:257:U:C2	46:A:258:A:C8	2.96	0.54
46:A:457:G:OP1	53:H:117:LYS:HB2	2.08	0.54
46:A:1239:A:H61	46:A:1271:A:H62	1.55	0.54
46:A:1349:A:OP2	62:Q:5:TYR:OH	2.26	0.54
46:A:1520:C:H42	46:A:3021:A:N6	2.06	0.54
46:A:1924:G:H2'	46:A:1925:U:H6	1.72	0.54
46:A:1971:A:H2'	46:A:1972:G:C8	2.43	0.54
46:A:2282:U:H2'	46:A:2283:C:C6	2.43	0.54
46:A:2730:G:H2'	46:A:2731:C:H6	1.71	0.54
46:A:2737:A:C6	46:A:2738:G:C4	2.96	0.54
46:A:3276:U:H2'	46:A:3277:A:C8	2.43	0.54
47:B:268:SER:H	47:B:271:THR:HG21	1.72	0.54
54:I:138:ILE:HD11	58:M:114:ILE:HD12	1.90	0.54
4:AD:302:TRP:O	4:AD:303:LYS:C	2.51	0.54
6:AF:302:GLY:CA	6:AF:304:ARG:NH2	2.71	0.54
8:AH:198:GLU:HB3	21:l:105:LEU:HG	1.87	0.54
9:AI:371:TYR:CD1	12:AL:1305:A:C2	2.96	0.54
10:AJ:69:VAL:N	18:i:124:THR:HB	2.19	0.54
11:AK:152:ARG:NH1	18:i:311:ILE:HD13	2.23	0.54
12:AL:1491:U:H2'	12:AL:1492:U:C6	2.43	0.54
12:AL:1633:U:C4	16:g:80:ARG:HD2	2.43	0.54
16:g:45:ARG:CD	17:h:170:PRO:CB	2.86	0.54
18:i:355:LYS:HA	18:i:358:LEU:HG	1.89	0.54
22:m:97:GLN:NE2	24:o:208:LYS:HZ3	2.04	0.54
27:r:82:ARG:HD2	27:r:91:VAL:O	2.08	0.54
29:t:4:PHE:CD2	29:t:9:LYS:HA	2.43	0.54
45:9:41:LEU:HD22	71:a:119:ILE:CD1	2.38	0.54
46:A:215:A:H3'	46:A:216:U:C6	2.43	0.54
46:A:276:U:H2'	46:A:277:U:C6	2.42	0.54
46:A:318:A:H3'	46:A:319:U:H6	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:419:U:C4	46:A:420:U:C4	2.96	0.54
46:A:716:A:H2'	46:A:717:U:C6	2.43	0.54
46:A:2184:C:H2'	46:A:2185:U:C6	2.43	0.54
46:A:2378:A:C6	46:A:2422:A:C4	2.96	0.54
46:A:2660:A:H3'	46:A:2661:C:H6	1.73	0.54
46:A:2789:C:H2'	46:A:2790:U:C6	2.43	0.54
46:A:2828:A:H2'	46:A:2829:U:O4'	2.08	0.54
46:A:2897:A:C6	46:A:3262:A:H1'	2.43	0.54
51:F:73:LEU:CD2	51:F:103:VAL:HG11	2.38	0.54
63:R:174:ASP:OD1	63:R:178:LYS:HE3	2.08	0.54
3:AC:8:ILE:O	17:h:165:SER:O	2.25	0.54
3:AC:266:LYS:HA	17:h:128:PRO:HG2	1.86	0.54
4:AD:148:SER:O	4:AD:151:GLU:N	2.41	0.54
6:AF:32:ILE:HG13	6:AF:34:TYR:CE2	2.42	0.54
6:AF:314:VAL:HG22	8:AH:18:THR:CB	2.38	0.54
7:AG:3:ILE:HD13	23:n:20:ARG:CZ	2.37	0.54
10:AJ:63:TYR:CE2	18:i:182:ILE:HG22	2.41	0.54
12:AL:58:A:N1	12:AL:320:C:H1'	2.22	0.54
12:AL:765:U:C2	12:AL:766:A:C8	2.95	0.54
12:AL:1085:U:H2'	12:AL:1086:A:H8	1.73	0.54
12:AL:1385:A:H2'	12:AL:1386:A:O4'	2.08	0.54
12:AL:1624:U:H5'	12:AL:1625:U:H2'	1.90	0.54
18:i:157:ASN:O	18:i:158:ASN:C	2.50	0.54
20:k:124:ASP:O	20:k:125:VAL:C	2.51	0.54
21:l:35:ASN:O	21:l:36:ARG:C	2.49	0.54
21:l:54:MET:SD	21:l:93:ARG:HG3	2.48	0.54
22:m:129:LYS:O	22:m:133:ILE:HG13	2.07	0.54
28:s:27:ILE:HG21	28:s:62:LEU:HD23	1.89	0.54
46:A:26:A:C2	71:a:113:HIS:N	2.76	0.54
46:A:688:U:OP1	49:D:101:SER:OG	2.25	0.54
46:A:1411:A:C8	61:P:58:VAL:HG23	2.44	0.54
46:A:1516:U:C5	46:A:3019:U:C2	2.96	0.54
46:A:1817:U:H3'	46:A:1818:G:C8	2.43	0.54
46:A:2062:G:C6	46:A:2065:A:H2'	2.42	0.54
46:A:2472:C:H2'	46:A:2473:U:C6	2.42	0.54
47:B:268:SER:H	47:B:271:THR:CG2	2.21	0.54
63:R:224:GLU:HA	63:R:227:ARG:CZ	2.37	0.54
2:AB:50:ARG:HG3	2:AB:102:GLU:OE1	2.08	0.53
5:AE:285:LEU:HD11	5:AE:298:GLN:CA	2.39	0.53
6:AF:314:VAL:HG21	8:AH:18:THR:CG2	2.37	0.53
7:AG:29:TRP:O	7:AG:30:TYR:C	2.51	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:124:GLU:HB2	16:g:11:ARG:NH1	2.20	0.53
9:AI:292:ASP:O	9:AI:293:ASN:HB2	2.08	0.53
9:AI:299:THR:OG1	9:AI:300:THR:N	2.41	0.53
11:AK:190:VAL:HG21	25:p:138:MET:HE2	1.89	0.53
12:AL:657:G:C2	12:AL:658:G:C8	2.97	0.53
12:AL:1319:A:H3'	12:AL:1319:A:OP2	2.08	0.53
12:AL:1449:C:H2'	12:AL:1450:U:O4'	2.08	0.53
13:AM:36:U:C4	14:AN:7:C:N4	2.76	0.53
18:i:100:TYR:HE1	25:p:48:ARG:NE	1.96	0.53
19:j:22:LYS:HE2	19:j:23:TYR:CE1	2.42	0.53
19:j:109:LEU:HD12	19:j:150:PHE:HD2	1.73	0.53
20:k:174:ASP:O	20:k:176:ASN:N	2.36	0.53
24:o:65:TYR:CD2	24:o:125:ILE:HD11	2.43	0.53
26:q:94:VAL:HG12	26:q:95:VAL:N	2.21	0.53
27:r:61:VAL:HA	27:r:106:SER:O	2.09	0.53
28:s:86:GLY:O	34:y:76:PHE:HA	2.08	0.53
29:t:48:MET:C	29:t:50:LEU:N	2.65	0.53
32:w:98:LYS:O	32:w:99:GLU:C	2.51	0.53
46:A:26:A:N3	71:a:111:THR:O	2.42	0.53
46:A:86:U:H2'	46:A:87:U:C6	2.41	0.53
46:A:523:U:H5"	55:J:194:ARG:NH1	2.23	0.53
46:A:937:U:C2	46:A:938:A:C8	2.96	0.53
46:A:1172:C:H2'	46:A:1173:U:H6	1.73	0.53
46:A:1279:A:O2'	49:D:86:ARG:NH2	2.40	0.53
46:A:1519:A:N3	46:A:1519:A:H5"	2.24	0.53
46:A:1577:U:H3'	46:A:1578:A:C8	2.43	0.53
46:A:1813:A:N6	46:A:1818:G:H1'	2.23	0.53
46:A:1871:U:H5"	47:B:353:LYS:HZ2	1.72	0.53
46:A:2336:G:C6	46:A:2337:A:C4	2.96	0.53
46:A:2378:A:C6	46:A:2422:A:C5	2.96	0.53
46:A:2744:A:C8	46:A:2796:G:N7	2.76	0.53
46:A:2974:U:H2'	46:A:2975:A:H8	1.72	0.53
76:f:8:VAL:HG11	76:f:32:LYS:HD2	1.91	0.53
1:AA:80:VAL:HG21	12:AL:1462:A:C4	2.44	0.53
3:AC:38:TRP:CE3	3:AC:93:VAL:HG21	2.42	0.53
3:AC:44:TYR:HB2	4:AD:287:PHE:HD2	1.73	0.53
5:AE:181:ILE:C	5:AE:183:HIS:H	2.15	0.53
8:AH:202:LEU:O	8:AH:205:VAL:N	2.41	0.53
10:AJ:51:PRO:O	10:AJ:52:ASP:CG	2.52	0.53
10:AJ:56:PHE:O	10:AJ:57:ARG:C	2.52	0.53
12:AL:34:G:H2'	12:AL:35:A:H8	1.74	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:502:A:O5'	19:j:7:LEU:HD22	2.08	0.53
12:AL:784:A:N3	26:q:206:PHE:HE2	2.05	0.53
12:AL:1089:U:H2'	12:AL:1090:U:C6	2.42	0.53
12:AL:1215:A:P	24:o:253:THR:CG2	2.96	0.53
12:AL:1425:A:O2'	12:AL:1426:A:H5'	2.08	0.53
17:h:129:TYR:OH	24:o:119:GLN:C	2.51	0.53
19:j:6:ASN:HB3	19:j:13:ARG:HD2	1.90	0.53
20:k:266:ARG:C	20:k:271:ILE:HD11	2.34	0.53
26:q:184:VAL:CG2	35:z:117:PHE:CD2	2.91	0.53
29:t:47:ASN:O	29:t:49:ASN:N	2.40	0.53
30:u:184:ARG:O	30:u:185:ILE:C	2.52	0.53
32:w:203:PHE:O	32:w:204:LEU:C	2.52	0.53
33:x:111:HIS:C	33:x:113:ASP:H	2.16	0.53
38:2:129:MET:O	50:E:284:GLN:NE2	2.42	0.53
46:A:70:A:H3'	46:A:71:A:H8	1.73	0.53
46:A:116:C:C2	61:P:89:ALA:HB2	2.43	0.53
46:A:288:G:C4	46:A:2697:U:H4'	2.43	0.53
46:A:328:A:H3'	46:A:329:A:H8	1.73	0.53
46:A:471:A:H5'	59:N:136:ARG:NE	2.24	0.53
46:A:605:A:H2'	46:A:606:U:C6	2.42	0.53
46:A:820:U:C2	46:A:821:U:N3	2.76	0.53
46:A:1244:A:H2'	46:A:1245:U:C6	2.42	0.53
46:A:1638:C:H2'	46:A:1639:A:H5'	1.88	0.53
46:A:1794:U:H2'	46:A:1795:U:H6	1.72	0.53
46:A:2031:C:N4	46:A:2068:C:OP2	2.41	0.53
46:A:2096:C:H2'	46:A:2097:U:C5	2.43	0.53
46:A:2982:U:C4	46:A:3005:A:C2	2.95	0.53
47:B:236:GLN:HB3	47:B:239:ASN:OD1	2.08	0.53
63:R:230:ALA:HA	63:R:235:TRP:NE1	2.23	0.53
4:AD:109:PRO:O	4:AD:111:LEU:N	2.41	0.53
5:AE:73:ILE:HB	5:AE:77:LYS:NZ	2.23	0.53
6:AF:137:PHE:CE2	19:j:468:PRO:CA	2.92	0.53
6:AF:207:THR:O	6:AF:210:GLU:N	2.39	0.53
8:AH:106:PHE:CD1	31:v:73:LYS:HG3	2.43	0.53
8:AH:162:GLN:NE2	23:n:60:PHE:CD2	2.76	0.53
9:AI:147:ILE:HG22	9:AI:387:THR:O	2.09	0.53
11:AK:137:LEU:O	18:i:215:LEU:CD2	2.55	0.53
11:AK:207:LYS:HG2	11:AK:216:LEU:HD11	1.89	0.53
11:AK:292:TYR:CE2	24:o:179:ASN:HA	2.43	0.53
12:AL:488:A:C5	12:AL:489:A:C5	2.97	0.53
12:AL:900:A:C8	12:AL:900:A:OP2	2.62	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1100:A:H61	12:AL:1235:A:N6	2.06	0.53
12:AL:1163:A:H1'	24:o:256:TYR:OH	2.07	0.53
21:l:111:LEU:HD12	33:x:95:ARG:HD2	1.90	0.53
30:u:85:GLU:OE1	32:w:107:PHE:CE1	2.61	0.53
30:u:158:GLU:O	30:u:159:LEU:C	2.50	0.53
30:u:171:THR:HA	30:u:176:VAL:HG11	1.91	0.53
32:w:79:ARG:HG2	32:w:81:LYS:HD2	1.90	0.53
42:6:217:ILE:HD12	42:6:277:LEU:HG	1.90	0.53
46:A:288:G:N3	46:A:2697:U:H4'	2.24	0.53
46:A:324:U:H2'	46:A:325:G:O4'	2.09	0.53
46:A:353:A:C6	46:A:354:A:C5	2.97	0.53
46:A:646:C:H2'	46:A:647:A:C8	2.43	0.53
46:A:884:U:N3	56:K:84:ARG:NH1	2.56	0.53
46:A:1040:C:H2'	46:A:1041:U:C5	2.43	0.53
46:A:1211:U:C2	46:A:1212:A:C8	2.97	0.53
46:A:1812:U:C4	46:A:1818:G:C5	2.96	0.53
75:e:147:PRO:HA	75:e:150:VAL:HG12	1.91	0.53
2:AB:104:LYS:HD2	2:AB:104:LYS:H	1.73	0.53
3:AC:67:LEU:HD13	3:AC:84:SER:HB2	1.91	0.53
3:AC:185:LEU:CG	7:AG:196:MET:C	2.81	0.53
4:AD:209:ASN:ND2	4:AD:260:PHE:HD2	2.05	0.53
5:AE:47:LYS:HE3	5:AE:98:SER:HB2	1.90	0.53
5:AE:219:LEU:HD23	5:AE:219:LEU:H	1.73	0.53
8:AH:199:LEU:HD11	30:u:142:LEU:CD1	2.38	0.53
8:AH:210:ILE:CG2	21:l:39:VAL:C	2.81	0.53
11:AK:162:LEU:HD22	25:p:65:THR:CA	2.15	0.53
12:AL:43:C:C2'	12:AL:44:U:H5'	2.38	0.53
12:AL:481:A:H4'	12:AL:482:U:OP1	2.09	0.53
15:Z:89:ILE:HG22	35:z:165:LEU:HD11	1.90	0.53
19:j:69:PHE:CZ	19:j:482:LEU:HD23	2.40	0.53
21:l:8:LEU:CG	33:x:136:GLY:HA3	2.38	0.53
22:m:98:TRP:CG	24:o:242:LEU:CD2	2.90	0.53
22:m:211:ARG:HA	22:m:211:ARG:HE	1.73	0.53
25:p:43:ALA:HB2	25:p:142:PHE:HD1	1.73	0.53
27:r:137:ASN:O	27:r:139:ILE:HG13	2.08	0.53
30:u:36:LYS:O	30:u:39:LYS:HB2	2.08	0.53
30:u:206:ARG:O	30:u:207:ILE:C	2.49	0.53
33:x:96:PRO:HD3	33:x:137:LEU:HD13	1.90	0.53
46:A:84:A:H2'	46:A:85:A:C8	2.43	0.53
46:A:133:A:H4'	62:Q:168:VAL:HG11	1.91	0.53
46:A:414:G:H2'	46:A:415:A:H8	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:899:A:O4’	46:A:1222:U:C2	2.61	0.53
46:A:1546:G:H2’	46:A:1547:U:C6	2.43	0.53
46:A:1728:U:O2’	47:B:269:ALA:O	2.25	0.53
46:A:2455:A:H5”	50:E:237:GLY:CA	2.39	0.53
46:A:2607:G:H2’	46:A:2608:C:O4’	2.08	0.53
46:A:2789:C:H2’	46:A:2790:U:H6	1.73	0.53
46:A:3061:A:H8	46:A:3061:A:OP2	1.91	0.53
61:P:92:ILE:HG23	65:T:122:ARG:HA	1.91	0.53
62:Q:263:GLU:OE2	72:b:35:LYS:NZ	2.40	0.53
63:R:261:ASN:HD22	63:R:267:HIS:CD2	2.23	0.53
75:e:107:ARG:HH22	75:e:126:LYS:HB2	1.74	0.53
1:AA:83:LYS:CD	12:AL:1601:C:C5’	2.87	0.53
2:AB:53:ASN:O	2:AB:56:LYS:HG3	2.07	0.53
5:AE:117:LEU:O	5:AE:121:LYS:N	2.42	0.53
7:AG:122:LEU:HD13	16:g:36:ILE:HD12	1.90	0.53
7:AG:224:VAL:CG1	33:x:45:LEU:HD12	2.25	0.53
11:AK:132:PHE:CE1	18:i:248:MET:CE	2.78	0.53
12:AL:13:U:H5”	12:AL:14:A:OP2	2.08	0.53
12:AL:409:G:O3’	19:j:123:GLN:NE2	2.41	0.53
12:AL:541:U:H2’	12:AL:542:A:N9	2.24	0.53
12:AL:834:A:H2’	12:AL:835:C:H6	1.74	0.53
12:AL:1327:A:H2’	12:AL:1328:A:H8	1.72	0.53
12:AL:1538:U:H2’	12:AL:1539:A:C8	2.44	0.53
12:AL:1580:U:H2’	12:AL:1581:G:H8	1.74	0.53
17:h:290:TRP:CE2	24:o:49:PRO:CG	2.91	0.53
18:i:302:ILE:HD12	25:p:20:TYR:CB	2.37	0.53
20:k:215:THR:HA	20:k:255:ILE:HG23	1.91	0.53
25:p:93:PHE:O	25:p:94:VAL:C	2.52	0.53
26:q:89:LEU:CD1	26:q:148:SER:HA	2.39	0.53
28:s:10:PHE:CD1	28:s:47:MET:HE2	2.43	0.53
28:s:52:GLU:HB3	28:s:53:PRO:HD3	1.89	0.53
38:2:47:SER:CB	46:A:2425:A:H5’	2.38	0.53
46:A:149:A:C5	46:A:1371:A:C6	2.97	0.53
46:A:430:A:H2’	46:A:431:U:C6	2.43	0.53
46:A:487:U:H2’	46:A:488:A:H8	1.74	0.53
46:A:1070:A:H2’	46:A:1071:A:O4’	2.09	0.53
46:A:1110:A:O2’	46:A:1111:U:H5’	2.09	0.53
46:A:1439:A:N3	46:A:1440:U:C1’	2.72	0.53
46:A:2070:U:H2’	46:A:2071:A:H1’	1.90	0.53
46:A:2842:U:H5’	48:C:208:ASN:CB	2.33	0.53
54:I:136:ARG:HD2	58:M:114:ILE:HD13	1.88	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:J:77:LEU:HD23	55:J:85:LEU:HD13	1.90	0.53
55:J:113:ILE:HG13	55:J:114:TYR:H	1.73	0.53
63:R:298:LYS:HB2	63:R:371:LEU:CD1	2.38	0.53
76:f:63:LYS:HG3	76:f:68:PHE:HA	1.89	0.53
4:AD:111:LEU:CA	4:AD:114:GLU:HB2	2.31	0.53
5:AE:129:ARG:CG	12:AL:155:A:O3'	2.41	0.53
6:AF:100:HIS:HB2	6:AF:105:LYS:H	1.73	0.53
6:AF:177:LEU:HD22	6:AF:181:ARG:HE	1.73	0.53
8:AH:180:ARG:HG3	12:AL:815:C:P	2.49	0.53
10:AJ:54:LEU:C	18:i:118:LEU:HD21	2.29	0.53
12:AL:259:G:H2'	12:AL:260:U:C6	2.43	0.53
12:AL:508:C:C5'	19:j:420:PRO:CB	2.83	0.53
12:AL:622:A:H8	12:AL:622:A:O5'	1.91	0.53
20:k:104:ASN:ND2	20:k:106:LEU:HD23	2.23	0.53
22:m:228:GLU:O	22:m:229:LYS:C	2.51	0.53
26:q:150:ARG:O	26:q:154:LEU:HG	2.09	0.53
32:w:10:VAL:HG13	32:w:55:GLY:H	1.74	0.53
39:3:106:LYS:HA	46:A:124:U:OP2	2.08	0.53
46:A:740:A:C6	46:A:741:U:C4	2.96	0.53
46:A:747:U:C2	46:A:748:U:C5	2.96	0.53
46:A:1120:U:H2'	46:A:1121:U:C6	2.43	0.53
46:A:1261:U:H2'	46:A:1262:A:C8	2.44	0.53
46:A:1813:A:H61	46:A:1818:G:H1'	1.74	0.53
46:A:2001:U:H3'	46:A:2002:U:C6	2.43	0.53
46:A:2063:A:C5'	46:A:2063:A:H8	2.22	0.53
46:A:2238:U:H2'	46:A:2239:A:C8	2.43	0.53
46:A:2378:A:N6	46:A:2422:A:N7	2.57	0.53
46:A:2842:U:C5'	48:C:208:ASN:CB	2.86	0.53
46:A:3162:U:H2'	46:A:3163:U:H6	1.68	0.53
63:R:51:LYS:HG2	63:R:57:VAL:CG1	2.39	0.53
63:R:331:GLU:HA	63:R:362:ARG:CZ	2.39	0.53
2:AB:59:PHE:CE1	2:AB:69:TRP:CZ3	2.96	0.53
7:AG:22:LEU:CA	20:k:135:VAL:HG13	2.39	0.53
7:AG:124:GLU:CD	7:AG:127:ILE:HD11	2.33	0.53
9:AI:156:LYS:HE2	9:AI:346:SER:HA	1.89	0.53
9:AI:450:ARG:O	22:m:114:LEU:HD12	2.08	0.53
11:AK:134:PHE:CD2	20:k:112:LEU:CD2	2.92	0.53
12:AL:19:U:H2'	12:AL:20:A:H5"	1.91	0.53
12:AL:259:G:C2	12:AL:277:C:C2	2.96	0.53
12:AL:268:G:H2'	12:AL:269:A:C8	2.43	0.53
12:AL:1111:U:OP1	12:AL:1454:U:O2'	2.25	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:g:3:LEU:CD1	17:h:211:TYR:HE2	2.12	0.53
18:i:146:LEU:O	18:i:147:ASN:C	2.52	0.53
20:k:52:VAL:C	20:k:54:PHE:H	2.16	0.53
22:m:238:ILE:HG22	22:m:241:ARG:HH21	1.74	0.53
26:q:85:ASN:O	26:q:138:ARG:HG3	2.09	0.53
28:s:27:ILE:CG2	67:V:96:GLY:C	2.82	0.53
30:u:105:ILE:O	30:u:109:LYS:HG3	2.08	0.53
34:y:73:LEU:HA	34:y:76:PHE:CE2	2.43	0.53
40:4:57:PRO:HB2	41:5:103:LYS:HG3	1.91	0.53
46:A:168:A:H3'	46:A:169:A:H8	1.74	0.53
46:A:525:G:C2	55:J:177:LEU:HD11	2.44	0.53
46:A:741:U:O2'	46:A:742:A:H5'	2.09	0.53
46:A:851:A:H2'	46:A:852:U:H6	1.72	0.53
46:A:985:A:H4'	76:f:151:SER:HB2	1.91	0.53
46:A:1210:A:C6	46:A:1211:U:C4	2.96	0.53
46:A:1216:A:OP1	66:U:69:ARG:HB2	2.09	0.53
46:A:1308:A:C2	46:A:1309:A:C8	2.97	0.53
46:A:1439:A:H5"	46:A:1439:A:H8	1.73	0.53
46:A:1680:A:H2'	46:A:1681:C:H5'	1.90	0.53
46:A:2201:U:O2'	46:A:2202:U:H5'	2.09	0.53
46:A:2233:U:H2'	46:A:2234:U:C6	2.44	0.53
46:A:2351:A:H2'	46:A:2352:A:H8	1.73	0.53
46:A:2386:A:O5'	46:A:2386:A:C8	2.62	0.53
46:A:2676:G:C6	46:A:2677:U:C4	2.97	0.53
46:A:2980:A:H2'	46:A:2981:U:O4'	2.09	0.53
46:A:3270:A:H2'	46:A:3271:A:C8	2.43	0.53
56:K:187:VAL:HG11	73:c:130:PHE:CD2	2.43	0.53
62:Q:83:ILE:HG22	62:Q:95:LEU:HD22	1.91	0.53
75:e:146:ASN:HD22	75:e:149:GLN:HG3	1.74	0.53
76:f:37:ILE:HG13	76:f:38:ASP:H	1.74	0.53
4:AD:157:ILE:HA	4:AD:293:LEU:HD13	1.90	0.53
4:AD:181:ALA:HA	4:AD:184:ASN:HB2	1.90	0.53
6:AF:107:LEU:HA	6:AF:117:PRO:HA	1.90	0.53
6:AF:307:TYR:OH	31:v:92:LYS:HB3	2.09	0.53
6:AF:314:VAL:HG21	8:AH:18:THR:HG21	1.89	0.53
7:AG:92:TYR:OH	23:n:21:VAL:HG13	2.09	0.53
11:AK:185:ARG:HB3	11:AK:201:VAL:HB	1.91	0.53
12:AL:135:A:OP1	12:AL:266:A:H1'	2.08	0.53
12:AL:478:U:H5"	19:j:406:TRP:HD1	1.72	0.53
12:AL:655:A:C2'	12:AL:656:G:H5'	2.38	0.53
12:AL:749:A:C4'	26:q:121:LYS:NZ	2.53	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:781:A:H2'	12:AL:782:C:C6	2.44	0.53
18:i:150:ASN:HB2	20:k:78:LEU:HB2	1.88	0.53
18:i:316:MET:CG	20:k:69:TRP:CH2	2.70	0.53
21:l:38:VAL:CG1	30:u:141:ILE:CD1	2.80	0.53
21:l:71:PHE:CZ	21:l:81:ILE:HD12	2.43	0.53
22:m:123:ARG:HA	22:m:123:ARG:NE	2.24	0.53
24:o:160:ARG:O	24:o:162:SER:N	2.41	0.53
26:q:198:ILE:HG23	26:q:199:SER:N	2.24	0.53
30:u:79:ILE:O	30:u:80:MET:C	2.51	0.53
30:u:127:ASP:CB	30:u:130:LYS:HB2	2.38	0.53
30:u:175:GLU:CG	30:u:226:LYS:HD3	2.37	0.53
33:x:69:ARG:HA	33:x:72:GLN:NE2	2.22	0.53
35:z:112:ASN:ND2	35:z:115:GLU:HB2	2.24	0.53
37:1:73:ILE:HD13	42:6:51:TYR:HB2	1.90	0.53
46:A:433:A:C2	46:A:457:G:C5	2.97	0.53
46:A:841:G:C4	50:E:107:TYR:CE2	2.96	0.53
46:A:1043:A:H3'	46:A:1044:A:C8	2.43	0.53
46:A:1307:A:N1	46:A:1326:C:O2'	2.36	0.53
46:A:1680:A:C2'	46:A:1681:C:H5'	2.39	0.53
46:A:2906:U:H2'	46:A:2907:U:H6	1.74	0.53
46:A:2919:U:O2'	46:A:2920:U:H5'	2.08	0.53
46:A:3009:A:H2'	46:A:3010:U:C6	2.44	0.53
46:A:3173:U:C2	46:A:3174:U:C5	2.96	0.53
46:A:3240:A:O2'	46:A:3241:U:H5'	2.09	0.53
46:A:3270:A:H2'	46:A:3271:A:H8	1.72	0.53
63:R:184:LEU:HD12	63:R:184:LEU:N	2.24	0.53
63:R:215:ARG:HD3	63:R:255:ASN:HB3	1.90	0.53
2:AB:69:TRP:CZ2	2:AB:77:LYS:HE3	2.44	0.53
3:AC:12:PRO:CG	17:h:160:LEU:O	2.57	0.53
3:AC:78:ASN:HD21	7:AG:186:GLU:HB3	1.74	0.53
3:AC:185:LEU:HD11	7:AG:195:GLU:O	2.05	0.53
5:AE:66:TYR:O	5:AE:67:ARG:C	2.52	0.53
6:AF:148:VAL:CG2	6:AF:216:PHE:HB2	2.38	0.53
7:AG:1:MET:HE2	17:h:351:GLU:HB2	1.91	0.53
9:AI:310:ASN:ND2	28:s:34:LYS:CG	2.71	0.53
11:AK:304:ALA:CA	24:o:152:GLY:HA2	2.39	0.53
12:AL:73:A:C2	12:AL:104:G:H1'	2.44	0.53
12:AL:79:A:N6	12:AL:95:U:H3	2.06	0.53
12:AL:340:C:C2	12:AL:341:A:C8	2.97	0.53
12:AL:486:U:H2'	12:AL:487:A:C1'	2.39	0.53
12:AL:626:U:O4	12:AL:654:G:N1	2.42	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:756:A:H62	26:q:138:ARG:HH21	1.56	0.53
12:AL:1179:U:O4	24:o:214:THR:HB	2.09	0.53
12:AL:1214:A:C5'	24:o:252:LEU:O	2.56	0.53
16:g:251:VAL:HG11	33:x:51:LYS:HA	1.90	0.53
20:k:305:TYR:O	20:k:306:SER:C	2.51	0.53
27:r:58:ARG:HH12	27:r:87:ASN:HB3	1.71	0.53
33:x:94:ALA:O	33:x:96:PRO:N	2.41	0.53
35:z:95:ASN:O	35:z:96:ALA:C	2.51	0.53
46:A:170:U:H3	46:A:208:A:H61	1.57	0.53
46:A:208:A:H2'	46:A:209:U:H6	1.73	0.53
46:A:342:A:N3	46:A:344:A:C6	2.76	0.53
46:A:629:G:H3'	46:A:630:G:C8	2.44	0.53
46:A:1061:U:H2'	46:A:1062:U:C6	2.43	0.53
46:A:1387:A:H5"	64:S:67:LYS:HD2	1.91	0.53
46:A:1498:U:C2'	46:A:1499:A:H5'	2.39	0.53
46:A:1824:U:H2'	46:A:1825:A:C8	2.43	0.53
46:A:2062:G:C4	46:A:2065:A:C8	2.97	0.53
46:A:2349:A:H3'	46:A:2350:U:H6	1.74	0.53
46:A:2387:U:H3	46:A:2415:A:H61	1.57	0.53
46:A:2462:A:H2'	46:A:2463:C:C6	2.44	0.53
46:A:2625:A:N6	55:J:110:GLN:NE2	2.35	0.53
46:A:3263:U:H2'	46:A:3264:C:H6	1.73	0.53
63:R:53:GLU:HG3	63:R:54:GLY:H	1.74	0.53
63:R:209:TYR:CE1	63:R:217:ASN:ND2	2.77	0.53
65:T:53:ILE:HD11	74:d:134:VAL:HG12	1.91	0.53
75:e:106:LEU:CD1	75:e:132:LEU:HG	2.38	0.53
3:AC:64:PHE:CZ	17:h:153:HIS:HE1	2.27	0.53
3:AC:178:PRO:HB3	3:AC:204:ILE:HD13	1.89	0.53
5:AE:211:LEU:HD21	5:AE:245:LEU:HD21	1.91	0.53
6:AF:307:TYR:HB3	31:v:63:LYS:HD2	1.90	0.53
7:AG:226:GLU:O	7:AG:230:LEU:HB3	2.08	0.53
11:AK:196:ASN:CG	12:AL:1318:U:O2	2.51	0.53
12:AL:60:A:C2	12:AL:61:C:H1'	2.44	0.53
12:AL:259:G:H2'	12:AL:260:U:H6	1.74	0.53
12:AL:632:C:N3	12:AL:644:G:N1	2.57	0.53
12:AL:702:A:N1	12:AL:711:A:C6	2.76	0.53
12:AL:725:A:H3'	12:AL:726:A:C8	2.42	0.53
12:AL:756:A:N7	26:q:138:ARG:NH2	2.57	0.53
16:g:6:LEU:CD1	17:h:185:VAL:HG12	2.39	0.53
18:i:316:MET:SD	18:i:316:MET:N	2.81	0.53
24:o:277:LYS:O	24:o:278:ARG:C	2.52	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:r:83:VAL:HG12	27:r:84:ARG:O	2.09	0.53
30:u:87:LEU:HB3	30:u:95:ILE:HD12	1.91	0.53
32:w:3:ARG:HD3	32:w:5:ASN:HD21	1.74	0.53
46:A:801:U:O2'	46:A:802:U:H5'	2.09	0.53
46:A:1145:U:H3	46:A:1167:A:H61	1.57	0.53
46:A:1952:A:H4'	48:C:207:GLN:O	2.09	0.53
46:A:2457:G:H4'	46:A:2458:G:O5'	2.09	0.53
46:A:2643:U:H2'	46:A:2644:A:O4'	2.10	0.53
46:A:2689:A:O2'	46:A:2690:U:H5"	2.08	0.53
46:A:2940:G:C2	46:A:2941:A:C8	2.96	0.53
46:A:3134:U:H2'	46:A:3135:U:H6	1.74	0.53
48:C:211:PRO:HB3	48:C:215:LEU:HD21	1.90	0.53
5:AE:112:ASN:O	5:AE:113:SER:C	2.52	0.52
5:AE:274:TYR:O	5:AE:278:TYR:N	2.29	0.52
6:AF:32:ILE:HG13	6:AF:34:TYR:CD2	2.44	0.52
6:AF:216:PHE:CZ	19:j:435:ALA:HB1	2.44	0.52
7:AG:22:LEU:HD22	20:k:135:VAL:CG1	2.39	0.52
7:AG:217:LEU:CD2	33:x:60:PHE:CE1	2.93	0.52
8:AH:103:ARG:HG2	31:v:76:ILE:CG2	2.34	0.52
9:AI:449:HIS:HB3	22:m:150:ILE:HD11	1.91	0.52
10:AJ:53:ILE:HG21	29:t:14:PRO:HB2	1.91	0.52
10:AJ:59:LEU:HD11	18:i:122:MET:HG2	1.90	0.52
12:AL:116:A:N1	12:AL:319:A:O2'	2.42	0.52
12:AL:520:A:N6	12:AL:532:U:O2	2.42	0.52
12:AL:740:A:N1	26:q:208:GLY:CA	2.72	0.52
12:AL:1038:G:H5"	12:AL:1039:A:H5"	1.90	0.52
13:AM:2:G:H5"	13:AM:3:C:C5	2.44	0.52
16:g:28:LYS:N	33:x:53:THR:HG22	2.24	0.52
16:g:67:ASP:O	16:g:68:LEU:C	2.51	0.52
16:g:228:PRO:HA	16:g:277:LEU:CA	2.35	0.52
17:h:256:LYS:NZ	24:o:56:ASN:OD1	2.24	0.52
18:i:218:ASP:OD1	18:i:218:ASP:N	2.42	0.52
20:k:151:MET:HG2	20:k:190:MET:HE2	1.90	0.52
21:l:56:LYS:HB3	21:l:61:HIS:CD2	2.44	0.52
23:n:100:HIS:CE1	23:n:149:GLU:HB2	2.44	0.52
23:n:130:ARG:HB2	23:n:151:LEU:HD11	1.91	0.52
28:s:12:GLY:O	28:s:14:GLU:N	2.42	0.52
30:u:245:PHE:CE2	30:u:247:MET:HG2	2.44	0.52
32:w:159:GLU:HG3	32:w:161:VAL:HG23	1.91	0.52
33:x:43:GLN:O	33:x:45:LEU:N	2.42	0.52
36:0:87:LYS:NZ	46:A:2744:A:H8	2.07	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:1:263:PRO:HB2	63:R:216:PHE:HZ	1.74	0.52
46:A:290:G:OP1	55:J:115:LYS:HE3	2.08	0.52
46:A:450:U:H2'	46:A:451:A:H8	1.73	0.52
46:A:617:A:N6	46:A:1528:G:H5'	2.24	0.52
46:A:1878:A:H2'	46:A:1879:U:C6	2.44	0.52
46:A:1920:A:N6	46:A:1934:U:H3	2.06	0.52
46:A:1962:A:H3'	46:A:1963:C:C6	2.45	0.52
46:A:2318:U:H2'	46:A:2319:A:H5'	1.91	0.52
46:A:2751:G:OP1	56:K:89:GLN:NE2	2.39	0.52
46:A:3163:U:C2	46:A:3164:A:C8	2.97	0.52
63:R:47:LEU:HD13	63:R:67:ARG:HG2	1.90	0.52
66:U:58:VAL:HG21	73:c:47:LEU:HD12	1.89	0.52
4:AD:96:SER:OG	4:AD:308:ARG:NH1	2.41	0.52
5:AE:194:HIS:NE2	5:AE:315:TYR:HE1	2.08	0.52
5:AE:278:TYR:O	5:AE:281:ALA:N	2.42	0.52
8:AH:231:PHE:HE2	33:x:96:PRO:CD	2.21	0.52
12:AL:479:A:H61	19:j:181:LEU:HD13	1.74	0.52
12:AL:654:G:C4	12:AL:655:A:C8	2.96	0.52
12:AL:1300:U:H2'	12:AL:1301:A:H8	1.72	0.52
16:g:97:ILE:HG23	16:g:284:SER:HA	1.90	0.52
17:h:144:GLN:HE21	24:o:119:GLN:CA	2.22	0.52
19:j:423:THR:HA	19:j:425:TRP:N	2.21	0.52
21:l:48:ARG:NH2	21:l:66:HIS:CB	2.72	0.52
22:m:205:SER:HB3	22:m:211:ARG:CD	2.39	0.52
32:w:77:ILE:O	32:w:79:ARG:N	2.42	0.52
32:w:80:ASN:HB2	32:w:84:GLN:NE2	2.24	0.52
46:A:311:A:H5"	62:Q:260:HIS:HE2	1.72	0.52
46:A:1782:A:H3'	46:A:1783:U:C6	2.45	0.52
46:A:2383:A:C2	46:A:2384:A:C5	2.98	0.52
46:A:2458:G:N3	46:A:2458:G:H2'	2.24	0.52
46:A:2727:A:H61	46:A:2755:U:H3	1.55	0.52
46:A:2941:A:C6	46:A:2942:A:C6	2.97	0.52
46:A:3010:U:H2'	46:A:3011:U:H6	1.73	0.52
3:AC:66:ILE:HA	3:AC:69:LYS:HB2	1.90	0.52
4:AD:161:LEU:HA	4:AD:289:LYS:CD	2.38	0.52
5:AE:103:ASN:OD1	5:AE:141:HIS:HD2	1.92	0.52
5:AE:255:LEU:HD13	5:AE:300:PHE:HD2	1.73	0.52
5:AE:317:THR:O	5:AE:320:LYS:HG3	2.10	0.52
7:AG:122:LEU:O	16:g:11:ARG:HG2	2.09	0.52
7:AG:192:GLU:OE1	16:g:215:LYS:C	2.52	0.52
7:AG:217:LEU:CB	16:g:273:MET:HG3	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:74:LEU:O	8:AH:75:ILE:C	2.52	0.52
8:AH:164:LEU:O	23:n:63:VAL:CG1	2.57	0.52
9:AI:348:VAL:CG1	12:AL:1333:U:H4'	2.40	0.52
12:AL:94:A:C6	12:AL:95:U:C4	2.97	0.52
12:AL:274:A:H2'	12:AL:275:A:H8	1.74	0.52
12:AL:535:U:H2'	12:AL:536:U:C6	2.44	0.52
12:AL:752:A:HO2'	12:AL:767:A:N6	2.06	0.52
12:AL:1526:A:H61	12:AL:1537:U:H3	1.57	0.52
13:AM:36:U:C4	14:AN:8:A:C6	2.97	0.52
15:Z:95:ASP:N	17:h:203:ARG:HH22	1.95	0.52
16:g:12:ILE:HD11	17:h:195:LEU:HD11	1.91	0.52
17:h:299:ASP:OD1	24:o:36:ARG:CZ	2.56	0.52
18:i:192:CYS:O	18:i:195:LEU:HB2	2.10	0.52
21:l:42:ILE:HG12	21:l:69:MET:HG3	1.91	0.52
24:o:156:ALA:HB1	24:o:233:LYS:CB	2.34	0.52
28:s:20:LEU:HB3	28:s:27:ILE:HD11	1.91	0.52
34:y:43:LEU:O	34:y:47:VAL:HG13	2.09	0.52
36:0:62:VAL:HG12	36:0:80:ILE:HD12	1.92	0.52
44:8:101:ARG:NE	46:A:74:A:OP1	2.42	0.52
46:A:143:A:H2'	46:A:144:A:C8	2.45	0.52
46:A:274:U:C2	46:A:275:A:C8	2.97	0.52
46:A:328:A:H2'	46:A:329:A:O4'	2.09	0.52
46:A:394:G:N1	46:A:398:G:C6	2.77	0.52
46:A:464:C:H2'	46:A:465:U:H6	1.74	0.52
46:A:1825:A:H2'	46:A:1826:U:C6	2.43	0.52
46:A:1955:C:H2'	46:A:2769:A:H5"	1.91	0.52
46:A:2015:C:O2'	46:A:2016:A:O5'	2.25	0.52
46:A:2716:A:H4'	46:A:2717:A:OP1	2.09	0.52
46:A:2922:G:N2	46:A:2931:G:C4	2.77	0.52
46:A:3134:U:H2'	46:A:3135:U:C6	2.43	0.52
46:A:3272:U:H2'	46:A:3273:A:C8	2.44	0.52
54:I:138:ILE:HG21	58:M:121:ILE:HD11	1.90	0.52
6:AF:67:TYR:OH	19:j:181:LEU:HD11	2.09	0.52
6:AF:302:GLY:HA2	6:AF:304:ARG:HH22	1.74	0.52
6:AF:303:GLU:H	6:AF:304:ARG:HH21	1.51	0.52
6:AF:321:TYR:CZ	31:v:36:PRO:CD	2.92	0.52
7:AG:88:VAL:HG22	23:n:74:TRP:CH2	2.45	0.52
7:AG:147:GLU:HG2	16:g:14:GLN:CG	2.36	0.52
7:AG:166:VAL:HG21	16:g:196:PHE:CZ	2.43	0.52
8:AH:16:PRO:CA	31:v:35:LYS:CE	2.87	0.52
8:AH:93:GLN:NE2	12:AL:221:U:C3'	2.72	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:100:ALA:HB2	12:AL:143:A:OP1	2.09	0.52
9:AI:182:LEU:HD11	12:AL:1353:U:H5'	1.88	0.52
10:AJ:54:LEU:O	10:AJ:55:LYS:C	2.52	0.52
11:AK:199:LYS:NZ	12:AL:1317:U:O5'	2.42	0.52
12:AL:274:A:O2'	12:AL:275:A:H5'	2.09	0.52
12:AL:379:U:O2'	31:v:32:ARG:HD2	2.09	0.52
12:AL:482:U:C4	12:AL:483:A:N7	2.78	0.52
12:AL:943:U:OP1	23:n:94:LYS:HB3	2.09	0.52
12:AL:1167:A:H2'	12:AL:1168:U:H6	1.74	0.52
12:AL:1380:A:H2'	12:AL:1381:U:H6	1.73	0.52
12:AL:1417:A:OP1	24:o:271:LYS:HB2	2.09	0.52
17:h:334:GLU:O	17:h:337:LYS:HG2	2.09	0.52
25:p:104:ARG:NH1	29:t:91:PHE:HE1	2.06	0.52
30:u:213:GLN:O	30:u:217:ARG:HG3	2.09	0.52
33:x:65:ILE:O	33:x:69:ARG:HG3	2.09	0.52
46:A:42:A:OP1	53:H:136:TYR:OH	2.23	0.52
46:A:735:A:H8	46:A:735:A:OP2	1.93	0.52
46:A:766:U:H2'	46:A:767:A:C8	2.44	0.52
46:A:1253:U:H2'	46:A:1254:U:H6	1.74	0.52
46:A:1534:G:H2'	46:A:1535:A:C8	2.45	0.52
46:A:1536:A:H2'	46:A:1537:A:N7	2.25	0.52
46:A:2033:U:H1'	46:A:2034:A:OP2	2.08	0.52
46:A:2843:G:H4'	46:A:2844:A:OP1	2.09	0.52
63:R:331:GLU:HA	63:R:362:ARG:NE	2.24	0.52
63:R:332:THR:O	63:R:333:ASP:C	2.53	0.52
75:e:100:ASN:HA	75:e:120:ARG:HD2	1.91	0.52
76:f:43:PHE:O	76:f:47:SER:N	2.43	0.52
76:f:75:PRO:O	76:f:76:PRO:C	2.51	0.52
3:AC:77:SER:O	3:AC:78:ASN:C	2.52	0.52
4:AD:182:MET:N	4:AD:182:MET:SD	2.83	0.52
4:AD:304:ILE:O	4:AD:308:ARG:N	2.42	0.52
5:AE:200:ASP:HA	5:AE:202:LYS:HE2	1.92	0.52
5:AE:213:VAL:O	5:AE:217:LYS:HG2	2.08	0.52
6:AF:34:TYR:HE2	12:AL:496:A:HO2'	1.53	0.52
6:AF:62:LEU:CD2	19:j:26:PHE:CE1	2.82	0.52
6:AF:222:ASP:O	6:AF:223:ALA:C	2.53	0.52
7:AG:22:LEU:HD11	20:k:205:LEU:CD1	2.39	0.52
8:AH:171:GLU:HA	8:AH:174:GLU:HB2	1.91	0.52
9:AI:295:SER:HA	9:AI:298:LEU:HB2	1.92	0.52
11:AK:145:VAL:HG11	20:k:68:PHE:CE1	2.45	0.52
11:AK:162:LEU:HB3	25:p:68:TYR:CE2	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:640:C:OP1	12:AL:978:A:H3'	2.10	0.52
12:AL:1104:U:O3'	18:i:390:ASN:HB2	2.08	0.52
15:Z:89:ILE:CG1	35:z:168:ILE:CG2	2.87	0.52
17:h:140:PRO:O	17:h:141:TYR:C	2.53	0.52
17:h:193:VAL:HG11	17:h:372:LEU:HD21	1.91	0.52
21:l:113:ARG:HE	33:x:91:GLU:CD	2.12	0.52
29:t:6:PHE:HB3	29:t:26:PHE:CE1	2.44	0.52
30:u:267:SER:OG	30:u:268:LYS:N	2.41	0.52
32:w:128:ILE:HA	32:w:147:ILE:HG12	1.90	0.52
37:1:156:MET:HE2	37:1:156:MET:HA	1.90	0.52
39:3:54:LYS:HE3	46:A:157:A:OP1	2.09	0.52
46:A:43:U:H2'	46:A:44:U:C5	2.44	0.52
46:A:115:A:H5'	46:A:116:C:OP2	2.10	0.52
46:A:137:A:H2'	46:A:138:U:H6	1.74	0.52
46:A:157:A:H5"	46:A:158:C:O4'	2.10	0.52
46:A:238:C:H1'	46:A:2700:A:H61	1.75	0.52
46:A:643:U:H5"	70:Y:61:SER:CB	2.39	0.52
46:A:647:A:H2'	46:A:648:U:O4'	2.09	0.52
46:A:1002:C:H2'	46:A:1003:U:C6	2.45	0.52
46:A:1010:A:C5'	76:f:129:SER:HB2	2.31	0.52
46:A:1141:A:H2'	46:A:1142:U:C6	2.44	0.52
46:A:1265:A:O2'	46:A:1266:U:H5'	2.10	0.52
46:A:1484:U:H2'	46:A:1485:A:H5'	1.92	0.52
46:A:1696:A:O3'	47:B:331:PRO:HB3	2.08	0.52
46:A:1767:A:O2'	46:A:1768:A:H8	1.93	0.52
46:A:2202:U:H2'	46:A:2203:A:C8	2.45	0.52
46:A:2767:C:H1'	46:A:2769:A:N6	2.24	0.52
47:B:124:THR:HG22	47:B:153:ARG:HG2	1.91	0.52
63:R:53:GLU:CD	63:R:94:ARG:HA	2.34	0.52
63:R:225:GLU:O	63:R:228:LEU:HB2	2.09	0.52
63:R:338:THR:N	63:R:361:ALA:CB	2.73	0.52
1:AA:80:VAL:HG22	12:AL:1462:A:N1	2.25	0.52
2:AB:71:SER:CA	2:AB:74:LEU:HD12	2.39	0.52
3:AC:135:VAL:HA	3:AC:138:GLU:HB3	1.91	0.52
5:AE:64:PHE:HB3	5:AE:74:LEU:HD13	1.92	0.52
5:AE:282:ARG:HB3	5:AE:315:TYR:HB2	1.90	0.52
5:AE:291:ASN:O	5:AE:297:LEU:HD12	2.10	0.52
6:AF:321:TYR:CE2	31:v:36:PRO:CD	2.92	0.52
8:AH:219:LYS:O	8:AH:223:VAL:HG23	2.10	0.52
9:AI:424:ASN:O	9:AI:428:GLU:HG3	2.10	0.52
9:AI:437:ASN:O	9:AI:438:PRO:C	2.50	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:728:A:OP1	33:x:120:LYS:HG3	2.08	0.52
12:AL:1000:U:H2'	12:AL:1001:U:H6	1.74	0.52
12:AL:1220:A:H5'	29:t:112:LYS:HZ1	1.71	0.52
12:AL:1492:U:H2'	12:AL:1493:A:H8	1.75	0.52
12:AL:1583:G:O2'	12:AL:1584:A:P	2.68	0.52
13:AM:14:A:H62	13:AM:46:G:H1	1.58	0.52
14:AN:6:C:H4'	14:AN:7:C:OP1	2.10	0.52
18:i:311:ILE:CG1	20:k:58:TYR:CZ	2.87	0.52
20:k:45:LYS:HD3	20:k:47:ARG:NH2	2.25	0.52
22:m:133:ILE:HA	22:m:209:ALA:HB1	1.92	0.52
22:m:203:ARG:CB	22:m:211:ARG:CD	2.88	0.52
25:p:116:THR:HG22	25:p:117:ASN:H	1.73	0.52
28:s:20:LEU:HD22	28:s:24:PHE:HE2	1.74	0.52
32:w:10:VAL:HG23	32:w:20:VAL:HG13	1.91	0.52
46:A:96:C:H2'	46:A:97:U:C6	2.44	0.52
46:A:238:C:H1'	46:A:2700:A:N6	2.24	0.52
46:A:752:U:H2'	46:A:753:A:C8	2.44	0.52
46:A:841:G:H5"	46:A:841:G:C8	2.44	0.52
46:A:888:G:H21	56:K:128:MET:HE2	1.75	0.52
46:A:1832:A:C2	46:A:1869:A:C6	2.97	0.52
46:A:2275:U:H3'	46:A:2276:G:C5'	2.39	0.52
46:A:2902:C:H2'	46:A:2903:A:O4'	2.09	0.52
46:A:3289:U:H2'	46:A:3290:A:N7	2.24	0.52
63:R:263:LYS:O	63:R:264:LEU:HB2	2.10	0.52
63:R:271:SER:O	63:R:274:GLU:N	2.42	0.52
3:AC:31:SER:O	3:AC:32:SER:C	2.52	0.52
3:AC:177:PHE:HA	3:AC:180:ASN:ND2	2.24	0.52
7:AG:6:ASN:HA	7:AG:9:ASN:OD1	2.10	0.52
7:AG:22:LEU:HD22	20:k:135:VAL:HG11	1.92	0.52
7:AG:77:THR:HG21	8:AH:179:LYS:HD2	1.92	0.52
7:AG:147:GLU:OE2	16:g:14:GLN:CA	2.57	0.52
8:AH:50:ALA:HB2	32:w:76:GLU:HA	1.72	0.52
8:AH:93:GLN:CG	12:AL:222:U:OP2	2.57	0.52
8:AH:215:GLN:O	8:AH:216:LEU:C	2.53	0.52
9:AI:220:LEU:CD1	9:AI:285:VAL:HG11	2.40	0.52
9:AI:450:ARG:O	22:m:114:LEU:CB	2.57	0.52
11:AK:132:PHE:CZ	18:i:251:LEU:HD11	2.45	0.52
12:AL:273:A:C6	12:AL:274:A:N7	2.78	0.52
12:AL:540:A:C5	12:AL:541:U:C4	2.98	0.52
12:AL:610:A:H1'	12:AL:611:U:N3	2.24	0.52
12:AL:675:U:H5	20:k:263:TYR:OH	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:743:U:H2'	12:AL:744:A:O4'	2.10	0.52
12:AL:958:C:H2'	12:AL:959:G:H8	1.73	0.52
12:AL:976:U:P	27:r:122:LYS:HD3	2.50	0.52
12:AL:1088:A:C6	12:AL:1089:U:C4	2.97	0.52
21:l:30:LYS:O	21:l:34:GLN:HG3	2.09	0.52
22:m:90:PRO:CG	24:o:241:LEU:CD1	2.72	0.52
30:u:252:MET:O	30:u:256:GLU:HA	2.09	0.52
31:v:86:VAL:HA	31:v:89:LEU:HD12	1.90	0.52
32:w:218:ASN:CG	32:w:219:ILE:H	2.17	0.52
33:x:88:ASN:HB2	33:x:91:GLU:HG2	1.91	0.52
46:A:175:U:H2'	46:A:176:U:H6	1.67	0.52
46:A:177:A:H2	46:A:200:G:O6	1.93	0.52
46:A:562:U:O4	55:J:137:ARG:NH1	2.43	0.52
46:A:875:U:C2	46:A:876:A:N7	2.78	0.52
46:A:981:G:C8	46:A:982:U:H2'	2.44	0.52
46:A:998:U:H2'	46:A:999:A:C8	2.45	0.52
46:A:1318:A:N3	46:A:1318:A:H2'	2.24	0.52
46:A:1546:G:O2'	46:A:1547:U:H5'	2.10	0.52
46:A:1608:U:O2'	48:C:201:HIS:NE2	2.42	0.52
46:A:1628:A:H2'	46:A:1629:A:C8	2.44	0.52
46:A:1708:A:N6	46:A:2248:G:O2'	2.43	0.52
46:A:1728:U:C6	47:B:314:GLN:NE2	2.78	0.52
46:A:1938:A:H2'	46:A:1939:U:O4'	2.10	0.52
46:A:2253:A:H2'	46:A:2254:A:H8	1.75	0.52
46:A:2257:U:H2'	46:A:2258:C:C6	2.45	0.52
46:A:2710:A:H2'	46:A:2711:G:O4'	2.09	0.52
46:A:2766:U:H3'	46:A:2767:C:H4'	1.92	0.52
47:B:155:ILE:HD11	47:B:157:PHE:CZ	2.44	0.52
56:K:58:VAL:HG11	73:c:104:LYS:CB	2.38	0.52
59:N:49:LEU:HD23	71:a:53:MET:HE1	1.91	0.52
63:R:290:GLN:O	63:R:291:HIS:C	2.50	0.52
74:d:37:VAL:O	74:d:96:ARG:NH1	2.39	0.52
76:f:73:LYS:HG2	76:f:132:ARG:HG3	1.92	0.52
2:AB:45:LEU:HB2	2:AB:56:LYS:HE2	1.91	0.52
3:AC:154:PHE:HA	3:AC:222:ILE:O	2.09	0.52
4:AD:280:TRP:O	4:AD:281:LEU:C	2.52	0.52
5:AE:183:HIS:O	5:AE:187:THR:HB	2.10	0.52
6:AF:58:MET:CB	19:j:11:LEU:CD1	2.87	0.52
8:AH:93:GLN:HG3	12:AL:222:U:P	2.49	0.52
8:AH:104:ARG:NE	12:AL:143:A:H5'	2.25	0.52
8:AH:203:TYR:O	30:u:138:ILE:HD11	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:69:LEU:HB2	9:AI:117:GLU:OE1	2.09	0.52
9:AI:180:PRO:O	9:AI:181:GLU:C	2.53	0.52
12:AL:562:A:C2	12:AL:563:U:H1'	2.45	0.52
12:AL:796:A:H5"	12:AL:796:A:H8	1.74	0.52
12:AL:816:U:H2'	12:AL:817:G:O4'	2.09	0.52
12:AL:894:U:C4'	17:h:204:SER:OG	2.58	0.52
12:AL:1639:A:O4'	17:h:150:GLN:NE2	2.43	0.52
17:h:269:TYR:HH	24:o:38:VAL:CG1	2.19	0.52
18:i:224:ILE:HD13	18:i:329:ILE:HD12	1.90	0.52
22:m:88:ILE:N	22:m:88:ILE:HD13	2.25	0.52
25:p:94:VAL:O	25:p:95:HIS:C	2.53	0.52
28:s:21:ALA:HA	28:s:28:GLY:HA2	1.92	0.52
29:t:42:LYS:HB3	29:t:46:ARG:HH12	1.73	0.52
31:v:68:ASP:HB3	31:v:71:ARG:HB2	1.90	0.52
32:w:196:ASN:CB	32:w:199:LYS:HB2	2.39	0.52
33:x:41:ILE:HG12	33:x:42:ASP:H	1.74	0.52
33:x:113:ASP:OD2	35:z:156:LYS:NZ	2.42	0.52
40:4:8:ARG:O	41:5:189:ALA:HB2	2.09	0.52
44:8:43:PHE:CZ	62:Q:110:PHE:HA	2.44	0.52
46:A:709:G:H5'	46:A:730:U:OP1	2.09	0.52
46:A:830:U:H2'	46:A:831:A:H8	1.75	0.52
46:A:958:A:H2'	46:A:959:U:H6	1.74	0.52
46:A:1111:U:H6	46:A:1111:U:OP2	1.92	0.52
46:A:1712:A:H5"	47:B:362:TRP:CE3	2.43	0.52
46:A:1732:G:H2'	46:A:1733:U:H6	1.74	0.52
46:A:2334:U:OP1	63:R:326:LYS:CE	2.58	0.52
46:A:2586:U:H5'	46:A:2586:U:C6	2.45	0.52
46:A:2897:A:OP2	46:A:3262:A:N6	2.42	0.52
46:A:3015:U:H2'	46:A:3016:A:C8	2.44	0.52
46:A:3084:A:O2'	51:F:101:GLY:HA3	2.09	0.52
46:A:3258:A:H2'	46:A:3259:G:C8	2.45	0.52
63:R:188:ILE:O	63:R:190:ASP:N	2.43	0.52
63:R:303:ALA:O	63:R:306:LYS:HB3	2.10	0.52
2:AB:74:LEU:HD13	2:AB:88:LEU:CD2	2.27	0.52
5:AE:314:PRO:HB2	5:AE:318:HIS:CB	2.40	0.52
6:AF:307:TYR:CB	31:v:63:LYS:HD2	2.40	0.52
8:AH:79:VAL:CG1	8:AH:104:ARG:HD3	2.40	0.52
9:AI:100:GLN:O	9:AI:104:LEU:HG	2.10	0.52
9:AI:126:VAL:HG13	9:AI:131:THR:OG1	2.10	0.52
9:AI:187:ARG:CD	28:s:44:TRP:CB	2.88	0.52
9:AI:307:ASN:ND2	9:AI:311:LYS:HB2	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:372:HIS:HD2	12:AL:1279:A:C5	2.28	0.52
12:AL:111:A:H61	12:AL:336:U:H5	1.56	0.52
12:AL:396:C:OP1	31:v:16:LYS:HA	2.10	0.52
12:AL:784:A:C2	26:q:206:PHE:HE2	2.27	0.52
12:AL:875:U:H2'	12:AL:876:A:C8	2.44	0.52
12:AL:1503:U:H2'	12:AL:1504:A:C8	2.45	0.52
12:AL:1627:U:H5	15:Z:16:LEU:HA	1.75	0.52
13:AM:33:U:H5	24:o:278:ARG:HD3	1.74	0.52
15:Z:95:ASP:C	17:h:329:ARG:HH22	2.18	0.52
17:h:180:PRO:HG3	17:h:379:ALA:HB2	1.90	0.52
17:h:329:ARG:O	17:h:332:LEU:N	2.43	0.52
21:l:32:ILE:HD13	21:l:71:PHE:CB	2.40	0.52
24:o:151:PHE:HB2	24:o:153:ARG:NE	2.19	0.52
24:o:262:LYS:HG2	24:o:268:LYS:O	2.10	0.52
26:q:205:LYS:NZ	26:q:211:SER:OG	2.40	0.52
30:u:187:ASN:O	30:u:188:MET:C	2.53	0.52
34:y:55:ASN:ND2	34:y:77:ALA:HB1	2.24	0.52
37:1:283:ASN:ND2	63:R:143:GLU:CD	2.66	0.52
41:5:329:ARG:O	53:H:139:ASN:CB	2.57	0.52
46:A:542:A:N6	63:R:148:SER:O	2.42	0.52
46:A:922:A:O2'	46:A:923:U:H5'	2.09	0.52
46:A:1583:G:N2	46:A:1585:G:H3'	2.25	0.52
46:A:1609:U:H2'	46:A:1610:A:H8	1.75	0.52
46:A:1747:C:C4	46:A:1748:A:C5	2.98	0.52
46:A:1790:A:H2'	46:A:1791:A:O4'	2.10	0.52
46:A:2258:C:H2'	46:A:2259:U:C6	2.45	0.52
46:A:2885:G:H4'	48:C:213:ARG:HD2	1.92	0.52
46:A:2911:U:O2'	46:A:3069:A:N7	2.43	0.52
48:C:31:ILE:HD13	53:H:140:ILE:HD13	1.92	0.52
63:R:272:GLU:O	63:R:273:GLN:C	2.51	0.52
63:R:279:LYS:O	63:R:283:LEU:HD13	2.10	0.52
63:R:294:THR:H	63:R:297:ASP:CG	2.16	0.52
63:R:301:ILE:HA	63:R:304:LEU:HD12	1.92	0.52
3:AC:136:LYS:O	3:AC:139:MET:HB2	2.10	0.52
4:AD:123:ASN:HD22	16:g:105:ASN:HB3	0.69	0.52
4:AD:136:GLU:O	4:AD:139:GLN:HB3	2.10	0.52
4:AD:209:ASN:HA	16:g:222:ILE:HD13	1.90	0.52
4:AD:281:LEU:O	4:AD:282:THR:C	2.53	0.52
5:AE:139:PRO:HB2	5:AE:183:HIS:CG	2.45	0.52
5:AE:171:LEU:O	5:AE:174:GLN:HG3	2.10	0.52
8:AH:156:LEU:HD11	23:n:48:LEU:HB3	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:199:LEU:HD23	30:u:93:TYR:HH	1.74	0.52
10:AJ:41:GLY:C	10:AJ:43:SER:H	2.17	0.52
11:AK:107:LEU:HD22	18:i:172:TYR:CD1	2.45	0.52
11:AK:239:ASP:CG	12:AL:1290:A:H61	2.18	0.52
11:AK:292:TYR:HD2	24:o:212:PHE:CZ	2.28	0.52
12:AL:73:A:N6	12:AL:100:A:C2	2.78	0.52
12:AL:93:A:H4'	12:AL:214:A:P	2.50	0.52
12:AL:111:A:H2'	12:AL:112:C:H6	1.73	0.52
12:AL:491:U:H3	12:AL:498:A:N6	2.08	0.52
12:AL:644:G:N1	14:AN:2:U:H2'	2.23	0.52
12:AL:644:G:C5	14:AN:2:U:C5	2.97	0.52
12:AL:723:A:H2'	12:AL:724:U:H6	1.75	0.52
12:AL:1045:C:O2	29:t:73:GLN:CA	2.50	0.52
12:AL:1071:A:H2'	12:AL:1071:A:N3	2.25	0.52
12:AL:1513:A:H61	12:AL:1550:U:H3	1.56	0.52
17:h:249:LEU:HD13	17:h:275:TRP:HE3	1.75	0.52
19:j:22:LYS:HA	19:j:25:LEU:HB3	1.92	0.52
19:j:157:VAL:HG21	19:j:448:CYS:HB3	1.92	0.52
20:k:295:LYS:HD2	23:n:42:GLN:C	2.35	0.52
31:v:50:VAL:HG13	31:v:61:PRO:HA	1.92	0.52
35:z:128:ASN:O	35:z:129:ILE:C	2.53	0.52
37:1:361:VAL:HG21	63:R:144:GLU:CG	2.39	0.52
39:3:89:GLU:HB3	62:Q:202:ILE:HD13	1.92	0.52
46:A:29:A:H5"	71:a:103:GLY:HA2	1.92	0.52
46:A:753:A:H2'	46:A:754:A:H8	1.75	0.52
46:A:791:U:H2'	46:A:792:U:C6	2.45	0.52
46:A:1089:A:H2'	46:A:1090:U:C6	2.45	0.52
46:A:1089:A:H2'	46:A:1090:U:H6	1.75	0.52
46:A:1148:A:H2'	46:A:1149:U:C6	2.44	0.52
46:A:1262:A:H2'	46:A:1263:A:C8	2.45	0.52
46:A:1291:U:H4'	49:D:125:HIS:CE1	2.45	0.52
46:A:1355:G:O2'	46:A:1406:A:N1	2.43	0.52
46:A:1542:U:H2'	46:A:1543:A:H8	1.73	0.52
46:A:1676:U:H2'	46:A:1677:A:C8	2.45	0.52
46:A:2445:G:H2'	46:A:2446:U:H6	1.75	0.52
46:A:2470:A:H2'	46:A:2471:A:O4'	2.10	0.52
46:A:2886:C:H5'	48:C:214:VAL:O	2.09	0.52
46:A:2942:A:O2'	46:A:2943:U:H5'	2.10	0.52
46:A:3087:A:H3'	46:A:3088:C:C6	2.45	0.52
63:R:196:SER:HA	63:R:199:ILE:HG12	1.92	0.52
63:R:200:ARG:O	63:R:203:ALA:HB3	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:R:222:LEU:HB3	63:R:247:ILE:HD13	1.91	0.52
76:f:132:ARG:HD2	76:f:133:HIS:CE1	2.45	0.52
3:AC:32:SER:O	3:AC:33:GLY:C	2.52	0.51
3:AC:122:LYS:HB3	3:AC:163:LEU:HD12	1.92	0.51
3:AC:266:LYS:C	17:h:129:TYR:CB	2.82	0.51
4:AD:28:LEU:O	4:AD:29:LYS:C	2.52	0.51
6:AF:166:LEU:HD23	6:AF:171:VAL:HG23	1.92	0.51
8:AH:162:GLN:NE2	23:n:60:PHE:CE2	2.77	0.51
8:AH:180:ARG:CD	8:AH:184:ARG:HH11	2.23	0.51
10:AJ:19:PHE:O	10:AJ:21:GLN:HG3	2.10	0.51
10:AJ:19:PHE:HE1	11:AK:226:ARG:HH11	1.41	0.51
10:AJ:47:TYR:OH	12:AL:1291:U:C5	2.61	0.51
11:AK:149:ARG:CD	20:k:70:ASP:C	2.83	0.51
12:AL:271:U:OP1	32:w:68:LYS:CA	2.58	0.51
12:AL:700:U:P	23:n:1:MET:CE	2.94	0.51
12:AL:1436:U:C3'	25:p:87:THR:HG21	2.40	0.51
16:g:221:VAL:CG2	16:g:224:ARG:HD3	2.40	0.51
17:h:290:TRP:CG	24:o:49:PRO:HG3	2.44	0.51
17:h:294:GLU:HA	24:o:36:ARG:O	2.10	0.51
17:h:295:ILE:HG21	24:o:36:ARG:NH2	2.24	0.51
19:j:95:LEU:HG	19:j:471:VAL:HG22	1.91	0.51
25:p:36:ILE:HG23	25:p:114:TRP:HB3	1.92	0.51
26:q:97:ASP:OD1	26:q:99:ASN:HB2	2.10	0.51
30:u:107:SER:O	30:u:111:GLU:HG2	2.10	0.51
32:w:65:PRO:HA	32:w:71:PHE:HD1	1.75	0.51
46:A:8:G:H2'	46:A:9:U:O4'	2.10	0.51
46:A:56:U:H2'	46:A:57:C:C6	2.44	0.51
46:A:164:U:H4'	46:A:165:A:OP2	2.10	0.51
46:A:336:A:OP1	64:S:120:ALA:HB3	2.09	0.51
46:A:566:U:H2'	46:A:567:U:C6	2.45	0.51
46:A:582:C:H5"	49:D:122:PRO:HD2	1.91	0.51
46:A:992:U:O4	76:f:13:ILE:HD11	2.08	0.51
46:A:1038:U:H2'	46:A:1039:A:O4'	2.10	0.51
46:A:1295:A:C6	46:A:1296:U:C4	2.98	0.51
46:A:1316:U:O2'	46:A:1317:A:H5'	2.10	0.51
46:A:1316:U:C6	68:W:173:LEU:HB3	2.45	0.51
46:A:1425:U:H3	46:A:1528:G:H1	1.58	0.51
46:A:1645:U:H3'	46:A:1646:A:H8	1.74	0.51
46:A:1692:A:O2'	46:A:1693:A:H2'	2.09	0.51
46:A:2086:U:H2'	46:A:2087:A:H8	1.71	0.51
46:A:2717:A:O2'	46:A:2718:C:O5'	2.27	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2953:G:H2'	46:A:2954:U:C6	2.44	0.51
46:A:3008:U:H2'	46:A:3009:A:C8	2.44	0.51
48:C:86:GLU:HB2	58:M:40:ILE:HD13	1.92	0.51
59:N:111:THR:HA	59:N:114:TYR:CE2	2.45	0.51
61:P:66:THR:HG21	74:d:197:GLY:HA2	1.92	0.51
63:R:257:SER:O	63:R:259:SER:N	2.40	0.51
63:R:272:GLU:HA	63:R:275:LYS:CB	2.39	0.51
75:e:96:LYS:HD3	75:e:96:LYS:H	1.75	0.51
75:e:203:MET:SD	75:e:203:MET:N	2.82	0.51
76:f:40:CYS:O	76:f:44:ASN:HB2	2.10	0.51
4:AD:149:LEU:HA	4:AD:152:PHE:HB3	1.92	0.51
4:AD:238:GLU:O	4:AD:239:ASP:C	2.53	0.51
5:AE:144:LYS:HB2	5:AE:147:THR:HG22	1.92	0.51
5:AE:264:GLY:C	5:AE:266:GLU:H	2.19	0.51
8:AH:147:LYS:O	8:AH:148:SER:C	2.53	0.51
9:AI:286:PRO:HB3	9:AI:338:GLU:CB	2.40	0.51
12:AL:326:C:O2'	12:AL:327:U:H5'	2.10	0.51
12:AL:541:U:C4	12:AL:542:A:C6	2.99	0.51
12:AL:675:U:C5	20:k:263:TYR:OH	2.63	0.51
12:AL:695:A:C6	12:AL:696:U:C4	2.98	0.51
12:AL:1038:G:O3'	29:t:95:ARG:NH1	2.44	0.51
12:AL:1116:U:O4	12:AL:1141:G:N1	2.43	0.51
12:AL:1283:U:H2'	12:AL:1284:A:H5"	1.92	0.51
12:AL:1311:A:C2	12:AL:1312:U:C5	2.98	0.51
13:AM:25:C:H2'	13:AM:26:A:O4'	2.10	0.51
17:h:152:ASN:HA	17:h:155:MET:HE3	1.93	0.51
18:i:100:TYR:HE2	25:p:139:LYS:HB2	1.74	0.51
18:i:114:LEU:HD21	29:t:15:GLY:HA2	1.92	0.51
18:i:173:MET:SD	20:k:91:ARG:CB	2.99	0.51
19:j:45:LYS:HA	19:j:476:ARG:HB3	1.93	0.51
22:m:203:ARG:HB3	22:m:211:ARG:CD	2.40	0.51
23:n:19:VAL:HG23	23:n:21:VAL:HG23	1.90	0.51
30:u:74:PRO:CG	32:w:100:GLU:HB3	2.40	0.51
30:u:201:ASN:HA	30:u:204:ASN:ND2	2.25	0.51
32:w:76:GLU:OE1	32:w:78:ILE:HB	2.11	0.51
34:y:44:PRO:HA	34:y:47:VAL:HG13	1.92	0.51
46:A:123:A:H2'	46:A:124:U:C6	2.45	0.51
46:A:888:G:N2	56:K:128:MET:HE2	2.25	0.51
46:A:962:A:H2'	46:A:963:A:C8	2.45	0.51
46:A:1351:A:C4	46:A:1555:A:C8	2.98	0.51
46:A:1720:U:H2'	46:A:1721:U:C6	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1916:U:O5'	46:A:1916:U:H6	1.94	0.51
46:A:2381:G:N1	46:A:2382:A:C5	2.78	0.51
46:A:2640:A:H2'	46:A:2641:C:H6	1.70	0.51
46:A:3235:U:O2'	46:A:3236:A:H5'	2.10	0.51
46:A:3268:A:C6	46:A:3269:U:C4	2.98	0.51
46:A:3290:A:C5	46:A:3291:U:C2	2.98	0.51
56:K:97:ILE:HG21	56:K:109:LEU:HD13	1.92	0.51
63:R:293:GLU:N	63:R:297:ASP:OD1	2.43	0.51
75:e:87:ILE:HG12	75:e:142:TYR:CD1	2.45	0.51
3:AC:232:LEU:CD2	4:AD:278:LYS:N	2.73	0.51
4:AD:260:PHE:CD1	16:g:223:GLN:NE2	2.77	0.51
6:AF:34:TYR:CE2	12:AL:496:A:H1'	2.46	0.51
7:AG:33:VAL:HG13	17:h:357:TYR:CZ	2.41	0.51
8:AH:79:VAL:HB	8:AH:104:ARG:HB3	1.92	0.51
9:AI:261:VAL:HG12	9:AI:262:MET:N	2.25	0.51
9:AI:265:PRO:O	9:AI:267:ASN:N	2.39	0.51
10:AJ:56:PHE:HD1	10:AJ:57:ARG:HG3	1.76	0.51
11:AK:73:MET:HE1	18:i:173:MET:H	1.75	0.51
12:AL:273:A:C2'	12:AL:274:A:H5'	2.40	0.51
12:AL:418:A:H2'	12:AL:419:U:C6	2.46	0.51
12:AL:420:A:C5	19:j:180:VAL:HG11	2.45	0.51
12:AL:536:U:H2'	12:AL:537:A:N7	2.25	0.51
12:AL:1027:C:C2	12:AL:1028:G:C8	2.98	0.51
12:AL:1103:U:O3'	18:i:342:THR:CG2	2.59	0.51
12:AL:1647:A:C8	12:AL:1648:C:H1'	2.45	0.51
16:g:226:VAL:HG11	16:g:298:LEU:HD11	1.92	0.51
17:h:302:THR:OG1	24:o:35:ARG:HD3	2.10	0.51
18:i:348:LEU:H	18:i:348:LEU:HD22	1.74	0.51
20:k:249:ILE:HD11	20:k:272:ALA:HA	1.91	0.51
22:m:226:ALA:O	22:m:229:LYS:HB2	2.10	0.51
30:u:87:LEU:HG	32:w:114:ARG:HH12	1.74	0.51
31:v:90:LEU:HD12	31:v:95:ILE:HD12	1.93	0.51
37:1:109:GLU:CB	37:1:138:VAL:HG21	2.37	0.51
46:A:101:A:H2'	46:A:102:A:H8	1.75	0.51
46:A:396:A:H2'	46:A:397:A:C8	2.44	0.51
46:A:723:U:O3'	55:J:102:VAL:HG11	2.10	0.51
46:A:772:A:H2'	46:A:773:U:H6	1.76	0.51
46:A:790:A:C5	46:A:791:U:C4	2.98	0.51
46:A:866:G:H8	46:A:866:G:H5"	1.74	0.51
46:A:1171:A:H2'	46:A:1172:C:H6	1.75	0.51
46:A:2069:U:O5'	46:A:2069:U:H6	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2093:A:C2	52:G:29:ARG:NH2	2.78	0.51
46:A:2327:A:H2'	46:A:2328:A:O4'	2.10	0.51
46:A:2942:A:H2'	46:A:2943:U:H6	1.75	0.51
47:B:265:PHE:O	47:B:266:CYS:C	2.53	0.51
63:R:272:GLU:HG2	63:R:276:GLN:OE1	2.10	0.51
66:U:12:LEU:HD11	66:U:23:VAL:HG11	1.91	0.51
75:e:66:MET:SD	75:e:150:VAL:HB	2.51	0.51
1:AA:78:ASP:HB3	1:AA:81:MET:HE3	1.92	0.51
2:AB:86:TYR:O	2:AB:89:LYS:N	2.39	0.51
4:AD:31:LEU:HD11	4:AD:100:CYS:H	1.76	0.51
5:AE:45:LYS:O	5:AE:48:LEU:HB2	2.10	0.51
7:AG:70:ASN:O	7:AG:71:ASN:C	2.52	0.51
8:AH:42:LYS:HE3	8:AH:49:TYR:CZ	2.46	0.51
8:AH:156:LEU:CD1	23:n:48:LEU:HB3	2.40	0.51
8:AH:202:LEU:CD1	21:l:105:LEU:HB3	2.32	0.51
9:AI:59:ASN:O	9:AI:62:ASN:N	2.42	0.51
9:AI:403:ILE:HG21	9:AI:425:LEU:HD21	1.92	0.51
10:AJ:4:PRO:HG2	10:AJ:7:ARG:CG	2.41	0.51
10:AJ:57:ARG:CD	12:AL:1061:U:C5'	2.74	0.51
12:AL:492:G:N2	12:AL:498:A:C4	2.79	0.51
12:AL:752:A:N1	12:AL:766:A:O2'	2.41	0.51
12:AL:1412:C:H5"	24:o:270:ARG:O	2.10	0.51
12:AL:1417:A:H1'	12:AL:1443:A:N6	2.26	0.51
15:Z:28:ASN:O	15:Z:31:LEU:N	2.44	0.51
18:i:211:SER:O	18:i:212:TYR:CE2	2.57	0.51
20:k:289:VAL:CG1	23:n:124:GLY:HA3	2.40	0.51
25:p:91:SER:O	29:t:96:TYR:CE2	2.64	0.51
25:p:124:LEU:O	25:p:128:ILE:HB	2.11	0.51
30:u:66:PRO:HG2	30:u:245:PHE:CD1	2.44	0.51
30:u:230:THR:O	30:u:233:LYS:HB3	2.10	0.51
41:5:139:ALA:CB	61:P:249:ALA:HB1	2.41	0.51
46:A:110:A:H2'	46:A:111:G:C8	2.45	0.51
46:A:177:A:C2	46:A:201:A:H2	2.29	0.51
46:A:376:A:H2'	46:A:377:U:C6	2.46	0.51
46:A:478:G:C8	46:A:1917:U:C4	2.98	0.51
46:A:1411:A:N7	61:P:58:VAL:CG2	2.74	0.51
46:A:1609:U:H5'	48:C:201:HIS:NE2	2.25	0.51
46:A:1686:U:OP2	46:A:1691:A:N6	2.42	0.51
46:A:1706:G:H5"	46:A:1709:G:H1'	1.92	0.51
46:A:1901:U:C2	46:A:1902:U:C5	2.99	0.51
46:A:2327:A:N3	63:R:327:SER:HB3	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2473:U:C2	46:A:2474:U:C5	2.98	0.51
46:A:2631:G:OP1	63:R:81:LYS:HE3	2.09	0.51
46:A:3244:A:H2'	46:A:3245:A:O4'	2.11	0.51
50:E:251:ALA:HB1	67:V:63:TYR:CE1	2.44	0.51
63:R:213:ASP:O	63:R:216:PHE:HB3	2.10	0.51
65:T:147:THR:HA	65:T:150:TRP:CD1	2.46	0.51
75:e:199:SER:O	75:e:200:VAL:C	2.53	0.51
2:AB:41:VAL:CG2	2:AB:63:TRP:HA	2.39	0.51
2:AB:90:GLN:HB3	2:AB:100:ILE:HG21	1.93	0.51
4:AD:20:GLU:O	4:AD:23:LYS:HG3	2.10	0.51
4:AD:288:GLY:O	4:AD:289:LYS:C	2.53	0.51
5:AE:267:LEU:HD22	5:AE:267:LEU:H	1.75	0.51
5:AE:280:ILE:O	5:AE:284:LEU:HD23	2.10	0.51
5:AE:306:ASN:H	5:AE:306:ASN:HD22	1.59	0.51
7:AG:156:LEU:HD23	7:AG:161:GLN:HB2	1.92	0.51
7:AG:170:ASP:HA	7:AG:173:ARG:HB2	1.93	0.51
8:AH:223:VAL:CG1	21:l:44:PRO:HG3	1.97	0.51
9:AI:434:GLY:HA2	24:o:183:LEU:HB3	1.92	0.51
9:AI:440:GLU:OE2	24:o:193:ARG:NH1	2.38	0.51
11:AK:87:LEU:HD11	11:AK:105:LYS:HA	1.93	0.51
12:AL:34:G:C5'	19:j:486:LYS:HG3	2.39	0.51
12:AL:269:A:H2'	12:AL:271:U:H5	1.75	0.51
12:AL:340:C:C4'	12:AL:1502:U:H4'	2.40	0.51
12:AL:541:U:C4	12:AL:542:A:N6	2.78	0.51
12:AL:632:C:C5'	12:AL:633:C:H6	2.24	0.51
12:AL:695:A:N6	12:AL:820:A:H61	2.09	0.51
12:AL:808:A:H8	12:AL:808:A:O5'	1.93	0.51
12:AL:862:C:OP1	26:q:215:ARG:HG2	2.09	0.51
12:AL:873:A:H2'	12:AL:874:G:O4'	2.10	0.51
12:AL:940:U:H4'	23:n:18:LYS:HZ1	1.75	0.51
12:AL:1035:C:H5"	12:AL:1037:C:O4'	2.10	0.51
12:AL:1100:A:H5"	12:AL:1232:C:H41	1.75	0.51
26:q:137:ALA:C	26:q:139:GLY:N	2.67	0.51
28:s:94:THR:HG22	28:s:117:ILE:HD11	1.92	0.51
28:s:98:PRO:HB3	28:s:102:GLN:HG3	1.92	0.51
28:s:98:PRO:CG	28:s:104:THR:HG22	2.31	0.51
37:1:121:PHE:HE2	38:2:67:ILE:HD11	1.75	0.51
46:A:51:G:H2'	46:A:52:A:C8	2.46	0.51
46:A:149:A:N7	46:A:1371:A:C6	2.79	0.51
46:A:292:G:P	55:J:105:TRP:HZ2	2.32	0.51
46:A:340:A:N1	46:A:341:A:N6	2.58	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:437:A:H2'	46:A:438:U:C6	2.45	0.51
46:A:456:U:H2'	46:A:457:G:C8	2.46	0.51
46:A:524:A:OP2	55:J:175:LYS:NZ	2.42	0.51
46:A:671:G:H2'	46:A:673:A:N7	2.25	0.51
46:A:1027:G:C2	46:A:1029:A:H1'	2.46	0.51
46:A:1552:C:H2'	46:A:1553:G:C8	2.45	0.51
46:A:1818:G:H21	46:A:1819:A:H62	1.58	0.51
46:A:1989:U:O2	52:G:14:LYS:HD2	2.10	0.51
56:K:229:PHE:CD2	63:R:122:PHE:HZ	2.28	0.51
64:S:227:TYR:O	64:S:228:LYS:C	2.54	0.51
4:AD:249:THR:HG23	4:AD:253:TYR:HB3	1.92	0.51
6:AF:167:SER:HB3	6:AF:170:GLN:HB2	1.93	0.51
9:AI:72:THR:O	9:AI:73:ALA:C	2.54	0.51
9:AI:193:ASP:C	9:AI:195:ASP:H	2.18	0.51
9:AI:348:VAL:HG11	12:AL:1333:U:H4'	1.92	0.51
9:AI:373:TYR:CE1	9:AI:378:VAL:HG21	2.46	0.51
9:AI:425:LEU:O	9:AI:426:ILE:C	2.54	0.51
12:AL:85:G:H3'	12:AL:91:A:N6	2.25	0.51
12:AL:196:A:H2'	12:AL:197:A:C8	2.46	0.51
12:AL:724:U:H2'	12:AL:725:A:H8	1.76	0.51
12:AL:1014:A:OP2	28:s:103:HIS:HB2	2.10	0.51
18:i:232:TYR:O	18:i:233:ASN:C	2.53	0.51
19:j:56:HIS:HB3	19:j:98:PHE:CD2	2.46	0.51
27:r:72:LYS:HA	27:r:74:ASN:N	2.26	0.51
39:3:32:GLY:HA3	46:A:1342:U:O2	2.11	0.51
41:5:198:HIS:HB2	46:A:445:U:H5'	1.93	0.51
46:A:20:A:H2'	46:A:21:U:C6	2.45	0.51
46:A:50:A:H2'	46:A:51:G:H8	1.75	0.51
46:A:141:U:H2'	46:A:142:A:H8	1.75	0.51
46:A:253:A:H5'	64:S:31:LYS:O	2.10	0.51
46:A:604:G:C6	46:A:659:G:C5	2.99	0.51
46:A:746:A:C6	46:A:778:A:C8	2.98	0.51
46:A:794:A:H2'	46:A:795:U:H6	1.75	0.51
46:A:964:A:H2'	46:A:965:U:H6	1.74	0.51
46:A:1025:A:H2'	46:A:1025:A:N3	2.25	0.51
46:A:1349:A:H2'	46:A:1349:A:N3	2.26	0.51
46:A:1632:A:C5	46:A:1670:A:C6	2.99	0.51
46:A:1645:U:H3'	46:A:1646:A:C8	2.46	0.51
46:A:1696:A:H2'	46:A:1697:C:O4'	2.11	0.51
46:A:1886:A:O2'	46:A:1887:C:H5'	2.11	0.51
46:A:1932:G:C2	48:C:209:GLN:HG2	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2022:U:O2	46:A:2022:U:H2'	2.10	0.51
46:A:2087:A:C2	46:A:2088:A:C5	2.98	0.51
46:A:2981:U:H2'	46:A:2982:U:H5	1.76	0.51
46:A:3004:A:H2'	46:A:3005:A:H8	1.74	0.51
63:R:199:ILE:HG13	63:R:200:ARG:N	2.25	0.51
75:e:54:ILE:CG1	75:e:105:TYR:CB	2.68	0.51
3:AC:31:SER:HA	3:AC:34:PHE:HE1	1.74	0.51
6:AF:32:ILE:H	6:AF:32:ILE:HD13	1.75	0.51
6:AF:93:GLU:O	6:AF:95:GLY:N	2.43	0.51
6:AF:131:ASP:O	6:AF:133:LEU:N	2.44	0.51
7:AG:3:ILE:CD1	23:n:20:ARG:CZ	2.88	0.51
7:AG:21:GLY:O	20:k:136:ASP:HB3	2.11	0.51
8:AH:201:ASN:O	21:l:121:LEU:HD22	2.10	0.51
8:AH:208:GLU:HA	30:u:134:ARG:HD3	1.92	0.51
11:AK:97:SER:HB2	18:i:171:TYR:HH	1.73	0.51
11:AK:119:LYS:HB3	11:AK:122:ASN:HB2	1.93	0.51
11:AK:292:TYR:CD2	24:o:180:GLY:N	2.79	0.51
12:AL:147:A:N6	12:AL:225:U:H3	2.05	0.51
12:AL:530:A:C6	12:AL:532:U:H1'	2.46	0.51
12:AL:988:A:O2'	12:AL:1467:U:OP2	2.28	0.51
12:AL:1181:A:N3	25:p:78:PRO:HG2	2.26	0.51
12:AL:1494:U:H2'	12:AL:1495:U:C6	2.46	0.51
18:i:93:TRP:CD1	29:t:108:PRO:HA	2.45	0.51
18:i:253:ASP:HB3	18:i:325:VAL:HG11	1.92	0.51
20:k:79:HIS:CE1	25:p:132:SER:O	2.64	0.51
20:k:217:TYR:CE2	20:k:285:THR:HG22	2.45	0.51
22:m:90:PRO:HG3	24:o:241:LEU:CD1	2.26	0.51
25:p:64:ARG:O	25:p:65:THR:C	2.54	0.51
26:q:68:LYS:O	26:q:69:PRO:C	2.52	0.51
28:s:84:LYS:CE	34:y:67:ASP:OD2	2.52	0.51
30:u:276:LYS:HA	30:u:279:ARG:HH21	1.76	0.51
46:A:86:U:O2'	46:A:87:U:H5'	2.10	0.51
46:A:93:U:H5'	46:A:94:A:H5"	1.93	0.51
46:A:261:A:C8	46:A:307:G:O6	2.63	0.51
46:A:982:U:H4'	46:A:983:U:O5'	2.11	0.51
46:A:1435:A:H2'	46:A:1436:U:C5	2.45	0.51
46:A:1610:A:OP1	48:C:199:HIS:NE2	2.42	0.51
46:A:1706:G:N2	47:B:265:PHE:HD1	2.09	0.51
46:A:1728:U:C4	47:B:270:GLY:CA	2.85	0.51
46:A:1750:G:H2'	46:A:1751:C:H6	1.74	0.51
46:A:1809:C:H2'	46:A:1810:C:H6	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2000:A:H2'	46:A:2001:U:C6	2.45	0.51
46:A:2006:U:H2'	46:A:2007:A:H8	1.72	0.51
46:A:2019:A:N7	46:A:2061:U:C2	2.79	0.51
46:A:2072:U:C6	46:A:2072:U:H3'	2.45	0.51
46:A:2474:U:C2	46:A:2475:U:C5	2.99	0.51
46:A:2869:A:C2	46:A:2870:G:H4'	2.46	0.51
46:A:3118:U:C2	46:A:3119:A:C8	2.98	0.51
1:AA:92:LYS:HE2	12:AL:956:U:C5'	2.41	0.51
3:AC:29:LEU:HD13	3:AC:33:GLY:HA3	1.92	0.51
5:AE:322:LEU:O	5:AE:323:GLY:C	2.54	0.51
6:AF:58:MET:CB	19:j:11:LEU:HD13	2.41	0.51
7:AG:147:GLU:OE2	16:g:14:GLN:CB	2.57	0.51
8:AH:195:LYS:HB3	30:u:93:TYR:HE1	1.76	0.51
11:AK:150:GLU:HA	20:k:71:TYR:CZ	2.46	0.51
11:AK:199:LYS:NZ	12:AL:1317:U:P	2.83	0.51
12:AL:57:G:O6	12:AL:365:G:H4'	2.11	0.51
12:AL:70:C:H4'	12:AL:384:G:H4'	1.93	0.51
12:AL:100:A:C2	12:AL:104:G:C6	2.99	0.51
12:AL:613:G:O2'	12:AL:614:U:H5'	2.11	0.51
12:AL:750:G:C2	12:AL:751:U:C4	2.99	0.51
12:AL:789:A:N6	12:AL:798:U:H2'	2.26	0.51
12:AL:830:U:C4	12:AL:877:G:C4	2.99	0.51
12:AL:1213:G:N7	24:o:247:HIS:HE1	2.09	0.51
12:AL:1286:A:H2'	12:AL:1287:A:O4'	2.10	0.51
12:AL:1377:A:C4'	28:s:75:VAL:HG13	2.41	0.51
12:AL:1560:U:OP2	30:u:36:LYS:NZ	2.43	0.51
12:AL:1612:C:H6	12:AL:1612:C:H5"	1.76	0.51
18:i:228:ASP:HB2	18:i:232:TYR:CE2	2.46	0.51
19:j:386:ILE:HG22	19:j:387:LYS:H	1.76	0.51
28:s:80:ALA:O	28:s:84:LYS:N	2.38	0.51
32:w:232:MET:SD	32:w:232:MET:N	2.84	0.51
33:x:87:ALA:O	33:x:88:ASN:C	2.53	0.51
46:A:387:A:C4	46:A:403:A:C2	2.99	0.51
46:A:388:A:C5	46:A:403:A:N6	2.79	0.51
46:A:1064:A:C6	46:A:1085:G:N2	2.79	0.51
46:A:1110:A:N6	51:F:42:ILE:HD11	2.26	0.51
46:A:1244:A:O2'	46:A:1245:U:H5'	2.11	0.51
46:A:1520:C:O2'	46:A:1521:U:H5'	2.11	0.51
46:A:2024:A:H8	46:A:2024:A:O5'	1.93	0.51
46:A:2026:G:N3	46:A:2026:G:H2'	2.25	0.51
46:A:2032:C:O5'	46:A:2032:C:H6	1.93	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2070:U:C4	46:A:2071:A:C4	2.99	0.51
46:A:2276:G:C2	56:K:128:MET:HG3	2.37	0.51
46:A:2351:A:H2'	46:A:2352:A:C8	2.45	0.51
46:A:2451:U:H2'	46:A:2452:U:C6	2.44	0.51
46:A:2685:A:C6	46:A:2686:U:C4	2.99	0.51
46:A:2935:A:H2'	46:A:2936:U:H6	1.76	0.51
46:A:3268:A:H2'	46:A:3269:U:H6	1.74	0.51
3:AC:219:MET:HG2	17:h:149:ARG:NH2	2.26	0.51
4:AD:38:GLN:HB3	4:AD:43:ASP:CG	2.36	0.51
4:AD:123:ASN:CB	16:g:105:ASN:HA	2.24	0.51
5:AE:102:LEU:O	5:AE:105:PHE:HB3	2.10	0.51
5:AE:279:LEU:HD21	5:AE:314:PRO:HG2	1.93	0.51
6:AF:52:THR:HG23	12:AL:498:A:C5'	2.39	0.51
7:AG:68:HIS:O	7:AG:69:ALA:C	2.52	0.51
7:AG:91:LEU:HD11	23:n:74:TRP:CH2	2.44	0.51
8:AH:130:LYS:HG3	8:AH:134:LYS:HE3	1.92	0.51
9:AI:265:PRO:C	9:AI:267:ASN:H	2.19	0.51
9:AI:328:ILE:HD13	9:AI:343:LEU:HD13	1.93	0.51
9:AI:357:VAL:HG22	9:AI:362:ILE:HG23	1.92	0.51
10:AJ:47:TYR:CE2	18:i:103:ASN:OD1	2.64	0.51
11:AK:75:ARG:HH11	18:i:187:MET:H	1.59	0.51
11:AK:127:ASN:O	11:AK:128:SER:C	2.54	0.51
11:AK:152:ARG:NH1	18:i:311:ILE:HD11	2.24	0.51
11:AK:286:ARG:CZ	12:AL:1323:A:OP1	2.58	0.51
12:AL:105:G:H2'	12:AL:106:U:C6	2.45	0.51
12:AL:279:A:O2'	12:AL:280:G:C8	2.64	0.51
12:AL:487:A:C3'	12:AL:488:A:H8	2.24	0.51
12:AL:510:U:H2'	12:AL:511:A:H8	1.76	0.51
12:AL:636:C:H1'	12:AL:650:C:C5'	2.41	0.51
12:AL:666:U:C2	12:AL:667:A:C8	2.99	0.51
12:AL:1295:A:H2'	12:AL:1296:A:C8	2.45	0.51
15:Z:95:ASP:C	17:h:329:ARG:NH2	2.69	0.51
21:l:6:ILE:CG2	33:x:135:ILE:HG22	2.39	0.51
22:m:113:THR:HG21	22:m:154:GLU:HG2	1.92	0.51
25:p:96:ALA:C	25:p:98:SER:H	2.19	0.51
30:u:133:ASP:O	30:u:134:ARG:C	2.53	0.51
32:w:77:ILE:C	32:w:79:ARG:H	2.19	0.51
37:1:122:ASN:C	46:A:2349:A:H1'	2.36	0.51
46:A:645:U:H2'	46:A:646:C:H6	1.76	0.51
46:A:659:G:H2'	46:A:660:U:H6	1.73	0.51
46:A:817:G:H3'	46:A:818:U:C6	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1748:A:H2'	46:A:1749:U:H6	1.75	0.51
46:A:2018:C:H5'	46:A:2019:A:P	2.51	0.51
46:A:2022:U:C4	46:A:2065:A:N3	2.79	0.51
46:A:2357:U:H4'	46:A:2358:A:OP1	2.11	0.51
46:A:2428:A:P	50:E:170:LYS:HZ1	2.29	0.51
46:A:2856:U:H2'	46:A:2857:A:C8	2.46	0.51
46:A:3129:A:H2'	46:A:3130:U:C6	2.44	0.51
46:A:3145:A:C5	46:A:3146:U:C4	2.99	0.51
46:A:3241:U:H2'	46:A:3242:A:H8	1.75	0.51
54:I:48:LYS:HG3	54:I:49:PRO:HD2	1.92	0.51
59:N:67:LEU:HD11	60:O:307:TYR:CD2	2.46	0.51
62:Q:133:LEU:HD12	62:Q:154:VAL:HG21	1.92	0.51
62:Q:246:LEU:HD13	64:S:38:TYR:CD2	2.46	0.51
62:Q:273:PRO:HB3	72:b:25:ILE:CD1	2.41	0.51
2:AB:50:ARG:NH2	2:AB:103:ILE:O	2.44	0.51
2:AB:82:GLN:CG	12:AL:376:C:P	2.99	0.51
3:AC:23:ASN:O	3:AC:31:SER:N	2.44	0.51
3:AC:166:LEU:HD21	3:AC:180:ASN:HB3	1.93	0.51
5:AE:259:PRO:HB2	5:AE:262:SER:HG	1.76	0.51
6:AF:61:PHE:CE1	19:j:29:TYR:CG	2.98	0.51
7:AG:18:LEU:HD21	7:AG:26:THR:HA	1.93	0.51
7:AG:72:LYS:O	7:AG:74:LEU:HB2	2.11	0.51
9:AI:227:SER:O	9:AI:228:LYS:HB3	2.11	0.51
9:AI:345:ILE:HG22	9:AI:346:SER:N	2.24	0.51
10:AJ:88:LYS:HE3	12:AL:1241:C:H5	1.76	0.51
12:AL:71:A:C5	12:AL:99:U:C5	2.99	0.51
12:AL:180:A:O2'	12:AL:182:A:O2'	2.23	0.51
12:AL:622:A:O2'	12:AL:623:A:H5'	2.10	0.51
12:AL:655:A:O2'	12:AL:656:G:H5'	2.11	0.51
12:AL:687:U:H6	12:AL:687:U:O5'	1.94	0.51
12:AL:1172:A:C6	25:p:39:GLY:CA	2.93	0.51
12:AL:1206:A:O2'	12:AL:1207:U:OP1	2.24	0.51
19:j:121:ALA:O	19:j:125:ILE:HG13	2.10	0.51
21:l:45:MET:HE2	21:l:67:PHE:C	2.36	0.51
28:s:73:ALA:HA	28:s:76:LYS:HB2	1.93	0.51
28:s:97:LEU:HD12	28:s:98:PRO:HD2	1.93	0.51
46:A:310:U:O4	46:A:363:C:H1'	2.12	0.51
46:A:315:A:C6	46:A:339:A:H5"	2.46	0.51
46:A:941:U:C2	46:A:942:A:C8	2.98	0.51
46:A:1060:U:C4	46:A:1061:U:C4	2.99	0.51
46:A:1413:A:C6	46:A:1546:G:C5	2.99	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1932:G:N1	48:C:209:GLN:HG2	2.26	0.51
46:A:2727:A:H2'	46:A:2728:U:C6	2.46	0.51
46:A:2851:U:H3'	46:A:2852:U:H5"	1.93	0.51
2:AB:113:GLY:HA3	2:AB:116:LYS:HD2	1.92	0.50
5:AE:215:TRP:C	5:AE:217:LYS:N	2.68	0.50
5:AE:227:LEU:CD1	5:AE:280:ILE:HG23	2.40	0.50
5:AE:271:LEU:HD13	5:AE:304:TYR:CE2	2.46	0.50
6:AF:58:MET:HE1	19:j:30:LYS:HB3	1.91	0.50
6:AF:62:LEU:CD2	19:j:26:PHE:CZ	2.93	0.50
6:AF:193:ASN:O	6:AF:197:ARG:HG2	2.11	0.50
6:AF:208:MET:CG	19:j:425:TRP:CH2	2.94	0.50
7:AG:124:GLU:OE2	17:h:189:MET:C	2.53	0.50
9:AI:285:VAL:C	9:AI:336:ASN:HD22	2.19	0.50
9:AI:289:PHE:CE2	9:AI:327:ILE:HD12	2.46	0.50
11:AK:97:SER:HB3	18:i:171:TYR:OH	2.11	0.50
12:AL:725:A:C6	12:AL:726:A:C6	2.98	0.50
12:AL:1064:U:O4	12:AL:1088:A:N1	2.43	0.50
12:AL:1071:A:C2	12:AL:1081:U:C5	2.99	0.50
12:AL:1134:A:C4	15:Z:83:ALA:HB1	2.46	0.50
12:AL:1135:G:H4'	15:Z:79:ASN:HB3	1.92	0.50
12:AL:1340:U:H5'	12:AL:1342:U:C6	2.45	0.50
12:AL:1634:C:C4	16:g:85:TRP:HZ3	2.30	0.50
15:Z:33:LEU:HD12	15:Z:61:CYS:SG	2.51	0.50
16:g:231:ILE:HG12	16:g:278:PHE:CZ	2.43	0.50
21:l:33:ILE:C	21:l:35:ASN:N	2.68	0.50
22:m:97:GLN:HE22	24:o:208:LYS:NZ	2.03	0.50
27:r:85:LEU:HD21	27:r:110:VAL:CG2	2.42	0.50
30:u:74:PRO:CB	32:w:100:GLU:HB3	2.40	0.50
30:u:188:MET:O	30:u:191:HIS:HB3	2.11	0.50
32:w:220:LYS:C	32:w:223:LEU:H	2.18	0.50
35:z:99:ARG:HH22	35:z:100:PHE:HD2	1.57	0.50
36:0:87:LYS:HZ1	46:A:2744:A:H8	1.59	0.50
43:7:75:ASN:HD21	55:J:140:TRP:HH2	1.59	0.50
46:A:65:A:H2'	46:A:66:U:C6	2.46	0.50
46:A:445:U:O4	46:A:446:A:N6	2.43	0.50
46:A:455:A:H3'	46:A:456:U:C6	2.46	0.50
46:A:740:A:C2	46:A:741:U:C6	3.00	0.50
46:A:827:U:C2	46:A:828:A:C8	3.00	0.50
46:A:931:U:H2'	46:A:932:C:H6	1.75	0.50
46:A:1541:U:H2'	46:A:1542:U:H6	1.71	0.50
46:A:1808:G:O2'	46:A:1809:C:H5'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1833:G:N2	46:A:1873:A:O2'	2.42	0.50
46:A:2088:A:C6	46:A:2089:U:C4	2.99	0.50
46:A:2870:G:H5'	46:A:2870:G:H8	1.75	0.50
47:B:134:ASN:O	47:B:135:ASN:C	2.51	0.50
63:R:179:VAL:HG13	63:R:183:GLU:OE2	2.11	0.50
63:R:240:LEU:O	63:R:241:SER:C	2.53	0.50
75:e:64:SER:HB2	75:e:143:GLU:HG2	1.92	0.50
75:e:94:LEU:HD21	75:e:138:ALA:HB1	1.92	0.50
2:AB:92:HIS:HD2	12:AL:524:A:C2	2.28	0.50
3:AC:185:LEU:CB	7:AG:196:MET:C	2.83	0.50
5:AE:62:LYS:C	5:AE:64:PHE:H	2.18	0.50
5:AE:189:ILE:CG2	5:AE:235:LEU:HD22	2.39	0.50
5:AE:259:PRO:C	5:AE:261:SER:N	2.65	0.50
5:AE:286:ASP:HB3	5:AE:315:TYR:OH	2.10	0.50
6:AF:212:LEU:HD12	19:j:445:PHE:HB3	1.81	0.50
7:AG:94:PRO:HG3	17:h:207:GLN:OE1	2.10	0.50
9:AI:134:PHE:HD2	9:AI:159:LEU:HD11	1.76	0.50
10:AJ:1:MET:HE1	11:AK:278:ARG:NH2	2.25	0.50
10:AJ:63:TYR:CD2	18:i:182:ILE:CG2	2.94	0.50
11:AK:51:TYR:HB3	11:AK:71:GLU:HB3	1.93	0.50
12:AL:71:A:H61	12:AL:100:A:H5'	1.75	0.50
12:AL:413:G:H2'	12:AL:501:U:C4	2.46	0.50
12:AL:500:A:H4'	12:AL:501:U:O5'	2.10	0.50
12:AL:540:A:C6	12:AL:541:U:C4	2.98	0.50
12:AL:899:U:C2'	12:AL:900:A:H8	2.18	0.50
12:AL:1044:C:N4	29:t:72:THR:HB	2.26	0.50
16:g:200:ILE:HD12	16:g:287:LYS:CG	2.20	0.50
18:i:98:TYR:CD2	25:p:48:ARG:O	2.64	0.50
21:l:124:VAL:O	21:l:128:TYR:N	2.43	0.50
22:m:101:LEU:O	22:m:103:SER:N	2.44	0.50
25:p:92:PRO:HA	29:t:96:TYR:CD2	2.45	0.50
26:q:97:ASP:OD2	26:q:99:ASN:HB2	2.11	0.50
31:v:21:TYR:CZ	31:v:45:PRO:HB3	2.47	0.50
31:v:40:LEU:HB3	31:v:67:LEU:HD12	1.93	0.50
35:z:129:ILE:N	35:z:130:PRO:HD2	2.27	0.50
35:z:135:SER:O	35:z:137:ARG:N	2.43	0.50
46:A:257:U:H2'	46:A:258:A:H8	1.76	0.50
46:A:397:A:H2'	46:A:398:G:O4'	2.11	0.50
46:A:456:U:O2'	53:H:50:SER:O	2.28	0.50
46:A:904:G:C2	46:A:912:C:C2	2.99	0.50
46:A:966:A:C6	46:A:967:U:C4	2.99	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1007:U:O2'	75:e:161:GLN:HG3	2.10	0.50
46:A:1414:U:H2'	46:A:1415:U:H6	1.76	0.50
46:A:1767:A:H8	46:A:1767:A:OP2	1.95	0.50
46:A:1777:C:H3'	46:A:1778:G:O4'	2.11	0.50
46:A:1841:C:H2'	46:A:1842:C:C6	2.47	0.50
46:A:2601:A:H3'	46:A:2603:C:H41	1.74	0.50
46:A:2744:A:C5	46:A:2796:G:C4	2.99	0.50
46:A:2837:U:H2'	46:A:2838:U:H6	1.75	0.50
46:A:3231:A:C6	46:A:3232:U:C4	2.99	0.50
63:R:53:GLU:C	63:R:55:GLN:N	2.70	0.50
63:R:134:LEU:HD12	63:R:140:ALA:HA	1.93	0.50
2:AB:44:PHE:O	2:AB:48:ILE:HG12	2.10	0.50
2:AB:49:GLY:HA3	2:AB:102:GLU:CG	2.40	0.50
3:AC:115:PRO:HD3	3:AC:253:TRP:CZ2	2.45	0.50
4:AD:209:ASN:C	4:AD:211:SER:N	2.69	0.50
5:AE:271:LEU:O	5:AE:272:SER:C	2.54	0.50
6:AF:58:MET:CE	19:j:30:LYS:HB3	2.41	0.50
6:AF:185:ILE:HG22	6:AF:189:VAL:HG23	1.94	0.50
8:AH:166:ARG:HD2	23:n:62:GLU:OE1	2.11	0.50
8:AH:208:GLU:CB	30:u:134:ARG:HH11	2.24	0.50
8:AH:229:GLU:OE2	21:l:43:VAL:CA	2.59	0.50
9:AI:236:ASN:OD1	9:AI:237:PRO:HD2	2.12	0.50
11:AK:143:GLU:CD	18:i:87:LEU:HD21	2.33	0.50
11:AK:174:ARG:NH1	25:p:40:ASP:OD2	2.43	0.50
12:AL:263:A:H2'	12:AL:264:U:C6	2.45	0.50
12:AL:513:A:H2'	12:AL:514:U:H5'	1.92	0.50
12:AL:534:A:H2'	12:AL:535:U:C6	2.46	0.50
12:AL:682:A:H2'	12:AL:683:A:C8	2.46	0.50
12:AL:746:A:C2'	12:AL:747:A:H5'	2.41	0.50
12:AL:1135:G:H5"	15:Z:17:LYS:HZ1	1.76	0.50
12:AL:1193:A:H2'	12:AL:1194:U:H6	1.75	0.50
15:Z:91:GLY:CA	16:g:71:LEU:HD22	2.42	0.50
16:g:71:LEU:CD2	17:h:201:LEU:CD2	2.84	0.50
18:i:218:ASP:HA	18:i:378:TYR:HB3	1.94	0.50
19:j:129:ASN:HB3	19:j:153:LYS:HB2	1.93	0.50
28:s:27:ILE:HG21	67:V:96:GLY:C	2.36	0.50
31:v:88:LYS:HA	31:v:91:ARG:HD3	1.93	0.50
32:w:58:VAL:HG11	32:w:74:ILE:HG12	1.93	0.50
33:x:93:TYR:HB3	33:x:131:ARG:HD2	1.93	0.50
33:x:129:ILE:HG23	33:x:138:MET:HE2	1.94	0.50
34:y:52:GLN:HB3	34:y:59:TYR:O	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:89:A:O2'	46:A:90:A:H5'	2.12	0.50
46:A:471:A:H5"	46:A:472:U:OP2	2.11	0.50
46:A:791:U:H2'	46:A:792:U:H6	1.76	0.50
46:A:939:A:H2'	46:A:940:A:C8	2.43	0.50
46:A:1139:G:C2	46:A:1140:A:C5	3.00	0.50
46:A:1242:A:H2'	46:A:1269:G:N1	2.26	0.50
46:A:1346:A:O2'	74:d:123:GLY:C	2.55	0.50
46:A:1401:G:C2	46:A:1402:G:C8	3.00	0.50
46:A:1500:U:H2'	46:A:1500:U:O2	2.12	0.50
46:A:1533:G:H4'	47:B:149:ARG:O	2.12	0.50
46:A:1577:U:H6	46:A:1577:U:H5"	1.76	0.50
46:A:1688:C:H41	70:Y:62:ARG:CG	2.24	0.50
46:A:1698:C:H4'	47:B:318:LEU:O	2.11	0.50
46:A:1793:U:H2'	46:A:1794:U:H6	1.76	0.50
46:A:2007:A:H61	46:A:2080:U:H3	1.58	0.50
46:A:2215:A:H2'	46:A:2216:U:C6	2.47	0.50
46:A:2237:A:H2'	46:A:2238:U:O4'	2.11	0.50
46:A:2327:A:C6	46:A:2333:A:C6	2.99	0.50
46:A:2673:A:H8	46:A:2673:A:H5'	1.76	0.50
46:A:2982:U:N3	46:A:3005:A:C2	2.80	0.50
46:A:3137:A:O2'	46:A:3138:U:H5'	2.11	0.50
63:R:214:ALA:O	63:R:215:ARG:C	2.54	0.50
69:X:31:ALA:HB3	69:X:55:ARG:CZ	2.41	0.50
5:AE:71:ALA:HA	5:AE:75:LEU:CD1	2.41	0.50
5:AE:255:LEU:CD1	5:AE:281:ALA:HB2	2.41	0.50
5:AE:326:GLU:O	5:AE:327:THR:C	2.54	0.50
6:AF:48:LYS:HD2	12:AL:489:A:C5	2.47	0.50
6:AF:189:VAL:HG12	6:AF:193:ASN:HD21	1.77	0.50
7:AG:114:TRP:HD1	16:g:205:GLY:O	1.88	0.50
7:AG:189:VAL:O	7:AG:190:ALA:C	2.54	0.50
9:AI:182:LEU:CD1	12:AL:1353:U:C5'	2.85	0.50
9:AI:307:ASN:CG	9:AI:308:THR:H	2.19	0.50
9:AI:407:LYS:O	9:AI:408:GLN:C	2.53	0.50
9:AI:412:LEU:HD22	9:AI:445:LEU:HD21	1.93	0.50
11:AK:134:PHE:HB3	20:k:105:ILE:C	2.36	0.50
12:AL:24:U:H2'	12:AL:25:G:H1'	1.92	0.50
12:AL:131:A:O2'	12:AL:132:A:H2'	2.11	0.50
12:AL:223:U:C4	12:AL:224:A:C8	2.99	0.50
12:AL:487:A:H2'	12:AL:488:A:C8	2.46	0.50
12:AL:516:A:H2'	12:AL:517:U:O4'	2.11	0.50
12:AL:613:G:H2'	12:AL:614:U:C6	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:727:A:C2	12:AL:728:A:C4	2.99	0.50
12:AL:781:A:H2'	12:AL:782:C:H6	1.76	0.50
12:AL:1418:A:OP1	24:o:271:LYS:HE3	2.11	0.50
12:AL:1431:U:O2'	12:AL:1432:A:H5'	2.11	0.50
12:AL:1437:A:H5"	24:o:262:LYS:HB3	1.93	0.50
12:AL:1564:A:H2'	12:AL:1565:A:C8	2.46	0.50
12:AL:1639:A:C2	17:h:150:GLN:HB2	2.47	0.50
16:g:249:GLY:C	33:x:55:TYR:HE1	2.19	0.50
21:l:3:TYR:O	21:l:70:LEU:HD12	2.11	0.50
22:m:92:ALA:O	22:m:93:GLU:C	2.54	0.50
22:m:97:GLN:O	22:m:101:LEU:N	2.35	0.50
30:u:284:ALA:O	30:u:285:THR:C	2.54	0.50
31:v:53:ARG:H	31:v:53:ARG:HE	1.57	0.50
38:2:47:SER:HB2	46:A:2425:A:H5'	1.94	0.50
41:5:99:ARG:CD	44:8:222:PRO:HB2	2.42	0.50
41:5:131:ILE:O	61:P:253:ILE:HD13	2.12	0.50
46:A:207:U:C2	46:A:208:A:C8	3.00	0.50
46:A:547:A:C8	46:A:548:A:C8	3.00	0.50
46:A:830:U:C2	46:A:831:A:C8	2.99	0.50
46:A:1007:U:C2'	75:e:161:GLN:CG	2.82	0.50
46:A:1054:A:H2'	46:A:1054:A:N3	2.26	0.50
46:A:1140:A:O2'	46:A:1141:A:H5'	2.11	0.50
46:A:1323:U:C4	46:A:1324:U:O4	2.65	0.50
46:A:1493:U:O2'	46:A:1494:A:P	2.70	0.50
46:A:1599:A:H2'	46:A:1599:A:N3	2.25	0.50
46:A:1656:G:C2	46:A:1657:A:C8	3.00	0.50
46:A:1709:G:H2'	46:A:1709:G:N3	2.27	0.50
46:A:1959:A:OP1	49:D:112:GLY:HA2	2.10	0.50
46:A:2205:G:C6	46:A:2206:U:C4	2.99	0.50
46:A:2319:A:C6	46:A:2320:A:C6	2.99	0.50
46:A:2743:U:H4'	46:A:2746:U:O4	2.12	0.50
46:A:2785:U:O4	46:A:2808:A:H2'	2.11	0.50
60:O:97:HIS:CG	62:Q:119:MET:HE1	2.46	0.50
3:AC:194:PHE:HE2	4:AD:223:TYR:CB	2.20	0.50
4:AD:55:CYS:SG	4:AD:80:ILE:HG12	2.51	0.50
6:AF:201:VAL:HA	6:AF:205:LEU:HD12	1.94	0.50
6:AF:330:LYS:NZ	12:AL:36:U:P	2.85	0.50
9:AI:56:LEU:HD12	22:m:211:ARG:HH11	1.77	0.50
9:AI:180:PRO:HD2	9:AI:293:ASN:HB2	1.92	0.50
9:AI:236:ASN:O	9:AI:237:PRO:C	2.51	0.50
9:AI:295:SER:O	9:AI:298:LEU:N	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:393:LYS:NZ	24:o:182:GLN:CG	2.64	0.50
11:AK:62:PRO:O	11:AK:66:LEU:HB2	2.11	0.50
11:AK:158:ALA:HB3	25:p:27:VAL:CG2	2.40	0.50
12:AL:333:A:O2'	12:AL:335:A:H8	1.95	0.50
12:AL:530:A:C5	12:AL:532:U:H1'	2.46	0.50
12:AL:999:C:H41	12:AL:1003:A:H62	1.60	0.50
12:AL:1300:U:H2'	12:AL:1301:A:C8	2.46	0.50
17:h:144:GLN:CD	24:o:119:GLN:CB	2.56	0.50
18:i:384:ASN:HB2	18:i:389:TYR:CD2	2.46	0.50
19:j:150:PHE:N	19:j:450:ALA:O	2.42	0.50
21:l:48:ARG:NH2	33:x:137:LEU:CD2	2.74	0.50
24:o:156:ALA:CB	24:o:233:LYS:HB2	2.32	0.50
25:p:85:ARG:HH22	29:t:115:TRP:HE1	1.52	0.50
26:q:152:PHE:O	26:q:153:GLU:C	2.55	0.50
28:s:18:ILE:O	28:s:19:ALA:C	2.54	0.50
30:u:156:ALA:O	30:u:159:LEU:N	2.45	0.50
31:v:34:ALA:O	31:v:35:LYS:C	2.54	0.50
33:x:58:PHE:CZ	33:x:64:ARG:HB2	2.46	0.50
46:A:48:A:C6	46:A:423:A:C2	3.00	0.50
46:A:112:G:O2'	46:A:157:A:N1	2.43	0.50
46:A:172:A:N6	46:A:205:A:H61	2.10	0.50
46:A:312:A:H3'	46:A:312:A:N3	2.27	0.50
46:A:551:U:H2'	46:A:552:A:N3	2.26	0.50
46:A:617:A:H4'	46:A:618:A:OP1	2.11	0.50
46:A:665:A:H3'	46:A:665:A:N3	2.26	0.50
46:A:676:A:H2'	46:A:677:C:H6	1.76	0.50
46:A:862:U:H2'	46:A:863:A:H8	1.77	0.50
46:A:980:A:H8	75:e:180:LYS:HZ1	1.60	0.50
46:A:1193:U:C2	46:A:1194:U:C5	2.99	0.50
46:A:1369:U:O2'	46:A:1370:A:H5'	2.12	0.50
46:A:1501:A:N1	46:A:1507:U:C5	2.79	0.50
46:A:1510:A:C4	46:A:1511:U:C5	2.99	0.50
46:A:1563:C:O2	46:A:1563:C:H2'	2.12	0.50
46:A:1970:C:H2'	46:A:1971:A:H8	1.77	0.50
46:A:2078:U:H2'	46:A:2079:A:C4	2.47	0.50
46:A:2245:U:C2	46:A:2246:A:C8	3.00	0.50
46:A:2584:A:H2'	46:A:2585:A:O4'	2.10	0.50
46:A:2909:A:H2'	46:A:2910:A:O4'	2.11	0.50
46:A:3268:A:C5	46:A:3269:U:C5	3.00	0.50
63:R:37:THR:C	63:R:39:MET:H	2.19	0.50
63:R:320:LEU:O	63:R:323:LYS:HB3	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:f:10:VAL:HB	76:f:60:ILE:HB	1.94	0.50
4:AD:38:GLN:O	4:AD:43:ASP:N	2.44	0.50
4:AD:173:ALA:O	4:AD:174:ARG:C	2.54	0.50
4:AD:254:GLU:O	4:AD:257:GLN:N	2.43	0.50
5:AE:93:PRO:HD2	5:AE:95:LYS:HZ1	1.58	0.50
5:AE:255:LEU:HD12	5:AE:300:PHE:HB2	1.89	0.50
5:AE:323:GLY:O	5:AE:327:THR:HG23	2.12	0.50
6:AF:321:TYR:CE2	31:v:35:LYS:CA	2.68	0.50
7:AG:203:VAL:HA	7:AG:207:GLU:CD	2.37	0.50
8:AH:46:GLY:HA3	32:w:5:ASN:CG	2.36	0.50
8:AH:102:LEU:HD21	31:v:96:LEU:CB	2.42	0.50
9:AI:128:GLU:HG3	9:AI:132:ASN:HD22	1.76	0.50
9:AI:371:TYR:CD1	12:AL:1305:A:H2	2.29	0.50
10:AJ:18:ILE:HG21	11:AK:258:LEU:HG	1.93	0.50
12:AL:239:A:OP1	32:w:71:PHE:CE2	2.65	0.50
12:AL:259:G:C4'	32:w:17:GLN:HB2	2.41	0.50
12:AL:508:C:H5'	19:j:420:PRO:CB	2.41	0.50
12:AL:522:A:H61	12:AL:527:G:C5'	2.23	0.50
12:AL:525:A:H2'	12:AL:526:U:O4'	2.12	0.50
12:AL:632:C:C4	12:AL:644:G:C5	2.99	0.50
12:AL:643:G:H22	27:r:76:ALA:HB2	1.76	0.50
12:AL:684:G:H4'	12:AL:685:G:O5'	2.09	0.50
12:AL:1272:U:P	22:m:208:PHE:H	2.35	0.50
12:AL:1589:G:H1'	12:AL:1610:A:C2	2.45	0.50
16:g:7:LEU:HD21	17:h:219:ILE:HG21	1.92	0.50
16:g:68:LEU:CG	17:h:217:ILE:CD1	2.90	0.50
21:l:114:SER:HB2	33:x:92:PHE:CE1	2.41	0.50
23:n:39:LEU:HD21	23:n:154:VAL:HG21	1.93	0.50
27:r:35:LYS:HZ2	32:w:37:LEU:HD23	1.76	0.50
28:s:55:ILE:O	28:s:58:ILE:HB	2.12	0.50
30:u:107:SER:HA	30:u:110:ARG:HH21	1.75	0.50
30:u:238:ASP:OD1	30:u:242:THR:CG2	2.59	0.50
33:x:58:PHE:O	33:x:59:ASP:C	2.55	0.50
34:y:21:LEU:HG	34:y:22:PRO:HD2	1.94	0.50
41:5:236:LEU:HD13	61:P:246:LEU:HD23	1.93	0.50
44:8:117:TRP:NE1	49:D:52:LEU:O	2.44	0.50
46:A:27:A:OP1	71:a:110:LYS:HG2	2.11	0.50
46:A:165:A:H3'	46:A:166:U:H6	1.77	0.50
46:A:168:A:H61	46:A:210:U:H3	1.59	0.50
46:A:325:G:O2'	46:A:331:A:N6	2.44	0.50
46:A:1130:C:H2'	46:A:1131:C:H6	1.74	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1353:A:O2'	46:A:1358:C:N4	2.42	0.50
46:A:1520:C:N4	46:A:3021:A:H61	2.08	0.50
46:A:1531:C:N3	47:B:326:TRP:CZ2	2.80	0.50
46:A:1794:U:C4	46:A:1795:U:C4	3.00	0.50
46:A:1915:A:C2	68:W:73:VAL:HG22	2.47	0.50
46:A:2760:G:C5	46:A:2761:C:C5	3.00	0.50
46:A:3054:A:H2'	46:A:3055:U:O4'	2.11	0.50
47:B:169:ARG:HD2	47:B:171:GLU:HG2	1.92	0.50
63:R:159:LEU:CD2	72:b:157:PHE:CE1	2.94	0.50
63:R:198:LEU:HA	63:R:201:VAL:CG1	2.36	0.50
76:f:62:ILE:HA	76:f:68:PHE:HB2	1.93	0.50
3:AC:148:LEU:HD13	4:AD:82:ASN:CB	2.29	0.50
5:AE:43:ILE:O	5:AE:44:ALA:C	2.55	0.50
5:AE:65:ILE:HG23	5:AE:90:PRO:HB3	1.94	0.50
5:AE:149:SER:HA	5:AE:153:ILE:CB	2.41	0.50
7:AG:32:VAL:CG1	17:h:235:VAL:HG13	2.42	0.50
8:AH:200:LEU:CA	8:AH:204:HIS:HB3	2.39	0.50
11:AK:132:PHE:HB3	18:i:248:MET:CA	2.23	0.50
12:AL:25:G:N2	12:AL:983:A:C2	2.80	0.50
12:AL:30:U:H2'	12:AL:31:U:C6	2.46	0.50
12:AL:331:A:H2'	12:AL:331:A:N3	2.27	0.50
12:AL:835:C:C2	12:AL:836:U:C5	3.00	0.50
18:i:184:ASN:ND2	20:k:87:PHE:HD2	2.09	0.50
20:k:144:LEU:HB3	20:k:172:VAL:HG22	1.94	0.50
20:k:174:ASP:C	20:k:176:ASN:H	2.19	0.50
26:q:167:VAL:HB	26:q:198:ILE:HG13	1.93	0.50
26:q:188:GLY:O	26:q:189:ALA:C	2.52	0.50
31:v:97:ASN:ND2	31:v:99:ALA:HB3	2.26	0.50
32:w:9:LEU:HA	32:w:57:LEU:HG	1.94	0.50
33:x:111:HIS:O	33:x:113:ASP:N	2.45	0.50
39:3:54:LYS:O	46:A:158:C:O2'	2.28	0.50
46:A:16:A:H2'	46:A:17:U:C5	2.47	0.50
46:A:217:A:N9	64:S:47:HIS:CE1	2.79	0.50
46:A:1015:A:H62	46:A:1017:A:H1'	1.76	0.50
46:A:1043:A:H3'	46:A:1044:A:H8	1.76	0.50
46:A:1074:U:O2	46:A:1074:U:H2'	2.10	0.50
46:A:1310:A:C2	46:A:1311:A:C5	3.00	0.50
46:A:1745:U:H2'	46:A:1800:A:H62	1.77	0.50
46:A:1923:C:OP2	46:A:2884:U:H4'	2.12	0.50
46:A:2003:G:N2	46:A:2083:U:O2	2.45	0.50
46:A:2184:C:H2'	46:A:2185:U:C5	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2213:U:H3	46:A:2235:A:H2	1.59	0.50
46:A:2793:G:H2'	46:A:2794:U:O4'	2.11	0.50
46:A:3137:A:H2'	46:A:3138:U:H6	1.76	0.50
47:B:160:TRP:O	47:B:161:GLU:C	2.54	0.50
47:B:282:LYS:O	47:B:283:LYS:HB2	2.11	0.50
63:R:297:ASP:OD2	63:R:297:ASP:N	2.43	0.50
64:S:132:ILE:HD12	64:S:132:ILE:N	2.27	0.50
6:AF:208:MET:HB2	19:j:425:TRP:CH2	2.46	0.50
7:AG:133:ASP:O	7:AG:139:GLN:NE2	2.45	0.50
9:AI:314:TYR:CD2	9:AI:316:LEU:HB2	2.46	0.50
11:AK:172:TYR:CD2	25:p:116:THR:O	2.65	0.50
12:AL:258:G:O2'	12:AL:259:G:H5'	2.11	0.50
12:AL:340:C:H2'	12:AL:341:A:O4'	2.12	0.50
12:AL:761:A:H3'	12:AL:762:U:C6	2.45	0.50
12:AL:999:C:N4	12:AL:1413:U:H3	2.09	0.50
12:AL:1095:G:C2	12:AL:1097:G:N7	2.80	0.50
12:AL:1214:A:H2'	12:AL:1215:A:C8	2.47	0.50
12:AL:1375:U:O3'	28:s:100:ARG:NH2	2.45	0.50
12:AL:1418:A:OP2	24:o:268:LYS:CE	2.57	0.50
12:AL:1634:C:H2'	12:AL:1635:U:C5	2.46	0.50
15:Z:89:ILE:HG12	35:z:168:ILE:HG21	1.94	0.50
16:g:48:TRP:CD1	16:g:54:ILE:HB	2.47	0.50
16:g:51:LYS:HE2	17:h:197:GLN:HA	1.93	0.50
18:i:237:LEU:O	18:i:238:THR:C	2.55	0.50
20:k:46:PHE:O	20:k:47:ARG:C	2.55	0.50
20:k:303:VAL:O	20:k:303:VAL:HG12	2.11	0.50
30:u:237:ASN:O	30:u:240:ALA:N	2.45	0.50
33:x:90:LEU:HA	33:x:128:ALA:HB2	1.94	0.50
34:y:38:ARG:NH1	34:y:77:ALA:HB3	2.27	0.50
39:3:30:PHE:CA	46:A:1568:U:C5	2.95	0.50
42:6:94:TRP:HB2	46:A:2325:A:H1'	1.94	0.50
45:9:114:PHE:CD2	45:9:204:LEU:HD21	2.47	0.50
46:A:315:A:H5'	46:A:360:A:N3	2.27	0.50
46:A:893:U:H2'	46:A:894:A:H8	1.75	0.50
46:A:1293:A:H2'	46:A:1294:C:O4'	2.12	0.50
46:A:1306:A:O2'	46:A:1307:A:H5"	2.12	0.50
46:A:1852:A:H3'	46:A:1853:A:C8	2.46	0.50
46:A:2420:U:C4	46:A:2421:U:C4	2.99	0.50
46:A:2647:U:C2	46:A:2648:A:C8	2.99	0.50
46:A:3005:A:H2'	46:A:3006:U:H6	1.77	0.50
48:C:215:LEU:HD13	53:H:84:PRO:HG2	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
55:J:111:THR:HG22	55:J:115:LYS:HB3	1.93	0.50
65:T:55:PRO:HG2	68:W:153:LEU:HD21	1.94	0.50
3:AC:25:VAL:HG22	3:AC:98:PRO:HD3	1.93	0.50
3:AC:54:ALA:HB1	7:AG:142:ARG:C	2.36	0.50
3:AC:59:GLU:O	3:AC:60:SER:C	2.53	0.50
3:AC:204:ILE:HG23	3:AC:214:VAL:HG23	1.94	0.50
5:AE:101:THR:C	5:AE:103:ASN:N	2.70	0.50
5:AE:215:TRP:CH2	5:AE:218:VAL:HG21	2.47	0.50
5:AE:248:LEU:CD1	5:AE:249:GLN:H	2.24	0.50
6:AF:103:THR:O	6:AF:104:LYS:C	2.55	0.50
9:AI:247:THR:O	9:AI:248:LEU:HD23	2.12	0.50
9:AI:431:PHE:CE1	24:o:176:ILE:HG13	2.35	0.50
11:AK:152:ARG:CG	20:k:70:ASP:OD1	2.59	0.50
11:AK:299:LYS:HG2	24:o:151:PHE:CB	2.28	0.50
12:AL:20:A:C2'	12:AL:21:U:C5'	2.85	0.50
12:AL:277:C:H2'	12:AL:278:U:O4'	2.11	0.50
12:AL:497:A:H4'	12:AL:498:A:OP1	2.12	0.50
12:AL:689:C:H2'	12:AL:690:G:O4'	2.12	0.50
12:AL:1012:G:H2'	12:AL:1013:C:C6	2.47	0.50
12:AL:1271:A:N7	12:AL:1338:A:N6	2.60	0.50
12:AL:1292:A:H2'	12:AL:1293:U:C6	2.47	0.50
12:AL:1465:A:OP2	20:k:157:GLN:NE2	2.43	0.50
17:h:255:GLN:HB3	17:h:259:LEU:CD1	2.39	0.50
20:k:266:ARG:HA	20:k:271:ILE:HD11	1.94	0.50
22:m:117:ILE:O	22:m:121:ILE:HG13	2.12	0.50
26:q:215:ARG:HE	26:q:217:LEU:HD21	1.75	0.50
28:s:46:ARG:HB2	28:s:48:HIS:ND1	2.27	0.50
32:w:68:LYS:HD3	32:w:69:ARG:HG2	1.93	0.50
40:4:71:LEU:HD21	46:A:1261:U:H5'	1.94	0.50
41:5:332:LYS:HE2	46:A:43:U:O2'	2.12	0.50
45:9:221:LEU:HA	45:9:230:VAL:HG23	1.94	0.50
46:A:44:U:H2'	46:A:45:U:C5	2.47	0.50
46:A:126:A:C6	46:A:127:A:C6	3.00	0.50
46:A:168:A:C6	46:A:169:A:C6	3.00	0.50
46:A:253:A:H5"	64:S:32:ILE:C	2.36	0.50
46:A:425:A:N3	46:A:425:A:C2'	2.74	0.50
46:A:596:C:H2'	46:A:597:U:O4'	2.12	0.50
46:A:633:G:H2'	46:A:634:A:C8	2.47	0.50
46:A:1020:U:H3'	75:e:134:LYS:CB	2.42	0.50
46:A:1182:A:C2	46:A:1183:A:C8	3.00	0.50
46:A:1242:A:H2'	46:A:1269:G:C6	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1260:U:H2'	46:A:1261:U:H6	1.77	0.50
46:A:1313:G:H5"	46:A:1314:U:C5'	2.42	0.50
46:A:1413:A:N6	46:A:1546:G:C5	2.80	0.50
46:A:1531:C:C4	47:B:326:TRP:CZ2	2.92	0.50
46:A:1988:A:H2'	46:A:1991:G:H8	1.74	0.50
46:A:2722:G:O3'	73:c:13:GLY:N	2.45	0.50
46:A:3241:U:H2'	46:A:3242:A:C8	2.47	0.50
58:M:18:VAL:HG12	71:a:170:ILE:HG13	1.94	0.50
63:R:260:PHE:O	63:R:267:HIS:NE2	2.45	0.50
76:f:68:PHE:CE2	76:f:70:PHE:HB3	2.47	0.50
76:f:79:TYR:HA	76:f:82:LEU:HB2	1.94	0.50
76:f:114:GLU:HA	76:f:155:LYS:HB3	1.93	0.50
5:AE:154:GLY:HA2	5:AE:325:LEU:HD13	1.94	0.49
6:AF:336:PHE:HZ	19:j:139:HIS:CB	2.23	0.49
7:AG:63:VAL:HG11	7:AG:77:THR:HA	1.94	0.49
8:AH:229:GLU:O	21:l:45:MET:HA	2.12	0.49
9:AI:190:PHE:CE1	28:s:42:TYR:HA	2.46	0.49
9:AI:200:ILE:HG13	9:AI:202:PRO:HD3	1.93	0.49
9:AI:227:SER:H	9:AI:278:GLU:CD	2.20	0.49
9:AI:299:THR:HB	9:AI:350:ARG:NH1	2.27	0.49
9:AI:334:PHE:HB2	9:AI:339:SER:OG	2.11	0.49
10:AJ:14:LEU:O	10:AJ:18:ILE:HG12	2.11	0.49
10:AJ:48:TYR:CD2	29:t:28:ARG:HD3	2.47	0.49
10:AJ:69:VAL:HG23	18:i:124:THR:CG2	2.20	0.49
11:AK:115:ALA:CB	18:i:172:TYR:CZ	2.95	0.49
11:AK:148:HIS:HB2	18:i:84:LEU:HD13	1.93	0.49
11:AK:195:PRO:HG3	12:AL:1290:A:O2'	2.12	0.49
12:AL:19:U:H4'	12:AL:640:C:H4'	1.93	0.49
12:AL:85:G:H3'	12:AL:91:A:H61	1.76	0.49
12:AL:550:U:H2'	12:AL:551:U:O4'	2.12	0.49
12:AL:898:U:H2'	12:AL:898:U:O2	2.12	0.49
12:AL:1225:G:H2'	12:AL:1226:A:C8	2.47	0.49
12:AL:1358:U:H2'	12:AL:1359:U:H6	1.76	0.49
12:AL:1465:A:C8	12:AL:1465:A:H5'	2.46	0.49
15:Z:16:LEU:HD22	35:z:165:LEU:CD2	2.39	0.49
17:h:129:TYR:CZ	24:o:120:LEU:HD12	2.46	0.49
20:k:14:GLN:O	20:k:15:HIS:C	2.55	0.49
22:m:200:ALA:HB3	22:m:208:PHE:HE1	1.76	0.49
28:s:46:ARG:H	28:s:49:GLN:NE2	2.10	0.49
30:u:53:LYS:O	30:u:54:GLN:C	2.55	0.49
31:v:14:GLY:HA3	31:v:19:PRO:HA	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:101:A:H2'	46:A:102:A:C8	2.47	0.49
46:A:222:A:H2'	46:A:223:C:C6	2.47	0.49
46:A:409:A:H5"	46:A:410:A:OP1	2.12	0.49
46:A:448:U:H2'	46:A:449:A:H8	1.76	0.49
46:A:592:C:OP1	70:Y:87:GLN:HB3	2.12	0.49
46:A:830:U:H2'	46:A:831:A:C8	2.47	0.49
46:A:905:A:H2'	46:A:908:C:N4	2.25	0.49
46:A:1206:A:H4'	46:A:1208:U:C6	2.47	0.49
46:A:1417:A:H2'	46:A:1418:U:C6	2.47	0.49
46:A:1701:A:O2'	46:A:1702:C:H5'	2.12	0.49
46:A:1809:C:H2'	46:A:1810:C:C6	2.46	0.49
46:A:1993:U:H2'	46:A:1994:C:C5	2.47	0.49
46:A:2016:A:H5"	46:A:2017:G:C2	2.47	0.49
46:A:2062:G:N2	46:A:2064:G:H3'	2.27	0.49
46:A:2425:A:C2	67:V:27:ARG:CD	2.94	0.49
46:A:2851:U:C4	46:A:2852:U:C6	3.00	0.49
46:A:2938:A:H2'	46:A:2939:U:C6	2.46	0.49
46:A:3290:A:H8	46:A:3290:A:P	2.35	0.49
55:J:110:GLN:O	55:J:111:THR:C	2.55	0.49
63:R:159:LEU:HD21	72:b:157:PHE:CE1	2.47	0.49
63:R:213:ASP:O	63:R:216:PHE:N	2.45	0.49
75:e:76:SER:HB3	75:e:79:GLU:HB2	1.93	0.49
3:AC:253:TRP:O	3:AC:254:SER:C	2.55	0.49
4:AD:111:LEU:O	4:AD:114:GLU:N	2.42	0.49
4:AD:235:GLY:C	4:AD:237:LEU:H	2.20	0.49
6:AF:178:LYS:O	6:AF:181:ARG:HB3	2.12	0.49
6:AF:314:VAL:HG21	8:AH:18:THR:OG1	2.05	0.49
7:AG:46:PRO:HD3	23:n:22:ALA:HB3	1.93	0.49
8:AH:32:ILE:HA	8:AH:35:LYS:HB3	1.94	0.49
9:AI:56:LEU:CD1	22:m:211:ARG:CD	2.91	0.49
9:AI:127:ARG:NH2	9:AI:393:LYS:O	2.45	0.49
9:AI:181:GLU:C	9:AI:183:PHE:N	2.70	0.49
11:AK:172:TYR:HD2	25:p:116:THR:CA	2.24	0.49
12:AL:85:G:H5"	12:AL:90:G:H22	1.77	0.49
12:AL:338:G:C6	12:AL:339:U:C4	3.00	0.49
12:AL:605:U:H5"	12:AL:606:U:OP1	2.12	0.49
12:AL:780:G:H2'	12:AL:781:A:C8	2.47	0.49
12:AL:1220:A:C4'	29:t:112:LYS:HZ1	2.21	0.49
12:AL:1436:U:C2'	25:p:87:THR:HG21	2.41	0.49
15:Z:11:PRO:O	15:Z:13:LEU:HG	2.11	0.49
19:j:59:HIS:HB3	19:j:119:ARG:HE	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:j:483:ARG:HG3	19:j:486:LYS:HB3	1.94	0.49
20:k:119:LYS:O	20:k:122:SER:HB3	2.12	0.49
22:m:172:GLY:O	22:m:173:VAL:C	2.55	0.49
26:q:149:GLY:O	26:q:153:GLU:HG3	2.13	0.49
28:s:31:THR:HA	28:s:34:LYS:HE3	1.93	0.49
29:t:31:PHE:O	29:t:35:GLU:N	2.44	0.49
30:u:127:ASP:O	30:u:128:ILE:C	2.53	0.49
30:u:175:GLU:HB3	30:u:230:THR:HG21	1.94	0.49
30:u:186:GLN:O	30:u:187:ASN:C	2.51	0.49
46:A:46:A:C8	46:A:2894:A:C8	3.00	0.49
46:A:151:A:N6	46:A:160:U:H3	2.09	0.49
46:A:228:U:O2'	46:A:229:G:H5'	2.12	0.49
46:A:311:A:O2'	46:A:314:A:N1	2.42	0.49
46:A:766:U:H2'	46:A:767:A:O4'	2.12	0.49
46:A:880:G:C6	46:A:881:C:C4	2.99	0.49
46:A:880:G:C5	46:A:881:C:C5	3.00	0.49
46:A:1111:U:H2'	46:A:1112:A:C8	2.47	0.49
46:A:1439:A:N3	46:A:1440:U:N1	2.60	0.49
46:A:1529:A:H2'	46:A:1530:U:C6	2.47	0.49
46:A:1577:U:H5'	46:A:1578:A:OP2	2.12	0.49
46:A:1678:C:H2'	46:A:1679:A:H8	1.77	0.49
46:A:1786:A:O2'	46:A:1787:A:H5'	2.12	0.49
46:A:2029:A:N3	46:A:2030:U:H1'	2.27	0.49
46:A:2213:U:H2'	46:A:2214:A:C8	2.47	0.49
46:A:2792:G:C6	46:A:2793:G:C5	2.99	0.49
46:A:2957:A:N6	46:A:3055:U:O2'	2.45	0.49
46:A:3232:U:C4	46:A:3233:A:N7	2.80	0.49
47:B:94:LYS:O	47:B:95:ARG:HB2	2.12	0.49
47:B:178:SER:OG	47:B:179:HIS:N	2.45	0.49
48:C:61:LEU:HB2	48:C:90:VAL:HG11	1.93	0.49
63:R:219:ARG:O	63:R:220:TYR:C	2.53	0.49
76:f:127:LYS:HB3	76:f:141:ILE:HD13	1.94	0.49
4:AD:254:GLU:HG3	16:g:226:VAL:CG2	2.33	0.49
5:AE:74:LEU:HD21	5:AE:88:LEU:CD2	2.40	0.49
5:AE:215:TRP:CH2	5:AE:248:LEU:CB	2.94	0.49
5:AE:260:ASN:C	5:AE:262:SER:H	2.20	0.49
6:AF:89:LYS:O	6:AF:93:GLU:HG2	2.12	0.49
7:AG:52:SER:C	7:AG:54:GLY:N	2.69	0.49
7:AG:206:ILE:HD11	16:g:227:VAL:CG1	2.42	0.49
7:AG:224:VAL:HG11	33:x:41:ILE:HD11	1.93	0.49
11:AK:115:ALA:HB2	18:i:172:TYR:HE1	1.71	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:101:U:H4'	12:AL:102:G:OP2	2.12	0.49
12:AL:632:C:C2	12:AL:644:G:C2	2.99	0.49
12:AL:1632:A:C5	33:x:67:LEU:CD1	2.91	0.49
16:g:249:GLY:N	33:x:55:TYR:CE1	2.80	0.49
16:g:251:VAL:HB	33:x:51:LYS:C	2.38	0.49
17:h:295:ILE:CG2	24:o:36:ARG:NE	2.75	0.49
18:i:152:LYS:HB3	18:i:206:GLU:HG3	1.95	0.49
22:m:194:ASN:C	22:m:196:ILE:N	2.70	0.49
24:o:235:LEU:HB3	24:o:246:LEU:HD13	1.94	0.49
29:t:50:LEU:HB3	29:t:51:PRO:CD	2.41	0.49
30:u:231:ILE:HG23	30:u:232:GLN:N	2.27	0.49
32:w:4:GLN:C	32:w:5:ASN:HD22	2.20	0.49
32:w:9:LEU:HG	32:w:57:LEU:HG	1.94	0.49
36:0:77:ARG:NH2	46:A:3077:A:OP1	2.40	0.49
42:6:62:THR:HG22	42:6:106:ARG:HD2	1.93	0.49
46:A:1239:A:H61	46:A:1271:A:N6	2.10	0.49
46:A:1714:G:C2	46:A:1719:G:C6	3.00	0.49
46:A:1770:U:H3'	46:A:1771:A:H8	1.76	0.49
46:A:1811:U:H2'	46:A:1812:U:C6	2.47	0.49
46:A:1852:A:C8	54:I:43:VAL:HG21	2.47	0.49
46:A:1898:C:C2	46:A:1899:C:C5	3.01	0.49
46:A:2033:U:H2'	46:A:2056:A:OP2	2.13	0.49
46:A:2062:G:H4'	46:A:2062:G:OP1	2.12	0.49
46:A:2455:A:H2'	46:A:2456:A:C8	2.47	0.49
46:A:2754:A:H2'	46:A:2755:U:C6	2.48	0.49
46:A:3113:U:O2'	46:A:3114:A:H5'	2.12	0.49
61:P:92:ILE:HB	61:P:108:ILE:HB	1.92	0.49
62:Q:263:GLU:OE2	72:b:35:LYS:HE2	2.12	0.49
63:R:219:ARG:NH2	63:R:248:ASP:CA	2.72	0.49
63:R:221:TYR:CE2	63:R:222:LEU:HD23	2.47	0.49
76:f:34:ILE:HG12	76:f:35:LYS:N	2.27	0.49
2:AB:38:VAL:HG13	2:AB:43:ALA:CB	2.39	0.49
5:AE:78:ASP:OD1	5:AE:78:ASP:N	2.45	0.49
5:AE:271:LEU:C	5:AE:274:TYR:H	2.20	0.49
5:AE:278:TYR:C	5:AE:280:ILE:N	2.62	0.49
6:AF:49:LYS:O	6:AF:50:HIS:C	2.55	0.49
6:AF:58:MET:HG2	19:j:11:LEU:HD22	1.94	0.49
6:AF:93:GLU:HB2	6:AF:122:ASN:HD22	1.77	0.49
6:AF:188:LEU:HD11	19:j:442:GLU:CG	2.42	0.49
7:AG:47:ARG:HB3	7:AG:47:ARG:NH1	2.26	0.49
8:AH:16:PRO:CA	31:v:35:LYS:HE3	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:78:THR:HG22	12:AL:230:A:O2'	2.12	0.49
10:AJ:32:SER:HA	10:AJ:35:LEU:HG	1.94	0.49
12:AL:94:A:H2'	12:AL:95:U:O4'	2.11	0.49
12:AL:498:A:H2'	12:AL:499:A:H5'	1.93	0.49
12:AL:1181:A:C2	25:p:78:PRO:CG	2.95	0.49
16:g:51:LYS:HB2	16:g:68:LEU:HB3	1.93	0.49
16:g:283:ALA:HB1	16:g:291:VAL:HG13	1.94	0.49
18:i:178:LYS:O	18:i:181:ASN:HB2	2.12	0.49
24:o:63:ARG:HH21	24:o:66:ILE:CD1	2.19	0.49
25:p:44:ASP:HB2	25:p:110:LEU:HD11	1.94	0.49
27:r:31:LEU:O	27:r:32:ASN:C	2.53	0.49
27:r:71:LYS:HG2	27:r:117:ASP:O	2.12	0.49
27:r:82:ARG:NH1	27:r:92:SER:OG	2.46	0.49
30:u:223:ASN:O	30:u:226:LYS:N	2.45	0.49
32:w:102:GLN:O	32:w:105:LYS:HB2	2.13	0.49
32:w:219:ILE:O	32:w:223:LEU:N	2.45	0.49
34:y:26:ALA:HB1	34:y:49:LEU:HD21	1.94	0.49
38:2:45:GLN:OE1	50:E:158:THR:HG22	2.11	0.49
46:A:163:A:H2'	46:A:214:A:N1	2.27	0.49
46:A:437:A:C6	46:A:438:U:C4	3.00	0.49
46:A:677:C:H2'	46:A:678:A:H8	1.78	0.49
46:A:820:U:O2	46:A:821:U:N3	2.46	0.49
46:A:1047:A:H5'	46:A:1048:A:H8	1.78	0.49
46:A:2237:A:H3'	46:A:2238:U:C6	2.47	0.49
46:A:2618:A:H5"	46:A:2618:A:H8	1.77	0.49
46:A:2619:A:H2'	46:A:2620:C:O4'	2.13	0.49
46:A:2768:G:H5"	46:A:2768:G:C4	2.47	0.49
46:A:2822:U:OP2	46:A:2823:C:H5	1.94	0.49
46:A:3014:C:H3'	46:A:3015:U:C6	2.44	0.49
63:R:194:ALA:O	63:R:198:LEU:HD22	2.12	0.49
3:AC:208:THR:OG1	3:AC:213:LYS:HA	2.13	0.49
5:AE:88:LEU:HD13	5:AE:88:LEU:C	2.37	0.49
5:AE:147:THR:HG23	5:AE:151:PHE:HD2	1.77	0.49
5:AE:265:ALA:O	5:AE:268:LYS:HB3	2.12	0.49
6:AF:67:TYR:C	6:AF:69:GLY:N	2.70	0.49
6:AF:212:LEU:HD11	19:j:445:PHE:CG	2.41	0.49
8:AH:200:LEU:HD11	30:u:105:ILE:HD11	1.93	0.49
9:AI:395:ASN:O	9:AI:399:VAL:HG23	2.12	0.49
10:AJ:17:LYS:HE3	11:AK:261:GLU:HG3	1.93	0.49
11:AK:50:LEU:HD23	11:AK:68:LEU:HD13	1.94	0.49
12:AL:338:G:C5	12:AL:339:U:C5	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:521:A:H2'	12:AL:527:G:N1	2.27	0.49
12:AL:539:C:C2'	12:AL:540:A:C8	2.92	0.49
12:AL:839:A:H2'	12:AL:840:G:O4'	2.12	0.49
12:AL:1059:A:C4'	29:t:12:LEU:HD11	2.42	0.49
12:AL:1473:A:O2'	12:AL:1610:A:O3'	2.31	0.49
12:AL:1571:A:H2'	12:AL:1572:U:C6	2.48	0.49
12:AL:1648:C:H3'	12:AL:1649:A:H8	1.78	0.49
21:l:48:ARG:O	21:l:49:TYR:C	2.55	0.49
25:p:22:VAL:O	25:p:23:ASN:C	2.54	0.49
28:s:52:GLU:HA	28:s:55:ILE:HD12	1.94	0.49
30:u:41:LEU:HB3	30:u:45:ARG:CZ	2.43	0.49
41:5:167:VAL:HG13	41:5:288:MET:HE1	1.95	0.49
46:A:136:A:H2'	46:A:137:A:H8	1.75	0.49
46:A:1048:A:H5'	75:e:110:HIS:CB	2.42	0.49
46:A:1324:U:C2	46:A:1325:U:C5	3.01	0.49
46:A:1533:G:C4'	47:B:149:ARG:O	2.60	0.49
46:A:1542:U:C2	46:A:1543:A:C8	3.00	0.49
46:A:1579:A:C6	46:A:1580:G:C4	3.01	0.49
46:A:1609:U:P	48:C:201:HIS:CD2	3.05	0.49
46:A:1885:A:H2'	46:A:1886:A:H8	1.78	0.49
46:A:1890:C:H2'	46:A:1891:U:C6	2.47	0.49
46:A:1906:C:C2	46:A:1907:U:C5	3.00	0.49
46:A:1930:A:H4'	46:A:1931:A:C8	2.48	0.49
46:A:2018:C:C5	46:A:2019:A:H3'	2.47	0.49
46:A:2071:A:C2'	46:A:2072:U:H5'	2.42	0.49
46:A:2357:U:H3	46:A:2363:A:H61	1.59	0.49
46:A:2754:A:C5	46:A:2755:U:C4	3.00	0.49
46:A:2897:A:N1	71:a:177:LYS:NZ	2.60	0.49
2:AB:92:HIS:CD2	12:AL:524:A:C2	2.96	0.49
4:AD:202:TYR:O	4:AD:204:ALA:N	2.45	0.49
5:AE:73:ILE:HB	5:AE:77:LYS:HZ1	1.77	0.49
6:AF:171:VAL:O	6:AF:175:TYR:N	2.45	0.49
6:AF:207:THR:O	6:AF:208:MET:C	2.55	0.49
8:AH:4:GLY:HA2	8:AH:7:LYS:HD2	1.95	0.49
8:AH:21:ILE:HG13	31:v:74:TYR:CD2	2.35	0.49
9:AI:134:PHE:CD2	9:AI:159:LEU:HD11	2.47	0.49
9:AI:351:THR:C	12:AL:1280:U:OP1	2.55	0.49
11:AK:140:GLN:NE2	18:i:321:TYR:HD2	1.92	0.49
11:AK:150:GLU:CA	20:k:71:TYR:CZ	2.95	0.49
12:AL:658:G:C6	12:AL:659:C:C4	3.00	0.49
12:AL:711:A:OP1	32:w:79:ARG:NH1	2.32	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:763:A:H8	12:AL:763:A:P	2.36	0.49
12:AL:1001:U:C2	12:AL:1002:A:C8	3.00	0.49
12:AL:1143:U:H2'	12:AL:1144:C:C6	2.47	0.49
13:AM:37:A:C4	14:AN:8:A:N6	2.81	0.49
15:Z:37:LEU:O	15:Z:41:TRP:N	2.45	0.49
17:h:133:ILE:O	17:h:135:SER:N	2.45	0.49
18:i:303:ASN:ND2	25:p:17:THR:HG23	2.27	0.49
19:j:471:VAL:N	19:j:472:PRO:HD2	2.28	0.49
22:m:103:SER:O	22:m:104:VAL:C	2.56	0.49
26:q:109:ASN:OD1	26:q:109:ASN:N	2.43	0.49
26:q:192:VAL:O	26:q:193:LYS:C	2.56	0.49
27:r:50:PRO:HD2	27:r:123:TYR:OH	2.11	0.49
30:u:64:VAL:HG11	30:u:236:LEU:HA	1.94	0.49
30:u:188:MET:HB3	30:u:205:LEU:HD13	1.93	0.49
30:u:231:ILE:CG1	30:u:236:LEU:HB2	2.43	0.49
32:w:181:SER:OG	32:w:185:ARG:NH2	2.46	0.49
35:z:132:ASP:O	35:z:133:LYS:C	2.54	0.49
46:A:12:A:C2	46:A:13:A:C5	3.00	0.49
46:A:425:A:H62	46:A:1943:C:C5'	2.23	0.49
46:A:673:A:C2	47:B:338:MET:HG2	2.48	0.49
46:A:752:U:H2'	46:A:753:A:H8	1.76	0.49
46:A:808:A:C5	46:A:809:C:H1'	2.48	0.49
46:A:905:A:H5"	46:A:951:A:C6	2.48	0.49
46:A:1027:G:N2	46:A:1029:A:H1'	2.27	0.49
46:A:1060:U:C2	46:A:1061:U:C6	3.00	0.49
46:A:1222:U:O2'	46:A:1223:A:H5'	2.12	0.49
46:A:1692:A:OP2	46:A:1882:U:H5'	2.11	0.49
46:A:1720:U:C1'	47:B:135:ASN:HD22	2.24	0.49
46:A:1851:U:C2	46:A:1854:U:C5	3.00	0.49
46:A:1866:A:H1'	46:A:2860:A:H5'	1.94	0.49
46:A:2018:C:N4	46:A:2021:A:OP2	2.45	0.49
46:A:2019:A:N6	46:A:2061:U:H3	2.09	0.49
46:A:2038:U:H3'	46:A:2039:U:H5"	1.94	0.49
46:A:2187:A:C2	46:A:2202:U:C4	3.00	0.49
46:A:2864:G:H5"	47:B:354:SER:HA	1.94	0.49
46:A:2917:U:H2'	46:A:2918:A:C8	2.46	0.49
73:c:101:THR:HG21	73:c:116:VAL:HG21	1.95	0.49
75:e:103:GLU:CB	75:e:130:LEU:HB3	2.42	0.49
3:AC:62:TYR:HA	17:h:164:ILE:HG12	1.93	0.49
4:AD:137:ARG:NH2	4:AD:309:LEU:HD23	2.28	0.49
4:AD:217:ASN:O	4:AD:221:ASN:N	2.45	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:216:VAL:HG21	33:x:57:PRO:O	2.13	0.49
7:AG:235:THR:O	7:AG:236:SER:C	2.55	0.49
8:AH:49:TYR:O	32:w:59:ARG:NH2	2.45	0.49
8:AH:185:SER:CB	32:w:176:LEU:CD2	2.90	0.49
11:AK:190:VAL:HG21	25:p:138:MET:HE3	1.94	0.49
12:AL:502:A:P	19:j:7:LEU:HB3	2.52	0.49
12:AL:698:A:P	23:n:2:SER:CB	2.97	0.49
12:AL:715:U:C4	12:AL:817:G:N3	2.81	0.49
12:AL:761:A:N3	12:AL:851:G:O2'	2.38	0.49
12:AL:1025:U:H4'	12:AL:1026:U:H5'	1.93	0.49
12:AL:1046:U:H1'	29:t:75:LYS:NZ	2.27	0.49
12:AL:1061:U:H2'	12:AL:1062:A:H8	1.77	0.49
12:AL:1215:A:O2'	12:AL:1216:A:O4'	2.27	0.49
16:g:200:ILE:CG1	16:g:287:LYS:HE2	2.40	0.49
18:i:136:ILE:HG21	18:i:219:ILE:HG23	1.94	0.49
18:i:311:ILE:HD11	20:k:58:TYR:CZ	2.47	0.49
19:j:20:PHE:CD1	19:j:434:PHE:HB2	2.47	0.49
19:j:27:ASN:HA	19:j:30:LYS:CG	2.43	0.49
20:k:79:HIS:HE1	25:p:132:SER:O	1.96	0.49
21:l:55:LYS:HA	21:l:60:LYS:CA	2.41	0.49
28:s:69:GLY:O	28:s:72:ARG:HB2	2.13	0.49
30:u:59:ALA:O	30:u:60:SER:C	2.55	0.49
30:u:253:GLN:NE2	30:u:264:ILE:N	2.59	0.49
30:u:276:LYS:HA	30:u:279:ARG:NH2	2.27	0.49
32:w:46:HIS:CD2	32:w:48:GLU:HB3	2.48	0.49
32:w:160:THR:HB	32:w:164:LEU:HB2	1.94	0.49
33:x:65:ILE:HB	33:x:69:ARG:HH21	1.78	0.49
36:0:73:ARG:CA	46:A:3093:U:C5	2.95	0.49
46:A:359:A:H2'	46:A:360:A:C8	2.47	0.49
46:A:376:A:H2'	46:A:377:U:H6	1.77	0.49
46:A:526:A:OP1	55:J:178:ALA:HB3	2.12	0.49
46:A:644:A:H8	46:A:644:A:OP2	1.95	0.49
46:A:670:U:C2	46:A:671:G:C8	3.01	0.49
46:A:698:U:H2'	46:A:699:G:C8	2.48	0.49
46:A:723:U:H4'	55:J:102:VAL:CG2	2.40	0.49
46:A:1111:U:O5'	46:A:1112:A:H5"	2.12	0.49
46:A:1172:C:H2'	46:A:1173:U:C6	2.48	0.49
46:A:1439:A:H4'	46:A:1482:A:N1	2.27	0.49
46:A:1682:U:OP1	46:A:1879:U:O2'	2.30	0.49
46:A:1733:U:H2'	46:A:1734:G:C8	2.47	0.49
46:A:1830:G:N2	46:A:1868:G:H2'	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2351:A:O2'	46:A:2352:A:H5'	2.11	0.49
46:A:2353:U:C2	46:A:2354:A:C8	3.00	0.49
46:A:2810:G:H2'	46:A:2811:G:H8	1.78	0.49
46:A:2984:A:N3	46:A:2984:A:H2'	2.28	0.49
46:A:3002:U:H2'	46:A:3003:U:C6	2.48	0.49
47:B:179:HIS:HD2	47:B:309:SER:HB2	1.77	0.49
62:Q:14:ARG:HD3	70:Y:101:TRP:CE2	2.48	0.49
1:AA:92:LYS:HA	1:AA:95:LYS:HD2	1.95	0.49
3:AC:151:GLY:HA2	3:AC:170:ASN:O	2.12	0.49
4:AD:280:TRP:CD1	4:AD:280:TRP:H	2.31	0.49
7:AG:74:LEU:CD2	8:AH:183:ASN:HB3	2.43	0.49
8:AH:162:GLN:HB3	23:n:60:PHE:HE1	1.66	0.49
8:AH:229:GLU:O	8:AH:229:GLU:HG2	2.11	0.49
9:AI:131:THR:HG22	9:AI:162:GLN:HE22	1.77	0.49
11:AK:57:TRP:HZ3	11:AK:86:GLU:HG3	1.78	0.49
11:AK:165:LEU:CD2	25:p:127:TYR:CD2	2.96	0.49
12:AL:275:A:H2'	12:AL:276:C:C6	2.48	0.49
12:AL:508:C:OP1	19:j:165:LYS:HB3	2.13	0.49
12:AL:525:A:O2'	12:AL:526:U:H5'	2.12	0.49
12:AL:698:A:OP1	23:n:2:SER:CA	2.60	0.49
15:Z:23:ILE:O	15:Z:24:ARG:CB	2.61	0.49
15:Z:86:TYR:C	15:Z:88:ARG:N	2.71	0.49
15:Z:94:HIS:CG	17:h:203:ARG:CA	2.91	0.49
16:g:11:ARG:HA	16:g:14:GLN:CD	2.38	0.49
17:h:384:LEU:O	17:h:388:LEU:HG	2.12	0.49
19:j:20:PHE:HD2	19:j:116:SER:HA	1.77	0.49
20:k:48:VAL:HG13	20:k:50:ARG:H	1.77	0.49
21:l:127:ASP:O	21:l:128:TYR:C	2.56	0.49
25:p:62:ILE:HA	25:p:128:ILE:HD11	1.95	0.49
26:q:188:GLY:C	26:q:192:VAL:HG23	2.38	0.49
26:q:199:SER:O	35:z:120:LEU:CD2	2.60	0.49
27:r:136:VAL:C	27:r:138:ARG:H	2.21	0.49
28:s:10:PHE:HE2	28:s:19:ALA:O	1.96	0.49
28:s:15:VAL:HG22	28:s:46:ARG:CD	2.42	0.49
28:s:67:ILE:CG1	67:V:96:GLY:CA	2.91	0.49
30:u:46:ARG:HA	30:u:49:LYS:HD2	1.93	0.49
30:u:144:MET:HB2	30:u:145:ARG:HH22	1.77	0.49
32:w:21:LYS:HZ3	32:w:44:LEU:HD22	1.78	0.49
32:w:175:ASN:O	32:w:179:GLN:HG3	2.13	0.49
38:2:47:SER:OG	46:A:2425:A:OP1	2.30	0.49
46:A:76:A:C6	46:A:77:U:C4	3.01	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:451:A:H2'	46:A:452:U:H6	1.77	0.49
46:A:494:U:H2'	46:A:495:A:H8	1.77	0.49
46:A:1126:A:H4'	46:A:1127:A:O5'	2.13	0.49
46:A:1241:A:H1'	46:A:1270:U:O4	2.13	0.49
46:A:2070:U:C2	46:A:2071:A:H1'	2.48	0.49
46:A:2098:U:H2'	46:A:2099:A:C8	2.47	0.49
46:A:2188:A:N1	46:A:2200:C:N3	2.60	0.49
46:A:2872:A:C2	46:A:2873:U:C4	3.01	0.49
46:A:3032:U:H2'	46:A:3033:A:C8	2.48	0.49
56:K:121:ILE:HG12	56:K:136:ASP:CB	2.42	0.49
63:R:82:ASP:O	63:R:83:HIS:HB2	2.13	0.49
63:R:162:LEU:O	63:R:163:GLU:C	2.56	0.49
3:AC:28:ILE:HD12	3:AC:28:ILE:H	1.78	0.49
5:AE:144:LYS:O	5:AE:148:ALA:N	2.35	0.49
8:AH:40:LYS:HE3	8:AH:48:GLY:HA2	1.94	0.49
8:AH:208:GLU:CG	30:u:134:ARG:HH11	2.22	0.49
9:AI:159:LEU:O	9:AI:162:GLN:N	2.46	0.49
11:AK:157:LEU:HD22	11:AK:161:GLU:HG3	1.94	0.49
11:AK:292:TYR:HE2	24:o:214:THR:HG22	1.78	0.49
12:AL:228:A:H2'	12:AL:229:U:C6	2.48	0.49
12:AL:315:G:C2	12:AL:316:A:C5	3.00	0.49
12:AL:801:U:H5"	33:x:130:ARG:HB3	1.95	0.49
12:AL:1001:U:H2'	12:AL:1002:A:H8	1.77	0.49
12:AL:1339:U:H4'	12:AL:1340:U:H5"	1.94	0.49
12:AL:1406:G:H2'	12:AL:1407:A:C8	2.48	0.49
12:AL:1527:A:N1	12:AL:1536:A:N6	2.61	0.49
26:q:193:LYS:O	35:z:110:LYS:CE	2.52	0.49
34:y:30:GLY:O	34:y:31:THR:C	2.56	0.49
37:1:346:LYS:HD2	46:A:2360:U:C5	2.47	0.49
39:3:30:PHE:HB2	46:A:1568:U:C5	2.44	0.49
46:A:242:U:H4'	46:A:327:A:C6	2.48	0.49
46:A:433:A:C2	46:A:457:G:C6	3.01	0.49
46:A:1660:A:H2'	46:A:1661:A:H8	1.78	0.49
46:A:1725:G:P	47:B:176:ARG:HH22	2.32	0.49
46:A:1735:U:OP1	46:A:1871:U:H4'	2.13	0.49
46:A:1814:U:H3'	46:A:1815:U:C5	2.47	0.49
46:A:1903:A:H8	46:A:1903:A:O5'	1.95	0.49
46:A:1907:U:C2	46:A:1908:A:C8	3.01	0.49
46:A:1919:A:H2	46:A:1935:G:H22	1.56	0.49
46:A:1953:G:OP1	46:A:2771:G:N1	2.46	0.49
46:A:2083:U:H2'	46:A:2084:G:H8	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2265:G:C6	46:A:2266:U:C2	3.00	0.49
46:A:2588:A:H3'	46:A:2589:A:C8	2.37	0.49
46:A:2604:U:O5'	46:A:2604:U:H6	1.96	0.49
46:A:2860:A:C5	46:A:2861:U:C5	3.00	0.49
46:A:3174:U:H4'	46:A:3236:A:H4'	1.95	0.49
46:A:3230:U:H2'	46:A:3231:A:H8	1.75	0.49
46:A:3272:U:H4'	71:a:163:MET:HG2	1.95	0.49
63:R:293:GLU:OE1	63:R:365:ARG:NH1	2.45	0.49
63:R:313:THR:O	63:R:317:GLU:N	2.36	0.49
69:X:51:GLU:OE1	69:X:55:ARG:HD3	2.12	0.49
2:AB:124:TRP:O	2:AB:127:GLU:HG2	2.12	0.49
6:AF:178:LYS:HZ3	19:j:459:ARG:NH2	2.11	0.49
6:AF:185:ILE:HG22	6:AF:189:VAL:CG2	2.43	0.49
8:AH:195:LYS:HB3	30:u:93:TYR:CE1	2.48	0.49
9:AI:90:LEU:HD11	9:AI:128:GLU:OE1	2.12	0.49
9:AI:274:ALA:O	9:AI:275:ILE:C	2.53	0.49
9:AI:287:ILE:O	9:AI:340:SER:N	2.43	0.49
11:AK:196:ASN:HD22	12:AL:1318:U:C3'	2.26	0.49
12:AL:23:A:H2'	12:AL:24:U:H6	1.77	0.49
12:AL:703:U:H5'	12:AL:704:A:OP2	2.13	0.49
12:AL:900:A:H8	12:AL:900:A:OP2	1.96	0.49
12:AL:1135:G:C6	12:AL:1145:A:N1	2.80	0.49
12:AL:1276:A:N6	12:AL:1333:U:H3	2.10	0.49
12:AL:1319:A:H2'	12:AL:1319:A:N3	2.27	0.49
13:AM:37:A:H2'	13:AM:38:A:H8	1.78	0.49
15:Z:89:ILE:HG12	35:z:168:ILE:CG2	2.43	0.49
17:h:172:LYS:O	17:h:174:ILE:N	2.46	0.49
18:i:93:TRP:CD2	29:t:109:GLY:H	1.69	0.49
20:k:52:VAL:C	20:k:54:PHE:N	2.69	0.49
21:l:38:VAL:HB	30:u:141:ILE:CD1	2.42	0.49
21:l:68:LEU:HD23	21:l:68:LEU:C	2.38	0.49
21:l:88:ASP:OD1	21:l:90:ARG:HB2	2.12	0.49
24:o:164:THR:O	24:o:165:ALA:C	2.55	0.49
26:q:215:ARG:HB2	26:q:217:LEU:HG	1.94	0.49
28:s:68:GLU:C	28:s:70:ASP:H	2.21	0.49
29:t:112:LYS:HD3	29:t:114:ILE:HG12	1.95	0.49
30:u:41:LEU:HB3	30:u:45:ARG:NH1	2.28	0.49
30:u:41:LEU:HB3	30:u:45:ARG:NH2	2.28	0.49
30:u:101:PHE:CA	32:w:167:LEU:CD1	2.88	0.49
32:w:197:ASP:OD1	32:w:197:ASP:N	2.45	0.49
34:y:46:PHE:HE2	34:y:49:LEU:HB2	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:0:74:ARG:HG2	46:A:3092:U:H5'	1.94	0.49
46:A:86:U:C2	46:A:87:U:C5	3.01	0.49
46:A:148:U:H4'	70:Y:79:PHE:CE1	2.47	0.49
46:A:539:U:H2'	46:A:540:A:O4'	2.13	0.49
46:A:670:U:H2'	46:A:671:G:H8	1.76	0.49
46:A:992:U:O4	76:f:13:ILE:CD1	2.60	0.49
46:A:1001:C:H41	46:A:1025:A:H1'	1.77	0.49
46:A:1386:A:H2'	46:A:1386:A:N3	2.27	0.49
46:A:1417:A:N6	46:A:1541:U:H3	2.11	0.49
46:A:1980:G:H2'	46:A:1981:U:O4'	2.13	0.49
46:A:2421:U:H2'	46:A:2422:A:C8	2.47	0.49
46:A:2800:A:H2'	46:A:2801:A:O4'	2.13	0.49
46:A:2837:U:C4	46:A:2838:U:C4	3.00	0.49
46:A:3014:C:N3	46:A:3033:A:C6	2.81	0.49
46:A:3044:A:H2'	46:A:3045:U:C6	2.47	0.49
46:A:3173:U:H2'	46:A:3174:U:C6	2.48	0.49
75:e:66:MET:SD	75:e:150:VAL:CB	3.00	0.49
4:AD:117:LEU:HD23	4:AD:117:LEU:H	1.77	0.48
5:AE:75:LEU:C	5:AE:78:ASP:H	2.21	0.48
5:AE:194:HIS:HE1	5:AE:315:TYR:OH	1.94	0.48
5:AE:206:ILE:C	5:AE:208:GLN:H	2.21	0.48
6:AF:58:MET:HE3	19:j:26:PHE:HB3	1.93	0.48
6:AF:131:ASP:O	6:AF:132:ARG:C	2.56	0.48
6:AF:172:SER:O	6:AF:176:GLY:N	2.46	0.48
7:AG:33:VAL:CB	17:h:357:TYR:OH	2.60	0.48
11:AK:196:ASN:HD22	12:AL:1318:U:H3'	1.77	0.48
12:AL:268:G:H8	12:AL:268:G:H5'	1.78	0.48
12:AL:269:A:O2'	12:AL:270:G:H5'	2.13	0.48
12:AL:529:U:H3'	12:AL:530:A:H2'	1.95	0.48
12:AL:612:A:C2	12:AL:661:A:C4	3.01	0.48
12:AL:787:A:OP2	33:x:112:ARG:HG3	2.12	0.48
12:AL:987:G:H2'	12:AL:988:A:H8	1.78	0.48
12:AL:1002:A:C5	12:AL:1003:A:C2	3.01	0.48
12:AL:1046:U:H1'	29:t:75:LYS:HZ1	1.78	0.48
12:AL:1214:A:H5'	24:o:252:LEU:O	2.12	0.48
12:AL:1400:A:H2'	12:AL:1401:A:O4'	2.13	0.48
13:AM:18:G:H1	13:AM:55:U:H3	1.61	0.48
17:h:129:TYR:CD2	17:h:132:LEU:HD13	2.48	0.48
18:i:191:LEU:C	18:i:193:ASN:N	2.71	0.48
20:k:293:ARG:O	23:n:43:GLY:CA	2.56	0.48
26:q:131:LEU:HG	26:q:147:THR:HA	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:r:58:ARG:O	27:r:110:VAL:N	2.44	0.48
27:r:114:ARG:HH22	27:r:119:PRO:HA	1.77	0.48
28:s:10:PHE:HB3	28:s:14:GLU:OE1	2.13	0.48
31:v:26:ALA:HA	31:v:37:ILE:HG13	1.95	0.48
31:v:86:VAL:O	31:v:90:LEU:HD13	2.13	0.48
31:v:99:ALA:O	31:v:101:ALA:N	2.45	0.48
33:x:62:MET:O	33:x:63:GLY:C	2.55	0.48
46:A:90:A:H2'	46:A:91:U:H6	1.69	0.48
46:A:202:A:O2'	46:A:203:U:H5"	2.14	0.48
46:A:263:A:C6	46:A:359:A:C8	3.02	0.48
46:A:470:U:C4	46:A:1930:A:C6	3.01	0.48
46:A:513:U:H2'	46:A:514:A:H8	1.78	0.48
46:A:1177:U:O2'	46:A:1178:A:H5'	2.13	0.48
46:A:1275:A:O2'	46:A:1276:U:H5'	2.13	0.48
46:A:1417:A:H61	46:A:1541:U:H3	1.62	0.48
46:A:1537:A:H8	46:A:1537:A:O5'	1.96	0.48
46:A:1732:G:H2'	46:A:1733:U:C6	2.48	0.48
46:A:1839:U:O4'	46:A:2858:C:O2'	2.30	0.48
46:A:2200:C:C2	46:A:2201:U:C5	3.01	0.48
46:A:2239:A:H2'	46:A:2240:U:C6	2.48	0.48
46:A:2327:A:C2	63:R:327:SER:HB3	2.48	0.48
46:A:2337:A:C6	46:A:2338:A:C6	3.01	0.48
46:A:2723:U:OP1	73:c:13:GLY:N	2.45	0.48
46:A:2737:A:H3'	46:A:2738:G:C8	2.42	0.48
46:A:2750:A:O2'	56:K:171:LYS:O	2.16	0.48
46:A:3089:A:H2'	46:A:3090:U:H6	1.79	0.48
48:C:77:GLY:HA2	58:M:128:PRO:HG2	1.95	0.48
76:f:11:LYS:HD2	76:f:12:LEU:N	2.28	0.48
3:AC:67:LEU:HD11	3:AC:173:THR:HG23	1.94	0.48
5:AE:47:LYS:NZ	5:AE:98:SER:CB	2.70	0.48
5:AE:181:ILE:HG12	5:AE:185:PHE:CD2	2.48	0.48
5:AE:193:LEU:CD2	5:AE:235:LEU:HD13	2.43	0.48
5:AE:227:LEU:CB	5:AE:231:LEU:HB2	2.42	0.48
8:AH:74:LEU:HG	8:AH:78:THR:HG23	1.95	0.48
9:AI:60:TRP:CD1	22:m:210:VAL:CG1	2.90	0.48
9:AI:201:GLN:O	9:AI:202:PRO:C	2.56	0.48
10:AJ:63:TYR:OH	18:i:191:LEU:CA	2.61	0.48
11:AK:152:ARG:NH2	20:k:69:TRP:HB3	2.28	0.48
11:AK:218:LYS:NZ	11:AK:264:ASP:O	2.46	0.48
12:AL:126:U:H3'	12:AL:127:U:C4	2.48	0.48
12:AL:314:C:C2	12:AL:315:G:C8	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:508:C:H2'	12:AL:509:A:C8	2.48	0.48
12:AL:760:A:C4	12:AL:761:A:C8	3.01	0.48
12:AL:842:A:H2'	12:AL:843:G:C8	2.47	0.48
13:AM:13:C:C4'	46:A:1824:U:C4'	2.86	0.48
19:j:6:ASN:O	19:j:7:LEU:CB	2.61	0.48
21:l:2:LEU:HD23	21:l:107:ARG:HB2	1.96	0.48
22:m:124:HIS:CD2	22:m:124:HIS:H	2.29	0.48
22:m:194:ASN:C	22:m:196:ILE:H	2.21	0.48
27:r:142:ARG:O	27:r:146:GLY:N	2.45	0.48
28:s:83:ARG:HD2	28:s:94:THR:CG2	2.43	0.48
28:s:83:ARG:HD2	28:s:94:THR:HG23	1.96	0.48
28:s:92:ARG:HH11	28:s:92:ARG:HG3	1.78	0.48
30:u:87:LEU:CG	32:w:114:ARG:NH1	2.76	0.48
41:5:188:ASN:O	41:5:192:SER:N	2.46	0.48
46:A:126:A:H2'	46:A:127:A:H8	1.73	0.48
46:A:318:A:C6	46:A:339:A:C8	3.00	0.48
46:A:448:U:H2'	46:A:449:A:C8	2.48	0.48
46:A:665:A:H5"	46:A:669:G:H4'	1.95	0.48
46:A:669:G:H2'	46:A:670:U:H6	1.77	0.48
46:A:876:A:H2'	46:A:877:U:C6	2.48	0.48
46:A:1066:A:H2'	46:A:1067:U:C6	2.47	0.48
46:A:1072:U:H2'	46:A:1073:A:H8	1.78	0.48
46:A:1886:A:H2'	46:A:1887:C:H6	1.78	0.48
46:A:2198:U:C5	64:S:227:TYR:CE2	3.01	0.48
46:A:2209:U:H2'	46:A:2210:A:H8	1.75	0.48
46:A:2716:A:O2'	46:A:2717:A:H5"	2.13	0.48
46:A:2798:A:C4	46:A:2799:A:C8	3.01	0.48
46:A:3150:U:OP2	46:A:3150:U:H3'	2.14	0.48
48:C:59:CYS:SG	48:C:60:GLY:N	2.86	0.48
74:d:165:TRP:CH2	74:d:171:MET:HE1	2.48	0.48
2:AB:84:ARG:HG3	2:AB:88:LEU:HD21	1.95	0.48
4:AD:96:SER:O	4:AD:301:GLU:N	2.45	0.48
5:AE:57:THR:O	5:AE:62:LYS:HE3	2.13	0.48
5:AE:103:ASN:HA	5:AE:106:ILE:HG13	1.95	0.48
5:AE:123:TRP:CD1	5:AE:124:THR:HG23	2.45	0.48
5:AE:259:PRO:HB2	5:AE:262:SER:OG	2.13	0.48
7:AG:69:ALA:HB1	7:AG:74:LEU:H	1.78	0.48
7:AG:122:LEU:HD21	16:g:36:ILE:HD12	1.93	0.48
12:AL:106:U:O2'	12:AL:107:G:H5'	2.13	0.48
12:AL:539:C:C2'	12:AL:540:A:H8	2.26	0.48
12:AL:911:U:O2'	12:AL:912:A:O5'	2.27	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1493:A:H2'	12:AL:1494:U:C6	2.48	0.48
16:g:279:GLU:H	16:g:296:ARG:HB3	1.78	0.48
17:h:145:GLU:HA	17:h:148:LEU:HG	1.95	0.48
18:i:102:LYS:O	18:i:105:GLU:N	2.46	0.48
18:i:110:MET:HE2	29:t:92:ARG:HG3	1.95	0.48
18:i:116:ASN:OD1	18:i:140:THR:HG23	2.12	0.48
18:i:302:ILE:HG22	25:p:20:TYR:CE1	2.45	0.48
18:i:315:PRO:HB2	18:i:316:MET:HE3	1.95	0.48
18:i:370:TYR:OH	29:t:103:LEU:O	2.28	0.48
22:m:98:TRP:O	22:m:102:LYS:HB2	2.13	0.48
22:m:214:GLU:N	22:m:214:GLU:OE1	2.47	0.48
27:r:99:GLY:O	27:r:127:ARG:NH1	2.47	0.48
30:u:74:PRO:HB2	32:w:100:GLU:CD	2.30	0.48
33:x:58:PHE:O	33:x:60:PHE:N	2.47	0.48
37:1:121:PHE:HA	46:A:2349:A:C4	2.48	0.48
46:A:262:A:OP2	72:b:61:ARG:HD3	2.14	0.48
46:A:319:U:C2	46:A:320:U:C6	3.01	0.48
46:A:523:U:H5'	55:J:194:ARG:CZ	2.43	0.48
46:A:864:A:H2'	46:A:865:A:O4'	2.12	0.48
46:A:932:C:O2'	46:A:933:C:H5'	2.13	0.48
46:A:937:U:O2'	46:A:938:A:H8	1.97	0.48
46:A:995:C:O5'	46:A:1036:U:H5"	2.12	0.48
46:A:1023:C:O2	46:A:1023:C:H2'	2.12	0.48
46:A:1144:U:C4	46:A:1145:U:C4	3.00	0.48
46:A:1688:C:N4	70:Y:62:ARG:HG3	2.27	0.48
46:A:2271:U:H2'	46:A:2702:G:OP2	2.13	0.48
46:A:2323:A:H3'	46:A:2324:U:C5'	2.43	0.48
46:A:2956:U:H5"	46:A:2957:A:H5'	1.94	0.48
47:B:208:SER:HA	47:B:240:CYS:HB3	1.95	0.48
62:Q:248:ALA:HB1	64:S:56:PRO:HA	1.96	0.48
63:R:212:GLU:OE2	63:R:215:ARG:NH2	2.45	0.48
63:R:308:ALA:O	63:R:311:PHE:N	2.38	0.48
75:e:208:GLY:O	75:e:209:LEU:C	2.56	0.48
3:AC:33:GLY:O	3:AC:37:VAL:HG23	2.13	0.48
3:AC:89:ASN:O	3:AC:92:PHE:HB3	2.14	0.48
5:AE:151:PHE:CD2	5:AE:318:HIS:CD2	3.02	0.48
5:AE:167:GLU:O	5:AE:171:LEU:N	2.38	0.48
7:AG:36:ILE:CD1	17:h:234:LYS:CB	2.92	0.48
10:AJ:41:GLY:H	10:AJ:42:PRO:HD2	1.79	0.48
12:AL:280:G:C6	12:AL:281:C:C4	3.01	0.48
15:Z:62:THR:CA	15:Z:66:ALA:HA	2.42	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:g:28:LYS:O	33:x:53:THR:CA	2.61	0.48
18:i:173:MET:SD	20:k:91:ARG:CG	3.01	0.48
24:o:176:ILE:HD13	24:o:183:LEU:HG	1.95	0.48
25:p:57:PHE:O	25:p:58:TYR:C	2.55	0.48
27:r:103:GLN:O	27:r:104:GLU:C	2.55	0.48
30:u:191:HIS:CE1	30:u:195:HIS:CD2	3.01	0.48
30:u:223:ASN:O	30:u:224:PRO:C	2.55	0.48
30:u:248:ASP:OD1	30:u:251:TYR:N	2.39	0.48
32:w:85:PHE:O	32:w:86:ALA:C	2.55	0.48
33:x:111:HIS:HE1	35:z:153:ARG:NH1	2.10	0.48
37:1:117:TYR:HD2	38:2:67:ILE:CD1	2.26	0.48
39:3:46:LYS:NZ	46:A:1554:U:OP2	2.36	0.48
41:5:331:SER:C	46:A:41:G:H21	2.22	0.48
46:A:9:U:O2'	46:A:10:A:H5'	2.13	0.48
46:A:41:G:OP1	46:A:41:G:H4'	2.14	0.48
46:A:175:U:C2	46:A:176:U:C5	3.02	0.48
46:A:692:G:H4'	46:A:693:A:OP2	2.14	0.48
46:A:980:A:N3	46:A:980:A:H2'	2.28	0.48
46:A:1024:A:O2'	46:A:1026:U:C4	2.64	0.48
46:A:1309:A:O2'	57:L:26:GLN:OE1	2.30	0.48
46:A:1318:A:N1	46:A:1600:U:O2'	2.43	0.48
46:A:1343:U:C4	61:P:139:HIS:CG	3.01	0.48
46:A:1530:U:H3	46:A:1533:G:H1	1.61	0.48
46:A:1648:U:O2'	46:A:1650:A:N7	2.47	0.48
46:A:1659:U:H6	46:A:1659:U:O5'	1.97	0.48
46:A:1669:A:O2'	46:A:1670:A:H5'	2.14	0.48
46:A:1841:C:C4	46:A:1865:C:H1'	2.48	0.48
46:A:1986:A:C2	46:A:1987:G:C5	3.02	0.48
46:A:2031:C:N4	46:A:2057:U:OP2	2.46	0.48
46:A:2062:G:N3	46:A:2065:A:C8	2.81	0.48
46:A:2070:U:H6	46:A:2070:U:O5'	1.97	0.48
46:A:2232:A:H2'	46:A:2233:U:O4'	2.13	0.48
46:A:2253:A:H2'	46:A:2254:A:C8	2.49	0.48
46:A:2916:U:H2'	46:A:2917:U:H6	1.79	0.48
46:A:2976:A:H2'	46:A:2977:U:C5	2.48	0.48
46:A:3028:A:H2'	46:A:3029:U:H6	1.77	0.48
46:A:3271:A:H1'	58:M:17:MET:HG3	1.95	0.48
63:R:286:LEU:N	63:R:286:LEU:HD23	2.27	0.48
65:T:60:LEU:CD2	74:d:169:TRP:HB2	2.44	0.48
69:X:13:LEU:CD2	69:X:25:ILE:HG12	2.43	0.48
75:e:168:GLY:HA3	75:e:178:VAL:HG13	1.93	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:e:197:LEU:H	75:e:197:LEU:HD22	1.77	0.48
3:AC:266:LYS:CA	17:h:128:PRO:CG	2.79	0.48
4:AD:148:SER:O	4:AD:149:LEU:C	2.57	0.48
4:AD:217:ASN:HB3	4:AD:251:PHE:CE2	2.49	0.48
5:AE:62:LYS:HB2	5:AE:63:PRO:CD	2.40	0.48
5:AE:271:LEU:HD13	5:AE:304:TYR:CZ	2.48	0.48
6:AF:296:TYR:N	6:AF:296:TYR:CD1	2.82	0.48
6:AF:307:TYR:H	6:AF:307:TYR:HD1	1.58	0.48
12:AL:270:G:H5"	12:AL:270:G:N3	2.29	0.48
12:AL:303:G:C2	12:AL:307:G:C6	3.01	0.48
12:AL:486:U:H5'	12:AL:487:A:OP2	2.13	0.48
12:AL:490:U:H2'	12:AL:491:U:H6	1.78	0.48
12:AL:729:U:H2'	12:AL:731:U:H5	1.77	0.48
12:AL:1048:A:N1	12:AL:1254:G:N2	2.61	0.48
12:AL:1109:U:H2'	12:AL:1110:C:C6	2.48	0.48
12:AL:1159:C:O2'	18:i:363:ASN:HB3	2.13	0.48
12:AL:1166:U:C2	12:AL:1167:A:C8	3.01	0.48
17:h:283:SER:O	17:h:285:GLU:N	2.41	0.48
18:i:305:ILE:HG22	18:i:306:TYR:CD2	2.49	0.48
21:l:29:GLY:O	21:l:30:LYS:C	2.56	0.48
22:m:203:ARG:HB2	22:m:211:ARG:HD3	1.93	0.48
22:m:237:ALA:O	22:m:238:ILE:C	2.55	0.48
26:q:104:LYS:HD3	26:q:104:LYS:H	1.78	0.48
26:q:215:ARG:CZ	26:q:217:LEU:HD21	2.43	0.48
31:v:91:ARG:HB3	31:v:98:ASP:HA	1.95	0.48
32:w:196:ASN:OD1	32:w:199:LYS:HD2	2.13	0.48
35:z:109:ASN:O	35:z:110:LYS:C	2.56	0.48
46:A:138:U:C2	46:A:139:U:C5	3.01	0.48
46:A:173:U:C4	46:A:174:G:C8	3.01	0.48
46:A:290:G:P	55:J:115:LYS:CE	2.96	0.48
46:A:389:G:O2'	46:A:390:U:P	2.71	0.48
46:A:450:U:C2	46:A:451:A:C8	3.01	0.48
46:A:455:A:H2'	46:A:456:U:O4'	2.13	0.48
46:A:458:A:H2'	46:A:459:U:C6	2.48	0.48
46:A:510:A:H2'	46:A:511:G:O4'	2.14	0.48
46:A:901:A:H1'	46:A:916:A:C6	2.48	0.48
46:A:962:A:H2'	46:A:963:A:H8	1.78	0.48
46:A:989:G:N3	46:A:989:G:H2'	2.27	0.48
46:A:1306:A:C4	46:A:1598:A:C6	3.01	0.48
46:A:1323:U:C2	46:A:1324:U:C5	3.01	0.48
46:A:1357:A:H8	46:A:1357:A:P	2.37	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1362:C:C4	46:A:1363:C:N4	2.81	0.48
46:A:1406:A:H5"	46:A:1406:A:H8	1.77	0.48
46:A:1584:A:OP1	46:A:1584:A:H8	1.96	0.48
46:A:1749:U:C2	46:A:1750:G:C8	3.01	0.48
46:A:1769:U:H3'	46:A:1770:U:C5'	2.40	0.48
46:A:1952:A:C4'	48:C:207:GLN:O	2.62	0.48
46:A:1973:C:O2'	46:A:1974:U:H5'	2.13	0.48
46:A:2332:U:C2	46:A:2333:A:C8	3.02	0.48
46:A:2355:U:H3	46:A:2365:A:H61	1.61	0.48
46:A:2385:U:H2'	46:A:2386:A:C8	2.49	0.48
46:A:2443:C:C2	46:A:2444:A:C8	3.01	0.48
46:A:2887:U:H2'	46:A:2888:G:O4'	2.13	0.48
46:A:2950:A:H1'	48:C:79:ARG:NH2	2.27	0.48
47:B:125:VAL:HG23	47:B:154:LEU:HD21	1.94	0.48
63:R:52:TYR:N	63:R:55:GLN:OE1	2.46	0.48
66:U:44:ALA:HB1	73:c:78:LEU:HD11	1.95	0.48
2:AB:48:ILE:HG21	2:AB:90:GLN:HG3	1.95	0.48
2:AB:59:PHE:CE1	2:AB:66:LEU:HB2	2.48	0.48
2:AB:66:LEU:HD23	2:AB:66:LEU:C	2.39	0.48
3:AC:55:GLY:HA3	7:AG:143:PRO:CG	2.38	0.48
5:AE:179:PHE:O	5:AE:219:LEU:HD21	2.13	0.48
5:AE:300:PHE:C	5:AE:302:ARG:N	2.70	0.48
6:AF:179:ILE:H	6:AF:179:ILE:HD12	1.78	0.48
6:AF:188:LEU:HD11	19:j:442:GLU:HG3	1.95	0.48
8:AH:100:ALA:HB1	12:AL:143:A:C5'	2.44	0.48
9:AI:59:ASN:ND2	9:AI:62:ASN:H	2.12	0.48
9:AI:373:TYR:HE1	9:AI:378:VAL:HG21	1.78	0.48
9:AI:413:LEU:HD23	22:m:149:PRO:HD2	1.87	0.48
12:AL:14:A:OP1	20:k:238:PHE:HZ	1.97	0.48
12:AL:310:A:H2'	12:AL:311:G:O4'	2.14	0.48
12:AL:720:U:H5"	30:u:181:MET:HE3	1.95	0.48
12:AL:1176:U:H4'	12:AL:1177:A:C5'	2.43	0.48
12:AL:1224:A:H2'	12:AL:1225:G:O4'	2.14	0.48
12:AL:1371:U:C4	12:AL:1372:G:C5	3.01	0.48
13:AM:33:U:O4	24:o:278:ARG:HD3	2.14	0.48
18:i:100:TYR:CZ	25:p:48:ARG:HD2	2.28	0.48
22:m:203:ARG:HG3	22:m:211:ARG:NE	2.29	0.48
25:p:34:LEU:HB2	25:p:72:PRO:HA	1.94	0.48
26:q:131:LEU:HD11	26:q:150:ARG:HB2	1.94	0.48
29:t:90:ASP:HB2	29:t:91:PHE:CD2	2.49	0.48
32:w:16:MET:HB2	32:w:19:THR:HB	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:y:13:TRP:C	34:y:15:GLY:N	2.70	0.48
37:1:202:VAL:HG22	46:A:2361:A:N9	2.28	0.48
46:A:118:A:C5	46:A:145:A:C8	3.01	0.48
46:A:317:U:C5	46:A:338:G:N2	2.81	0.48
46:A:322:U:H2'	46:A:323:G:C8	2.48	0.48
46:A:656:A:H2'	46:A:657:U:H6	1.76	0.48
46:A:669:G:C5	46:A:670:U:C4	3.01	0.48
46:A:674:A:H4'	46:A:2855:A:H4'	1.95	0.48
46:A:789:A:C8	46:A:840:C:C5	3.01	0.48
46:A:866:G:H5"	46:A:866:G:C8	2.49	0.48
46:A:1051:A:H3'	46:A:1052:A:O4'	2.13	0.48
46:A:1075:A:H3'	46:A:1076:U:C6	2.49	0.48
46:A:1075:A:N1	46:A:1076:U:H1'	2.28	0.48
46:A:1405:U:H2'	46:A:1406:A:N9	2.28	0.48
46:A:1438:U:H3'	46:A:1439:A:O4'	2.14	0.48
46:A:1439:A:C8	46:A:1439:A:H5"	2.48	0.48
46:A:1785:U:O2	46:A:1785:U:H2'	2.13	0.48
46:A:1888:A:H2'	46:A:1889:A:C8	2.49	0.48
46:A:2016:A:H4'	46:A:2017:G:N2	2.29	0.48
46:A:2318:U:OP1	72:b:139:SER:N	2.46	0.48
46:A:2666:A:C6	46:A:2667:A:C5	3.02	0.48
46:A:2763:A:H1'	46:A:2764:C:H5	1.78	0.48
46:A:2797:U:C2	51:F:194:TYR:CE2	3.01	0.48
47:B:167:VAL:CG1	47:B:204:ASP:H	2.27	0.48
63:R:48:GLY:H	63:R:50:LYS:NZ	2.11	0.48
63:R:76:ASN:HB3	63:R:89:GLU:OE1	2.13	0.48
63:R:154:ALA:O	63:R:157:ASN:N	2.47	0.48
75:e:54:ILE:HD11	75:e:105:TYR:N	2.27	0.48
76:f:120:VAL:HG12	76:f:142:VAL:HG22	1.95	0.48
3:AC:78:ASN:N	7:AG:190:ALA:HB1	2.28	0.48
3:AC:94:GLU:OE1	17:h:160:LEU:CD1	2.35	0.48
4:AD:100:CYS:SG	4:AD:102:ARG:HB2	2.53	0.48
5:AE:68:PRO:CG	12:AL:1543:A:OP1	2.54	0.48
5:AE:73:ILE:O	5:AE:74:LEU:C	2.57	0.48
6:AF:306:GLN:O	31:v:62:ILE:HG22	2.14	0.48
7:AG:33:VAL:CG2	17:h:357:TYR:OH	2.62	0.48
7:AG:132:TYR:HE2	7:AG:142:ARG:HB2	1.76	0.48
8:AH:160:MET:HE1	23:n:37:TYR:CD1	2.47	0.48
9:AI:126:VAL:CA	9:AI:131:THR:HG21	2.37	0.48
9:AI:187:ARG:HD3	28:s:44:TRP:HB2	1.94	0.48
9:AI:355:LEU:HB3	9:AI:356:PRO:CD	2.42	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:449:HIS:CE1	22:m:149:PRO:CG	2.97	0.48
11:AK:51:TYR:HA	11:AK:57:TRP:HZ2	1.79	0.48
11:AK:107:LEU:HD13	18:i:172:TYR:HD1	1.79	0.48
11:AK:149:ARG:HD2	20:k:71:TYR:CA	2.42	0.48
12:AL:109:A:H5"	12:AL:110:A:N7	2.29	0.48
12:AL:324:G:H2'	12:AL:325:A:C8	2.49	0.48
12:AL:328:C:H2'	12:AL:329:U:O4'	2.13	0.48
12:AL:515:A:C5	12:AL:516:A:C5	3.01	0.48
12:AL:1015:U:H2'	12:AL:1016:G:C8	2.48	0.48
12:AL:1136:A:P	15:Z:79:ASN:OD1	2.72	0.48
12:AL:1248:A:O2'	29:t:5:ARG:NE	2.46	0.48
12:AL:1429:A:C8	29:t:72:THR:CG2	2.83	0.48
19:j:20:PHE:CE1	19:j:434:PHE:HB2	2.49	0.48
19:j:436:ILE:HB	19:j:466:ILE:HD13	1.96	0.48
22:m:98:TRP:CD1	24:o:242:LEU:HD23	2.48	0.48
29:t:60:LEU:HD12	34:y:20:PRO:HD3	1.95	0.48
30:u:64:VAL:HG13	30:u:69:GLY:C	2.38	0.48
30:u:203:ARG:O	30:u:207:ILE:HG13	2.13	0.48
32:w:4:GLN:O	32:w:5:ASN:ND2	2.47	0.48
33:x:43:GLN:C	33:x:45:LEU:H	2.21	0.48
34:y:22:PRO:O	34:y:23:ILE:C	2.54	0.48
40:4:33:TRP:CH2	46:A:1273:U:O2	2.67	0.48
46:A:134:U:H3'	46:A:135:U:C5	2.48	0.48
46:A:620:G:H2'	46:A:620:G:N3	2.29	0.48
46:A:632:U:H2'	46:A:633:G:C8	2.47	0.48
46:A:674:A:N3	46:A:674:A:C2'	2.77	0.48
46:A:683:U:H2'	46:A:2706:C:O2	2.13	0.48
46:A:747:U:H2'	46:A:748:U:H6	1.72	0.48
46:A:817:G:H8	46:A:817:G:P	2.37	0.48
46:A:900:A:C4	46:A:915:G:C2	3.01	0.48
46:A:1057:A:O2'	46:A:1058:U:H5'	2.14	0.48
46:A:1210:A:H2'	46:A:1211:U:H6	1.77	0.48
46:A:1230:C:H1'	46:A:1257:U:O4	2.14	0.48
46:A:1679:A:H5"	46:A:1680:A:OP2	2.13	0.48
46:A:1771:A:H3'	46:A:1772:U:H6	1.79	0.48
46:A:2220:U:O2	46:A:2220:U:C2'	2.55	0.48
46:A:2261:A:H2'	46:A:2262:U:O4'	2.13	0.48
46:A:2319:A:H2'	46:A:2320:A:H8	1.75	0.48
46:A:2332:U:O3'	63:R:322:ARG:CD	2.58	0.48
46:A:2357:U:O2'	46:A:2358:A:P	2.72	0.48
46:A:2767:C:O2'	46:A:2769:A:N6	2.35	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2973:A:H2'	46:A:2974:U:H6	1.78	0.48
46:A:3108:U:C2	46:A:3109:U:C5	3.02	0.48
46:A:3277:A:C2	46:A:3278:A:C5	3.01	0.48
46:A:3290:A:N7	46:A:3291:U:C4	2.82	0.48
59:N:111:THR:HA	59:N:114:TYR:CZ	2.48	0.48
62:Q:275:LEU:HA	72:b:22:PRO:HB3	1.96	0.48
63:R:112:ARG:HB2	63:R:115:LEU:HD23	1.95	0.48
75:e:87:ILE:HB	75:e:140:ILE:HD12	1.95	0.48
1:AA:96:ARG:HG3	1:AA:99:ARG:NH2	2.28	0.48
5:AE:94:VAL:HA	5:AE:97:LEU:HD12	1.96	0.48
5:AE:149:SER:HB2	5:AE:155:LYS:O	2.13	0.48
5:AE:255:LEU:HD21	5:AE:280:ILE:HG21	1.95	0.48
5:AE:282:ARG:HG3	5:AE:313:ASP:OD2	2.14	0.48
5:AE:306:ASN:O	5:AE:308:LEU:N	2.44	0.48
6:AF:208:MET:HG3	19:j:425:TRP:HH2	1.78	0.48
7:AG:124:GLU:HA	16:g:11:ARG:HD3	1.95	0.48
7:AG:213:GLU:OE1	16:g:230:ARG:CD	2.59	0.48
8:AH:104:ARG:NH1	12:AL:142:U:O2'	2.46	0.48
8:AH:185:SER:HB2	32:w:176:LEU:CD2	2.42	0.48
11:AK:295:PRO:HB3	11:AK:297:HIS:CE1	2.48	0.48
12:AL:33:A:H61	12:AL:672:U:H1'	1.78	0.48
12:AL:420:A:C4	19:j:180:VAL:HG11	2.48	0.48
12:AL:509:A:H3'	12:AL:510:U:C6	2.49	0.48
12:AL:1061:U:H2'	12:AL:1062:A:C8	2.49	0.48
12:AL:1177:A:HO2'	12:AL:1178:A:P	2.36	0.48
12:AL:1320:A:OP2	25:p:46:GLN:NE2	2.47	0.48
12:AL:1521:U:H2'	12:AL:1522:A:C8	2.49	0.48
21:l:2:LEU:HD22	21:l:101:LEU:HD21	1.95	0.48
21:l:66:HIS:HE1	33:x:137:LEU:CB	2.19	0.48
24:o:159:LYS:H	24:o:229:HIS:HD2	1.61	0.48
26:q:135:LYS:O	26:q:136:ALA:C	2.55	0.48
31:v:4:GLY:O	31:v:28:SER:HB3	2.13	0.48
37:1:117:TYR:HB2	38:2:67:ILE:HD13	1.95	0.48
39:3:99:PRO:O	62:Q:204:ARG:NH1	2.46	0.48
46:A:48:A:N1	46:A:1944:C:O2'	2.35	0.48
46:A:430:A:C6	46:A:460:G:C2	3.02	0.48
46:A:770:A:C6	46:A:771:U:C4	3.02	0.48
46:A:834:A:O2'	46:A:835:A:H8	1.94	0.48
46:A:1010:A:H1'	46:A:1011:A:OP2	2.13	0.48
46:A:1323:U:N3	46:A:1324:U:C4	2.82	0.48
46:A:1411:A:N7	61:P:58:VAL:CB	2.75	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1702:C:C4	46:A:1703:U:C4	3.02	0.48
46:A:1998:U:C2	46:A:1999:U:C6	3.02	0.48
46:A:2097:U:H2'	46:A:2098:U:C6	2.49	0.48
46:A:2413:A:H2'	46:A:2414:U:C6	2.49	0.48
46:A:2599:A:H5'	46:A:2601:A:H1'	1.95	0.48
46:A:2758:U:H2'	46:A:2759:U:C6	2.49	0.48
46:A:2979:U:C2	46:A:2980:A:C8	3.02	0.48
46:A:3176:U:H2'	46:A:3177:A:C8	2.48	0.48
63:R:206:LYS:HG2	63:R:264:LEU:HD11	1.95	0.48
5:AE:86:GLU:O	5:AE:87:PRO:C	2.56	0.48
5:AE:143:GLN:HA	5:AE:183:HIS:HB3	1.96	0.48
5:AE:222:LYS:O	5:AE:223:ASN:HB2	2.13	0.48
6:AF:46:HIS:HD1	6:AF:48:LYS:HD3	1.78	0.48
9:AI:156:LYS:CE	9:AI:346:SER:HA	2.44	0.48
9:AI:164:HIS:NE2	9:AI:290:THR:HG21	2.29	0.48
11:AK:292:TYR:OH	24:o:179:ASN:OD1	2.31	0.48
12:AL:301:A:C5	12:AL:302:U:C4	3.01	0.48
12:AL:404:U:C2	12:AL:405:A:C8	3.02	0.48
12:AL:478:U:H5"	19:j:406:TRP:CD1	2.48	0.48
12:AL:558:A:H2'	12:AL:559:U:O4'	2.13	0.48
12:AL:784:A:C2	33:x:107:GLY:O	2.65	0.48
12:AL:850:G:C6	12:AL:863:G:C6	3.01	0.48
12:AL:1000:U:H2'	12:AL:1001:U:C6	2.49	0.48
12:AL:1043:A:C6	12:AL:1386:A:C6	3.02	0.48
12:AL:1639:A:C3'	17:h:150:GLN:NE2	2.75	0.48
19:j:159:GLU:HB2	19:j:421:PHE:CE1	2.49	0.48
25:p:66:GLY:O	25:p:67:TYR:C	2.57	0.48
30:u:85:GLU:O	30:u:88:VAL:HG23	2.13	0.48
32:w:57:LEU:C	32:w:58:VAL:HG22	2.38	0.48
32:w:184:ASP:O	32:w:188:THR:HG23	2.13	0.48
32:w:223:LEU:HA	32:w:226:LYS:HB2	1.95	0.48
33:x:135:ILE:O	33:x:136:GLY:C	2.56	0.48
46:A:174:G:N2	46:A:205:A:N7	2.62	0.48
46:A:341:A:H61	46:A:360:A:H61	1.62	0.48
46:A:643:U:H5"	70:Y:61:SER:OG	2.13	0.48
46:A:954:A:H61	46:A:1094:U:H5	1.59	0.48
46:A:1306:A:C5	46:A:1598:A:C6	3.02	0.48
46:A:1367:A:H61	46:A:1398:G:H1'	1.79	0.48
46:A:1698:C:O2'	47:B:319:GLY:HA2	2.14	0.48
46:A:1702:C:H2'	46:A:1703:U:H6	1.78	0.48
46:A:1727:A:H3'	47:B:290:GLN:HB3	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2056:A:H2'	46:A:2056:A:N3	2.28	0.48
46:A:2733:A:O2'	46:A:2734:A:H5'	2.14	0.48
46:A:2750:A:C2'	46:A:2751:G:H5'	2.44	0.48
55:J:112:PRO:O	55:J:114:TYR:N	2.47	0.48
55:J:147:LEU:HA	55:J:163:LEU:HD13	1.96	0.48
63:R:283:LEU:O	63:R:284:GLU:C	2.56	0.48
75:e:101:LEU:H	75:e:101:LEU:HD13	1.78	0.48
4:AD:122:PHE:CZ	7:AG:174:TYR:C	2.92	0.48
4:AD:226:MET:O	4:AD:229:GLN:N	2.47	0.48
5:AE:94:VAL:HA	5:AE:97:LEU:CD1	2.42	0.48
5:AE:132:ALA:HA	5:AE:135:THR:HG23	1.95	0.48
7:AG:122:LEU:CD1	16:g:36:ILE:CD1	2.91	0.48
7:AG:217:LEU:HD21	16:g:273:MET:HE3	1.85	0.48
11:AK:111:GLY:C	18:i:172:TYR:CD2	2.92	0.48
12:AL:268:G:C6	12:AL:269:A:C6	3.01	0.48
12:AL:1096:C:H41	29:t:20:ARG:HH22	1.62	0.48
12:AL:1180:U:H2'	12:AL:1181:A:C8	2.49	0.48
12:AL:1266:C:H1'	12:AL:1433:U:O2	2.13	0.48
16:g:200:ILE:CD1	16:g:287:LYS:HD3	2.19	0.48
18:i:209:LYS:HE2	18:i:209:LYS:HB2	1.50	0.48
22:m:123:ARG:O	22:m:125:GLY:N	2.47	0.48
27:r:115:CYS:O	27:r:115:CYS:SG	2.72	0.48
30:u:88:VAL:O	30:u:89:LEU:HD23	2.14	0.48
31:v:72:THR:HG22	31:v:76:ILE:HG13	1.96	0.48
32:w:190:LEU:HD13	32:w:225:ARG:CG	2.44	0.48
39:3:64:HIS:CB	46:A:1362:C:H4'	2.44	0.48
46:A:438:U:C2	46:A:439:A:C8	3.02	0.48
46:A:676:A:H2'	46:A:677:C:C6	2.48	0.48
46:A:1647:G:O2'	46:A:1649:C:H5"	2.14	0.48
46:A:2083:U:C2	46:A:2084:G:C8	3.02	0.48
46:A:2595:U:H2'	46:A:2596:G:C8	2.49	0.48
46:A:2983:U:H3'	46:A:2984:A:H8	1.79	0.48
46:A:3019:U:C5'	65:T:35:ARG:HH21	2.27	0.48
51:F:115:THR:HG23	51:F:116:GLU:HG2	1.96	0.48
3:AC:49:LEU:O	3:AC:53:THR:HG23	2.14	0.47
3:AC:86:ILE:HG21	17:h:162:ALA:CB	2.43	0.47
3:AC:228:ASP:HB3	3:AC:232:LEU:HD23	1.96	0.47
4:AD:66:THR:O	4:AD:70:GLU:N	2.47	0.47
4:AD:168:PHE:HB2	4:AD:170:TRP:HE1	1.79	0.47
5:AE:219:LEU:HD23	5:AE:219:LEU:N	2.29	0.47
6:AF:129:PHE:O	6:AF:132:ARG:HB3	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:3:ILE:HG23	23:n:20:ARG:HH12	1.71	0.47
8:AH:162:GLN:HG3	23:n:60:PHE:CD1	2.47	0.47
9:AI:50:ARG:HD2	9:AI:52:THR:HG23	1.95	0.47
9:AI:225:GLU:H	9:AI:284:LYS:HZ2	1.62	0.47
9:AI:365:ASP:O	9:AI:368:VAL:HG23	2.13	0.47
11:AK:222:LEU:HB2	11:AK:258:LEU:HD21	1.96	0.47
11:AK:304:ALA:HA	24:o:152:GLY:CA	2.42	0.47
12:AL:617:U:C2	12:AL:656:G:C2	3.02	0.47
12:AL:1285:A:H2'	12:AL:1286:A:C8	2.48	0.47
12:AL:1428:U:OP2	29:t:76:ASN:ND2	2.47	0.47
12:AL:1501:A:H2'	12:AL:1502:U:O4'	2.14	0.47
17:h:304:ARG:HG2	17:h:305:ALA:N	2.29	0.47
21:l:13:ASN:C	21:l:15:ASN:N	2.71	0.47
21:l:47:ILE:HG12	21:l:65:TYR:CD2	2.49	0.47
21:l:119:SER:HB3	21:l:122:GLU:CD	2.39	0.47
24:o:263:LYS:O	24:o:265:GLY:N	2.40	0.47
25:p:93:PHE:CD2	25:p:94:VAL:HG23	2.49	0.47
28:s:6:LEU:CD1	67:V:96:GLY:N	2.76	0.47
29:t:111:LYS:HB2	29:t:111:LYS:HE3	1.59	0.47
33:x:92:PHE:N	33:x:92:PHE:CD1	2.81	0.47
34:y:53:ILE:O	34:y:59:TYR:HA	2.14	0.47
42:6:104:HIS:ND1	46:A:2422:A:H4'	2.29	0.47
46:A:51:G:H2'	46:A:52:A:H8	1.79	0.47
46:A:250:U:H2'	46:A:251:U:H6	1.79	0.47
46:A:717:U:H2'	46:A:719:U:O4'	2.14	0.47
46:A:1075:A:H3'	46:A:1076:U:H6	1.79	0.47
46:A:1212:A:C2	46:A:1213:A:C8	3.02	0.47
46:A:1362:C:C2	46:A:1363:C:C5	3.01	0.47
46:A:1549:U:C5	61:P:62:ILE:CD1	2.95	0.47
46:A:1773:U:H2'	46:A:1774:U:H6	1.79	0.47
46:A:2024:A:N6	46:A:2073:U:O2	2.47	0.47
46:A:2239:A:H2'	46:A:2240:U:O4'	2.14	0.47
46:A:3124:A:H2'	46:A:3124:A:N3	2.29	0.47
55:J:157:MET:HB2	55:J:157:MET:HE3	1.71	0.47
63:R:51:LYS:HG2	63:R:57:VAL:HG13	1.95	0.47
63:R:63:ILE:HB	63:R:85:ILE:HG22	1.94	0.47
63:R:160:LYS:HD3	63:R:161:GLN:N	2.29	0.47
75:e:84:ARG:O	75:e:87:ILE:HG22	2.14	0.47
76:f:18:GLN:H	76:f:47:SER:HB2	1.79	0.47
76:f:63:LYS:C	76:f:65:ASP:H	2.22	0.47
2:AB:89:LYS:HE3	12:AL:388:G:OP1	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:65:HIS:HB3	12:AL:1640:U:H1'	1.95	0.47
3:AC:77:SER:HB2	7:AG:190:ALA:HB1	1.96	0.47
4:AD:33:SER:O	4:AD:34:ILE:C	2.57	0.47
5:AE:123:TRP:C	5:AE:125:GLY:N	2.72	0.47
5:AE:258:ILE:CB	5:AE:303:GLN:HB2	2.31	0.47
6:AF:61:PHE:HB2	19:j:29:TYR:CZ	2.49	0.47
6:AF:175:TYR:O	6:AF:177:LEU:N	2.41	0.47
6:AF:216:PHE:HZ	19:j:435:ALA:HB1	1.79	0.47
6:AF:307:TYR:CA	31:v:63:LYS:HD2	2.44	0.47
7:AG:231:MET:HA	7:AG:234:ARG:HB3	1.96	0.47
8:AH:21:ILE:HG12	31:v:74:TYR:HB2	1.94	0.47
8:AH:103:ARG:CD	31:v:100:TRP:CH2	2.76	0.47
8:AH:180:ARG:HH11	8:AH:181:ASN:HB2	1.78	0.47
9:AI:164:HIS:O	9:AI:168:VAL:HG23	2.14	0.47
10:AJ:62:LEU:N	10:AJ:62:LEU:HD23	2.28	0.47
12:AL:109:A:C6	12:AL:333:A:C5	3.01	0.47
12:AL:511:A:N6	12:AL:608:U:O2'	2.45	0.47
12:AL:539:C:C2	12:AL:540:A:C8	3.02	0.47
12:AL:606:U:H2'	12:AL:607:U:H6	1.78	0.47
12:AL:654:G:C6	12:AL:655:A:C5	3.02	0.47
12:AL:1050:C:H2'	12:AL:1051:A:H8	1.79	0.47
12:AL:1163:A:N3	24:o:256:TYR:OH	2.47	0.47
12:AL:1361:U:O2'	28:s:12:GLY:HA3	2.13	0.47
13:AM:33:U:C4	24:o:278:ARG:HD3	2.49	0.47
16:g:75:THR:HG22	35:z:177:TYR:HH	1.77	0.47
18:i:192:CYS:HB2	18:i:203:VAL:O	2.14	0.47
18:i:204:THR:CG2	20:k:84:ASN:HD21	2.25	0.47
19:j:396:PRO:HA	19:j:399:ARG:HE	1.79	0.47
19:j:411:VAL:CG2	19:j:414:ARG:HB2	2.44	0.47
21:l:67:PHE:HE2	21:l:69:MET:HE3	1.78	0.47
27:r:84:ARG:HE	27:r:88:GLY:HA2	1.79	0.47
28:s:67:ILE:HD11	67:V:96:GLY:N	2.26	0.47
30:u:65:ASP:OD2	30:u:68:LEU:HB2	2.14	0.47
30:u:95:ILE:O	30:u:98:VAL:HB	2.13	0.47
30:u:105:ILE:CG2	30:u:109:LYS:HE2	2.43	0.47
32:w:52:SER:OG	32:w:74:ILE:HD13	2.13	0.47
32:w:128:ILE:C	32:w:130:THR:N	2.72	0.47
45:9:42:ARG:CB	46:A:25:A:H3'	2.44	0.47
46:A:11:G:C2	46:A:12:A:C8	3.03	0.47
46:A:102:A:C6	46:A:103:U:C4	3.02	0.47
46:A:147:C:O2'	46:A:156:A:N3	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:149:A:C6	46:A:1371:A:C5	3.02	0.47
46:A:352:A:C6	46:A:353:A:C5	3.02	0.47
46:A:659:G:N2	46:A:1400:U:H1'	2.29	0.47
46:A:877:U:H2'	46:A:878:G:C8	2.49	0.47
46:A:1019:G:C6	46:A:1021:A:H1'	2.50	0.47
46:A:1215:A:H5"	66:U:69:ARG:HG2	1.96	0.47
46:A:1513:A:H2'	46:A:1514:U:C6	2.49	0.47
46:A:1676:U:O2'	46:A:1677:A:H5'	2.14	0.47
46:A:1696:A:H2'	46:A:1697:C:C6	2.49	0.47
46:A:2019:A:H2'	46:A:2020:U:O2	2.14	0.47
46:A:2058:U:H2'	46:A:2058:U:O2	2.13	0.47
46:A:2625:A:H2'	46:A:2626:C:C6	2.49	0.47
46:A:2698:A:H2'	46:A:2699:A:H8	1.77	0.47
46:A:2805:A:O2'	46:A:2806:A:H5'	2.15	0.47
46:A:2947:C:H1'	48:C:251:SER:OG	2.15	0.47
46:A:3135:U:O2'	46:A:3136:U:P	2.73	0.47
47:B:171:GLU:HB2	47:B:180:ILE:HD11	1.95	0.47
54:I:72:ILE:HD12	54:I:99:ILE:HG21	1.96	0.47
63:R:258:THR:OG1	63:R:258:THR:O	2.31	0.47
75:e:168:GLY:HA3	75:e:178:VAL:CG1	2.44	0.47
2:AB:85:LYS:O	2:AB:88:LEU:HG	2.13	0.47
3:AC:74:PRO:HB3	7:AG:201:PHE:CE1	2.49	0.47
3:AC:162:LYS:O	3:AC:164:PHE:N	2.47	0.47
4:AD:217:ASN:HB3	4:AD:251:PHE:CD2	2.49	0.47
5:AE:107:TYR:OH	5:AE:151:PHE:HB3	2.14	0.47
5:AE:215:TRP:CG	5:AE:245:LEU:HD22	2.48	0.47
6:AF:50:HIS:HB3	12:AL:491:U:O4	2.13	0.47
6:AF:58:MET:CG	19:j:26:PHE:CG	2.61	0.47
7:AG:75:TYR:HD2	8:AH:182:TYR:CD2	2.12	0.47
9:AI:69:LEU:N	9:AI:70:GLN:HE21	2.12	0.47
9:AI:355:LEU:O	9:AI:356:PRO:C	2.51	0.47
11:AK:182:VAL:HG21	25:p:148:ILE:CB	2.43	0.47
12:AL:46:A:N1	12:AL:407:U:C2	2.82	0.47
12:AL:409:G:C6	12:AL:509:A:C6	3.02	0.47
12:AL:416:A:C4	12:AL:417:U:C6	3.01	0.47
12:AL:419:U:C2	12:AL:420:A:C8	3.01	0.47
12:AL:786:U:H5"	33:x:111:HIS:CA	2.45	0.47
12:AL:846:A:C5	12:AL:867:A:C2	3.02	0.47
12:AL:912:A:H1'	12:AL:913:U:OP1	2.14	0.47
12:AL:1040:C:HO2'	29:t:86:PHE:HA	1.76	0.47
12:AL:1176:U:H4'	12:AL:1177:A:H5'	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1282:A:O2'	24:o:181:ARG:NH2	2.47	0.47
12:AL:1381:U:OP2	34:y:11:SER:HA	2.14	0.47
15:Z:31:LEU:HD13	22:m:246:LEU:HB2	1.95	0.47
17:h:144:GLN:HG2	24:o:120:LEU:HD13	1.96	0.47
17:h:194:HIS:CE1	17:h:195:LEU:HG	2.49	0.47
17:h:276:ILE:CD1	24:o:47:ALA:CA	2.48	0.47
26:q:148:SER:O	26:q:151:MET:HB3	2.14	0.47
30:u:43:ALA:O	30:u:46:ARG:HB2	2.14	0.47
32:w:42:ASP:OD1	32:w:42:ASP:N	2.46	0.47
35:z:127:ASN:HB2	35:z:129:ILE:HG13	1.95	0.47
46:A:143:A:H2'	46:A:144:A:H8	1.80	0.47
46:A:201:A:C2'	46:A:202:A:C8	2.97	0.47
46:A:249:C:O2'	46:A:250:U:H5'	2.14	0.47
46:A:627:C:O2'	46:A:628:A:H5'	2.14	0.47
46:A:632:U:O2	46:A:647:A:H2	1.97	0.47
46:A:754:A:C2	46:A:755:U:C2	3.03	0.47
46:A:852:U:H2'	46:A:853:U:H6	1.79	0.47
46:A:1608:U:H4'	48:C:201:HIS:CE1	2.49	0.47
46:A:1609:U:OP1	48:C:201:HIS:HD2	1.97	0.47
46:A:1610:A:OP1	48:C:199:HIS:CD2	2.68	0.47
46:A:1961:G:O5'	49:D:109:LYS:CE	2.62	0.47
46:A:2416:U:H6	46:A:2416:U:O5'	1.97	0.47
46:A:2694:G:H5"	46:A:2695:A:OP1	2.14	0.47
46:A:2718:C:H2'	46:A:2719:A:C8	2.49	0.47
46:A:2843:G:H2'	46:A:2843:G:N3	2.30	0.47
46:A:2862:G:N2	46:A:2864:G:H3'	2.29	0.47
46:A:2918:A:C4	46:A:2919:U:C5	3.02	0.47
46:A:3004:A:C4	46:A:3005:A:C8	3.02	0.47
46:A:3292:A:H3'	46:A:3293:U:C5	2.49	0.47
2:AB:118:LYS:CB	12:AL:354:U:OP1	2.62	0.47
3:AC:215:GLN:HB2	3:AC:217:TRP:CH2	2.49	0.47
4:AD:14:SER:C	4:AD:16:ARG:H	2.21	0.47
4:AD:31:LEU:HD11	4:AD:100:CYS:HB3	1.96	0.47
4:AD:199:LEU:CD2	16:g:214:LEU:CD2	2.84	0.47
5:AE:190:MET:CG	5:AE:283:THR:HG21	2.39	0.47
6:AF:321:TYR:HE1	31:v:13:PHE:CZ	2.27	0.47
7:AG:22:LEU:HD21	20:k:139:TYR:HE2	1.77	0.47
7:AG:75:TYR:HB2	8:AH:183:ASN:OD1	2.14	0.47
7:AG:147:GLU:OE2	16:g:14:GLN:HG3	2.05	0.47
8:AH:16:PRO:N	31:v:35:LYS:HE3	2.29	0.47
8:AH:155:THR:HG23	23:n:40:TYR:HE2	1.77	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:108:GLY:HA3	12:AL:1352:U:H3'	1.95	0.47
12:AL:80:U:C3'	12:AL:81:U:H6	2.13	0.47
12:AL:479:A:C6	19:j:181:LEU:HD13	2.50	0.47
12:AL:806:A:H1'	30:u:201:ASN:ND2	2.29	0.47
12:AL:904:U:H2'	12:AL:905:A:C2	2.50	0.47
12:AL:1416:U:C3'	24:o:270:ARG:HD3	2.38	0.47
12:AL:1421:C:H2'	12:AL:1422:G:C8	2.49	0.47
12:AL:1444:A:H2'	12:AL:1445:U:O4'	2.14	0.47
12:AL:1514:U:C2	12:AL:1515:A:C8	3.02	0.47
15:Z:37:LEU:HD22	15:Z:54:LEU:HD22	1.97	0.47
16:g:229:GLY:HA3	16:g:247:ILE:HG12	1.96	0.47
18:i:148:LYS:HE3	20:k:79:HIS:N	2.19	0.47
19:j:55:TYR:HE1	19:j:111:ARG:HH22	1.62	0.47
19:j:92:PRO:HD2	19:j:459:ARG:O	2.13	0.47
23:n:119:LYS:O	23:n:153:ARG:NH1	2.47	0.47
25:p:56:ASP:OD1	25:p:109:ARG:NH1	2.48	0.47
26:q:205:LYS:O	35:z:136:GLN:NE2	2.47	0.47
28:s:100:ARG:HD2	28:s:102:GLN:HG2	1.96	0.47
32:w:146:GLU:HA	32:w:149:GLN:CD	2.39	0.47
32:w:189:ARG:HA	32:w:192:GLU:HG2	1.96	0.47
42:6:27:VAL:HG11	42:6:195:ALA:HB2	1.95	0.47
46:A:33:A:C6	46:A:34:U:C4	3.02	0.47
46:A:152:G:C4	46:A:153:G:C8	3.02	0.47
46:A:212:A:H2'	46:A:213:U:C6	2.49	0.47
46:A:292:G:OP1	55:J:105:TRP:CH2	2.67	0.47
46:A:312:A:C6	62:Q:259:SER:OG	2.63	0.47
46:A:523:U:C5'	55:J:194:ARG:NH1	2.77	0.47
46:A:628:A:H2'	46:A:629:G:O4'	2.15	0.47
46:A:826:A:C5	46:A:827:U:C4	3.01	0.47
46:A:1925:U:H2'	46:A:1926:A:H8	1.75	0.47
46:A:1981:U:C4	46:A:2263:U:C4	3.02	0.47
46:A:2093:A:N1	52:G:29:ARG:NH2	2.62	0.47
46:A:2257:U:C2	46:A:2258:C:C5	3.02	0.47
46:A:2452:U:H1'	50:E:230:ARG:HG3	1.97	0.47
46:A:2574:G:C2'	46:A:2575:A:H5'	2.45	0.47
46:A:2797:U:C2	51:F:194:TYR:OH	2.46	0.47
58:M:76:VAL:HG21	58:M:94:ILE:HD11	1.96	0.47
66:U:15:VAL:CG1	66:U:19:THR:HB	2.44	0.47
1:AA:90:LYS:HE3	12:AL:1612:C:N4	2.21	0.47
1:AA:110:GLY:O	1:AA:111:ARG:HB2	2.14	0.47
2:AB:86:TYR:O	2:AB:87:ILE:C	2.54	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:191:ILE:HG22	4:AD:223:TYR:HE1	1.79	0.47
4:AD:115:ALA:C	4:AD:117:LEU:N	2.72	0.47
6:AF:308:LYS:O	31:v:63:LYS:O	2.32	0.47
6:AF:330:LYS:HA	12:AL:404:U:H4'	1.96	0.47
7:AG:120:LYS:CE	16:g:14:GLN:HB2	2.44	0.47
8:AH:206:ALA:O	8:AH:207:ASN:HB3	2.15	0.47
9:AI:49:LYS:C	9:AI:51:VAL:N	2.72	0.47
9:AI:143:VAL:HG12	9:AI:145:LYS:HB2	1.96	0.47
9:AI:186:GLY:HA2	9:AI:305:TYR:CE1	2.49	0.47
9:AI:431:PHE:C	9:AI:433:SER:H	2.22	0.47
11:AK:218:LYS:HE3	11:AK:270:PHE:HD2	1.80	0.47
11:AK:298:TRP:CZ2	24:o:175:GLU:HB2	2.49	0.47
12:AL:15:A:H4'	12:AL:16:G:OP1	2.15	0.47
12:AL:258:G:C2	12:AL:259:G:C8	3.02	0.47
12:AL:674:A:C6	12:AL:676:G:C5	3.03	0.47
12:AL:786:U:H5"	33:x:111:HIS:HA	1.96	0.47
12:AL:836:U:C2	12:AL:837:A:N7	2.82	0.47
12:AL:1375:U:H2'	12:AL:1375:U:O2	2.13	0.47
12:AL:1634:C:H2'	12:AL:1635:U:C6	2.50	0.47
16:g:36:ILE:HB	16:g:63:LEU:CD2	2.44	0.47
18:i:343:SER:O	18:i:345:THR:HG23	2.14	0.47
19:j:89:LYS:HD3	19:j:461:GLY:HA3	1.95	0.47
19:j:438:PRO:HG2	19:j:441:LEU:HD12	1.96	0.47
21:l:38:VAL:CB	30:u:141:ILE:CG1	2.93	0.47
22:m:128:GLU:O	22:m:132:THR:HG23	2.14	0.47
25:p:71:ILE:O	25:p:72:PRO:C	2.57	0.47
28:s:55:ILE:HA	28:s:58:ILE:HD12	1.96	0.47
30:u:109:LYS:HE3	30:u:131:LEU:HD11	1.97	0.47
32:w:164:LEU:HD13	32:w:164:LEU:O	2.15	0.47
34:y:33:ILE:O	34:y:35:THR:HG23	2.14	0.47
34:y:59:TYR:N	34:y:59:TYR:CD1	2.82	0.47
36:0:73:ARG:HA	46:A:3093:U:H5	1.79	0.47
46:A:46:A:N7	46:A:2894:A:H2'	2.30	0.47
46:A:152:G:C2	46:A:153:G:C4	3.03	0.47
46:A:253:A:H5"	64:S:33:ALA:N	2.29	0.47
46:A:334:G:H2'	46:A:335:U:C6	2.50	0.47
46:A:687:U:H2'	46:A:688:U:C6	2.49	0.47
46:A:708:U:O2'	46:A:730:U:H5"	2.15	0.47
46:A:778:A:C8	46:A:778:A:H5'	2.50	0.47
46:A:844:A:C2	46:A:845:U:H1'	2.50	0.47
46:A:914:A:OP2	73:c:121:LYS:CE	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1010:A:O2'	46:A:1011:A:OP1	2.28	0.47
46:A:1031:U:H2'	46:A:1032:G:C8	2.50	0.47
46:A:1043:A:H2'	46:A:1043:A:N3	2.30	0.47
46:A:1276:U:H2'	46:A:1277:U:C6	2.49	0.47
46:A:1439:A:C2	46:A:1440:U:H1'	2.50	0.47
46:A:1656:G:O2'	46:A:1657:A:H5'	2.15	0.47
46:A:1686:U:H1'	46:A:1690:A:H62	1.79	0.47
46:A:1841:C:C4	46:A:1842:C:C4	3.02	0.47
46:A:2010:A:H2	46:A:2076:A:H61	1.61	0.47
46:A:2017:G:N2	46:A:2065:A:N6	2.56	0.47
46:A:2469:U:H6	46:A:2469:U:OP2	1.98	0.47
46:A:2667:A:C5	46:A:2668:C:C5	3.03	0.47
46:A:2910:A:H2'	46:A:2911:U:H6	1.79	0.47
46:A:2955:G:H1'	46:A:3057:A:N6	2.28	0.47
47:B:124:THR:HG22	47:B:153:ARG:CG	2.44	0.47
47:B:251:ILE:CG2	47:B:272:TYR:HB2	2.44	0.47
48:C:63:THR:HG22	48:C:87:VAL:HG22	1.95	0.47
57:L:151:SER:HA	68:W:106:SER:HA	1.95	0.47
2:AB:41:VAL:HB	2:AB:61:ASN:HA	1.97	0.47
4:AD:209:ASN:HD21	4:AD:260:PHE:HB2	1.79	0.47
4:AD:209:ASN:HD22	4:AD:265:VAL:CG2	2.28	0.47
5:AE:181:ILE:C	5:AE:183:HIS:N	2.73	0.47
5:AE:278:TYR:HE2	5:AE:313:ASP:CG	2.21	0.47
6:AF:61:PHE:CB	19:j:29:TYR:CZ	2.98	0.47
6:AF:61:PHE:CE2	19:j:29:TYR:CD1	3.03	0.47
6:AF:292:THR:O	6:AF:292:THR:OG1	2.29	0.47
8:AH:2:GLY:HA3	12:AL:299:U:OP2	2.15	0.47
8:AH:198:GLU:HG2	21:l:105:LEU:HD22	1.90	0.47
8:AH:224:PHE:HD2	21:l:18:LYS:CE	2.23	0.47
9:AI:226:LEU:CD2	9:AI:278:GLU:HG3	2.44	0.47
9:AI:423:GLU:O	9:AI:424:ASN:C	2.58	0.47
11:AK:65:ILE:HG21	11:AK:89:ALA:HB1	1.96	0.47
11:AK:99:VAL:HG21	18:i:171:TYR:CE2	2.49	0.47
11:AK:134:PHE:C	11:AK:136:GLU:H	2.23	0.47
12:AL:30:U:H2'	12:AL:31:U:H6	1.80	0.47
12:AL:34:G:C4'	19:j:486:LYS:HG3	2.44	0.47
12:AL:98:A:C3'	12:AL:99:U:H5"	2.45	0.47
12:AL:414:A:N7	12:AL:502:A:N7	2.63	0.47
12:AL:511:A:C2	12:AL:512:A:H1'	2.49	0.47
12:AL:632:C:H5"	12:AL:633:C:O4'	2.14	0.47
12:AL:801:U:H5'	33:x:130:ARG:HB3	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:h:247:LEU:HD13	24:o:45:TYR:CE2	2.40	0.47
18:i:367:LYS:N	18:i:371:ILE:O	2.45	0.47
19:j:419:LYS:HE2	19:j:420:PRO:HD2	1.97	0.47
20:k:40:ILE:CG2	25:p:22:VAL:CG1	2.80	0.47
20:k:201:ALA:O	20:k:204:ASN:N	2.46	0.47
21:l:46:GLY:HA2	21:l:65:TYR:CZ	2.50	0.47
28:s:92:ARG:NH2	28:s:104:THR:HG21	2.28	0.47
30:u:66:PRO:HG2	30:u:245:PHE:HD1	1.79	0.47
30:u:75:PHE:CE2	30:u:164:PHE:CE1	2.99	0.47
30:u:87:LEU:CG	32:w:114:ARG:HH12	2.26	0.47
33:x:120:LYS:O	33:x:123:ARG:HG2	2.14	0.47
46:A:213:U:C2'	46:A:214:A:H5"	2.44	0.47
46:A:276:U:H2'	46:A:277:U:H6	1.79	0.47
46:A:474:A:C2	46:A:475:U:C6	3.03	0.47
46:A:696:G:H5'	46:A:697:C:C5	2.49	0.47
46:A:703:U:C2	46:A:1283:G:N1	2.83	0.47
46:A:1144:U:H2'	46:A:1145:U:H5'	1.96	0.47
46:A:1438:U:C2	46:A:1482:A:N6	2.83	0.47
46:A:2611:U:OP1	72:b:137:LYS:HE2	2.14	0.47
46:A:2613:A:H4'	46:A:2614:U:OP2	2.15	0.47
46:A:2782:A:O2'	46:A:2783:U:H5'	2.14	0.47
46:A:2949:C:H2'	46:A:2950:A:H8	1.79	0.47
63:R:77:VAL:HG22	63:R:86:PHE:O	2.14	0.47
63:R:155:LYS:NZ	72:b:157:PHE:CD2	2.80	0.47
63:R:224:GLU:O	63:R:225:GLU:C	2.56	0.47
69:X:13:LEU:HB3	69:X:49:PHE:HB3	1.96	0.47
69:X:40:ASP:O	69:X:41:PRO:C	2.58	0.47
3:AC:208:THR:HA	3:AC:212:GLY:N	2.28	0.47
4:AD:123:ASN:HD22	16:g:105:ASN:HA	1.79	0.47
4:AD:210:PHE:C	4:AD:212:THR:H	2.22	0.47
5:AE:216:LYS:C	5:AE:216:LYS:HD2	2.39	0.47
5:AE:286:ASP:HB3	5:AE:315:TYR:HH	1.78	0.47
6:AF:127:ASN:O	6:AF:128:ILE:C	2.57	0.47
6:AF:128:ILE:O	6:AF:129:PHE:C	2.56	0.47
6:AF:153:LEU:HD12	6:AF:157:ILE:HG12	1.97	0.47
6:AF:314:VAL:HG22	8:AH:18:THR:HG1	1.71	0.47
7:AG:36:ILE:HG22	17:h:231:ARG:CG	2.44	0.47
7:AG:217:LEU:HB3	16:g:273:MET:HG3	1.97	0.47
8:AH:168:ARG:HG3	23:n:65:PRO:HB2	1.97	0.47
9:AI:230:TYR:HB3	9:AI:232:PHE:CZ	2.49	0.47
9:AI:280:SER:HA	9:AI:334:PHE:CD1	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:289:PHE:CZ	9:AI:327:ILE:HD12	2.49	0.47
9:AI:434:GLY:O	9:AI:435:ASN:HB2	2.14	0.47
12:AL:44:U:O2'	12:AL:45:A:OP2	2.32	0.47
12:AL:327:U:H5"	12:AL:1504:A:H5'	1.96	0.47
12:AL:417:U:H2'	12:AL:418:A:H8	1.80	0.47
12:AL:512:A:H2'	12:AL:513:A:H8	1.80	0.47
12:AL:515:A:C6	12:AL:516:A:C5	3.02	0.47
12:AL:524:A:C2	12:AL:525:A:C4	3.03	0.47
12:AL:618:G:C6	12:AL:649:A:C2	3.02	0.47
12:AL:664:G:H3'	12:AL:665:U:H6	1.80	0.47
12:AL:712:A:H2'	12:AL:713:U:C6	2.50	0.47
12:AL:757:U:O4	26:q:85:ASN:OD1	2.33	0.47
12:AL:781:A:H2'	12:AL:782:C:O4'	2.14	0.47
12:AL:789:A:C6	12:AL:799:A:C8	3.02	0.47
12:AL:805:U:H2'	12:AL:806:A:H8	1.77	0.47
12:AL:837:A:H2'	12:AL:838:G:C8	2.50	0.47
12:AL:1167:A:H2'	12:AL:1168:U:C6	2.50	0.47
12:AL:1176:U:H4'	12:AL:1177:A:O5'	2.14	0.47
12:AL:1258:U:C5	28:s:105:ARG:HB2	2.50	0.47
16:g:2:THR:O	16:g:3:LEU:C	2.58	0.47
17:h:132:LEU:HD11	17:h:145:GLU:HB3	1.97	0.47
17:h:269:TYR:CZ	24:o:39:PRO:HG2	2.49	0.47
18:i:88:ASN:ND2	25:p:53:GLU:CD	2.59	0.47
18:i:179:LEU:O	18:i:183:MET:HG2	2.15	0.47
19:j:27:ASN:HA	19:j:30:LYS:HG3	1.97	0.47
19:j:400:LYS:HD3	19:j:409:ASN:HB3	1.96	0.47
20:k:175:LYS:HA	20:k:252:CYS:O	2.15	0.47
20:k:243:ASN:O	20:k:244:HIS:C	2.58	0.47
21:l:15:ASN:O	21:l:16:ALA:C	2.58	0.47
22:m:137:ALA:O	22:m:141:VAL:HG23	2.14	0.47
22:m:239:ALA:O	22:m:240:HIS:HB2	2.14	0.47
25:p:96:ALA:C	25:p:98:SER:N	2.70	0.47
30:u:141:ILE:HG22	30:u:141:ILE:O	2.14	0.47
30:u:206:ARG:HG3	30:u:247:MET:HG3	1.97	0.47
31:v:65:VAL:HG12	31:v:67:LEU:H	1.79	0.47
32:w:108:LEU:O	32:w:109:ASP:C	2.56	0.47
33:x:103:VAL:C	33:x:105:SER:N	2.65	0.47
35:z:94:GLU:C	35:z:96:ALA:N	2.66	0.47
40:4:26:ILE:HG21	40:4:98:LEU:HD11	1.97	0.47
43:7:56:ILE:HD13	49:D:42:ALA:HB2	1.96	0.47
43:7:91:THR:HG23	43:7:135:VAL:HG22	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
44:8:189:ILE:HG22	44:8:194:LEU:HD23	1.96	0.47
46:A:9:U:C2'	46:A:10:A:H5'	2.45	0.47
46:A:11:G:N1	46:A:12:A:C5	2.83	0.47
46:A:42:A:H2'	46:A:43:U:O4'	2.14	0.47
46:A:125:U:O5'	46:A:125:U:H6	1.98	0.47
46:A:166:U:H2'	46:A:166:U:O2	2.13	0.47
46:A:168:A:N6	46:A:210:U:H3	2.12	0.47
46:A:220:A:H2'	46:A:220:A:N3	2.29	0.47
46:A:243:A:C6	46:A:244:A:N6	2.83	0.47
46:A:289:U:O2	55:J:119:LYS:NZ	2.48	0.47
46:A:368:U:H2'	46:A:369:A:H8	1.79	0.47
46:A:425:A:H5"	53:H:117:LYS:NZ	2.29	0.47
46:A:454:A:N3	46:A:1921:A:C6	2.83	0.47
46:A:564:A:H4'	46:A:565:A:H5'	1.96	0.47
46:A:649:C:O2	46:A:1881:A:H2	1.97	0.47
46:A:707:A:H2'	46:A:708:U:H6	1.78	0.47
46:A:746:A:H4'	46:A:747:U:OP1	2.14	0.47
46:A:789:A:N7	46:A:840:C:C4	2.83	0.47
46:A:869:U:O2'	46:A:870:C:H5'	2.15	0.47
46:A:887:G:H22	73:c:15:LEU:HD13	1.80	0.47
46:A:966:A:C6	46:A:1059:A:C6	3.02	0.47
46:A:1059:A:C4	46:A:1060:U:C5	3.03	0.47
46:A:1111:U:C3'	46:A:1112:A:H5"	2.35	0.47
46:A:1132:U:H6	46:A:1132:U:O5'	1.98	0.47
46:A:1163:A:C6	46:A:1164:U:C4	3.02	0.47
46:A:1205:U:H2'	46:A:1208:U:C4'	2.45	0.47
46:A:1423:A:H8	46:A:1423:A:P	2.38	0.47
46:A:1610:A:C2'	46:A:1611:A:H5'	2.45	0.47
46:A:1641:A:H2'	46:A:1642:A:C8	2.50	0.47
46:A:1672:G:H2'	46:A:1673:U:C6	2.50	0.47
46:A:1761:A:C5	46:A:1790:A:C6	3.02	0.47
46:A:1792:A:H2'	46:A:1793:U:C6	2.50	0.47
46:A:1971:A:H2'	46:A:1972:G:H8	1.78	0.47
46:A:1985:U:H2'	46:A:1986:A:H8	1.79	0.47
46:A:2075:U:H2'	46:A:2076:A:H8	1.76	0.47
46:A:2075:U:N3	46:A:2076:A:N6	2.61	0.47
46:A:2076:A:H2'	46:A:2077:A:O4'	2.13	0.47
46:A:2333:A:H5'	46:A:2334:U:OP2	2.15	0.47
46:A:2427:U:OP2	50:E:170:LYS:HE3	2.15	0.47
46:A:2427:U:OP2	50:E:170:LYS:CE	2.63	0.47
46:A:2427:U:C4	67:V:32:ILE:HD11	2.50	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2576:A:C6	46:A:2577:A:C6	3.03	0.47
46:A:2587:U:OP2	46:A:2589:A:N6	2.48	0.47
46:A:2812:G:C6	46:A:2813:U:C4	3.03	0.47
46:A:2942:A:H2'	46:A:2943:U:C6	2.49	0.47
46:A:2945:A:C6	46:A:3066:G:C6	3.02	0.47
46:A:3018:A:C5	46:A:3019:U:C4	3.02	0.47
46:A:3290:A:N7	46:A:3291:U:N3	2.63	0.47
47:B:310:ASN:C	47:B:312:ASP:H	2.22	0.47
47:B:311:ILE:HD12	47:B:311:ILE:N	2.24	0.47
47:B:318:LEU:HA	47:B:323:ARG:HD2	1.97	0.47
48:C:207:GLN:HB2	48:C:211:PRO:HG2	1.96	0.47
49:D:200:ILE:HD11	49:D:205:VAL:CG2	2.45	0.47
55:J:155:LEU:HB3	55:J:190:LEU:HD23	1.96	0.47
56:K:121:ILE:HG12	56:K:136:ASP:CG	2.40	0.47
63:R:42:SER:O	63:R:43:ALA:C	2.58	0.47
63:R:57:VAL:HB	63:R:58:SER:H	1.59	0.47
63:R:176:LEU:O	63:R:180:LEU:HB2	2.15	0.47
63:R:215:ARG:HD3	63:R:255:ASN:CB	2.44	0.47
65:T:55:PRO:HB3	74:d:170:ARG:HA	1.97	0.47
75:e:65:SER:CB	75:e:146:ASN:HB2	2.45	0.47
4:AD:62:LYS:HD3	4:AD:66:THR:HG21	1.97	0.47
5:AE:271:LEU:HB3	5:AE:304:TYR:OH	2.15	0.47
6:AF:148:VAL:O	6:AF:218:VAL:HA	2.14	0.47
6:AF:204:ASP:OD1	6:AF:204:ASP:N	2.47	0.47
7:AG:129:ASP:OD1	7:AG:129:ASP:N	2.48	0.47
7:AG:184:GLU:OE2	16:g:91:GLN:OE1	2.33	0.47
9:AI:50:ARG:NE	22:m:204:VAL:HB	2.30	0.47
11:AK:199:LYS:NZ	12:AL:1317:U:OP2	2.48	0.47
11:AK:298:TRP:HZ2	24:o:175:GLU:HB2	1.80	0.47
12:AL:416:A:C2	12:AL:417:U:C2	3.02	0.47
12:AL:544:A:C4	12:AL:545:U:H5	2.33	0.47
12:AL:1090:U:H2'	12:AL:1091:A:C8	2.50	0.47
12:AL:1358:U:C2	12:AL:1359:U:C5	3.03	0.47
13:AM:25:C:H2'	13:AM:26:A:H8	1.80	0.47
13:AM:36:U:O4	14:AN:8:A:C6	2.63	0.47
16:g:246:ALA:O	33:x:55:TYR:OH	2.26	0.47
17:h:225:THR:OG1	17:h:360:PRO:HB2	2.15	0.47
18:i:101:ASN:OD1	18:i:101:ASN:N	2.38	0.47
18:i:126:LYS:HZ1	18:i:130:MET:H	1.62	0.47
18:i:149:LEU:HD12	18:i:150:ASN:H	1.80	0.47
18:i:186:ASN:O	18:i:187:MET:C	2.58	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:l:50:LEU:HD13	21:l:54:MET:SD	2.54	0.47
21:l:50:LEU:HD21	21:l:64:ALA:HB3	1.95	0.47
21:l:85:LEU:O	21:l:86:LYS:C	2.56	0.47
22:m:90:PRO:HB3	24:o:241:LEU:HG	1.96	0.47
24:o:158:GLY:H	24:o:230:ALA:CB	2.24	0.47
26:q:184:VAL:HG13	35:z:113:PRO:CG	2.36	0.47
27:r:116:GLN:N	27:r:116:GLN:OE1	2.48	0.47
29:t:24:ASP:O	29:t:28:ARG:HG3	2.15	0.47
30:u:103:ALA:HB3	32:w:165:LEU:HD22	1.93	0.47
30:u:106:GLU:HA	30:u:109:LYS:HD2	1.97	0.47
31:v:24:VAL:HG12	31:v:39:VAL:HG13	1.96	0.47
32:w:67:SER:HB3	32:w:70:LYS:HB3	1.97	0.47
41:5:203:TRP:CZ3	41:5:260:VAL:HG23	2.50	0.47
43:7:96:ILE:HG21	43:7:100:VAL:HG12	1.97	0.47
46:A:44:U:O2'	46:A:45:U:P	2.73	0.47
46:A:208:A:H2'	46:A:209:U:C6	2.48	0.47
46:A:339:A:C2	46:A:340:A:C4	3.03	0.47
46:A:450:U:H2'	46:A:451:A:C8	2.49	0.47
46:A:506:A:C6	46:A:507:A:C5	3.03	0.47
46:A:788:C:H4'	46:A:789:A:H5"	1.97	0.47
46:A:817:G:H3'	46:A:818:U:C5	2.50	0.47
46:A:965:U:H2'	46:A:966:A:O4'	2.15	0.47
46:A:1351:A:C5	46:A:1555:A:C8	3.03	0.47
46:A:1851:U:O2'	46:A:1853:A:N7	2.41	0.47
46:A:2260:A:O2'	46:A:2261:A:H5'	2.15	0.47
46:A:2799:A:C2'	46:A:2800:A:H5'	2.45	0.47
46:A:2917:U:C2	46:A:2918:A:C8	3.02	0.47
46:A:3080:A:C6	46:A:3098:A:C5	3.03	0.47
47:B:210:ARG:HA	47:B:242:PRO:HD3	1.97	0.47
63:R:155:LYS:HZ2	72:b:157:PHE:HE2	1.56	0.47
1:AA:83:LYS:HD3	12:AL:1601:C:P	2.54	0.47
3:AC:77:SER:HA	3:AC:80:PHE:HB3	1.97	0.47
3:AC:114:GLU:HA	3:AC:253:TRP:CD1	2.50	0.47
3:AC:208:THR:O	3:AC:211:ASN:N	2.47	0.47
4:AD:155:LEU:HD22	16:g:210:LEU:HD12	1.97	0.47
4:AD:260:PHE:HZ	16:g:222:ILE:H	1.59	0.47
5:AE:137:ILE:HG21	5:AE:170:PHE:HZ	1.79	0.47
5:AE:325:LEU:H	5:AE:325:LEU:HG	1.46	0.47
7:AG:86:VAL:CG2	23:n:72:ARG:NH1	2.74	0.47
9:AI:148:ILE:HG23	9:AI:391:VAL:CG2	2.45	0.47
9:AI:175:ILE:HG23	9:AI:212:ILE:HG12	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:62:LEU:O	10:AJ:64:PRO:HD3	2.15	0.47
12:AL:302:U:O5'	12:AL:302:U:H6	1.97	0.47
12:AL:663:C:H2'	12:AL:664:G:O4'	2.15	0.47
12:AL:1071:A:C2	12:AL:1080:A:N6	2.83	0.47
12:AL:1071:A:C2	12:AL:1081:U:C4	3.02	0.47
12:AL:1135:G:H4'	15:Z:79:ASN:CB	2.44	0.47
14:AN:2:U:H4'	14:AN:3:G:O5'	2.14	0.47
16:g:200:ILE:HD12	16:g:287:LYS:HE2	1.80	0.47
17:h:359:ILE:O	17:h:360:PRO:C	2.57	0.47
18:i:88:ASN:CB	25:p:53:GLU:OE2	2.63	0.47
18:i:224:ILE:HG22	18:i:391:ILE:HD13	1.97	0.47
18:i:306:TYR:HE2	25:p:28:TYR:HE2	1.63	0.47
19:j:175:ASP:HA	19:j:178:GLN:HE21	1.80	0.47
20:k:288:GLU:O	20:k:289:VAL:C	2.57	0.47
21:l:88:ASP:O	21:l:89:PRO:C	2.57	0.47
22:m:87:LYS:HD3	22:m:87:LYS:O	2.15	0.47
23:n:126:LEU:O	23:n:154:VAL:N	2.45	0.47
25:p:103:GLU:HG2	29:t:113:GLY:HA3	1.91	0.47
26:q:205:LYS:NZ	26:q:209:VAL:O	2.37	0.47
28:s:51:SER:O	28:s:53:PRO:N	2.47	0.47
28:s:52:GLU:HB3	28:s:53:PRO:CD	2.45	0.47
28:s:68:GLU:C	28:s:70:ASP:N	2.72	0.47
32:w:181:SER:HA	32:w:184:ASP:OD2	2.15	0.47
35:z:108:VAL:HG22	35:z:116:SER:OG	2.14	0.47
35:z:135:SER:C	35:z:137:ARG:N	2.70	0.47
42:6:207:ILE:CD1	42:6:236:ILE:HD13	2.44	0.47
46:A:47:A:C2	46:A:423:A:C8	3.03	0.47
46:A:115:A:C8	62:Q:9:SER:HA	2.49	0.47
46:A:153:G:H3'	46:A:154:U:C6	2.49	0.47
46:A:175:U:C2	46:A:204:A:N1	2.83	0.47
46:A:213:U:H2'	46:A:214:A:H5"	1.97	0.47
46:A:235:A:C2	46:A:238:C:C4	3.02	0.47
46:A:315:A:N6	46:A:339:A:H3'	2.30	0.47
46:A:346:G:C6	46:A:347:A:C5	3.03	0.47
46:A:655:A:N3	47:B:325:ARG:NH1	2.63	0.47
46:A:790:A:C6	46:A:791:U:C4	3.03	0.47
46:A:900:A:C2	46:A:915:G:N3	2.83	0.47
46:A:900:A:C6	46:A:1220:G:C5	3.03	0.47
46:A:1299:G:O2'	46:A:1300:U:P	2.73	0.47
46:A:1348:U:H4'	46:A:1349:A:OP2	2.14	0.47
46:A:1389:U:C2	46:A:1390:A:C8	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1488:U:C4	46:A:1489:U:C4	3.03	0.47
46:A:1609:U:H5'	48:C:201:HIS:HE2	1.79	0.47
46:A:2318:U:H2'	46:A:2318:U:O2	2.15	0.47
46:A:2464:A:H2	50:E:229:ASN:HD21	1.61	0.47
46:A:2807:G:H2'	46:A:2808:A:O4'	2.14	0.47
46:A:2911:U:H2'	46:A:2912:C:O4'	2.14	0.47
46:A:3107:U:H2'	46:A:3108:U:H6	1.79	0.47
46:A:3124:A:H4'	46:A:3125:U:OP1	2.14	0.47
46:A:3146:U:O2'	46:A:3251:A:N1	2.41	0.47
47:B:153:ARG:HH11	47:B:153:ARG:HG3	1.80	0.47
50:E:20:LYS:O	63:R:81:LYS:HA	2.15	0.47
57:L:148:LEU:HD21	57:L:169:ASN:HB2	1.97	0.47
63:R:184:LEU:HD22	63:R:258:THR:HG22	1.95	0.47
63:R:259:SER:HB3	63:R:268:GLN:C	2.40	0.47
63:R:325:LEU:O	63:R:326:LYS:C	2.55	0.47
75:e:168:GLY:HA2	75:e:178:VAL:HG13	1.96	0.47
4:AD:305:VAL:HA	4:AD:308:ARG:HB2	1.97	0.47
5:AE:37:PHE:O	5:AE:38:ALA:C	2.58	0.47
5:AE:52:LEU:O	5:AE:56:LYS:N	2.48	0.47
6:AF:58:MET:HB2	19:j:11:LEU:HD13	1.97	0.47
9:AI:149:THR:O	9:AI:156:LYS:HG2	2.15	0.47
9:AI:224:ILE:HG23	9:AI:282:GLN:HG2	1.96	0.47
9:AI:248:LEU:HD12	9:AI:258:LEU:HD13	1.96	0.47
9:AI:325:MET:O	9:AI:328:ILE:N	2.48	0.47
9:AI:328:ILE:HG23	9:AI:343:LEU:HD11	1.96	0.47
9:AI:376:LYS:O	9:AI:377:PHE:C	2.57	0.47
9:AI:449:HIS:CE1	22:m:149:PRO:HG3	2.49	0.47
12:AL:15:A:H5"	20:k:261:LYS:HE3	1.96	0.47
12:AL:240:A:C5'	32:w:43:TYR:OH	2.52	0.47
12:AL:695:A:N6	12:AL:820:A:N6	2.63	0.47
12:AL:725:A:N6	12:AL:726:A:N6	2.63	0.47
16:g:28:LYS:H	33:x:53:THR:HG22	1.80	0.47
18:i:126:LYS:HE2	18:i:126:LYS:HA	1.98	0.47
21:l:115:LEU:HD21	33:x:95:ARG:HH12	1.79	0.47
23:n:127:ILE:HD11	23:n:153:ARG:HH11	1.80	0.47
25:p:85:ARG:HH21	29:t:115:TRP:CD1	2.30	0.47
26:q:96:GLU:HG2	26:q:97:ASP:N	2.28	0.47
29:t:39:LYS:O	29:t:40:SER:C	2.58	0.47
30:u:224:PRO:O	30:u:225:GLU:C	2.54	0.47
31:v:75:TRP:O	31:v:76:ILE:C	2.58	0.47
42:6:94:TRP:CH2	46:A:2334:U:C2	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:6:255:ALA:HB3	42:6:257:LEU:HD11	1.96	0.47
46:A:44:U:O5'	46:A:44:U:H6	1.98	0.47
46:A:56:U:H2'	46:A:57:C:H6	1.80	0.47
46:A:147:C:H2'	46:A:148:U:C6	2.50	0.47
46:A:246:U:O2'	46:A:247:A:H5'	2.15	0.47
46:A:603:U:H6	46:A:603:U:O5'	1.97	0.47
46:A:872:G:H2'	46:A:873:A:C8	2.50	0.47
46:A:937:U:C2	46:A:938:A:N7	2.82	0.47
46:A:1431:U:H2'	46:A:1432:A:H8	1.77	0.47
46:A:1439:A:C3'	46:A:1440:U:H6	2.26	0.47
46:A:1647:G:H3'	46:A:1647:G:N3	2.30	0.47
46:A:1738:A:O2'	46:A:1739:C:H5'	2.13	0.47
46:A:2278:G:O2'	46:A:2279:G:H5'	2.16	0.47
46:A:2461:A:N1	50:E:147:ARG:HD3	2.30	0.47
46:A:2600:U:H5	63:R:101:HIS:ND1	2.13	0.47
46:A:2969:U:C2	46:A:2970:A:C8	3.03	0.47
46:A:3019:U:H5"	65:T:35:ARG:NH2	2.29	0.47
46:A:3248:C:C2	46:A:3249:U:C5	3.03	0.47
75:e:65:SER:O	75:e:66:MET:HB3	2.14	0.47
75:e:132:LEU:HD13	75:e:170:LYS:HB2	1.97	0.47
3:AC:49:LEU:O	3:AC:52:ALA:N	2.48	0.46
4:AD:258:LYS:O	4:AD:260:PHE:N	2.49	0.46
5:AE:314:PRO:HG2	5:AE:315:TYR:H	1.80	0.46
6:AF:325:ASN:O	6:AF:327:ASP:N	2.41	0.46
7:AG:124:GLU:HB3	16:g:11:ARG:HH11	1.76	0.46
7:AG:180:ARG:HB3	16:g:208:TYR:CG	2.50	0.46
7:AG:204:SER:N	7:AG:207:GLU:HB2	2.28	0.46
7:AG:206:ILE:HB	16:g:92:GLU:OE1	2.15	0.46
9:AI:57:TYR:HB3	22:m:204:VAL:HG12	1.96	0.46
9:AI:400:ASN:O	9:AI:401:GLU:C	2.57	0.46
11:AK:283:LYS:HG2	11:AK:287:LYS:HE3	1.97	0.46
12:AL:492:G:N2	12:AL:498:A:C5	2.83	0.46
12:AL:522:A:OP2	31:v:21:TYR:OH	2.32	0.46
12:AL:632:C:C5	12:AL:643:G:H3'	2.51	0.46
12:AL:690:G:C6	12:AL:823:G:C8	3.02	0.46
12:AL:729:U:OP1	33:x:127:LYS:NZ	2.48	0.46
12:AL:802:A:H2'	12:AL:803:A:C8	2.49	0.46
12:AL:1045:C:O2	29:t:72:THR:O	2.33	0.46
12:AL:1504:A:H2'	12:AL:1505:U:C6	2.50	0.46
12:AL:1584:A:OP2	27:r:71:LYS:HA	2.15	0.46
13:AM:26:A:N6	13:AM:44:G:H1	2.13	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:h:164:ILE:HG22	17:h:167:VAL:HG11	1.96	0.46
17:h:175:PHE:O	17:h:177:PRO:HD3	2.14	0.46
17:h:247:LEU:HA	17:h:269:TYR:O	2.15	0.46
18:i:196:SER:C	18:i:198:TYR:H	2.23	0.46
19:j:49:LYS:HD3	19:j:50:GLN:HE22	1.79	0.46
19:j:52:THR:HA	19:j:469:PHE:CE2	2.50	0.46
20:k:63:THR:HG23	20:k:64:LYS:HG2	1.98	0.46
21:l:123:LEU:C	21:l:126:GLU:HB3	2.39	0.46
22:m:165:MET:HB3	22:m:166:THR:H	1.51	0.46
22:m:196:ILE:HG23	22:m:215:GLU:HG2	1.97	0.46
22:m:228:GLU:CD	22:m:229:LYS:N	2.73	0.46
23:n:1:MET:CG	23:n:31:LEU:HB2	2.36	0.46
24:o:62:LEU:HB3	24:o:63:ARG:HH22	1.80	0.46
24:o:245:ARG:HH11	24:o:245:ARG:HG2	1.79	0.46
26:q:128:THR:OG1	26:q:138:ARG:HB2	2.15	0.46
26:q:180:ILE:HG23	35:z:117:PHE:CD2	2.50	0.46
26:q:193:LYS:HA	35:z:110:LYS:NZ	2.29	0.46
26:q:197:LYS:CB	35:z:107:ILE:HA	2.45	0.46
28:s:34:LYS:H	28:s:34:LYS:HG3	1.55	0.46
32:w:190:LEU:HD13	32:w:225:ARG:HG2	1.96	0.46
35:z:114:ALA:O	35:z:115:GLU:C	2.57	0.46
37:1:121:PHE:HE1	46:A:2349:A:N6	2.11	0.46
37:1:346:LYS:HB2	46:A:2360:U:C4	2.51	0.46
37:1:365:VAL:CG2	46:A:546:A:H5"	2.44	0.46
46:A:58:A:OP2	61:P:229:ARG:NH2	2.48	0.46
46:A:275:A:C4	46:A:276:U:C5	3.03	0.46
46:A:488:A:H2'	46:A:489:A:C8	2.49	0.46
46:A:835:A:C8	46:A:838:C:N4	2.83	0.46
46:A:1312:G:HO2'	46:A:1313:G:P	2.38	0.46
46:A:1705:U:H1'	46:A:1709:G:H21	1.79	0.46
46:A:2024:A:C4	46:A:2074:A:N7	2.83	0.46
46:A:2198:U:C4	64:S:227:TYR:CE2	3.03	0.46
46:A:2259:U:C2	46:A:2260:A:C8	3.03	0.46
46:A:2354:A:H2'	46:A:2355:U:C6	2.50	0.46
46:A:2843:G:C8	46:A:2845:G:H2'	2.50	0.46
46:A:2847:U:C5	46:A:2848:G:C6	3.03	0.46
46:A:2962:U:H2'	46:A:2963:U:C6	2.49	0.46
46:A:3059:C:H2'	46:A:3060:U:O4'	2.15	0.46
46:A:3150:U:H1'	46:A:3151:A:OP1	2.14	0.46
55:J:81:PRO:HB2	59:N:140:ARG:HA	1.97	0.46
59:N:106:GLY:HA3	71:a:51:PRO:CA	2.43	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:R:259:SER:HB2	63:R:269:TYR:HD1	1.80	0.46
63:R:292:LEU:HD11	63:R:301:ILE:CG1	2.46	0.46
65:T:51:GLU:HA	74:d:110:LEU:HD23	1.96	0.46
3:AC:19:ALA:O	3:AC:23:ASN:N	2.47	0.46
5:AE:111:PRO:HA	5:AE:153:ILE:C	2.40	0.46
6:AF:177:LEU:HB3	6:AF:181:ARG:HG2	1.97	0.46
7:AG:11:LEU:HG	7:AG:12:GLN:H	1.80	0.46
7:AG:22:LEU:CD2	20:k:139:TYR:HD2	2.14	0.46
7:AG:22:LEU:HD21	20:k:205:LEU:CD1	2.45	0.46
9:AI:72:THR:OG1	22:m:146:ARG:NH2	2.49	0.46
9:AI:127:ARG:N	9:AI:131:THR:HG23	2.30	0.46
9:AI:144:LYS:HA	9:AI:146:PHE:CE1	2.50	0.46
9:AI:447:LEU:O	22:m:135:SER:CB	2.55	0.46
12:AL:233:C:O2'	31:v:27:ASN:ND2	2.37	0.46
12:AL:488:A:H2'	12:AL:489:A:C8	2.50	0.46
12:AL:810:A:O2'	12:AL:811:U:H5'	2.15	0.46
12:AL:1147:A:N7	17:h:274:ARG:NH1	2.63	0.46
12:AL:1215:A:O2'	12:AL:1216:A:O5'	2.33	0.46
15:Z:48:SER:HB3	15:Z:51:CYS:HB3	1.97	0.46
16:g:18:ASN:OD1	16:g:18:ASN:N	2.47	0.46
16:g:89:ARG:HA	16:g:92:GLU:HB3	1.97	0.46
16:g:282:GLU:O	16:g:293:MET:HA	2.14	0.46
18:i:90:MET:HA	18:i:93:TRP:CE3	2.50	0.46
20:k:293:ARG:NH2	23:n:42:GLN:HB3	2.29	0.46
21:l:7:GLY:C	21:l:8:LEU:HD23	2.41	0.46
22:m:197:VAL:HG13	22:m:208:PHE:CZ	2.51	0.46
22:m:203:ARG:HB3	22:m:211:ARG:NE	2.30	0.46
24:o:256:TYR:O	24:o:257:ARG:C	2.58	0.46
24:o:268:LYS:HE2	24:o:271:LYS:HD2	1.98	0.46
30:u:225:GLU:CG	32:w:88:TYR:CE1	2.96	0.46
32:w:40:ARG:O	32:w:40:ARG:HG3	2.14	0.46
32:w:41:ARG:NH1	32:w:42:ASP:O	2.48	0.46
32:w:46:HIS:NE2	32:w:48:GLU:HB3	2.30	0.46
34:y:37:ALA:O	34:y:38:ARG:HG3	2.15	0.46
40:4:11:ILE:O	41:5:291:LYS:N	2.43	0.46
46:A:106:A:C2	46:A:220:A:C6	3.03	0.46
46:A:300:A:C6	46:A:301:A:N7	2.83	0.46
46:A:352:A:H2'	46:A:353:A:C8	2.49	0.46
46:A:632:U:H2'	46:A:633:G:H8	1.81	0.46
46:A:646:C:H2'	46:A:647:A:H8	1.80	0.46
46:A:799:U:C2	46:A:800:A:C8	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:859:U:C2	46:A:860:A:C8	3.03	0.46
46:A:863:A:O2'	46:A:864:A:H5'	2.15	0.46
46:A:1486:U:C2	46:A:1487:A:C8	3.03	0.46
46:A:1551:C:OP1	61:P:115:LYS:HB2	2.14	0.46
46:A:1583:G:H8	46:A:1583:G:OP2	1.98	0.46
46:A:2016:A:C4'	46:A:2017:G:N2	2.78	0.46
46:A:2057:U:OP2	46:A:2057:U:H2'	2.15	0.46
46:A:2270:U:H2'	46:A:2271:U:O4'	2.16	0.46
46:A:2645:A:C5	46:A:2646:G:H1'	2.51	0.46
46:A:2650:G:O3'	50:E:19:PRO:HD2	2.15	0.46
46:A:2739:U:O4	46:A:2740:A:N6	2.48	0.46
46:A:2915:A:H2'	46:A:2916:U:C6	2.51	0.46
46:A:2979:U:H2'	46:A:2979:U:O2	2.14	0.46
46:A:3029:U:H1'	65:T:37:PRO:HG3	1.97	0.46
47:B:155:ILE:HD12	47:B:195:ILE:HG13	1.97	0.46
53:H:13:ALA:HB2	60:O:294:LEU:HD11	1.96	0.46
75:e:101:LEU:HD13	75:e:101:LEU:N	2.30	0.46
76:f:72:MET:HE3	76:f:72:MET:HB2	1.63	0.46
1:AA:86:LYS:HD3	1:AA:87:LYS:NZ	2.31	0.46
3:AC:229:HIS:ND1	4:AD:281:LEU:CD2	2.60	0.46
4:AD:130:PRO:HB2	4:AD:139:GLN:HB2	1.98	0.46
4:AD:258:LYS:CD	16:g:226:VAL:HG22	2.42	0.46
5:AE:184:PHE:O	5:AE:188:ASN:HB2	2.15	0.46
5:AE:197:ARG:NH2	5:AE:319:LEU:HD13	2.28	0.46
7:AG:192:GLU:OE1	16:g:215:LYS:HA	2.15	0.46
8:AH:32:ILE:HD13	8:AH:35:LYS:HD3	1.98	0.46
8:AH:132:LEU:HD23	8:AH:132:LEU:HA	1.78	0.46
9:AI:60:TRP:O	9:AI:61:THR:C	2.58	0.46
9:AI:450:ARG:OXT	22:m:114:LEU:HD12	2.15	0.46
11:AK:106:LYS:HG2	11:AK:114:GLY:HA3	1.97	0.46
11:AK:174:ARG:HG3	25:p:38:TYR:CD2	2.50	0.46
11:AK:218:LYS:HE3	11:AK:270:PHE:CD2	2.49	0.46
12:AL:327:U:H5	12:AL:334:U:H6	1.62	0.46
12:AL:379:U:O2	31:v:32:ARG:NH1	2.48	0.46
12:AL:723:A:H2'	12:AL:724:U:C6	2.49	0.46
12:AL:1024:A:N1	12:AL:1253:G:O2'	2.43	0.46
12:AL:1146:U:H2'	12:AL:1147:A:O4'	2.16	0.46
12:AL:1309:A:H2'	12:AL:1310:U:C6	2.51	0.46
12:AL:1412:C:C4'	24:o:270:ARG:O	2.64	0.46
13:AM:37:A:H2'	13:AM:38:A:C8	2.51	0.46
13:AM:72:C:H5'	13:AM:73:A:C8	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:g:12:ILE:CD1	17:h:195:LEU:HD22	2.41	0.46
16:g:12:ILE:HD13	17:h:195:LEU:HD22	1.97	0.46
17:h:257:ARG:O	17:h:258:GLY:C	2.58	0.46
17:h:263:ALA:HB1	17:h:268:GLY:C	2.40	0.46
17:h:295:ILE:HG13	17:h:299:ASP:HA	1.97	0.46
18:i:195:LEU:HB2	18:i:203:VAL:HG11	1.97	0.46
18:i:242:ARG:O	18:i:246:ASN:N	2.48	0.46
18:i:368:LEU:O	29:t:111:LYS:CB	2.57	0.46
24:o:233:LYS:O	24:o:236:VAL:HB	2.15	0.46
25:p:119:GLU:O	25:p:120:VAL:C	2.57	0.46
27:r:142:ARG:HB3	27:r:147:ALA:HB3	1.96	0.46
30:u:78:ARG:O	30:u:79:ILE:C	2.55	0.46
30:u:196:ARG:NH1	30:u:261:LYS:HE3	2.29	0.46
31:v:97:ASN:HD22	31:v:99:ALA:HB3	1.78	0.46
46:A:35:U:O2	46:A:3270:A:H2	1.99	0.46
46:A:344:A:C4	46:A:345:G:C8	3.03	0.46
46:A:373:U:H2'	46:A:374:U:H6	1.80	0.46
46:A:703:U:O2'	46:A:704:U:H5'	2.15	0.46
46:A:831:A:H2'	46:A:832:U:H6	1.80	0.46
46:A:1260:U:C2	46:A:1261:U:C5	3.03	0.46
46:A:1267:A:C6	46:A:1268:U:C4	3.03	0.46
46:A:1524:U:H2'	46:A:1525:A:C8	2.49	0.46
46:A:1582:A:H2'	46:A:1583:G:C8	2.49	0.46
46:A:1720:U:O2'	47:B:135:ASN:ND2	2.48	0.46
46:A:2216:U:H3	46:A:2232:A:N6	2.12	0.46
46:A:2216:U:C2	46:A:2217:A:C8	3.04	0.46
46:A:2472:C:H2'	46:A:2473:U:H6	1.79	0.46
46:A:2736:G:C2	46:A:2737:A:C8	3.04	0.46
46:A:2869:A:N3	46:A:2869:A:H2'	2.29	0.46
46:A:2911:U:H2'	46:A:2912:C:C6	2.50	0.46
46:A:2932:A:C2	46:A:2933:C:C5	3.03	0.46
63:R:156:PRO:O	63:R:157:ASN:C	2.59	0.46
3:AC:208:THR:HA	3:AC:212:GLY:C	2.41	0.46
3:AC:219:MET:HE2	17:h:153:HIS:CD2	2.50	0.46
4:AD:209:ASN:HA	16:g:222:ILE:HG23	1.97	0.46
4:AD:233:GLU:HG2	4:AD:234:ALA:N	2.31	0.46
5:AE:68:PRO:CD	12:AL:1542:A:H5"	2.45	0.46
5:AE:258:ILE:HG12	5:AE:300:PHE:HE1	1.81	0.46
7:AG:108:PHE:HD2	7:AG:169:TYR:HE1	1.62	0.46
7:AG:217:LEU:HD22	16:g:273:MET:HE2	1.83	0.46
9:AI:169:ASP:C	9:AI:171:LYS:H	2.23	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AJ:91:PRO:HG2	12:AL:1243:U:OP2	2.16	0.46
12:AL:102:G:N2	12:AL:155:A:N1	2.63	0.46
12:AL:490:U:H2'	12:AL:491:U:C6	2.51	0.46
12:AL:492:G:C2	12:AL:498:A:C6	3.03	0.46
12:AL:522:A:C2	12:AL:526:U:C5	3.04	0.46
12:AL:524:A:C6	12:AL:525:A:C6	3.04	0.46
12:AL:749:A:C1'	26:q:121:LYS:HE3	2.45	0.46
12:AL:1498:C:H2'	12:AL:1499:U:O4'	2.16	0.46
12:AL:1559:A:OP1	30:u:36:LYS:HG3	2.16	0.46
16:g:23:THR:O	16:g:24:TYR:C	2.58	0.46
18:i:152:LYS:HE2	18:i:152:LYS:HB2	1.73	0.46
19:j:28:LEU:HD22	19:j:434:PHE:CE1	2.49	0.46
21:l:129:GLN:O	21:l:130:SER:C	2.58	0.46
27:r:137:ASN:O	27:r:138:ARG:C	2.59	0.46
30:u:94:ASN:ND2	30:u:96:GLU:HB2	2.30	0.46
32:w:66:LEU:HB2	32:w:70:LYS:O	2.15	0.46
32:w:230:MET:SD	32:w:230:MET:C	2.98	0.46
33:x:83:MET:HB2	33:x:102:TYR:OH	2.16	0.46
41:5:245:ILE:HD11	60:O:148:LYS:CB	2.46	0.46
44:8:153:LEU:HD11	49:D:43:LEU:HD11	1.98	0.46
46:A:451:A:O2'	46:A:452:U:H5'	2.16	0.46
46:A:643:U:H3'	70:Y:61:SER:HA	1.98	0.46
46:A:1129:U:C2	46:A:1130:C:C6	3.04	0.46
46:A:1209:A:H2'	46:A:1210:A:C8	2.50	0.46
46:A:1782:A:H3'	46:A:1783:U:H6	1.81	0.46
46:A:1821:G:C2'	46:A:1822:G:H5'	2.45	0.46
46:A:2063:A:C2	46:A:2064:G:H1'	2.50	0.46
46:A:2305:A:N3	46:A:2305:A:H5"	2.31	0.46
46:A:2470:A:H8	46:A:2470:A:H5'	1.81	0.46
46:A:2613:A:HO2'	46:A:2614:U:P	2.39	0.46
46:A:2711:G:OP1	49:D:115:ARG:NH2	2.48	0.46
46:A:2910:A:C4	46:A:2911:U:C6	3.03	0.46
46:A:3135:U:O2'	46:A:3136:U:O5'	2.33	0.46
59:N:104:LEU:HD13	71:a:53:MET:HG2	1.97	0.46
62:Q:103:THR:HG22	62:Q:119:MET:HG3	1.96	0.46
63:R:222:LEU:O	63:R:226:GLU:HG2	2.16	0.46
63:R:276:GLN:O	63:R:279:LYS:HB3	2.15	0.46
63:R:308:ALA:C	63:R:310:ASN:N	2.69	0.46
68:W:118:MET:HE2	68:W:118:MET:HA	1.97	0.46
76:f:59:LEU:HD23	76:f:71:GLU:HB2	1.96	0.46
4:AD:258:LYS:HA	4:AD:258:LYS:HD3	1.68	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:88:LEU:HD12	5:AE:90:PRO:HG3	1.85	0.46
7:AG:28:ALA:O	7:AG:30:TYR:N	2.47	0.46
9:AI:66:THR:HB	12:AL:1351:U:O2	2.16	0.46
9:AI:173:ILE:HA	9:AI:216:ASN:OD1	2.15	0.46
10:AJ:59:LEU:O	10:AJ:60:LYS:HB2	2.15	0.46
11:AK:107:LEU:HD11	18:i:168:ASN:HA	1.96	0.46
12:AL:63:U:O4	12:AL:361:G:N2	2.49	0.46
12:AL:539:C:C3'	12:AL:540:A:H8	2.28	0.46
12:AL:831:A:OP2	12:AL:877:G:N2	2.49	0.46
12:AL:1387:A:C8	12:AL:1391:G:C6	3.03	0.46
12:AL:1591:A:H1'	12:AL:1612:C:O5'	2.16	0.46
15:Z:27:ALA:O	15:Z:29:LYS:N	2.47	0.46
15:Z:51:CYS:O	15:Z:52:ALA:C	2.58	0.46
16:g:15:VAL:O	17:h:215:LYS:NZ	2.44	0.46
18:i:100:TYR:O	18:i:102:LYS:HD2	2.16	0.46
18:i:148:LYS:HB2	18:i:202:LYS:HB2	1.97	0.46
18:i:228:ASP:HB2	18:i:232:TYR:HE2	1.80	0.46
26:q:97:ASP:OD1	26:q:98:LYS:N	2.48	0.46
30:u:212:ARG:O	30:u:213:GLN:C	2.56	0.46
30:u:220:LYS:NZ	30:u:238:ASP:OD2	2.42	0.46
30:u:255:TYR:O	30:u:256:GLU:HB2	2.14	0.46
33:x:111:HIS:HE1	35:z:153:ARG:HH12	1.64	0.46
35:z:141:LYS:HE2	35:z:144:LYS:HD2	1.98	0.46
37:1:73:ILE:HG12	42:6:47:LYS:CB	2.42	0.46
42:6:56:GLU:O	42:6:60:MET:N	2.49	0.46
46:A:729:C:H2'	46:A:730:U:H6	1.80	0.46
46:A:771:U:H2'	46:A:772:A:H8	1.80	0.46
46:A:844:A:H2'	46:A:845:U:H6	1.80	0.46
46:A:883:A:OP1	46:A:883:A:H8	1.99	0.46
46:A:967:U:H2'	46:A:968:U:C1'	2.46	0.46
46:A:1003:U:H2'	46:A:1004:A:C8	2.51	0.46
46:A:1047:A:H5'	46:A:1048:A:C8	2.50	0.46
46:A:1177:U:C2'	46:A:1178:A:H5'	2.46	0.46
46:A:1619:G:H8	46:A:1619:G:OP2	1.99	0.46
46:A:1809:C:H2'	46:A:1810:C:O4'	2.15	0.46
46:A:1855:U:C4	46:A:2819:U:H1'	2.50	0.46
46:A:2066:U:O2'	46:A:2067:A:H5'	2.15	0.46
46:A:2205:G:C5	46:A:2206:U:C4	3.04	0.46
46:A:2246:A:C2	46:A:2247:A:C5	3.04	0.46
46:A:2672:G:H8	46:A:2672:G:OP2	1.99	0.46
46:A:2799:A:O2'	46:A:2800:A:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:3089:A:H2'	46:A:3090:U:C6	2.50	0.46
46:A:3276:U:C2	46:A:3277:A:C8	3.03	0.46
60:O:163:VAL:HG13	60:O:267:LEU:HB2	1.98	0.46
63:R:267:HIS:CE1	63:R:270:ILE:HD13	2.49	0.46
1:AA:82:ARG:NH1	12:AL:1621:G:C8	2.83	0.46
2:AB:75:LYS:C	2:AB:77:LYS:N	2.71	0.46
3:AC:163:LEU:CD2	3:AC:221:ILE:HG13	2.43	0.46
5:AE:211:LEU:HD13	5:AE:235:LEU:CD2	2.43	0.46
5:AE:255:LEU:HB3	5:AE:300:PHE:CG	2.50	0.46
6:AF:61:PHE:CD1	19:j:29:TYR:OH	2.66	0.46
7:AG:111:GLN:O	16:g:201:ILE:HB	2.16	0.46
8:AH:215:GLN:O	8:AH:218:LYS:N	2.49	0.46
9:AI:60:TRP:HB2	22:m:210:VAL:CG1	2.42	0.46
9:AI:141:HIS:CG	9:AI:142:PRO:HD2	2.51	0.46
9:AI:228:LYS:HE3	9:AI:230:TYR:CE1	2.51	0.46
11:AK:239:ASP:OD2	12:AL:1290:A:N6	2.48	0.46
12:AL:40:G:C2	12:AL:41:C:C2	3.03	0.46
12:AL:223:U:H3'	12:AL:224:A:O4'	2.16	0.46
12:AL:501:U:H4'	19:j:7:LEU:HD13	1.97	0.46
12:AL:522:A:N7	12:AL:527:G:C6	2.83	0.46
12:AL:1052:U:H2'	12:AL:1053:A:C8	2.51	0.46
12:AL:1064:U:C4	12:AL:1088:A:C2	3.03	0.46
12:AL:1382:C:H2'	12:AL:1383:U:C6	2.51	0.46
13:AM:13:C:C4'	46:A:1824:U:H4'	2.46	0.46
17:h:129:TYR:CZ	24:o:119:GLN:O	2.69	0.46
19:j:55:TYR:HB3	19:j:469:PHE:CZ	2.51	0.46
19:j:442:GLU:HB2	19:j:453:LEU:HD21	1.98	0.46
22:m:204:VAL:H	22:m:211:ARG:HD3	1.80	0.46
22:m:219:ILE:HG12	22:m:224:SER:CB	2.28	0.46
22:m:226:ALA:O	22:m:227:PHE:C	2.58	0.46
26:q:131:LEU:HD21	26:q:150:ARG:HG2	1.98	0.46
26:q:214:MET:HE3	26:q:214:MET:HB2	1.72	0.46
28:s:87:SER:O	28:s:88:TYR:C	2.58	0.46
28:s:89:SER:O	28:s:90:GLY:C	2.58	0.46
28:s:106:ASN:OD1	28:s:106:ASN:N	2.48	0.46
34:y:21:LEU:C	34:y:23:ILE:H	2.24	0.46
36:0:61:SER:HB3	46:A:2732:G:H5"	1.97	0.46
38:2:40:GLN:O	38:2:44:THR:HG23	2.16	0.46
39:3:64:HIS:HB3	46:A:1362:C:O2'	2.16	0.46
43:7:80:SER:O	46:A:564:A:O2'	2.26	0.46
46:A:65:A:C6	46:A:66:U:C4	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:337:A:OP2	46:A:1992:A:H5"	2.15	0.46
46:A:379:A:N6	49:D:82:ASN:HB3	2.31	0.46
46:A:421:U:H2'	46:A:422:U:H6	1.76	0.46
46:A:642:A:C5	60:O:251:THR:HB	2.51	0.46
46:A:746:A:O3'	46:A:747:U:H6	1.98	0.46
46:A:947:G:C5	46:A:1107:U:C5	3.03	0.46
46:A:967:U:C4	46:A:968:U:C4	3.04	0.46
46:A:1322:U:C2	46:A:1323:U:C5	3.04	0.46
46:A:1395:U:H2'	46:A:1396:A:H8	1.75	0.46
46:A:1413:A:N6	46:A:1545:U:H3	2.10	0.46
46:A:1414:U:H2'	46:A:1415:U:C6	2.51	0.46
46:A:1506:U:O2	46:A:1507:U:N3	2.49	0.46
46:A:1707:C:OP2	47:B:265:PHE:CZ	2.65	0.46
46:A:1807:A:H61	46:A:1824:U:H3	1.63	0.46
46:A:2029:A:O2'	46:A:2030:U:OP2	2.28	0.46
46:A:2084:G:H2'	46:A:2085:A:C8	2.50	0.46
46:A:2475:U:C2	46:A:2476:C:C5	3.03	0.46
46:A:2713:G:H2'	46:A:2767:C:O4'	2.16	0.46
46:A:2778:C:H1'	48:C:204:SER:HB2	1.97	0.46
46:A:2956:U:H5"	46:A:2957:A:C5'	2.45	0.46
46:A:2977:U:O2'	46:A:2978:A:H5'	2.16	0.46
46:A:3015:U:H2'	46:A:3016:A:H8	1.79	0.46
46:A:3123:A:C2	46:A:3126:C:C2	3.04	0.46
46:A:3280:C:C2	46:A:3281:U:C5	3.03	0.46
47:B:133:ARG:HH21	47:B:139:ILE:HD11	1.81	0.46
63:R:63:ILE:O	63:R:64:MET:HB2	2.16	0.46
63:R:105:LYS:NZ	63:R:105:LYS:HB3	2.31	0.46
63:R:120:PRO:HB2	63:R:121:HIS:H	1.55	0.46
71:a:87:MET:O	71:a:87:MET:HE3	2.15	0.46
76:f:127:LYS:O	76:f:133:HIS:HB2	2.16	0.46
3:AC:151:GLY:C	3:AC:226:LEU:HB2	2.40	0.46
3:AC:219:MET:SD	12:AL:1639:A:N1	2.89	0.46
4:AD:20:GLU:O	4:AD:21:HIS:C	2.58	0.46
4:AD:209:ASN:O	4:AD:211:SER:N	2.48	0.46
5:AE:227:LEU:HD11	5:AE:280:ILE:HG21	1.98	0.46
7:AG:114:TRP:CZ2	16:g:87:ARG:HA	2.44	0.46
8:AH:91:SER:O	8:AH:94:LYS:N	2.48	0.46
8:AH:185:SER:C	32:w:176:LEU:HD21	2.40	0.46
9:AI:183:PHE:HB3	9:AI:204:TYR:CZ	2.51	0.46
9:AI:345:ILE:CD1	9:AI:355:LEU:HD22	2.38	0.46
11:AK:70:TRP:CD1	18:i:173:MET:HG2	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:200:VAL:HG11	11:AK:248:ALA:HA	1.97	0.46
12:AL:39:A:H2'	12:AL:40:G:C8	2.51	0.46
12:AL:47:A:N6	12:AL:406:U:H3	2.14	0.46
12:AL:220:A:H2'	12:AL:221:U:H6	1.81	0.46
12:AL:320:C:O2	12:AL:357:A:H2	1.98	0.46
12:AL:637:A:C2	27:r:116:GLN:HB3	2.50	0.46
12:AL:715:U:C2	12:AL:817:G:N2	2.84	0.46
12:AL:848:A:H2'	12:AL:849:C:C6	2.50	0.46
12:AL:863:G:C2	12:AL:864:U:C2	3.04	0.46
12:AL:1043:A:N6	12:AL:1386:A:C6	2.84	0.46
12:AL:1063:U:O2	12:AL:1063:U:H2'	2.15	0.46
12:AL:1104:U:P	18:i:342:THR:CG2	3.03	0.46
12:AL:1237:U:C4'	18:i:383:ILE:HD11	2.42	0.46
12:AL:1282:A:C6	12:AL:1330:A:N6	2.84	0.46
12:AL:1328:A:H2'	12:AL:1329:A:H8	1.80	0.46
13:AM:67:G:H2'	13:AM:67:G:N3	2.31	0.46
17:h:144:GLN:HG2	24:o:120:LEU:CD1	2.46	0.46
18:i:179:LEU:HD11	18:i:183:MET:HE2	1.96	0.46
19:j:20:PHE:CD2	19:j:116:SER:HA	2.51	0.46
19:j:124:PHE:CE1	19:j:156:LYS:HD2	2.50	0.46
21:l:113:ARG:NH2	33:x:93:TYR:CZ	2.80	0.46
22:m:126:LYS:HB3	22:m:129:LYS:HG3	1.97	0.46
26:q:214:MET:HE1	35:z:140:MET:HA	1.98	0.46
28:s:64:THR:OG1	28:s:65:MET:SD	2.73	0.46
30:u:237:ASN:O	30:u:238:ASP:C	2.59	0.46
32:w:22:VAL:HG21	32:w:58:VAL:CG2	2.45	0.46
34:y:48:GLY:HA2	34:y:64:ILE:HB	1.98	0.46
41:5:203:TRP:CH2	41:5:260:VAL:HG23	2.51	0.46
41:5:331:SER:CA	46:A:41:G:H21	2.29	0.46
42:6:104:HIS:HA	46:A:2422:A:H5'	1.98	0.46
46:A:32:U:C2	46:A:33:A:C8	3.03	0.46
46:A:237:A:C5	46:A:2696:A:C5	3.04	0.46
46:A:341:A:H4'	46:A:342:A:O5'	2.15	0.46
46:A:420:U:C2	46:A:421:U:C5	3.04	0.46
46:A:573:U:H2'	46:A:574:A:C8	2.51	0.46
46:A:893:U:H2'	46:A:894:A:C8	2.50	0.46
46:A:931:U:C4	46:A:1119:A:N3	2.83	0.46
46:A:1494:A:H2'	46:A:1495:U:C6	2.50	0.46
46:A:1516:U:H5	46:A:3019:U:H2'	1.81	0.46
46:A:2022:U:N3	46:A:2064:G:N1	2.49	0.46
46:A:2328:A:C6	46:A:2329:A:C6	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2612:A:H4'	46:A:2613:A:H5"	1.98	0.46
46:A:2916:U:C2	46:A:2917:U:C5	3.04	0.46
46:A:2978:A:H2'	46:A:2979:U:C6	2.49	0.46
46:A:2984:A:H2	46:A:3002:U:H3	1.62	0.46
53:H:37:ILE:HG23	53:H:42:ARG:HB2	1.97	0.46
63:R:242:GLU:CA	63:R:245:SER:HB3	2.43	0.46
1:AA:83:LYS:HG2	12:AL:1601:C:H4'	1.98	0.46
2:AB:79:VAL:O	2:AB:83:GLN:HB2	2.15	0.46
2:AB:89:LYS:HD2	2:AB:92:HIS:HE1	1.81	0.46
3:AC:77:SER:CB	7:AG:190:ALA:HB1	2.46	0.46
3:AC:142:ARG:NH1	3:AC:165:ILE:HB	2.31	0.46
3:AC:151:GLY:HA2	3:AC:170:ASN:CA	2.46	0.46
3:AC:207:SER:OG	3:AC:208:THR:N	2.49	0.46
5:AE:67:ARG:HG2	5:AE:68:PRO:HD2	1.97	0.46
5:AE:123:TRP:CD1	5:AE:124:THR:H	2.34	0.46
5:AE:194:HIS:NE2	5:AE:283:THR:HG23	2.31	0.46
6:AF:198:ARG:NH1	12:AL:552:A:C5'	2.57	0.46
6:AF:303:GLU:O	6:AF:304:ARG:HB2	2.16	0.46
7:AG:11:LEU:HG	7:AG:12:GLN:N	2.31	0.46
7:AG:47:ARG:HB3	7:AG:47:ARG:CZ	2.46	0.46
9:AI:70:GLN:HG2	9:AI:71:GLN:H	1.81	0.46
9:AI:328:ILE:HG12	9:AI:343:LEU:HD21	1.98	0.46
9:AI:351:THR:HG1	12:AL:1280:U:P	2.15	0.46
10:AJ:32:SER:HA	10:AJ:35:LEU:CG	2.46	0.46
11:AK:174:ARG:CZ	25:p:38:TYR:HB3	2.46	0.46
12:AL:50:A:C6	12:AL:51:G:N7	2.84	0.46
12:AL:217:U:H2'	12:AL:218:A:C8	2.48	0.46
12:AL:656:G:C2	12:AL:657:G:C5	3.04	0.46
12:AL:710:U:C2	12:AL:711:A:C8	3.03	0.46
12:AL:813:A:H2'	12:AL:814:A:H8	1.78	0.46
12:AL:1071:A:H2	12:AL:1080:A:H61	1.62	0.46
18:i:184:ASN:HA	18:i:192:CYS:SG	2.56	0.46
18:i:228:ASP:HA	18:i:231:LYS:HD2	1.98	0.46
18:i:369:ASN:CA	29:t:114:ILE:HD11	2.46	0.46
21:l:40:ARG:HH21	30:u:141:ILE:HG23	1.80	0.46
22:m:124:HIS:C	22:m:126:LYS:H	2.24	0.46
22:m:161:ALA:CB	22:m:188:ARG:HB3	2.44	0.46
45:9:175:LYS:HE2	46:A:23:U:C5'	2.45	0.46
46:A:10:A:C2	46:A:11:G:C5	3.04	0.46
46:A:304:A:H2	46:A:306:G:H2'	1.80	0.46
46:A:633:G:H2'	46:A:634:A:H8	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:790:A:H2'	46:A:791:U:C6	2.51	0.46
46:A:1109:A:C4	51:F:44:ARG:CZ	2.99	0.46
46:A:1188:U:O5'	46:A:1188:U:H6	1.97	0.46
46:A:1252:G:C6	46:A:1253:U:C4	3.03	0.46
46:A:1309:A:N3	57:L:26:GLN:NE2	2.64	0.46
46:A:1734:G:C6	46:A:1735:U:C4	3.04	0.46
46:A:1833:G:H3'	46:A:1834:C:C6	2.51	0.46
46:A:1870:A:H4'	46:A:1871:U:OP1	2.15	0.46
46:A:2184:C:C2	46:A:2205:G:N1	2.84	0.46
46:A:2220:U:C2'	46:A:2221:A:H5"	2.43	0.46
46:A:2244:A:H2'	46:A:2245:U:O4'	2.16	0.46
46:A:2300:U:C4	46:A:2302:U:C6	3.04	0.46
46:A:2640:A:N6	46:A:2648:A:N6	2.64	0.46
46:A:2685:A:C5	46:A:2686:U:C5	3.04	0.46
46:A:3129:A:C6	46:A:3130:U:C4	3.04	0.46
46:A:3150:U:C4	46:A:3153:U:C5	3.04	0.46
74:d:23:PRO:HD3	74:d:211:ALA:HB1	1.97	0.46
75:e:54:ILE:HD11	75:e:105:TYR:HA	1.93	0.46
4:AD:249:THR:C	4:AD:251:PHE:N	2.73	0.46
5:AE:58:ASP:OD1	12:AL:154:U:OP1	2.34	0.46
5:AE:62:LYS:C	5:AE:64:PHE:N	2.74	0.46
9:AI:350:ARG:NH2	9:AI:371:TYR:CZ	2.84	0.46
11:AK:163:PRO:HB3	25:p:68:TYR:CE1	2.51	0.46
11:AK:217:HIS:ND1	11:AK:271:SER:HA	2.31	0.46
11:AK:284:SER:HA	11:AK:287:LYS:HD2	1.98	0.46
12:AL:552:A:H2'	12:AL:553:U:C6	2.50	0.46
12:AL:826:G:H2'	12:AL:827:G:O4'	2.16	0.46
12:AL:831:A:H2'	12:AL:832:A:H8	1.80	0.46
12:AL:842:A:C4	12:AL:843:G:C8	3.03	0.46
12:AL:1631:U:OP1	33:x:70:LYS:NZ	2.42	0.46
15:Z:56:THR:HA	15:Z:59:LYS:HD2	1.97	0.46
16:g:58:ILE:HD11	35:z:175:LYS:O	2.13	0.46
18:i:315:PRO:C	20:k:69:TRP:CH2	2.94	0.46
20:k:146:MET:HB2	20:k:170:VAL:CG1	2.45	0.46
20:k:295:LYS:CD	23:n:42:GLN:O	2.63	0.46
21:l:123:LEU:O	21:l:126:GLU:HB3	2.16	0.46
26:q:108:TYR:CD2	35:z:89:ALA:CB	2.98	0.46
30:u:82:GLU:CG	32:w:107:PHE:CE1	2.97	0.46
34:y:52:GLN:HA	34:y:60:VAL:O	2.16	0.46
38:2:60:LYS:HE3	46:A:2372:U:C4	2.51	0.46
46:A:57:C:H2'	46:A:58:A:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:321:A:H2'	46:A:322:U:O4'	2.16	0.46
46:A:350:A:H2'	46:A:351:C:C6	2.51	0.46
46:A:1113:A:H5'	46:A:1114:U:OP2	2.15	0.46
46:A:1237:U:HO2'	55:J:59:SER:HG	1.59	0.46
46:A:1498:U:C2	46:A:1499:A:C8	3.03	0.46
46:A:1544:A:C5	46:A:1545:U:C4	3.04	0.46
46:A:1698:C:N4	46:A:1736:G:O2'	2.49	0.46
46:A:1772:U:H2'	46:A:1773:U:H6	1.81	0.46
46:A:1998:U:C4	46:A:1999:U:C4	3.04	0.46
46:A:2016:A:H4'	46:A:2017:G:OP1	2.15	0.46
46:A:2056:A:H1'	46:A:2057:U:P	2.56	0.46
46:A:2061:U:H5	46:A:2062:G:C1'	2.29	0.46
46:A:2083:U:C2	46:A:2084:G:N7	2.84	0.46
46:A:2088:A:C4	46:A:2089:U:C5	3.04	0.46
46:A:2094:A:C8	46:A:2251:A:C6	3.04	0.46
46:A:2325:A:N3	46:A:2325:A:H2'	2.30	0.46
46:A:2368:U:OP1	63:R:322:ARG:NH2	2.49	0.46
46:A:2439:U:O2'	46:A:2440:G:H5'	2.15	0.46
46:A:2449:A:H2'	46:A:2450:A:O4'	2.16	0.46
46:A:2685:A:H2'	46:A:2686:U:C6	2.50	0.46
46:A:2728:U:H3	46:A:2754:A:N6	2.14	0.46
46:A:2772:U:O2'	46:A:2773:C:OP1	2.31	0.46
46:A:3076:A:C4	46:A:3077:A:C8	3.03	0.46
46:A:3267:U:H2'	46:A:3268:A:C8	2.48	0.46
3:AC:90:HIS:CG	17:h:161:GLY:CA	2.69	0.46
3:AC:234:ASP:O	3:AC:235:TYR:C	2.58	0.46
3:AC:239:ASN:HB3	3:AC:242:LYS:HD3	1.98	0.46
4:AD:43:ASP:O	4:AD:46:LYS:HB2	2.16	0.46
4:AD:260:PHE:CA	16:g:223:GLN:HE21	2.28	0.46
8:AH:101:GLU:HA	8:AH:104:ARG:HG2	1.98	0.46
9:AI:169:ASP:O	9:AI:171:LYS:HG3	2.16	0.46
9:AI:181:GLU:O	9:AI:183:PHE:N	2.49	0.46
10:AJ:32:SER:HA	10:AJ:35:LEU:HB2	1.98	0.46
12:AL:24:U:C2	12:AL:25:G:C8	3.03	0.46
12:AL:62:A:C4	12:AL:63:U:C6	3.04	0.46
12:AL:674:A:N6	12:AL:676:G:C6	2.84	0.46
12:AL:1102:A:H61	12:AL:1237:U:H3	1.63	0.46
12:AL:1263:G:H2'	12:AL:1264:U:O4'	2.16	0.46
15:Z:46:HIS:O	15:Z:47:MET:C	2.59	0.46
19:j:114:PHE:CE2	19:j:450:ALA:HB2	2.44	0.46
19:j:186:VAL:HG12	19:j:190:LYS:HE3	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:l:74:SER:O	21:l:75:ALA:C	2.59	0.46
29:t:25:ASN:HA	29:t:28:ARG:HD2	1.97	0.46
29:t:42:LYS:HD3	29:t:46:ARG:HH12	1.80	0.46
31:v:31:ALA:HB3	31:v:34:ALA:HB2	1.98	0.46
33:x:99:LEU:HB3	33:x:129:ILE:HG12	1.97	0.46
34:y:46:PHE:O	34:y:47:VAL:C	2.59	0.46
41:5:389:VAL:HG13	46:A:3277:A:H5'	1.97	0.46
46:A:305:A:H2'	46:A:306:G:H8	1.73	0.46
46:A:782:G:N2	46:A:842:A:C4	2.84	0.46
46:A:841:G:OP1	50:E:110:ASN:OD1	2.33	0.46
46:A:1022:A:H2'	46:A:1023:C:C2	2.51	0.46
46:A:1149:U:H2'	46:A:1150:U:N1	2.31	0.46
46:A:1167:A:H3'	46:A:1168:A:C8	2.42	0.46
46:A:1226:A:O2'	46:A:1227:G:H5'	2.16	0.46
46:A:1363:C:O2'	46:A:1364:C:H5'	2.15	0.46
46:A:1393:U:H2'	46:A:1394:U:C6	2.51	0.46
46:A:1490:A:N1	46:A:1523:A:N1	2.64	0.46
46:A:1494:A:H2'	46:A:1495:U:H6	1.80	0.46
46:A:1582:A:H5'	46:A:1582:A:N3	2.30	0.46
46:A:1974:U:H2'	46:A:1975:U:O4'	2.15	0.46
46:A:2186:U:P	64:S:205:ARG:NH2	2.89	0.46
46:A:2198:U:C5	64:S:227:TYR:HD2	2.34	0.46
46:A:2381:G:C2	46:A:2382:A:C4	3.04	0.46
46:A:2382:A:C2	46:A:2383:A:C4	3.04	0.46
46:A:2978:A:H2'	46:A:2979:U:H6	1.80	0.46
47:B:67:ASP:OD1	47:B:68:THR:N	2.49	0.46
47:B:149:ARG:HH21	47:B:149:ARG:HG3	1.81	0.46
47:B:268:SER:O	47:B:271:THR:HG22	2.16	0.46
63:R:77:VAL:HG13	63:R:78:GLY:N	2.31	0.46
63:R:198:LEU:CA	63:R:201:VAL:HG12	2.36	0.46
63:R:292:LEU:HA	63:R:297:ASP:CB	2.44	0.46
65:T:144:SER:O	65:T:147:THR:OG1	2.32	0.46
2:AB:70:ASP:O	2:AB:71:SER:C	2.58	0.45
4:AD:175:ARG:HE	4:AD:177:LEU:H	1.63	0.45
4:AD:209:ASN:HD22	4:AD:265:VAL:HG21	1.81	0.45
4:AD:260:PHE:HA	16:g:223:GLN:HE21	1.81	0.45
5:AE:93:PRO:CD	5:AE:95:LYS:HZ2	2.07	0.45
7:AG:149:VAL:O	7:AG:153:THR:HG23	2.16	0.45
8:AH:21:ILE:HG12	31:v:74:TYR:CB	2.46	0.45
9:AI:57:TYR:CE2	12:AL:1341:U:O4'	2.69	0.45
9:AI:172:GLN:HA	9:AI:286:PRO:HD2	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:179:TYR:CE1	9:AI:181:GLU:HB3	2.50	0.45
9:AI:188:ASN:HD22	9:AI:188:ASN:H	1.64	0.45
9:AI:267:ASN:O	9:AI:268:ARG:C	2.59	0.45
12:AL:25:G:H4'	20:k:267:ASN:ND2	2.14	0.45
12:AL:130:G:H2'	12:AL:130:G:N3	2.31	0.45
12:AL:338:G:C5	12:AL:339:U:C4	3.04	0.45
12:AL:411:A:H5"	19:j:116:SER:OG	2.16	0.45
12:AL:678:U:H1'	12:AL:683:A:H2'	1.98	0.45
12:AL:805:U:C2	12:AL:806:A:C8	3.04	0.45
12:AL:844:C:H2'	12:AL:845:G:O4'	2.17	0.45
12:AL:855:C:C6	13:AM:38:A:O2'	2.68	0.45
12:AL:1060:A:C6	12:AL:1061:U:C4	3.04	0.45
12:AL:1304:U:O2	12:AL:1304:U:H2'	2.17	0.45
12:AL:1419:U:H5"	12:AL:1420:A:OP1	2.16	0.45
18:i:101:ASN:O	18:i:104:MET:HB3	2.15	0.45
19:j:144:LEU:HB2	19:j:452:TYR:CD2	2.50	0.45
20:k:290:ALA:O	20:k:291:LEU:C	2.58	0.45
22:m:173:VAL:O	22:m:174:ALA:HB3	2.16	0.45
26:q:144:ALA:O	26:q:145:PHE:C	2.56	0.45
30:u:67:VAL:HG23	30:u:245:PHE:CZ	2.52	0.45
32:w:171:GLY:O	32:w:175:ASN:HB2	2.16	0.45
32:w:230:MET:O	32:w:231:ASP:C	2.58	0.45
33:x:68:ASP:O	33:x:69:ARG:C	2.57	0.45
34:y:71:HIS:CB	34:y:76:PHE:CE1	2.97	0.45
41:5:245:ILE:HD11	60:O:148:LYS:HB2	1.98	0.45
46:A:238:C:C1'	46:A:2700:A:H61	2.28	0.45
46:A:253:A:H2'	46:A:254:G:H8	1.81	0.45
46:A:567:U:C2	46:A:568:A:C8	3.04	0.45
46:A:659:G:H22	46:A:1400:U:H1'	1.80	0.45
46:A:875:U:C2	46:A:876:A:C8	3.04	0.45
46:A:1245:U:C2	46:A:1246:A:N7	2.84	0.45
46:A:1427:A:N1	46:A:1526:A:N1	2.64	0.45
46:A:1531:C:N4	47:B:326:TRP:HH2	2.02	0.45
46:A:1593:A:H2'	46:A:1594:G:O4'	2.16	0.45
46:A:1622:C:H3'	46:A:1623:U:C6	2.51	0.45
46:A:1761:A:N1	46:A:1987:G:H1'	2.30	0.45
46:A:2025:A:N1	46:A:2071:A:C2	2.83	0.45
46:A:2206:U:O2'	46:A:2207:A:H5'	2.15	0.45
46:A:2252:C:H3'	46:A:2253:A:H8	1.81	0.45
46:A:2336:G:C6	46:A:2337:A:C5	3.04	0.45
46:A:2337:A:N6	46:A:2338:A:C6	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2379:U:H2'	46:A:2380:U:O4'	2.17	0.45
46:A:2605:G:H2'	46:A:2606:U:O4'	2.15	0.45
46:A:2621:A:C2	63:R:62:ILE:HD11	2.51	0.45
46:A:2646:G:C6	46:A:2647:U:C4	3.03	0.45
46:A:2727:A:C6	46:A:2728:U:C4	3.04	0.45
46:A:2835:U:H2'	46:A:2836:G:O4'	2.15	0.45
46:A:2934:C:C2'	46:A:2935:A:H5'	2.46	0.45
46:A:2949:C:H2'	46:A:2950:A:C8	2.51	0.45
46:A:3177:A:H5"	46:A:3178:A:N7	2.31	0.45
47:B:170:ILE:HD13	47:B:181:ALA:HB2	1.98	0.45
51:F:122:LEU:HD22	51:F:201:VAL:HG22	1.98	0.45
63:R:150:LYS:O	63:R:153:LEU:HB2	2.16	0.45
63:R:193:LEU:CD2	63:R:250:CYS:CB	2.92	0.45
75:e:82:HIS:HB2	75:e:156:VAL:HG11	1.97	0.45
2:AB:114:GLU:C	2:AB:116:LYS:H	2.24	0.45
3:AC:65:HIS:NE2	17:h:159:LYS:CD	2.76	0.45
4:AD:122:PHE:CE2	7:AG:174:TYR:C	2.94	0.45
7:AG:1:MET:SD	17:h:354:LEU:CD1	2.72	0.45
7:AG:180:ARG:HA	7:AG:180:ARG:HD3	1.70	0.45
8:AH:182:TYR:OH	32:w:180:ARG:NE	2.50	0.45
8:AH:204:HIS:CD2	8:AH:205:VAL:HG23	2.52	0.45
9:AI:182:LEU:HD11	12:AL:1353:U:C5'	2.44	0.45
9:AI:412:LEU:O	9:AI:413:LEU:HG	2.17	0.45
12:AL:115:G:H1'	12:AL:116:A:N7	2.31	0.45
12:AL:310:A:O2'	12:AL:311:G:H5'	2.17	0.45
12:AL:410:G:C6	12:AL:411:A:C5	3.03	0.45
12:AL:479:A:N6	19:j:181:LEU:HD13	2.31	0.45
12:AL:685:G:N2	12:AL:824:A:OP1	2.46	0.45
18:i:307:ASN:O	18:i:308:ASN:HB3	2.16	0.45
20:k:258:LEU:HA	20:k:258:LEU:HD23	1.83	0.45
21:l:38:VAL:CG2	30:u:141:ILE:CG1	2.94	0.45
21:l:66:HIS:CD2	21:l:66:HIS:H	2.34	0.45
24:o:61:LEU:HD11	24:o:128:GLU:HG3	1.97	0.45
26:q:134:ARG:O	26:q:135:LYS:HB2	2.16	0.45
26:q:170:ASP:OD1	26:q:202:THR:HA	2.16	0.45
26:q:183:LEU:HD23	26:q:192:VAL:HG22	1.99	0.45
28:s:68:GLU:O	28:s:70:ASP:N	2.49	0.45
36:0:86:LYS:CG	46:A:2793:G:H5"	2.47	0.45
37:1:157:GLN:OE1	46:A:2643:U:N3	2.36	0.45
41:5:87:ILE:HG21	41:5:117:SER:HB3	1.99	0.45
42:6:103:LYS:HG3	46:A:2422:A:OP1	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:30:U:C2	48:C:21:SER:HA	2.45	0.45
46:A:38:A:C6	46:A:39:U:C4	3.03	0.45
46:A:71:A:C2	46:A:72:U:C4	3.04	0.45
46:A:145:A:H2'	46:A:146:C:C6	2.50	0.45
46:A:234:G:C6	46:A:235:A:C5	3.03	0.45
46:A:277:U:H2'	46:A:278:A:C8	2.43	0.45
46:A:314:A:N3	64:S:140:LYS:HE3	2.32	0.45
46:A:487:U:C2	49:D:131:LEU:HD22	2.51	0.45
46:A:836:A:H2'	46:A:837:U:C6	2.52	0.45
46:A:879:U:OP2	56:K:55:ARG:HG3	2.16	0.45
46:A:960:U:H2'	46:A:961:A:O4'	2.16	0.45
46:A:1017:A:N3	46:A:1017:A:H2'	2.31	0.45
46:A:1064:A:C5	46:A:1085:G:C2	3.04	0.45
46:A:1439:A:N3	46:A:1440:U:H1'	2.32	0.45
46:A:1997:A:C2	46:A:1998:U:C2	3.04	0.45
46:A:2027:U:C3'	46:A:2028:A:H8	2.27	0.45
46:A:2084:G:C4	46:A:2085:A:C8	3.05	0.45
46:A:2097:U:H2'	46:A:2098:U:H6	1.81	0.45
46:A:2216:U:O2	46:A:2217:A:C8	2.69	0.45
46:A:2284:A:OP1	63:R:40:LYS:NZ	2.49	0.45
46:A:2306:U:C2	46:A:2307:A:C8	3.04	0.45
46:A:2457:G:C2	46:A:2461:A:C8	3.04	0.45
46:A:2471:A:C2'	46:A:2472:C:H5'	2.47	0.45
46:A:2471:A:O2'	46:A:2472:C:H5'	2.16	0.45
46:A:2591:A:N7	46:A:2651:G:N2	2.65	0.45
46:A:2610:A:H5"	46:A:2611:U:OP1	2.15	0.45
46:A:2831:A:H8	46:A:2831:A:O5'	1.99	0.45
46:A:3007:A:H2'	46:A:3008:U:H6	1.79	0.45
46:A:3074:A:H2'	46:A:3075:U:O4'	2.16	0.45
46:A:3128:G:C6	46:A:3129:A:C5	3.05	0.45
47:B:320:LYS:HG3	47:B:323:ARG:H	1.80	0.45
61:P:70:ILE:HD11	61:P:131:MET:HE1	1.98	0.45
63:R:292:LEU:HD11	63:R:301:ILE:HG12	1.98	0.45
3:AC:74:PRO:HB3	7:AG:201:PHE:CD1	2.52	0.45
3:AC:217:TRP:CB	17:h:146:LEU:HD11	2.47	0.45
4:AD:191:ILE:HG21	4:AD:268:ILE:CD1	2.47	0.45
4:AD:258:LYS:CE	16:g:226:VAL:HG11	2.42	0.45
5:AE:100:GLN:HB2	12:AL:1526:A:OP2	2.16	0.45
5:AE:181:ILE:HG12	5:AE:185:PHE:HD2	1.82	0.45
5:AE:266:GLU:O	5:AE:270:LEU:N	2.38	0.45
5:AE:289:GLN:C	5:AE:291:ASN:N	2.75	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:60:GLN:C	6:AF:62:LEU:N	2.70	0.45
7:AG:63:VAL:HG21	7:AG:77:THR:O	2.17	0.45
7:AG:166:VAL:HG13	16:g:196:PHE:CE1	2.52	0.45
8:AH:104:ARG:O	8:AH:108:ILE:HG13	2.16	0.45
9:AI:221:LEU:C	9:AI:223:SER:N	2.74	0.45
11:AK:132:PHE:CE2	18:i:251:LEU:HD11	2.52	0.45
12:AL:17:A:O2'	12:AL:18:A:H5'	2.15	0.45
12:AL:181:A:H4'	12:AL:182:A:H2'	1.97	0.45
12:AL:273:A:C2	12:AL:274:A:C8	3.04	0.45
12:AL:308:U:H2'	12:AL:309:U:C6	2.51	0.45
12:AL:533:A:H2'	12:AL:534:A:C8	2.52	0.45
12:AL:1065:A:N6	12:AL:1086:A:H61	2.14	0.45
12:AL:1114:A:N1	12:AL:1155:A:O2'	2.34	0.45
12:AL:1177:A:O2'	12:AL:1178:A:OP1	2.29	0.45
12:AL:1214:A:H4'	24:o:253:THR:HA	1.99	0.45
12:AL:1284:A:O3'	24:o:217:GLY:HA2	2.16	0.45
12:AL:1496:A:C2	30:u:41:LEU:HD23	2.46	0.45
12:AL:1514:U:H2'	12:AL:1515:A:H8	1.81	0.45
12:AL:1561:C:H2'	12:AL:1562:A:O4'	2.15	0.45
15:Z:89:ILE:HD12	35:z:169:VAL:CG2	2.46	0.45
16:g:45:ARG:HD3	17:h:170:PRO:HB2	1.98	0.45
17:h:188:LEU:HB2	17:h:222:LEU:HD13	1.98	0.45
17:h:206:THR:HG22	17:h:352:PRO:HG3	1.97	0.45
19:j:2:PRO:HG2	19:j:3:ARG:HD3	1.99	0.45
21:l:42:ILE:HG22	21:l:44:PRO:HD3	1.98	0.45
22:m:153:LEU:HD12	22:m:216:LEU:HD13	1.99	0.45
24:o:202:VAL:HB	24:o:245:ARG:NH1	2.30	0.45
28:s:15:VAL:HG12	28:s:17:LYS:HG2	1.97	0.45
31:v:71:ARG:HH12	31:v:74:TYR:CB	2.29	0.45
33:x:58:PHE:C	33:x:60:PHE:N	2.70	0.45
38:2:50:SER:CB	46:A:2426:A:H5'	2.35	0.45
39:3:65:THR:HG21	46:A:1412:U:H1'	1.99	0.45
46:A:26:A:N3	71:a:144:ILE:HD11	2.31	0.45
46:A:78:U:H2'	46:A:78:U:O2	2.15	0.45
46:A:174:G:N2	46:A:204:A:C6	2.84	0.45
46:A:301:A:C5	46:A:302:U:C5	3.05	0.45
46:A:497:U:C2	46:A:498:A:N7	2.84	0.45
46:A:599:A:O2'	46:A:600:C:H5'	2.16	0.45
46:A:657:U:C2	46:A:658:U:C5	3.04	0.45
46:A:838:C:O2'	46:A:839:U:H5'	2.16	0.45
46:A:854:A:O2'	66:U:37:LYS:NZ	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:905:A:H4'	46:A:951:A:C2	2.52	0.45
46:A:1163:A:C4	46:A:1164:U:C5	3.05	0.45
46:A:1260:U:H2'	46:A:1261:U:C6	2.51	0.45
46:A:1510:A:O2'	46:A:1511:U:H5'	2.17	0.45
46:A:1894:C:O2'	46:A:1895:U:H5'	2.16	0.45
46:A:1962:A:H5'	46:A:1963:C:OP2	2.17	0.45
46:A:2062:G:N3	46:A:2062:G:C2'	2.79	0.45
46:A:2769:A:O2'	46:A:2770:U:H5'	2.16	0.45
46:A:2812:G:O2'	46:A:2832:A:N1	2.48	0.45
46:A:2961:A:C5	46:A:2962:U:C4	3.05	0.45
46:A:2971:A:H2'	46:A:2972:U:H6	1.78	0.45
46:A:3004:A:H2'	46:A:3005:A:O4'	2.16	0.45
75:e:54:ILE:CD1	75:e:105:TYR:CB	2.52	0.45
76:f:81:LEU:HG	76:f:115:LEU:HD22	1.97	0.45
1:AA:83:LYS:O	1:AA:87:LYS:HE2	2.16	0.45
5:AE:296:GLU:HA	5:AE:299:GLU:HB3	1.98	0.45
6:AF:43:GLY:O	6:AF:44:ARG:C	2.59	0.45
7:AG:42:PHE:HD2	23:n:20:ARG:NH1	2.14	0.45
7:AG:149:VAL:O	7:AG:152:ARG:HB3	2.17	0.45
9:AI:131:THR:HG22	9:AI:162:GLN:NE2	2.32	0.45
10:AJ:69:VAL:O	18:i:124:THR:CB	2.64	0.45
11:AK:182:VAL:HA	11:AK:204:VAL:HB	1.98	0.45
12:AL:268:G:HO2'	32:w:64:ARG:HH21	1.62	0.45
12:AL:634:A:OP2	27:r:77:GLN:N	2.49	0.45
12:AL:724:U:N3	12:AL:725:A:N7	2.64	0.45
12:AL:856:G:O6	14:AN:10:C:OP2	2.35	0.45
12:AL:900:A:H2'	12:AL:901:U:O4'	2.16	0.45
12:AL:974:A:N3	12:AL:1481:U:O2'	2.49	0.45
15:Z:7:VAL:O	15:Z:7:VAL:HG13	2.16	0.45
16:g:251:VAL:HB	33:x:51:LYS:O	2.16	0.45
17:h:332:LEU:O	17:h:336:ILE:HG13	2.15	0.45
18:i:213:ILE:HG12	18:i:223:TYR:CB	2.46	0.45
21:l:2:LEU:HB2	21:l:101:LEU:HD11	1.98	0.45
22:m:203:ARG:HB3	22:m:211:ARG:CZ	2.46	0.45
28:s:102:GLN:HE21	28:s:102:GLN:HB2	1.46	0.45
30:u:189:ALA:HB1	30:u:257:PHE:CZ	2.52	0.45
32:w:126:ARG:HD3	32:w:126:ARG:H	1.81	0.45
33:x:135:ILE:O	33:x:137:LEU:N	2.49	0.45
37:1:73:ILE:HD11	42:6:47:LYS:O	2.16	0.45
46:A:35:U:H2'	46:A:36:A:H8	1.81	0.45
46:A:52:A:C6	46:A:53:U:C4	3.05	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:243:A:C6	46:A:244:A:C6	3.04	0.45
46:A:675:G:O6	47:B:341:CYS:SG	2.75	0.45
46:A:937:U:OP1	46:A:937:U:H4'	2.16	0.45
46:A:1344:U:H5'	46:A:1345:A:OP2	2.17	0.45
46:A:1437:A:C6	46:A:1438:U:C2	3.05	0.45
46:A:1746:C:N3	46:A:1799:U:N3	2.64	0.45
46:A:1902:U:O2'	46:A:1903:A:H5'	2.15	0.45
46:A:2071:A:H2'	46:A:2071:A:N3	2.32	0.45
46:A:2212:A:C4	46:A:2213:U:C5	3.05	0.45
46:A:2307:A:O2'	46:A:2655:A:N1	2.47	0.45
46:A:2588:A:C2	46:A:2589:A:H1'	2.51	0.45
46:A:3171:A:H1'	46:A:3172:U:OP2	2.16	0.45
63:R:200:ARG:NH2	63:R:221:TYR:CD2	2.85	0.45
63:R:238:GLU:O	63:R:239:LYS:C	2.58	0.45
63:R:335:THR:HA	63:R:363:SER:HB2	1.98	0.45
5:AE:162:LEU:HD23	5:AE:162:LEU:HA	1.83	0.45
5:AE:253:ILE:O	5:AE:254:SER:HB2	2.16	0.45
7:AG:206:ILE:HG12	16:g:227:VAL:HG13	1.98	0.45
8:AH:21:ILE:HA	31:v:74:TYR:CZ	2.51	0.45
8:AH:83:GLN:CG	12:AL:145:A:C5'	2.93	0.45
8:AH:99:LYS:O	8:AH:102:LEU:HB3	2.16	0.45
9:AI:127:ARG:HD2	9:AI:394:LEU:CD2	2.46	0.45
9:AI:287:ILE:HG22	9:AI:288:MET:N	2.30	0.45
10:AJ:3:VAL:HG11	10:AJ:8:LEU:HD21	1.98	0.45
11:AK:152:ARG:HA	20:k:62:PHE:CE2	2.51	0.45
12:AL:328:C:C2	12:AL:329:U:C6	3.05	0.45
12:AL:834:A:H2'	12:AL:835:C:C6	2.50	0.45
12:AL:1104:U:P	18:i:342:THR:HG21	2.57	0.45
12:AL:1259:A:N3	34:y:86:THR:HB	2.31	0.45
12:AL:1307:U:H2'	12:AL:1308:U:O4'	2.16	0.45
12:AL:1622:G:H2'	12:AL:1622:G:N3	2.32	0.45
16:g:6:LEU:HB2	17:h:189:MET:SD	2.55	0.45
17:h:294:GLU:OE1	24:o:35:ARG:HB2	2.17	0.45
20:k:150:VAL:HG13	20:k:169:LEU:HB2	1.99	0.45
21:l:111:LEU:CD1	33:x:95:ARG:HH11	2.28	0.45
26:q:101:HIS:C	26:q:103:ASN:N	2.74	0.45
29:t:23:ARG:HE	29:t:27:LYS:HE3	1.81	0.45
30:u:153:ILE:HD11	30:u:187:ASN:ND2	2.30	0.45
32:w:57:LEU:O	32:w:58:VAL:HG13	2.16	0.45
34:y:42:ILE:HD11	34:y:73:LEU:HD23	1.98	0.45
44:8:42:TRP:CH2	62:Q:122:ILE:HG22	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:9:42:ARG:HB3	46:A:25:A:H3'	1.98	0.45
46:A:201:A:C2	46:A:202:A:N6	2.85	0.45
46:A:304:A:H2'	46:A:306:G:OP2	2.16	0.45
46:A:349:A:C8	46:A:349:A:H5'	2.52	0.45
46:A:393:C:C2'	46:A:394:G:H5'	2.47	0.45
46:A:455:A:H3'	46:A:456:U:H6	1.81	0.45
46:A:783:U:C1'	46:A:2294:A:H5'	2.47	0.45
46:A:784:A:C6	46:A:843:A:C8	3.04	0.45
46:A:1057:A:C6	46:A:1058:U:C4	3.03	0.45
46:A:1160:A:H2'	46:A:1161:A:H8	1.80	0.45
46:A:1215:A:H2'	46:A:1216:A:H8	1.82	0.45
46:A:1350:U:H5	62:Q:5:TYR:OH	2.00	0.45
46:A:1362:C:H2'	46:A:1363:C:C6	2.52	0.45
46:A:1817:U:C4	46:A:1818:G:C6	3.04	0.45
46:A:2203:A:H2'	46:A:2204:A:O4'	2.16	0.45
46:A:2314:U:O2	72:b:136:LYS:NZ	2.31	0.45
46:A:2390:U:H2'	46:A:2391:U:C6	2.52	0.45
46:A:2586:U:H3'	46:A:2586:U:OP2	2.16	0.45
46:A:2814:U:C2	46:A:2815:U:C4	3.04	0.45
46:A:3265:U:O5'	46:A:3265:U:H6	2.00	0.45
63:R:125:THR:O	63:R:127:ARG:HG3	2.16	0.45
63:R:129:PHE:CZ	63:R:131:ARG:HD2	2.51	0.45
3:AC:190:SER:H	4:AD:78:LYS:HZ3	1.64	0.45
4:AD:31:LEU:CD1	4:AD:100:CYS:H	2.30	0.45
4:AD:119:THR:HB	4:AD:122:PHE:CZ	2.51	0.45
4:AD:138:LEU:HD13	4:AD:309:LEU:HD22	1.97	0.45
4:AD:261:SER:H	16:g:223:GLN:NE2	2.14	0.45
5:AE:88:LEU:O	5:AE:90:PRO:HD3	2.16	0.45
8:AH:184:ARG:HD3	12:AL:814:A:O2'	2.16	0.45
9:AI:447:LEU:O	9:AI:449:HIS:CD2	2.70	0.45
11:AK:181:PRO:HB2	11:AK:204:VAL:HG23	1.98	0.45
12:AL:416:A:H2'	12:AL:417:U:H6	1.82	0.45
12:AL:798:U:O2'	12:AL:799:A:P	2.74	0.45
12:AL:1027:C:H2'	12:AL:1028:G:H8	1.81	0.45
12:AL:1429:A:N7	29:t:72:THR:HG22	2.27	0.45
12:AL:1502:U:H2'	12:AL:1503:U:O4'	2.17	0.45
12:AL:1590:A:C4	14:AN:8:A:OP2	2.70	0.45
15:Z:38:LEU:HD21	22:m:164:MET:CE	2.46	0.45
15:Z:62:THR:HA	15:Z:66:ALA:CA	2.45	0.45
16:g:210:LEU:HD22	16:g:210:LEU:HA	1.81	0.45
17:h:142:SER:HB3	17:h:145:GLU:HG2	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:h:154:SER:O	17:h:155:MET:C	2.59	0.45
17:h:183:ILE:HD11	17:h:375:VAL:CG1	2.46	0.45
17:h:349:ASP:OD1	17:h:350:SER:N	2.50	0.45
18:i:95:THR:HG1	29:t:108:PRO:CD	2.28	0.45
19:j:164:LYS:HD3	19:j:164:LYS:HA	1.68	0.45
20:k:41:PRO:HG2	20:k:43:ASP:H	1.82	0.45
20:k:56:PRO:HG3	20:k:62:PHE:CE1	2.52	0.45
21:l:63:ARG:HH21	26:q:108:TYR:HH	1.56	0.45
21:l:117:LYS:HE3	21:l:126:GLU:HB2	1.99	0.45
22:m:137:ALA:HB1	22:m:213:GLY:CA	2.46	0.45
26:q:108:TYR:CE2	35:z:89:ALA:HB3	2.45	0.45
26:q:142:GLU:O	26:q:143:ALA:C	2.59	0.45
28:s:78:ASN:O	28:s:81:LEU:HB3	2.16	0.45
32:w:22:VAL:HG21	32:w:58:VAL:HG21	1.97	0.45
32:w:45:VAL:CG1	32:w:74:ILE:HG13	2.41	0.45
32:w:188:THR:O	32:w:192:GLU:N	2.49	0.45
32:w:190:LEU:HD21	32:w:225:ARG:HA	1.98	0.45
37:1:282:LYS:HE2	63:R:143:GLU:OE1	2.16	0.45
46:A:149:A:C5	46:A:1371:A:C5	3.04	0.45
46:A:206:U:H3'	46:A:207:U:C6	2.52	0.45
46:A:398:G:H2'	46:A:399:G:O4'	2.16	0.45
46:A:499:G:H1'	49:D:147:VAL:HG22	1.97	0.45
46:A:504:A:O2'	46:A:505:C:H5'	2.17	0.45
46:A:546:A:H2'	46:A:547:A:C2	2.51	0.45
46:A:634:A:OP1	48:C:194:GLY:HA2	2.16	0.45
46:A:1096:A:N1	46:A:2836:G:O2'	2.42	0.45
46:A:1144:U:C2	46:A:1145:U:C5	3.04	0.45
46:A:1408:U:O2	46:A:1408:U:H2'	2.17	0.45
46:A:1490:A:H2'	46:A:1491:U:O4'	2.16	0.45
46:A:1531:C:O2'	46:A:1533:G:N2	2.50	0.45
46:A:1567:C:H5'	60:O:247:PHE:CE2	2.52	0.45
46:A:1889:A:H2'	46:A:1890:C:O4'	2.15	0.45
46:A:2098:U:H2'	46:A:2099:A:H8	1.82	0.45
46:A:2208:A:N1	46:A:2239:A:N1	2.64	0.45
46:A:2392:A:H8	46:A:2392:A:O5'	2.00	0.45
46:A:2745:U:H5"	46:A:2804:U:O4'	2.17	0.45
46:A:2782:A:C5	46:A:2783:U:C4	3.04	0.45
46:A:2836:G:C4	46:A:2837:U:C5	3.05	0.45
46:A:3105:U:H2'	46:A:3106:G:O4'	2.17	0.45
46:A:3165:U:H2'	46:A:3166:A:C8	2.52	0.45
46:A:3176:U:H2'	46:A:3177:A:H8	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:B:73:LEU:HD22	47:B:73:LEU:H	1.82	0.45
48:C:201:HIS:O	48:C:202:GLY:C	2.59	0.45
54:I:36:VAL:HG21	54:I:119:ASP:HB2	1.99	0.45
2:AB:81:ILE:HG23	2:AB:84:ARG:HH22	1.82	0.45
3:AC:86:ILE:CG2	17:h:162:ALA:CB	2.88	0.45
4:AD:31:LEU:HD11	4:AD:100:CYS:CB	2.46	0.45
4:AD:191:ILE:HG21	4:AD:268:ILE:HD12	1.98	0.45
6:AF:294:VAL:HB	6:AF:309:PHE:O	2.16	0.45
6:AF:331:ASP:OD1	6:AF:331:ASP:N	2.50	0.45
6:AF:334:ILE:HG23	6:AF:342:MET:HG3	1.98	0.45
8:AH:6:ALA:HA	8:AH:10:PHE:HA	1.98	0.45
8:AH:76:ALA:O	8:AH:77:LYS:C	2.59	0.45
8:AH:135:ALA:O	8:AH:138:LEU:HB2	2.16	0.45
8:AH:172:GLU:O	8:AH:175:LEU:HG	2.17	0.45
9:AI:147:ILE:HG23	9:AI:388:GLU:HA	1.98	0.45
9:AI:177:ILE:HD13	9:AI:320:MET:CE	2.46	0.45
9:AI:181:GLU:O	9:AI:184:LEU:N	2.49	0.45
9:AI:367:TYR:OH	11:AK:274:PRO:HD2	2.17	0.45
10:AJ:32:SER:HB3	12:AL:1313:U:OP2	2.17	0.45
11:AK:52:MET:HE1	11:AK:76:LEU:HD21	1.97	0.45
11:AK:292:TYR:CE2	24:o:214:THR:HG22	2.51	0.45
12:AL:34:G:C6	12:AL:671:A:C2	3.04	0.45
12:AL:99:U:H2'	12:AL:100:A:H5"	1.99	0.45
12:AL:127:U:C4	12:AL:128:A:C5	3.04	0.45
12:AL:224:A:H2'	12:AL:225:U:H5'	1.98	0.45
12:AL:232:U:O4'	31:v:78:VAL:HG13	2.16	0.45
12:AL:519:A:H3'	12:AL:520:A:H8	1.80	0.45
12:AL:697:G:C5'	23:n:4:VAL:CG2	2.95	0.45
12:AL:822:U:H5"	12:AL:887:A:N3	2.32	0.45
12:AL:1154:C:OP1	18:i:352:PHE:N	2.45	0.45
12:AL:1220:A:H1'	29:t:114:ILE:HG23	1.99	0.45
12:AL:1447:U:H4'	12:AL:1448:U:O5'	2.16	0.45
12:AL:1646:U:H4'	12:AL:1648:C:OP2	2.17	0.45
17:h:298:ASN:HA	17:h:388:LEU:HD22	1.97	0.45
18:i:90:MET:HB3	18:i:96:GLN:HE21	1.81	0.45
18:i:302:ILE:HD11	25:p:25:GLU:HA	1.98	0.45
21:l:26:SER:O	21:l:30:LYS:HG3	2.16	0.45
22:m:97:GLN:HB3	22:m:101:LEU:HD13	1.98	0.45
26:q:170:ASP:OD1	26:q:171:ASP:N	2.49	0.45
26:q:176:ARG:O	26:q:177:ALA:C	2.60	0.45
30:u:209:VAL:HG11	30:u:245:PHE:CE2	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:5:268:TRP:HA	41:5:279:VAL:HG22	1.99	0.45
46:A:30:U:H3	48:C:21:SER:N	2.12	0.45
46:A:118:A:C6	46:A:145:A:C4	3.04	0.45
46:A:177:A:C2	46:A:201:A:C2	3.05	0.45
46:A:701:U:C2	55:J:87:LYS:O	2.69	0.45
46:A:947:G:C5	46:A:1107:U:H5	2.35	0.45
46:A:991:U:H4'	46:A:1036:U:O2'	2.16	0.45
46:A:1029:A:H3'	46:A:1031:U:H5	1.82	0.45
46:A:1127:A:C2	46:A:1143:A:C2	3.04	0.45
46:A:1424:U:H5'	46:A:1533:G:O2'	2.16	0.45
46:A:1639:A:H2'	46:A:1640:U:O4'	2.17	0.45
46:A:1771:A:H3'	46:A:1772:U:C6	2.52	0.45
46:A:1946:U:O5'	68:W:86:LYS:HA	2.17	0.45
46:A:2030:U:O2	46:A:2030:U:H2'	2.15	0.45
46:A:2667:A:H2'	46:A:2668:C:H6	1.82	0.45
46:A:2734:A:C2	46:A:2747:G:N3	2.85	0.45
46:A:2860:A:C6	46:A:2861:U:C5	3.04	0.45
46:A:2872:A:H2'	46:A:2873:U:C6	2.51	0.45
46:A:2910:A:C5	46:A:2911:U:C5	3.05	0.45
46:A:2924:A:H3'	46:A:2925:C:C6	2.52	0.45
46:A:3076:A:C6	46:A:3077:A:C5	3.05	0.45
46:A:3149:A:N6	46:A:3252:U:C5	2.84	0.45
47:B:129:LYS:HZ1	47:B:147:GLY:C	2.25	0.45
49:D:257:LEU:HB2	55:J:61:LEU:HD13	1.98	0.45
63:R:193:LEU:O	63:R:194:ALA:C	2.59	0.45
1:AA:82:ARG:NH2	12:AL:884:A:N1	2.64	0.45
2:AB:45:LEU:CG	2:AB:56:LYS:HG2	2.33	0.45
4:AD:155:LEU:HD22	16:g:210:LEU:CD1	2.47	0.45
4:AD:157:ILE:HG23	4:AD:293:LEU:HD12	1.99	0.45
5:AE:78:ASP:O	5:AE:79:ILE:C	2.60	0.45
5:AE:215:TRP:C	5:AE:217:LYS:H	2.23	0.45
6:AF:137:PHE:CG	19:j:468:PRO:CB	2.97	0.45
7:AG:191:LEU:O	7:AG:194:ALA:N	2.50	0.45
8:AH:43:GLY:O	8:AH:44:VAL:C	2.60	0.45
8:AH:203:TYR:HB3	30:u:138:ILE:CG1	2.47	0.45
8:AH:208:GLU:CA	30:u:134:ARG:HD3	2.47	0.45
9:AI:123:VAL:HG21	9:AI:405:TYR:CE2	2.51	0.45
9:AI:132:ASN:O	9:AI:136:LYS:HG3	2.17	0.45
9:AI:138:LEU:HD23	9:AI:146:PHE:HE1	1.82	0.45
9:AI:345:ILE:CG2	9:AI:346:SER:N	2.80	0.45
9:AI:389:PHE:O	9:AI:390:GLU:C	2.60	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:29:G:C5	12:AL:30:U:C5	3.05	0.45
12:AL:30:U:H2'	12:AL:31:U:O4'	2.17	0.45
12:AL:130:G:H22	12:AL:132:A:N6	2.15	0.45
12:AL:787:A:H62	12:AL:799:A:H2'	1.81	0.45
12:AL:804:U:OP1	21:l:3:TYR:OH	2.25	0.45
12:AL:842:A:H2'	12:AL:843:G:H8	1.81	0.45
12:AL:925:A:H2'	12:AL:926:A:O4'	2.17	0.45
12:AL:1025:U:H5'	12:AL:1026:U:H5'	1.99	0.45
12:AL:1164:U:H1'	12:AL:1216:A:H62	1.81	0.45
17:h:183:ILE:CD1	17:h:375:VAL:HG11	2.47	0.45
19:j:170:GLU:HA	19:j:173:LYS:HD2	1.99	0.45
21:l:33:ILE:C	21:l:35:ASN:H	2.24	0.45
22:m:115:ASP:O	22:m:116:HIS:C	2.59	0.45
23:n:127:ILE:HA	23:n:152:CYS:O	2.17	0.45
26:q:108:TYR:HA	35:z:86:ALA:N	2.31	0.45
26:q:214:MET:O	26:q:215:ARG:C	2.56	0.45
27:r:35:LYS:HD2	32:w:37:LEU:HD21	1.96	0.45
28:s:67:ILE:CG1	67:V:96:GLY:N	2.79	0.45
32:w:53:ARG:HH21	32:w:83:GLN:CG	2.30	0.45
32:w:53:ARG:O	32:w:54:GLU:C	2.59	0.45
32:w:172:LEU:HA	32:w:175:ASN:HB3	1.98	0.45
33:x:42:ASP:OD1	33:x:42:ASP:N	2.50	0.45
37:1:121:PHE:HD1	46:A:2349:A:N6	2.13	0.45
39:3:17:LEU:HD21	46:A:1319:A:N3	2.31	0.45
46:A:24:G:C6	46:A:25:A:N6	2.85	0.45
46:A:230:A:C8	46:A:247:A:C6	3.05	0.45
46:A:371:U:O2'	46:A:372:A:H5'	2.16	0.45
46:A:398:G:OP1	70:Y:94:ARG:HD2	2.16	0.45
46:A:546:A:H8	46:A:546:A:O5'	1.99	0.45
46:A:614:A:H4'	46:A:615:U:OP2	2.16	0.45
46:A:754:A:C6	46:A:755:U:C4	3.04	0.45
46:A:1007:U:O2'	46:A:1008:U:P	2.75	0.45
46:A:1084:U:H2'	46:A:1085:G:C8	2.51	0.45
46:A:1313:G:C2	46:A:1321:C:C2	3.05	0.45
46:A:1340:G:H2'	46:A:1341:G:C8	2.52	0.45
46:A:1522:A:H2'	46:A:1523:A:H8	1.71	0.45
46:A:1555:A:C6	46:A:1556:A:C5	3.05	0.45
46:A:1612:A:H5"	46:A:1612:A:H8	1.81	0.45
46:A:1634:A:HO2'	46:A:1635:G:H8	1.62	0.45
46:A:1689:U:C5	46:A:2876:U:O4	2.70	0.45
46:A:1708:A:H4'	46:A:1709:G:OP1	2.13	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1924:G:C5	46:A:1940:G:C2	3.04	0.45
46:A:2744:A:N7	46:A:2796:G:C6	2.84	0.45
46:A:2766:U:O3'	46:A:2768:G:OP1	2.34	0.45
46:A:2814:U:C5'	46:A:2833:A:C2	3.00	0.45
46:A:2836:G:C6	46:A:2837:U:C4	3.05	0.45
46:A:2962:U:H2'	46:A:2963:U:H6	1.81	0.45
46:A:2983:U:C3'	46:A:2984:A:H8	2.29	0.45
46:A:3050:G:C4	46:A:3051:U:C5	3.05	0.45
46:A:3078:A:H2'	46:A:3079:U:H6	1.81	0.45
46:A:3245:A:C6	46:A:3246:U:C4	3.05	0.45
60:O:154:ARG:HB3	61:P:231:LEU:CD1	2.47	0.45
63:R:193:LEU:CD1	63:R:247:ILE:HG12	2.46	0.45
63:R:331:GLU:CB	63:R:362:ARG:NH1	2.71	0.45
1:AA:96:ARG:O	1:AA:100:GLU:N	2.45	0.45
2:AB:100:ILE:O	2:AB:101:HIS:HB3	2.17	0.45
3:AC:14:LEU:HG	3:AC:38:TRP:CD1	2.52	0.45
3:AC:27:ASN:O	3:AC:28:ILE:C	2.59	0.45
3:AC:62:TYR:CG	17:h:159:LYS:HE3	2.51	0.45
3:AC:190:SER:H	4:AD:78:LYS:NZ	2.15	0.45
3:AC:261:PHE:HB2	17:h:149:ARG:CD	2.38	0.45
4:AD:27:PRO:HA	4:AD:33:SER:C	2.42	0.45
4:AD:117:LEU:O	4:AD:118:GLN:C	2.60	0.45
4:AD:200:ASN:H	4:AD:208:PHE:HE1	1.63	0.45
5:AE:52:LEU:HD23	5:AE:52:LEU:C	2.42	0.45
5:AE:92:PRO:HG2	5:AE:95:LYS:HB2	1.59	0.45
5:AE:117:LEU:HD21	5:AE:159:MET:HB3	1.98	0.45
5:AE:216:LYS:C	5:AE:218:VAL:H	2.23	0.45
6:AF:308:LYS:HB2	31:v:62:ILE:CB	2.46	0.45
8:AH:206:ALA:O	8:AH:207:ASN:CB	2.64	0.45
10:AJ:19:PHE:CE2	11:AK:226:ARG:HD2	2.52	0.45
11:AK:87:LEU:HD13	11:AK:108:TYR:CG	2.52	0.45
11:AK:299:LYS:HE2	24:o:151:PHE:HA	1.98	0.45
12:AL:28:G:H2'	12:AL:29:G:C8	2.52	0.45
12:AL:46:A:C2	12:AL:407:U:O2	2.70	0.45
12:AL:412:U:H2'	12:AL:413:G:O4'	2.17	0.45
12:AL:523:U:O2	12:AL:525:A:C8	2.70	0.45
12:AL:626:U:C4	12:AL:654:G:N1	2.84	0.45
12:AL:774:U:H4'	26:q:120:GLN:NE2	2.31	0.45
12:AL:1275:A:H2'	12:AL:1276:A:H5"	1.99	0.45
12:AL:1384:G:C3'	29:t:42:LYS:HZ1	2.23	0.45
13:AM:36:U:C5	14:AN:7:C:N4	2.84	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:i:146:LEU:HD12	25:p:132:SER:HB3	1.98	0.45
21:l:35:ASN:O	21:l:37:GLY:N	2.50	0.45
21:l:102:ASP:OD1	21:l:102:ASP:N	2.49	0.45
24:o:156:ALA:CB	24:o:234:ALA:N	2.80	0.45
26:q:111:THR:O	26:q:115:TYR:HD1	2.00	0.45
26:q:112:MET:O	26:q:116:LEU:HG	2.17	0.45
30:u:74:PRO:HB3	32:w:100:GLU:HB3	1.99	0.45
30:u:94:ASN:ND2	30:u:97:GLU:OE2	2.50	0.45
35:z:91:SER:O	35:z:93:VAL:N	2.50	0.45
37:1:121:PHE:CD1	46:A:2349:A:C6	3.05	0.45
42:6:104:HIS:CE1	46:A:2422:A:H5”	2.51	0.45
46:A:15:A:C5	46:A:3285:A:C2	3.04	0.45
46:A:113:U:O2’	46:A:114:U:H5’	2.16	0.45
46:A:138:U:H2’	46:A:139:U:H6	1.82	0.45
46:A:534:A:H2’	46:A:535:U:O4’	2.17	0.45
46:A:624:G:N2	46:A:625:A:N7	2.65	0.45
46:A:1013:G:C8	46:A:1013:G:H5”	2.52	0.45
46:A:1072:U:H2’	46:A:1073:A:C8	2.52	0.45
46:A:1413:A:C6	46:A:1546:G:C4	3.04	0.45
46:A:1960:A:H3’	49:D:109:LYS:HZ2	1.72	0.45
46:A:1998:U:H2’	46:A:1999:U:H6	1.82	0.45
46:A:2438:A:H8	46:A:2438:A:P	2.40	0.45
46:A:2777:U:O2	48:C:204:SER:OG	2.35	0.45
46:A:2786:C:O2’	46:A:2787:C:H5’	2.17	0.45
46:A:2843:G:C8	46:A:2846:U:C6	3.05	0.45
46:A:2927:C:OP2	51:F:211:LYS:NZ	2.43	0.45
46:A:2941:A:C2	46:A:2942:A:C4	3.05	0.45
46:A:3041:A:H5”	46:A:3041:A:C8	2.52	0.45
46:A:3107:U:C4	46:A:3108:U:C4	3.04	0.45
46:A:3154:U:C4	48:C:114:HIS:CE1	3.04	0.45
61:P:181:PHE:HB2	65:T:78:ILE:HD11	1.99	0.45
63:R:129:PHE:HE2	63:R:131:ARG:HB2	1.80	0.45
65:T:144:SER:O	65:T:148:THR:HG23	2.16	0.45
75:e:96:LYS:HB2	75:e:98:ARG:CZ	2.47	0.45
75:e:142:TYR:HD1	75:e:142:TYR:HA	1.69	0.45
3:AC:8:ILE:N	17:h:165:SER:O	2.49	0.45
3:AC:148:LEU:CD2	4:AD:203:ASN:C	2.87	0.45
3:AC:185:LEU:CG	7:AG:198:GLY:H	2.30	0.45
5:AE:63:PRO:HA	5:AE:67:ARG:HB2	1.99	0.45
5:AE:260:ASN:HD21	5:AE:303:GLN:HA	1.82	0.45
5:AE:267:LEU:O	5:AE:271:LEU:HG	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:31:ARG:HB3	6:AF:32:ILE:HD13	1.99	0.45
6:AF:306:GLN:O	31:v:62:ILE:CA	2.56	0.45
7:AG:1:MET:HE1	17:h:354:LEU:HD11	1.97	0.45
7:AG:75:TYR:CZ	32:w:183:ILE:HD12	2.50	0.45
7:AG:166:VAL:HG21	16:g:195:LYS:HE2	0.53	0.45
9:AI:151:GLU:HG2	9:AI:154:VAL:HB	1.98	0.45
9:AI:187:ARG:HG2	9:AI:187:ARG:NH1	2.32	0.45
9:AI:318:LEU:O	9:AI:319:GLN:C	2.59	0.45
9:AI:367:TYR:HE2	11:AK:274:PRO:O	2.00	0.45
11:AK:199:LYS:HE3	12:AL:1317:U:OP2	2.16	0.45
11:AK:286:ARG:CD	12:AL:1323:A:OP2	2.61	0.45
12:AL:34:G:O4'	19:j:486:LYS:HG3	2.16	0.45
12:AL:80:U:C4	12:AL:81:U:C4	3.05	0.45
12:AL:323:U:N3	12:AL:324:G:N7	2.65	0.45
12:AL:667:A:H2'	12:AL:668:A:C8	2.51	0.45
12:AL:785:A:O2'	33:x:108:ARG:HG3	2.17	0.45
12:AL:905:A:H2	12:AL:912:A:H61	1.63	0.45
12:AL:1120:U:O2	17:h:282:ASN:ND2	2.45	0.45
12:AL:1310:U:C2	12:AL:1311:A:C8	3.05	0.45
12:AL:1319:A:H4'	12:AL:1320:A:OP1	2.16	0.45
12:AL:1397:A:C6	12:AL:1398:U:C4	3.04	0.45
16:g:51:LYS:CG	17:h:217:ILE:HD13	2.46	0.45
16:g:101:ILE:HB	16:g:103:ARG:CZ	2.46	0.45
18:i:127:LEU:O	18:i:128:ASN:HB3	2.17	0.45
19:j:13:ARG:O	19:j:15:ARG:N	2.48	0.45
19:j:75:SER:O	19:j:76:VAL:C	2.60	0.45
20:k:21:LEU:HD11	20:k:37:GLN:HE22	1.81	0.45
22:m:127:LYS:HZ1	24:o:191:LYS:HZ2	1.57	0.45
26:q:173:GLY:O	26:q:174:LYS:C	2.60	0.45
28:s:17:LYS:HG3	28:s:18:ILE:H	1.82	0.45
30:u:201:ASN:HA	30:u:204:ASN:HD22	1.81	0.45
32:w:106:GLU:C	32:w:108:LEU:N	2.74	0.45
32:w:110:LYS:O	32:w:114:ARG:HB3	2.17	0.45
33:x:64:ARG:HE	33:x:68:ASP:CG	2.24	0.45
34:y:31:THR:O	34:y:33:ILE:N	2.50	0.45
41:5:98:LEU:HG	41:5:227:GLY:HA2	1.99	0.45
42:6:104:HIS:ND1	46:A:2422:A:C5'	2.80	0.45
46:A:32:U:H2'	46:A:33:A:H8	1.82	0.45
46:A:71:A:C4	46:A:72:U:C5	3.04	0.45
46:A:169:A:C6	46:A:170:U:C4	3.05	0.45
46:A:217:A:C5	64:S:47:HIS:NE2	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:260:G:C2	46:A:364:U:C2	3.05	0.45
46:A:573:U:H2'	46:A:574:A:H8	1.81	0.45
46:A:635:U:H2'	46:A:636:G:O4'	2.17	0.45
46:A:698:U:C5	55:J:99:ARG:CZ	3.00	0.45
46:A:825:A:H2'	46:A:826:A:H8	1.81	0.45
46:A:1143:A:C6	46:A:1144:U:C4	3.04	0.45
46:A:1330:U:C6	46:A:1330:U:H5"	2.51	0.45
46:A:1399:A:H1'	46:A:1400:U:C5	2.51	0.45
46:A:1439:A:O2'	46:A:1482:A:N6	2.49	0.45
46:A:1501:A:H3'	46:A:1502:U:C6	2.51	0.45
46:A:2063:A:O5'	46:A:2063:A:C8	2.68	0.45
46:A:2205:G:C2	46:A:2206:U:C2	3.06	0.45
46:A:2209:U:C2	46:A:2210:A:C8	3.05	0.45
46:A:2285:U:C6	46:A:2693:C:C4	3.05	0.45
46:A:2428:A:OP2	50:E:170:LYS:CE	2.64	0.45
46:A:2771:G:H4'	46:A:2772:U:O5'	2.17	0.45
46:A:2970:A:C6	46:A:3041:A:N6	2.85	0.45
46:A:3025:U:H2'	46:A:3026:A:C8	2.52	0.45
61:P:190:MET:HE1	62:Q:42:MET:HG3	1.98	0.45
63:R:66:GLN:NE2	63:R:85:ILE:HD13	2.32	0.45
63:R:236:THR:O	63:R:237:ASN:C	2.59	0.45
75:e:200:VAL:O	75:e:201:LEU:C	2.60	0.45
76:f:76:PRO:O	76:f:77:THR:C	2.58	0.45
76:f:121:TYR:O	76:f:125:LYS:HG3	2.17	0.45
3:AC:162:LYS:HD3	3:AC:162:LYS:HA	1.84	0.44
3:AC:194:PHE:CE2	4:AD:223:TYR:CB	2.95	0.44
4:AD:167:GLY:O	4:AD:275:ALA:N	2.48	0.44
4:AD:251:PHE:HA	4:AD:255:THR:CB	2.47	0.44
5:AE:168:HIS:CA	5:AE:171:LEU:HB2	2.41	0.44
5:AE:217:LYS:O	5:AE:218:VAL:C	2.60	0.44
5:AE:274:TYR:CD1	5:AE:277:ILE:HD12	2.51	0.44
5:AE:315:TYR:CZ	5:AE:319:LEU:HD11	2.52	0.44
6:AF:307:TYR:OH	31:v:92:LYS:HG3	2.17	0.44
7:AG:94:PRO:HD3	17:h:207:GLN:OE1	2.17	0.44
9:AI:143:VAL:O	9:AI:145:LYS:HG3	2.17	0.44
9:AI:414:ASP:O	9:AI:415:LYS:C	2.60	0.44
11:AK:152:ARG:CB	20:k:70:ASP:OD1	2.64	0.44
11:AK:184:TYR:O	25:p:144:GLN:N	2.48	0.44
12:AL:224:A:C5	12:AL:225:U:C5	3.05	0.44
12:AL:520:A:H2'	12:AL:521:A:H8	1.82	0.44
12:AL:622:A:H2'	12:AL:623:A:C8	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:731:U:H5'	12:AL:792:U:H1'	1.98	0.44
12:AL:744:A:C5	12:AL:745:U:C4	3.06	0.44
12:AL:928:U:H2'	12:AL:929:G:O4'	2.17	0.44
12:AL:1104:U:OP1	18:i:342:THR:CG2	2.65	0.44
12:AL:1290:A:C8	12:AL:1318:U:C4	3.05	0.44
12:AL:1354:U:C2	12:AL:1355:U:O2	2.71	0.44
12:AL:1540:U:H2'	12:AL:1541:U:C6	2.52	0.44
18:i:190:ASN:HD21	18:i:193:ASN:HB2	1.82	0.44
19:j:396:PRO:O	19:j:400:LYS:HG2	2.17	0.44
21:l:20:GLU:O	21:l:21:ALA:C	2.60	0.44
22:m:212:LEU:O	22:m:216:LEU:HG	2.17	0.44
25:p:18:ARG:O	25:p:18:ARG:CG	2.62	0.44
26:q:99:ASN:HA	26:q:102:LYS:HG3	1.99	0.44
26:q:215:ARG:NH2	26:q:217:LEU:HD21	2.33	0.44
32:w:13:GLN:OE1	32:w:14:GLY:N	2.50	0.44
32:w:193:LEU:CD1	32:w:200:CYS:CB	2.95	0.44
35:z:123:ILE:HG22	35:z:124:MET:CE	2.47	0.44
38:2:49:MET:HE1	50:E:160:ALA:HB1	1.99	0.44
40:4:40:MET:HE2	40:4:86:VAL:HG21	1.99	0.44
46:A:278:A:H2'	46:A:279:U:C6	2.52	0.44
46:A:374:U:H2'	46:A:375:A:H8	1.82	0.44
46:A:441:A:C6	46:A:444:A:C5	3.05	0.44
46:A:471:A:H5'	59:N:136:ARG:HE	1.81	0.44
46:A:670:U:H2'	46:A:671:G:C8	2.52	0.44
46:A:703:U:C4	46:A:1283:G:O6	2.70	0.44
46:A:1280:A:H3'	46:A:1281:U:H5"	1.98	0.44
46:A:1303:C:C4	46:A:1600:U:C5	3.05	0.44
46:A:1386:A:H5"	46:A:1715:A:N6	2.33	0.44
46:A:1387:A:H5"	64:S:67:LYS:CD	2.47	0.44
46:A:1588:U:H2'	46:A:1589:A:H8	1.82	0.44
46:A:1609:U:H2'	46:A:1610:A:C8	2.51	0.44
46:A:1795:U:H2'	46:A:1796:A:C8	2.52	0.44
46:A:1892:G:H4'	46:A:1893:U:C5	2.53	0.44
46:A:2302:U:H2'	46:A:2303:G:H8	1.81	0.44
46:A:2331:U:OP2	63:R:322:ARG:HB2	2.17	0.44
46:A:2754:A:C6	46:A:2755:U:C4	3.05	0.44
46:A:2803:C:H2'	46:A:2804:U:C6	2.52	0.44
46:A:2955:G:OP1	46:A:3049:A:N6	2.49	0.44
46:A:3287:U:O5'	46:A:3287:U:H6	2.00	0.44
53:H:13:ALA:CB	60:O:294:LEU:HD11	2.47	0.44
62:Q:263:GLU:OE2	72:b:35:LYS:CE	2.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
75:e:71:HIS:CD2	75:e:73:ASN:HB3	2.51	0.44
76:f:9:ILE:HG12	76:f:61:THR:HA	1.99	0.44
76:f:109:THR:OG1	76:f:155:LYS:HA	2.16	0.44
2:AB:48:ILE:CG2	2:AB:90:GLN:HG3	2.47	0.44
2:AB:55:LEU:C	2:AB:57:ASP:N	2.74	0.44
3:AC:65:HIS:NE2	17:h:159:LYS:CE	2.80	0.44
3:AC:135:VAL:O	3:AC:136:LYS:C	2.60	0.44
4:AD:209:ASN:CB	4:AD:265:VAL:HG21	2.48	0.44
5:AE:295:LEU:O	5:AE:296:GLU:C	2.61	0.44
6:AF:62:LEU:HG	19:j:26:PHE:CZ	2.52	0.44
6:AF:317:VAL:HB	6:AF:318:GLY:H	1.59	0.44
7:AG:52:SER:OG	7:AG:53:ASN:N	2.50	0.44
7:AG:137:MET:HE1	7:AG:176:PHE:CD1	2.53	0.44
9:AI:325:MET:O	9:AI:328:ILE:HB	2.17	0.44
10:AJ:14:LEU:HD13	11:AK:222:LEU:HD21	1.97	0.44
10:AJ:22:ASN:O	12:AL:1313:U:H4’	2.18	0.44
12:AL:485:A:O2’	12:AL:486:U:P	2.75	0.44
12:AL:500:A:H5”	19:j:7:LEU:HD11	1.88	0.44
12:AL:515:A:C4	12:AL:516:A:C8	3.05	0.44
12:AL:642:C:H41	27:r:74:ASN:CG	2.25	0.44
12:AL:697:G:C5’	23:n:4:VAL:HG23	2.45	0.44
12:AL:1064:U:H2’	12:AL:1065:A:O4’	2.17	0.44
12:AL:1211:A:O2’	12:AL:1212:A:H8	1.99	0.44
12:AL:1375:U:C3’	28:s:100:ARG:HE	2.29	0.44
12:AL:1445:U:P	22:m:116:HIS:HE1	2.41	0.44
18:i:260:TYR:O	18:i:264:ILE:HG12	2.18	0.44
24:o:277:LYS:HB3	24:o:278:ARG:H	1.69	0.44
26:q:128:THR:HA	26:q:147:THR:CG2	2.46	0.44
26:q:153:GLU:O	26:q:157:GLU:HG3	2.17	0.44
26:q:215:ARG:CB	26:q:217:LEU:HG	2.47	0.44
31:v:21:TYR:O	31:v:43:TYR:N	2.51	0.44
32:w:112:SER:O	32:w:113:VAL:C	2.58	0.44
33:x:103:VAL:HG12	33:x:105:SER:H	1.82	0.44
34:y:72:LYS:O	34:y:73:LEU:C	2.60	0.44
46:A:225:A:C6	46:A:252:A:C6	3.05	0.44
46:A:236:A:N3	46:A:236:A:H2’	2.32	0.44
46:A:330:A:C2	46:A:331:A:C4	3.06	0.44
46:A:370:C:C2	46:A:371:U:C5	3.05	0.44
46:A:500:U:O2’	46:A:504:A:H5”	2.17	0.44
46:A:574:A:O3’	55:J:104:SER:HB2	2.17	0.44
46:A:1169:A:H4’	46:A:1170:U:OP2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1267:A:C5	46:A:1268:U:C4	3.06	0.44
46:A:1434:A:C2	46:A:1488:U:C2	3.05	0.44
46:A:1536:A:C6	46:A:1537:A:N6	2.85	0.44
46:A:1729:A:H2'	46:A:1730:A:C8	2.51	0.44
46:A:2213:U:H2'	46:A:2214:A:H8	1.82	0.44
46:A:2870:G:H5'	46:A:2870:G:C8	2.52	0.44
46:A:2924:A:H3'	46:A:2925:C:H6	1.82	0.44
46:A:2959:C:H2'	46:A:2960:U:H6	1.82	0.44
46:A:3023:U:H2'	46:A:3024:U:H6	1.80	0.44
46:A:3257:C:C2	46:A:3258:A:C8	3.05	0.44
63:R:197:TYR:CD2	63:R:197:TYR:C	2.94	0.44
71:a:144:ILE:HD12	71:a:144:ILE:HA	1.92	0.44
76:f:58:VAL:HB	76:f:60:ILE:HG13	1.99	0.44
1:AA:94:ARG:NH2	12:AL:1608:G:H1	2.13	0.44
3:AC:33:GLY:O	3:AC:36:THR:N	2.48	0.44
6:AF:40:LYS:HB2	6:AF:60:GLN:HE22	1.83	0.44
6:AF:72:VAL:HG11	12:AL:482:U:OP1	2.17	0.44
7:AG:124:GLU:CB	16:g:11:ARG:HD2	2.24	0.44
8:AH:151:LEU:H	8:AH:151:LEU:HD12	1.81	0.44
9:AI:56:LEU:HD13	22:m:205:SER:HB3	1.98	0.44
10:AJ:15:SER:HB3	11:AK:224:ARG:CD	2.47	0.44
12:AL:69:U:O2'	12:AL:70:C:H5'	2.18	0.44
12:AL:377:A:C2	12:AL:528:A:C6	3.04	0.44
12:AL:521:A:H2'	12:AL:527:G:H1	1.82	0.44
12:AL:539:C:H42	12:AL:556:G:H1	1.64	0.44
12:AL:604:A:H2'	12:AL:605:U:O4'	2.18	0.44
12:AL:749:A:H2'	12:AL:750:G:H8	1.82	0.44
12:AL:1023:A:H1'	12:AL:1050:C:O2'	2.17	0.44
12:AL:1105:G:H1	12:AL:1231:U:H3	1.66	0.44
12:AL:1172:A:C6	25:p:39:GLY:HA2	2.53	0.44
12:AL:1172:A:O2'	12:AL:1173:U:OP1	2.35	0.44
12:AL:1174:U:H5'	12:AL:1176:U:C2	2.51	0.44
12:AL:1175:U:OP1	25:p:112:ARG:NH1	2.41	0.44
12:AL:1495:U:H3'	12:AL:1496:A:H5"	1.98	0.44
13:AM:61:C:H3'	13:AM:62:C:C6	2.52	0.44
16:g:232:LEU:HA	16:g:272:ARG:HG2	1.99	0.44
17:h:203:ARG:O	17:h:205:SER:N	2.50	0.44
18:i:82:ASN:ND2	20:k:57:PRO:HG3	2.32	0.44
18:i:100:TYR:CE2	25:p:139:LYS:CB	2.98	0.44
27:r:68:LEU:HB2	27:r:118:LEU:HD21	2.00	0.44
28:s:11:LYS:O	28:s:14:GLU:HB2	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:s:69:GLY:HA2	28:s:72:ARG:CG	2.48	0.44
30:u:198:ASP:OD2	30:u:201:ASN:HB2	2.17	0.44
32:w:80:ASN:C	32:w:82:GLY:N	2.72	0.44
34:y:38:ARG:NH1	34:y:74:GLY:HA2	2.32	0.44
35:z:122:ARG:O	35:z:123:ILE:C	2.59	0.44
38:2:49:MET:HE1	50:E:160:ALA:CB	2.48	0.44
38:2:127:MET:HG2	67:V:80:TRP:HA	1.98	0.44
39:3:30:PHE:CA	46:A:1568:U:H5	2.31	0.44
46:A:170:U:H2'	46:A:171:A:H8	1.82	0.44
46:A:302:U:H3'	46:A:303:A:H8	1.82	0.44
46:A:602:A:O2'	46:A:1366:A:N3	2.46	0.44
46:A:629:G:N2	46:A:1881:A:C2	2.86	0.44
46:A:847:U:C4	46:A:848:U:C4	3.05	0.44
46:A:1081:A:H2'	46:A:1082:U:H6	1.77	0.44
46:A:1330:U:H5'	46:A:1331:A:OP1	2.17	0.44
46:A:1997:A:H61	46:A:2089:U:H3	1.63	0.44
46:A:2025:A:C2	46:A:2026:G:C4	3.05	0.44
46:A:2064:G:C8	46:A:2064:G:O5'	2.69	0.44
46:A:2198:U:H2'	46:A:2199:U:O4'	2.18	0.44
46:A:2216:U:H2'	46:A:2217:A:H8	1.82	0.44
46:A:2326:U:O2'	46:A:2327:A:H5'	2.18	0.44
46:A:2593:A:N7	46:A:2655:A:N6	2.64	0.44
46:A:2598:U:C4'	46:A:2602:A:H62	2.29	0.44
46:A:2623:A:OP1	63:R:50:LYS:HE3	2.17	0.44
46:A:2696:A:H2'	46:A:2696:A:N3	2.32	0.44
46:A:3004:A:C5	46:A:3005:A:C5	3.05	0.44
46:A:3103:G:C2	46:A:3104:U:C6	3.06	0.44
46:A:3232:U:O4	46:A:3233:A:N6	2.51	0.44
46:A:3270:A:C2	46:A:3271:A:C5	3.05	0.44
55:J:128:LYS:HB2	55:J:172:TYR:HB3	1.99	0.44
2:AB:49:GLY:O	2:AB:52:CYS:SG	2.75	0.44
3:AC:92:PHE:HA	3:AC:95:ASN:HD22	1.82	0.44
3:AC:229:HIS:O	3:AC:233:HIS:HB3	2.17	0.44
4:AD:175:ARG:CB	4:AD:191:ILE:HG23	2.48	0.44
4:AD:241:GLU:HB3	4:AD:245:LYS:HA	2.00	0.44
5:AE:195:ARG:C	5:AE:197:ARG:N	2.74	0.44
5:AE:251:VAL:HG12	5:AE:252:ASP:N	2.22	0.44
6:AF:46:HIS:ND1	6:AF:48:LYS:HD3	2.32	0.44
6:AF:66:ASN:OD1	6:AF:69:GLY:N	2.50	0.44
6:AF:314:VAL:CG2	8:AH:18:THR:HG21	2.47	0.44
7:AG:73:GLY:O	8:AH:186:LEU:HD13	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AG:191:LEU:O	7:AG:195:GLU:N	2.27	0.44
9:AI:372:HIS:CD2	12:AL:1279:A:C5	3.05	0.44
9:AI:376:LYS:O	9:AI:379:GLU:N	2.51	0.44
9:AI:441:LEU:HD23	9:AI:441:LEU:C	2.42	0.44
11:AK:138:PRO:HG3	18:i:322:LYS:O	2.17	0.44
11:AK:172:TYR:HD2	25:p:116:THR:O	1.99	0.44
11:AK:292:TYR:CG	24:o:180:GLY:HA3	2.53	0.44
12:AL:263:A:C6	12:AL:273:A:C6	3.06	0.44
12:AL:384:G:N1	12:AL:388:G:O6	2.51	0.44
12:AL:784:A:N3	26:q:206:PHE:CE2	2.83	0.44
12:AL:1275:A:C4	12:AL:1276:A:C2	3.06	0.44
12:AL:1594:A:H5'	12:AL:1596:A:N7	2.33	0.44
19:j:8:LEU:HD22	19:j:17:ARG:CZ	2.48	0.44
19:j:111:ARG:HB3	19:j:438:PRO:HG2	1.99	0.44
19:j:125:ILE:O	19:j:138:LYS:HA	2.17	0.44
19:j:127:HIS:CB	19:j:129:ASN:HD21	2.30	0.44
20:k:78:LEU:O	20:k:79:HIS:HB2	2.17	0.44
20:k:182:GLY:HA3	20:k:201:ALA:HB2	1.99	0.44
26:q:82:PHE:CD2	26:q:176:ARG:HA	2.53	0.44
26:q:215:ARG:C	26:q:217:LEU:H	2.24	0.44
30:u:252:MET:SD	30:u:257:PHE:CB	3.06	0.44
32:w:13:GLN:HB2	32:w:54:GLU:H	1.83	0.44
32:w:13:GLN:HG2	32:w:20:VAL:CG2	2.47	0.44
33:x:114:ILE:O	33:x:115:THR:C	2.60	0.44
37:1:73:ILE:HG13	42:6:47:LYS:HB3	1.98	0.44
46:A:12:A:C2'	46:A:13:A:H8	2.31	0.44
46:A:176:U:H3'	46:A:177:A:H8	1.83	0.44
46:A:317:U:C4	46:A:338:G:N2	2.85	0.44
46:A:336:A:H2'	46:A:337:A:C8	2.53	0.44
46:A:520:A:C8	46:A:2683:U:H4'	2.53	0.44
46:A:600:C:C2'	47:B:133:ARG:NH1	2.76	0.44
46:A:616:A:N7	46:A:1429:C:C2	2.86	0.44
46:A:656:A:C4	46:A:657:U:C5	3.06	0.44
46:A:688:U:P	49:D:101:SER:HG	2.39	0.44
46:A:739:A:H2	46:A:740:A:C8	2.34	0.44
46:A:808:A:H2'	46:A:809:C:O4'	2.17	0.44
46:A:937:U:HO2'	46:A:938:A:H8	1.66	0.44
46:A:1248:A:H2'	46:A:1249:U:H6	1.80	0.44
46:A:1330:U:H3'	46:A:1591:G:C6	2.52	0.44
46:A:1483:U:H2'	46:A:1484:U:H6	1.82	0.44
46:A:1859:G:H2'	46:A:1860:U:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2034:A:H4'	46:A:2035:U:OP1	2.14	0.44
46:A:2099:A:H2'	46:A:2100:U:C5	2.52	0.44
46:A:2186:U:OP2	64:S:205:ARG:NH2	2.50	0.44
46:A:2243:U:H2'	46:A:2244:A:C8	2.51	0.44
46:A:2353:U:N3	46:A:2354:A:N7	2.66	0.44
46:A:2713:G:C5	46:A:2767:C:H3'	2.51	0.44
46:A:3109:U:C2	46:A:3110:U:C5	3.05	0.44
46:A:3252:U:H1'	46:A:3253:U:OP2	2.17	0.44
46:A:3269:U:C2	46:A:3270:A:N7	2.85	0.44
46:A:3275:C:H2'	46:A:3276:U:H6	1.81	0.44
47:B:185:HIS:HB3	47:B:188:THR:HB	2.00	0.44
47:B:210:ARG:HH11	47:B:210:ARG:HG2	1.83	0.44
63:R:55:GLN:O	63:R:92:VAL:HA	2.17	0.44
63:R:181:ARG:HA	63:R:181:ARG:HD2	1.70	0.44
75:e:197:LEU:HA	75:e:201:LEU:HD13	1.99	0.44
3:AC:10:VAL:O	3:AC:11:VAL:C	2.60	0.44
3:AC:16:ASN:C	3:AC:18:LYS:N	2.71	0.44
3:AC:192:ASP:O	3:AC:195:ALA:HB3	2.18	0.44
5:AE:231:LEU:O	5:AE:234:THR:HB	2.17	0.44
5:AE:274:TYR:HE2	5:AE:300:PHE:HZ	1.64	0.44
6:AF:42:LEU:HB3	6:AF:45:GLN:HE22	1.83	0.44
6:AF:56:THR:O	6:AF:59:ARG:HB3	2.17	0.44
6:AF:308:LYS:HB2	31:v:62:ILE:CG2	2.47	0.44
7:AG:3:ILE:CB	23:n:20:ARG:CZ	2.92	0.44
7:AG:213:GLU:CB	16:g:230:ARG:NE	2.80	0.44
8:AH:21:ILE:HG12	31:v:74:TYR:HD1	1.69	0.44
9:AI:129:ASP:HB3	9:AI:392:PRO:HG3	1.98	0.44
11:AK:114:GLY:O	11:AK:118:ILE:HG12	2.17	0.44
12:AL:508:C:O5'	19:j:420:PRO:O	2.35	0.44
12:AL:521:A:H5"	31:v:45:PRO:O	2.17	0.44
12:AL:788:U:C5'	35:z:153:ARG:HG3	2.41	0.44
12:AL:842:A:C6	12:AL:843:G:C5	3.05	0.44
12:AL:1043:A:C4	12:AL:1387:A:C2	3.05	0.44
16:g:213:LYS:HZ1	16:g:221:VAL:HG23	1.83	0.44
17:h:322:VAL:O	17:h:344:ALA:HA	2.17	0.44
17:h:325:PRO:O	17:h:326:THR:C	2.59	0.44
18:i:125:LEU:H	18:i:132:ILE:HG23	1.82	0.44
18:i:191:LEU:HD23	18:i:191:LEU:HA	1.75	0.44
18:i:354:ASN:HB3	18:i:357:TYR:CD2	2.53	0.44
19:j:421:PHE:O	19:j:422:PHE:C	2.59	0.44
20:k:104:ASN:OD1	20:k:104:ASN:N	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:k:294:GLY:N	23:n:78:LYS:HZ3	2.16	0.44
30:u:89:LEU:HD12	30:u:93:TYR:O	2.18	0.44
30:u:108:ALA:HA	30:u:111:GLU:HG2	2.00	0.44
32:w:132:GLN:HG3	32:w:133:ASP:N	2.31	0.44
32:w:223:LEU:O	32:w:226:LYS:HB3	2.18	0.44
35:z:108:VAL:C	35:z:110:LYS:H	2.26	0.44
36:0:73:ARG:CA	46:A:3093:U:H5	2.31	0.44
36:0:86:LYS:HG3	46:A:2793:G:H5"	2.00	0.44
42:6:66:TYR:CG	46:A:2424:U:O4	2.58	0.44
42:6:217:ILE:HG22	50:E:83:LEU:CD2	2.47	0.44
46:A:127:A:C2'	46:A:128:U:H5'	2.48	0.44
46:A:412:A:H2	46:A:1293:A:HO2'	1.60	0.44
46:A:601:U:O2'	46:A:1367:A:H4'	2.17	0.44
46:A:852:U:H2'	46:A:853:U:C6	2.53	0.44
46:A:918:U:H2'	46:A:919:A:O4'	2.17	0.44
46:A:1058:U:C2	46:A:1059:A:C8	3.05	0.44
46:A:1145:U:C2	46:A:1146:A:C8	3.06	0.44
46:A:1162:A:C6	46:A:1163:A:C6	3.05	0.44
46:A:1272:U:H4'	46:A:1273:U:O5'	2.17	0.44
46:A:1303:C:H2'	46:A:1600:U:H5"	1.99	0.44
46:A:1410:U:H4'	46:A:1411:A:OP1	2.17	0.44
46:A:1763:A:C2	46:A:1990:A:C5	3.05	0.44
46:A:1811:U:H1'	46:A:1821:G:N2	2.32	0.44
46:A:1956:G:N2	68:W:72:ALA:HB3	2.31	0.44
46:A:2026:G:H3'	46:A:2027:U:C5	2.53	0.44
46:A:2651:G:H5'	50:E:19:PRO:HG2	1.99	0.44
46:A:2928:A:C6	46:A:2929:A:C4	3.06	0.44
46:A:2957:A:C8	46:A:3056:A:N6	2.85	0.44
54:I:3:PHE:CZ	54:I:33:PRO:HB3	2.52	0.44
69:X:63:LEU:H	69:X:63:LEU:HG	1.50	0.44
70:Y:88:GLY:HA2	70:Y:91:ILE:HD12	1.99	0.44
75:e:200:VAL:HA	75:e:204:LEU:HB3	1.99	0.44
2:AB:73:ILE:O	2:AB:77:LYS:N	2.51	0.44
3:AC:19:ALA:O	3:AC:20:LEU:C	2.60	0.44
4:AD:290:ARG:NH2	7:AG:182:GLN:OE1	2.50	0.44
5:AE:255:LEU:HD13	5:AE:300:PHE:CG	2.52	0.44
5:AE:273:LYS:HD2	5:AE:277:ILE:HD12	1.99	0.44
5:AE:279:LEU:CD2	5:AE:315:TYR:CB	2.92	0.44
6:AF:305:SER:O	6:AF:306:GLN:C	2.60	0.44
8:AH:40:LYS:HE2	8:AH:62:LEU:HB2	2.00	0.44
9:AI:429:LYS:C	9:AI:431:PHE:N	2.73	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:411:A:H2'	12:AL:412:U:C6	2.51	0.44
12:AL:827:G:H1'	30:u:246:ASN:HD22	1.82	0.44
12:AL:836:U:C6	12:AL:836:U:OP2	2.71	0.44
12:AL:1025:U:C4'	12:AL:1026:U:H5'	2.48	0.44
12:AL:1064:U:C5	12:AL:1088:A:C2	3.06	0.44
12:AL:1172:A:N1	25:p:39:GLY:HA2	2.29	0.44
12:AL:1210:A:C2	12:AL:1211:A:C8	3.05	0.44
12:AL:1289:U:H2'	12:AL:1319:A:N6	2.33	0.44
12:AL:1359:U:H2'	12:AL:1360:A:C8	2.53	0.44
14:AN:6:C:O2'	14:AN:7:C:O5'	2.33	0.44
17:h:275:TRP:CZ2	17:h:280:LEU:HG	2.51	0.44
18:i:207:PRO:HG2	20:k:92:TRP:HZ3	1.80	0.44
18:i:379:ASN:HB3	18:i:392:LYS:HA	1.99	0.44
19:j:20:PHE:CZ	19:j:113:MET:HG2	2.52	0.44
19:j:147:GLY:N	19:j:452:TYR:O	2.48	0.44
19:j:438:PRO:HD2	19:j:443:ILE:HD11	2.00	0.44
20:k:240:LEU:HD23	20:k:240:LEU:HA	1.84	0.44
20:k:240:LEU:HB3	20:k:247:PHE:HD1	1.82	0.44
20:k:299:ASP:OD1	20:k:299:ASP:N	2.50	0.44
21:l:81:ILE:O	21:l:85:LEU:HG	2.18	0.44
22:m:97:GLN:HE22	24:o:208:LYS:HZ2	1.59	0.44
26:q:178:ALA:O	26:q:179:PHE:C	2.61	0.44
30:u:85:GLU:CD	32:w:107:PHE:HZ	2.26	0.44
30:u:253:GLN:HE21	30:u:264:ILE:H	1.61	0.44
46:A:425:A:H5"	53:H:117:LYS:HZ3	1.82	0.44
46:A:642:A:O4'	60:O:250:ARG:HA	2.17	0.44
46:A:1113:A:H3'	46:A:1115:A:C8	2.53	0.44
46:A:1118:A:N3	46:A:1118:A:H5'	2.33	0.44
46:A:1130:C:C2	46:A:1131:C:C6	3.05	0.44
46:A:1205:U:H2'	46:A:1208:U:C5'	2.47	0.44
46:A:1795:U:H2'	46:A:1796:A:H8	1.83	0.44
46:A:1835:G:H3'	46:A:1862:C:H42	1.83	0.44
46:A:2215:A:H2'	46:A:2216:U:H6	1.80	0.44
46:A:2326:U:H2'	46:A:2327:A:H8	1.83	0.44
46:A:2384:A:C2	46:A:2385:U:C2	3.05	0.44
46:A:2600:U:C5	63:R:101:HIS:ND1	2.86	0.44
46:A:2712:G:H2'	46:A:2713:G:H1'	1.99	0.44
46:A:2763:A:H1'	46:A:2764:C:C5	2.53	0.44
46:A:2970:A:H2'	46:A:2971:A:H8	1.81	0.44
46:A:2973:A:H2'	46:A:2974:U:C6	2.52	0.44
46:A:3014:C:C4	46:A:3033:A:C6	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:3097:U:O2'	51:F:176:GLN:NE2	2.51	0.44
47:B:100:SER:C	47:B:102:GLY:H	2.26	0.44
47:B:199:GLY:O	47:B:201:ARG:N	2.51	0.44
48:C:93:ILE:HD11	48:C:109:GLY:HA3	1.98	0.44
50:E:252:ASN:ND2	50:E:256:TRP:HE1	2.16	0.44
51:F:30:VAL:HG11	51:F:111:ILE:HD13	2.00	0.44
58:M:90:PHE:CE1	58:M:121:ILE:HD12	2.53	0.44
63:R:251:SER:O	63:R:255:ASN:ND2	2.50	0.44
63:R:323:LYS:HD3	63:R:324:TYR:CE2	2.52	0.44
2:AB:44:PHE:O	2:AB:48:ILE:HG23	2.18	0.44
2:AB:46:ASN:HA	2:AB:53:ASN:HB3	1.99	0.44
3:AC:228:ASP:OD2	4:AD:277:PRO:N	2.51	0.44
3:AC:256:VAL:HA	3:AC:259:ARG:HD2	1.98	0.44
4:AD:260:PHE:HD1	16:g:223:GLN:HE21	1.64	0.44
6:AF:103:THR:O	6:AF:105:LYS:HG3	2.18	0.44
6:AF:145:THR:HG21	6:AF:216:PHE:CD1	2.52	0.44
7:AG:32:VAL:HG12	17:h:235:VAL:HG13	1.99	0.44
7:AG:203:VAL:HG13	7:AG:207:GLU:HB3	1.99	0.44
9:AI:235:ALA:HB2	9:AI:264:HIS:CE1	2.52	0.44
9:AI:415:LYS:HE3	9:AI:416:ASP:OD2	2.18	0.44
11:AK:94:SER:O	11:AK:95:GLU:C	2.60	0.44
11:AK:151:GLN:CG	18:i:83:LYS:CE	2.77	0.44
12:AL:26:U:H6	12:AL:26:U:O5'	2.00	0.44
12:AL:70:C:H4'	12:AL:384:G:C4'	2.48	0.44
12:AL:329:U:C4	12:AL:330:G:C5	3.06	0.44
12:AL:337:A:H2'	12:AL:338:G:O4'	2.18	0.44
12:AL:509:A:C3'	12:AL:510:U:C6	3.01	0.44
12:AL:639:U:H2'	12:AL:640:C:C6	2.52	0.44
12:AL:700:U:OP1	23:n:30:LYS:N	2.37	0.44
12:AL:784:A:C8	26:q:206:PHE:HD2	2.35	0.44
12:AL:991:G:H3'	12:AL:1597:G:N2	2.33	0.44
12:AL:1219:A:H2'	12:AL:1220:A:C8	2.53	0.44
12:AL:1389:U:H4'	28:s:88:TYR:CE2	2.53	0.44
13:AM:36:U:C6	14:AN:7:C:N4	2.86	0.44
13:AM:51:A:H3'	13:AM:52:G:C8	2.47	0.44
18:i:178:LYS:O	18:i:182:ILE:HG13	2.18	0.44
20:k:25:TYR:CZ	25:p:21:PRO:HG3	2.53	0.44
21:l:10:ARG:CB	21:l:92:ILE:HD11	2.48	0.44
23:n:125:GLU:HG2	23:n:155:LYS:HB2	2.00	0.44
26:q:68:LYS:HB3	26:q:69:PRO:HD2	2.00	0.44
26:q:89:LEU:HD12	26:q:147:THR:O	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:q:215:ARG:CZ	26:q:217:LEU:HD11	2.47	0.44
27:r:62:VAL:CG1	27:r:65:VAL:HG22	2.48	0.44
29:t:41:LEU:HD23	29:t:44:ILE:HD12	2.00	0.44
30:u:67:VAL:CG2	30:u:245:PHE:CZ	3.01	0.44
30:u:88:VAL:HG12	30:u:89:LEU:H	1.83	0.44
30:u:220:LYS:O	30:u:220:LYS:HG2	2.17	0.44
30:u:269:LYS:O	30:u:270:VAL:C	2.57	0.44
31:v:8:ILE:HA	31:v:25:VAL:HA	2.00	0.44
32:w:196:ASN:CG	32:w:199:LYS:HB2	2.42	0.44
37:1:361:VAL:HG21	63:R:144:GLU:HG3	1.98	0.44
41:5:331:SER:C	46:A:41:G:N2	2.76	0.44
46:A:63:G:H2'	46:A:64:U:H6	1.81	0.44
46:A:256:A:C8	46:A:369:A:N6	2.86	0.44
46:A:270:G:H2'	46:A:271:A:H8	1.82	0.44
46:A:572:U:O5'	46:A:572:U:H6	2.01	0.44
46:A:1015:A:H3'	46:A:1016:C:O4'	2.17	0.44
46:A:1018:U:O3'	46:A:1021:A:N1	2.50	0.44
46:A:1263:A:H2'	46:A:1264:U:O4'	2.17	0.44
46:A:1553:G:N7	46:A:1554:U:C4	2.85	0.44
46:A:1724:A:N7	47:B:154:LEU:HD12	2.33	0.44
46:A:1773:U:O2'	46:A:1774:U:H5'	2.17	0.44
46:A:1985:U:H2'	46:A:1986:A:C8	2.52	0.44
46:A:2061:U:H5	46:A:2062:G:H1'	1.83	0.44
46:A:2203:A:H2'	46:A:2204:A:H8	1.80	0.44
46:A:2215:A:H8	46:A:2215:A:OP2	2.00	0.44
46:A:2310:U:C2	46:A:2656:A:C2	3.05	0.44
46:A:2680:A:O2'	46:A:2681:G:H5'	2.17	0.44
46:A:2907:U:O2'	46:A:2908:A:H5'	2.17	0.44
46:A:2927:C:P	51:F:211:LYS:HE2	2.57	0.44
46:A:3032:U:O2	46:A:3032:U:O4'	2.36	0.44
47:B:166:THR:N	47:B:186:ASN:OD1	2.51	0.44
48:C:43:ASN:O	48:C:52:ARG:NH2	2.46	0.44
55:J:113:ILE:O	55:J:116:LEU:N	2.51	0.44
59:N:76:LEU:HD11	59:N:153:LEU:HD11	1.99	0.44
63:R:193:LEU:HD22	63:R:250:CYS:CB	2.48	0.44
63:R:267:HIS:ND1	63:R:268:GLN:N	2.61	0.44
65:T:86:PRO:HG2	65:T:89:HIS:CG	2.53	0.44
69:X:31:ALA:H	69:X:55:ARG:HH22	1.66	0.44
76:f:18:GLN:HE22	76:f:48:ALA:HA	1.83	0.44
2:AB:105:LEU:HD21	12:AL:389:A:O3'	2.17	0.44
3:AC:153:LEU:O	3:AC:223:CYS:HA	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AD:206:THR:HB	4:AD:207:PRO:HD2	2.00	0.44
4:AD:209:ASN:HA	16:g:222:ILE:HG21	2.00	0.44
4:AD:249:THR:O	4:AD:251:PHE:N	2.51	0.44
5:AE:46:ALA:HA	5:AE:49:ASP:HB2	2.00	0.44
5:AE:140:ILE:HA	5:AE:143:GLN:HB3	2.00	0.44
5:AE:142:VAL:HG12	5:AE:145:MET:HB2	2.00	0.44
5:AE:218:VAL:HG11	5:AE:221:ARG:NH2	2.31	0.44
7:AG:75:TYR:CE2	8:AH:182:TYR:HE2	2.29	0.44
9:AI:208:LEU:O	9:AI:212:ILE:HG13	2.18	0.44
9:AI:268:ARG:O	9:AI:271:LEU:HB3	2.18	0.44
9:AI:396:LYS:O	9:AI:399:VAL:HB	2.17	0.44
11:AK:150:GLU:OE1	25:p:133:MET:CE	2.66	0.44
11:AK:196:ASN:HD22	12:AL:1318:U:H2'	1.80	0.44
12:AL:214:A:H2'	12:AL:215:U:C6	2.52	0.44
12:AL:490:U:C2	12:AL:491:U:C5	3.06	0.44
12:AL:611:U:H4'	12:AL:612:A:OP1	2.18	0.44
12:AL:714:U:H2'	12:AL:715:U:C6	2.53	0.44
12:AL:786:U:H2'	12:AL:787:A:N3	2.33	0.44
12:AL:802:A:OP1	33:x:127:LYS:HD2	2.16	0.44
12:AL:1429:A:C6	12:AL:1430:G:C5	3.05	0.44
15:Z:91:GLY:HA2	16:g:71:LEU:HD22	2.00	0.44
16:g:41:SER:HB2	17:h:170:PRO:HG2	2.00	0.44
18:i:301:ASN:O	18:i:305:ILE:HG13	2.18	0.44
18:i:315:PRO:O	20:k:69:TRP:CZ3	2.70	0.44
21:l:104:GLN:OE1	21:l:118:LYS:HG2	2.17	0.44
25:p:121:LEU:HD23	25:p:121:LEU:HA	1.74	0.44
26:q:124:ILE:O	26:q:151:MET:HE1	2.18	0.44
27:r:83:VAL:HG12	27:r:84:ARG:N	2.32	0.44
29:t:54:LEU:HA	29:t:57:GLU:OE2	2.18	0.44
30:u:101:PHE:HA	32:w:167:LEU:HD11	1.96	0.44
36:0:73:ARG:C	46:A:3093:U:C6	2.96	0.44
46:A:132:A:C2	46:A:133:A:C4	3.06	0.44
46:A:217:A:C5	64:S:47:HIS:CE1	3.06	0.44
46:A:259:A:H2'	46:A:260:G:O4'	2.18	0.44
46:A:275:A:C6	46:A:276:U:C4	3.06	0.44
46:A:532:A:C4	46:A:534:A:N7	2.86	0.44
46:A:568:A:C2	46:A:569:A:C4	3.06	0.44
46:A:702:U:O4	55:J:79:ARG:CZ	2.66	0.44
46:A:1110:A:H61	51:F:42:ILE:HD11	1.83	0.44
46:A:1301:A:C2	46:A:1913:A:C4	3.05	0.44
46:A:1561:G:H3'	46:A:1561:G:N3	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1737:A:C4	46:A:1738:A:C8	3.05	0.44
46:A:2248:G:C2	46:A:2249:A:C8	3.05	0.44
46:A:2333:A:P	63:R:322:ARG:HD2	2.57	0.44
46:A:2667:A:C6	46:A:2668:C:C4	3.06	0.44
46:A:2837:U:O2'	46:A:2838:U:H5'	2.18	0.44
46:A:3051:U:C2	46:A:3052:A:C8	3.05	0.44
46:A:3076:A:C2	46:A:3077:A:C4	3.06	0.44
46:A:3117:A:H2'	46:A:3118:U:H6	1.73	0.44
47:B:135:ASN:O	47:B:136:SER:C	2.61	0.44
47:B:266:CYS:C	47:B:271:THR:HG21	2.43	0.44
50:E:266:ILE:HG21	50:E:280:LEU:HD21	2.00	0.44
62:Q:263:GLU:OE1	72:b:35:LYS:HG2	2.18	0.44
63:R:257:SER:O	63:R:269:TYR:N	2.51	0.44
63:R:295:LYS:HA	63:R:371:LEU:CB	2.47	0.44
75:e:65:SER:HA	75:e:144:ASP:HB2	2.00	0.44
4:AD:209:ASN:ND2	4:AD:260:PHE:HB2	2.33	0.44
4:AD:231:ALA:CB	4:AD:235:GLY:HA2	2.45	0.44
5:AE:101:THR:O	5:AE:103:ASN:N	2.51	0.44
7:AG:29:TRP:CG	17:h:341:PRO:HG3	2.53	0.44
7:AG:137:MET:HE1	7:AG:176:PHE:HD1	1.82	0.44
8:AH:229:GLU:CG	21:l:43:VAL:HG12	2.48	0.44
10:AJ:62:LEU:HG	10:AJ:63:TYR:H	1.81	0.44
12:AL:98:A:C2'	12:AL:99:U:H5"	2.48	0.44
12:AL:112:C:H2'	12:AL:113:G:O4'	2.18	0.44
12:AL:221:U:H2'	12:AL:222:U:O4'	2.18	0.44
12:AL:257:A:N6	12:AL:279:A:C6	2.86	0.44
12:AL:644:G:C6	14:AN:2:U:H6	2.33	0.44
12:AL:828:A:O2'	12:AL:829:U:H5'	2.18	0.44
12:AL:1026:U:O2	12:AL:1026:U:H2'	2.17	0.44
12:AL:1096:C:O5'	12:AL:1096:C:H6	2.01	0.44
12:AL:1344:A:C4	12:AL:1345:A:N7	2.86	0.44
13:AM:1:G:O2'	13:AM:3:C:N4	2.50	0.44
15:Z:41:TRP:O	15:Z:42:SER:C	2.60	0.44
17:h:171:HIS:NE2	17:h:176:TYR:CE2	2.83	0.44
17:h:251:THR:OG1	17:h:324:ASN:ND2	2.48	0.44
17:h:321:VAL:HA	17:h:343:ILE:O	2.18	0.44
19:j:69:PHE:HZ	19:j:482:LEU:CD2	2.29	0.44
19:j:428:ARG:HD3	19:j:431:LEU:CD2	2.48	0.44
20:k:300:VAL:O	20:k:300:VAL:HG12	2.18	0.44
28:s:9:GLY:O	28:s:23:LYS:HG3	2.18	0.44
28:s:73:ALA:O	28:s:74:ILE:C	2.61	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:w:28:VAL:HG23	32:w:37:LEU:O	2.18	0.44
35:z:106:ILE:O	35:z:107:ILE:C	2.58	0.44
39:3:30:PHE:HA	46:A:1568:U:H5	1.82	0.44
46:A:18:A:C6	46:A:19:G:C6	3.05	0.44
46:A:87:U:C2	46:A:88:U:C5	3.05	0.44
46:A:331:A:O2'	46:A:332:A:P	2.76	0.44
46:A:339:A:C6	46:A:340:A:C6	3.06	0.44
46:A:485:A:H2	46:A:700:G:N3	2.15	0.44
46:A:521:A:H2'	46:A:522:A:H8	1.80	0.44
46:A:672:A:HO2'	46:A:1695:C:HO2'	1.65	0.44
46:A:753:A:H2	46:A:769:U:H3	1.66	0.44
46:A:755:U:C2	46:A:756:A:C8	3.06	0.44
46:A:806:G:C6	46:A:819:U:O2	2.71	0.44
46:A:818:U:C3'	46:A:819:U:H6	2.29	0.44
46:A:820:U:H2'	46:A:821:U:C6	2.53	0.44
46:A:933:C:H2'	46:A:934:U:C6	2.52	0.44
46:A:1160:A:H2'	46:A:1161:A:C8	2.52	0.44
46:A:1346:A:H2'	46:A:1346:A:N3	2.32	0.44
46:A:1369:U:H2'	46:A:1370:A:C8	2.53	0.44
46:A:1532:A:H5"	47:B:150:ASN:OD1	2.17	0.44
46:A:1551:C:C4	46:A:1552:C:N4	2.86	0.44
46:A:1770:U:H3	46:A:1781:A:H61	1.65	0.44
46:A:1872:G:C2	46:A:1873:A:N7	2.86	0.44
46:A:2250:G:H4'	46:A:2252:C:C2	2.53	0.44
46:A:2291:G:H3'	46:A:2292:C:H2'	2.00	0.44
46:A:2436:A:C4'	46:A:2437:U:OP2	2.63	0.44
46:A:3126:C:H2'	46:A:3127:U:C6	2.53	0.44
63:R:226:GLU:O	63:R:227:ARG:C	2.60	0.44
75:e:106:LEU:HD11	75:e:132:LEU:HG	2.00	0.44
1:AA:80:VAL:HG22	12:AL:1462:A:N6	2.29	0.43
5:AE:257:ASP:N	5:AE:257:ASP:OD1	2.51	0.43
6:AF:149:LEU:HB2	6:AF:154:LYS:HE3	1.99	0.43
6:AF:195:TRP:O	6:AF:199:ASN:N	2.51	0.43
7:AG:166:VAL:HG13	16:g:196:PHE:CD1	2.53	0.43
9:AI:57:TYR:CB	22:m:204:VAL:HG12	2.48	0.43
9:AI:74:VAL:CG2	9:AI:409:SER:HA	2.48	0.43
9:AI:137:LYS:O	9:AI:141:HIS:N	2.48	0.43
9:AI:226:LEU:HD11	9:AI:248:LEU:HD13	2.00	0.43
9:AI:230:TYR:CZ	9:AI:274:ALA:HB1	2.52	0.43
11:AK:212:GLU:O	11:AK:213:GLU:C	2.60	0.43
11:AK:226:ARG:HH12	11:AK:254:ILE:HG21	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AK:227:TYR:HA	11:AK:234:PHE:HA	1.99	0.43
12:AL:275:A:H2'	12:AL:276:C:O4'	2.18	0.43
12:AL:322:U:H2'	12:AL:323:U:H6	1.83	0.43
12:AL:484:U:H2'	12:AL:485:A:O4'	2.17	0.43
12:AL:536:U:C2'	12:AL:537:A:C8	2.99	0.43
12:AL:643:G:N2	27:r:76:ALA:HB2	2.33	0.43
12:AL:695:A:C5	12:AL:696:U:C4	3.06	0.43
12:AL:717:G:C8	12:AL:818:A:C6	3.06	0.43
12:AL:784:A:C6	26:q:206:PHE:HE2	2.36	0.43
13:AM:36:U:N3	14:AN:7:C:N4	2.66	0.43
17:h:290:TRP:CE2	24:o:49:PRO:HD3	2.50	0.43
20:k:129:LEU:O	20:k:133:THR:N	2.51	0.43
25:p:139:LYS:HE2	25:p:141:ASN:HD21	1.82	0.43
26:q:99:ASN:O	26:q:102:LYS:N	2.46	0.43
26:q:137:ALA:O	26:q:139:GLY:N	2.50	0.43
28:s:114:LEU:HD22	28:s:115:ASN:H	1.83	0.43
30:u:266:ASP:OD1	30:u:266:ASP:N	2.51	0.43
30:u:279:ARG:HB3	30:u:283:ARG:NH2	2.32	0.43
42:6:104:HIS:H	46:A:2422:A:H5'	1.83	0.43
46:A:9:U:H3	46:A:3290:A:N6	2.16	0.43
46:A:18:A:H2'	46:A:19:G:C8	2.53	0.43
46:A:164:U:O2'	46:A:165:A:OP1	2.31	0.43
46:A:200:G:N3	46:A:200:G:C2'	2.75	0.43
46:A:222:A:H2'	46:A:223:C:O4'	2.18	0.43
46:A:230:A:C6	46:A:231:A:C6	3.06	0.43
46:A:286:U:O2'	46:A:328:A:H5'	2.17	0.43
46:A:326:A:C4	46:A:330:A:C6	3.06	0.43
46:A:373:U:H2'	46:A:374:U:C6	2.53	0.43
46:A:426:A:C8	46:A:1923:C:N4	2.86	0.43
46:A:783:U:C4	46:A:2294:A:C8	3.06	0.43
46:A:1020:U:O3'	46:A:1021:A:O4'	2.35	0.43
46:A:1563:C:H2'	46:A:1564:C:H5'	2.00	0.43
46:A:1628:A:H2'	46:A:1629:A:O4'	2.17	0.43
46:A:1970:C:H2'	46:A:1971:A:C8	2.52	0.43
46:A:2301:C:C5'	63:R:37:THR:HG21	2.47	0.43
46:A:2575:A:H2'	46:A:2576:A:C8	2.53	0.43
46:A:2615:U:H2'	46:A:2616:G:H8	1.82	0.43
46:A:2864:G:H2'	46:A:2865:A:C8	2.53	0.43
46:A:3035:U:N3	46:A:3040:U:C5	2.86	0.43
47:B:138:LYS:O	47:B:139:ILE:C	2.60	0.43
56:K:215:TYR:CE2	56:K:219:LEU:HD11	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:R:111:LEU:HD12	63:R:126:VAL:HB	1.98	0.43
65:T:206:GLN:HB3	65:T:212:ILE:HG23	2.00	0.43
69:X:31:ALA:O	69:X:33:LEU:N	2.51	0.43
2:AB:42:ASP:OD2	2:AB:56:LYS:HD3	2.18	0.43
3:AC:266:LYS:HD3	17:h:151:LEU:HD13	2.00	0.43
4:AD:64:LEU:O	4:AD:65:GLU:C	2.61	0.43
4:AD:110:ARG:HD3	4:AD:110:ARG:HA	1.27	0.43
4:AD:208:PHE:HD2	4:AD:210:PHE:H	1.66	0.43
4:AD:235:GLY:C	4:AD:237:LEU:N	2.76	0.43
5:AE:62:LYS:O	5:AE:64:PHE:N	2.50	0.43
5:AE:110:GLU:OE2	5:AE:111:PRO:HD2	2.18	0.43
5:AE:195:ARG:HG2	5:AE:196:ASN:N	2.33	0.43
6:AF:314:VAL:CG2	8:AH:18:THR:CB	2.93	0.43
11:AK:265:LEU:HB2	11:AK:269:ASP:HA	2.00	0.43
12:AL:15:A:C2	19:j:41:LEU:HD21	2.53	0.43
12:AL:25:G:N3	12:AL:25:G:H2'	2.33	0.43
12:AL:109:A:H5"	12:AL:110:A:C8	2.54	0.43
12:AL:482:U:C2'	12:AL:483:A:O5'	2.66	0.43
12:AL:520:A:O2'	31:v:46:VAL:HG22	2.17	0.43
12:AL:606:U:C4	12:AL:607:U:C4	3.05	0.43
12:AL:616:C:OP2	27:r:141:SER:OG	2.30	0.43
12:AL:644:G:C2	14:AN:2:U:C5	3.06	0.43
12:AL:785:A:O2'	33:x:108:ARG:HG2	2.18	0.43
12:AL:893:A:O2'	17:h:204:SER:HB2	2.18	0.43
12:AL:1055:U:H2'	12:AL:1056:U:C6	2.53	0.43
12:AL:1070:A:C5	12:AL:1071:A:C8	3.06	0.43
12:AL:1220:A:H4'	29:t:112:LYS:HZ1	1.67	0.43
12:AL:1459:C:O5'	12:AL:1459:C:H6	2.01	0.43
12:AL:1633:U:C5	33:x:58:PHE:CD2	3.06	0.43
18:i:190:ASN:HD22	18:i:190:ASN:N	2.16	0.43
18:i:195:LEU:HB3	18:i:203:VAL:HG11	2.00	0.43
18:i:220:PHE:CD2	18:i:393:VAL:HG11	2.53	0.43
18:i:303:ASN:HD22	25:p:18:ARG:C	2.12	0.43
18:i:384:ASN:OD1	18:i:385:LYS:N	2.51	0.43
20:k:208:ILE:H	20:k:208:ILE:HG13	1.54	0.43
21:l:125:ASN:HA	21:l:128:TYR:HB2	1.99	0.43
23:n:131:ALA:HB1	23:n:146:LEU:HB3	2.00	0.43
23:n:150:VAL:HG12	23:n:151:LEU:H	1.83	0.43
24:o:158:GLY:N	24:o:230:ALA:HB2	2.28	0.43
26:q:215:ARG:C	26:q:217:LEU:N	2.75	0.43
27:r:96:PRO:O	27:r:127:ARG:HG3	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:r:149:LYS:O	27:r:150:PRO:C	2.62	0.43
28:s:118:ASP:O	28:s:119:ARG:C	2.60	0.43
29:t:66:PRO:HD2	29:t:69:MET:HE3	2.00	0.43
30:u:94:ASN:OD1	30:u:95:ILE:N	2.51	0.43
30:u:100:LYS:HB3	32:w:167:LEU:CG	2.47	0.43
30:u:236:LEU:HD13	30:u:241:ILE:HD11	2.00	0.43
32:w:15:LYS:C	32:w:16:MET:HG3	2.43	0.43
32:w:53:ARG:NH2	32:w:83:GLN:HG2	2.33	0.43
32:w:170:SER:CA	32:w:173:GLU:HB2	2.44	0.43
33:x:92:PHE:HD2	33:x:98:ILE:HG13	1.83	0.43
34:y:85:TYR:H	34:y:85:TYR:HD1	1.66	0.43
37:1:249:LEU:HB3	37:1:252:ILE:HD11	2.00	0.43
39:3:67:PHE:C	46:A:1403:G:H21	2.26	0.43
41:5:142:ASN:O	41:5:215:ARG:NH2	2.50	0.43
45:9:204:LEU:HD22	45:9:212:ALA:CB	2.48	0.43
46:A:73:U:C4	46:A:90:A:N1	2.86	0.43
46:A:100:U:C2	46:A:101:A:N7	2.85	0.43
46:A:119:A:C2	65:T:153:ARG:HD3	2.53	0.43
46:A:418:A:C4	46:A:419:U:C5	3.07	0.43
46:A:512:U:H2'	46:A:513:U:C6	2.53	0.43
46:A:549:U:C2	46:A:550:A:C8	3.06	0.43
46:A:623:C:H2'	46:A:624:G:O4'	2.18	0.43
46:A:860:A:C4	46:A:861:A:C8	3.06	0.43
46:A:901:A:C8	46:A:916:A:N6	2.85	0.43
46:A:932:C:C2'	46:A:933:C:H5'	2.48	0.43
46:A:956:A:H3'	46:A:957:U:H6	1.83	0.43
46:A:1064:A:H5'	46:A:1065:A:N7	2.33	0.43
46:A:1242:A:C6	46:A:1268:U:C4	3.06	0.43
46:A:1558:G:H5'	46:A:1559:U:OP1	2.18	0.43
46:A:1722:U:C4'	47:B:141:VAL:HG21	2.47	0.43
46:A:1767:A:O2'	46:A:1768:A:O4'	2.36	0.43
46:A:1790:A:H5'	46:A:1790:A:H8	1.82	0.43
46:A:2027:U:H1'	46:A:2070:U:O2	2.19	0.43
46:A:2207:A:C4	46:A:2208:A:C8	3.06	0.43
46:A:2474:U:O2'	46:A:2475:U:H5'	2.18	0.43
46:A:2573:G:C2	46:A:2574:G:C8	3.06	0.43
46:A:2576:A:C2	46:A:2577:A:C4	3.06	0.43
46:A:2661:C:H5"	55:J:119:LYS:CD	2.48	0.43
46:A:2826:C:H2'	46:A:2827:A:C8	2.52	0.43
46:A:3077:A:H61	46:A:3100:G:H1'	1.83	0.43
46:A:3084:A:C6	46:A:3094:A:N7	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
61:P:155:PRO:HG3	62:Q:9:SER:HB2	1.99	0.43
63:R:96:TYR:HD2	63:R:97:LEU:O	2.00	0.43
63:R:159:LEU:HD21	72:b:157:PHE:CZ	2.52	0.43
63:R:184:LEU:O	63:R:185:LYS:C	2.59	0.43
76:f:138:MET:HE3	76:f:138:MET:HB2	1.79	0.43
4:AD:210:PHE:CE1	7:AG:196:MET:HG2	2.53	0.43
5:AE:50:GLU:CD	5:AE:66:TYR:OH	2.56	0.43
5:AE:149:SER:CA	5:AE:153:ILE:HB	2.47	0.43
5:AE:177:SER:O	5:AE:219:LEU:HD11	2.19	0.43
6:AF:306:GLN:HA	31:v:62:ILE:HG22	1.99	0.43
7:AG:13:ARG:NH2	17:h:336:ILE:O	2.40	0.43
7:AG:96:LYS:HE2	12:AL:916:A:P	2.59	0.43
7:AG:122:LEU:CD2	16:g:36:ILE:CD1	2.87	0.43
7:AG:224:VAL:CG1	33:x:45:LEU:HB3	2.48	0.43
8:AH:200:LEU:HD21	30:u:105:ILE:HG12	2.00	0.43
9:AI:49:LYS:HG3	12:AL:1341:U:H5'	2.00	0.43
9:AI:60:TRP:HB2	22:m:210:VAL:HG21	2.00	0.43
9:AI:190:PHE:HD1	28:s:42:TYR:HB3	1.83	0.43
9:AI:449:HIS:CD2	9:AI:449:HIS:N	2.86	0.43
10:AJ:47:TYR:O	10:AJ:48:TYR:C	2.61	0.43
11:AK:169:ARG:HB3	25:p:70:GLY:O	2.18	0.43
11:AK:172:TYR:CE1	25:p:38:TYR:HE2	2.35	0.43
11:AK:196:ASN:ND2	12:AL:1318:U:C3'	2.82	0.43
12:AL:62:A:C5	12:AL:63:U:C5	3.06	0.43
12:AL:108:U:O2	12:AL:108:U:O4'	2.36	0.43
12:AL:498:A:C2'	12:AL:499:A:H5'	2.47	0.43
12:AL:677:G:C6	12:AL:678:U:C4	3.06	0.43
12:AL:1108:G:C5	12:AL:1229:A:C2	3.06	0.43
16:g:51:LYS:HG2	17:h:217:ILE:HD13	2.00	0.43
18:i:112:ASP:HB3	18:i:142:ASN:ND2	2.34	0.43
18:i:182:ILE:O	18:i:191:LEU:N	2.36	0.43
18:i:232:TYR:HA	18:i:235:GLY:O	2.18	0.43
18:i:334:ARG:NE	18:i:386:ASN:O	2.47	0.43
26:q:87:THR:O	26:q:128:THR:HG23	2.18	0.43
27:r:96:PRO:HD2	27:r:127:ARG:HG2	2.01	0.43
30:u:34:SER:C	30:u:36:LYS:N	2.76	0.43
30:u:63:LYS:HD3	30:u:63:LYS:HA	1.73	0.43
36:0:73:ARG:CB	46:A:3093:U:C6	2.93	0.43
45:9:124:LEU:CD1	45:9:145:LEU:HD11	2.48	0.43
46:A:68:A:H8	46:A:68:A:OP2	2.01	0.43
46:A:178:U:H6	46:A:178:U:O5'	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:336:A:H2'	46:A:337:A:H8	1.84	0.43
46:A:534:A:O5'	46:A:534:A:C8	2.72	0.43
46:A:644:A:O2'	46:A:645:U:H5'	2.19	0.43
46:A:674:A:C2	46:A:676:A:C8	3.06	0.43
46:A:1041:U:H3'	46:A:1042:A:H8	1.83	0.43
46:A:1052:A:N6	46:A:1055:A:O5'	2.51	0.43
46:A:1498:U:O2'	46:A:1499:A:H5'	2.18	0.43
46:A:1510:A:C6	46:A:1511:U:C4	3.07	0.43
46:A:1531:C:N3	47:B:326:TRP:CE3	2.86	0.43
46:A:1639:A:H2'	46:A:1640:U:C6	2.53	0.43
46:A:1989:U:C2	52:G:14:LYS:HD2	2.53	0.43
46:A:2382:A:C2	46:A:2383:A:C5	3.05	0.43
46:A:2392:A:N1	46:A:2410:U:C4	2.86	0.43
46:A:2575:A:C2	46:A:2576:A:C5	3.06	0.43
46:A:2622:C:O4'	63:R:62:ILE:HD12	2.18	0.43
46:A:2727:A:H2'	46:A:2728:U:H6	1.83	0.43
46:A:2790:U:H4'	46:A:3101:A:H5'	1.99	0.43
46:A:2886:C:H1'	48:C:214:VAL:HG11	1.99	0.43
46:A:2904:A:H2'	46:A:2905:A:C8	2.52	0.43
46:A:2922:G:H1'	46:A:2923:U:H5	1.83	0.43
46:A:2961:A:H2'	46:A:2962:U:H6	1.80	0.43
46:A:3018:A:H3'	46:A:3019:U:H6	1.82	0.43
46:A:3028:A:H2'	46:A:3029:U:C6	2.53	0.43
46:A:3046:C:H2'	46:A:3047:A:O4'	2.17	0.43
46:A:3128:G:C6	46:A:3129:A:N7	2.86	0.43
46:A:3159:G:C5	46:A:3160:U:C5	3.06	0.43
47:B:134:ASN:O	47:B:137:GLY:N	2.51	0.43
48:C:205:TYR:HA	48:C:218:ARG:NH1	2.33	0.43
59:N:109:ILE:HG13	59:N:113:LEU:HD12	2.00	0.43
63:R:221:TYR:O	63:R:222:LEU:C	2.58	0.43
75:e:63:ASN:O	75:e:143:GLU:HB3	2.18	0.43
4:AD:44:ARG:HD2	4:AD:44:ARG:HA	1.69	0.43
5:AE:53:ILE:HA	5:AE:56:LYS:HB3	1.99	0.43
5:AE:290:HIS:O	5:AE:293:GLN:HG2	2.19	0.43
5:AE:309:SER:O	5:AE:311:SER:O	2.36	0.43
6:AF:134:LEU:HD23	6:AF:134:LEU:HA	1.87	0.43
7:AG:52:SER:OG	7:AG:97:LEU:HA	2.18	0.43
8:AH:130:LYS:HA	8:AH:133:GLU:CD	2.43	0.43
11:AK:96:TYR:O	11:AK:97:SER:HB2	2.19	0.43
12:AL:53:A:HO2'	12:AL:369:U:H1'	1.83	0.43
12:AL:66:G:C6	12:AL:358:G:C6	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:521:A:H5'	31:v:46:VAL:HG22	2.00	0.43
12:AL:625:A:H4'	12:AL:626:U:OP1	2.18	0.43
12:AL:658:G:OP1	19:j:50:GLN:CD	2.61	0.43
12:AL:721:U:H2'	12:AL:722:A:H8	1.82	0.43
12:AL:749:A:H2'	12:AL:750:G:C8	2.53	0.43
12:AL:831:A:H2'	12:AL:832:A:C8	2.54	0.43
12:AL:1129:G:C5	12:AL:1130:U:C5	3.05	0.43
12:AL:1292:A:H2'	12:AL:1293:U:H6	1.83	0.43
12:AL:1444:A:H8	12:AL:1444:A:OP2	2.01	0.43
15:Z:75:LYS:HB3	15:Z:76:SER:H	1.65	0.43
15:Z:94:HIS:HD2	17:h:203:ARG:CZ	2.31	0.43
16:g:90:PHE:HA	16:g:93:MET:HE2	2.00	0.43
20:k:231:LEU:HD21	20:k:246:ILE:HG21	2.00	0.43
22:m:165:MET:SD	22:m:183:LEU:HD11	2.59	0.43
30:u:188:MET:HE2	30:u:188:MET:HB2	1.90	0.43
31:v:9:ARG:CD	31:v:32:ARG:HA	2.48	0.43
46:A:111:G:C6	46:A:112:G:C5	3.06	0.43
46:A:175:U:C2	46:A:204:A:C2	3.06	0.43
46:A:262:A:N6	46:A:271:A:C2	2.86	0.43
46:A:313:U:O2	72:b:54:HIS:HA	2.18	0.43
46:A:331:A:O2'	46:A:332:A:O4'	2.35	0.43
46:A:400:G:O2'	46:A:401:A:H5"	2.19	0.43
46:A:702:U:C4	55:J:79:ARG:NE	2.86	0.43
46:A:901:A:C2	46:A:916:A:C8	3.06	0.43
46:A:1048:A:N7	46:A:3087:A:N6	2.66	0.43
46:A:1250:U:C2	46:A:1251:A:N7	2.86	0.43
46:A:1288:U:C5'	46:A:1289:G:H5"	2.42	0.43
46:A:1519:A:N7	46:A:3022:G:N2	2.66	0.43
46:A:1526:A:C6	46:A:1527:A:N7	2.86	0.43
46:A:1535:A:H3'	46:A:1536:A:H8	1.83	0.43
46:A:1688:C:C5	70:Y:62:ARG:HG2	2.54	0.43
46:A:1770:U:C5'	46:A:1770:U:H6	2.31	0.43
46:A:1885:A:C2	46:A:1886:A:N7	2.87	0.43
46:A:1937:U:H2'	46:A:1938:A:H8	1.83	0.43
46:A:1961:G:P	49:D:109:LYS:HZ1	2.41	0.43
46:A:1989:U:H3	52:G:14:LYS:CD	2.31	0.43
46:A:2584:A:H4'	50:E:98:GLN:HE22	1.83	0.43
46:A:2883:C:C2	46:A:2884:U:C5	3.06	0.43
46:A:2901:U:O2'	46:A:2902:C:H5'	2.19	0.43
46:A:3292:A:H3'	46:A:3293:U:C6	2.53	0.43
57:L:111:LEU:HD22	68:W:118:MET:CE	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:R:155:LYS:HG3	63:R:159:LEU:CD2	2.48	0.43
63:R:204:SER:HB3	63:R:214:ALA:HB1	1.99	0.43
63:R:272:GLU:O	63:R:276:GLN:NE2	2.51	0.43
75:e:57:TYR:CD1	75:e:97:VAL:HG22	2.54	0.43
75:e:119:LYS:O	75:e:122:GLU:HG2	2.17	0.43
76:f:85:LEU:HD12	76:f:154:ILE:HG23	2.00	0.43
2:AB:73:ILE:HG22	2:AB:77:LYS:HE2	2.00	0.43
2:AB:113:GLY:O	2:AB:115:ARG:N	2.52	0.43
3:AC:136:LYS:NZ	3:AC:249:ASP:HA	2.33	0.43
4:AD:220:ASN:O	4:AD:221:ASN:C	2.62	0.43
5:AE:194:HIS:O	5:AE:195:ARG:C	2.57	0.43
6:AF:112:ASP:OD1	6:AF:113:GLY:N	2.51	0.43
6:AF:135:GLN:O	6:AF:136:PRO:C	2.61	0.43
7:AG:36:ILE:HD13	17:h:234:LYS:CB	2.40	0.43
9:AI:148:ILE:CG2	9:AI:159:LEU:HD23	2.48	0.43
9:AI:187:ARG:HG2	9:AI:187:ARG:HH11	1.84	0.43
11:AK:150:GLU:CB	20:k:71:TYR:HH	2.00	0.43
11:AK:194:HIS:NE2	12:AL:1318:U:O2'	2.51	0.43
12:AL:56:U:O2	12:AL:366:G:H1'	2.17	0.43
12:AL:303:G:N2	12:AL:306:A:OP2	2.47	0.43
12:AL:1090:U:H4'	12:AL:1091:A:OP1	2.18	0.43
12:AL:1122:C:H5"	17:h:337:LYS:HE2	2.00	0.43
12:AL:1184:U:C2	12:AL:1185:A:C8	3.07	0.43
13:AM:25:C:H2'	13:AM:26:A:C8	2.53	0.43
15:Z:16:LEU:CD2	35:z:165:LEU:HD23	2.41	0.43
16:g:97:ILE:HG22	16:g:99:SER:H	1.84	0.43
17:h:256:LYS:HZ1	24:o:56:ASN:CG	2.16	0.43
18:i:334:ARG:HH22	18:i:340:GLY:HA2	1.83	0.43
19:j:187:LYS:HD2	19:j:190:LYS:HD2	2.00	0.43
21:l:58:GLN:HE21	21:l:58:GLN:HB2	1.53	0.43
26:q:67:TYR:CD2	26:q:68:LYS:C	2.97	0.43
32:w:64:ARG:O	32:w:65:PRO:C	2.61	0.43
32:w:86:ALA:O	32:w:87:LEU:C	2.61	0.43
32:w:200:CYS:SG	32:w:201:ASP:N	2.91	0.43
41:5:307:LEU:HD21	41:5:340:VAL:HG11	1.99	0.43
46:A:58:A:C6	46:A:59:U:C4	3.06	0.43
46:A:428:C:OP1	46:A:429:A:C8	2.71	0.43
46:A:532:A:C8	46:A:534:A:C6	3.06	0.43
46:A:1144:U:C2	46:A:1145:U:C6	3.06	0.43
46:A:1316:U:C5	68:W:173:LEU:HB3	2.54	0.43
46:A:1371:A:H3'	46:A:1372:A:C5'	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1430:U:H2'	46:A:1431:U:O4'	2.19	0.43
46:A:1433:A:C6	46:A:1434:A:N6	2.86	0.43
46:A:1883:A:H2'	46:A:1884:C:H6	1.82	0.43
46:A:2062:G:O2'	46:A:2065:A:N6	2.51	0.43
46:A:2068:C:C4	46:A:2069:U:C4	3.07	0.43
46:A:2082:A:N1	46:A:2083:U:C2	2.86	0.43
46:A:2210:A:H2'	46:A:2211:U:C5	2.49	0.43
46:A:2359:U:HO2'	46:A:2360:U:P	2.41	0.43
46:A:2441:U:C2	46:A:2442:A:N7	2.87	0.43
46:A:2448:A:H2'	46:A:2449:A:C8	2.54	0.43
46:A:2673:A:C6	55:J:125:VAL:HG11	2.53	0.43
46:A:2683:U:H2'	46:A:2684:U:C6	2.54	0.43
46:A:2735:A:H2'	46:A:2736:G:H5'	2.00	0.43
46:A:2981:U:H2'	46:A:2982:U:C5	2.54	0.43
47:B:211:ARG:HH21	47:B:211:ARG:HG3	1.83	0.43
63:R:66:GLN:HE21	63:R:85:ILE:HD13	1.83	0.43
63:R:228:LEU:HD23	63:R:228:LEU:HA	1.82	0.43
63:R:229:LYS:HB2	63:R:229:LYS:HZ2	1.82	0.43
76:f:145:ILE:HA	76:f:148:VAL:HG13	1.99	0.43
1:AA:80:VAL:O	1:AA:84:ARG:HG3	2.18	0.43
4:AD:130:PRO:O	4:AD:135:ASN:N	2.43	0.43
4:AD:157:ILE:HG23	4:AD:293:LEU:CD1	2.49	0.43
4:AD:220:ASN:O	4:AD:224:THR:HG23	2.19	0.43
5:AE:38:ALA:O	5:AE:42:GLU:HG3	2.18	0.43
5:AE:69:LYS:CE	5:AE:72:GLN:HG2	2.49	0.43
5:AE:274:TYR:HA	5:AE:277:ILE:CG1	2.49	0.43
6:AF:160:GLU:OE1	6:AF:164:GLU:HG3	2.17	0.43
6:AF:336:PHE:CZ	19:j:139:HIS:HB2	2.52	0.43
7:AG:180:ARG:HB3	16:g:208:TYR:CD2	2.54	0.43
8:AH:40:LYS:NZ	8:AH:63:SER:H	2.16	0.43
8:AH:215:GLN:HG3	8:AH:216:LEU:N	2.31	0.43
11:AK:51:TYR:HA	11:AK:57:TRP:CZ2	2.53	0.43
12:AL:138:G:O2'	12:AL:139:A:O5'	2.37	0.43
12:AL:788:U:OP1	33:x:111:HIS:NE2	2.52	0.43
12:AL:827:G:H1'	30:u:246:ASN:ND2	2.34	0.43
12:AL:879:A:H2'	12:AL:881:A:O5'	2.19	0.43
12:AL:1012:G:C6	12:AL:1013:C:C4	3.07	0.43
12:AL:1176:U:H5'	12:AL:1177:A:N7	2.34	0.43
12:AL:1184:U:O3'	20:k:51:ASN:ND2	2.51	0.43
12:AL:1384:G:N2	12:AL:1387:A:N7	2.67	0.43
12:AL:1633:U:C6	33:x:58:PHE:CG	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:h:203:ARG:NE	17:h:349:ASP:O	2.52	0.43
18:i:303:ASN:CB	25:p:17:THR:HG23	2.47	0.43
19:j:129:ASN:CG	19:j:156:LYS:HG3	2.43	0.43
19:j:173:LYS:HA	19:j:176:LYS:HE2	2.01	0.43
20:k:59:LEU:HD13	20:k:59:LEU:HA	1.83	0.43
21:l:71:PHE:HE2	21:l:73:SER:OG	2.02	0.43
26:q:67:TYR:CD2	26:q:68:LYS:N	2.87	0.43
26:q:178:ALA:O	26:q:181:SER:N	2.51	0.43
26:q:196:VAL:HB	26:q:197:LYS:H	1.50	0.43
30:u:216:LEU:HB3	30:u:241:ILE:HG21	2.00	0.43
32:w:106:GLU:O	32:w:107:PHE:C	2.62	0.43
32:w:129:ARG:HD3	32:w:129:ARG:HA	1.80	0.43
34:y:26:ALA:O	34:y:30:GLY:N	2.52	0.43
34:y:26:ALA:HB2	34:y:33:ILE:HG21	2.00	0.43
46:A:9:U:H3	46:A:3290:A:H61	1.65	0.43
46:A:346:G:C2	46:A:347:A:C4	3.06	0.43
46:A:410:A:O2'	46:A:411:A:H5'	2.18	0.43
46:A:608:A:H2'	46:A:609:G:O4'	2.18	0.43
46:A:643:U:H5"	70:Y:61:SER:HB2	1.99	0.43
46:A:666:G:C4	46:A:685:G:C8	3.07	0.43
46:A:740:A:C6	46:A:741:U:C5	3.07	0.43
46:A:790:A:H2'	46:A:791:U:H6	1.83	0.43
46:A:800:A:H3'	46:A:801:U:H5"	1.99	0.43
46:A:887:G:N2	73:c:15:LEU:HD13	2.34	0.43
46:A:896:U:O2'	46:A:897:C:H5'	2.19	0.43
46:A:965:U:H3	46:A:1059:A:H61	1.67	0.43
46:A:966:A:C5	46:A:967:U:C4	3.05	0.43
46:A:1072:U:N3	46:A:1073:A:N7	2.66	0.43
46:A:1272:U:O2'	46:A:1273:U:OP2	2.32	0.43
46:A:1308:A:H5"	46:A:1308:A:C8	2.54	0.43
46:A:1666:A:H2'	46:A:1667:A:H8	1.78	0.43
46:A:1767:A:O2'	46:A:1768:A:C8	2.66	0.43
46:A:1784:U:O2	46:A:1784:U:H2'	2.18	0.43
46:A:1865:C:C4	46:A:1866:A:C5	3.07	0.43
46:A:1981:U:C4	46:A:2263:U:N3	2.86	0.43
46:A:2032:C:N3	46:A:2056:A:O3'	2.51	0.43
46:A:2084:G:H3'	46:A:2085:A:H8	1.84	0.43
46:A:2301:C:OP1	46:A:2301:C:H2'	2.18	0.43
46:A:2302:U:H2'	46:A:2303:G:C8	2.54	0.43
46:A:2305:A:OP1	56:K:49:GLN:NE2	2.51	0.43
46:A:2325:A:N6	46:A:2334:U:H3	2.15	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2390:U:C2	46:A:2391:U:C5	3.07	0.43
46:A:2474:U:H3	46:A:2576:A:H61	1.66	0.43
46:A:2659:A:C6	46:A:2660:A:C6	3.07	0.43
46:A:2798:A:C6	46:A:2799:A:C5	3.07	0.43
46:A:2951:U:C2	46:A:2952:G:C8	3.06	0.43
46:A:2982:U:O5'	46:A:2982:U:H6	2.02	0.43
46:A:3078:A:H2'	46:A:3079:U:C6	2.53	0.43
46:A:3138:U:H2'	46:A:3139:A:H5"	2.00	0.43
47:B:72:THR:OG1	47:B:73:LEU:N	2.51	0.43
48:C:24:PRO:HB3	71:a:99:ASN:O	2.19	0.43
49:D:49:PHE:O	49:D:50:PRO:C	2.60	0.43
56:K:214:LYS:HA	63:R:97:LEU:CD2	2.48	0.43
62:Q:133:LEU:HD13	62:Q:182:ILE:HG21	2.00	0.43
69:X:31:ALA:HB3	69:X:55:ARG:NH1	2.33	0.43
2:AB:84:ARG:O	2:AB:85:LYS:C	2.60	0.43
2:AB:112:GLY:C	2:AB:114:GLU:H	2.25	0.43
6:AF:31:ARG:HG2	12:AL:625:A:OP2	2.19	0.43
6:AF:124:ARG:O	6:AF:128:ILE:N	2.51	0.43
8:AH:220:ILE:CG2	21:l:22:LYS:HG2	2.48	0.43
9:AI:129:ASP:O	9:AI:389:PHE:CZ	2.71	0.43
9:AI:164:HIS:CD2	9:AI:290:THR:HG21	2.54	0.43
10:AJ:61:THR:O	10:AJ:61:THR:HG22	2.18	0.43
10:AJ:95:LYS:HD2	12:AL:1089:U:OP1	2.18	0.43
11:AK:150:GLU:HG3	20:k:79:HIS:HD2	1.82	0.43
12:AL:56:U:C5	12:AL:368:A:C6	3.07	0.43
12:AL:133:U:H1'	12:AL:134:U:OP2	2.19	0.43
12:AL:274:A:H2'	12:AL:275:A:C8	2.53	0.43
12:AL:690:G:C2	12:AL:826:G:O6	2.70	0.43
12:AL:695:A:H61	12:AL:820:A:N6	2.17	0.43
12:AL:835:C:H2'	12:AL:836:U:C5	2.54	0.43
12:AL:1097:G:H2'	12:AL:1098:U:H6	1.84	0.43
12:AL:1180:U:OP1	24:o:164:THR:HG21	2.19	0.43
12:AL:1264:U:H5"	24:o:274:THR:OG1	2.18	0.43
16:g:78:GLU:C	16:g:80:ARG:H	2.26	0.43
17:h:251:THR:H	17:h:324:ASN:ND2	2.17	0.43
18:i:302:ILE:CD1	25:p:25:GLU:CB	2.95	0.43
21:l:5:LEU:O	21:l:5:LEU:HG	2.18	0.43
27:r:59:LYS:HA	27:r:109:TYR:HA	1.99	0.43
31:v:71:ARG:HH12	31:v:74:TYR:HB2	1.83	0.43
32:w:109:ASP:O	32:w:110:LYS:C	2.61	0.43
41:5:111:LEU:HA	41:5:270:VAL:HG11	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:5:201:LYS:HB3	46:A:443:U:N3	2.33	0.43
44:8:40:MET:SD	62:Q:42:MET:HE1	2.59	0.43
46:A:102:A:H2'	46:A:103:U:O4'	2.19	0.43
46:A:158:C:H2'	46:A:159:C:C6	2.54	0.43
46:A:165:A:H5'	46:A:166:U:OP2	2.19	0.43
46:A:345:G:C2	46:A:346:G:N7	2.86	0.43
46:A:499:G:H1'	49:D:147:VAL:CG2	2.49	0.43
46:A:589:A:H2'	46:A:590:A:C8	2.54	0.43
46:A:606:U:O2'	46:A:607:A:H5'	2.18	0.43
46:A:781:G:C2	46:A:2294:A:C4	3.07	0.43
46:A:1010:A:H1'	46:A:1011:A:P	2.59	0.43
46:A:1064:A:H1'	46:A:1067:U:O4	2.18	0.43
46:A:1137:U:C2'	46:A:1138:G:H5'	2.48	0.43
46:A:1393:U:C4	46:A:1394:U:C4	3.07	0.43
46:A:1496:U:H2'	46:A:1497:A:C8	2.54	0.43
46:A:1565:G:C2	46:A:1571:G:C5	3.06	0.43
46:A:1746:C:H5"	46:A:1800:A:N6	2.34	0.43
46:A:1926:A:H8	46:A:1926:A:O5'	2.02	0.43
46:A:1972:G:C5	46:A:1973:C:C4	3.07	0.43
46:A:1997:A:H2'	46:A:1998:U:O4'	2.17	0.43
46:A:2327:A:N3	63:R:327:SER:CB	2.82	0.43
46:A:2331:U:O4	46:A:2366:U:O2'	2.33	0.43
46:A:2623:A:H5"	63:R:46:ARG:HG2	2.01	0.43
46:A:2795:U:C5'	46:A:2796:G:C8	3.02	0.43
46:A:2810:G:C4	46:A:2811:G:C8	3.06	0.43
46:A:2821:U:N3	46:A:2822:U:O4	2.52	0.43
46:A:2871:U:C2	46:A:2872:A:C8	3.07	0.43
46:A:3102:A:N3	46:A:3102:A:C2'	2.82	0.43
50:E:23:CYS:HB2	63:R:79:ILE:CD1	2.36	0.43
63:R:58:SER:O	63:R:59:THR:C	2.59	0.43
63:R:75:GLU:HB3	63:R:117:LEU:HD13	2.00	0.43
76:f:24:PRO:C	76:f:27:PRO:HD2	2.43	0.43
2:AB:82:GLN:HA	2:AB:85:LYS:CD	2.49	0.43
3:AC:194:PHE:HE2	4:AD:223:TYR:CG	2.37	0.43
4:AD:155:LEU:CD2	16:g:210:LEU:CG	2.96	0.43
5:AE:137:ILE:HD13	5:AE:137:ILE:H	1.84	0.43
8:AH:103:ARG:NE	31:v:76:ILE:O	2.52	0.43
8:AH:155:THR:HG21	23:n:40:TYR:CE2	2.53	0.43
12:AL:29:G:H3'	12:AL:30:U:C6	2.54	0.43
12:AL:405:A:O2'	12:AL:406:U:H5'	2.19	0.43
12:AL:658:G:C5	12:AL:659:C:C4	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:1001:U:N3	12:AL:1002:A:N7	2.66	0.43
12:AL:1343:U:O2'	12:AL:1344:A:H5'	2.18	0.43
12:AL:1644:C:N4	17:h:171:HIS:HB2	2.33	0.43
17:h:145:GLU:O	17:h:146:LEU:C	2.62	0.43
17:h:275:TRP:O	17:h:276:ILE:C	2.62	0.43
18:i:175:MET:O	18:i:176:MET:C	2.60	0.43
20:k:112:LEU:O	20:k:113:PRO:C	2.60	0.43
21:l:69:MET:HE3	21:l:69:MET:HB2	1.88	0.43
31:v:40:LEU:HD11	31:v:72:THR:HG23	2.00	0.43
31:v:93:ALA:HB3	31:v:95:ILE:HG13	2.00	0.43
44:8:243:MET:HE2	61:P:251:LYS:HB3	2.01	0.43
46:A:58:A:H61	46:A:413:U:H3	1.65	0.43
46:A:307:G:H1'	46:A:308:U:H5'	2.01	0.43
46:A:429:A:H2'	46:A:429:A:N3	2.32	0.43
46:A:537:U:C2	46:A:538:A:N7	2.87	0.43
46:A:568:A:C4	46:A:569:A:C8	3.07	0.43
46:A:771:U:C2	46:A:772:A:C8	3.07	0.43
46:A:880:G:C6	46:A:890:A:N1	2.87	0.43
46:A:1060:U:H2'	46:A:1061:U:O4'	2.19	0.43
46:A:1080:U:C2	46:A:1081:A:C8	3.07	0.43
46:A:1186:A:C5	46:A:1187:U:C4	3.07	0.43
46:A:1439:A:C3'	46:A:1440:U:C6	3.00	0.43
46:A:1509:U:C2	46:A:1510:A:N7	2.86	0.43
46:A:1612:A:C2	46:A:1613:G:C5	3.07	0.43
46:A:1614:G:O2'	46:A:1615:G:H5'	2.19	0.43
46:A:1814:U:H3'	46:A:1815:U:C6	2.53	0.43
46:A:1876:U:C2	46:A:1877:A:C8	3.07	0.43
46:A:2019:A:N6	46:A:2060:A:C5	2.87	0.43
46:A:2081:A:H8	46:A:2081:A:OP2	2.02	0.43
46:A:2187:A:OP2	64:S:205:ARG:HG3	2.19	0.43
46:A:2229:U:O2'	46:A:2230:A:H8	2.01	0.43
46:A:2366:U:H2'	46:A:2367:A:H8	1.83	0.43
46:A:2441:U:C2	46:A:2442:A:C8	3.07	0.43
46:A:2580:A:H2'	46:A:2581:U:C5	2.52	0.43
46:A:2714:A:O3'	46:A:2715:U:O4'	2.37	0.43
46:A:2921:A:C4	46:A:2923:U:N3	2.86	0.43
46:A:3025:U:H2'	46:A:3026:A:H8	1.84	0.43
46:A:3176:U:C2	46:A:3177:A:C8	3.07	0.43
55:J:152:GLY:O	55:J:153:GLU:C	2.61	0.43
55:J:153:GLU:O	55:J:154:VAL:C	2.62	0.43
59:N:109:ILE:HG23	59:N:114:TYR:CE2	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:R:240:LEU:HA	63:R:243:SER:CB	2.49	0.43
66:U:6:VAL:HG23	66:U:28:LEU:HD21	2.01	0.43
75:e:72:TYR:H	75:e:137:THR:HA	1.84	0.43
2:AB:82:GLN:O	2:AB:85:LYS:N	2.51	0.43
4:AD:190:ASP:O	4:AD:191:ILE:C	2.61	0.43
5:AE:194:HIS:O	5:AE:197:ARG:HB3	2.19	0.43
6:AF:54:LEU:H	6:AF:54:LEU:HD12	1.83	0.43
7:AG:35:SER:O	7:AG:37:PRO:HD3	2.18	0.43
7:AG:94:PRO:HG3	17:h:207:GLN:HE22	1.84	0.43
8:AH:21:ILE:HD11	31:v:74:TYR:CB	2.48	0.43
9:AI:322:LYS:HD2	9:AI:322:LYS:HA	1.53	0.43
9:AI:414:ASP:C	9:AI:416:ASP:N	2.75	0.43
9:AI:437:ASN:O	9:AI:440:GLU:N	2.47	0.43
10:AJ:66:ILE:HG12	18:i:182:ILE:HD11	2.00	0.43
11:AK:172:TYR:CE2	25:p:115:ASP:C	2.97	0.43
12:AL:43:C:O2'	12:AL:44:U:H5'	2.19	0.43
12:AL:64:G:O6	12:AL:360:A:C6	2.72	0.43
12:AL:303:G:N2	12:AL:307:G:C5	2.87	0.43
12:AL:715:U:C4	12:AL:817:G:C2	3.07	0.43
12:AL:740:A:C2	26:q:208:GLY:HA2	2.47	0.43
12:AL:787:A:H62	12:AL:799:A:C2'	2.31	0.43
12:AL:805:U:C2	12:AL:806:A:N7	2.87	0.43
12:AL:1195:A:C6	12:AL:1208:A:N1	2.87	0.43
12:AL:1219:A:H2'	12:AL:1220:A:H8	1.84	0.43
12:AL:1438:C:H2'	12:AL:1439:G:O4'	2.19	0.43
13:AM:72:C:C3'	13:AM:73:A:H5'	2.49	0.43
16:g:221:VAL:HG21	16:g:224:ARG:CD	2.47	0.43
16:g:273:MET:HE3	33:x:60:PHE:CD1	2.46	0.43
17:h:224:GLN:O	17:h:225:THR:C	2.61	0.43
18:i:177:ASN:HB3	20:k:91:ARG:HA	2.01	0.43
18:i:213:ILE:HG12	18:i:223:TYR:HB2	2.01	0.43
21:l:48:ARG:NH2	21:l:66:HIS:HB2	2.34	0.43
25:p:86:TRP:CZ2	29:t:91:PHE:CZ	3.07	0.43
30:u:106:GLU:OE2	32:w:129:ARG:NH2	2.52	0.43
31:v:52:LYS:O	31:v:56:LYS:HG3	2.19	0.43
39:3:75:LYS:NZ	46:A:162:U:O4	2.49	0.43
46:A:70:A:C5	46:A:92:A:N6	2.86	0.43
46:A:260:G:H2'	46:A:261:A:C8	2.54	0.43
46:A:268:C:H4'	46:A:269:A:C5'	2.48	0.43
46:A:274:U:O2'	46:A:275:A:H5'	2.19	0.43
46:A:566:U:H2'	46:A:567:U:H6	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:608:A:C2	46:A:1585:G:N3	2.87	0.43
46:A:676:A:H4'	46:A:1686:U:H4'	2.00	0.43
46:A:739:A:C2	46:A:740:A:C8	3.07	0.43
46:A:970:U:H4'	46:A:971:A:O5'	2.19	0.43
46:A:1006:U:C4'	46:A:1007:U:H4'	2.48	0.43
46:A:1048:A:OP2	75:e:109:SER:HB2	2.18	0.43
46:A:1090:U:O2'	46:A:1091:A:H5'	2.19	0.43
46:A:1151:U:N3	46:A:1162:A:C2	2.87	0.43
46:A:1218:A:O2'	46:A:1219:U:H5'	2.19	0.43
46:A:1237:U:O2	55:J:62:GLY:HA3	2.18	0.43
46:A:1358:C:O2'	46:A:1359:G:H8	2.02	0.43
46:A:1577:U:H5"	46:A:1577:U:C6	2.54	0.43
46:A:1609:U:P	48:C:201:HIS:HE2	2.36	0.43
46:A:1689:U:O2	46:A:2875:G:O2'	2.35	0.43
46:A:1707:C:P	47:B:295:ARG:HH11	2.42	0.43
46:A:1715:A:H5"	46:A:1716:U:C5	2.54	0.43
46:A:1807:A:N6	46:A:1825:A:C6	2.87	0.43
46:A:1833:G:H3'	46:A:1834:C:H6	1.84	0.43
46:A:1951:A:C6	46:A:2881:A:C5	3.07	0.43
46:A:1993:U:O2'	64:S:101:VAL:HG21	2.18	0.43
46:A:1997:A:C5	46:A:1998:U:C5	3.06	0.43
46:A:2732:G:C6	46:A:2751:G:N1	2.87	0.43
46:A:2778:C:H2'	46:A:2779:A:O4'	2.19	0.43
46:A:2946:A:C2	46:A:3065:U:C2	3.07	0.43
46:A:3106:G:C5	46:A:3107:U:C5	3.07	0.43
46:A:3156:U:C2	46:A:3157:A:C8	3.07	0.43
46:A:3279:U:H2'	46:A:3280:C:O4'	2.18	0.43
47:B:61:LEU:O	47:B:63:ILE:HG12	2.19	0.43
63:R:184:LEU:HB2	63:R:186:LEU:H	1.83	0.43
75:e:61:MET:HB2	75:e:105:TYR:OH	2.19	0.43
75:e:195:SER:HB3	75:e:198:VAL:O	2.19	0.43
75:e:211:ARG:HG3	75:e:211:ARG:NH1	2.33	0.43
2:AB:46:ASN:CB	2:AB:53:ASN:HB3	2.49	0.43
2:AB:109:SER:O	2:AB:110:PHE:C	2.62	0.43
4:AD:151:GLU:CD	16:g:106:PRO:HA	2.40	0.43
4:AD:213:SER:HB2	4:AD:217:ASN:HD21	1.84	0.43
4:AD:254:GLU:OE1	16:g:226:VAL:HG23	2.19	0.43
5:AE:44:ALA:HA	5:AE:99:LYS:HG3	2.01	0.43
5:AE:151:PHE:HE1	5:AE:319:LEU:HD23	1.82	0.43
5:AE:274:TYR:O	5:AE:277:ILE:N	2.52	0.43
6:AF:47:PRO:O	12:AL:493:A:N6	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AH:21:ILE:CB	31:v:74:TYR:CE1	3.02	0.43
8:AH:65:LYS:HD2	8:AH:68:PHE:CE2	2.54	0.43
8:AH:103:ARG:NH2	31:v:76:ILE:O	2.52	0.43
8:AH:184:ARG:HD3	12:AL:814:A:C2'	2.48	0.43
9:AI:49:LYS:HD3	9:AI:49:LYS:C	2.44	0.43
9:AI:307:ASN:CG	9:AI:308:THR:N	2.77	0.43
11:AK:185:ARG:CG	25:p:143:PHE:HE1	2.15	0.43
12:AL:478:U:N3	12:AL:479:A:H1'	2.34	0.43
12:AL:660:G:OP1	19:j:63:LYS:HG2	2.19	0.43
12:AL:720:U:H2'	12:AL:721:U:H6	1.82	0.43
12:AL:728:A:N7	12:AL:808:A:C2	2.87	0.43
12:AL:762:U:O2	12:AL:762:U:C2'	2.67	0.43
12:AL:763:A:O5'	12:AL:763:A:C8	2.69	0.43
12:AL:796:A:H5"	12:AL:796:A:C8	2.52	0.43
12:AL:1023:A:O2'	12:AL:1050:C:H4'	2.19	0.43
12:AL:1300:U:C2	12:AL:1301:A:N7	2.87	0.43
12:AL:1398:U:H5"	28:s:25:TYR:CD1	2.54	0.43
12:AL:1627:U:C6	15:Z:16:LEU:HD12	2.49	0.43
13:AM:13:C:O5'	46:A:1823:U:O2'	2.37	0.43
17:h:259:LEU:O	17:h:260:GLU:C	2.62	0.43
18:i:88:ASN:CA	25:p:53:GLU:OE2	2.64	0.43
19:j:64:ARG:O	19:j:68:VAL:HG23	2.19	0.43
20:k:169:LEU:CD2	20:k:181:LEU:HD12	2.46	0.43
20:k:174:ASP:C	20:k:176:ASN:N	2.77	0.43
20:k:266:ARG:CA	20:k:271:ILE:HD11	2.48	0.43
21:l:119:SER:OG	21:l:121:LEU:HG	2.19	0.43
22:m:211:ARG:NH1	22:m:214:GLU:CB	2.81	0.43
24:o:156:ALA:HB2	24:o:234:ALA:N	2.34	0.43
25:p:53:GLU:O	25:p:54:ASN:C	2.62	0.43
25:p:55:LEU:HD23	25:p:55:LEU:HA	1.78	0.43
26:q:75:LYS:HD2	26:q:166:GLU:OE2	2.19	0.43
26:q:173:GLY:C	26:q:175:GLY:N	2.75	0.43
28:s:106:ASN:O	28:s:108:ALA:N	2.51	0.43
29:t:90:ASP:HB2	29:t:91:PHE:CE2	2.54	0.43
32:w:189:ARG:O	32:w:193:LEU:N	2.49	0.43
33:x:58:PHE:O	33:x:61:SER:N	2.52	0.43
34:y:64:ILE:HD13	34:y:64:ILE:HA	1.92	0.43
37:1:161:THR:HB	46:A:2645:A:O4'	2.18	0.43
40:4:33:TRP:HH2	46:A:1274:A:C8	2.33	0.43
45:9:42:ARG:HB2	46:A:25:A:O5'	2.19	0.43
46:A:12:A:C3'	46:A:13:A:H8	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:138:U:H2'	46:A:139:U:C6	2.54	0.43
46:A:425:A:O2'	46:A:426:A:P	2.77	0.43
46:A:987:G:H1	46:A:995:C:N4	2.16	0.43
46:A:1087:U:O2'	46:A:1088:A:P	2.77	0.43
46:A:1113:A:C8	46:A:1115:A:N7	2.87	0.43
46:A:1245:U:O2'	46:A:1246:A:H5'	2.19	0.43
46:A:1826:U:H1'	46:A:1829:U:O4	2.19	0.43
46:A:2267:A:O2'	46:A:2268:G:H5'	2.18	0.43
46:A:2285:U:C5	46:A:2693:C:N4	2.86	0.43
46:A:2426:A:P	46:A:2426:A:H8	2.42	0.43
46:A:2700:A:N3	46:A:2700:A:H2'	2.34	0.43
46:A:2810:G:N7	46:A:3102:A:C2	2.87	0.43
46:A:2886:C:O2'	46:A:2887:U:H5'	2.18	0.43
46:A:2976:A:H2'	46:A:2977:U:H6	1.78	0.43
46:A:3278:A:C2	46:A:3279:U:C2	3.06	0.43
47:B:143:HIS:CD2	47:B:332:THR:HA	2.53	0.43
48:C:40:PRO:HD2	53:H:130:ASP:HB3	1.99	0.43
49:D:71:ARG:NH1	55:J:63:GLN:O	2.51	0.43
57:L:7:ARG:HB2	57:L:42:GLU:HG3	2.01	0.43
60:O:288:ARG:NH2	71:a:180:ILE:HG23	2.34	0.43
63:R:264:LEU:O	63:R:265:GLU:C	2.62	0.43
65:T:117:GLN:HG3	65:T:145:ILE:HG21	2.00	0.43
69:X:58:ALA:O	69:X:60:ARG:N	2.52	0.43
1:AA:86:LYS:HB2	12:AL:1602:C:OP1	2.19	0.42
2:AB:81:ILE:C	2:AB:83:GLN:N	2.76	0.42
3:AC:78:ASN:N	7:AG:190:ALA:HB2	2.29	0.42
3:AC:232:LEU:HD22	4:AD:278:LYS:CB	2.35	0.42
4:AD:226:MET:O	4:AD:230:ARG:N	2.32	0.42
5:AE:278:TYR:OH	5:AE:301:ILE:HG23	2.18	0.42
6:AF:100:HIS:CD2	6:AF:107:LEU:HD11	2.55	0.42
6:AF:332:ARG:NH1	12:AL:404:U:O2	2.51	0.42
9:AI:56:LEU:HD11	22:m:211:ARG:HA	2.00	0.42
9:AI:169:ASP:C	9:AI:171:LYS:N	2.77	0.42
9:AI:258:LEU:O	9:AI:261:VAL:HG23	2.19	0.42
9:AI:302:TYR:CD1	9:AI:312:GLN:HB2	2.35	0.42
10:AJ:7:ARG:O	10:AJ:11:VAL:HG23	2.18	0.42
11:AK:225:SER:HA	11:AK:279:HIS:CD2	2.53	0.42
12:AL:66:G:C5	12:AL:358:G:C6	3.07	0.42
12:AL:254:A:N1	30:u:50:ASN:CG	2.77	0.42
12:AL:633:C:H2'	12:AL:634:A:O4'	2.19	0.42
12:AL:644:G:C2	14:AN:2:U:C6	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:806:A:C6	12:AL:807:A:N6	2.87	0.42
12:AL:896:A:O2'	15:Z:9:ARG:NE	2.53	0.42
12:AL:1052:U:H2'	12:AL:1053:A:H8	1.84	0.42
12:AL:1309:A:H2'	12:AL:1310:U:H6	1.84	0.42
13:AM:12:U:H4'	46:A:1823:U:H1'	2.00	0.42
15:Z:95:ASP:H	17:h:203:ARG:NH1	2.17	0.42
17:h:177:PRO:O	17:h:378:ARG:NH1	2.52	0.42
17:h:222:LEU:O	17:h:223:ASN:C	2.61	0.42
17:h:249:LEU:HD23	17:h:322:VAL:HG22	2.01	0.42
17:h:283:SER:C	17:h:285:GLU:N	2.77	0.42
18:i:331:PHE:HB3	18:i:335:LEU:CD1	2.47	0.42
19:j:108:ALA:HB3	19:j:144:LEU:HD12	2.00	0.42
20:k:145:THR:HG21	20:k:175:LYS:HE3	2.01	0.42
22:m:213:GLY:O	22:m:216:LEU:HB2	2.19	0.42
22:m:224:SER:C	22:m:226:ALA:N	2.74	0.42
24:o:156:ALA:HB3	24:o:230:ALA:O	2.19	0.42
28:s:11:LYS:HE2	28:s:11:LYS:HB3	1.85	0.42
28:s:83:ARG:HG3	28:s:90:GLY:CA	2.49	0.42
29:t:43:PHE:CD1	29:t:43:PHE:C	2.97	0.42
30:u:192:ILE:C	30:u:194:GLU:H	2.27	0.42
31:v:91:ARG:HB2	31:v:92:LYS:HZ2	1.84	0.42
32:w:115:GLU:C	32:w:117:LYS:N	2.77	0.42
42:6:103:LYS:HG2	46:A:2422:A:OP1	2.17	0.42
46:A:48:A:H2'	46:A:49:G:O4'	2.18	0.42
46:A:119:A:N6	65:T:154:HIS:HA	2.34	0.42
46:A:232:C:H2'	46:A:233:U:O4'	2.19	0.42
46:A:411:A:H1'	46:A:480:C:O2'	2.18	0.42
46:A:926:A:C8	46:A:1175:A:N6	2.87	0.42
46:A:1010:A:OP1	76:f:129:SER:HA	2.19	0.42
46:A:1020:U:C5'	75:e:134:LYS:CB	2.87	0.42
46:A:1238:G:OP2	49:D:220:ARG:NH1	2.52	0.42
46:A:1250:U:C2	46:A:1251:A:C8	3.07	0.42
46:A:1319:A:P	46:A:1320:C:H41	2.41	0.42
46:A:1370:A:H61	46:A:1395:U:H3	1.66	0.42
46:A:1439:A:O2'	46:A:1440:U:O4'	2.36	0.42
46:A:1439:A:H3'	46:A:1440:U:C5	2.54	0.42
46:A:1522:A:O2'	46:A:1523:A:P	2.77	0.42
46:A:1617:A:H2'	46:A:1618:G:O4'	2.19	0.42
46:A:1635:G:C2	65:T:15:ALA:CB	3.02	0.42
46:A:1722:U:O4'	47:B:141:VAL:HG21	2.18	0.42
46:A:2212:A:H2'	46:A:2213:U:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2356:A:H2'	46:A:2357:U:C6	2.54	0.42
46:A:2459:A:H2'	46:A:2460:A:C8	2.54	0.42
46:A:2643:U:C4	46:A:2644:A:C5	3.07	0.42
46:A:2978:A:C6	46:A:3009:A:N1	2.87	0.42
46:A:3004:A:C2'	46:A:3005:A:H8	2.32	0.42
46:A:3084:A:N1	46:A:3094:A:C8	2.87	0.42
55:J:113:ILE:HG13	55:J:114:TYR:N	2.34	0.42
55:J:149:LEU:HD11	55:J:155:LEU:HD13	2.01	0.42
63:R:178:LYS:HB2	63:R:178:LYS:HZ3	1.82	0.42
63:R:254:LEU:O	63:R:258:THR:OG1	2.36	0.42
76:f:132:ARG:HD3	76:f:132:ARG:C	2.44	0.42
2:AB:107:LYS:HD3	2:AB:107:LYS:N	2.33	0.42
3:AC:237:VAL:HG11	4:AD:44:ARG:CD	2.47	0.42
3:AC:239:ASN:OD1	3:AC:239:ASN:N	2.52	0.42
4:AD:224:THR:O	4:AD:227:GLU:HB2	2.19	0.42
5:AE:206:ILE:C	5:AE:208:GLN:N	2.77	0.42
6:AF:39:PHE:HD1	6:AF:39:PHE:HA	1.68	0.42
6:AF:135:GLN:NE2	6:AF:137:PHE:O	2.52	0.42
6:AF:330:LYS:HA	12:AL:404:U:O3'	2.19	0.42
8:AH:210:ILE:HG12	8:AH:215:GLN:HE21	1.85	0.42
9:AI:176:ASN:OD1	9:AI:177:ILE:N	2.52	0.42
9:AI:286:PRO:HB3	9:AI:338:GLU:O	2.18	0.42
9:AI:289:PHE:HE2	9:AI:324:MET:HA	1.82	0.42
11:AK:252:HIS:CE1	25:p:149:SER:HA	2.53	0.42
12:AL:202:G:C2	12:AL:223:U:O2	2.72	0.42
12:AL:317:U:H2'	12:AL:318:C:O4'	2.18	0.42
12:AL:616:C:P	27:r:141:SER:OG	2.78	0.42
12:AL:723:A:O2'	12:AL:724:U:H5'	2.20	0.42
12:AL:758:G:H1'	14:AN:11:A:O2'	2.18	0.42
12:AL:911:U:HO2'	12:AL:912:A:P	2.42	0.42
12:AL:1213:G:C5	24:o:247:HIS:HE1	2.37	0.42
12:AL:1440:G:C6	12:AL:1441:U:C4	3.07	0.42
12:AL:1638:A:O2'	12:AL:1640:U:H5"	2.18	0.42
16:g:250:PHE:N	33:x:55:TYR:HE1	2.17	0.42
18:i:155:TYR:CE2	18:i:176:MET:HE2	2.50	0.42
19:j:168:PHE:CE2	19:j:392:GLU:HA	2.54	0.42
19:j:457:VAL:H	19:j:464:GLU:HG3	1.83	0.42
22:m:116:HIS:CD2	22:m:120:MET:SD	3.12	0.42
25:p:86:TRP:CD1	25:p:86:TRP:N	2.87	0.42
27:r:53:ASP:O	27:r:54:GLN:C	2.61	0.42
27:r:101:ASP:OD2	27:r:133:SER:HB3	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:t:66:PRO:O	29:t:70:ARG:NH1	2.52	0.42
30:u:74:PRO:CG	32:w:100:GLU:CG	2.92	0.42
30:u:206:ARG:CG	30:u:247:MET:HG3	2.50	0.42
30:u:262:ILE:HG21	30:u:265:ARG:NE	2.34	0.42
31:v:14:GLY:HA3	31:v:20:VAL:N	2.34	0.42
33:x:111:HIS:CE1	35:z:153:ARG:NH1	2.87	0.42
34:y:19:VAL:CG2	34:y:40:ALA:HB2	2.49	0.42
34:y:68:MET:HG2	34:y:76:PHE:CE1	2.53	0.42
35:z:124:MET:HE2	35:z:124:MET:HA	2.01	0.42
46:A:27:A:H4'	71:a:110:LYS:HE2	1.99	0.42
46:A:303:A:C2	46:A:304:A:N6	2.87	0.42
46:A:352:A:C4	46:A:353:A:C8	3.07	0.42
46:A:790:A:C5	46:A:791:U:C5	3.07	0.42
46:A:836:A:H2'	46:A:837:U:O4'	2.20	0.42
46:A:1210:A:H2'	46:A:1211:U:O4'	2.19	0.42
46:A:1276:U:H2'	46:A:1277:U:H6	1.83	0.42
46:A:1323:U:C4	46:A:1324:U:C4	3.07	0.42
46:A:1526:A:O2'	46:A:1527:A:H5'	2.19	0.42
46:A:1640:U:O5'	46:A:1640:U:H6	2.02	0.42
46:A:1716:U:O2'	46:A:1717:A:P	2.77	0.42
46:A:1720:U:C2	46:A:1721:U:C5	3.07	0.42
46:A:1748:A:C5	46:A:1749:U:C4	3.07	0.42
46:A:2219:A:N1	46:A:2228:A:N6	2.66	0.42
46:A:2231:U:O2'	46:A:2232:A:H5'	2.17	0.42
46:A:2381:G:C4	46:A:2382:A:C8	3.07	0.42
46:A:2386:A:O5'	46:A:2386:A:H8	2.02	0.42
46:A:2896:U:H4'	46:A:2897:A:OP2	2.19	0.42
46:A:3275:C:H2'	46:A:3276:U:C6	2.54	0.42
56:K:97:ILE:HG13	56:K:168:ALA:HB2	2.01	0.42
56:K:184:LEU:HD13	56:K:192:PHE:HB3	2.01	0.42
62:Q:245:LYS:HA	64:S:52:ARG:HB2	2.00	0.42
63:R:308:ALA:HB3	63:R:317:GLU:OE2	2.19	0.42
64:S:105:LEU:CD1	64:S:118:MET:HE1	2.49	0.42
75:e:161:GLN:HA	75:e:164:LEU:HD11	2.02	0.42
2:AB:70:ASP:OD2	2:AB:72:LYS:HB2	2.19	0.42
3:AC:9:HIS:NE2	17:h:164:ILE:HD12	2.23	0.42
4:AD:213:SER:HB2	4:AD:217:ASN:ND2	2.35	0.42
5:AE:118:ASP:C	5:AE:120:PHE:H	2.27	0.42
5:AE:151:PHE:O	5:AE:153:ILE:N	2.40	0.42
5:AE:215:TRP:HH2	5:AE:221:ARG:HE	1.67	0.42
5:AE:284:LEU:HD12	5:AE:297:LEU:HD13	1.99	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:110:ARG:NH2	6:AF:117:PRO:HD2	2.33	0.42
6:AF:295:ILE:CD1	31:v:93:ALA:HB2	2.43	0.42
6:AF:319:TYR:HD1	31:v:42:THR:CG2	2.19	0.42
7:AG:31:ASN:O	7:AG:32:VAL:C	2.62	0.42
7:AG:210:ILE:HA	16:g:230:ARG:HH21	1.84	0.42
8:AH:98:GLN:O	8:AH:99:LYS:C	2.61	0.42
9:AI:127:ARG:N	9:AI:131:THR:CG2	2.83	0.42
9:AI:273:LYS:O	9:AI:277:ASP:HB2	2.19	0.42
10:AJ:91:PRO:HD2	12:AL:1243:U:C6	2.49	0.42
11:AK:164:LEU:CB	20:k:32:SER:CB	2.83	0.42
12:AL:53:A:O2'	12:AL:369:U:H1'	2.19	0.42
12:AL:81:U:N3	12:AL:82:A:N7	2.68	0.42
12:AL:308:U:O2'	12:AL:670:C:H5"	2.19	0.42
12:AL:542:A:H8	12:AL:542:A:O5'	2.03	0.42
12:AL:1064:U:C4	12:AL:1065:A:C5	3.08	0.42
12:AL:1172:A:H61	25:p:39:GLY:HA3	1.83	0.42
12:AL:1503:U:H2'	12:AL:1504:A:H8	1.81	0.42
15:Z:62:THR:HB	22:m:184:ASN:HA	2.00	0.42
16:g:105:ASN:CG	16:g:108:PHE:HA	2.44	0.42
18:i:145:SER:O	18:i:147:ASN:N	2.52	0.42
18:i:190:ASN:ND2	18:i:193:ASN:HB2	2.34	0.42
18:i:311:ILE:CD1	20:k:58:TYR:CZ	3.02	0.42
20:k:54:PHE:CE2	25:p:64:ARG:NE	2.85	0.42
21:l:94:SER:O	21:l:95:SER:HB2	2.18	0.42
24:o:159:LYS:CD	24:o:164:THR:HG22	2.49	0.42
26:q:83:THR:O	26:q:173:GLY:HA3	2.18	0.42
26:q:129:GLY:HA2	26:q:133:PHE:O	2.19	0.42
27:r:84:ARG:HG2	27:r:85:LEU:N	2.34	0.42
28:s:39:LEU:HB3	28:s:41:PHE:CE2	2.54	0.42
30:u:103:ALA:O	30:u:104:ALA:C	2.62	0.42
32:w:218:ASN:O	32:w:221:LYS:N	2.52	0.42
35:z:120:LEU:HD12	35:z:120:LEU:HA	1.66	0.42
35:z:124:MET:CE	35:z:129:ILE:HD12	2.49	0.42
37:1:121:PHE:HD1	46:A:2349:A:C5	2.38	0.42
46:A:175:U:O4	46:A:202:A:N6	2.53	0.42
46:A:237:A:H62	46:A:2696:A:H2'	1.83	0.42
46:A:307:G:O2'	46:A:308:U:O5'	2.37	0.42
46:A:896:U:OP1	66:U:13:ILE:O	2.36	0.42
46:A:954:A:N1	46:A:1094:U:H5	2.18	0.42
46:A:1406:A:H5"	46:A:1406:A:C8	2.53	0.42
46:A:1610:A:H61	46:A:1902:U:H3	1.67	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1635:G:C2	65:T:15:ALA:HB3	2.54	0.42
46:A:1642:A:H2'	46:A:1643:G:O4'	2.19	0.42
46:A:1805:G:O2'	46:A:1806:C:H5'	2.19	0.42
46:A:1865:C:C5'	46:A:1866:A:H2'	2.48	0.42
46:A:1921:A:H4'	46:A:1922:U:OP2	2.19	0.42
46:A:1977:A:H2'	46:A:1978:C:C6	2.55	0.42
46:A:2359:U:O2'	46:A:2360:U:P	2.77	0.42
46:A:2913:U:C4	46:A:2914:C:C4	3.07	0.42
46:A:3148:A:H2'	46:A:3149:A:O4'	2.19	0.42
46:A:3149:A:N6	46:A:3252:U:H5	2.16	0.42
46:A:3249:U:O5'	46:A:3249:U:H6	2.02	0.42
47:B:230:LEU:HA	47:B:233:LYS:HZ2	1.85	0.42
56:K:122:LYS:HE3	56:K:122:LYS:HB2	1.86	0.42
62:Q:238:LEU:HD13	62:Q:243:ILE:HD11	2.01	0.42
63:R:108:GLY:HA3	63:R:117:LEU:HD12	2.01	0.42
63:R:115:LEU:N	63:R:115:LEU:HD22	2.34	0.42
63:R:155:LYS:HB3	63:R:156:PRO:HD3	1.99	0.42
63:R:196:SER:O	63:R:197:TYR:C	2.62	0.42
63:R:201:VAL:C	63:R:203:ALA:N	2.73	0.42
63:R:242:GLU:O	63:R:246:LYS:N	2.47	0.42
75:e:98:ARG:O	75:e:102:PHE:HB2	2.19	0.42
75:e:190:LYS:HB3	76:f:3:GLN:CB	2.49	0.42
2:AB:108:LYS:HB3	12:AL:68:A:H5'	2.02	0.42
3:AC:25:VAL:CG1	3:AC:28:ILE:HD13	2.48	0.42
3:AC:62:TYR:HE2	17:h:163:THR:HG22	1.82	0.42
4:AD:284:TYR:CD2	4:AD:292:TYR:HB2	2.54	0.42
5:AE:127:SER:C	5:AE:129:ARG:N	2.71	0.42
8:AH:103:ARG:NH2	31:v:80:ALA:N	2.58	0.42
9:AI:50:ARG:HD3	9:AI:50:ARG:HA	1.64	0.42
9:AI:202:PRO:HB3	9:AI:268:ARG:HH12	1.84	0.42
9:AI:431:PHE:CD1	24:o:176:ILE:CG1	2.78	0.42
10:AJ:39:LEU:H	10:AJ:39:LEU:HG	1.71	0.42
11:AK:140:GLN:CD	18:i:321:TYR:CG	2.97	0.42
11:AK:252:HIS:HE1	25:p:150:LEU:H	1.61	0.42
11:AK:304:ALA:HB2	24:o:152:GLY:H	1.71	0.42
12:AL:127:U:C4	12:AL:128:A:C6	3.07	0.42
12:AL:223:U:H3'	12:AL:224:A:C4'	2.50	0.42
12:AL:410:G:C4	12:AL:411:A:C8	3.07	0.42
12:AL:1043:A:C5	12:AL:1386:A:N1	2.88	0.42
12:AL:1327:A:C6	12:AL:1328:A:C6	3.08	0.42
12:AL:1553:A:H2'	12:AL:1554:U:H6	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:i:119:LEU:HB3	18:i:137:MET:HE1	2.00	0.42
18:i:231:LYS:O	18:i:237:LEU:HG	2.18	0.42
20:k:25:TYR:OH	25:p:19:PRO:HD2	2.19	0.42
20:k:106:LEU:HD13	20:k:110:VAL:O	2.18	0.42
21:l:38:VAL:HG13	21:l:39:VAL:O	2.19	0.42
27:r:118:LEU:O	27:r:120:GLY:N	2.51	0.42
30:u:74:PRO:O	30:u:76:ILE:N	2.52	0.42
30:u:228:TYR:HA	30:u:231:ILE:HG22	2.01	0.42
30:u:282:LYS:O	30:u:282:LYS:HG2	2.20	0.42
44:8:157:PHE:HB2	49:D:57:PHE:CD2	2.54	0.42
46:A:104:A:O2'	46:A:105:G:H5'	2.19	0.42
46:A:263:A:O2'	46:A:357:C:H1'	2.19	0.42
46:A:306:G:H4'	46:A:307:G:O5'	2.20	0.42
46:A:355:U:N3	46:A:356:U:C4	2.87	0.42
46:A:497:U:C2	46:A:498:A:C8	3.07	0.42
46:A:503:A:C2	46:A:504:A:C8	3.07	0.42
46:A:550:A:H2'	46:A:551:U:H6	1.84	0.42
46:A:602:A:H4'	46:A:1366:A:O2'	2.19	0.42
46:A:622:U:O2'	46:A:1652:U:OP2	2.23	0.42
46:A:724:A:H2'	46:A:725:U:C6	2.54	0.42
46:A:807:A:C2	46:A:818:U:N3	2.80	0.42
46:A:825:A:C6	46:A:826:A:C6	3.07	0.42
46:A:867:A:H2'	46:A:868:G:C8	2.55	0.42
46:A:884:U:C2	56:K:84:ARG:NH1	2.87	0.42
46:A:927:A:OP1	66:U:10:ARG:NH2	2.51	0.42
46:A:928:A:H2'	46:A:929:G:O4'	2.19	0.42
46:A:1644:U:O5'	46:A:1644:U:H6	2.02	0.42
46:A:1792:A:H2'	46:A:1793:U:O4'	2.19	0.42
46:A:1995:G:C2	46:A:1996:A:H1'	2.54	0.42
46:A:2302:U:H5	63:R:39:MET:SD	2.41	0.42
46:A:2350:U:H2'	46:A:2351:A:H8	1.78	0.42
46:A:2382:A:C4	46:A:2383:A:C8	3.06	0.42
46:A:2779:A:H2'	46:A:2780:A:H8	1.80	0.42
46:A:2780:A:H2'	46:A:2781:C:O4'	2.20	0.42
46:A:2864:G:C5'	47:B:354:SER:C	2.92	0.42
46:A:3010:U:C4	46:A:3011:U:C4	3.07	0.42
46:A:3177:A:H61	46:A:3230:U:H3	1.67	0.42
46:A:3229:U:C2'	46:A:3230:U:C6	3.01	0.42
48:C:58:ARG:NH1	48:C:159:PHE:O	2.52	0.42
50:E:251:ALA:CB	67:V:63:TYR:CG	3.02	0.42
57:L:107:ARG:HG3	57:L:125:GLU:HG2	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
59:N:106:GLY:HA3	71:a:51:PRO:HB3	2.01	0.42
62:Q:270:ARG:CZ	72:b:35:LYS:O	2.67	0.42
63:R:274:GLU:O	63:R:275:LYS:C	2.62	0.42
69:X:17:ALA:O	69:X:19:SER:N	2.52	0.42
69:X:23:ARG:CZ	69:X:23:ARG:HB2	2.49	0.42
72:b:70:ALA:HB2	72:b:79:LEU:HD11	2.02	0.42
76:f:78:GLY:HA2	76:f:148:VAL:HG21	1.99	0.42
76:f:81:LEU:HD13	76:f:148:VAL:HG21	2.01	0.42
2:AB:75:LYS:C	2:AB:77:LYS:H	2.26	0.42
2:AB:96:ASN:O	2:AB:97:ASN:HB2	2.18	0.42
3:AC:41:TYR:O	3:AC:45:LEU:HG	2.20	0.42
3:AC:235:TYR:O	3:AC:239:ASN:ND2	2.52	0.42
4:AD:30:GLY:O	4:AD:31:LEU:C	2.61	0.42
5:AE:64:PHE:O	5:AE:74:LEU:HD22	2.19	0.42
5:AE:71:ALA:HA	5:AE:75:LEU:HD12	2.00	0.42
5:AE:106:ILE:O	5:AE:153:ILE:HD11	2.19	0.42
5:AE:258:ILE:HG12	5:AE:300:PHE:CE1	2.54	0.42
6:AF:74:ASN:O	6:AF:76:TYR:N	2.53	0.42
6:AF:80:PRO:HG2	6:AF:215:MET:HG2	2.01	0.42
6:AF:83:HIS:HB3	6:AF:217:PRO:HA	2.01	0.42
6:AF:306:GLN:CA	31:v:62:ILE:HG22	2.50	0.42
8:AH:38:SER:HB2	8:AH:39:PRO:HD2	2.00	0.42
8:AH:164:LEU:HD21	23:n:33:LEU:HD21	1.99	0.42
8:AH:194:LYS:O	8:AH:195:LYS:C	2.62	0.42
8:AH:221:ASP:O	8:AH:225:ASN:ND2	2.53	0.42
9:AI:62:ASN:O	9:AI:63:THR:C	2.63	0.42
9:AI:114:GLN:C	9:AI:116:ASN:H	2.26	0.42
9:AI:202:PRO:HB2	9:AI:203:MET:H	1.69	0.42
11:AK:90:LEU:HB3	11:AK:104:ILE:CG2	2.49	0.42
12:AL:40:G:C6	12:AL:41:C:C4	3.08	0.42
12:AL:78:U:H2'	12:AL:78:U:O2	2.18	0.42
12:AL:629:G:H2'	12:AL:630:U:O4'	2.19	0.42
12:AL:693:G:H2'	12:AL:695:A:H8	1.84	0.42
12:AL:810:A:C6	12:AL:811:U:C4	3.07	0.42
12:AL:1484:A:H2'	12:AL:1485:A:O4'	2.19	0.42
12:AL:1516:U:O2	12:AL:1516:U:H2'	2.20	0.42
12:AL:1635:U:O4	16:g:85:TRP:HE3	2.03	0.42
13:AM:2:G:N3	13:AM:2:G:H2'	2.35	0.42
15:Z:67:LEU:O	15:Z:68:GLY:C	2.62	0.42
17:h:135:SER:O	17:h:136:ALA:HB2	2.20	0.42
18:i:149:LEU:HD12	18:i:150:ASN:N	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:j:407:GLN:HA	19:j:410:TYR:CZ	2.55	0.42
20:k:269:MET:HG2	20:k:270:ASN:N	2.34	0.42
23:n:92:ILE:HD11	23:n:153:ARG:HB2	2.02	0.42
26:q:98:LYS:N	26:q:98:LYS:HD3	2.31	0.42
27:r:72:LYS:HA	27:r:74:ASN:H	1.83	0.42
29:t:94:CYS:SG	29:t:95:ARG:N	2.92	0.42
30:u:147:SER:OG	30:u:148:GLU:N	2.49	0.42
31:v:25:VAL:HG21	31:v:75:TRP:HD1	1.80	0.42
32:w:39:HIS:HE1	32:w:41:ARG:HB2	1.85	0.42
32:w:56:ASP:HB3	32:w:57:LEU:H	1.49	0.42
32:w:199:LYS:O	32:w:202:GLN:HG3	2.19	0.42
38:2:69:HIS:CE1	50:E:54:ILE:HD13	2.54	0.42
39:3:119:LEU:HD11	65:T:169:PHE:CD2	2.55	0.42
44:8:243:MET:HE2	61:P:251:LYS:CG	2.49	0.42
46:A:13:A:H2'	46:A:14:U:H6	1.83	0.42
46:A:748:U:H2'	46:A:749:A:O4'	2.20	0.42
46:A:1030:C:H2'	46:A:1031:U:O4'	2.20	0.42
46:A:1342:U:OP1	61:P:151:ARG:NH1	2.52	0.42
46:A:1432:A:C2	46:A:1433:A:C4	3.08	0.42
46:A:1597:G:H4'	46:A:1598:A:C5	2.54	0.42
46:A:1910:G:H5"	60:O:202:LYS:HB2	2.02	0.42
46:A:1997:A:N6	46:A:2089:U:H3	2.18	0.42
46:A:2054:A:H4'	46:A:2055:U:H5'	2.00	0.42
46:A:2077:A:C2	46:A:2078:U:C5	3.08	0.42
46:A:2078:U:H4'	46:A:2078:U:OP1	2.19	0.42
46:A:2084:G:C6	46:A:2085:A:C5	3.07	0.42
46:A:2325:A:H5"	46:A:2326:U:OP2	2.20	0.42
46:A:2333:A:N3	63:R:328:VAL:CG1	2.81	0.42
46:A:2831:A:H2'	46:A:2832:A:C8	2.54	0.42
46:A:2855:A:H2'	46:A:2856:U:O4'	2.20	0.42
60:O:97:HIS:ND1	62:Q:119:MET:HE1	2.34	0.42
63:R:108:GLY:HA3	63:R:117:LEU:CD1	2.50	0.42
63:R:300:TYR:O	63:R:303:ALA:HB3	2.19	0.42
69:X:30:GLY:O	69:X:32:PRO:HD3	2.19	0.42
3:AC:124:LYS:O	3:AC:129:GLY:N	2.51	0.42
3:AC:261:PHE:CD1	17:h:149:ARG:CA	3.00	0.42
4:AD:160:ASN:ND2	4:AD:275:ALA:HB2	2.34	0.42
4:AD:170:TRP:N	4:AD:199:LEU:O	2.51	0.42
5:AE:84:THR:O	5:AE:85:ARG:HB2	2.19	0.42
5:AE:282:ARG:HB3	5:AE:315:TYR:CB	2.49	0.42
9:AI:50:ARG:HG2	9:AI:55:SER:HA	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:263:THR:O	9:AI:268:ARG:NH2	2.53	0.42
10:AJ:59:LEU:HD11	18:i:122:MET:CG	2.49	0.42
11:AK:70:TRP:CZ2	18:i:173:MET:CE	3.02	0.42
11:AK:218:LYS:HD3	11:AK:262:SER:HA	2.01	0.42
12:AL:24:U:O2'	12:AL:1126:A:H1'	2.18	0.42
12:AL:268:G:H2'	12:AL:269:A:H8	1.81	0.42
12:AL:522:A:C8	12:AL:527:G:C6	3.07	0.42
12:AL:802:A:H2'	12:AL:803:A:H8	1.84	0.42
12:AL:1078:U:O2	12:AL:1078:U:H2'	2.19	0.42
12:AL:1257:A:H4'	34:y:80:ARG:HD2	2.01	0.42
15:Z:18:VAL:HG22	35:z:162:PHE:HZ	1.83	0.42
17:h:179:LEU:HB3	17:h:181:GLU:OE1	2.20	0.42
17:h:203:ARG:C	17:h:205:SER:N	2.77	0.42
18:i:276:ILE:HA	18:i:279:LEU:HB2	2.02	0.42
18:i:355:LYS:HB3	18:i:359:TRP:CZ2	2.54	0.42
19:j:6:ASN:O	19:j:7:LEU:CG	2.66	0.42
20:k:49:SER:O	20:k:50:ARG:HB2	2.20	0.42
20:k:217:TYR:HE2	20:k:285:THR:HG22	1.84	0.42
21:l:8:LEU:CD1	33:x:136:GLY:CA	2.73	0.42
21:l:20:GLU:HB3	21:l:90:ARG:HD2	2.01	0.42
23:n:150:VAL:HG12	23:n:151:LEU:N	2.34	0.42
26:q:157:GLU:C	26:q:159:ASN:H	2.28	0.42
27:r:45:LYS:O	27:r:46:ILE:C	2.63	0.42
28:s:102:GLN:HB2	28:s:103:HIS:H	1.68	0.42
31:v:20:VAL:HA	31:v:45:PRO:CD	2.49	0.42
32:w:193:LEU:O	32:w:194:LEU:C	2.61	0.42
40:4:5:ALA:HB2	41:5:181:VAL:HG12	2.02	0.42
46:A:62:A:O2'	46:A:482:G:H5'	2.20	0.42
46:A:452:U:O2'	46:A:453:U:H5'	2.20	0.42
46:A:479:U:C2	46:A:480:C:C5	3.07	0.42
46:A:713:U:H2'	46:A:714:A:H8	1.83	0.42
46:A:792:U:N3	46:A:793:A:C8	2.88	0.42
46:A:855:U:O4	46:A:856:A:N6	2.50	0.42
46:A:987:G:H2'	46:A:988:G:O4'	2.20	0.42
46:A:1025:A:H4'	46:A:1026:U:C5'	2.49	0.42
46:A:1140:A:H8	46:A:1140:A:O5'	2.02	0.42
46:A:1273:U:OP1	46:A:1273:U:H3'	2.19	0.42
46:A:1277:U:H6	46:A:1277:U:H5"	1.85	0.42
46:A:1493:U:O2'	46:A:1494:A:O4'	2.29	0.42
46:A:1615:G:C6	46:A:1892:G:N7	2.87	0.42
46:A:1780:U:H2'	46:A:1781:A:O4'	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1871:U:O2'	46:A:1872:G:P	2.78	0.42
46:A:1947:C:H2'	46:A:1948:A:C8	2.55	0.42
46:A:2318:U:C2'	46:A:2319:A:H5'	2.49	0.42
46:A:2333:A:N3	46:A:2333:A:H2'	2.35	0.42
46:A:2377:A:N7	46:A:2423:G:C6	2.88	0.42
46:A:2610:A:OP1	72:b:137:LYS:NZ	2.47	0.42
46:A:2729:A:N1	46:A:2730:G:C5	2.88	0.42
46:A:2760:G:C4	46:A:2761:C:C6	3.08	0.42
46:A:2843:G:N7	46:A:2846:U:C6	2.87	0.42
46:A:2898:U:C5	46:A:3261:U:C5	3.07	0.42
46:A:2909:A:C4	46:A:2910:A:C8	3.08	0.42
46:A:3009:A:H2'	46:A:3010:U:H6	1.82	0.42
46:A:3290:A:N7	46:A:3291:U:C2	2.87	0.42
63:R:324:TYR:C	63:R:325:LEU:HD12	2.44	0.42
75:e:204:LEU:HD13	75:e:205:SER:H	1.85	0.42
1:AA:83:LYS:CG	12:AL:1601:C:H4'	2.49	0.42
1:AA:90:LYS:HG3	1:AA:94:ARG:CZ	2.50	0.42
3:AC:19:ALA:HB1	3:AC:23:ASN:HB2	2.01	0.42
4:AD:155:LEU:CD2	16:g:210:LEU:CB	2.82	0.42
5:AE:80:ARG:HD3	5:AE:85:ARG:HB3	2.02	0.42
5:AE:107:TYR:C	5:AE:109:VAL:N	2.71	0.42
5:AE:253:ILE:CG1	5:AE:254:SER:N	2.83	0.42
5:AE:299:GLU:HA	5:AE:302:ARG:HB2	2.02	0.42
6:AF:58:MET:CB	19:j:11:LEU:HD11	2.50	0.42
6:AF:198:ARG:CZ	12:AL:552:A:C4'	2.97	0.42
7:AG:3:ILE:HG23	23:n:20:ARG:NH1	2.15	0.42
8:AH:231:PHE:CD2	33:x:96:PRO:HD2	2.53	0.42
9:AI:58:LYS:HE3	9:AI:58:LYS:HB2	1.87	0.42
9:AI:221:LEU:O	9:AI:222:LYS:C	2.62	0.42
9:AI:393:LYS:HZ2	24:o:182:GLN:CD	2.27	0.42
9:AI:399:VAL:O	9:AI:400:ASN:C	2.63	0.42
10:AJ:57:ARG:O	10:AJ:59:LEU:HB2	2.18	0.42
11:AK:54:PRO:HB2	11:AK:86:GLU:HB2	2.00	0.42
12:AL:127:U:C2	12:AL:128:A:C2	3.07	0.42
12:AL:405:A:C4	12:AL:406:U:C5	3.07	0.42
12:AL:483:A:C6	12:AL:484:U:C4	3.08	0.42
12:AL:539:C:H2'	12:AL:540:A:O4'	2.19	0.42
12:AL:632:C:C5	12:AL:644:G:H5'	2.54	0.42
12:AL:764:A:C2	12:AL:765:U:H4'	2.55	0.42
12:AL:1042:A:O2'	12:AL:1044:C:OP2	2.31	0.42
13:AM:6:C:H2'	13:AM:7:G:H5'	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AM:33:U:OP2	24:o:278:ARG:NH2	2.51	0.42
15:Z:31:LEU:HD23	15:Z:31:LEU:HA	1.83	0.42
15:Z:51:CYS:O	15:Z:54:LEU:N	2.53	0.42
16:g:83:THR:O	16:g:84:GLN:C	2.62	0.42
16:g:86:ASN:ND2	33:x:54:ILE:HG21	2.35	0.42
17:h:229:LEU:HD22	17:h:372:LEU:HD22	2.00	0.42
18:i:106:ILE:O	18:i:109:THR:HG22	2.19	0.42
19:j:395:GLU:N	19:j:396:PRO:HD2	2.33	0.42
19:j:440:HIS:ND1	19:j:464:GLU:HB3	2.35	0.42
20:k:151:MET:HE3	20:k:151:MET:HB2	1.73	0.42
20:k:244:HIS:ND1	20:k:245:VAL:N	2.68	0.42
21:l:56:LYS:CB	21:l:92:ILE:HG23	2.48	0.42
21:l:114:SER:CB	33:x:95:ARG:NE	2.76	0.42
25:p:123:MET:O	25:p:126:ALA:N	2.53	0.42
31:v:27:ASN:OD1	31:v:29:ARG:N	2.48	0.42
31:v:83:SER:O	31:v:84:GLU:C	2.62	0.42
36:0:62:VAL:HG12	36:0:80:ILE:CD1	2.50	0.42
37:1:252:ILE:HG21	37:1:261:ILE:HD12	2.01	0.42
40:4:92:ASP:HB2	46:A:1210:A:O2'	2.20	0.42
41:5:324:VAL:HG21	41:5:339:HIS:CG	2.54	0.42
41:5:351:TYR:HB3	53:H:10:LEU:HD11	2.01	0.42
43:7:72:ARG:HH12	46:A:504:A:P	2.43	0.42
46:A:30:U:N3	48:C:21:SER:N	2.68	0.42
46:A:36:A:C6	46:A:37:U:C4	3.07	0.42
46:A:169:A:H2'	46:A:170:U:O4'	2.20	0.42
46:A:207:U:H2'	46:A:208:A:O4'	2.20	0.42
46:A:534:A:H5"	63:R:142:LYS:HZ1	1.83	0.42
46:A:674:A:H2'	46:A:675:G:H4'	2.01	0.42
46:A:718:G:H2'	46:A:1968:U:C2	2.55	0.42
46:A:823:U:O2	46:A:823:U:C2'	2.68	0.42
46:A:926:A:C6	46:A:927:A:C6	3.08	0.42
46:A:984:C:OP1	46:A:993:G:C5'	2.62	0.42
46:A:1029:A:H2'	46:A:1029:A:N3	2.35	0.42
46:A:1123:U:C4	46:A:1124:U:C5	3.08	0.42
46:A:1161:A:C2	46:A:1162:A:C8	3.08	0.42
46:A:1211:U:O2'	46:A:1212:A:H5'	2.19	0.42
46:A:1507:U:H3'	46:A:1508:A:H5"	2.01	0.42
46:A:1509:U:C2'	46:A:1510:A:H8	2.30	0.42
46:A:1647:G:O4'	47:B:98:PRO:HG2	2.20	0.42
46:A:2026:G:N1	46:A:2071:A:C2	2.88	0.42
46:A:2252:C:H2'	46:A:2253:A:O4'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2438:A:OP1	46:A:2438:A:H2'	2.19	0.42
46:A:2461:A:O2'	50:E:145:PHE:CE2	2.69	0.42
46:A:2631:G:OP1	63:R:81:LYS:CE	2.68	0.42
46:A:2641:C:H2'	46:A:2642:G:C8	2.54	0.42
46:A:2659:A:C5	46:A:2660:A:C5	3.08	0.42
46:A:2886:C:H5"	48:C:216:PRO:CA	2.49	0.42
46:A:2930:G:C6	46:A:2931:G:C4	3.07	0.42
46:A:2951:U:C2	46:A:2952:G:N7	2.88	0.42
46:A:2980:A:C6	46:A:3007:A:C6	3.08	0.42
46:A:3132:A:C6	46:A:3133:U:C4	3.07	0.42
46:A:3150:U:C6	46:A:3152:A:H5'	2.54	0.42
46:A:3250:A:OP1	57:L:144:LYS:NZ	2.38	0.42
63:R:215:ARG:CD	63:R:255:ASN:CG	2.90	0.42
63:R:236:THR:HG22	63:R:238:GLU:HG3	2.00	0.42
63:R:294:THR:O	63:R:297:ASP:N	2.53	0.42
76:f:146:VAL:HG22	76:f:156:VAL:HG11	2.01	0.42
3:AC:63:PRO:HA	3:AC:66:ILE:HD12	2.01	0.42
4:AD:211:SER:O	4:AD:214:GLY:N	2.52	0.42
5:AE:300:PHE:C	5:AE:302:ARG:H	2.26	0.42
6:AF:185:ILE:O	6:AF:186:VAL:C	2.61	0.42
6:AF:314:VAL:HA	6:AF:317:VAL:HG21	2.02	0.42
7:AG:166:VAL:CG1	16:g:195:LYS:O	2.67	0.42
8:AH:59:SER:CB	12:AL:132:A:OP1	2.67	0.42
8:AH:106:PHE:CG	31:v:73:LYS:HG3	2.54	0.42
9:AI:49:LYS:HE3	9:AI:57:TYR:CZ	2.55	0.42
9:AI:408:GLN:C	9:AI:410:ASN:H	2.27	0.42
10:AJ:29:ARG:CZ	12:AL:1311:A:H4'	2.50	0.42
10:AJ:62:LEU:HD23	10:AJ:62:LEU:H	1.85	0.42
12:AL:227:U:O5'	12:AL:227:U:H6	2.03	0.42
12:AL:263:A:C6	12:AL:273:A:N6	2.88	0.42
12:AL:478:U:C4	12:AL:479:A:H1'	2.55	0.42
12:AL:536:U:O5'	12:AL:536:U:H6	2.02	0.42
12:AL:682:A:H8	12:AL:682:A:H5'	1.84	0.42
12:AL:998:A:N3	12:AL:998:A:H2'	2.34	0.42
12:AL:1050:C:H2'	12:AL:1051:A:C8	2.54	0.42
12:AL:1148:A:H4'	12:AL:1149:A:O5'	2.18	0.42
12:AL:1157:A:H2'	12:AL:1158:A:O4'	2.19	0.42
12:AL:1210:A:N1	12:AL:1211:A:C5	2.88	0.42
12:AL:1344:A:N6	12:AL:1360:A:N6	2.68	0.42
12:AL:1384:G:H5"	29:t:42:LYS:HZ2	1.80	0.42
12:AL:1471:U:H6	12:AL:1471:U:O5'	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:i:381:SER:HB2	18:i:388:LYS:HE2	2.01	0.42
19:j:79:LEU:HD23	19:j:79:LEU:HA	1.81	0.42
20:k:267:ASN:C	20:k:271:ILE:HG12	2.45	0.42
21:l:32:ILE:HD13	21:l:71:PHE:HB2	2.01	0.42
21:l:45:MET:HE3	21:l:66:HIS:HB3	2.02	0.42
22:m:229:LYS:O	22:m:230:ARG:C	2.61	0.42
24:o:67:LYS:HE3	24:o:67:LYS:HB3	1.86	0.42
28:s:71:ALA:O	28:s:72:ARG:C	2.63	0.42
28:s:85:ILE:HG22	28:s:86:GLY:H	1.85	0.42
30:u:228:TYR:O	30:u:229:TRP:C	2.59	0.42
30:u:237:ASN:OD1	30:u:239:ALA:HB3	2.20	0.42
33:x:110:GLN:HE21	33:x:110:GLN:HB2	1.52	0.42
34:y:31:THR:HA	34:y:32:PRO:HD2	1.92	0.42
34:y:32:PRO:HD3	34:y:50:LYS:HE3	2.00	0.42
40:4:33:TRP:CH2	46:A:1274:A:C5	3.08	0.42
41:5:198:HIS:NE2	46:A:445:U:C6	2.88	0.42
46:A:52:A:C5	46:A:53:U:C4	3.07	0.42
46:A:163:A:C6	46:A:213:U:C4	3.07	0.42
46:A:210:U:C2	46:A:211:A:C8	3.07	0.42
46:A:238:C:C1’	46:A:2700:A:N6	2.82	0.42
46:A:319:U:C2	46:A:320:U:C5	3.08	0.42
46:A:346:G:C2	46:A:357:C:O2	2.73	0.42
46:A:352:A:H2’	46:A:353:A:H8	1.84	0.42
46:A:441:A:C2	46:A:444:A:C8	3.08	0.42
46:A:472:U:O2’	46:A:473:A:H3’	2.19	0.42
46:A:860:A:H3’	46:A:861:A:H8	1.84	0.42
46:A:979:C:O2’	75:e:180:LYS:HD2	2.20	0.42
46:A:1028:C:H4’	46:A:1029:A:OP1	2.19	0.42
46:A:1116:A:H2’	46:A:1117:G:O4’	2.20	0.42
46:A:1409:C:O2’	46:A:1410:U:OP1	2.37	0.42
46:A:1792:A:H2’	46:A:1793:U:H6	1.85	0.42
46:A:2076:A:C6	46:A:2077:A:C4	3.08	0.42
46:A:2258:C:C2	46:A:2259:U:C5	3.07	0.42
46:A:2308:A:O2’	46:A:2309:G:H5’	2.19	0.42
46:A:2362:U:N3	72:b:151:ASN:OD1	2.53	0.42
46:A:2381:G:C2	46:A:2382:A:N9	2.87	0.42
46:A:2440:G:C6	46:A:2441:U:C4	3.07	0.42
46:A:2452:U:O2	50:E:229:ASN:HA	2.19	0.42
46:A:2685:A:H2’	46:A:2686:U:H6	1.84	0.42
46:A:2722:G:C5	46:A:2723:U:C5	3.08	0.42
46:A:2909:A:O2’	46:A:2910:A:H5’	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:3124:A:H4'	46:A:3124:A:OP2	2.19	0.42
46:A:3241:U:O2	46:A:3241:U:O4'	2.36	0.42
59:N:106:GLY:CA	71:a:51:PRO:HA	2.49	0.42
64:S:132:ILE:N	64:S:132:ILE:CD1	2.83	0.42
69:X:33:LEU:HA	69:X:51:GLU:OE2	2.19	0.42
76:f:18:GLN:OE1	76:f:53:GLY:HA2	2.20	0.42
2:AB:68:GLN:O	2:AB:69:TRP:C	2.63	0.42
3:AC:90:HIS:HB3	17:h:161:GLY:HA3	2.00	0.42
4:AD:209:ASN:CA	16:g:222:ILE:HD13	2.50	0.42
5:AE:45:LYS:HB2	5:AE:105:PHE:CE2	2.54	0.42
5:AE:109:VAL:CG1	5:AE:110:GLU:N	2.83	0.42
5:AE:151:PHE:C	5:AE:153:ILE:H	2.26	0.42
5:AE:182:GLU:C	5:AE:183:HIS:CG	2.98	0.42
5:AE:215:TRP:CG	5:AE:216:LYS:N	2.82	0.42
6:AF:37:TYR:CD2	6:AF:95:GLY:HA3	2.55	0.42
7:AG:10:VAL:HG13	17:h:339:ARG:HA	2.02	0.42
7:AG:127:ILE:HD11	16:g:11:ARG:NH1	2.32	0.42
7:AG:142:ARG:NH2	7:AG:147:GLU:HB3	2.34	0.42
7:AG:176:PHE:O	7:AG:177:TYR:C	2.62	0.42
7:AG:205:ALA:HB3	16:g:92:GLU:HB2	2.01	0.42
7:AG:215:GLU:O	7:AG:218:ASP:HB2	2.20	0.42
8:AH:165:LEU:HD22	8:AH:167:ASN:H	1.84	0.42
9:AI:127:ARG:HE	9:AI:127:ARG:HB3	1.68	0.42
10:AJ:83:LYS:HB3	10:AJ:89:GLY:HA2	2.01	0.42
12:AL:404:U:H2'	12:AL:405:A:H8	1.85	0.42
12:AL:653:A:O2'	12:AL:654:G:H5'	2.19	0.42
12:AL:679:U:H1'	12:AL:885:U:C4	2.55	0.42
12:AL:851:G:C4	12:AL:852:A:C8	3.08	0.42
12:AL:851:G:H2'	12:AL:852:A:H8	1.85	0.42
12:AL:1097:G:H2'	12:AL:1098:U:C6	2.54	0.42
12:AL:1105:G:OP1	18:i:392:LYS:HE3	2.20	0.42
12:AL:1168:U:N3	12:AL:1169:A:N7	2.67	0.42
12:AL:1259:A:C2	34:y:86:THR:CB	3.00	0.42
12:AL:1270:A:H2	12:AL:1336:U:O2	2.03	0.42
12:AL:1329:A:H4'	12:AL:1421:C:OP2	2.20	0.42
12:AL:1409:U:H5'	13:AM:32:C:OP1	2.20	0.42
12:AL:1646:U:C1'	12:AL:1647:A:H4'	2.41	0.42
13:AM:75:C:H4'	13:AM:76:A:OP1	2.19	0.42
15:Z:37:LEU:HD13	15:Z:37:LEU:HA	1.73	0.42
16:g:71:LEU:C	16:g:73:ARG:H	2.27	0.42
18:i:206:GLU:CB	20:k:76:PRO:O	2.66	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:i:302:ILE:O	18:i:303:ASN:C	2.62	0.42
18:i:316:MET:CE	20:k:69:TRP:HZ2	2.32	0.42
19:j:186:VAL:O	19:j:190:LYS:HG3	2.20	0.42
19:j:472:PRO:HA	19:j:475:GLU:HB3	2.01	0.42
20:k:263:TYR:HB3	20:k:264:LYS:H	1.68	0.42
20:k:288:GLU:HB3	23:n:80:ARG:CZ	2.50	0.42
22:m:212:LEU:HD23	22:m:212:LEU:HA	1.87	0.42
26:q:70:LYS:O	26:q:97:ASP:HA	2.19	0.42
28:s:59:ALA:O	28:s:60:SER:C	2.61	0.42
28:s:113:LYS:HB3	28:s:114:LEU:HD13	2.02	0.42
28:s:119:ARG:HB3	28:s:120:ARG:H	1.52	0.42
30:u:65:ASP:OD2	30:u:69:GLY:N	2.45	0.42
30:u:156:ALA:C	30:u:158:GLU:N	2.77	0.42
30:u:238:ASP:OD1	30:u:242:THR:HG23	2.20	0.42
32:w:128:ILE:O	32:w:130:THR:N	2.51	0.42
46:A:238:C:O2'	46:A:239:A:H5'	2.20	0.42
46:A:353:A:H3'	46:A:354:A:H8	1.84	0.42
46:A:530:A:C2	46:A:552:A:H8	2.38	0.42
46:A:613:G:N2	46:A:615:U:O4	2.52	0.42
46:A:900:A:C8	46:A:1220:G:C2	3.07	0.42
46:A:946:A:H3'	46:A:946:A:N3	2.35	0.42
46:A:955:A:C2'	46:A:956:A:C8	3.03	0.42
46:A:974:A:N1	46:A:1046:A:H2'	2.35	0.42
46:A:986:U:H2'	46:A:987:G:H8	1.82	0.42
46:A:1526:A:H2'	46:A:1527:A:O5'	2.19	0.42
46:A:1540:A:C5	46:A:1541:U:C5	3.07	0.42
46:A:1616:A:H1'	46:A:3062:A:N7	2.34	0.42
46:A:1636:C:H2'	46:A:1637:U:H6	1.81	0.42
46:A:1664:A:O2'	46:A:1665:G:H5'	2.20	0.42
46:A:1889:A:H2'	46:A:1890:C:C6	2.55	0.42
46:A:1994:C:H4'	46:A:1995:G:O5'	2.20	0.42
46:A:2032:C:H2'	46:A:2056:A:H5'	2.02	0.42
46:A:2032:C:H42	46:A:2057:U:P	2.43	0.42
46:A:2067:A:OP2	46:A:2068:C:H5'	2.19	0.42
46:A:2208:A:H2'	46:A:2209:U:H6	1.78	0.42
46:A:2413:A:C5	46:A:2414:U:C5	3.08	0.42
46:A:2738:G:C2	46:A:2741:G:N7	2.88	0.42
46:A:2843:G:C6	46:A:2845:G:C6	3.08	0.42
46:A:2959:C:H2'	46:A:2960:U:C6	2.55	0.42
46:A:3028:A:H8	46:A:3028:A:O5'	2.03	0.42
46:A:3107:U:C2	46:A:3108:U:C6	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:R:82:ASP:O	63:R:83:HIS:CB	2.68	0.42
63:R:155:LYS:HD2	72:b:157:PHE:CG	2.55	0.42
63:R:333:ASP:CA	63:R:336:VAL:HG12	2.40	0.42
75:e:85:PHE:O	75:e:89:GLN:HG3	2.20	0.42
3:AC:198:LYS:HA	3:AC:198:LYS:HD2	1.36	0.42
5:AE:227:LEU:C	5:AE:231:LEU:HB2	2.45	0.42
5:AE:255:LEU:HD13	5:AE:300:PHE:HB3	1.99	0.42
5:AE:255:LEU:HD11	5:AE:281:ALA:HB2	2.01	0.42
5:AE:259:PRO:O	5:AE:262:SER:N	2.51	0.42
6:AF:157:ILE:HD13	6:AF:157:ILE:HA	1.89	0.42
8:AH:100:ALA:O	8:AH:103:ARG:N	2.51	0.42
8:AH:106:PHE:CZ	31:v:95:ILE:O	2.73	0.42
9:AI:58:LYS:O	9:AI:59:ASN:C	2.63	0.42
9:AI:148:ILE:HG23	9:AI:159:LEU:HD23	2.01	0.42
9:AI:181:GLU:C	9:AI:183:PHE:H	2.27	0.42
9:AI:288:MET:O	9:AI:290:THR:N	2.52	0.42
9:AI:336:ASN:OD1	9:AI:338:GLU:HB2	2.20	0.42
9:AI:446:VAL:O	9:AI:449:HIS:NE2	2.52	0.42
11:AK:174:ARG:HG3	25:p:38:TYR:HD2	1.83	0.42
12:AL:149:U:C2	12:AL:164:A:C2	3.08	0.42
12:AL:196:A:H3'	12:AL:197:A:C8	2.55	0.42
12:AL:483:A:N1	12:AL:484:U:C4	2.88	0.42
12:AL:488:A:N6	12:AL:489:A:C2	2.88	0.42
12:AL:625:A:N1	12:AL:654:G:O2'	2.36	0.42
12:AL:873:A:C5	12:AL:874:G:C8	3.07	0.42
12:AL:1368:A:C5	12:AL:1403:A:C6	3.08	0.42
15:Z:38:LEU:HD13	15:Z:38:LEU:HA	1.90	0.42
15:Z:67:LEU:HB2	15:Z:70:ARG:HG3	2.01	0.42
18:i:104:MET:SD	18:i:107:MET:HE3	2.56	0.42
19:j:472:PRO:O	19:j:476:ARG:HG2	2.20	0.42
20:k:61:ASP:OD1	25:p:24:VAL:HG22	2.18	0.42
20:k:133:THR:HG23	20:k:135:VAL:H	1.85	0.42
22:m:169:PHE:O	22:m:176:ALA:HB1	2.20	0.42
25:p:148:ILE:O	25:p:149:SER:HB3	2.19	0.42
26:q:180:ILE:CG2	35:z:117:PHE:CD2	3.03	0.42
27:r:56:PRO:HB2	27:r:57:GLN:H	1.59	0.42
27:r:106:SER:HB3	27:r:131:ASP:HB2	2.01	0.42
27:r:129:ALA:O	27:r:130:GLY:C	2.63	0.42
28:s:11:LYS:N	28:s:14:GLU:OE1	2.48	0.42
30:u:87:LEU:CD1	32:w:114:ARG:HH12	2.32	0.42
31:v:20:VAL:HA	31:v:45:PRO:HD3	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:w:143:GLU:HA	32:w:146:GLU:HB3	2.01	0.42
34:y:42:ILE:HD13	34:y:71:HIS:O	2.20	0.42
37:1:361:VAL:HG21	63:R:144:GLU:HG2	2.01	0.42
44:8:108:ALA:HB1	49:D:205:VAL:HG11	2.01	0.42
46:A:25:A:O2'	46:A:26:A:P	2.77	0.42
46:A:88:U:C2	46:A:89:A:C8	3.08	0.42
46:A:431:U:C4	46:A:432:C:C4	3.08	0.42
46:A:461:U:O4'	46:A:1936:C:H5'	2.20	0.42
46:A:724:A:H2'	46:A:725:U:H6	1.84	0.42
46:A:783:U:N3	46:A:2294:A:C8	2.88	0.42
46:A:900:A:C2	46:A:915:G:C4	3.07	0.42
46:A:1283:G:OP2	55:J:79:ARG:NH1	2.52	0.42
46:A:1531:C:N3	47:B:326:TRP:CE2	2.88	0.42
46:A:1649:C:H2'	46:A:1650:A:O4'	2.20	0.42
46:A:1745:U:H2'	46:A:1800:A:N6	2.35	0.42
46:A:1877:A:H2'	46:A:1878:A:C8	2.54	0.42
46:A:2022:U:O2	46:A:2022:U:C2'	2.68	0.42
46:A:2084:G:C2	46:A:2085:A:C4	3.07	0.42
46:A:2209:U:H2'	46:A:2210:A:O4'	2.20	0.42
46:A:2268:G:H2'	46:A:2269:U:O4'	2.20	0.42
46:A:2316:A:H4'	46:A:2317:A:O5'	2.20	0.42
46:A:2335:U:O2'	46:A:2336:G:H5'	2.19	0.42
46:A:2766:U:C3'	46:A:2767:C:H4'	2.50	0.42
46:A:2802:G:C6	46:A:2803:C:C4	3.08	0.42
46:A:2864:G:H5"	47:B:354:SER:C	2.45	0.42
46:A:2948:C:OP2	48:C:173:LYS:HE3	2.20	0.42
46:A:3066:G:H2'	46:A:3067:A:C8	2.54	0.42
46:A:3159:G:H2'	46:A:3160:U:O4'	2.20	0.42
50:E:244:LYS:HB3	50:E:253:GLN:HE22	1.85	0.42
62:Q:14:ARG:HD3	70:Y:101:TRP:CZ2	2.55	0.42
63:R:293:GLU:OE1	63:R:294:THR:HG23	2.20	0.42
75:e:204:LEU:HD13	75:e:205:SER:N	2.34	0.42
3:AC:42:GLN:HG3	3:AC:46:CYS:SG	2.59	0.41
3:AC:176:TYR:CE2	3:AC:178:PRO:HB2	2.55	0.41
3:AC:177:PHE:CD2	3:AC:178:PRO:HD3	2.55	0.41
3:AC:200:MET:O	3:AC:201:LYS:C	2.63	0.41
4:AD:174:ARG:HA	4:AD:266:SER:O	2.19	0.41
4:AD:177:LEU:HD23	4:AD:192:GLU:H	1.85	0.41
5:AE:190:MET:HG2	5:AE:191:CYS:N	2.32	0.41
5:AE:194:HIS:NE2	5:AE:315:TYR:CE1	2.87	0.41
5:AE:267:LEU:HA	5:AE:270:LEU:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:339:LEU:HD23	31:v:52:LYS:HE2	2.01	0.41
7:AG:154:MET:O	7:AG:158:LYS:N	2.37	0.41
8:AH:42:LYS:HB3	8:AH:49:TYR:O	2.20	0.41
8:AH:86:LYS:O	8:AH:87:SER:C	2.62	0.41
11:AK:164:LEU:CB	20:k:32:SER:HB2	2.47	0.41
12:AL:324:G:H2'	12:AL:325:A:H8	1.84	0.41
12:AL:743:U:O4	12:AL:744:A:N6	2.53	0.41
12:AL:897:U:C2	12:AL:898:U:C6	3.08	0.41
12:AL:1285:A:N3	12:AL:1438:C:O2'	2.38	0.41
12:AL:1300:U:N3	12:AL:1301:A:N7	2.68	0.41
12:AL:1470:C:H2'	12:AL:1471:U:C6	2.55	0.41
18:i:87:LEU:HD23	18:i:87:LEU:HA	1.74	0.41
18:i:107:MET:HE3	18:i:107:MET:HB3	1.72	0.41
22:m:205:SER:HB3	22:m:211:ARG:CG	2.49	0.41
26:q:82:PHE:CD1	26:q:82:PHE:N	2.87	0.41
28:s:39:LEU:HB3	28:s:41:PHE:CZ	2.55	0.41
28:s:98:PRO:HB3	28:s:102:GLN:N	2.34	0.41
30:u:281:GLN:C	30:u:283:ARG:N	2.76	0.41
32:w:79:ARG:HE	32:w:81:LYS:NZ	2.16	0.41
33:x:88:ASN:HB3	33:x:124:ARG:NH2	2.35	0.41
41:5:120:LEU:CD2	41:5:205:ILE:HG23	2.49	0.41
41:5:356:LYS:NZ	46:A:33:A:OP2	2.50	0.41
46:A:55:A:C4	46:A:56:U:C5	3.07	0.41
46:A:176:U:O2	46:A:176:U:H2'	2.20	0.41
46:A:787:G:H2'	46:A:788:C:C6	2.55	0.41
46:A:846:A:C4	46:A:847:U:C5	3.08	0.41
46:A:947:G:C6	46:A:1106:C:C2	3.08	0.41
46:A:973:U:C4	46:A:3087:A:N7	2.88	0.41
46:A:1073:A:H2'	46:A:1074:U:H6	1.83	0.41
46:A:1424:U:H2'	46:A:1425:U:H6	1.82	0.41
46:A:1427:A:H2	46:A:1526:A:C2	2.38	0.41
46:A:1434:A:C8	46:A:1434:A:O5'	2.72	0.41
46:A:1761:A:N6	46:A:1790:A:C4	2.89	0.41
46:A:2002:U:H2'	46:A:2003:G:N7	2.35	0.41
46:A:2322:U:H5"	46:A:2323:A:C4	2.55	0.41
46:A:2384:A:C2'	46:A:2385:U:C6	2.91	0.41
46:A:2390:U:H2'	46:A:2391:U:H6	1.84	0.41
46:A:2843:G:H8	46:A:2845:G:H3'	1.85	0.41
46:A:2910:A:H2'	46:A:2911:U:O4'	2.20	0.41
46:A:2922:G:C2	46:A:2931:G:C5	3.08	0.41
46:A:2945:A:H2'	46:A:2946:A:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:3068:U:H4'	46:A:3069:A:O5'	2.17	0.41
57:L:179:GLU:HG3	57:L:214:LEU:HD12	2.01	0.41
63:R:144:GLU:C	63:R:146:SER:N	2.76	0.41
69:X:13:LEU:HD13	69:X:13:LEU:HA	1.90	0.41
75:e:54:ILE:CD1	75:e:105:TYR:CA	2.87	0.41
75:e:133:LEU:H	75:e:133:LEU:HG	1.56	0.41
2:AB:82:GLN:HA	2:AB:85:LYS:HG3	2.02	0.41
2:AB:116:LYS:O	2:AB:117:ARG:C	2.62	0.41
3:AC:190:SER:CB	4:AD:78:LYS:HZ1	2.33	0.41
5:AE:74:LEU:HA	5:AE:79:ILE:HG13	2.02	0.41
5:AE:76:THR:OG1	5:AE:77:LYS:HD2	2.20	0.41
5:AE:255:LEU:HD12	5:AE:296:GLU:O	2.20	0.41
5:AE:274:TYR:C	5:AE:277:ILE:H	2.28	0.41
7:AG:7:ALA:CB	17:h:353:SER:O	2.68	0.41
7:AG:49:LYS:NZ	23:n:58:LYS:HZ2	2.15	0.41
7:AG:70:ASN:C	7:AG:72:LYS:N	2.73	0.41
7:AG:71:ASN:C	7:AG:73:GLY:H	2.27	0.41
8:AH:69:ILE:HG21	8:AH:74:LEU:HD22	2.01	0.41
8:AH:74:LEU:HA	8:AH:77:LYS:HD2	2.01	0.41
9:AI:59:ASN:O	9:AI:60:TRP:C	2.62	0.41
9:AI:148:ILE:CG2	9:AI:391:VAL:CG2	2.98	0.41
9:AI:151:GLU:N	9:AI:154:VAL:CG1	2.79	0.41
9:AI:219:ALA:C	9:AI:221:LEU:N	2.78	0.41
9:AI:320:MET:HE3	9:AI:320:MET:HB3	1.82	0.41
9:AI:336:ASN:CG	9:AI:338:GLU:HB2	2.45	0.41
9:AI:350:ARG:HG3	12:AL:1278:G:H4'	2.02	0.41
10:AJ:57:ARG:HD2	12:AL:1061:U:OP1	2.20	0.41
10:AJ:59:LEU:HD22	10:AJ:63:TYR:HD2	1.83	0.41
10:AJ:67:GLU:OE2	18:i:126:LYS:HG2	2.20	0.41
12:AL:14:A:OP1	20:k:238:PHE:CZ	2.73	0.41
12:AL:79:A:N6	12:AL:94:A:H61	2.18	0.41
12:AL:296:C:H42	12:AL:315:G:H1	1.68	0.41
12:AL:348:A:C8	12:AL:349:U:N3	2.84	0.41
12:AL:616:C:O2'	12:AL:617:U:H5'	2.21	0.41
12:AL:762:U:H3'	12:AL:763:A:N7	2.35	0.41
12:AL:902:A:C2	12:AL:916:A:C2	3.08	0.41
12:AL:1181:A:H1'	12:AL:1320:A:N6	2.35	0.41
17:h:294:GLU:C	24:o:36:ARG:O	2.59	0.41
20:k:52:VAL:O	20:k:54:PHE:N	2.53	0.41
20:k:56:PRO:HG3	20:k:62:PHE:HE1	1.85	0.41
22:m:243:TYR:O	22:m:244:ILE:C	2.63	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:q:109:ASN:O	26:q:113:LEU:HG	2.20	0.41
26:q:110:ASP:HA	26:q:113:LEU:HD12	2.02	0.41
28:s:46:ARG:HG2	28:s:49:GLN:HE21	1.84	0.41
31:v:8:ILE:HG12	31:v:25:VAL:HG13	2.01	0.41
32:w:56:ASP:O	32:w:57:LEU:HD12	2.20	0.41
35:z:101:ASN:N	35:z:101:ASN:HD22	2.19	0.41
37:1:346:LYS:HD2	46:A:2360:U:C4	2.55	0.41
39:3:68:GLY:HA2	46:A:1362:C:O2	2.20	0.41
41:5:172:ILE:HD13	45:9:110:LEU:HD12	2.02	0.41
46:A:204:A:OP2	46:A:204:A:H8	2.02	0.41
46:A:275:A:H2'	46:A:276:U:H6	1.79	0.41
46:A:305:A:C6	46:A:306:G:C6	3.08	0.41
46:A:329:A:OP2	46:A:329:A:C8	2.73	0.41
46:A:350:A:H2'	46:A:351:C:H6	1.85	0.41
46:A:378:A:C2	46:A:380:G:C5	3.08	0.41
46:A:532:A:C4	46:A:534:A:C8	3.09	0.41
46:A:676:A:H4'	46:A:1686:U:C4'	2.49	0.41
46:A:756:A:C2	46:A:767:A:C5	3.08	0.41
46:A:965:U:C2	46:A:966:A:C8	3.08	0.41
46:A:1048:A:H5'	75:e:110:HIS:ND1	2.34	0.41
46:A:1351:A:OP1	61:P:99:LYS:NZ	2.52	0.41
46:A:1641:A:H2'	46:A:1642:A:H8	1.85	0.41
46:A:1841:C:C4	46:A:1865:C:C1'	3.03	0.41
46:A:2360:U:H5"	63:R:162:LEU:CD1	2.50	0.41
46:A:2386:A:H2'	46:A:2387:U:C6	2.55	0.41
46:A:2576:A:C6	46:A:2577:A:C5	3.08	0.41
46:A:2893:A:H2'	46:A:2894:A:H5"	2.02	0.41
46:A:2897:A:C5	46:A:3262:A:C4	3.08	0.41
46:A:3075:U:H2'	46:A:3076:A:H5'	2.02	0.41
47:B:229:ILE:HG13	47:B:230:LEU:HG	2.01	0.41
56:K:87:ALA:HA	56:K:115:THR:HG21	2.01	0.41
62:Q:14:ARG:HD2	70:Y:101:TRP:CE3	2.55	0.41
63:R:139:ALA:HA	63:R:142:LYS:NZ	2.35	0.41
63:R:295:LYS:NZ	63:R:371:LEU:H	2.18	0.41
76:f:85:LEU:HD11	76:f:115:LEU:HB2	2.02	0.41
1:AA:92:LYS:CE	12:AL:956:U:H5"	2.48	0.41
2:AB:48:ILE:HG13	2:AB:52:CYS:HB2	2.02	0.41
3:AC:90:HIS:O	3:AC:94:GLU:HG3	2.19	0.41
3:AC:217:TRP:CB	17:h:149:ARG:HH22	2.33	0.41
5:AE:105:PHE:O	5:AE:106:ILE:C	2.63	0.41
5:AE:227:LEU:C	5:AE:231:LEU:H	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:76:TYR:CZ	6:AF:88:ILE:HA	2.55	0.41
6:AF:121:GLU:H	6:AF:121:GLU:CD	2.28	0.41
7:AG:14:THR:O	7:AG:15:SER:C	2.62	0.41
11:AK:227:TYR:CZ	11:AK:229:HIS:HA	2.55	0.41
11:AK:282:ALA:O	11:AK:286:ARG:HG3	2.20	0.41
12:AL:28:G:H2'	12:AL:29:G:H8	1.85	0.41
12:AL:266:A:H2'	12:AL:267:A:C4	2.55	0.41
12:AL:401:A:N3	12:AL:401:A:C3'	2.83	0.41
12:AL:410:G:N3	12:AL:410:G:H2'	2.34	0.41
12:AL:413:G:OP1	19:j:22:LYS:NZ	2.48	0.41
12:AL:523:U:O2	12:AL:526:U:H5	2.03	0.41
12:AL:717:G:C5	12:AL:818:A:C5	3.09	0.41
12:AL:726:A:H2'	12:AL:727:A:O4'	2.20	0.41
12:AL:746:A:H2'	12:AL:747:A:H5'	2.03	0.41
12:AL:791:G:H2'	12:AL:792:U:C6	2.55	0.41
12:AL:843:G:H2'	12:AL:844:C:H6	1.85	0.41
12:AL:893:A:O2'	17:h:204:SER:CB	2.68	0.41
12:AL:1266:C:C4	12:AL:1267:U:C4	3.08	0.41
12:AL:1370:A:O2'	12:AL:1371:U:H5'	2.20	0.41
13:AM:4:U:H3	13:AM:69:A:H61	1.68	0.41
16:g:286:GLU:O	16:g:289:GLY:N	2.52	0.41
17:h:204:SER:O	17:h:206:THR:N	2.53	0.41
17:h:300:ASN:O	17:h:301:PRO:C	2.62	0.41
18:i:311:ILE:HA	18:i:315:PRO:CG	2.46	0.41
18:i:335:LEU:HD23	18:i:335:LEU:HA	1.83	0.41
19:j:168:PHE:HE2	19:j:392:GLU:HA	1.85	0.41
20:k:21:LEU:HD11	20:k:37:GLN:NE2	2.35	0.41
20:k:302:LYS:HE2	20:k:302:LYS:HB3	1.90	0.41
24:o:159:LYS:HB3	24:o:254:ARG:NH2	2.35	0.41
28:s:114:LEU:O	28:s:115:ASN:C	2.62	0.41
33:x:90:LEU:HB3	33:x:124:ARG:HH21	1.85	0.41
34:y:83:PHE:CG	34:y:84:SER:N	2.88	0.41
35:z:92:SER:C	35:z:94:GLU:N	2.78	0.41
43:7:66:TYR:CE1	43:7:103:LEU:HD13	2.55	0.41
43:7:121:VAL:HB	43:7:128:ILE:HG22	2.01	0.41
46:A:12:A:C2'	46:A:13:A:C8	3.02	0.41
46:A:164:U:O2'	62:Q:221:LYS:HE3	2.20	0.41
46:A:207:U:O2'	46:A:208:A:H5'	2.20	0.41
46:A:344:A:H2'	46:A:345:G:O4'	2.20	0.41
46:A:415:A:O2'	46:A:416:U:H5'	2.20	0.41
46:A:470:U:C2	46:A:1930:A:C5	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:662:G:O2'	46:A:1368:U:H4'	2.20	0.41
46:A:720:A:N7	46:A:2273:G:O2'	2.50	0.41
46:A:804:G:C2	46:A:805:G:C8	3.09	0.41
46:A:817:G:H2'	46:A:818:U:C6	2.54	0.41
46:A:970:U:OP1	46:A:971:A:C6	2.74	0.41
46:A:1060:U:H2'	46:A:1061:U:H6	1.85	0.41
46:A:1063:A:C6	46:A:1086:U:N3	2.89	0.41
46:A:1160:A:C4	46:A:1161:A:C8	3.07	0.41
46:A:1241:A:N6	46:A:1271:A:OP2	2.51	0.41
46:A:1277:U:O2'	49:D:75:TRP:NE1	2.47	0.41
46:A:1313:G:H2'	46:A:1314:U:C5	2.55	0.41
46:A:1520:C:N3	46:A:1521:U:C5	2.88	0.41
46:A:1522:A:O2'	46:A:1523:A:OP1	2.31	0.41
46:A:1674:U:H2'	46:A:1675:G:H8	1.85	0.41
46:A:2078:U:H3'	46:A:2079:A:C8	2.55	0.41
46:A:2317:A:C2	46:A:2318:U:H1'	2.55	0.41
46:A:2337:A:C6	46:A:2338:A:C5	3.08	0.41
46:A:2434:A:H2'	46:A:2435:A:H8	1.85	0.41
46:A:2924:A:H2'	46:A:2925:C:O4'	2.19	0.41
46:A:2957:A:H4'	57:L:5:ILE:CD1	2.50	0.41
46:A:3008:U:C2	46:A:3009:A:C8	3.08	0.41
46:A:3043:U:O2'	57:L:75:SER:HA	2.19	0.41
46:A:3273:A:OP1	71:a:126:ARG:NH2	2.53	0.41
47:B:99:VAL:HG23	47:B:100:SER:H	1.85	0.41
47:B:160:TRP:O	47:B:162:GLY:N	2.54	0.41
47:B:243:ILE:C	47:B:245:MET:H	2.29	0.41
47:B:276:LEU:HD23	47:B:276:LEU:HA	1.91	0.41
47:B:359:MET:HE2	47:B:363:GLY:HA2	2.01	0.41
59:N:104:LEU:HD21	59:N:113:LEU:HD13	2.01	0.41
60:O:168:TYR:CE1	61:P:207:LYS:HA	2.55	0.41
61:P:227:ILE:HG22	61:P:232:LYS:HB2	2.02	0.41
69:X:31:ALA:H	69:X:55:ARG:NH2	2.18	0.41
75:e:50:LYS:HE2	75:e:104:VAL:HG11	2.03	0.41
3:AC:23:ASN:O	3:AC:30:SER:C	2.64	0.41
4:AD:155:LEU:CD2	16:g:210:LEU:HD12	2.51	0.41
5:AE:73:ILE:C	5:AE:76:THR:H	2.28	0.41
5:AE:295:LEU:HD22	5:AE:299:GLU:HB2	2.02	0.41
6:AF:42:LEU:CB	6:AF:45:GLN:HE22	2.33	0.41
6:AF:305:SER:O	31:v:62:ILE:HG22	2.21	0.41
9:AI:144:LYS:HA	9:AI:146:PHE:CZ	2.55	0.41
9:AI:267:ASN:C	9:AI:269:GLY:N	2.77	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:286:PRO:CB	9:AI:338:GLU:HB3	2.46	0.41
11:AK:115:ALA:CB	18:i:172:TYR:CE1	2.93	0.41
11:AK:152:ARG:HH22	20:k:69:TRP:CB	2.31	0.41
12:AL:74:C:O2'	12:AL:156:A:N3	2.51	0.41
12:AL:518:U:H1'	12:AL:533:A:H61	1.84	0.41
12:AL:521:A:H5'	31:v:46:VAL:CA	2.46	0.41
12:AL:600:A:O2'	12:AL:601:U:P	2.78	0.41
12:AL:677:G:H2'	12:AL:677:G:N3	2.35	0.41
12:AL:847:A:C2'	12:AL:848:A:H5'	2.51	0.41
12:AL:1011:A:N1	12:AL:1012:G:C6	2.88	0.41
12:AL:1021:U:H2'	12:AL:1022:U:C6	2.55	0.41
12:AL:1080:A:H8	12:AL:1080:A:OP2	2.04	0.41
12:AL:1208:A:H2'	12:AL:1209:U:O4'	2.20	0.41
12:AL:1403:A:H3'	12:AL:1404:A:H5'	2.01	0.41
12:AL:1430:G:H2'	12:AL:1431:U:H6	1.85	0.41
12:AL:1499:U:O5'	12:AL:1499:U:H6	2.03	0.41
12:AL:1560:U:P	30:u:36:LYS:NZ	2.94	0.41
15:Z:31:LEU:CD1	22:m:246:LEU:HB2	2.50	0.41
15:Z:65:SER:O	15:Z:66:ALA:C	2.63	0.41
16:g:7:LEU:HA	16:g:10:SER:HB3	2.02	0.41
17:h:156:ARG:HB3	17:h:157:THR:H	1.74	0.41
17:h:225:THR:HG23	17:h:360:PRO:O	2.20	0.41
17:h:293:GLN:O	24:o:38:VAL:O	2.38	0.41
18:i:311:ILE:CD1	20:k:58:TYR:CE2	3.00	0.41
22:m:140:LEU:CD1	22:m:210:VAL:HB	2.51	0.41
25:p:144:GLN:HG2	25:p:145:ARG:N	2.35	0.41
26:q:198:ILE:HD13	35:z:117:PHE:CD1	2.53	0.41
27:r:115:CYS:SG	27:r:118:LEU:HB2	2.60	0.41
27:r:149:LYS:O	27:r:151:SER:N	2.53	0.41
31:v:77:GLY:O	31:v:78:VAL:C	2.63	0.41
46:A:332:A:H2'	46:A:333:U:C6	2.55	0.41
46:A:374:U:C2	46:A:375:A:C8	3.08	0.41
46:A:380:G:O2'	46:A:381:U:H5'	2.21	0.41
46:A:436:A:H2'	46:A:437:A:C8	2.56	0.41
46:A:547:A:N7	46:A:548:A:C5	2.88	0.41
46:A:756:A:N1	46:A:767:A:C5	2.89	0.41
46:A:770:A:C5	46:A:771:U:C5	3.07	0.41
46:A:1251:A:N1	46:A:1262:A:C6	2.89	0.41
46:A:1253:U:C2	46:A:1254:U:C5	3.08	0.41
46:A:1261:U:H2'	46:A:1262:A:H8	1.83	0.41
46:A:1484:U:C2	46:A:1485:A:N7	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1579:A:C2	46:A:1580:G:H1'	2.54	0.41
46:A:1669:A:C6	46:A:1670:A:C5	3.09	0.41
46:A:1701:A:H1'	46:A:1801:A:N3	2.35	0.41
46:A:1826:U:H2'	46:A:1828:A:OP2	2.20	0.41
46:A:1971:A:C2	46:A:1972:G:C5	3.08	0.41
46:A:1977:A:H2'	46:A:1978:C:H6	1.86	0.41
46:A:2097:U:O2	46:A:2247:A:H2	2.04	0.41
46:A:2328:A:C6	46:A:2329:A:C5	3.09	0.41
46:A:2376:A:H8	46:A:2376:A:O5'	2.03	0.41
46:A:2442:A:C4	46:A:2443:C:C5	3.07	0.41
46:A:2673:A:N7	55:J:125:VAL:HG21	2.34	0.41
46:A:2716:A:OP2	46:A:2767:C:N4	2.54	0.41
46:A:2942:A:C6	46:A:2943:U:C4	3.08	0.41
46:A:2964:G:H2'	46:A:2965:A:C8	2.56	0.41
46:A:3175:A:C2	46:A:3176:U:C4	3.07	0.41
46:A:3270:A:C2	46:A:3271:A:N7	2.88	0.41
48:C:66:LYS:HB3	58:M:41:MET:HG2	2.02	0.41
50:E:30:HIS:HA	63:R:122:PHE:HE1	1.84	0.41
63:R:253:LEU:HD23	63:R:253:LEU:C	2.46	0.41
63:R:295:LYS:HZ1	63:R:371:LEU:H	1.68	0.41
63:R:312:LEU:HA	63:R:312:LEU:HD12	1.76	0.41
69:X:33:LEU:HD13	69:X:51:GLU:HG3	2.02	0.41
75:e:62:GLU:HB3	75:e:63:ASN:H	1.58	0.41
75:e:130:LEU:HD23	75:e:130:LEU:HA	1.79	0.41
1:AA:87:LYS:HD2	12:AL:1612:C:OP1	2.19	0.41
3:AC:185:LEU:CD1	7:AG:195:GLU:C	2.80	0.41
4:AD:34:ILE:H	4:AD:34:ILE:HG13	1.71	0.41
4:AD:111:LEU:C	4:AD:115:ALA:H	2.28	0.41
4:AD:117:LEU:H	4:AD:117:LEU:CD2	2.33	0.41
5:AE:69:LYS:HE2	5:AE:72:GLN:HG2	2.01	0.41
5:AE:123:TRP:O	5:AE:124:THR:C	2.62	0.41
5:AE:137:ILE:HG21	5:AE:170:PHE:CZ	2.55	0.41
5:AE:139:PRO:HB2	5:AE:183:HIS:ND1	2.35	0.41
5:AE:150:PHE:HE2	5:AE:191:CYS:O	2.04	0.41
5:AE:187:THR:HA	5:AE:190:MET:HE2	2.02	0.41
7:AG:28:ALA:C	7:AG:30:TYR:N	2.78	0.41
7:AG:152:ARG:HG2	7:AG:172:ALA:CB	2.51	0.41
7:AG:188:GLN:HG2	16:g:91:GLN:NE2	2.36	0.41
9:AI:100:GLN:HA	9:AI:168:VAL:HG11	2.03	0.41
9:AI:299:THR:O	9:AI:301:ALA:N	2.54	0.41
9:AI:316:LEU:HD21	9:AI:325:MET:HG3	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AI:420:LYS:NZ	9:AI:428:GLU:CD	2.79	0.41
11:AK:57:TRP:HB3	11:AK:65:ILE:CG2	2.50	0.41
11:AK:164:LEU:HA	20:k:35:LEU:HD12	2.02	0.41
12:AL:487:A:C2	12:AL:488:A:C5	3.08	0.41
12:AL:636:C:H5"	27:r:145:TYR:CZ	2.46	0.41
12:AL:930:A:OP2	20:k:223:ARG:NH2	2.54	0.41
12:AL:1097:G:C4	12:AL:1098:U:C5	3.08	0.41
12:AL:1128:A:C4	12:AL:1129:G:C8	3.07	0.41
12:AL:1202:U:H2'	12:AL:1204:U:C6	2.55	0.41
12:AL:1429:A:C4	12:AL:1430:G:C8	3.07	0.41
13:AM:35:A:OP2	24:o:278:ARG:NH1	2.53	0.41
16:g:246:ALA:CB	33:x:55:TYR:CE2	3.03	0.41
17:h:129:TYR:OH	24:o:120:LEU:N	2.54	0.41
17:h:295:ILE:HG13	17:h:299:ASP:C	2.46	0.41
18:i:135:ILE:HD12	18:i:157:ASN:HB2	2.01	0.41
18:i:278:LEU:HD13	18:i:278:LEU:HA	1.87	0.41
19:j:22:LYS:HE2	19:j:23:TYR:HE1	1.83	0.41
20:k:302:LYS:C	20:k:304:TYR:H	2.29	0.41
21:l:45:MET:HB3	21:l:48:ARG:NH1	2.25	0.41
27:r:62:VAL:HG13	27:r:81:CYS:HB2	2.03	0.41
30:u:211:GLN:O	30:u:212:ARG:C	2.63	0.41
32:w:30:ASN:CG	32:w:32:LYS:H	2.28	0.41
34:y:50:LYS:HB3	34:y:63:GLU:HG2	2.01	0.41
38:2:47:SER:CB	46:A:2425:A:C5'	2.99	0.41
40:4:27:THR:HB	40:4:73:ARG:HG3	2.03	0.41
46:A:279:U:H3	46:A:298:A:H61	1.68	0.41
46:A:372:A:C4	46:A:373:U:C5	3.08	0.41
46:A:615:U:O2'	46:A:616:A:P	2.78	0.41
46:A:735:A:H3'	46:A:736:A:H5"	2.02	0.41
46:A:748:U:C2	46:A:749:A:C8	3.08	0.41
46:A:947:G:C6	46:A:1106:C:N3	2.89	0.41
46:A:1005:A:C5	46:A:1022:A:H4'	2.55	0.41
46:A:1109:A:O2'	53:H:66:ARG:NH2	2.54	0.41
46:A:1178:A:C6	46:A:1179:U:C4	3.08	0.41
46:A:1205:U:H2'	46:A:1208:U:H4'	2.00	0.41
46:A:1293:A:H2'	46:A:1294:C:C6	2.56	0.41
46:A:1631:G:C6	46:A:1671:A:C4	3.08	0.41
46:A:1677:A:H4'	46:A:1838:A:OP1	2.19	0.41
46:A:2069:U:C4	46:A:2070:U:C4	3.08	0.41
46:A:2188:A:H5'	64:S:169:PRO:CB	2.51	0.41
46:A:2273:G:H2'	46:A:2274:A:H8	1.79	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:2321:A:N3	46:A:2322:U:C5	2.83	0.41
46:A:2328:A:C5	46:A:2329:A:C5	3.09	0.41
46:A:2732:G:C6	46:A:2733:A:C5	3.08	0.41
46:A:2885:G:O2'	48:C:214:VAL:N	2.53	0.41
46:A:3050:G:C6	46:A:3051:U:C4	3.09	0.41
46:A:3163:U:H2'	46:A:3164:A:H8	1.86	0.41
47:B:167:VAL:HG12	47:B:204:ASP:O	2.21	0.41
47:B:229:ILE:H	47:B:229:ILE:HG12	1.65	0.41
50:E:251:ALA:HB1	67:V:63:TYR:CG	2.56	0.41
63:R:79:ILE:O	63:R:79:ILE:HG23	2.20	0.41
63:R:186:LEU:HG	63:R:187:ASP:N	2.36	0.41
63:R:233:GLU:O	63:R:235:TRP:CD1	2.74	0.41
74:d:92:LEU:HD21	74:d:137:LEU:HA	2.03	0.41
4:AD:175:ARG:HG2	4:AD:177:LEU:H	1.86	0.41
4:AD:244:ALA:HB1	4:AD:248:LYS:HE2	2.03	0.41
4:AD:248:LYS:HD3	4:AD:248:LYS:HA	1.81	0.41
4:AD:260:PHE:C	16:g:223:GLN:HE21	2.29	0.41
4:AD:268:ILE:HG21	4:AD:310:PRO:HG3	2.01	0.41
5:AE:50:GLU:O	5:AE:51:PHE:C	2.60	0.41
6:AF:96:GLN:H	6:AF:96:GLN:HG3	1.68	0.41
7:AG:37:PRO:HA	7:AG:38:PRO:HD3	1.90	0.41
9:AI:189:ASP:HA	28:s:42:TYR:CG	2.55	0.41
9:AI:294:PHE:O	9:AI:295:SER:C	2.61	0.41
9:AI:401:GLU:O	9:AI:402:LEU:C	2.63	0.41
11:AK:267:GLU:CD	11:AK:267:GLU:H	2.28	0.41
12:AL:73:A:N6	12:AL:100:A:H2	2.17	0.41
12:AL:314:C:H2'	12:AL:315:G:O4'	2.21	0.41
12:AL:515:A:C6	12:AL:537:A:C2	3.08	0.41
12:AL:527:G:O2'	12:AL:529:U:O4	2.32	0.41
12:AL:891:C:H4'	23:n:12:HIS:ND1	2.36	0.41
12:AL:1016:G:C6	12:AL:1263:G:C6	3.08	0.41
12:AL:1106:U:O2	25:p:92:PRO:HD3	2.20	0.41
12:AL:1118:C:H2'	12:AL:1119:G:C8	2.55	0.41
13:AM:30:C:H42	13:AM:40:G:H1	1.69	0.41
17:h:295:ILE:HG23	17:h:296:ASP:O	2.21	0.41
18:i:254:HIS:HA	18:i:355:LYS:HD2	2.01	0.41
18:i:302:ILE:CD1	25:p:25:GLU:HA	2.51	0.41
19:j:49:LYS:C	19:j:51:GLU:N	2.79	0.41
19:j:66:GLN:NE2	19:j:484:ASN:HB3	2.36	0.41
20:k:59:LEU:CG	25:p:20:TYR:CZ	2.89	0.41
20:k:126:ALA:O	20:k:127:ALA:C	2.62	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:k:168:ALA:HB2	20:k:190:MET:CE	2.51	0.41
20:k:220:ILE:HD12	20:k:278:ALA:HB1	2.02	0.41
22:m:88:ILE:O	22:m:89:LYS:CB	2.61	0.41
22:m:138:LEU:O	22:m:141:VAL:HB	2.20	0.41
22:m:185:LYS:HD3	22:m:185:LYS:C	2.45	0.41
24:o:63:ARG:NH1	24:o:63:ARG:HG2	2.34	0.41
28:s:6:LEU:HD11	67:V:96:GLY:N	2.36	0.41
30:u:66:PRO:HB2	30:u:245:PHE:CD1	2.56	0.41
30:u:76:ILE:O	30:u:77:THR:C	2.63	0.41
31:v:75:TRP:HA	31:v:75:TRP:CE3	2.55	0.41
31:v:87:THR:HG23	31:v:100:TRP:CD1	2.56	0.41
32:w:170:SER:HA	32:w:173:GLU:CG	2.50	0.41
33:x:88:ASN:OD1	33:x:88:ASN:N	2.47	0.41
37:1:188:VAL:HG12	46:A:2358:A:N3	2.35	0.41
46:A:23:U:C2'	46:A:24:G:C8	3.01	0.41
46:A:149:A:C4	46:A:1371:A:C2	3.08	0.41
46:A:170:U:H3	46:A:208:A:N6	2.17	0.41
46:A:315:A:C8	46:A:317:U:N3	2.89	0.41
46:A:380:G:H2'	46:A:381:U:C6	2.56	0.41
46:A:511:G:C4	46:A:512:U:C5	3.09	0.41
46:A:661:G:OP1	70:Y:72:LYS:HG3	2.21	0.41
46:A:691:A:N1	46:A:693:A:C8	2.88	0.41
46:A:880:G:C4	46:A:890:A:C2	3.08	0.41
46:A:931:U:C2	46:A:932:C:C5	3.09	0.41
46:A:1072:U:C2	46:A:1073:A:N7	2.88	0.41
46:A:1084:U:H2'	46:A:1085:G:H8	1.84	0.41
46:A:1499:A:H2'	46:A:1500:U:H6	1.81	0.41
46:A:1800:A:H3'	46:A:1800:A:N3	2.36	0.41
46:A:1855:U:H5	46:A:2824:G:N2	2.18	0.41
46:A:2071:A:C2	46:A:2072:U:C5	3.09	0.41
46:A:2258:C:C2	46:A:2259:U:C6	3.09	0.41
46:A:3045:U:O2'	46:A:3046:C:H5'	2.20	0.41
46:A:3263:U:H5"	71:a:181:ALA:HB2	2.01	0.41
46:A:3292:A:H2'	46:A:3292:A:N3	2.35	0.41
63:R:48:GLY:H	63:R:50:LYS:HZ1	1.69	0.41
63:R:117:LEU:N	63:R:118:PRO:CD	2.83	0.41
63:R:236:THR:O	63:R:238:GLU:N	2.53	0.41
63:R:242:GLU:C	63:R:245:SER:H	2.27	0.41
63:R:308:ALA:O	63:R:309:CYS:C	2.61	0.41
75:e:66:MET:HB2	75:e:146:ASN:HB3	2.03	0.41
3:AC:185:LEU:HG	7:AG:197:PHE:CA	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AC:197:LEU:HD12	7:AG:200:LEU:HD21	2.01	0.41
4:AD:19:LEU:HB2	4:AD:21:HIS:ND1	2.36	0.41
4:AD:301:GLU:HG3	4:AD:304:ILE:HG13	2.03	0.41
5:AE:215:TRP:CZ2	5:AE:248:LEU:HB2	2.55	0.41
6:AF:45:GLN:H	6:AF:45:GLN:HG2	1.59	0.41
6:AF:52:THR:HB	6:AF:55:LYS:CD	2.51	0.41
6:AF:136:PRO:HB2	6:AF:137:PHE:H	1.71	0.41
7:AG:64:THR:C	7:AG:66:GLN:H	2.29	0.41
7:AG:74:LEU:CD2	8:AH:183:ASN:CB	2.99	0.41
7:AG:184:GLU:HG2	16:g:209:SER:CA	2.47	0.41
8:AH:21:ILE:H	8:AH:21:ILE:HD12	1.86	0.41
9:AI:136:LYS:O	9:AI:140:SER:OG	2.37	0.41
9:AI:431:PHE:C	9:AI:433:SER:N	2.78	0.41
10:AJ:56:PHE:H	18:i:118:LEU:CD2	2.32	0.41
11:AK:132:PHE:H	18:i:247:ILE:C	2.28	0.41
11:AK:212:GLU:N	11:AK:215:SER:OG	2.48	0.41
12:AL:79:A:C6	12:AL:80:U:C4	3.09	0.41
12:AL:109:A:C5	12:AL:333:A:C6	3.09	0.41
12:AL:148:A:C2	12:AL:225:U:O2	2.74	0.41
12:AL:478:U:C2	12:AL:479:A:H1'	2.55	0.41
12:AL:488:A:HO2'	12:AL:489:A:P	2.43	0.41
12:AL:558:A:N6	12:AL:560:A:C2	2.89	0.41
12:AL:843:G:H2'	12:AL:844:C:C6	2.56	0.41
12:AL:1047:U:H4'	12:AL:1048:A:O5'	2.20	0.41
12:AL:1108:G:C1'	25:p:95:HIS:HD2	2.22	0.41
12:AL:1155:A:C5	12:AL:1156:A:C8	3.09	0.41
12:AL:1205:A:C2	12:AL:1206:A:C5	3.08	0.41
12:AL:1627:U:H1'	35:z:162:PHE:CE1	2.56	0.41
12:AL:1642:U:C5'	16:g:44:TYR:CD2	3.03	0.41
12:AL:1646:U:O2	17:h:378:ARG:NH2	2.54	0.41
16:g:93:MET:HA	16:g:227:VAL:HG21	2.03	0.41
17:h:263:ALA:HB1	17:h:268:GLY:O	2.20	0.41
17:h:294:GLU:CA	24:o:36:ARG:O	2.69	0.41
22:m:121:ILE:O	22:m:122:MET:C	2.63	0.41
22:m:127:LYS:HZ3	24:o:191:LYS:HZ2	1.62	0.41
25:p:33:LYS:NZ	25:p:75:GLY:CA	2.84	0.41
27:r:94:TYR:CB	27:r:121:VAL:HG11	2.50	0.41
28:s:9:GLY:C	28:s:10:PHE:CD1	2.99	0.41
28:s:81:LEU:O	28:s:84:LYS:HG2	2.20	0.41
28:s:82:LYS:HB2	28:s:87:SER:CB	2.51	0.41
28:s:87:SER:O	28:s:90:GLY:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:s:116:LYS:O	28:s:117:ILE:C	2.63	0.41
29:t:11:LYS:H	29:t:11:LYS:CD	2.21	0.41
30:u:132:GLU:CG	32:w:126:ARG:HG2	2.50	0.41
30:u:276:LYS:CD	30:u:279:ARG:HH21	2.21	0.41
31:v:63:LYS:HG2	31:v:63:LYS:H	1.70	0.41
32:w:128:ILE:HG13	32:w:147:ILE:HG12	2.03	0.41
32:w:146:GLU:HA	32:w:149:GLN:CG	2.51	0.41
41:5:332:LYS:N	46:A:42:A:H1'	2.36	0.41
46:A:161:U:O2	46:A:161:U:H2'	2.21	0.41
46:A:216:U:H4'	46:A:217:A:OP2	2.20	0.41
46:A:225:A:O2'	46:A:226:A:H5'	2.21	0.41
46:A:590:A:H2'	46:A:591:A:O4'	2.21	0.41
46:A:602:A:O2'	46:A:603:U:H5'	2.20	0.41
46:A:860:A:C6	46:A:861:A:C5	3.08	0.41
46:A:933:C:C2	46:A:1103:G:C2	3.09	0.41
46:A:1073:A:N1	46:A:1079:A:N6	2.67	0.41
46:A:1501:A:H61	46:A:1507:U:H5	1.67	0.41
46:A:1551:C:O2	46:A:1551:C:H2'	2.21	0.41
46:A:1793:U:H2'	46:A:1794:U:C6	2.56	0.41
46:A:1915:A:H2'	46:A:1916:U:H5'	2.02	0.41
46:A:1952:A:C5'	48:C:207:GLN:O	2.68	0.41
46:A:1999:U:C2	46:A:2088:A:C2	3.08	0.41
46:A:2070:U:H3'	46:A:2071:A:O4'	2.21	0.41
46:A:2322:U:H4'	46:A:2323:A:O4'	2.20	0.41
46:A:2348:A:H8	46:A:2348:A:OP2	2.03	0.41
46:A:2588:A:H5'	46:A:2589:A:OP2	2.21	0.41
46:A:2609:G:C6	46:A:2610:A:C6	3.09	0.41
46:A:2637:A:O3'	63:R:149:ARG:HD3	2.21	0.41
46:A:2670:C:H2'	46:A:2671:U:C6	2.54	0.41
46:A:2786:C:H2'	46:A:2787:C:C6	2.55	0.41
46:A:2799:A:H2'	46:A:2800:A:O4'	2.20	0.41
46:A:3067:A:H2'	46:A:3068:U:C5	2.55	0.41
46:A:3290:A:P	46:A:3290:A:C8	3.14	0.41
59:N:96:THR:HG23	59:N:105:VAL:HB	2.01	0.41
62:Q:283:ILE:HG23	72:b:75:VAL:HG11	2.03	0.41
63:R:106:PHE:N	63:R:106:PHE:CD1	2.88	0.41
63:R:151:ASP:N	63:R:151:ASP:OD1	2.53	0.41
63:R:158:ILE:O	63:R:159:LEU:C	2.64	0.41
63:R:190:ASP:OD1	63:R:192:GLU:HB2	2.21	0.41
63:R:280:ALA:O	63:R:281:LYS:C	2.63	0.41
63:R:332:THR:C	63:R:334:SER:N	2.75	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:R:333:ASP:C	63:R:335:THR:N	2.77	0.41
66:U:31:ARG:HH21	66:U:31:ARG:HD2	1.71	0.41
1:AA:87:LYS:O	1:AA:91:HIS:CG	2.74	0.41
3:AC:79:ILE:H	3:AC:79:ILE:HG13	1.67	0.41
3:AC:148:LEU:CD1	4:AD:82:ASN:HD22	2.07	0.41
3:AC:148:LEU:CD2	4:AD:204:ALA:N	2.84	0.41
4:AD:145:SER:HB2	4:AD:196:LEU:HB2	2.02	0.41
4:AD:189:ARG:O	4:AD:190:ASP:C	2.63	0.41
5:AE:69:LYS:NZ	5:AE:69:LYS:HB3	2.36	0.41
5:AE:88:LEU:C	5:AE:90:PRO:HD3	2.46	0.41
5:AE:306:ASN:C	5:AE:308:LEU:N	2.75	0.41
6:AF:58:MET:O	6:AF:62:LEU:HG	2.20	0.41
7:AG:13:ARG:HH21	17:h:339:ARG:HG3	1.84	0.41
7:AG:136:HIS:CE1	7:AG:139:GLN:HE22	2.39	0.41
7:AG:220:TRP:CH2	33:x:41:ILE:HD12	2.56	0.41
8:AH:124:TYR:HA	8:AH:127:LYS:NZ	2.36	0.41
8:AH:182:TYR:CZ	32:w:180:ARG:CD	3.02	0.41
9:AI:265:PRO:C	9:AI:267:ASN:N	2.79	0.41
9:AI:411:VAL:HG12	9:AI:411:VAL:O	2.20	0.41
10:AJ:59:LEU:HD23	10:AJ:59:LEU:HA	1.82	0.41
11:AK:149:ARG:HD2	20:k:70:ASP:C	2.45	0.41
11:AK:198:ARG:HA	11:AK:244:ALA:HB2	2.03	0.41
11:AK:278:ARG:HH11	12:AL:1297:A:H4'	1.85	0.41
12:AL:24:U:H2'	12:AL:25:G:C8	2.56	0.41
12:AL:411:A:C5'	19:j:116:SER:OG	2.69	0.41
12:AL:415:U:O2	12:AL:415:U:H2'	2.20	0.41
12:AL:485:A:C6	12:AL:486:U:C4	3.09	0.41
12:AL:632:C:N3	12:AL:644:G:C6	2.89	0.41
12:AL:1021:U:H2'	12:AL:1022:U:H6	1.84	0.41
12:AL:1098:U:H2'	12:AL:1099:U:C6	2.56	0.41
12:AL:1272:U:C6	12:AL:1272:U:H3'	2.55	0.41
15:Z:88:ARG:HH22	35:z:172:ALA:HB2	1.84	0.41
16:g:6:LEU:CD1	17:h:185:VAL:CG1	2.99	0.41
16:g:72:GLU:CD	16:g:72:GLU:N	2.79	0.41
16:g:267:MET:SD	16:g:271:ILE:HA	2.61	0.41
17:h:204:SER:C	17:h:206:THR:H	2.29	0.41
19:j:406:TRP:CD1	19:j:406:TRP:H	2.39	0.41
19:j:440:HIS:HB2	19:j:454:ARG:HG2	2.02	0.41
20:k:71:TYR:CG	20:k:77:HIS:CE1	3.09	0.41
22:m:123:ARG:HE	22:m:123:ARG:CA	2.20	0.41
26:q:72:GLU:O	26:q:73:VAL:C	2.60	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:q:211:SER:O	26:q:212:PRO:C	2.63	0.41
27:r:132:LEU:HA	27:r:132:LEU:HD23	1.88	0.41
28:s:93:HIS:CD2	28:s:99:VAL:HG11	2.56	0.41
30:u:245:PHE:CE1	30:u:246:ASN:O	2.73	0.41
36:0:59:ARG:HB2	46:A:2732:G:OP1	2.21	0.41
40:4:33:TRP:CH2	46:A:1273:U:C2	3.09	0.41
46:A:34:U:O2'	46:A:35:U:H5'	2.21	0.41
46:A:52:A:O2'	46:A:53:U:H5'	2.21	0.41
46:A:72:U:C2	46:A:73:U:C5	3.08	0.41
46:A:221:A:H2'	46:A:222:A:C8	2.56	0.41
46:A:324:U:H3	46:A:332:A:H61	1.68	0.41
46:A:384:A:H8	46:A:384:A:H5'	1.85	0.41
46:A:437:A:C5	46:A:438:U:C5	3.08	0.41
46:A:504:A:C5	46:A:505:C:C5	3.09	0.41
46:A:648:U:H2'	46:A:649:C:C6	2.56	0.41
46:A:789:A:C2	46:A:790:A:C4	3.08	0.41
46:A:941:U:O2	46:A:1122:A:C2	2.74	0.41
46:A:1004:A:P	76:f:143:LYS:NZ	2.94	0.41
46:A:1227:G:O2'	46:A:1228:A:H5'	2.21	0.41
46:A:1299:G:O6	60:O:173:SER:HB2	2.20	0.41
46:A:1309:A:C4	46:A:1310:A:C8	3.09	0.41
46:A:1343:U:O4'	46:A:1344:U:C5	2.74	0.41
46:A:1409:C:O2'	46:A:1410:U:P	2.79	0.41
46:A:1416:A:C6	46:A:1543:A:N1	2.89	0.41
46:A:1427:A:C2	46:A:1526:A:N1	2.89	0.41
46:A:1437:A:H2'	46:A:1438:U:O4'	2.20	0.41
46:A:1645:U:H4'	46:A:1646:A:OP2	2.21	0.41
46:A:1779:A:H2'	46:A:1780:U:C5	2.53	0.41
46:A:1793:U:O2'	46:A:1794:U:H5'	2.21	0.41
46:A:2024:A:N7	46:A:2074:A:N6	2.68	0.41
46:A:2234:U:H3'	46:A:2235:A:H8	1.86	0.41
46:A:2354:A:H2'	46:A:2355:U:H6	1.84	0.41
46:A:2413:A:C6	46:A:2414:U:C4	3.09	0.41
46:A:2656:A:O5'	46:A:2657:U:H5'	2.20	0.41
46:A:2657:U:O2'	46:A:2658:G:H5'	2.20	0.41
46:A:2762:C:OP2	56:K:127:ARG:HD3	2.21	0.41
46:A:2818:C:H2'	46:A:2819:U:C6	2.56	0.41
46:A:2924:A:C4	46:A:2932:A:C6	3.09	0.41
46:A:3006:U:O2'	46:A:3007:A:H5'	2.21	0.41
46:A:3044:A:H2'	46:A:3045:U:H6	1.85	0.41
46:A:3125:U:H2'	57:L:231:SER:OG	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
49:D:49:PHE:HB3	49:D:50:PRO:HD3	2.03	0.41
63:R:313:THR:H	63:R:316:GLU:HB2	1.84	0.41
69:X:55:ARG:HB2	69:X:56:LYS:H	1.59	0.41
71:a:62:ALA:HB1	71:a:70:THR:HG23	2.02	0.41
76:f:72:MET:HB3	76:f:73:LYS:H	1.69	0.41
1:AA:80:VAL:HA	1:AA:83:LYS:HE2	2.02	0.41
2:AB:82:GLN:OE1	12:AL:375:A:OP1	2.38	0.41
3:AC:49:LEU:O	3:AC:50:THR:C	2.64	0.41
3:AC:123:ILE:O	3:AC:124:LYS:C	2.64	0.41
3:AC:155:LEU:HD12	3:AC:165:ILE:HG12	2.03	0.41
3:AC:215:GLN:H	3:AC:215:GLN:HG2	1.59	0.41
5:AE:112:ASN:HA	5:AE:155:LYS:HE2	2.03	0.41
5:AE:152:LYS:O	5:AE:153:ILE:HD13	2.21	0.41
5:AE:255:LEU:HD23	5:AE:255:LEU:HA	1.82	0.41
5:AE:267:LEU:O	5:AE:268:LYS:C	2.62	0.41
6:AF:83:HIS:HA	6:AF:216:PHE:O	2.20	0.41
6:AF:153:LEU:HD13	6:AF:220:ASP:OD2	2.20	0.41
6:AF:188:LEU:HD23	6:AF:188:LEU:HA	1.88	0.41
6:AF:306:GLN:C	31:v:62:ILE:HG22	2.46	0.41
7:AG:1:MET:HE1	17:h:354:LEU:CD1	2.50	0.41
7:AG:83:ASP:O	23:n:70:THR:HG22	2.21	0.41
7:AG:177:TYR:CZ	16:g:107:PHE:CZ	3.07	0.41
7:AG:224:VAL:CB	33:x:45:LEU:HD13	2.40	0.41
8:AH:22:LEU:HD21	8:AH:71:VAL:HG22	2.02	0.41
8:AH:28:LYS:HE2	8:AH:71:VAL:H	1.85	0.41
8:AH:110:ALA:HA	8:AH:113:LYS:HZ2	1.86	0.41
8:AH:131:GLU:H	8:AH:131:GLU:HG3	1.75	0.41
8:AH:184:ARG:HG3	12:AL:814:A:H5'	2.00	0.41
8:AH:189:PHE:CZ	8:AH:193:LYS:HD2	2.56	0.41
8:AH:210:ILE:CG2	21:l:39:VAL:O	2.69	0.41
9:AI:50:ARG:HH21	22:m:205:SER:H	1.69	0.41
9:AI:288:MET:O	9:AI:289:PHE:C	2.62	0.41
9:AI:292:ASP:OD1	9:AI:293:ASN:N	2.54	0.41
9:AI:295:SER:C	9:AI:298:LEU:H	2.25	0.41
9:AI:357:VAL:O	9:AI:358:ALA:C	2.64	0.41
9:AI:376:LYS:HD2	9:AI:376:LYS:HA	1.75	0.41
9:AI:385:ASN:OD1	9:AI:385:ASN:N	2.53	0.41
9:AI:425:LEU:O	9:AI:428:GLU:HB2	2.20	0.41
9:AI:425:LEU:O	9:AI:428:GLU:N	2.54	0.41
10:AJ:34:ILE:HA	10:AJ:37:GLU:CD	2.46	0.41
10:AJ:51:PRO:O	10:AJ:52:ASP:OD2	2.39	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:43:C:H2'	12:AL:44:U:H5'	2.01	0.41
12:AL:118:U:O4	12:AL:294:A:H4'	2.21	0.41
12:AL:131:A:H2'	12:AL:133:U:C2	2.56	0.41
12:AL:279:A:H4'	12:AL:280:G:O5'	2.20	0.41
12:AL:394:U:H2'	12:AL:395:C:C6	2.55	0.41
12:AL:500:A:C5'	19:j:7:LEU:CD1	2.80	0.41
12:AL:556:G:H2'	12:AL:557:G:C8	2.56	0.41
12:AL:556:G:H3'	12:AL:557:G:H8	1.86	0.41
12:AL:650:C:O2	12:AL:650:C:H2'	2.21	0.41
12:AL:760:A:C6	12:AL:761:A:C5	3.09	0.41
12:AL:792:U:H3	12:AL:797:A:H61	1.68	0.41
12:AL:825:G:H2'	12:AL:826:G:C5'	2.49	0.41
12:AL:998:A:O2'	12:AL:999:C:H4'	2.20	0.41
12:AL:1081:U:H6	12:AL:1081:U:H2'	1.64	0.41
12:AL:1147:A:C2	12:AL:1149:A:H5'	2.55	0.41
12:AL:1303:U:H1'	12:AL:1304:U:O4'	2.21	0.41
12:AL:1324:U:OP2	12:AL:1325:A:O2'	2.38	0.41
12:AL:1507:U:H6	12:AL:1507:U:H5"	1.85	0.41
12:AL:1573:G:H2'	12:AL:1573:G:N3	2.36	0.41
12:AL:1633:U:C2	16:g:80:ARG:HD2	2.54	0.41
12:AL:1635:U:O2'	12:AL:1636:U:O2	2.37	0.41
13:AM:27:C:H42	13:AM:43:G:H1	1.69	0.41
15:Z:28:ASN:O	15:Z:29:LYS:C	2.61	0.41
17:h:198:SER:C	17:h:200:SER:H	2.29	0.41
17:h:235:VAL:HG21	17:h:357:TYR:CE2	2.56	0.41
17:h:276:ILE:HD13	24:o:47:ALA:HA	1.78	0.41
18:i:148:LYS:HZ3	20:k:78:LEU:N	2.16	0.41
18:i:302:ILE:CB	25:p:20:TYR:CD1	2.79	0.41
18:i:310:THR:O	18:i:312:ASP:N	2.53	0.41
18:i:315:PRO:O	20:k:69:TRP:CH2	2.74	0.41
19:j:114:PHE:HE1	19:j:445:PHE:HA	1.85	0.41
19:j:394:ASP:HB3	19:j:397:LYS:HB3	2.03	0.41
20:k:41:PRO:HB2	20:k:42:GLU:H	1.55	0.41
20:k:50:ARG:O	20:k:52:VAL:N	2.54	0.41
20:k:302:LYS:C	20:k:304:TYR:N	2.78	0.41
22:m:213:GLY:O	22:m:217:THR:HG23	2.21	0.41
22:m:237:ALA:C	22:m:239:ALA:O	2.64	0.41
22:m:239:ALA:O	22:m:240:HIS:CB	2.68	0.41
25:p:36:ILE:HG22	25:p:39:GLY:HA2	2.02	0.41
27:r:111:ARG:HD2	27:r:126:ILE:HG12	2.03	0.41
27:r:131:ASP:OD1	27:r:131:ASP:N	2.52	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:s:36:CYS:O	28:s:40:GLY:N	2.53	0.41
28:s:83:ARG:HA	28:s:90:GLY:HA3	2.02	0.41
28:s:102:GLN:H	28:s:102:GLN:HG3	1.58	0.41
28:s:119:ARG:O	28:s:120:ARG:C	2.63	0.41
29:t:87:VAL:HG13	29:t:93:LEU:O	2.21	0.41
30:u:127:ASP:O	30:u:130:LYS:N	2.54	0.41
30:u:208:LEU:O	30:u:209:VAL:C	2.64	0.41
30:u:226:LYS:O	30:u:227:TYR:C	2.63	0.41
30:u:239:ALA:O	30:u:242:THR:N	2.41	0.41
30:u:250:ARG:O	30:u:251:TYR:C	2.63	0.41
32:w:176:LEU:HA	32:w:179:GLN:OE1	2.21	0.41
41:5:213:LEU:HD21	44:8:239:TYR:CE1	2.56	0.41
46:A:51:G:N2	46:A:453:U:O3’	2.53	0.41
46:A:72:U:N3	46:A:73:U:C5	2.88	0.41
46:A:89:A:C2	46:A:90:A:C5	3.09	0.41
46:A:90:A:C6	46:A:91:U:C4	3.08	0.41
46:A:220:A:C5	46:A:221:A:C5	3.09	0.41
46:A:315:A:N6	46:A:339:A:H5”	2.35	0.41
46:A:395:U:C2	46:A:679:A:C6	3.08	0.41
46:A:426:A:N7	46:A:1923:C:C4	2.89	0.41
46:A:454:A:C2	46:A:1921:A:C6	3.08	0.41
46:A:565:A:H2’	46:A:566:U:C6	2.56	0.41
46:A:639:G:C8	60:O:249:ALA:CB	3.03	0.41
46:A:696:G:H5’	46:A:697:C:H5	1.85	0.41
46:A:722:G:C6	46:A:723:U:C4	3.09	0.41
46:A:779:A:H2’	46:A:780:U:C6	2.55	0.41
46:A:790:A:H8	46:A:790:A:O5’	2.04	0.41
46:A:808:A:H3’	46:A:809:C:C6	2.46	0.41
46:A:829:A:H2’	46:A:830:U:C6	2.56	0.41
46:A:836:A:H1’	46:A:2290:A:O2’	2.20	0.41
46:A:886:A:O5’	46:A:886:A:H8	2.04	0.41
46:A:902:G:H4’	46:A:1176:A:N7	2.36	0.41
46:A:931:U:C5	46:A:1119:A:C4	3.09	0.41
46:A:935:A:N3	46:A:1173:U:O2’	2.52	0.41
46:A:977:A:H2	46:A:1044:A:C6	2.39	0.41
46:A:1076:U:O2	46:A:1076:U:H2’	2.20	0.41
46:A:1214:U:H2’	46:A:1215:A:H8	1.85	0.41
46:A:1266:U:H2’	46:A:1267:A:H8	1.78	0.41
46:A:1307:A:H4’	46:A:1308:A:OP1	2.20	0.41
46:A:1332:A:C4	46:A:1334:A:C8	3.09	0.41
46:A:1434:A:O5’	46:A:1434:A:H8	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1482:A:H2'	46:A:1483:U:H6	1.77	0.41
46:A:1484:U:H2'	46:A:1484:U:O2	2.19	0.41
46:A:1499:A:C8	46:A:1499:A:OP2	2.74	0.41
46:A:1501:A:N1	46:A:1507:U:C4	2.89	0.41
46:A:1669:A:C5	46:A:1670:A:C5	3.09	0.41
46:A:1740:U:C4	46:A:1741:C:C5	3.09	0.41
46:A:1837:A:H2'	46:A:1839:U:OP2	2.21	0.41
46:A:1865:C:H5"	46:A:1866:A:C2'	2.48	0.41
46:A:1983:A:H2'	46:A:1984:U:C6	2.56	0.41
46:A:2018:C:C4	46:A:2021:A:N7	2.89	0.41
46:A:2031:C:H2'	46:A:2032:C:O4'	2.21	0.41
46:A:2076:A:H8	46:A:2076:A:O5'	2.03	0.41
46:A:2085:A:C4	46:A:2086:U:C5	3.08	0.41
46:A:2095:U:H3'	46:A:2096:C:H6	1.85	0.41
46:A:2185:U:C2	46:A:2186:U:C5	3.09	0.41
46:A:2216:U:H2'	46:A:2217:A:C8	2.56	0.41
46:A:2290:A:O2'	46:A:2291:G:H5'	2.20	0.41
46:A:2602:A:H2	63:R:83:HIS:NE2	2.19	0.41
46:A:2643:U:OP1	50:E:41:SER:OG	2.29	0.41
46:A:2667:A:C4	46:A:2668:C:C6	3.09	0.41
46:A:2668:C:H3'	46:A:2669:A:C8	2.56	0.41
46:A:2725:A:C2	46:A:2726:U:H1'	2.56	0.41
46:A:2727:A:C5	46:A:2728:U:C4	3.09	0.41
46:A:2734:A:H4'	46:A:2735:A:OP1	2.21	0.41
46:A:2743:U:O5'	46:A:2743:U:H6	2.03	0.41
46:A:2763:A:H8	46:A:2763:A:O5'	2.04	0.41
46:A:2768:G:H3'	46:A:2768:G:N3	2.36	0.41
46:A:2922:G:C2	46:A:2931:G:C4	3.08	0.41
46:A:3111:A:H2'	46:A:3112:A:H8	1.85	0.41
46:A:3119:A:C4'	48:C:125:HIS:HA	2.49	0.41
46:A:3271:A:C1'	58:M:17:MET:HG3	2.50	0.41
47:B:103:LEU:HD23	47:B:103:LEU:HA	1.90	0.41
48:C:68:MET:HE2	48:C:81:ALA:HB1	2.02	0.41
55:J:135:LEU:HG	55:J:177:LEU:O	2.21	0.41
57:L:148:LEU:HD21	57:L:169:ASN:CB	2.51	0.41
63:R:173:GLN:HE21	63:R:173:GLN:HB3	1.61	0.41
63:R:268:GLN:CD	63:R:269:TYR:N	2.79	0.41
66:U:19:THR:HA	66:U:22:ILE:HD12	2.02	0.41
75:e:84:ARG:HB3	75:e:88:LYS:HE3	2.03	0.41
76:f:26:GLY:O	76:f:29:LEU:HB2	2.20	0.41
76:f:46:ARG:NH1	76:f:70:PHE:O	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
76:f:78:GLY:HA2	76:f:148:VAL:CG2	2.51	0.41
2:AB:77:LYS:HD3	2:AB:77:LYS:HA	1.84	0.41
3:AC:211:ASN:N	3:AC:211:ASN:OD1	2.54	0.41
3:AC:266:LYS:HD2	3:AC:266:LYS:H	1.85	0.41
4:AD:67:LEU:HA	4:AD:70:GLU:OE2	2.21	0.41
5:AE:207:ALA:O	5:AE:210:LYS:HB2	2.20	0.41
6:AF:185:ILE:O	6:AF:189:VAL:HG23	2.21	0.41
9:AI:50:ARG:CZ	9:AI:56:LEU:H	2.34	0.41
9:AI:132:ASN:OD1	9:AI:136:LYS:HE3	2.21	0.41
9:AI:134:PHE:HZ	9:AI:342:ILE:HD13	1.86	0.41
9:AI:352:ASN:OD1	9:AI:352:ASN:C	2.64	0.41
9:AI:367:TYR:HE2	11:AK:274:PRO:CB	2.25	0.41
9:AI:407:LYS:HA	9:AI:412:LEU:HD11	2.03	0.41
11:AK:145:VAL:HG12	20:k:68:PHE:O	2.21	0.41
11:AK:151:GLN:CD	18:i:83:LYS:HZ1	2.19	0.41
11:AK:162:LEU:HD13	25:p:64:ARG:CB	2.46	0.41
11:AK:196:ASN:ND2	12:AL:1318:U:C2'	2.84	0.41
12:AL:539:C:N4	12:AL:556:G:H1	2.18	0.41
12:AL:993:U:H5	12:AL:1457:U:O2	2.04	0.41
12:AL:1079:A:H2'	12:AL:1079:A:N3	2.36	0.41
12:AL:1080:A:C2	12:AL:1081:U:H1'	2.55	0.41
12:AL:1400:A:C8	12:AL:1401:A:C8	3.09	0.41
12:AL:1470:C:H2'	12:AL:1471:U:O4'	2.21	0.41
12:AL:1540:U:H2'	12:AL:1541:U:O4'	2.21	0.41
16:g:272:ARG:HH12	33:x:48:LYS:CA	2.30	0.41
16:g:281:LEU:O	16:g:282:GLU:HB3	2.21	0.41
17:h:169:TYR:C	17:h:171:HIS:N	2.77	0.41
17:h:231:ARG:O	17:h:232:ALA:C	2.64	0.41
21:l:1:MET:HG2	30:u:148:GLU:OE1	2.21	0.41
21:l:76:ALA:O	21:l:77:VAL:C	2.60	0.41
22:m:133:ILE:HG12	22:m:209:ALA:HB2	2.03	0.41
22:m:140:LEU:O	22:m:141:VAL:C	2.62	0.41
24:o:261:ARG:CZ	24:o:261:ARG:HB2	2.51	0.41
26:q:82:PHE:CE2	26:q:179:PHE:HB3	2.56	0.41
26:q:164:ASP:HB3	26:q:196:VAL:HG22	2.03	0.41
27:r:60:GLY:O	27:r:108:VAL:N	2.44	0.41
29:t:23:ARG:HD2	29:t:23:ARG:HA	1.86	0.41
29:t:85:ARG:O	29:t:86:PHE:C	2.64	0.41
31:v:70:ASP:O	31:v:73:LYS:HB2	2.20	0.41
34:y:48:GLY:HA2	34:y:64:ILE:CB	2.50	0.41
34:y:52:GLN:HG2	34:y:61:PRO:HB3	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:9:145:LEU:HD12	45:9:145:LEU:N	2.36	0.41
46:A:135:U:H6	46:A:135:U:O5'	2.03	0.41
46:A:149:A:C5'	70:Y:83:ALA:HB1	2.49	0.41
46:A:210:U:C2	46:A:211:A:N7	2.89	0.41
46:A:281:A:N1	46:A:295:A:H5"	2.35	0.41
46:A:454:A:C2	46:A:1921:A:C4	3.09	0.41
46:A:658:U:O2'	46:A:659:G:H5'	2.21	0.41
46:A:666:G:C6	46:A:678:A:C2	3.09	0.41
46:A:726:A:N3	46:A:726:A:H2'	2.36	0.41
46:A:734:U:H2'	46:A:735:A:C8	2.56	0.41
46:A:1010:A:N1	46:A:1011:A:N6	2.47	0.41
46:A:1110:A:H2'	46:A:1111:U:H5'	2.03	0.41
46:A:1120:U:C2	46:A:1121:U:C5	3.09	0.41
46:A:1160:A:C6	46:A:1161:A:C5	3.09	0.41
46:A:1167:A:C5	46:A:1168:A:C5	3.09	0.41
46:A:1311:A:C6	46:A:1312:G:C6	3.09	0.41
46:A:1325:U:H2'	46:A:1326:C:C6	2.56	0.41
46:A:1372:A:H2'	46:A:1373:U:C6	2.56	0.41
46:A:1757:A:C2	46:A:1758:U:H1'	2.56	0.41
46:A:1762:A:H2	46:A:1988:A:O4'	2.04	0.41
46:A:1768:A:C2'	46:A:1769:U:C6	2.97	0.41
46:A:1775:A:C2	46:A:1776:A:C4	3.09	0.41
46:A:2002:U:H2'	46:A:2003:G:C8	2.56	0.41
46:A:2017:G:H22	46:A:2065:A:N6	2.00	0.41
46:A:2022:U:C4	46:A:2065:A:C2	3.08	0.41
46:A:2062:G:N1	46:A:2065:A:H3'	2.36	0.41
46:A:2272:U:H2'	46:A:2273:G:C8	2.55	0.41
46:A:2672:G:C6	72:b:109:HIS:CE1	3.09	0.41
46:A:2823:C:H2'	46:A:2824:G:O4'	2.19	0.41
46:A:2940:G:N3	46:A:2941:A:C8	2.89	0.41
46:A:3003:U:C2'	46:A:3004:A:C8	2.92	0.41
46:A:3018:A:C2	46:A:3019:U:C2	3.09	0.41
65:T:98:LEU:HD22	65:T:152:ILE:HG12	2.02	0.41
74:d:130:CYS:O	74:d:134:VAL:HG23	2.20	0.41
75:e:51:THR:O	75:e:54:ILE:HG22	2.22	0.41
75:e:60:LEU:O	75:e:143:GLU:O	2.38	0.41
1:AA:101:LYS:HB3	1:AA:101:LYS:NZ	2.36	0.40
3:AC:239:ASN:O	3:AC:240:ARG:C	2.63	0.40
3:AC:266:LYS:C	17:h:129:TYR:CG	2.99	0.40
4:AD:111:LEU:O	4:AD:112:GLY:C	2.65	0.40
4:AD:289:LYS:O	4:AD:292:TYR:HB3	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AE:279:LEU:HD21	5:AE:315:TYR:CA	2.51	0.40
5:AE:315:TYR:CE2	5:AE:316:ASP:OD1	2.74	0.40
6:AF:52:THR:HB	6:AF:55:LYS:HD2	2.02	0.40
8:AH:91:SER:O	8:AH:92:ALA:C	2.64	0.40
10:AJ:4:PRO:HG2	10:AJ:7:ARG:HG2	2.02	0.40
11:AK:129:LEU:HD13	18:i:213:ILE:HG22	2.04	0.40
11:AK:292:TYR:CZ	24:o:179:ASN:HA	2.56	0.40
12:AL:57:G:C6	12:AL:365:G:H4'	2.57	0.40
12:AL:267:A:OP2	12:AL:267:A:C8	2.74	0.40
12:AL:275:A:C6	12:AL:276:C:C4	3.09	0.40
12:AL:375:A:H2'	12:AL:376:C:O4'	2.22	0.40
12:AL:851:G:C2	12:AL:862:C:C2	3.08	0.40
12:AL:1011:A:C4	12:AL:1012:G:N7	2.90	0.40
12:AL:1326:U:O2'	12:AL:1327:A:H5'	2.21	0.40
12:AL:1384:G:C3'	29:t:42:LYS:HZ3	2.26	0.40
12:AL:1495:U:O5'	12:AL:1495:U:H6	2.04	0.40
14:AN:4:A:O3'	14:AN:5:C:O4'	2.39	0.40
16:g:78:GLU:OE2	35:z:174:ARG:CZ	2.66	0.40
16:g:83:THR:C	16:g:85:TRP:N	2.78	0.40
16:g:244:LEU:HA	16:g:253:ASP:HA	2.03	0.40
17:h:294:GLU:OE1	24:o:35:ARG:CB	2.68	0.40
18:i:185:ASN:HD21	20:k:89:ILE:HG23	1.85	0.40
18:i:303:ASN:HB3	25:p:17:THR:HG21	2.03	0.40
19:j:48:ALA:HB2	19:j:476:ARG:HB2	2.02	0.40
19:j:410:TYR:HB2	19:j:415:GLN:HA	2.02	0.40
20:k:181:LEU:HD23	20:k:276:ILE:CG2	2.50	0.40
20:k:183:GLU:CD	20:k:273:LYS:HZ1	2.28	0.40
25:p:45:ILE:HG22	25:p:47:LEU:HG	2.02	0.40
25:p:74:THR:CG2	25:p:112:ARG:HG3	2.49	0.40
25:p:96:ALA:O	25:p:98:SER:N	2.54	0.40
28:s:5:ILE:O	28:s:6:LEU:C	2.63	0.40
28:s:6:LEU:HD12	67:V:96:GLY:N	2.36	0.40
30:u:142:LEU:HA	30:u:142:LEU:HD23	1.85	0.40
31:v:53:ARG:HE	31:v:53:ARG:N	2.19	0.40
33:x:92:PHE:CD2	33:x:98:ILE:HG13	2.56	0.40
38:2:47:SER:CB	46:A:2424:U:HO2'	2.20	0.40
46:A:118:A:C4	46:A:145:A:N7	2.89	0.40
46:A:428:C:H5"	46:A:429:A:C4	2.56	0.40
46:A:707:A:H2'	46:A:708:U:C6	2.54	0.40
46:A:806:G:C6	46:A:807:A:C5	3.09	0.40
46:A:999:A:H2'	46:A:1000:A:C8	2.56	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1239:A:N6	46:A:1271:A:N6	2.66	0.40
46:A:1715:A:H2	46:A:1716:U:C2	2.39	0.40
46:A:1749:U:N3	46:A:1750:G:C5	2.90	0.40
46:A:1835:G:N2	46:A:1864:G:C8	2.89	0.40
46:A:1975:U:OP1	47:B:356:LYS:NZ	2.45	0.40
46:A:2082:A:C6	46:A:2083:U:C4	3.10	0.40
46:A:2384:A:C2'	46:A:2385:U:H6	2.30	0.40
46:A:2476:C:C2	46:A:2477:U:C6	3.09	0.40
46:A:2660:A:N6	46:A:2689:A:C2	2.88	0.40
46:A:2666:A:H3'	46:A:2667:A:H8	1.85	0.40
46:A:2956:U:O2'	57:L:13:LYS:HB2	2.21	0.40
46:A:3258:A:H2'	46:A:3259:G:H8	1.85	0.40
46:A:3283:U:C4	46:A:3284:U:C5	3.09	0.40
47:B:86:LEU:O	47:B:87:SER:C	2.63	0.40
47:B:96:LEU:O	47:B:97:LYS:C	2.64	0.40
47:B:276:LEU:HD11	47:B:288:ARG:HB2	2.02	0.40
63:R:262:ASN:C	63:R:264:LEU:H	2.29	0.40
69:X:45:ARG:HE	69:X:45:ARG:HB2	1.63	0.40
76:f:34:ILE:HD11	76:f:68:PHE:CD1	2.56	0.40
4:AD:168:PHE:O	4:AD:170:TRP:HD1	2.05	0.40
5:AE:265:ALA:HB1	5:AE:268:LYS:HD2	2.04	0.40
6:AF:29:ARG:HG3	6:AF:30:ARG:N	2.28	0.40
6:AF:56:THR:HA	6:AF:59:ARG:HB3	2.03	0.40
6:AF:71:TYR:O	6:AF:72:VAL:C	2.64	0.40
7:AG:122:LEU:CA	16:g:11:ARG:HB3	2.47	0.40
7:AG:206:ILE:HG12	16:g:92:GLU:OE1	2.20	0.40
8:AH:187:LEU:HD13	8:AH:187:LEU:HA	1.79	0.40
9:AI:449:HIS:CE1	22:m:149:PRO:HG2	2.56	0.40
11:AK:134:PHE:CD2	20:k:106:LEU:CA	3.05	0.40
12:AL:25:G:N2	12:AL:26:U:O4'	2.55	0.40
12:AL:328:C:C2'	12:AL:329:U:H5'	2.52	0.40
12:AL:850:G:C2	12:AL:851:G:C8	3.09	0.40
12:AL:1071:A:HO2'	12:AL:1072:U:P	2.42	0.40
12:AL:1172:A:C6	25:p:39:GLY:HA3	2.54	0.40
12:AL:1179:U:O2	24:o:166:LYS:HD2	2.21	0.40
12:AL:1206:A:HO2'	12:AL:1207:U:P	2.41	0.40
12:AL:1375:U:H3'	28:s:100:ARG:HE	1.86	0.40
12:AL:1376:U:OP2	12:AL:1376:U:H6	2.03	0.40
12:AL:1429:A:H2'	12:AL:1430:G:H8	1.86	0.40
14:AN:11:A:H4'	14:AN:12:A:OP2	2.21	0.40
15:Z:88:ARG:NH2	16:g:74:ILE:HD13	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:i:187:MET:HE3	18:i:187:MET:HB2	1.83	0.40
19:j:59:HIS:CD2	19:j:122:ARG:HD2	2.55	0.40
19:j:149:MET:HE3	19:j:149:MET:HB3	1.84	0.40
22:m:101:LEU:HD22	24:o:242:LEU:HD13	2.02	0.40
24:o:149:ASP:HB2	24:o:153:ARG:HD2	2.03	0.40
24:o:268:LYS:HB2	24:o:269:ALA:H	1.62	0.40
25:p:54:ASN:OD1	25:p:54:ASN:N	2.54	0.40
27:r:101:ASP:OD2	27:r:133:SER:CB	2.70	0.40
28:s:11:LYS:HG2	28:s:12:GLY:N	2.37	0.40
30:u:220:LYS:HD2	30:u:227:TYR:CE2	2.56	0.40
30:u:251:TYR:O	30:u:252:MET:C	2.63	0.40
34:y:54:HIS:HA	34:y:59:TYR:HA	2.03	0.40
46:A:115:A:OP2	62:Q:9:SER:OG	2.34	0.40
46:A:115:A:H3'	46:A:116:C:H5"	2.02	0.40
46:A:242:U:H4'	46:A:327:A:N6	2.37	0.40
46:A:256:A:C8	46:A:369:A:C6	3.09	0.40
46:A:270:G:H2'	46:A:271:A:C8	2.55	0.40
46:A:516:A:N6	46:A:526:A:OP2	2.44	0.40
46:A:529:A:H1'	46:A:530:A:P	2.61	0.40
46:A:878:G:C6	46:A:879:U:C5	3.08	0.40
46:A:928:A:N7	73:c:30:ARG:NE	2.69	0.40
46:A:936:A:H5"	71:a:32:TYR:CD2	2.56	0.40
46:A:1004:A:OP1	76:f:143:LYS:NZ	2.52	0.40
46:A:1020:U:H6	46:A:1020:U:H2'	1.74	0.40
46:A:1110:A:N6	51:F:42:ILE:CD1	2.83	0.40
46:A:1358:C:C6	46:A:1359:G:C8	3.10	0.40
46:A:1619:G:C5'	54:I:6:SER:HA	2.50	0.40
46:A:1747:C:O2	46:A:1747:C:C2'	2.59	0.40
46:A:1772:U:C4	46:A:1773:U:C4	3.08	0.40
46:A:1995:G:H2'	46:A:1996:A:O4'	2.21	0.40
46:A:2079:A:H8	46:A:2079:A:H3'	1.87	0.40
46:A:2245:U:C2	46:A:2246:A:N7	2.89	0.40
46:A:2258:C:O2'	46:A:2259:U:H5'	2.21	0.40
46:A:2285:U:O4'	46:A:2693:C:H2'	2.21	0.40
46:A:2666:A:C2	46:A:2685:A:C4	3.10	0.40
46:A:2787:C:O2'	46:A:2788:U:H5'	2.21	0.40
46:A:2803:C:C4	46:A:2804:U:C4	3.09	0.40
46:A:2857:A:C4	46:A:2858:C:C5	3.09	0.40
46:A:3244:A:C6	46:A:3245:A:C5	3.09	0.40
50:E:251:ALA:CB	67:V:63:TYR:CD2	3.04	0.40
63:R:120:PRO:O	63:R:121:HIS:CB	2.68	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
63:R:162:LEU:HA	63:R:165:ARG:NH1	2.36	0.40
63:R:197:TYR:CD2	63:R:198:LEU:HD13	2.53	0.40
63:R:215:ARG:O	63:R:216:PHE:C	2.61	0.40
63:R:219:ARG:NH1	63:R:252:ASP:OD1	2.54	0.40
63:R:317:GLU:HG3	63:R:321:ARG:HD2	2.02	0.40
65:T:49:ILE:CD1	74:d:103:GLN:HB2	2.52	0.40
1:AA:82:ARG:CZ	12:AL:884:A:N1	2.84	0.40
2:AB:114:GLU:C	2:AB:116:LYS:N	2.79	0.40
2:AB:120:PHE:HA	2:AB:123:LYS:HB2	2.02	0.40
3:AC:20:LEU:O	3:AC:21:LEU:C	2.63	0.40
3:AC:38:TRP:O	3:AC:42:GLN:HB3	2.21	0.40
3:AC:169:ASN:HB2	3:AC:181:GLN:O	2.21	0.40
3:AC:196:THR:HA	3:AC:199:GLN:OE1	2.21	0.40
6:AF:73:MET:HE1	6:AF:100:HIS:HD2	1.86	0.40
8:AH:36:VAL:O	8:AH:65:LYS:HG3	2.22	0.40
9:AI:157:THR:O	9:AI:158:VAL:C	2.62	0.40
9:AI:159:LEU:O	9:AI:162:GLN:HB2	2.21	0.40
9:AI:192:TYR:CD1	9:AI:193:ASP:N	2.79	0.40
9:AI:271:LEU:O	9:AI:275:ILE:HG13	2.21	0.40
9:AI:402:LEU:HB3	9:AI:406:TYR:CE2	2.57	0.40
9:AI:429:LYS:O	9:AI:430:TYR:C	2.63	0.40
12:AL:219:U:O2'	12:AL:220:A:H8	2.05	0.40
12:AL:485:A:H4'	12:AL:486:U:OP1	2.20	0.40
12:AL:540:A:C6	12:AL:541:U:O4	2.75	0.40
12:AL:679:U:O3'	12:AL:884:A:H2'	2.21	0.40
12:AL:955:G:O2'	12:AL:971:G:O6	2.36	0.40
12:AL:1154:C:OP1	18:i:352:PHE:HB2	2.22	0.40
12:AL:1164:U:H2'	12:AL:1165:A:H8	1.86	0.40
12:AL:1243:U:H4'	12:AL:1244:U:H5"	2.03	0.40
12:AL:1428:U:H6	12:AL:1428:U:H2'	1.73	0.40
12:AL:1498:C:C2	12:AL:1564:A:C2	3.09	0.40
12:AL:1541:U:H6	12:AL:1541:U:O5'	2.05	0.40
15:Z:89:ILE:CD1	35:z:169:VAL:N	2.84	0.40
17:h:368:SER:O	17:h:369:VAL:C	2.65	0.40
22:m:233:ILE:O	22:m:234:HIS:C	2.62	0.40
24:o:278:ARG:HG3	24:o:278:ARG:HH11	1.87	0.40
26:q:181:SER:OG	26:q:182:ALA:N	2.54	0.40
27:r:136:VAL:C	27:r:138:ARG:N	2.76	0.40
28:s:65:MET:HE3	28:s:65:MET:HB3	1.80	0.40
29:t:10:THR:HG21	29:t:26:PHE:HD1	1.86	0.40
33:x:131:ARG:O	33:x:135:ILE:HG12	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:z:110:LYS:HD2	35:z:110:LYS:HA	1.94	0.40
36:0:61:SER:HB2	46:A:2732:G:H5"	2.03	0.40
42:6:62:THR:HG22	42:6:106:ARG:CD	2.50	0.40
46:A:11:G:O6	46:A:3288:C:N3	2.54	0.40
46:A:12:A:C8	46:A:12:A:H5"	2.56	0.40
46:A:174:G:N2	46:A:204:A:N1	2.69	0.40
46:A:206:U:C2	46:A:207:U:C6	3.09	0.40
46:A:326:A:O4'	46:A:330:A:N6	2.55	0.40
46:A:706:U:H2'	46:A:707:A:C8	2.56	0.40
46:A:932:C:C2	46:A:1104:A:C2	3.09	0.40
46:A:1026:U:H4'	46:A:1043:A:N3	2.37	0.40
46:A:1171:A:H2'	46:A:1172:C:C6	2.54	0.40
46:A:1274:A:H2'	46:A:1275:A:O4'	2.20	0.40
46:A:1706:G:C1'	47:B:265:PHE:CE1	3.03	0.40
46:A:1784:U:C4	46:A:1785:U:C4	3.09	0.40
46:A:1787:A:N6	46:A:1990:A:C6	2.89	0.40
46:A:1898:C:H4'	46:A:3060:U:O2'	2.21	0.40
46:A:2037:A:O2'	46:A:2038:U:O4'	2.36	0.40
46:A:2215:A:H2	46:A:2233:U:H3	1.62	0.40
46:A:2231:U:C2'	46:A:2232:A:H8	2.29	0.40
46:A:2276:G:H5'	46:A:2276:G:N9	2.35	0.40
46:A:2336:G:C5	46:A:2337:A:N7	2.90	0.40
46:A:2622:C:H2'	46:A:2623:A:O4'	2.22	0.40
46:A:2744:A:H3'	46:A:2745:U:H6	1.86	0.40
46:A:3171:A:H4'	46:A:3172:U:O5'	2.21	0.40
46:A:3267:U:C2	46:A:3268:A:N7	2.89	0.40
50:E:249:ILE:HA	50:E:256:TRP:NE1	2.37	0.40
63:R:227:ARG:HB3	63:R:240:LEU:CD1	2.51	0.40
63:R:290:GLN:O	63:R:292:LEU:HG	2.22	0.40
63:R:292:LEU:CD2	63:R:301:ILE:HB	2.52	0.40
64:S:137:THR:OG1	64:S:159:LEU:HD11	2.21	0.40
1:AA:92:LYS:HE3	1:AA:92:LYS:HB3	1.98	0.40
3:AC:33:GLY:HA2	3:AC:233:HIS:CE1	2.57	0.40
3:AC:169:ASN:CG	7:AG:197:PHE:CE1	2.92	0.40
5:AE:73:ILE:HG22	5:AE:76:THR:HG21	2.04	0.40
5:AE:139:PRO:HB3	5:AE:180:ASP:OD1	2.22	0.40
5:AE:142:VAL:HB	5:AE:184:PHE:HB2	2.02	0.40
5:AE:151:PHE:CZ	5:AE:319:LEU:HD23	2.57	0.40
5:AE:295:LEU:C	5:AE:297:LEU:N	2.79	0.40
6:AF:198:ARG:CD	12:AL:545:U:H5"	2.52	0.40
6:AF:296:TYR:N	6:AF:296:TYR:HD1	2.19	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AF:298:GLU:H	6:AF:298:GLU:HG3	1.57	0.40
7:AG:33:VAL:HA	17:h:357:TYR:OH	2.22	0.40
8:AH:37:LYS:CG	12:AL:182:A:OP1	2.69	0.40
8:AH:71:VAL:HG21	8:AH:115:GLU:HB2	2.04	0.40
8:AH:100:ALA:CB	12:AL:143:A:O5'	2.57	0.40
9:AI:179:TYR:O	9:AI:180:PRO:C	2.62	0.40
11:AK:238:SER:HB3	11:AK:247:ASN:HB3	2.03	0.40
12:AL:138:G:O2'	12:AL:140:A:N7	2.49	0.40
12:AL:757:U:O5'	12:AL:757:U:H6	2.04	0.40
12:AL:897:U:N3	12:AL:898:U:C5	2.89	0.40
12:AL:1105:G:OP1	18:i:390:ASN:HB3	2.22	0.40
12:AL:1394:U:H2'	12:AL:1395:A:C8	2.57	0.40
15:Z:62:THR:OG1	15:Z:63:SER:N	2.53	0.40
16:g:48:TRP:CZ3	16:g:63:LEU:HB3	2.56	0.40
16:g:258:GLN:HE21	16:g:258:GLN:HA	1.87	0.40
18:i:156:TYR:CD1	18:i:157:ASN:N	2.89	0.40
18:i:194:ILE:H	18:i:194:ILE:HG13	1.59	0.40
20:k:66:HIS:ND1	20:k:69:TRP:HD1	2.20	0.40
21:l:10:ARG:HB3	21:l:92:ILE:HD11	2.03	0.40
21:l:81:ILE:HG22	21:l:96:ILE:HD11	2.02	0.40
25:p:71:ILE:O	25:p:73:LEU:N	2.55	0.40
25:p:114:TRP:O	25:p:115:ASP:C	2.64	0.40
26:q:71:GLU:HA	26:q:96:GLU:O	2.22	0.40
26:q:151:MET:O	26:q:155:ILE:HG13	2.21	0.40
27:r:140:SER:O	27:r:141:SER:HB2	2.21	0.40
29:t:53:LYS:O	29:t:54:LEU:C	2.63	0.40
30:u:245:PHE:HE1	30:u:251:TYR:CE2	2.38	0.40
31:v:30:LYS:HD3	31:v:35:LYS:O	2.22	0.40
33:x:95:ARG:H	33:x:95:ARG:HG2	1.70	0.40
37:1:120:GLN:O	46:A:2349:A:C4	2.75	0.40
41:5:73:TYR:CD2	61:P:255:LEU:HD11	2.55	0.40
46:A:126:A:C2'	46:A:127:A:C8	3.00	0.40
46:A:136:A:C2	46:A:137:A:C4	3.09	0.40
46:A:257:U:H2'	46:A:258:A:C8	2.54	0.40
46:A:316:G:N2	46:A:338:G:C4	2.90	0.40
46:A:316:G:N2	46:A:338:G:C5	2.89	0.40
46:A:390:U:OP2	46:A:400:G:N2	2.51	0.40
46:A:502:A:N7	46:A:563:U:C2	2.89	0.40
46:A:533:U:C5	63:R:134:LEU:HA	2.56	0.40
46:A:633:G:H4'	46:A:1627:C:O2'	2.22	0.40
46:A:800:A:C3'	46:A:801:U:H5"	2.50	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:853:U:H2'	46:A:854:A:H8	1.81	0.40
46:A:867:A:C6	46:A:868:G:C5	3.09	0.40
46:A:878:G:H22	46:A:891:A:H2	1.66	0.40
46:A:1148:A:H2'	46:A:1149:U:H6	1.86	0.40
46:A:1323:U:H2'	46:A:1324:U:H6	1.85	0.40
46:A:2188:A:C2	46:A:2201:U:C4	3.10	0.40
46:A:2198:U:C4	64:S:227:TYR:CD2	3.10	0.40
46:A:2377:A:N6	46:A:2423:G:C8	2.90	0.40
46:A:2382:A:N1	46:A:2383:A:C5	2.89	0.40
46:A:2439:U:C2'	46:A:2440:G:H5'	2.51	0.40
46:A:2582:U:H2'	46:A:2583:A:O4'	2.20	0.40
46:A:2924:A:C4	46:A:2932:A:C5	3.09	0.40
46:A:2971:A:N6	46:A:3034:A:H62	2.18	0.40
46:A:3068:U:H4'	46:A:3069:A:OP2	2.19	0.40
46:A:3120:A:H2'	46:A:3121:U:O4'	2.21	0.40
63:R:159:LEU:HD22	72:b:157:PHE:CE1	2.57	0.40
63:R:215:ARG:HH11	63:R:255:ASN:HB3	1.86	0.40
63:R:271:SER:O	63:R:275:LYS:N	2.48	0.40
65:T:54:PRO:HA	74:d:131:GLN:HG2	2.03	0.40
75:e:68:PHE:CZ	75:e:70:VAL:HB	2.56	0.40
75:e:204:LEU:HD22	75:e:206:GLY:N	2.36	0.40
76:f:21:PRO:HA	76:f:36:ALA:O	2.21	0.40
76:f:148:VAL:HG23	76:f:154:ILE:HD12	2.03	0.40
2:AB:88:LEU:HD23	2:AB:88:LEU:N	2.36	0.40
3:AC:115:PRO:HD3	3:AC:253:TRP:CE2	2.57	0.40
3:AC:176:TYR:CZ	3:AC:213:LYS:HB3	2.57	0.40
3:AC:187:SER:O	3:AC:188:ALA:C	2.65	0.40
3:AC:266:LYS:HB3	17:h:128:PRO:CB	2.51	0.40
4:AD:37:LEU:HD12	4:AD:37:LEU:HA	1.84	0.40
4:AD:226:MET:HE3	4:AD:226:MET:HB2	1.85	0.40
4:AD:238:GLU:H	4:AD:238:GLU:HG3	1.43	0.40
4:AD:277:PRO:O	4:AD:278:LYS:C	2.64	0.40
6:AF:169:GLN:O	6:AF:173:GLN:HG3	2.21	0.40
7:AG:81:SER:HB3	12:AL:812:U:OP1	2.21	0.40
7:AG:227:GLU:OE1	33:x:62:MET:CE	2.69	0.40
8:AH:11:LYS:H	8:AH:11:LYS:HG3	1.55	0.40
9:AI:226:LEU:HD12	9:AI:248:LEU:HB3	2.03	0.40
9:AI:440:GLU:O	9:AI:444:SER:N	2.54	0.40
11:AK:163:PRO:HG3	25:p:23:ASN:HB3	2.03	0.40
11:AK:174:ARG:CG	25:p:38:TYR:HD2	2.29	0.40
11:AK:174:ARG:HH11	25:p:40:ASP:CG	2.28	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AL:44:U:N3	12:AL:45:A:C8	2.89	0.40
12:AL:416:A:C5	12:AL:417:U:C5	3.09	0.40
12:AL:485:A:C4	12:AL:486:U:C5	3.09	0.40
12:AL:529:U:H2'	12:AL:530:A:C8	2.56	0.40
12:AL:633:C:C2	12:AL:634:A:C8	3.10	0.40
12:AL:1188:A:C5	12:AL:1215:A:C6	3.09	0.40
12:AL:1558:U:H5"	30:u:35:ALA:CB	2.52	0.40
17:h:261:GLU:HA	17:h:264:LYS:HB2	2.04	0.40
17:h:335:ALA:O	17:h:336:ILE:C	2.63	0.40
18:i:100:TYR:OH	25:p:46:GLN:O	2.35	0.40
18:i:230:ASP:C	18:i:232:TYR:N	2.77	0.40
18:i:253:ASP:HB3	18:i:325:VAL:CG1	2.51	0.40
18:i:319:LEU:HD13	18:i:319:LEU:HA	1.90	0.40
19:j:96:GLN:OE1	19:j:456:PRO:HB2	2.21	0.40
19:j:122:ARG:O	19:j:126:LEU:HG	2.21	0.40
20:k:183:GLU:CD	20:k:273:LYS:NZ	2.79	0.40
21:l:38:VAL:HG21	30:u:141:ILE:CG1	2.52	0.40
22:m:184:ASN:O	22:m:187:GLN:HB2	2.21	0.40
25:p:128:ILE:HD13	25:p:128:ILE:HA	1.72	0.40
26:q:191:VAL:O	26:q:193:LYS:N	2.54	0.40
30:u:57:LEU:HA	30:u:57:LEU:HD12	1.81	0.40
30:u:72:ASP:O	30:u:74:PRO:N	2.54	0.40
30:u:121:GLU:HB2	30:u:122:VAL:H	1.67	0.40
33:x:62:MET:HE2	33:x:62:MET:HB3	1.88	0.40
33:x:92:PHE:O	33:x:99:LEU:HD11	2.21	0.40
34:y:28:THR:OG1	34:y:29:LYS:N	2.53	0.40
34:y:48:GLY:N	34:y:64:ILE:HG13	2.37	0.40
35:z:93:VAL:C	35:z:95:ASN:N	2.77	0.40
41:5:160:LYS:HA	41:5:261:ARG:HD3	2.04	0.40
46:A:133:A:C2	46:A:134:U:C6	3.10	0.40
46:A:174:G:N2	46:A:205:A:C5	2.90	0.40
46:A:260:G:N2	46:A:364:U:H2'	2.36	0.40
46:A:310:U:H4'	46:A:311:A:OP1	2.21	0.40
46:A:485:A:N1	46:A:700:G:O2'	2.38	0.40
46:A:505:C:C4	46:A:506:A:C5	3.10	0.40
46:A:526:A:N1	46:A:550:A:O2'	2.53	0.40
46:A:538:A:H2'	46:A:539:U:C6	2.54	0.40
46:A:595:U:O2	46:A:595:U:C2'	2.63	0.40
46:A:1009:U:C6	46:A:1009:U:H5"	2.57	0.40
46:A:1316:U:O2	46:A:1316:U:C2'	2.70	0.40
46:A:1374:U:O4	46:A:1382:A:N6	2.54	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:A:1689:U:O4	46:A:2853:A:C2	2.75	0.40
46:A:1694:A:N3	46:A:1694:A:H2'	2.36	0.40
46:A:1745:U:C4	46:A:1800:A:C6	3.10	0.40
46:A:1898:C:C2	46:A:1899:C:C6	3.10	0.40
46:A:1940:G:O2'	46:A:1941:U:H5'	2.21	0.40
46:A:1998:U:H2'	46:A:1999:U:C6	2.57	0.40
46:A:2025:A:N1	46:A:2071:A:H2	2.20	0.40
46:A:2032:C:N3	46:A:2057:U:P	2.95	0.40
46:A:2446:U:H6	46:A:2446:U:OP2	2.05	0.40
46:A:2639:U:H2'	46:A:2640:A:H8	1.86	0.40
46:A:2654:U:OP1	63:R:81:LYS:NZ	2.55	0.40
46:A:2673:A:H5'	46:A:2673:A:C8	2.54	0.40
46:A:2745:U:H2'	46:A:2746:U:H6	1.86	0.40
46:A:2804:U:H2'	46:A:2805:A:C8	2.56	0.40
47:B:66:ASN:O	47:B:67:ASP:HB2	2.22	0.40
47:B:308:VAL:HG12	47:B:309:SER:N	2.36	0.40
48:C:208:ASN:O	48:C:210:ASP:N	2.51	0.40
50:E:218:ARG:HG3	50:E:219:GLU:H	1.85	0.40
63:R:101:HIS:CD2	63:R:106:PHE:CZ	3.09	0.40
66:U:26:LEU:HD21	66:U:47:LEU:CD2	2.52	0.40
75:e:70:VAL:HG21	75:e:164:LEU:HD13	2.03	0.40
75:e:113:ASP:N	75:e:113:ASP:OD1	2.54	0.40

There are no symmetry-related clashes.

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 PDB entries followed by that with respect to all EM entries.

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
1	AA	32/34 (94%)	30 (94%)	2 (6%)	0	100 100
2	AB	93/101 (92%)	70 (75%)	15 (16%)	8 (9%)	0 3
3	AC	257/259 (99%)	209 (81%)	32 (12%)	16 (6%)	1 9

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
4	AD	299/321 (93%)	215 (72%)	63 (21%)	21 (7%)	1 6
5	AE	296/339 (87%)	220 (74%)	58 (20%)	18 (6%)	1 9
6	AF	248/320 (78%)	178 (72%)	49 (20%)	21 (8%)	0 3
7	AG	234/236 (99%)	196 (84%)	31 (13%)	7 (3%)	3 23
8	AH	232/234 (99%)	192 (83%)	34 (15%)	6 (3%)	4 26
9	AI	403/405 (100%)	316 (78%)	62 (15%)	25 (6%)	1 9
10	AJ	94/96 (98%)	75 (80%)	7 (7%)	12 (13%)	0 1
11	AK	262/273 (96%)	237 (90%)	22 (8%)	3 (1%)	11 43
15	Z	83/91 (91%)	63 (76%)	17 (20%)	3 (4%)	2 19
16	g	190/344 (55%)	159 (84%)	29 (15%)	2 (1%)	11 43
17	h	265/267 (99%)	215 (81%)	38 (14%)	12 (4%)	2 15
18	i	287/398 (72%)	236 (82%)	37 (13%)	14 (5%)	1 13
19	j	281/486 (58%)	253 (90%)	23 (8%)	5 (2%)	6 34
20	k	284/293 (97%)	219 (77%)	54 (19%)	11 (4%)	2 18
21	l	129/131 (98%)	104 (81%)	19 (15%)	6 (5%)	2 14
22	m	159/161 (99%)	128 (80%)	24 (15%)	7 (4%)	2 15
23	n	153/155 (99%)	150 (98%)	3 (2%)	0	100 100
24	o	220/244 (90%)	196 (89%)	17 (8%)	7 (3%)	3 21
25	p	132/186 (71%)	100 (76%)	25 (19%)	7 (5%)	1 12
26	q	150/152 (99%)	117 (78%)	22 (15%)	11 (7%)	1 6
27	r	123/125 (98%)	91 (74%)	22 (18%)	10 (8%)	1 4
28	s	118/120 (98%)	87 (74%)	21 (18%)	10 (8%)	0 3
29	t	111/115 (96%)	102 (92%)	8 (7%)	1 (1%)	14 47
30	u	251/253 (99%)	205 (82%)	37 (15%)	9 (4%)	2 19
31	v	104/120 (87%)	94 (90%)	9 (9%)	1 (1%)	12 45
32	w	194/237 (82%)	155 (80%)	29 (15%)	10 (5%)	1 12
33	x	87/99 (88%)	67 (77%)	11 (13%)	9 (10%)	0 2
34	y	78/80 (98%)	54 (69%)	15 (19%)	9 (12%)	0 1
35	z	90/92 (98%)	72 (80%)	12 (13%)	6 (7%)	1 7
36	0	36/38 (95%)	33 (92%)	3 (8%)	0	100 100
37	1	346/348 (99%)	329 (95%)	17 (5%)	0	100 100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
38	2	111/113 (98%)	106 (96%)	5 (4%)	0	100	100
39	3	128/130 (98%)	122 (95%)	6 (5%)	0	100	100
40	4	136/138 (99%)	130 (96%)	6 (4%)	0	100	100
41	5	322/324 (99%)	306 (95%)	16 (5%)	0	100	100
42	6	228/281 (81%)	221 (97%)	7 (3%)	0	100	100
43	7	104/106 (98%)	97 (93%)	7 (7%)	0	100	100
44	8	195/264 (74%)	192 (98%)	3 (2%)	0	100	100
45	9	198/215 (92%)	186 (94%)	12 (6%)	0	100	100
47	B	317/393 (81%)	273 (86%)	34 (11%)	10 (3%)	3	21
48	C	247/249 (99%)	233 (94%)	13 (5%)	1 (0%)	30	62
49	D	250/252 (99%)	235 (94%)	10 (4%)	5 (2%)	6	31
50	E	272/274 (99%)	254 (93%)	15 (6%)	3 (1%)	11	43
51	F	194/196 (99%)	183 (94%)	10 (5%)	1 (0%)	24	59
52	G	72/74 (97%)	70 (97%)	2 (3%)	0	100	100
53	H	158/160 (99%)	152 (96%)	6 (4%)	0	100	100
54	I	123/138 (89%)	114 (93%)	9 (7%)	0	100	100
55	J	218/220 (99%)	193 (88%)	19 (9%)	6 (3%)	4	25
56	K	193/195 (99%)	181 (94%)	10 (5%)	2 (1%)	12	45
57	L	225/237 (95%)	217 (96%)	8 (4%)	0	100	100
58	M	149/151 (99%)	139 (93%)	10 (7%)	0	100	100
59	N	116/118 (98%)	106 (91%)	9 (8%)	1 (1%)	14	47
60	O	223/225 (99%)	211 (95%)	12 (5%)	0	100	100
61	P	205/207 (99%)	196 (96%)	9 (4%)	0	100	100
62	Q	280/296 (95%)	268 (96%)	12 (4%)	0	100	100
63	R	327/337 (97%)	268 (82%)	45 (14%)	14 (4%)	2	16
64	S	181/216 (84%)	171 (94%)	10 (6%)	0	100	100
65	T	210/225 (93%)	199 (95%)	11 (5%)	0	100	100
66	U	80/82 (98%)	78 (98%)	2 (2%)	0	100	100
67	V	63/177 (36%)	61 (97%)	2 (3%)	0	100	100
68	W	110/112 (98%)	105 (96%)	5 (4%)	0	100	100
69	X	62/64 (97%)	50 (81%)	8 (13%)	4 (6%)	1	8

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
70	Y	44/46 (96%)	41 (93%)	3 (7%)	0	100 100
71	a	175/177 (99%)	163 (93%)	12 (7%)	0	100 100
72	b	153/155 (99%)	146 (95%)	7 (5%)	0	100 100
73	c	117/119 (98%)	112 (96%)	4 (3%)	1 (1%)	14 47
74	d	202/215 (94%)	189 (94%)	13 (6%)	0	100 100
75	e	163/249 (66%)	136 (83%)	23 (14%)	4 (2%)	4 27
76	f	134/158 (85%)	104 (78%)	21 (16%)	9 (7%)	1 7
All	All	13006/14441 (90%)	11375 (88%)	1283 (10%)	348 (3%)	6 25

All (348) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
2	AB	82	GLN
2	AB	95	ARG
3	AC	33	GLY
3	AC	59	GLU
3	AC	170	ASN
4	AD	111	LEU
4	AD	203	ASN
4	AD	208	PHE
4	AD	211	SER
4	AD	212	THR
5	AE	33	VAL
5	AE	36	ARG
5	AE	228	ALA
5	AE	310	GLU
5	AE	314	PRO
6	AF	29	ARG
7	AG	3	ILE
7	AG	67	PRO
7	AG	86	VAL
7	AG	126	GLU
8	AH	211	VAL
8	AH	231	PHE
9	AI	71	GLN
9	AI	154	VAL
9	AI	194	ASP
9	AI	228	LYS
10	AJ	20	ASP
10	AJ	52	ASP

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Mol	Chain	Res	Type
10	AJ	56	PHE
10	AJ	57	ARG
10	AJ	58	HIS
10	AJ	59	LEU
10	AJ	60	LYS
15	Z	7	VAL
15	Z	19	LYS
16	g	226	VAL
17	h	135	SER
17	h	136	ALA
17	h	155	MET
17	h	156	ARG
17	h	364	ASP
18	i	146	LEU
18	i	175	MET
18	i	212	TYR
20	k	28	SER
20	k	60	ASP
20	k	268	ASP
21	l	15	ASN
21	l	129	GLN
21	l	130	SER
22	m	103	SER
24	o	161	LYS
24	o	249	ALA
25	p	22	VAL
26	q	67	TYR
27	r	56	PRO
27	r	116	GLN
28	s	52	GLU
28	s	107	ASN
28	s	119	ARG
32	w	78	ILE
33	x	44	SER
33	x	104	THR
33	x	136	GLY
34	y	16	PRO
34	y	34	ARG
35	z	99	ARG
47	B	95	ARG
49	D	136	PRO
55	J	113	ILE

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Mol	Chain	Res	Type
55	J	169	PRO
63	R	120	PRO
63	R	121	HIS
63	R	147	ILE
2	AB	68	GLN
2	AB	114	GLU
3	AC	31	SER
3	AC	58	LEU
4	AD	41	TRP
4	AD	109	PRO
4	AD	110	ARG
4	AD	147	GLY
4	AD	210	PHE
4	AD	216	MET
4	AD	259	GLY
5	AE	96	PRO
5	AE	182	GLU
5	AE	263	SER
6	AF	128	ILE
6	AF	130	LYS
6	AF	163	VAL
6	AF	201	VAL
6	AF	296	TYR
6	AF	303	GLU
6	AF	317	VAL
6	AF	324	GLY
7	AG	53	ASN
7	AG	73	GLY
8	AH	85	ILE
9	AI	50	ARG
9	AI	115	PHE
9	AI	238	LYS
9	AI	265	PRO
9	AI	300	THR
9	AI	301	ALA
9	AI	303	SER
9	AI	421	LYS
10	AJ	18	ILE
11	AK	181	PRO
11	AK	213	GLU
17	h	205	SER
17	h	284	THR

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Mol	Chain	Res	Type
17	h	319	LEU
18	i	192	CYS
19	j	7	LEU
20	k	41	PRO
20	k	61	ASP
20	k	85	ASN
21	l	36	ARG
22	m	124	HIS
22	m	173	VAL
22	m	225	SER
25	p	53	GLU
25	p	94	VAL
26	q	119	PRO
26	q	185	GLY
26	q	189	ALA
26	q	196	VAL
27	r	53	ASP
27	r	63	LEU
27	r	146	GLY
28	s	81	LEU
28	s	98	PRO
28	s	120	ARG
29	t	49	ASN
30	u	72	ASP
30	u	74	PRO
30	u	75	PHE
32	w	33	ILE
32	w	48	GLU
32	w	81	LYS
32	w	161	VAL
32	w	184	ASP
33	x	102	TYR
34	y	49	LEU
35	z	111	ASN
35	z	128	ASN
47	B	99	VAL
49	D	52	LEU
49	D	195	VAL
50	E	218	ARG
55	J	124	ASN
55	J	147	LEU
63	R	54	GLY

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Mol	Chain	Res	Type
63	R	189	LYS
69	X	59	GLU
75	e	200	VAL
76	f	11	LYS
76	f	14	VAL
76	f	48	ALA
2	AB	81	ILE
2	AB	109	SER
3	AC	23	ASN
3	AC	30	SER
3	AC	115	PRO
3	AC	163	LEU
3	AC	261	PHE
4	AD	28	LEU
4	AD	125	THR
5	AE	102	LEU
5	AE	178	VAL
6	AF	78	THR
6	AF	136	PRO
6	AF	164	GLU
6	AF	326	ARG
7	AG	191	LEU
8	AH	37	LYS
9	AI	67	ALA
9	AI	131	THR
9	AI	202	PRO
9	AI	348	VAL
10	AJ	55	LYS
10	AJ	64	PRO
11	AK	66	LEU
17	h	134	PRO
18	i	312	ASP
18	i	322	LYS
18	i	324	LEU
19	j	79	LEU
20	k	51	ASN
21	l	95	SER
22	m	90	PRO
24	o	165	ALA
24	o	257	ARG
24	o	265	GLY
25	p	19	PRO

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Mol	Chain	Res	Type
25	p	149	SER
26	q	74	VAL
26	q	199	SER
26	q	212	PRO
28	s	17	LYS
28	s	96	HIS
30	u	55	ALA
32	w	129	ARG
34	y	28	THR
34	y	68	MET
34	y	86	THR
35	z	113	PRO
47	B	91	THR
47	B	161	GLU
55	J	109	GLY
59	N	108	PRO
63	R	122	PHE
63	R	261	ASN
69	X	33	LEU
2	AB	117	ARG
3	AC	105	THR
4	AD	29	LYS
4	AD	78	LYS
4	AD	112	GLY
4	AD	156	LEU
4	AD	282	THR
5	AE	101	THR
5	AE	112	ASN
5	AE	123	TRP
5	AE	145	MET
6	AF	30	ARG
6	AF	167	SER
8	AH	170	PRO
9	AI	70	GLN
9	AI	336	ASN
9	AI	349	ASP
16	g	260	PRO
17	h	313	LYS
17	h	353	SER
18	i	128	ASN
18	i	147	ASN
18	i	187	MET

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Mol	Chain	Res	Type
18	i	228	ASP
18	i	314	ILE
20	k	214	ARG
20	k	265	SER
20	k	267	ASN
21	l	118	LYS
22	m	89	LYS
24	o	239	ASN
24	o	277	LYS
25	p	21	PRO
25	p	72	PRO
26	q	192	VAL
27	r	138	ARG
28	s	3	VAL
28	s	13	LYS
30	u	78	ARG
30	u	267	SER
32	w	116	ASN
33	x	59	ASP
33	x	95	ARG
33	x	101	ARG
33	x	112	ARG
35	z	136	GLN
47	B	67	ASP
47	B	160	TRP
47	B	200	LEU
50	E	257	PRO
56	K	125	GLU
63	R	311	PHE
63	R	326	LYS
75	e	209	LEU
76	f	22	SER
76	f	76	PRO
4	AD	235	GLY
5	AE	251	VAL
5	AE	307	ALA
6	AF	64	PRO
6	AF	94	ARG
6	AF	95	GLY
6	AF	132	ARG
9	AI	266	HIS
9	AI	280	SER

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Mol	Chain	Res	Type
10	AJ	48	TYR
15	Z	24	ARG
17	h	173	ASP
19	j	4	LYS
22	m	174	ALA
26	q	138	ARG
27	r	128	GLY
30	u	58	LYS
30	u	70	ARG
31	v	100	TRP
32	w	226	LYS
34	y	32	PRO
34	y	47	VAL
35	z	93	VAL
47	B	139	ILE
48	C	197	ILE
49	D	49	PHE
50	E	42	PRO
56	K	128	MET
63	R	38	SER
63	R	109	VAL
63	R	155	LYS
63	R	257	SER
73	c	124	ILE
75	e	201	LEU
76	f	4	ALA
3	AC	28	ILE
3	AC	114	GLU
5	AE	63	PRO
6	AF	176	GLY
9	AI	335	ALA
18	i	129	ASN
20	k	91	ARG
27	r	120	GLY
47	B	283	LYS
69	X	11	ILE
69	X	32	PRO
75	e	69	PHE
76	f	19	ALA
76	f	57	PRO
4	AD	207	PRO
6	AF	217	PRO

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Mol	Chain	Res	Type
51	F	196	GLY
55	J	112	PRO
63	R	57	VAL
76	f	58	VAL
3	AC	37	VAL
3	AC	214	VAL
18	i	311	ILE
26	q	124	ILE
32	w	77	ILE
34	y	69	VAL
3	AC	111	VAL
5	AE	128	ILE
9	AI	374	GLU
19	j	14	GLY
27	r	149	LYS
47	B	63	ILE
49	D	31	PRO
9	AI	179	TYR
9	AI	368	VAL
27	r	150	PRO
30	u	223	ASN
2	AB	99	PRO
8	AH	75	ILE
10	AJ	42	PRO
19	j	424	PRO
33	x	86	GLY

5.3.2 Protein sidechains

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all PDB entries followed by that with respect to all EM entries.

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

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
1	AA	32/32 (100%)	28 (88%)	4 (12%)	4 21
2	AB	86/92 (94%)	73 (85%)	13 (15%)	3 14
3	AC	234/234 (100%)	206 (88%)	28 (12%)	5 23
4	AD	265/281 (94%)	235 (89%)	30 (11%)	5 24

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
5	AE	266/303 (88%)	213 (80%)	53 (20%)	1 7
6	AF	230/290 (79%)	189 (82%)	41 (18%)	2 10
7	AG	211/211 (100%)	189 (90%)	22 (10%)	7 28
8	AH	211/211 (100%)	177 (84%)	34 (16%)	2 13
9	AI	371/371 (100%)	347 (94%)	24 (6%)	15 47
10	AJ	84/84 (100%)	68 (81%)	16 (19%)	1 9
11	AK	241/250 (96%)	221 (92%)	20 (8%)	10 38
15	Z	78/82 (95%)	65 (83%)	13 (17%)	2 11
16	g	173/309 (56%)	143 (83%)	30 (17%)	2 10
17	h	234/234 (100%)	210 (90%)	24 (10%)	7 28
18	i	287/385 (74%)	236 (82%)	51 (18%)	2 10
19	j	256/437 (59%)	233 (91%)	23 (9%)	9 34
20	k	249/252 (99%)	220 (88%)	29 (12%)	5 24
21	l	120/120 (100%)	111 (92%)	9 (8%)	12 42
22	m	138/138 (100%)	124 (90%)	14 (10%)	7 30
23	n	142/142 (100%)	137 (96%)	5 (4%)	32 64
24	o	196/215 (91%)	173 (88%)	23 (12%)	5 23
25	p	121/167 (72%)	103 (85%)	18 (15%)	3 15
26	q	131/131 (100%)	122 (93%)	9 (7%)	14 45
27	r	104/104 (100%)	94 (90%)	10 (10%)	8 32
28	s	100/100 (100%)	73 (73%)	27 (27%)	0 2
29	t	102/103 (99%)	89 (87%)	13 (13%)	4 20
30	u	220/220 (100%)	206 (94%)	14 (6%)	16 48
31	v	91/105 (87%)	87 (96%)	4 (4%)	25 59
32	w	187/218 (86%)	160 (86%)	27 (14%)	3 16
33	x	80/87 (92%)	64 (80%)	16 (20%)	1 7
34	y	69/69 (100%)	54 (78%)	15 (22%)	1 6
35	z	81/81 (100%)	71 (88%)	10 (12%)	4 22
36	0	36/36 (100%)	36 (100%)	0	100 100
37	1	323/323 (100%)	308 (95%)	15 (5%)	24 58
38	2	106/106 (100%)	100 (94%)	6 (6%)	18 51

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
39	3	112/112 (100%)	110 (98%)	2 (2%)	51 74
40	4	121/121 (100%)	116 (96%)	5 (4%)	27 60
41	5	284/284 (100%)	278 (98%)	6 (2%)	47 71
42	6	213/252 (84%)	203 (95%)	10 (5%)	23 57
43	7	95/95 (100%)	90 (95%)	5 (5%)	20 53
44	8	182/240 (76%)	174 (96%)	8 (4%)	25 59
45	9	176/186 (95%)	168 (96%)	8 (4%)	24 58
47	B	272/337 (81%)	240 (88%)	32 (12%)	5 23
48	C	210/210 (100%)	197 (94%)	13 (6%)	16 49
49	D	217/218 (100%)	195 (90%)	22 (10%)	7 30
50	E	242/242 (100%)	227 (94%)	15 (6%)	16 49
51	F	172/172 (100%)	167 (97%)	5 (3%)	37 67
52	G	68/68 (100%)	65 (96%)	3 (4%)	25 59
53	H	138/138 (100%)	131 (95%)	7 (5%)	21 54
54	I	108/117 (92%)	104 (96%)	4 (4%)	30 63
55	J	181/181 (100%)	167 (92%)	14 (8%)	12 41
56	K	167/167 (100%)	149 (89%)	18 (11%)	6 27
57	L	203/211 (96%)	195 (96%)	8 (4%)	28 62
58	M	136/136 (100%)	131 (96%)	5 (4%)	30 63
59	N	107/107 (100%)	103 (96%)	4 (4%)	30 63
60	O	200/200 (100%)	187 (94%)	13 (6%)	15 47
61	P	185/185 (100%)	180 (97%)	5 (3%)	39 68
62	Q	256/267 (96%)	244 (95%)	12 (5%)	23 57
63	R	303/308 (98%)	270 (89%)	33 (11%)	6 26
64	S	167/191 (87%)	157 (94%)	10 (6%)	17 50
65	T	204/213 (96%)	197 (97%)	7 (3%)	32 64
66	U	73/73 (100%)	68 (93%)	5 (7%)	14 46
67	V	60/161 (37%)	58 (97%)	2 (3%)	33 65
68	W	104/104 (100%)	102 (98%)	2 (2%)	50 73
69	X	56/56 (100%)	45 (80%)	11 (20%)	1 8
70	Y	40/40 (100%)	39 (98%)	1 (2%)	42 69

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
71	a	158/158 (100%)	150 (95%)	8 (5%)	21 54
72	b	144/144 (100%)	138 (96%)	6 (4%)	26 60
73	c	110/110 (100%)	108 (98%)	2 (2%)	51 74
74	d	191/199 (96%)	186 (97%)	5 (3%)	40 69
75	e	154/229 (67%)	129 (84%)	25 (16%)	2 12
76	f	113/127 (89%)	100 (88%)	13 (12%)	5 24
All	All	11777/12882 (91%)	10733 (91%)	1044 (9%)	11 34

All (1044) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	AA	81	MET
1	AA	101	LYS
1	AA	103	GLU
1	AA	107	LEU
2	AB	37	GLN
2	AB	46	ASN
2	AB	55	LEU
2	AB	59	PHE
2	AB	60	GLU
2	AB	75	LYS
2	AB	88	LEU
2	AB	90	GLN
2	AB	100	ILE
2	AB	102	GLU
2	AB	107	LYS
2	AB	108	LYS
2	AB	110	PHE
3	AC	10	VAL
3	AC	37	VAL
3	AC	45	LEU
3	AC	49	LEU
3	AC	61	TYR
3	AC	67	LEU
3	AC	85	SER
3	AC	101	VAL
3	AC	117	ARG
3	AC	118	LEU
3	AC	122	LYS
3	AC	125	ASP

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Mol	Chain	Res	Type
3	AC	131	ASP
3	AC	132	TRP
3	AC	144	GLU
3	AC	163	LEU
3	AC	177	PHE
3	AC	181	GLN
3	AC	192	ASP
3	AC	198	LYS
3	AC	204	ILE
3	AC	208	THR
3	AC	211	ASN
3	AC	239	ASN
3	AC	251	LEU
3	AC	255	VAL
3	AC	264	ILE
3	AC	266	LYS
4	AD	35	GLU
4	AD	71	ASN
4	AD	73	LYS
4	AD	92	PHE
4	AD	94	MET
4	AD	100	CYS
4	AD	110	ARG
4	AD	116	LEU
4	AD	122	PHE
4	AD	138	LEU
4	AD	156	LEU
4	AD	171	LEU
4	AD	175	ARG
4	AD	182	MET
4	AD	191	ILE
4	AD	199	LEU
4	AD	217	ASN
4	AD	218	GLU
4	AD	220	ASN
4	AD	226	MET
4	AD	238	GLU
4	AD	239	ASP
4	AD	248	LYS
4	AD	249	THR
4	AD	258	LYS
4	AD	260	PHE

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Mol	Chain	Res	Type
4	AD	264	GLU
4	AD	265	VAL
4	AD	281	LEU
4	AD	287	PHE
5	AE	32	THR
5	AE	57	THR
5	AE	60	LYS
5	AE	69	LYS
5	AE	78	ASP
5	AE	79	ILE
5	AE	81	ASP
5	AE	102	LEU
5	AE	104	ASP
5	AE	107	TYR
5	AE	126	THR
5	AE	128	ILE
5	AE	130	LYS
5	AE	133	ILE
5	AE	136	TYR
5	AE	137	ILE
5	AE	142	VAL
5	AE	143	GLN
5	AE	147	THR
5	AE	150	PHE
5	AE	159	MET
5	AE	160	VAL
5	AE	164	TYR
5	AE	166	ILE
5	AE	169	LYS
5	AE	174	GLN
5	AE	178	VAL
5	AE	187	THR
5	AE	190	MET
5	AE	193	LEU
5	AE	195	ARG
5	AE	198	LEU
5	AE	200	ASP
5	AE	205	GLU
5	AE	211	LEU
5	AE	218	VAL
5	AE	219	LEU
5	AE	221	ARG

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Mol	Chain	Res	Type
5	AE	231	LEU
5	AE	251	VAL
5	AE	267	LEU
5	AE	274	TYR
5	AE	280	ILE
5	AE	284	LEU
5	AE	288	ASP
5	AE	293	GLN
5	AE	295	LEU
5	AE	302	ARG
5	AE	306	ASN
5	AE	313	ASP
5	AE	318	HIS
5	AE	320	LYS
5	AE	325	LEU
6	AF	32	ILE
6	AF	39	PHE
6	AF	41	LYS
6	AF	45	GLN
6	AF	48	LYS
6	AF	58	MET
6	AF	67	TYR
6	AF	73	MET
6	AF	76	TYR
6	AF	79	VAL
6	AF	81	THR
6	AF	91	ASP
6	AF	100	HIS
6	AF	115	LEU
6	AF	127	ASN
6	AF	130	LYS
6	AF	136	PRO
6	AF	143	CYS
6	AF	147	TYR
6	AF	153	LEU
6	AF	157	ILE
6	AF	163	VAL
6	AF	171	VAL
6	AF	181	ARG
6	AF	198	ARG
6	AF	204	ASP
6	AF	209	ASP

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Mol	Chain	Res	Type
6	AF	215	MET
6	AF	218	VAL
6	AF	295	ILE
6	AF	296	TYR
6	AF	298	GLU
6	AF	300	VAL
6	AF	303	GLU
6	AF	304	ARG
6	AF	307	TYR
6	AF	309	PHE
6	AF	317	VAL
6	AF	320	ARG
6	AF	333	ARG
6	AF	339	LEU
7	AG	2	LYS
7	AG	5	THR
7	AG	45	GLU
7	AG	47	ARG
7	AG	71	ASN
7	AG	74	LEU
7	AG	96	LYS
7	AG	103	ARG
7	AG	104	LEU
7	AG	121	ILE
7	AG	129	ASP
7	AG	130	GLU
7	AG	136	HIS
7	AG	137	MET
7	AG	142	ARG
7	AG	162	TYR
7	AG	165	MET
7	AG	171	HIS
7	AG	203	VAL
7	AG	206	ILE
7	AG	207	GLU
7	AG	230	LEU
8	AH	1	MET
8	AH	8	TYR
8	AH	11	LYS
8	AH	22	LEU
8	AH	27	THR
8	AH	30	THR

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Mol	Chain	Res	Type
8	AH	32	ILE
8	AH	33	ILE
8	AH	36	VAL
8	AH	62	LEU
8	AH	70	ASP
8	AH	104	ARG
8	AH	119	LEU
8	AH	130	LYS
8	AH	137	GLU
8	AH	141	GLU
8	AH	143	LEU
8	AH	144	ASN
8	AH	150	ASP
8	AH	153	ILE
8	AH	160	MET
8	AH	165	LEU
8	AH	166	ARG
8	AH	174	GLU
8	AH	175	LEU
8	AH	180	ARG
8	AH	187	LEU
8	AH	199	LEU
8	AH	200	LEU
8	AH	202	LEU
8	AH	208	GLU
8	AH	215	GLN
8	AH	230	GLU
8	AH	231	PHE
9	AI	49	LYS
9	AI	50	ARG
9	AI	52	THR
9	AI	56	LEU
9	AI	61	THR
9	AI	66	THR
9	AI	70	GLN
9	AI	131	THR
9	AI	138	LEU
9	AI	147	ILE
9	AI	154	VAL
9	AI	174	ILE
9	AI	232	PHE
9	AI	246	VAL

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Mol	Chain	Res	Type
9	AI	290	THR
9	AI	298	LEU
9	AI	323	LEU
9	AI	343	LEU
9	AI	349	ASP
9	AI	354	THR
9	AI	362	ILE
9	AI	407	LYS
9	AI	425	LEU
9	AI	449	HIS
10	AJ	3	VAL
10	AJ	14	LEU
10	AJ	39	LEU
10	AJ	43	SER
10	AJ	44	VAL
10	AJ	50	ASN
10	AJ	52	ASP
10	AJ	53	ILE
10	AJ	54	LEU
10	AJ	55	LYS
10	AJ	56	PHE
10	AJ	57	ARG
10	AJ	62	LEU
10	AJ	81	GLU
10	AJ	88	LYS
10	AJ	93	LYS
11	AK	65	ILE
11	AK	96	TYR
11	AK	102	ASN
11	AK	126	ASP
11	AK	129	LEU
11	AK	134	PHE
11	AK	137	LEU
11	AK	151	GLN
11	AK	164	LEU
11	AK	167	GLN
11	AK	169	ARG
11	AK	172	TYR
11	AK	173	LYS
11	AK	174	ARG
11	AK	187	THR
11	AK	216	LEU

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Mol	Chain	Res	Type
11	AK	236	MET
11	AK	265	LEU
11	AK	267	GLU
11	AK	290	ARG
15	Z	15	ARG
15	Z	17	LYS
15	Z	23	ILE
15	Z	34	MET
15	Z	37	LEU
15	Z	38	LEU
15	Z	39	GLN
15	Z	51	CYS
15	Z	54	LEU
15	Z	55	VAL
15	Z	70	ARG
15	Z	80	TYR
15	Z	89	ILE
16	g	5	GLU
16	g	11	ARG
16	g	18	ASN
16	g	29	PHE
16	g	43	LEU
16	g	51	LYS
16	g	63	LEU
16	g	64	VAL
16	g	70	THR
16	g	71	LEU
16	g	72	GLU
16	g	83	THR
16	g	84	GLN
16	g	87	ARG
16	g	92	GLU
16	g	105	ASN
16	g	109	LYS
16	g	203	THR
16	g	210	LEU
16	g	213	LYS
16	g	226	VAL
16	g	254	VAL
16	g	255	VAL
16	g	256	PHE
16	g	267	MET

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Mol	Chain	Res	Type
16	g	273	MET
16	g	281	LEU
16	g	282	GLU
16	g	293	MET
16	g	297	LEU
17	h	133	ILE
17	h	135	SER
17	h	150	GLN
17	h	155	MET
17	h	156	ARG
17	h	159	LYS
17	h	167	VAL
17	h	171	HIS
17	h	176	TYR
17	h	180	PRO
17	h	181	GLU
17	h	184	THR
17	h	213	GLU
17	h	247	LEU
17	h	249	LEU
17	h	295	ILE
17	h	311	THR
17	h	313	LYS
17	h	327	GLU
17	h	337	LYS
17	h	342	THR
17	h	348	THR
17	h	356	THR
17	h	394	LYS
18	i	80	ILE
18	i	87	LEU
18	i	90	MET
18	i	94	ASN
18	i	101	ASN
18	i	107	MET
18	i	114	LEU
18	i	115	ILE
18	i	118	LEU
18	i	119	LEU
18	i	125	LEU
18	i	126	LYS
18	i	137	MET

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Mol	Chain	Res	Type
18	i	146	LEU
18	i	152	LYS
18	i	158	ASN
18	i	170	ASN
18	i	175	MET
18	i	176	MET
18	i	177	ASN
18	i	179	LEU
18	i	182	ILE
18	i	184	ASN
18	i	187	MET
18	i	190	ASN
18	i	191	LEU
18	i	206	GLU
18	i	209	LYS
18	i	215	LEU
18	i	218	ASP
18	i	220	PHE
18	i	230	ASP
18	i	243	MET
18	i	244	LEU
18	i	276	ILE
18	i	278	LEU
18	i	306	TYR
18	i	310	THR
18	i	312	ASP
18	i	316	MET
18	i	318	ILE
18	i	319	LEU
18	i	324	LEU
18	i	329	ILE
18	i	348	LEU
18	i	368	LEU
18	i	374	ASN
18	i	377	LEU
18	i	379	ASN
18	i	382	ASN
18	i	386	ASN
19	j	3	ARG
19	j	13	ARG
19	j	18	THR
19	j	29	TYR

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Mol	Chain	Res	Type
19	j	47	THR
19	j	50	GLN
19	j	52	THR
19	j	67	THR
19	j	72	LYS
19	j	90	GLU
19	j	100	VAL
19	j	109	LEU
19	j	119	ARG
19	j	150	PHE
19	j	164	LYS
19	j	188	GLU
19	j	386	ILE
19	j	388	LEU
19	j	419	LYS
19	j	420	PRO
19	j	457	VAL
19	j	474	HIS
19	j	483	ARG
20	k	15	HIS
20	k	20	LEU
20	k	27	GLU
20	k	50	ARG
20	k	59	LEU
20	k	60	ASP
20	k	83	GLU
20	k	94	GLN
20	k	104	ASN
20	k	106	LEU
20	k	150	VAL
20	k	152	LYS
20	k	154	VAL
20	k	157	GLN
20	k	163	ILE
20	k	169	LEU
20	k	207	GLU
20	k	208	ILE
20	k	242	VAL
20	k	245	VAL
20	k	248	GLU
20	k	258	LEU
20	k	261	LYS

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Mol	Chain	Res	Type
20	k	262	VAL
20	k	269	MET
20	k	287	ASP
20	k	297	LEU
20	k	299	ASP
20	k	301	ARG
21	l	1	MET
21	l	8	LEU
21	l	18	LYS
21	l	38	VAL
21	l	58	GLN
21	l	82	LEU
21	l	102	ASP
21	l	105	LEU
21	l	131	ILE
22	m	88	ILE
22	m	123	ARG
22	m	126	LYS
22	m	129	LYS
22	m	134	LEU
22	m	145	THR
22	m	164	MET
22	m	165	MET
22	m	173	VAL
22	m	178	VAL
22	m	184	ASN
22	m	211	ARG
22	m	214	GLU
22	m	228	GLU
23	n	1	MET
23	n	29	THR
23	n	75	VAL
23	n	82	ASN
23	n	147	ASP
24	o	55	ILE
24	o	63	ARG
24	o	67	LYS
24	o	91	LEU
24	o	98	LEU
24	o	106	LEU
24	o	117	ASP
24	o	120	LEU

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Mol	Chain	Res	Type
24	o	159	LYS
24	o	183	LEU
24	o	215	THR
24	o	225	GLU
24	o	228	MET
24	o	233	LYS
24	o	251	VAL
24	o	255	ASP
24	o	261	ARG
24	o	267	LYS
24	o	270	ARG
24	o	272	MET
24	o	274	THR
24	o	276	VAL
24	o	278	ARG
25	p	18	ARG
25	p	22	VAL
25	p	44	ASP
25	p	51	ASP
25	p	54	ASN
25	p	56	ASP
25	p	62	ILE
25	p	86	TRP
25	p	87	THR
25	p	94	VAL
25	p	103	GLU
25	p	116	THR
25	p	117	ASN
25	p	121	LEU
25	p	128	ILE
25	p	133	MET
25	p	147	GLU
25	p	148	ILE
26	q	66	VAL
26	q	83	THR
26	q	106	LEU
26	q	108	TYR
26	q	109	ASN
26	q	126	LEU
26	q	169	MET
26	q	187	GLU
26	q	214	MET

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Mol	Chain	Res	Type
27	r	43	ARG
27	r	57	GLN
27	r	66	MET
27	r	67	VAL
27	r	72	LYS
27	r	100	HIS
27	r	101	ASP
27	r	135	VAL
27	r	137	ASN
27	r	144	LYS
28	s	3	VAL
28	s	5	ILE
28	s	6	LEU
28	s	8	LYS
28	s	18	ILE
28	s	27	ILE
28	s	34	LYS
28	s	35	ILE
28	s	44	TRP
28	s	47	MET
28	s	56	MET
28	s	62	LEU
28	s	65	MET
28	s	67	ILE
28	s	85	ILE
28	s	91	MET
28	s	93	HIS
28	s	97	LEU
28	s	98	PRO
28	s	100	ARG
28	s	102	GLN
28	s	103	HIS
28	s	104	THR
28	s	105	ARG
28	s	106	ASN
28	s	109	LYS
28	s	114	LEU
29	t	5	ARG
29	t	11	LYS
29	t	12	LEU
29	t	53	LYS
29	t	56	LEU

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Mol	Chain	Res	Type
29	t	70	ARG
29	t	90	ASP
29	t	92	ARG
29	t	95	ARG
29	t	111	LYS
29	t	112	LYS
29	t	114	ILE
29	t	115	TRP
30	u	40	PHE
30	u	47	LYS
30	u	50	ASN
30	u	53	LYS
30	u	65	ASP
30	u	83	LEU
30	u	91	LYS
30	u	119	ASN
30	u	123	VAL
30	u	170	ASP
30	u	175	GLU
30	u	183	VAL
30	u	203	ARG
30	u	243	ASP
31	v	5	LEU
31	v	53	ARG
31	v	63	LYS
31	v	72	THR
32	w	3	ARG
32	w	12	SER
32	w	20	VAL
32	w	24	VAL
32	w	28	VAL
32	w	37	LEU
32	w	42	ASP
32	w	48	GLU
32	w	56	ASP
32	w	57	LEU
32	w	58	VAL
32	w	68	LYS
32	w	79	ARG
32	w	91	GLU
32	w	108	LEU
32	w	114	ARG

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Mol	Chain	Res	Type
32	w	127	ASP
32	w	129	ARG
32	w	131	ILE
32	w	144	LEU
32	w	146	GLU
32	w	164	LEU
32	w	193	LEU
32	w	197	ASP
32	w	198	LEU
32	w	223	LEU
32	w	225	ARG
33	x	41	ILE
33	x	49	LEU
33	x	51	LYS
33	x	62	MET
33	x	81	ASP
33	x	82	ILE
33	x	88	ASN
33	x	92	PHE
33	x	93	TYR
33	x	95	ARG
33	x	104	THR
33	x	110	GLN
33	x	115	THR
33	x	117	LEU
33	x	137	LEU
33	x	138	MET
34	y	21	LEU
34	y	24	ARG
34	y	25	GLU
34	y	38	ARG
34	y	42	ILE
34	y	47	VAL
34	y	49	LEU
34	y	51	PHE
34	y	58	GLU
34	y	59	TYR
34	y	62	ILE
34	y	76	PHE
34	y	80	ARG
34	y	82	ARG
34	y	86	THR

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Mol	Chain	Res	Type
35	z	88	ILE
35	z	93	VAL
35	z	99	ARG
35	z	101	ASN
35	z	133	LYS
35	z	134	ARG
35	z	144	LYS
35	z	156	LYS
35	z	165	LEU
35	z	171	ASP
37	1	32	LEU
37	1	45	GLN
37	1	62	ILE
37	1	102	ASP
37	1	105	LEU
37	1	155	LEU
37	1	165	ILE
37	1	171	THR
37	1	173	VAL
37	1	216	LEU
37	1	243	THR
37	1	246	CYS
37	1	290	VAL
37	1	296	GLN
37	1	315	LEU
38	2	36	SER
38	2	46	LEU
38	2	64	GLU
38	2	100	ARG
38	2	104	LEU
38	2	124	ARG
39	3	25	ARG
39	3	47	GLN
40	4	11	ILE
40	4	13	ARG
40	4	100	LEU
40	4	102	LYS
40	4	132	LEU
41	5	70	LEU
41	5	244	LEU
41	5	271	THR
41	5	279	VAL

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Mol	Chain	Res	Type
41	5	295	THR
41	5	320	VAL
42	6	44	LEU
42	6	111	LYS
42	6	159	GLU
42	6	160	ARG
42	6	161	GLN
42	6	170	VAL
42	6	198	GLU
42	6	213	SER
42	6	266	VAL
42	6	277	LEU
43	7	47	LEU
43	7	84	ASN
43	7	111	LEU
43	7	121	VAL
43	7	144	LYS
44	8	51	HIS
44	8	123	ILE
44	8	124	THR
44	8	179	LEU
44	8	191	GLU
44	8	202	LEU
44	8	238	LYS
44	8	258	LEU
45	9	56	LEU
45	9	86	LEU
45	9	104	ASN
45	9	108	ASN
45	9	118	GLN
45	9	124	LEU
45	9	210	GLU
45	9	223	LYS
47	B	61	LEU
47	B	63	ILE
47	B	64	ILE
47	B	73	LEU
47	B	83	ARG
47	B	86	LEU
47	B	93	MET
47	B	99	VAL
47	B	127	ARG

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Mol	Chain	Res	Type
47	B	152	THR
47	B	154	LEU
47	B	159	ARG
47	B	169	ARG
47	B	176	ARG
47	B	180	ILE
47	B	190	GLU
47	B	191	LEU
47	B	194	ILE
47	B	229	ILE
47	B	230	LEU
47	B	232	VAL
47	B	235	THR
47	B	237	ARG
47	B	239	ASN
47	B	241	LEU
47	B	283	LYS
47	B	294	HIS
47	B	302	VAL
47	B	311	ILE
47	B	316	ARG
47	B	327	LEU
47	B	338	MET
48	C	23	ARG
48	C	27	VAL
48	C	61	LEU
48	C	86	GLU
48	C	97	THR
48	C	106	CYS
48	C	148	LEU
48	C	164	GLN
48	C	175	LYS
48	C	234	VAL
48	C	248	VAL
48	C	258	SER
48	C	263	GLN
49	D	30	ASN
49	D	52	LEU
49	D	56	THR
49	D	58	VAL
49	D	62	THR
49	D	65	VAL

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Mol	Chain	Res	Type
49	D	103	ARG
49	D	115	ARG
49	D	124	ARG
49	D	142	GLU
49	D	143	LEU
49	D	156	LEU
49	D	161	LYS
49	D	182	LEU
49	D	199	GLU
49	D	200	ILE
49	D	216	LEU
49	D	222	LEU
49	D	235	SER
49	D	237	ASP
49	D	244	ASP
49	D	260	GLN
50	E	38	SER
50	E	82	LEU
50	E	83	LEU
50	E	138	GLU
50	E	154	LEU
50	E	165	GLN
50	E	189	HIS
50	E	200	LYS
50	E	209	LEU
50	E	249	ILE
50	E	250	ASP
50	E	252	ASN
50	E	254	ASP
50	E	258	LYS
50	E	259	THR
51	F	48	THR
51	F	80	LYS
51	F	86	VAL
51	F	143	LYS
51	F	185	LEU
52	G	12	LEU
52	G	31	GLN
52	G	80	LEU
53	H	19	VAL
53	H	46	VAL
53	H	60	THR

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Mol	Chain	Res	Type
53	H	83	ARG
53	H	99	LYS
53	H	123	LEU
53	H	160	ASN
54	I	4	LEU
54	I	18	LEU
54	I	26	ARG
54	I	109	THR
55	J	60	ILE
55	J	97	LYS
55	J	115	LYS
55	J	130	LEU
55	J	132	GLU
55	J	157	MET
55	J	161	ARG
55	J	193	SER
55	J	209	LYS
55	J	227	GLN
55	J	241	ARG
55	J	243	THR
55	J	261	VAL
55	J	273	GLU
56	K	68	THR
56	K	94	ASP
56	K	98	MET
56	K	104	LEU
56	K	113	LEU
56	K	114	CYS
56	K	122	LYS
56	K	125	GLU
56	K	128	MET
56	K	139	MET
56	K	150	GLU
56	K	158	GLU
56	K	163	GLU
56	K	167	LYS
56	K	184	LEU
56	K	191	SER
56	K	196	LYS
56	K	227	LYS
57	L	8	LYS
57	L	51	ILE

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Mol	Chain	Res	Type
57	L	62	ASN
57	L	68	GLU
57	L	69	LEU
57	L	138	VAL
57	L	177	LYS
57	L	194	LEU
58	M	28	VAL
58	M	102	LEU
58	M	109	LEU
58	M	110	LEU
58	M	161	LEU
59	N	46	THR
59	N	97	LEU
59	N	105	VAL
59	N	130	THR
60	O	103	GLN
60	O	107	LEU
60	O	110	GLN
60	O	112	LEU
60	O	140	LEU
60	O	159	LEU
60	O	163	VAL
60	O	203	ILE
60	O	212	GLN
60	O	228	LEU
60	O	276	ARG
60	O	293	GLN
60	O	302	VAL
61	P	72	GLN
61	P	88	LYS
61	P	113	PHE
61	P	161	THR
61	P	231	LEU
62	Q	11	VAL
62	Q	14	ARG
62	Q	51	GLU
62	Q	103	THR
62	Q	129	LYS
62	Q	131	LEU
62	Q	196	LEU
62	Q	216	ASN
62	Q	243	ILE

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Mol	Chain	Res	Type
62	Q	246	LEU
62	Q	276	THR
62	Q	293	LYS
63	R	45	ARG
63	R	57	VAL
63	R	62	ILE
63	R	77	VAL
63	R	117	LEU
63	R	126	VAL
63	R	147	ILE
63	R	153	LEU
63	R	159	LEU
63	R	160	LYS
63	R	168	LYS
63	R	175	LYS
63	R	180	LEU
63	R	183	GLU
63	R	184	LEU
63	R	188	ILE
63	R	192	GLU
63	R	198	LEU
63	R	206	LYS
63	R	227	ARG
63	R	229	LYS
63	R	240	LEU
63	R	242	GLU
63	R	265	GLU
63	R	272	GLU
63	R	278	LEU
63	R	293	GLU
63	R	294	THR
63	R	297	ASP
63	R	313	THR
63	R	328	VAL
63	R	332	THR
63	R	346	VAL
64	S	67	LYS
64	S	79	VAL
64	S	95	LYS
64	S	96	TRP
64	S	102	LYS
64	S	116	ILE

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Mol	Chain	Res	Type
64	S	124	LYS
64	S	126	ILE
64	S	132	ILE
64	S	150	THR
65	T	17	THR
65	T	45	ASN
65	T	115	ARG
65	T	131	VAL
65	T	161	LEU
65	T	170	LEU
65	T	203	THR
66	U	6	VAL
66	U	8	LEU
66	U	24	LYS
66	U	31	ARG
66	U	60	GLU
67	V	61	SER
67	V	62	GLN
68	W	167	LYS
68	W	173	LEU
69	X	11	ILE
69	X	13	LEU
69	X	27	ILE
69	X	32	PRO
69	X	33	LEU
69	X	37	VAL
69	X	43	VAL
69	X	46	HIS
69	X	47	VAL
69	X	55	ARG
69	X	63	LEU
70	Y	71	LEU
71	a	25	LYS
71	a	45	LEU
71	a	70	THR
71	a	85	LEU
71	a	105	SER
71	a	126	ARG
71	a	144	ILE
71	a	173	ARG
72	b	32	THR
72	b	46	LYS

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Mol	Chain	Res	Type
72	b	75	VAL
72	b	88	LEU
72	b	119	LEU
72	b	152	GLN
73	c	113	ILE
73	c	121	LYS
74	d	22	ILE
74	d	66	LEU
74	d	68	ARG
74	d	192	LEU
74	d	213	LEU
75	e	51	THR
75	e	54	ILE
75	e	60	LEU
75	e	70	VAL
75	e	87	ILE
75	e	94	LEU
75	e	101	LEU
75	e	126	LYS
75	e	133	LEU
75	e	134	LYS
75	e	139	THR
75	e	142	TYR
75	e	145	THR
75	e	164	LEU
75	e	165	MET
75	e	171	VAL
75	e	178	VAL
75	e	187	LEU
75	e	190	LYS
75	e	193	MET
75	e	203	MET
75	e	204	LEU
75	e	207	LEU
75	e	209	LEU
75	e	210	VAL
76	f	1	MET
76	f	8	VAL
76	f	11	LYS
76	f	14	VAL
76	f	29	LEU
76	f	34	ILE

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Mol	Chain	Res	Type
76	f	39	PHE
76	f	50	TYR
76	f	54	VAL
76	f	56	VAL
76	f	72	MET
76	f	138	MET
76	f	148	VAL

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (285) such sidechains are listed below:

Mol	Chain	Res	Type
1	AA	109	GLN
2	AB	37	GLN
2	AB	46	ASN
2	AB	83	GLN
2	AB	92	HIS
2	AB	96	ASN
2	AB	101	HIS
2	AB	128	ASN
3	AC	9	HIS
3	AC	56	GLN
3	AC	90	HIS
3	AC	95	ASN
3	AC	169	ASN
3	AC	180	ASN
3	AC	186	ASN
4	AD	21	HIS
4	AD	71	ASN
4	AD	123	ASN
4	AD	160	ASN
4	AD	256	GLN
4	AD	257	GLN
5	AE	70	ASN
5	AE	141	HIS
5	AE	249	GLN
5	AE	260	ASN
5	AE	298	GLN
5	AE	306	ASN
5	AE	318	HIS
6	AF	60	GLN
6	AF	74	ASN
6	AF	108	GLN

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Mol	Chain	Res	Type
6	AF	135	GLN
6	AF	146	ASN
6	AF	193	ASN
6	AF	199	ASN
6	AF	306	GLN
6	AF	337	ASN
7	AG	68	HIS
7	AG	125	ASN
7	AG	136	HIS
7	AG	139	GLN
8	AH	93	GLN
8	AH	120	HIS
8	AH	126	GLN
8	AH	181	ASN
8	AH	215	GLN
8	AH	225	ASN
9	AI	59	ASN
9	AI	62	ASN
9	AI	70	GLN
9	AI	82	ASN
9	AI	98	ASN
9	AI	116	ASN
9	AI	120	GLN
9	AI	132	ASN
9	AI	141	HIS
9	AI	188	ASN
9	AI	201	GLN
9	AI	239	ASN
9	AI	267	ASN
9	AI	372	HIS
9	AI	435	ASN
9	AI	449	HIS
10	AJ	21	GLN
11	AK	63	GLN
11	AK	122	ASN
11	AK	127	ASN
11	AK	142	GLN
11	AK	148	HIS
11	AK	151	GLN
11	AK	155	ASN
11	AK	170	GLN
11	AK	196	ASN

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Mol	Chain	Res	Type
11	AK	229	HIS
11	AK	252	HIS
15	Z	28	ASN
15	Z	39	GLN
15	Z	46	HIS
15	Z	81	HIS
15	Z	90	ASN
15	Z	94	HIS
16	g	34	GLN
16	g	223	GLN
16	g	258	GLN
16	g	294	HIS
17	h	144	GLN
17	h	150	GLN
17	h	153	HIS
17	h	255	GLN
17	h	293	GLN
17	h	328	ASN
17	h	392	ASN
18	i	79	ASN
18	i	86	HIS
18	i	91	ASN
18	i	94	ASN
18	i	99	ASN
18	i	103	ASN
18	i	108	ASN
18	i	142	ASN
18	i	166	ASN
18	i	167	ASN
18	i	184	ASN
18	i	185	ASN
18	i	259	ASN
18	i	263	ASN
18	i	265	ASN
18	i	280	ASN
18	i	303	ASN
18	i	375	HIS
18	i	382	ASN
18	i	390	ASN
18	i	396	ASN
19	j	66	GLN
19	j	123	GLN

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Mol	Chain	Res	Type
19	j	127	HIS
19	j	129	ASN
19	j	139	HIS
19	j	178	GLN
19	j	403	ASN
19	j	407	GLN
19	j	409	ASN
19	j	415	GLN
19	j	439	HIS
20	k	84	ASN
20	k	86	ASN
20	k	176	ASN
20	k	230	HIS
20	k	267	ASN
20	k	283	GLN
21	l	13	ASN
21	l	34	GLN
21	l	58	GLN
21	l	61	HIS
21	l	112	HIS
22	m	97	GLN
22	m	119	ASN
22	m	131	GLN
22	m	232	GLN
22	m	234	HIS
23	n	14	GLN
23	n	42	GLN
23	n	82	ASN
23	n	100	HIS
24	o	182	GLN
25	p	23	ASN
25	p	46	GLN
25	p	52	ASN
25	p	95	HIS
25	p	141	ASN
26	q	120	GLN
28	s	49	GLN
28	s	78	ASN
28	s	93	HIS
28	s	96	HIS
29	t	34	ASN
29	t	106	ASN

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Mol	Chain	Res	Type
30	u	54	GLN
30	u	177	GLN
30	u	187	ASN
30	u	195	HIS
30	u	204	ASN
30	u	232	GLN
30	u	246	ASN
30	u	253	GLN
32	w	4	GLN
32	w	5	ASN
32	w	84	GLN
32	w	102	GLN
32	w	187	GLN
32	w	202	GLN
32	w	222	ASN
33	x	110	GLN
33	x	133	GLN
34	y	17	ASN
34	y	87	GLN
35	z	97	GLN
35	z	101	ASN
35	z	154	HIS
37	1	141	HIS
37	1	145	GLN
37	1	201	ASN
37	1	212	GLN
37	1	222	GLN
37	1	230	ASN
37	1	253	ASN
38	2	80	GLN
38	2	82	GLN
38	2	83	GLN
38	2	88	ASN
38	2	142	HIS
39	3	38	ASN
39	3	118	GLN
39	3	132	GLN
40	4	115	ASN
41	5	78	GLN
41	5	102	HIS
41	5	147	ASN
41	5	277	GLN

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Mol	Chain	Res	Type
42	6	281	ASN
43	7	53	HIS
43	7	58	ASN
43	7	87	ASN
44	8	149	GLN
44	8	235	GLN
45	9	118	GLN
45	9	141	GLN
45	9	207	ASN
47	B	76	GLN
47	B	135	ASN
47	B	148	HIS
47	B	179	HIS
47	B	310	ASN
47	B	314	GLN
47	B	376	ASN
48	C	44	HIS
48	C	95	HIS
48	C	107	GLN
48	C	114	HIS
48	C	164	GLN
48	C	201	HIS
48	C	209	GLN
48	C	228	HIS
48	C	243	ASN
48	C	263	GLN
49	D	137	ASN
49	D	185	ASN
49	D	260	GLN
50	E	30	HIS
50	E	110	ASN
50	E	252	ASN
50	E	253	GLN
50	E	267	ASN
51	F	74	HIS
51	F	176	GLN
53	H	43	HIS
53	H	145	HIS
54	I	80	ASN
55	J	110	GLN
55	J	158	ASN
55	J	227	GLN

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Mol	Chain	Res	Type
55	J	239	GLN
56	K	39	HIS
56	K	124	ASN
57	L	15	HIS
57	L	154	ASN
58	M	101	GLN
58	M	139	HIS
60	O	90	ASN
60	O	166	GLN
60	O	197	HIS
60	O	212	GLN
61	P	82	ASN
61	P	136	GLN
61	P	139	HIS
61	P	143	ASN
61	P	237	ASN
63	R	121	HIS
63	R	157	ASN
63	R	255	ASN
63	R	267	HIS
63	R	276	GLN
64	S	47	HIS
64	S	64	ASN
64	S	84	ASN
65	T	117	GLN
66	U	61	HIS
67	V	74	GLN
68	W	123	GLN
71	a	47	HIS
71	a	96	GLN
71	a	99	ASN
71	a	159	HIS
71	a	194	GLN
72	b	151	ASN
72	b	152	GLN
73	c	27	GLN
74	d	5	HIS
74	d	36	GLN
74	d	91	ASN
74	d	147	ASN
75	e	71	HIS
75	e	99	ASN

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Mol	Chain	Res	Type
75	e	146	ASN
76	f	133	HIS

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
12	AL	1490/1649 (90%)	523 (35%)	97 (6%)
13	AM	75/76 (98%)	43 (57%)	7 (9%)
14	AN	12/13 (92%)	12 (100%)	7 (58%)
46	A	2851/3296 (86%)	977 (34%)	187 (6%)
All	All	4428/5034 (87%)	1555 (35%)	298 (6%)

All (1555) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
12	AL	14	A
12	AL	15	A
12	AL	16	G
12	AL	20	A
12	AL	25	G
12	AL	26	U
12	AL	27	U
12	AL	39	A
12	AL	40	G
12	AL	44	U
12	AL	45	A
12	AL	46	A
12	AL	51	G
12	AL	54	C
12	AL	55	A
12	AL	57	G
12	AL	58	A
12	AL	59	C
12	AL	61	C
12	AL	66	G
12	AL	71	A
12	AL	72	U
12	AL	73	A
12	AL	76	U
12	AL	77	U
12	AL	78	U

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Mol	Chain	Res	Type
12	AL	79	A
12	AL	80	U
12	AL	81	U
12	AL	82	A
12	AL	84	U
12	AL	85	G
12	AL	90	G
12	AL	91	A
12	AL	92	U
12	AL	94	A
12	AL	95	U
12	AL	96	A
12	AL	97	A
12	AL	99	U
12	AL	100	A
12	AL	101	U
12	AL	102	G
12	AL	105	G
12	AL	108	U
12	AL	109	A
12	AL	110	A
12	AL	111	A
12	AL	115	G
12	AL	116	A
12	AL	119	A
12	AL	121	U
12	AL	123	U
12	AL	124	U
12	AL	126	U
12	AL	128	A
12	AL	129	G
12	AL	130	G
12	AL	131	A
12	AL	132	A
12	AL	133	U
12	AL	134	U
12	AL	135	A
12	AL	136	A
12	AL	137	U
12	AL	138	G
12	AL	139	A
12	AL	140	A

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Mol	Chain	Res	Type
12	AL	141	C
12	AL	143	A
12	AL	144	U
12	AL	146	G
12	AL	148	A
12	AL	156	A
12	AL	158	U
12	AL	159	A
12	AL	161	U
12	AL	163	A
12	AL	164	A
12	AL	182	A
12	AL	195	U
12	AL	196	A
12	AL	197	A
12	AL	198	A
12	AL	208	U
12	AL	209	A
12	AL	215	U
12	AL	216	A
12	AL	218	A
12	AL	219	U
12	AL	220	A
12	AL	223	U
12	AL	224	A
12	AL	227	U
12	AL	229	U
12	AL	232	U
12	AL	234	A
12	AL	235	A
12	AL	241	U
12	AL	243	A
12	AL	244	U
12	AL	247	U
12	AL	248	U
12	AL	251	G
12	AL	254	A
12	AL	255	G
12	AL	256	U
12	AL	257	A
12	AL	266	A
12	AL	267	A

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Mol	Chain	Res	Type
12	AL	268	G
12	AL	269	A
12	AL	270	G
12	AL	271	U
12	AL	272	U
12	AL	273	A
12	AL	280	G
12	AL	284	A
12	AL	285	C
12	AL	286	G
12	AL	288	U
12	AL	294	A
12	AL	298	A
12	AL	299	U
12	AL	307	G
12	AL	308	U
12	AL	311	G
12	AL	312	A
12	AL	334	U
12	AL	335	A
12	AL	337	A
12	AL	348	A
12	AL	349	U
12	AL	350	A
12	AL	351	A
12	AL	352	G
12	AL	356	C
12	AL	371	U
12	AL	376	C
12	AL	377	A
12	AL	380	G
12	AL	389	A
12	AL	392	G
12	AL	393	A
12	AL	401	A
12	AL	406	U
12	AL	409	G
12	AL	410	G
12	AL	414	A
12	AL	415	U
12	AL	479	A
12	AL	481	A

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Mol	Chain	Res	Type
12	AL	482	U
12	AL	486	U
12	AL	487	A
12	AL	488	A
12	AL	489	A
12	AL	492	G
12	AL	495	U
12	AL	496	A
12	AL	497	A
12	AL	498	A
12	AL	501	U
12	AL	502	A
12	AL	507	C
12	AL	508	C
12	AL	509	A
12	AL	510	U
12	AL	511	A
12	AL	518	U
12	AL	519	A
12	AL	523	U
12	AL	524	A
12	AL	529	U
12	AL	531	U
12	AL	532	U
12	AL	533	A
12	AL	537	A
12	AL	538	C
12	AL	539	C
12	AL	541	U
12	AL	544	A
12	AL	545	U
12	AL	552	A
12	AL	553	U
12	AL	556	G
12	AL	557	G
12	AL	558	A
12	AL	601	U
12	AL	602	A
12	AL	603	U
12	AL	604	A
12	AL	606	U
12	AL	610	A

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Mol	Chain	Res	Type
12	AL	611	U
12	AL	612	A
12	AL	623	A
12	AL	624	U
12	AL	625	A
12	AL	629	G
12	AL	632	C
12	AL	633	C
12	AL	638	G
12	AL	641	G
12	AL	644	G
12	AL	645	U
12	AL	646	A
12	AL	647	A
12	AL	648	C
12	AL	651	A
12	AL	655	A
12	AL	656	G
12	AL	661	A
12	AL	668	A
12	AL	669	U
12	AL	673	A
12	AL	674	A
12	AL	676	G
12	AL	682	A
12	AL	683	A
12	AL	684	G
12	AL	685	G
12	AL	686	A
12	AL	687	U
12	AL	694	A
12	AL	696	U
12	AL	698	A
12	AL	704	A
12	AL	709	A
12	AL	711	A
12	AL	715	U
12	AL	716	A
12	AL	717	G
12	AL	720	U
12	AL	727	A
12	AL	728	A

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Mol	Chain	Res	Type
12	AL	729	U
12	AL	740	A
12	AL	741	A
12	AL	746	A
12	AL	747	A
12	AL	751	U
12	AL	752	A
12	AL	753	A
12	AL	755	G
12	AL	760	A
12	AL	761	A
12	AL	762	U
12	AL	763	A
12	AL	764	A
12	AL	765	U
12	AL	767	A
12	AL	768	U
12	AL	769	A
12	AL	770	A
12	AL	774	U
12	AL	775	U
12	AL	780	G
12	AL	783	U
12	AL	784	A
12	AL	788	U
12	AL	789	A
12	AL	791	G
12	AL	793	G
12	AL	794	A
12	AL	796	A
12	AL	797	A
12	AL	798	U
12	AL	799	A
12	AL	800	U
12	AL	809	U
12	AL	817	G
12	AL	820	A
12	AL	822	U
12	AL	823	G
12	AL	836	U
12	AL	839	A
12	AL	853	U

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Mol	Chain	Res	Type
12	AL	859	A
12	AL	870	U
12	AL	874	G
12	AL	877	G
12	AL	878	U
12	AL	880	A
12	AL	882	C
12	AL	891	C
12	AL	892	A
12	AL	898	U
12	AL	899	U
12	AL	900	A
12	AL	912	A
12	AL	913	U
12	AL	914	A
12	AL	915	U
12	AL	916	A
12	AL	917	U
12	AL	918	A
12	AL	923	A
12	AL	924	U
12	AL	931	A
12	AL	933	A
12	AL	934	U
12	AL	936	A
12	AL	937	A
12	AL	938	A
12	AL	949	U
12	AL	950	G
12	AL	952	A
12	AL	972	A
12	AL	979	A
12	AL	986	A
12	AL	987	G
12	AL	991	G
12	AL	992	U
12	AL	993	U
12	AL	995	C
12	AL	999	C
12	AL	1000	U
12	AL	1003	A
12	AL	1016	G

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Mol	Chain	Res	Type
12	AL	1025	U
12	AL	1026	U
12	AL	1030	U
12	AL	1031	A
12	AL	1034	C
12	AL	1036	A
12	AL	1038	G
12	AL	1039	A
12	AL	1041	U
12	AL	1042	A
12	AL	1046	U
12	AL	1049	C
12	AL	1057	U
12	AL	1058	G
12	AL	1059	A
12	AL	1063	U
12	AL	1064	U
12	AL	1066	U
12	AL	1067	A
12	AL	1068	A
12	AL	1071	A
12	AL	1072	U
12	AL	1073	U
12	AL	1074	A
12	AL	1080	A
12	AL	1081	U
12	AL	1085	U
12	AL	1086	A
12	AL	1088	A
12	AL	1091	A
12	AL	1102	A
12	AL	1111	U
12	AL	1112	U
12	AL	1113	U
12	AL	1132	U
12	AL	1133	U
12	AL	1134	A
12	AL	1135	G
12	AL	1136	A
12	AL	1141	G
12	AL	1142	U
12	AL	1148	A

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Mol	Chain	Res	Type
12	AL	1155	A
12	AL	1172	A
12	AL	1173	U
12	AL	1175	U
12	AL	1176	U
12	AL	1177	A
12	AL	1178	A
12	AL	1179	U
12	AL	1182	U
12	AL	1183	A
12	AL	1188	A
12	AL	1189	U
12	AL	1196	U
12	AL	1198	A
12	AL	1199	U
12	AL	1205	A
12	AL	1207	U
12	AL	1210	A
12	AL	1212	A
12	AL	1213	G
12	AL	1214	A
12	AL	1215	A
12	AL	1216	A
12	AL	1217	G
12	AL	1228	A
12	AL	1229	A
12	AL	1233	A
12	AL	1234	U
12	AL	1236	A
12	AL	1241	C
12	AL	1245	A
12	AL	1246	U
12	AL	1256	A
12	AL	1257	A
12	AL	1258	U
12	AL	1259	A
12	AL	1265	G
12	AL	1270	A
12	AL	1271	A
12	AL	1272	U
12	AL	1273	A
12	AL	1274	A

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Mol	Chain	Res	Type
12	AL	1276	A
12	AL	1279	A
12	AL	1280	U
12	AL	1281	A
12	AL	1284	A
12	AL	1285	A
12	AL	1288	U
12	AL	1289	U
12	AL	1290	A
12	AL	1291	U
12	AL	1293	U
12	AL	1294	A
12	AL	1297	A
12	AL	1298	U
12	AL	1302	U
12	AL	1303	U
12	AL	1304	U
12	AL	1305	A
12	AL	1314	U
12	AL	1315	A
12	AL	1320	A
12	AL	1322	A
12	AL	1326	U
12	AL	1335	U
12	AL	1338	A
12	AL	1339	U
12	AL	1341	U
12	AL	1343	U
12	AL	1344	A
12	AL	1345	A
12	AL	1347	A
12	AL	1350	U
12	AL	1351	U
12	AL	1353	U
12	AL	1354	U
12	AL	1362	A
12	AL	1368	A
12	AL	1369	U
12	AL	1373	A
12	AL	1374	A
12	AL	1376	U
12	AL	1385	A

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Mol	Chain	Res	Type
12	AL	1386	A
12	AL	1387	A
12	AL	1388	U
12	AL	1390	C
12	AL	1391	G
12	AL	1403	A
12	AL	1413	U
12	AL	1422	G
12	AL	1426	A
12	AL	1429	A
12	AL	1431	U
12	AL	1437	A
12	AL	1443	A
12	AL	1444	A
12	AL	1447	U
12	AL	1448	U
12	AL	1449	C
12	AL	1452	A
12	AL	1455	G
12	AL	1462	A
12	AL	1463	C
12	AL	1464	U
12	AL	1465	A
12	AL	1466	A
12	AL	1467	U
12	AL	1468	C
12	AL	1487	C
12	AL	1495	U
12	AL	1497	U
12	AL	1501	A
12	AL	1505	U
12	AL	1507	U
12	AL	1511	U
12	AL	1512	A
12	AL	1513	A
12	AL	1516	U
12	AL	1517	U
12	AL	1518	U
12	AL	1520	U
12	AL	1522	A
12	AL	1523	A
12	AL	1524	U

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Mol	Chain	Res	Type
12	AL	1526	A
12	AL	1537	U
12	AL	1538	U
12	AL	1539	A
12	AL	1540	U
12	AL	1543	A
12	AL	1547	A
12	AL	1548	U
12	AL	1556	U
12	AL	1574	A
12	AL	1584	A
12	AL	1585	A
12	AL	1586	G
12	AL	1595	C
12	AL	1596	A
12	AL	1597	G
12	AL	1598	U
12	AL	1609	G
12	AL	1610	A
12	AL	1611	A
12	AL	1612	C
12	AL	1621	G
12	AL	1622	G
12	AL	1624	U
12	AL	1628	A
12	AL	1629	A
12	AL	1630	A
12	AL	1633	U
12	AL	1636	U
12	AL	1637	A
12	AL	1640	U
12	AL	1646	U
12	AL	1647	A
12	AL	1648	C
12	AL	1649	A
13	AM	3	C
13	AM	4	U
13	AM	5	A
13	AM	8	U
13	AM	9	A
13	AM	10	G
13	AM	14	A

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Mol	Chain	Res	Type
13	AM	15	G
13	AM	16	U
13	AM	17	U
13	AM	18	G
13	AM	19	G
13	AM	20	U
13	AM	21	A
13	AM	22	G
13	AM	24	G
13	AM	34	C
13	AM	36	U
13	AM	42	U
13	AM	43	G
13	AM	45	G
13	AM	46	G
13	AM	47	U
13	AM	48	C
13	AM	49	A
13	AM	50	C
13	AM	52	G
13	AM	56	C
13	AM	59	A
13	AM	60	U
13	AM	61	C
13	AM	62	C
13	AM	63	C
13	AM	65	U
13	AM	66	C
13	AM	68	U
13	AM	69	A
13	AM	70	G
13	AM	72	C
13	AM	73	A
13	AM	74	C
13	AM	75	C
13	AM	76	A
14	AN	2	U
14	AN	3	G
14	AN	4	A
14	AN	5	C
14	AN	6	C
14	AN	7	C

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Mol	Chain	Res	Type
14	AN	8	A
14	AN	9	C
14	AN	10	C
14	AN	11	A
14	AN	12	A
14	AN	13	U
46	A	10	A
46	A	17	U
46	A	21	U
46	A	22	U
46	A	26	A
46	A	27	A
46	A	28	U
46	A	29	A
46	A	30	U
46	A	36	A
46	A	38	A
46	A	41	G
46	A	43	U
46	A	44	U
46	A	45	U
46	A	46	A
46	A	47	A
46	A	48	A
46	A	49	G
46	A	50	A
46	A	53	U
46	A	58	A
46	A	68	A
46	A	69	U
46	A	70	A
46	A	76	A
46	A	77	U
46	A	85	A
46	A	93	U
46	A	94	A
46	A	95	A
46	A	106	A
46	A	117	U
46	A	119	A
46	A	120	U
46	A	122	A

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Mol	Chain	Res	Type
46	A	124	U
46	A	128	U
46	A	133	A
46	A	134	U
46	A	135	U
46	A	136	A
46	A	149	A
46	A	150	A
46	A	151	A
46	A	152	G
46	A	153	G
46	A	155	A
46	A	161	U
46	A	162	U
46	A	163	A
46	A	165	A
46	A	166	U
46	A	167	U
46	A	171	A
46	A	174	G
46	A	177	A
46	A	178	U
46	A	201	A
46	A	203	U
46	A	204	A
46	A	205	A
46	A	207	U
46	A	209	U
46	A	212	A
46	A	214	A
46	A	216	U
46	A	217	A
46	A	218	A
46	A	219	U
46	A	220	A
46	A	221	A
46	A	236	A
46	A	239	A
46	A	244	A
46	A	245	G
46	A	255	G
46	A	256	A

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Mol	Chain	Res	Type
46	A	261	A
46	A	262	A
46	A	264	U
46	A	266	A
46	A	268	C
46	A	269	A
46	A	270	G
46	A	283	U
46	A	288	G
46	A	292	G
46	A	301	A
46	A	302	U
46	A	307	G
46	A	308	U
46	A	310	U
46	A	311	A
46	A	312	A
46	A	314	A
46	A	316	G
46	A	321	A
46	A	327	A
46	A	329	A
46	A	330	A
46	A	331	A
46	A	332	A
46	A	337	A
46	A	341	A
46	A	342	A
46	A	343	U
46	A	348	U
46	A	349	A
46	A	350	A
46	A	359	A
46	A	365	A
46	A	372	A
46	A	380	G
46	A	382	A
46	A	383	U
46	A	384	A
46	A	387	A
46	A	388	A
46	A	401	A

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Mol	Chain	Res	Type
46	A	420	U
46	A	423	A
46	A	425	A
46	A	426	A
46	A	427	G
46	A	428	C
46	A	429	A
46	A	430	A
46	A	435	G
46	A	442	U
46	A	443	U
46	A	445	U
46	A	447	U
46	A	454	A
46	A	455	A
46	A	462	A
46	A	472	U
46	A	474	A
46	A	479	U
46	A	485	A
46	A	496	U
46	A	502	A
46	A	503	A
46	A	507	A
46	A	508	U
46	A	509	A
46	A	516	A
46	A	518	A
46	A	520	A
46	A	526	A
46	A	527	A
46	A	528	U
46	A	529	A
46	A	530	A
46	A	531	U
46	A	532	A
46	A	547	A
46	A	552	A
46	A	562	U
46	A	563	U
46	A	564	A
46	A	565	A

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Mol	Chain	Res	Type
46	A	577	U
46	A	578	G
46	A	579	A
46	A	586	A
46	A	592	C
46	A	594	A
46	A	595	U
46	A	600	C
46	A	607	A
46	A	609	G
46	A	614	A
46	A	615	U
46	A	616	A
46	A	617	A
46	A	618	A
46	A	619	C
46	A	621	A
46	A	627	C
46	A	629	G
46	A	637	U
46	A	638	U
46	A	643	U
46	A	644	A
46	A	655	A
46	A	665	A
46	A	667	U
46	A	673	A
46	A	675	G
46	A	681	U
46	A	682	C
46	A	683	U
46	A	684	G
46	A	692	G
46	A	696	G
46	A	702	U
46	A	703	U
46	A	710	A
46	A	718	G
46	A	719	U
46	A	721	A
46	A	722	G
46	A	726	A

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Mol	Chain	Res	Type
46	A	734	U
46	A	735	A
46	A	736	A
46	A	737	A
46	A	747	U
46	A	767	A
46	A	768	U
46	A	769	U
46	A	776	A
46	A	777	G
46	A	778	A
46	A	781	G
46	A	782	G
46	A	788	C
46	A	789	A
46	A	790	A
46	A	793	A
46	A	796	A
46	A	797	U
46	A	798	A
46	A	799	U
46	A	800	A
46	A	801	U
46	A	803	A
46	A	804	G
46	A	808	A
46	A	820	U
46	A	825	A
46	A	835	A
46	A	836	A
46	A	840	C
46	A	841	G
46	A	843	A
46	A	856	A
46	A	857	U
46	A	858	A
46	A	864	A
46	A	865	A
46	A	867	A
46	A	872	G
46	A	874	U
46	A	879	U

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Mol	Chain	Res	Type
46	A	883	A
46	A	884	U
46	A	887	G
46	A	891	A
46	A	899	A
46	A	900	A
46	A	908	C
46	A	911	C
46	A	915	G
46	A	916	A
46	A	917	U
46	A	918	U
46	A	919	A
46	A	920	A
46	A	925	U
46	A	929	G
46	A	933	C
46	A	942	A
46	A	943	A
46	A	947	G
46	A	948	U
46	A	951	A
46	A	952	A
46	A	954	A
46	A	955	A
46	A	961	A
46	A	962	A
46	A	966	A
46	A	968	U
46	A	969	A
46	A	970	U
46	A	971	A
46	A	972	A
46	A	973	U
46	A	976	A
46	A	977	A
46	A	978	U
46	A	979	C
46	A	983	U
46	A	984	C
46	A	991	U
46	A	992	U

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Mol	Chain	Res	Type
46	A	1001	C
46	A	1006	U
46	A	1007	U
46	A	1008	U
46	A	1009	U
46	A	1010	A
46	A	1011	A
46	A	1012	U
46	A	1013	G
46	A	1014	A
46	A	1015	A
46	A	1016	C
46	A	1017	A
46	A	1018	U
46	A	1019	G
46	A	1020	U
46	A	1021	A
46	A	1024	A
46	A	1025	A
46	A	1026	U
46	A	1028	C
46	A	1029	A
46	A	1030	C
46	A	1035	U
46	A	1036	U
46	A	1041	U
46	A	1043	A
46	A	1044	A
46	A	1045	U
46	A	1046	A
46	A	1047	A
46	A	1048	A
46	A	1049	A
46	A	1050	A
46	A	1051	A
46	A	1052	A
46	A	1053	U
46	A	1055	A
46	A	1056	A
46	A	1058	U
46	A	1059	A
46	A	1060	U

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Mol	Chain	Res	Type
46	A	1062	U
46	A	1065	A
46	A	1074	U
46	A	1075	A
46	A	1076	U
46	A	1077	A
46	A	1078	U
46	A	1079	A
46	A	1080	U
46	A	1086	U
46	A	1087	U
46	A	1088	A
46	A	1094	U
46	A	1095	A
46	A	1096	A
46	A	1097	U
46	A	1101	C
46	A	1105	U
46	A	1109	A
46	A	1110	A
46	A	1111	U
46	A	1112	A
46	A	1113	A
46	A	1114	U
46	A	1115	A
46	A	1116	A
46	A	1118	A
46	A	1119	A
46	A	1127	A
46	A	1138	G
46	A	1139	G
46	A	1140	A
46	A	1145	U
46	A	1151	U
46	A	1169	A
46	A	1170	U
46	A	1171	A
46	A	1176	A
46	A	1182	A
46	A	1184	A
46	A	1190	U
46	A	1191	U

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Mol	Chain	Res	Type
46	A	1192	A
46	A	1206	A
46	A	1207	A
46	A	1242	A
46	A	1243	U
46	A	1244	A
46	A	1255	A
46	A	1256	U
46	A	1257	U
46	A	1258	A
46	A	1263	A
46	A	1267	A
46	A	1269	G
46	A	1271	A
46	A	1272	U
46	A	1273	U
46	A	1278	A
46	A	1280	A
46	A	1281	U
46	A	1286	A
46	A	1287	A
46	A	1289	G
46	A	1304	G
46	A	1305	A
46	A	1306	A
46	A	1308	A
46	A	1311	A
46	A	1313	G
46	A	1314	U
46	A	1315	A
46	A	1316	U
46	A	1317	A
46	A	1318	A
46	A	1331	A
46	A	1332	A
46	A	1333	A
46	A	1337	U
46	A	1342	U
46	A	1345	A
46	A	1346	A
46	A	1350	U
46	A	1352	A

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Mol	Chain	Res	Type
46	A	1358	C
46	A	1365	U
46	A	1370	A
46	A	1371	A
46	A	1374	U
46	A	1386	A
46	A	1389	U
46	A	1399	A
46	A	1400	U
46	A	1406	A
46	A	1407	A
46	A	1408	U
46	A	1410	U
46	A	1411	A
46	A	1412	U
46	A	1424	U
46	A	1426	U
46	A	1428	U
46	A	1429	C
46	A	1438	U
46	A	1439	A
46	A	1440	U
46	A	1482	A
46	A	1484	U
46	A	1485	A
46	A	1487	A
46	A	1488	U
46	A	1490	A
46	A	1491	U
46	A	1492	A
46	A	1493	U
46	A	1494	A
46	A	1498	U
46	A	1499	A
46	A	1500	U
46	A	1501	A
46	A	1507	U
46	A	1508	A
46	A	1509	U
46	A	1510	A
46	A	1515	A
46	A	1516	U

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Mol	Chain	Res	Type
46	A	1517	A
46	A	1519	A
46	A	1523	A
46	A	1524	U
46	A	1528	G
46	A	1531	C
46	A	1532	A
46	A	1534	G
46	A	1536	A
46	A	1542	U
46	A	1547	U
46	A	1548	A
46	A	1549	U
46	A	1552	C
46	A	1558	G
46	A	1559	U
46	A	1560	A
46	A	1563	C
46	A	1564	C
46	A	1568	U
46	A	1569	C
46	A	1570	A
46	A	1579	A
46	A	1582	A
46	A	1583	G
46	A	1586	A
46	A	1592	A
46	A	1596	U
46	A	1597	G
46	A	1598	A
46	A	1600	U
46	A	1605	U
46	A	1606	A
46	A	1611	A
46	A	1618	G
46	A	1619	G
46	A	1626	G
46	A	1627	C
46	A	1632	A
46	A	1633	U
46	A	1634	A
46	A	1635	G

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Mol	Chain	Res	Type
46	A	1636	C
46	A	1639	A
46	A	1648	U
46	A	1649	C
46	A	1653	A
46	A	1655	A
46	A	1662	U
46	A	1664	A
46	A	1666	A
46	A	1667	A
46	A	1671	A
46	A	1672	G
46	A	1679	A
46	A	1680	A
46	A	1687	A
46	A	1688	C
46	A	1689	U
46	A	1698	C
46	A	1706	G
46	A	1707	C
46	A	1708	A
46	A	1709	G
46	A	1710	A
46	A	1712	A
46	A	1715	A
46	A	1716	U
46	A	1717	A
46	A	1724	A
46	A	1727	A
46	A	1728	U
46	A	1734	G
46	A	1741	C
46	A	1742	U
46	A	1747	C
46	A	1750	G
46	A	1756	U
46	A	1757	A
46	A	1761	A
46	A	1764	U
46	A	1765	A
46	A	1767	A
46	A	1770	U

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Mol	Chain	Res	Type
46	A	1771	A
46	A	1775	A
46	A	1778	G
46	A	1779	A
46	A	1781	A
46	A	1782	A
46	A	1783	U
46	A	1785	U
46	A	1786	A
46	A	1789	U
46	A	1790	A
46	A	1797	G
46	A	1803	U
46	A	1807	A
46	A	1813	A
46	A	1814	U
46	A	1815	U
46	A	1818	G
46	A	1819	A
46	A	1825	A
46	A	1829	U
46	A	1830	G
46	A	1831	U
46	A	1833	G
46	A	1836	A
46	A	1837	A
46	A	1838	A
46	A	1843	U
46	A	1851	U
46	A	1855	U
46	A	1863	C
46	A	1864	G
46	A	1865	C
46	A	1866	A
46	A	1867	U
46	A	1869	A
46	A	1870	A
46	A	1871	U
46	A	1872	G
46	A	1873	A
46	A	1877	A
46	A	1882	U

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Mol	Chain	Res	Type
46	A	1891	U
46	A	1893	U
46	A	1894	C
46	A	1896	C
46	A	1897	C
46	A	1909	A
46	A	1920	A
46	A	1923	C
46	A	1930	A
46	A	1931	A
46	A	1932	G
46	A	1933	A
46	A	1943	C
46	A	1952	A
46	A	1955	C
46	A	1956	G
46	A	1959	A
46	A	1960	A
46	A	1961	G
46	A	1963	C
46	A	1965	C
46	A	1967	A
46	A	1968	U
46	A	1969	G
46	A	1989	U
46	A	1991	G
46	A	1992	A
46	A	1995	G
46	A	1996	A
46	A	2003	G
46	A	2007	A
46	A	2009	U
46	A	2010	A
46	A	2011	U
46	A	2013	G
46	A	2014	U
46	A	2015	C
46	A	2016	A
46	A	2017	G
46	A	2018	C
46	A	2019	A
46	A	2020	U

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Mol	Chain	Res	Type
46	A	2021	A
46	A	2022	U
46	A	2023	U
46	A	2024	A
46	A	2026	G
46	A	2027	U
46	A	2029	A
46	A	2030	U
46	A	2033	U
46	A	2034	A
46	A	2035	U
46	A	2036	U
46	A	2037	A
46	A	2038	U
46	A	2039	U
46	A	2040	A
46	A	2041	G
46	A	2042	G
46	A	2043	U
46	A	2044	A
46	A	2045	A
46	A	2046	U
46	A	2047	C
46	A	2048	G
46	A	2049	U
46	A	2050	U
46	A	2051	U
46	A	2052	A
46	A	2053	G
46	A	2054	A
46	A	2055	U
46	A	2056	A
46	A	2057	U
46	A	2058	U
46	A	2059	A
46	A	2060	A
46	A	2061	U
46	A	2062	G
46	A	2063	A
46	A	2064	G
46	A	2066	U
46	A	2067	A

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Mol	Chain	Res	Type
46	A	2068	C
46	A	2069	U
46	A	2071	A
46	A	2072	U
46	A	2073	U
46	A	2074	A
46	A	2075	U
46	A	2076	A
46	A	2077	A
46	A	2078	U
46	A	2079	A
46	A	2080	U
46	A	2082	A
46	A	2084	G
46	A	2085	A
46	A	2086	U
46	A	2093	A
46	A	2184	C
46	A	2204	A
46	A	2205	G
46	A	2212	A
46	A	2213	U
46	A	2215	A
46	A	2216	U
46	A	2219	A
46	A	2220	U
46	A	2229	U
46	A	2231	U
46	A	2232	A
46	A	2251	A
46	A	2252	C
46	A	2263	U
46	A	2264	G
46	A	2265	G
46	A	2272	U
46	A	2275	U
46	A	2276	G
46	A	2277	G
46	A	2280	C
46	A	2295	A
46	A	2301	C
46	A	2304	A

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Mol	Chain	Res	Type
46	A	2305	A
46	A	2306	U
46	A	2309	G
46	A	2310	U
46	A	2316	A
46	A	2317	A
46	A	2319	A
46	A	2321	A
46	A	2322	U
46	A	2323	A
46	A	2324	U
46	A	2325	A
46	A	2332	U
46	A	2333	A
46	A	2347	A
46	A	2348	A
46	A	2349	A
46	A	2350	U
46	A	2356	A
46	A	2358	A
46	A	2359	U
46	A	2360	U
46	A	2361	A
46	A	2362	U
46	A	2363	A
46	A	2364	U
46	A	2365	A
46	A	2372	U
46	A	2373	U
46	A	2374	A
46	A	2376	A
46	A	2379	U
46	A	2380	U
46	A	2381	G
46	A	2389	U
46	A	2390	U
46	A	2392	A
46	A	2414	U
46	A	2418	U
46	A	2422	A
46	A	2424	U
46	A	2425	A

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Mol	Chain	Res	Type
46	A	2426	A
46	A	2427	U
46	A	2430	A
46	A	2431	U
46	A	2432	A
46	A	2433	A
46	A	2436	A
46	A	2437	U
46	A	2438	A
46	A	2439	U
46	A	2446	U
46	A	2447	A
46	A	2453	G
46	A	2455	A
46	A	2458	G
46	A	2461	A
46	A	2462	A
46	A	2463	C
46	A	2469	U
46	A	2470	A
46	A	2472	C
46	A	2574	G
46	A	2575	A
46	A	2580	A
46	A	2586	U
46	A	2587	U
46	A	2588	A
46	A	2589	A
46	A	2590	U
46	A	2591	A
46	A	2599	A
46	A	2600	U
46	A	2601	A
46	A	2603	C
46	A	2611	U
46	A	2612	A
46	A	2614	U
46	A	2617	U
46	A	2618	A
46	A	2621	A
46	A	2640	A
46	A	2646	G

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Mol	Chain	Res	Type
46	A	2650	G
46	A	2652	C
46	A	2656	A
46	A	2660	A
46	A	2662	A
46	A	2664	A
46	A	2666	A
46	A	2669	A
46	A	2670	C
46	A	2672	G
46	A	2673	A
46	A	2674	U
46	A	2677	U
46	A	2691	A
46	A	2695	A
46	A	2696	A
46	A	2701	A
46	A	2705	A
46	A	2707	G
46	A	2711	G
46	A	2713	G
46	A	2714	A
46	A	2715	U
46	A	2716	A
46	A	2717	A
46	A	2718	C
46	A	2727	A
46	A	2734	A
46	A	2735	A
46	A	2738	G
46	A	2740	A
46	A	2741	G
46	A	2742	A
46	A	2744	A
46	A	2747	G
46	A	2748	U
46	A	2753	U
46	A	2756	G
46	A	2757	U
46	A	2758	U
46	A	2760	G
46	A	2764	C

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Mol	Chain	Res	Type
46	A	2766	U
46	A	2767	C
46	A	2768	G
46	A	2769	A
46	A	2770	U
46	A	2771	G
46	A	2772	U
46	A	2773	C
46	A	2779	A
46	A	2784	U
46	A	2785	U
46	A	2786	C
46	A	2795	U
46	A	2796	G
46	A	2797	U
46	A	2798	A
46	A	2800	A
46	A	2802	G
46	A	2814	U
46	A	2815	U
46	A	2817	A
46	A	2821	U
46	A	2828	A
46	A	2829	U
46	A	2833	A
46	A	2834	A
46	A	2838	U
46	A	2839	A
46	A	2840	C
46	A	2841	G
46	A	2843	G
46	A	2844	A
46	A	2848	G
46	A	2849	G
46	A	2850	G
46	A	2852	U
46	A	2853	A
46	A	2869	A
46	A	2870	G
46	A	2876	U
46	A	2877	U
46	A	2878	C

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Mol	Chain	Res	Type
46	A	2880	U
46	A	2890	A
46	A	2894	A
46	A	2896	U
46	A	2897	A
46	A	2898	U
46	A	2906	U
46	A	2912	C
46	A	2913	U
46	A	2918	A
46	A	2925	C
46	A	2928	A
46	A	2929	A
46	A	2930	G
46	A	2931	G
46	A	2939	U
46	A	2940	G
46	A	2950	A
46	A	2951	U
46	A	2956	U
46	A	2957	A
46	A	2968	A
46	A	2979	U
46	A	2980	A
46	A	2981	U
46	A	2982	U
46	A	2983	U
46	A	3003	U
46	A	3006	U
46	A	3013	U
46	A	3014	C
46	A	3018	A
46	A	3019	U
46	A	3020	U
46	A	3021	A
46	A	3032	U
46	A	3034	A
46	A	3042	U
46	A	3043	U
46	A	3044	A
46	A	3048	U
46	A	3049	A

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Mol	Chain	Res	Type
46	A	3050	G
46	A	3061	A
46	A	3062	A
46	A	3067	A
46	A	3069	A
46	A	3076	A
46	A	3080	A
46	A	3092	U
46	A	3093	U
46	A	3094	A
46	A	3098	A
46	A	3102	A
46	A	3103	G
46	A	3106	G
46	A	3121	U
46	A	3122	U
46	A	3123	A
46	A	3124	A
46	A	3125	U
46	A	3126	C
46	A	3136	U
46	A	3137	A
46	A	3138	U
46	A	3139	A
46	A	3141	U
46	A	3148	A
46	A	3149	A
46	A	3150	U
46	A	3151	A
46	A	3152	A
46	A	3153	U
46	A	3154	U
46	A	3169	U
46	A	3171	A
46	A	3172	U
46	A	3174	U
46	A	3177	A
46	A	3231	A
46	A	3232	U
46	A	3233	A
46	A	3234	A
46	A	3235	U

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Mol	Chain	Res	Type
46	A	3236	A
46	A	3244	A
46	A	3248	C
46	A	3251	A
46	A	3252	U
46	A	3253	U
46	A	3256	U
46	A	3257	C
46	A	3261	U
46	A	3262	A
46	A	3274	U
46	A	3280	C
46	A	3288	C
46	A	3289	U
46	A	3291	U
46	A	3292	A
46	A	3293	U

All (298) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
12	AL	13	U
12	AL	44	U
12	AL	58	A
12	AL	71	A
12	AL	101	U
12	AL	109	A
12	AL	115	G
12	AL	119	A
12	AL	120	A
12	AL	122	U
12	AL	128	A
12	AL	132	A
12	AL	133	U
12	AL	136	A
12	AL	138	G
12	AL	139	A
12	AL	196	A
12	AL	218	A
12	AL	219	U
12	AL	247	U
12	AL	254	A

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Mol	Chain	Res	Type
12	AL	255	G
12	AL	271	U
12	AL	279	A
12	AL	284	A
12	AL	285	C
12	AL	286	G
12	AL	298	A
12	AL	333	A
12	AL	336	U
12	AL	349	U
12	AL	388	G
12	AL	392	G
12	AL	485	A
12	AL	488	A
12	AL	494	U
12	AL	496	A
12	AL	500	A
12	AL	501	U
12	AL	509	A
12	AL	600	A
12	AL	603	U
12	AL	610	A
12	AL	632	C
12	AL	646	A
12	AL	673	A
12	AL	682	A
12	AL	684	G
12	AL	703	U
12	AL	727	A
12	AL	739	G
12	AL	751	U
12	AL	752	A
12	AL	761	A
12	AL	767	A
12	AL	783	U
12	AL	798	U
12	AL	822	U
12	AL	898	U
12	AL	911	U
12	AL	912	A
12	AL	937	A
12	AL	949	U

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Mol	Chain	Res	Type
12	AL	971	G
12	AL	986	A
12	AL	991	G
12	AL	1071	A
12	AL	1090	U
12	AL	1177	A
12	AL	1182	U
12	AL	1195	A
12	AL	1206	A
12	AL	1244	U
12	AL	1272	U
12	AL	1303	U
12	AL	1319	A
12	AL	1340	U
12	AL	1343	U
12	AL	1352	U
12	AL	1367	A
12	AL	1430	G
12	AL	1447	U
12	AL	1462	A
12	AL	1464	U
12	AL	1465	A
12	AL	1467	U
12	AL	1512	A
12	AL	1517	U
12	AL	1538	U
12	AL	1539	A
12	AL	1556	U
12	AL	1583	G
12	AL	1584	A
12	AL	1585	A
12	AL	1595	C
12	AL	1597	G
12	AL	1632	A
13	AM	7	G
13	AM	9	A
13	AM	20	U
13	AM	42	U
13	AM	62	C
13	AM	67	G
13	AM	71	C
14	AN	2	U

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Mol	Chain	Res	Type
14	AN	3	G
14	AN	6	C
14	AN	7	C
14	AN	8	A
14	AN	9	C
14	AN	12	A
46	A	25	A
46	A	29	A
46	A	44	U
46	A	69	U
46	A	163	A
46	A	164	U
46	A	268	C
46	A	289	U
46	A	306	G
46	A	311	A
46	A	330	A
46	A	349	A
46	A	382	A
46	A	388	A
46	A	429	A
46	A	454	A
46	A	507	A
46	A	516	A
46	A	529	A
46	A	563	U
46	A	578	G
46	A	614	A
46	A	615	U
46	A	616	A
46	A	617	A
46	A	637	U
46	A	643	U
46	A	653	U
46	A	691	A
46	A	702	U
46	A	718	G
46	A	733	A
46	A	746	A
46	A	768	U
46	A	797	U
46	A	798	A

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Mol	Chain	Res	Type
46	A	800	A
46	A	857	U
46	A	883	A
46	A	915	G
46	A	951	A
46	A	954	A
46	A	970	U
46	A	972	A
46	A	976	A
46	A	978	U
46	A	1006	U
46	A	1007	U
46	A	1010	A
46	A	1013	G
46	A	1015	A
46	A	1016	C
46	A	1020	U
46	A	1023	C
46	A	1029	A
46	A	1035	U
46	A	1047	A
46	A	1048	A
46	A	1053	U
46	A	1055	A
46	A	1059	A
46	A	1062	U
46	A	1064	A
46	A	1076	U
46	A	1077	A
46	A	1078	U
46	A	1087	U
46	A	1093	A
46	A	1100	A
46	A	1114	U
46	A	1205	U
46	A	1242	A
46	A	1272	U
46	A	1280	A
46	A	1307	A
46	A	1312	G
46	A	1317	A
46	A	1331	A

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Mol	Chain	Res	Type
46	A	1349	A
46	A	1409	C
46	A	1410	U
46	A	1411	A
46	A	1428	U
46	A	1439	A
46	A	1481	A
46	A	1489	U
46	A	1492	A
46	A	1493	U
46	A	1522	A
46	A	1527	A
46	A	1547	U
46	A	1569	C
46	A	1591	G
46	A	1626	G
46	A	1632	A
46	A	1635	G
46	A	1687	A
46	A	1688	C
46	A	1706	G
46	A	1707	C
46	A	1708	A
46	A	1727	A
46	A	1770	U
46	A	1789	U
46	A	1801	A
46	A	1813	A
46	A	1814	U
46	A	1818	G
46	A	1837	A
46	A	1863	C
46	A	1892	G
46	A	1967	A
46	A	1994	C
46	A	2014	U
46	A	2016	A
46	A	2022	U
46	A	2026	G
46	A	2033	U
46	A	2034	A
46	A	2036	U

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Mol	Chain	Res	Type
46	A	2039	U
46	A	2043	U
46	A	2044	A
46	A	2048	G
46	A	2049	U
46	A	2053	G
46	A	2054	A
46	A	2056	A
46	A	2057	U
46	A	2058	U
46	A	2065	A
46	A	2066	U
46	A	2072	U
46	A	2077	A
46	A	2079	A
46	A	2204	A
46	A	2251	A
46	A	2276	G
46	A	2279	G
46	A	2309	G
46	A	2316	A
46	A	2324	U
46	A	2357	U
46	A	2359	U
46	A	2361	A
46	A	2373	U
46	A	2378	A
46	A	2423	G
46	A	2424	U
46	A	2437	U
46	A	2446	U
46	A	2469	U
46	A	2586	U
46	A	2590	U
46	A	2599	A
46	A	2600	U
46	A	2610	A
46	A	2613	A
46	A	2713	G
46	A	2716	A
46	A	2717	A
46	A	2734	A

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Mol	Chain	Res	Type
46	A	2740	A
46	A	2757	U
46	A	2767	C
46	A	2768	G
46	A	2771	G
46	A	2772	U
46	A	2839	A
46	A	2843	G
46	A	2848	G
46	A	2868	C
46	A	2876	U
46	A	2956	U
46	A	2979	U
46	A	3018	A
46	A	3048	U
46	A	3061	A
46	A	3068	U
46	A	3122	U
46	A	3124	A
46	A	3125	U
46	A	3135	U
46	A	3150	U
46	A	3171	A
46	A	3234	A
46	A	3252	U

5.4 Non-standard residues in protein, DNA, RNA chains

There are no non-standard protein/DNA/RNA residues in this entry.

5.5 Carbohydrates

There are no oligosaccharides in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

The following chains have linkage breaks:

Mol	Chain	Number of breaks
12	AL	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	AL	482:U	O3'	483:A	P	1.32

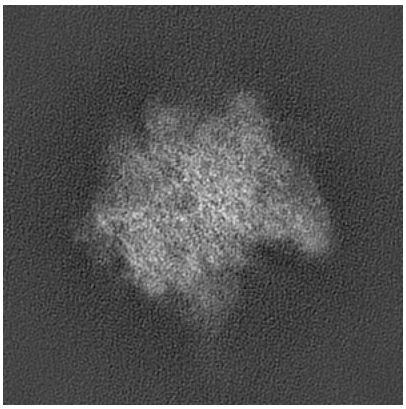
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-42720. These allow visual inspection of the internal detail of the map and identification of artifacts.

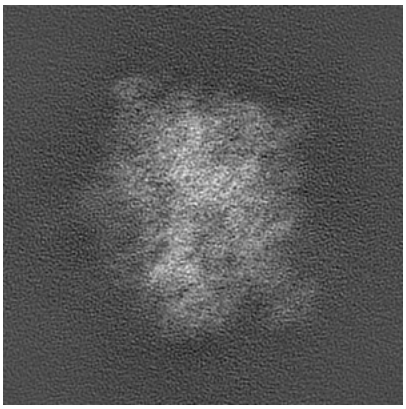
Images derived from a raw map, generated by summing the deposited half-maps, are presented below the corresponding image components of the primary map to allow further visual inspection and comparison with those of the primary map.

6.1 Orthogonal projections

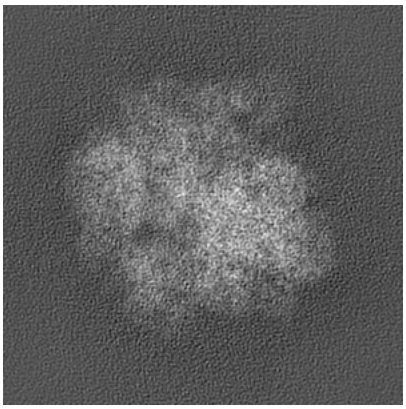
6.1.1 Primary map



X

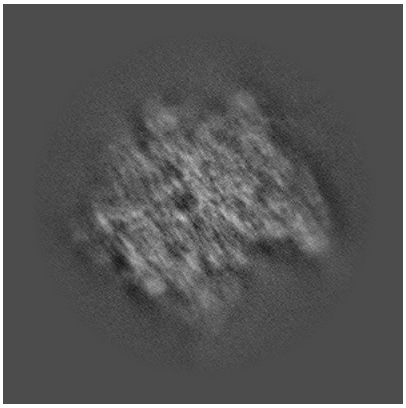


Y

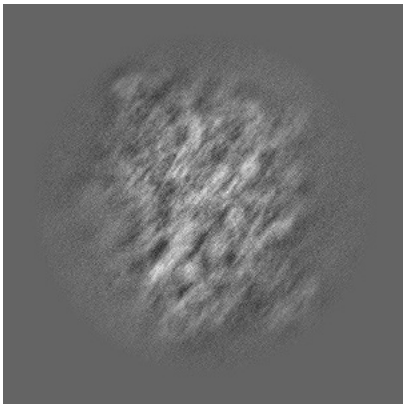


Z

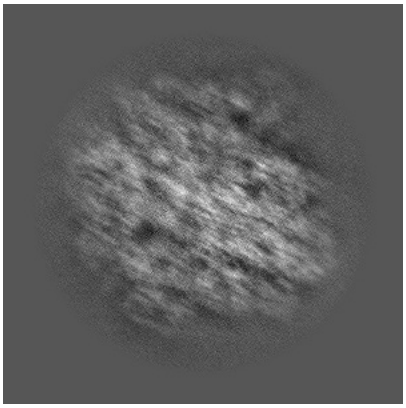
6.1.2 Raw map



X



Y

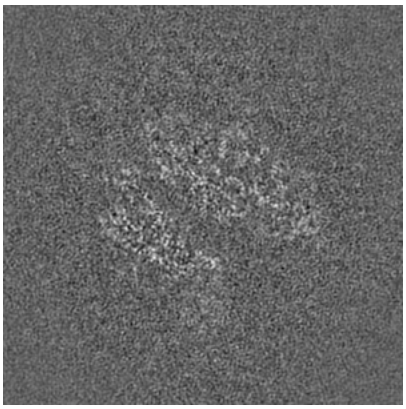


Z

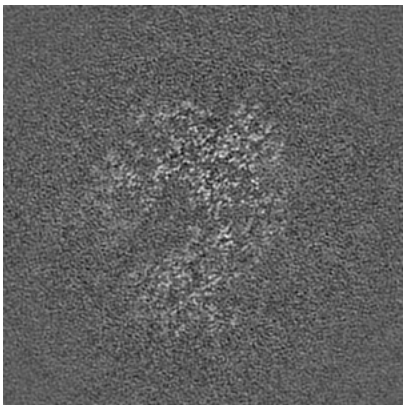
The images above show the map projected in three orthogonal directions.

6.2 Central slices (i)

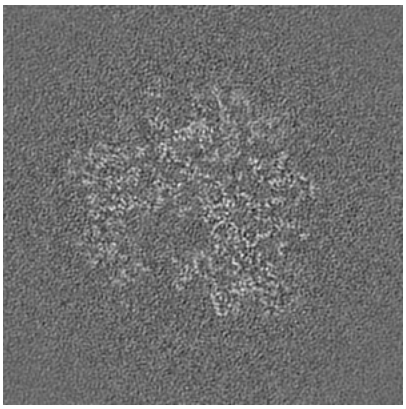
6.2.1 Primary map



X Index: 256

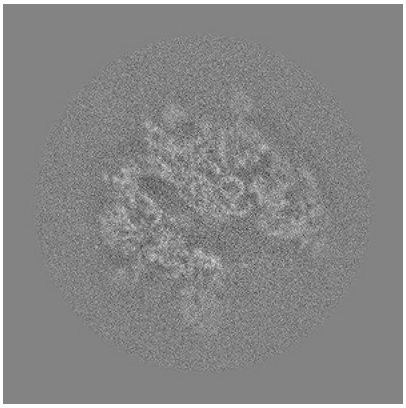


Y Index: 256

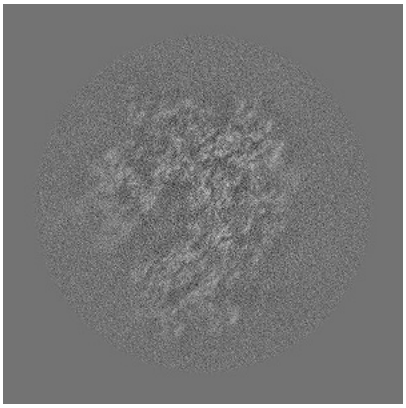


Z Index: 256

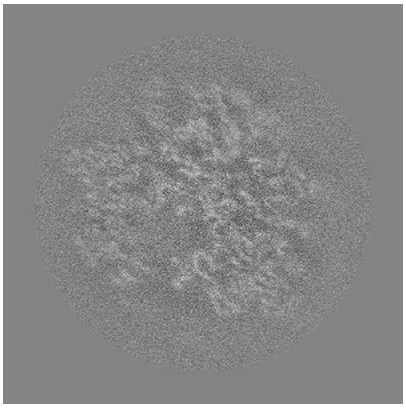
6.2.2 Raw map



X Index: 256



Y Index: 256

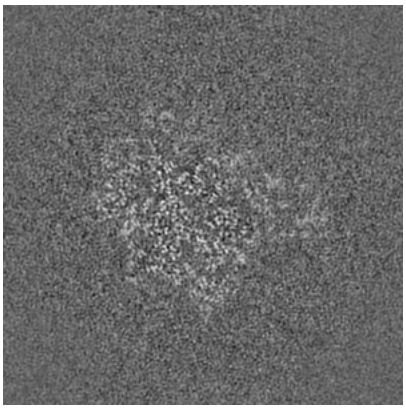


Z Index: 256

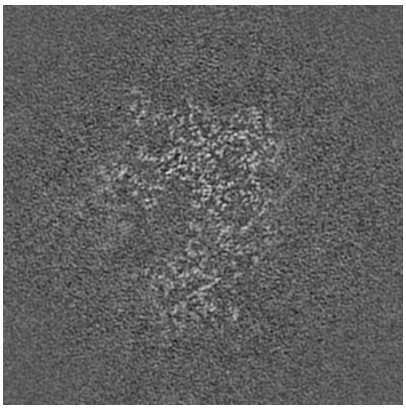
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

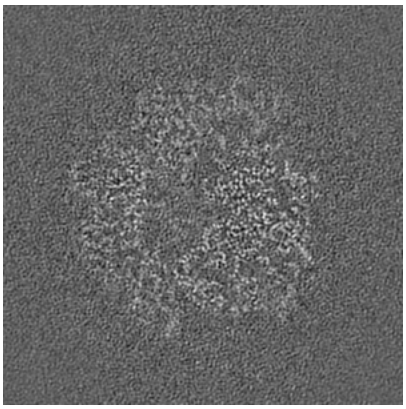
6.3.1 Primary map



X Index: 296

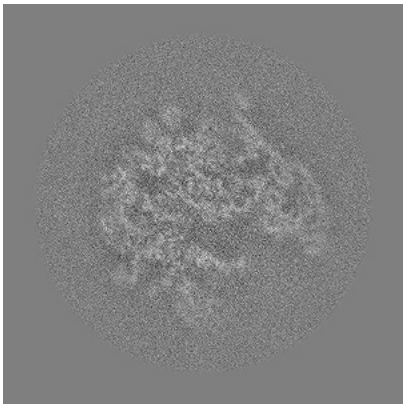


Y Index: 254

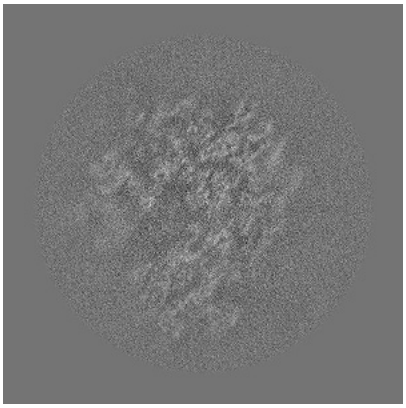


Z Index: 236

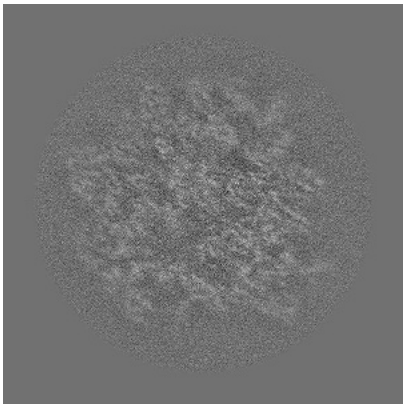
6.3.2 Raw map



X Index: 262



Y Index: 257

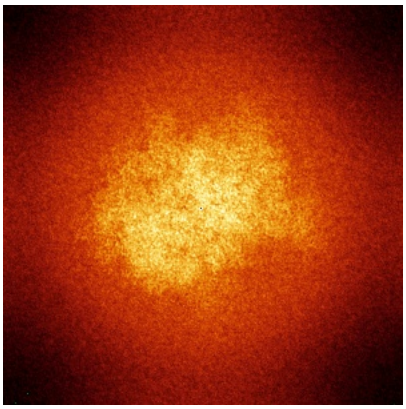


Z Index: 244

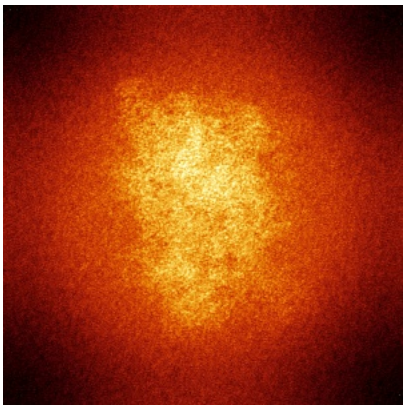
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal standard-deviation projections (False-color) (i)

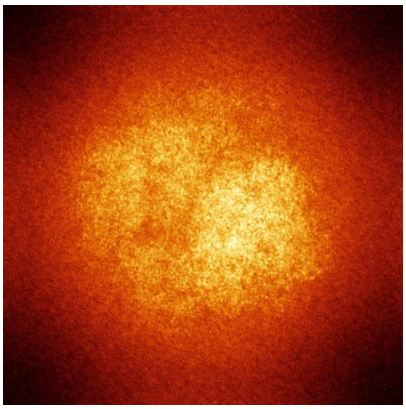
6.4.1 Primary map



X

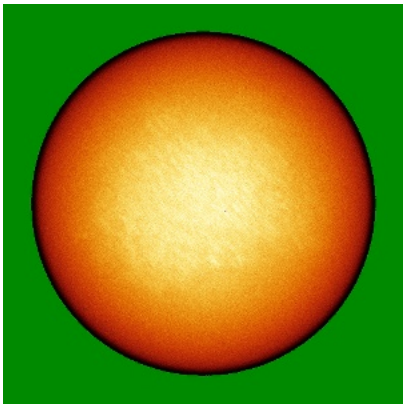


Y

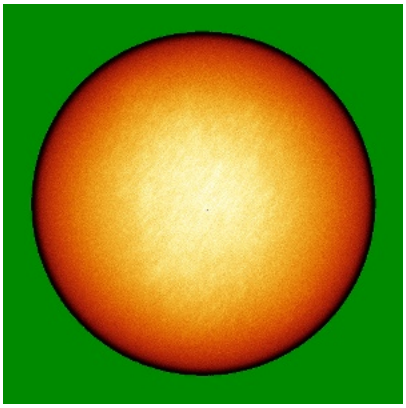


Z

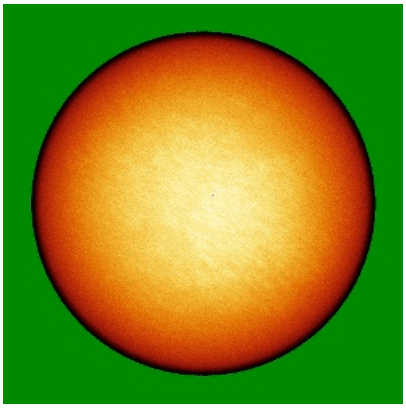
6.4.2 Raw map



X



Y

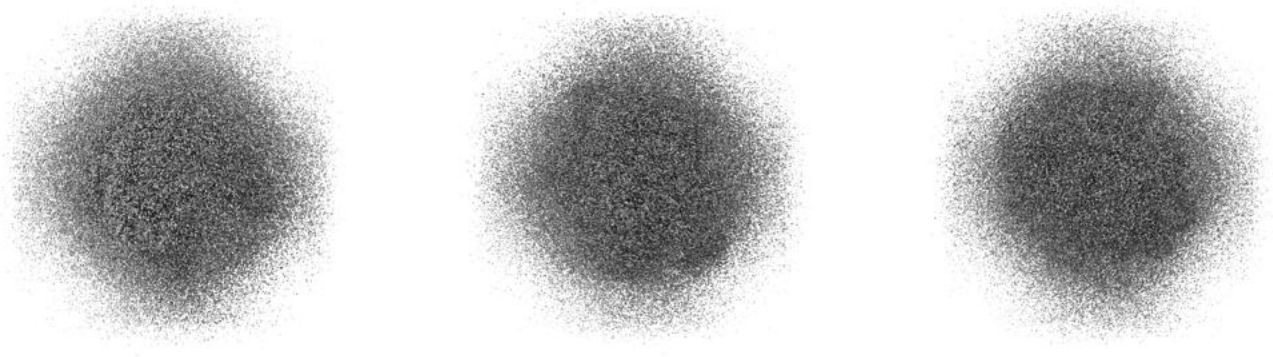


Z

The images above show the map standard deviation projections with false color in three orthogonal directions. Minimum values are shown in green, max in blue, and dark to light orange shades represent small to large values respectively.

6.5 Orthogonal surface views (i)

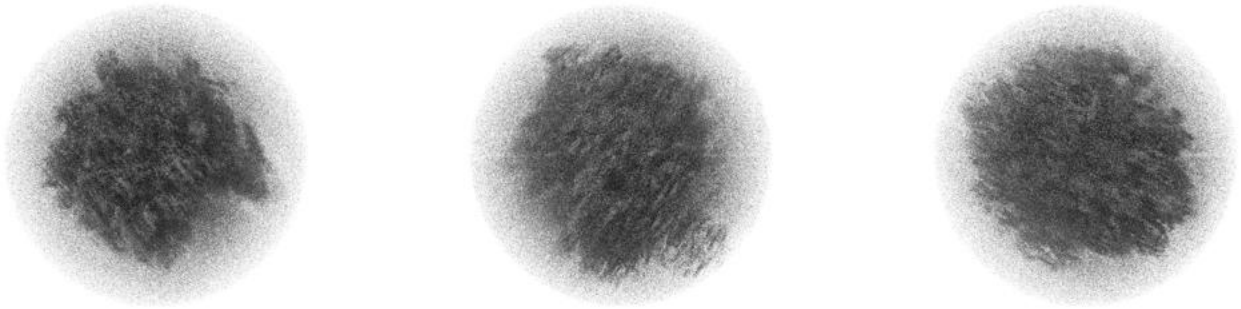
6.5.1 Primary map



X Y Z

The images above show the 3D surface view of the map at the recommended contour level 4.3. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

6.5.2 Raw map



X Y Z

These images show the 3D surface of the raw map. The raw map's contour level was selected so that its surface encloses the same volume as the primary map does at its recommended contour level.

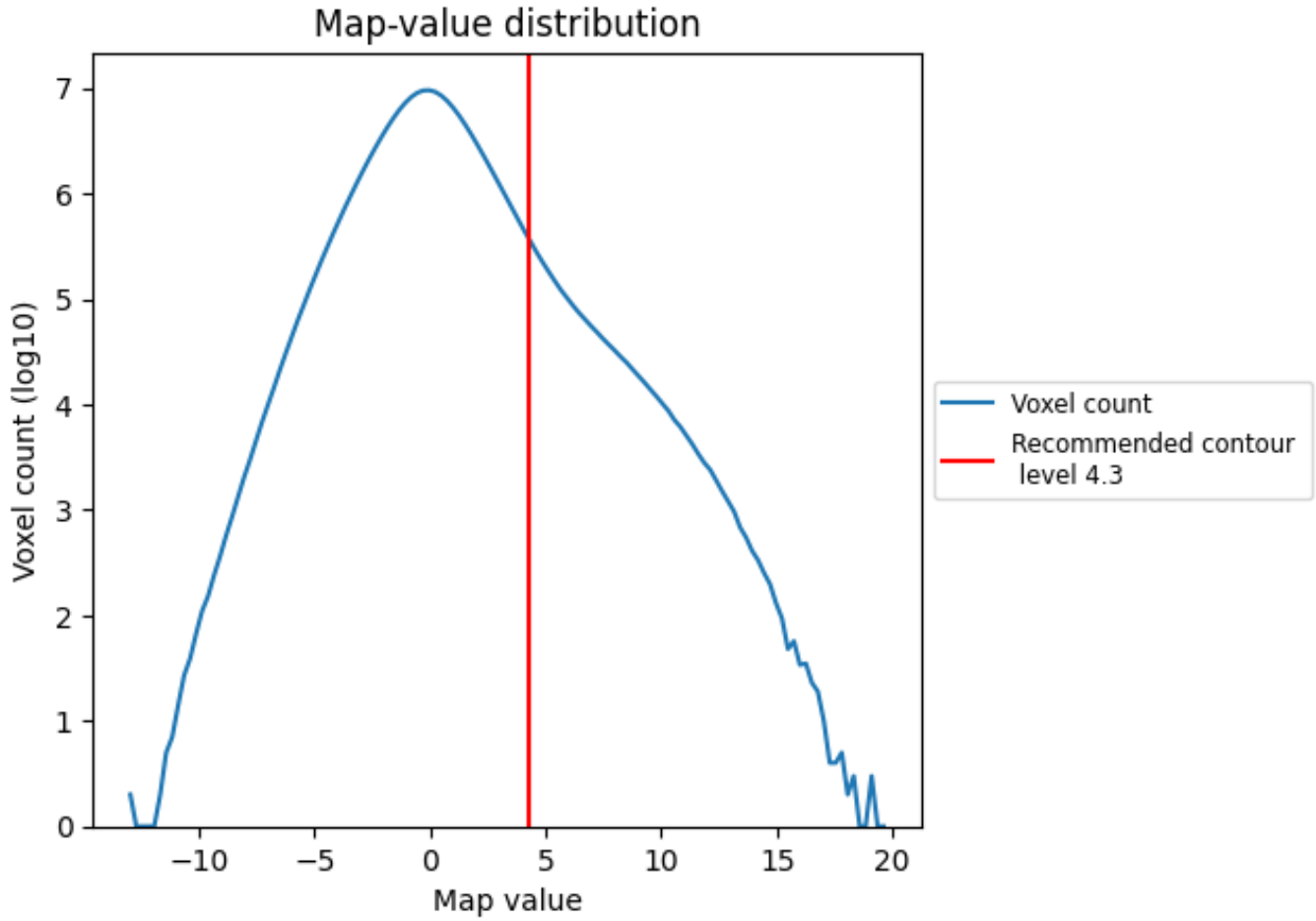
6.6 Mask visualisation (i)

This section was not generated. No masks/segmentation were deposited.

7 Map analysis

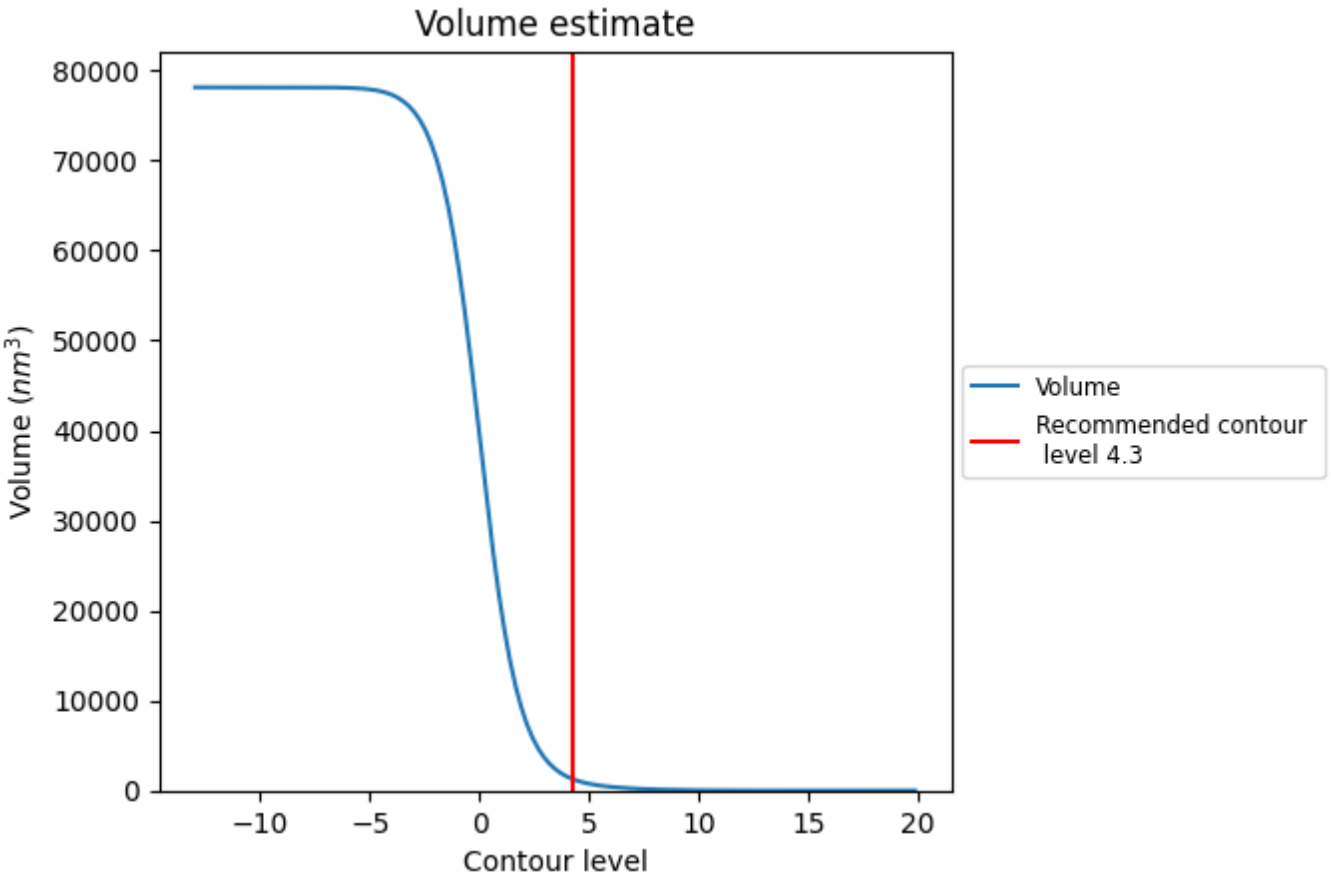
This section contains the results of statistical analysis of the map.

7.1 Map-value distribution



The map-value distribution is plotted in 128 intervals along the x-axis. The y-axis is logarithmic. A spike in this graph at zero usually indicates that the volume has been masked.

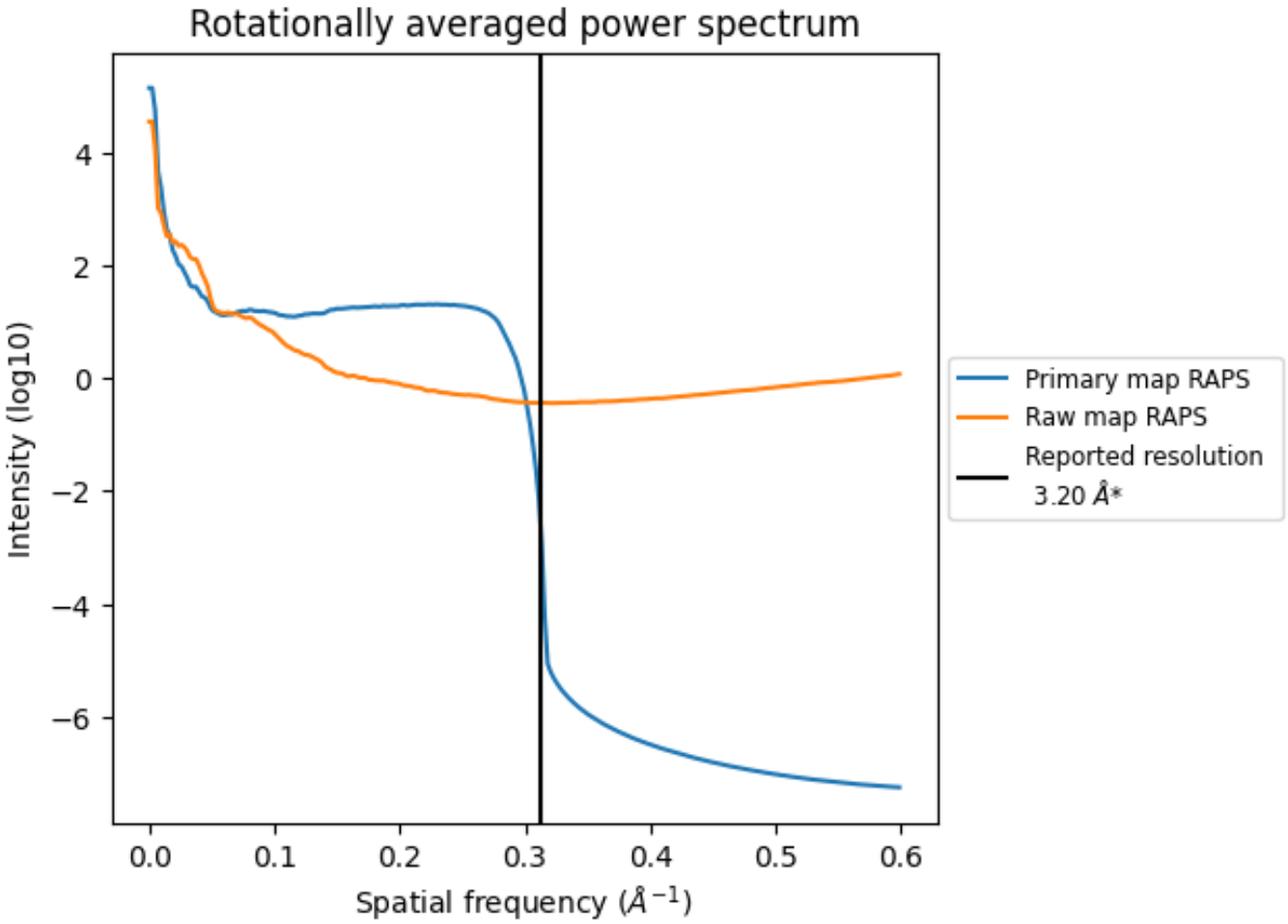
7.2 Volume estimate



The volume at the recommended contour level is 1241 nm^3; this corresponds to an approximate mass of 1121 kDa.

The volume estimate graph shows how the enclosed volume varies with the contour level. The recommended contour level is shown as a vertical line and the intersection between the line and the curve gives the volume of the enclosed surface at the given level.

7.3 Rotationally averaged power spectrum (i)

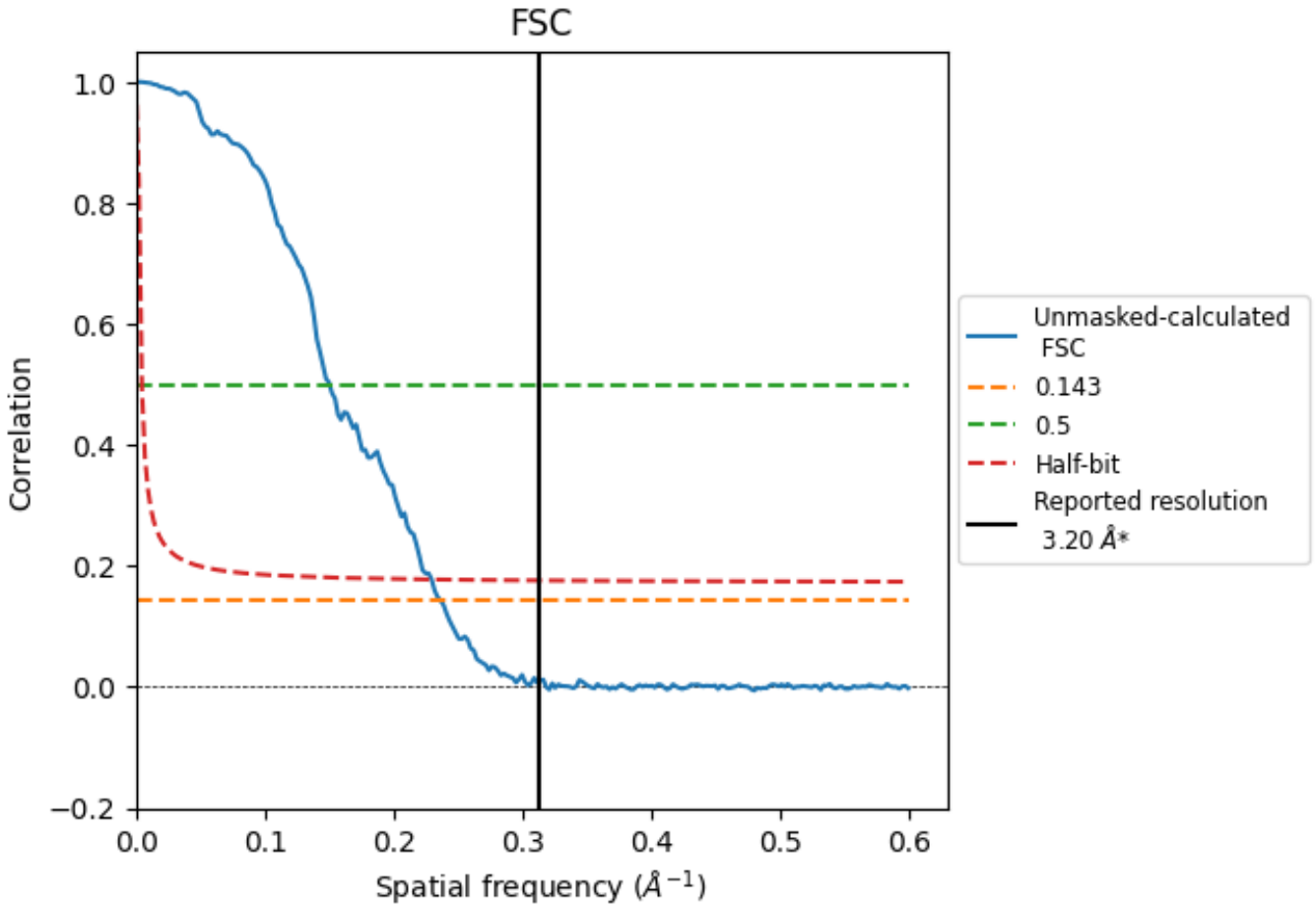


*Reported resolution corresponds to spatial frequency of 0.312 Å^{-1}

8 Fourier-Shell correlation

Fourier-Shell Correlation (FSC) is the most commonly used method to estimate the resolution of single-particle and subtomogram-averaged maps. The shape of the curve depends on the imposed symmetry, mask and whether or not the two 3D reconstructions used were processed from a common reference. The reported resolution is shown as a black line. A curve is displayed for the half-bit criterion in addition to lines showing the 0.143 gold standard cut-off and 0.5 cut-off.

8.1 FSC



*Reported resolution corresponds to spatial frequency of 0.312 Å^{-1}

8.2 Resolution estimates (i)

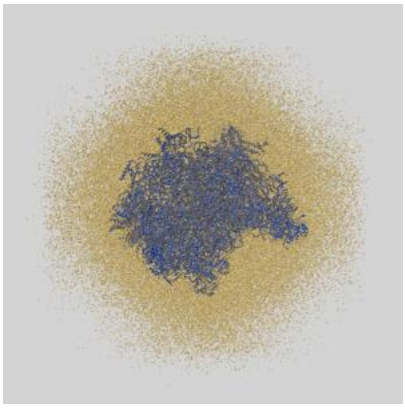
Resolution estimate (Å)	Estimation criterion (FSC cut-off)		
	0.143	0.5	Half-bit
Reported by author	3.20	-	-
Author-provided FSC curve	-	-	-
Unmasked-calculated*	4.23	6.66	4.36

*Resolution estimate based on FSC curve calculated by comparison of deposited half-maps. The value from deposited half-maps intersecting FSC 0.143 CUT-OFF 4.23 differs from the reported value 3.2 by more than 10 %

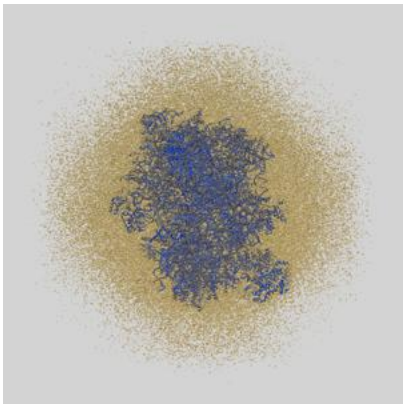
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-42720 and PDB model 8UXA. Per-residue inclusion information can be found in section 3 on page 17.

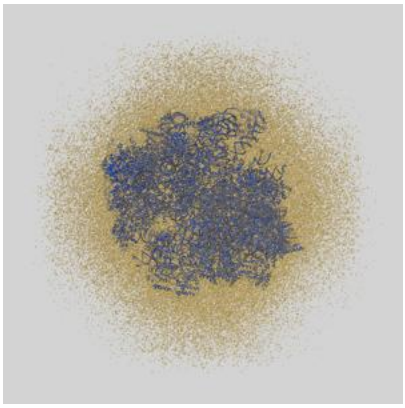
9.1 Map-model overlay



X



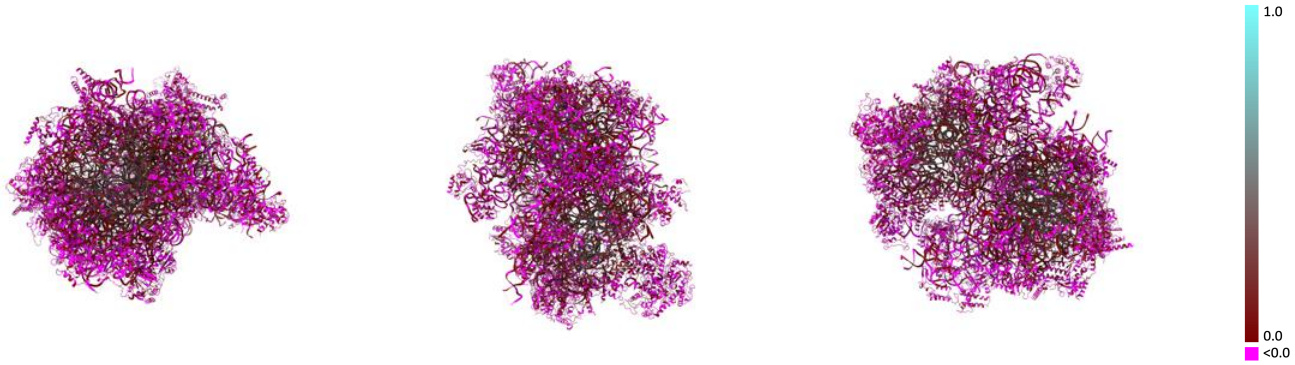
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 4.3 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

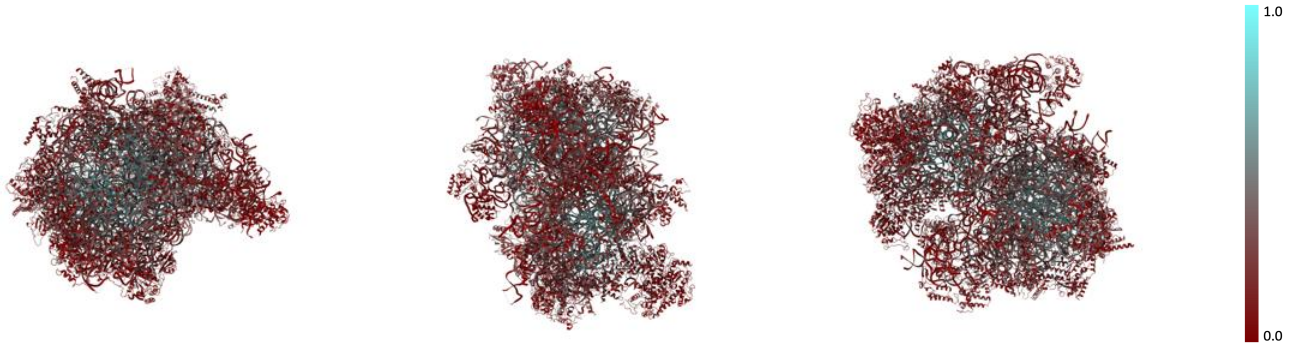
9.2 Q-score mapped to coordinate model



X Y Z

The images above show the model with each residue coloured according its Q-score. This shows their resolvability in the map with higher Q-score values reflecting better resolvability. Please note: Q-score is calculating the resolvability of atoms, and thus high values are only expected at resolutions at which atoms can be resolved. Low Q-score values may therefore be expected for many entries.

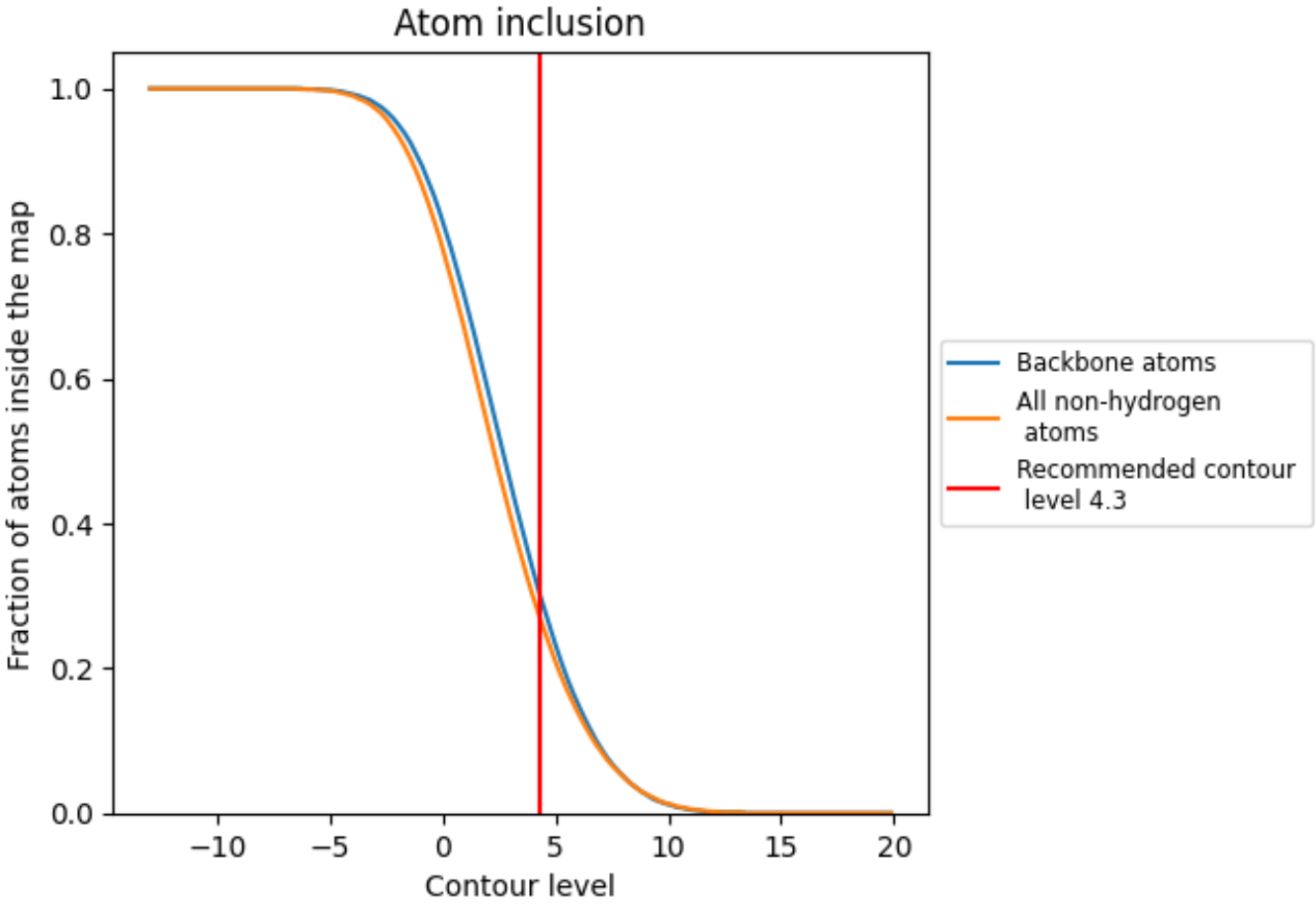
9.3 Atom inclusion mapped to coordinate model



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (4.3).

9.4 Atom inclusion (i)



At the recommended contour level, 30% of all backbone atoms, 27% of all non-hydrogen atoms, are inside the map.

9.5 Map-model fit summary

The table lists the average atom inclusion at the recommended contour level (4.3) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.2700	0.0810
0	0.2610	0.0530
1	0.1270	-0.0450
2	0.1240	-0.0420
3	0.2550	0.0750
4	0.2190	0.0190
5	0.1670	-0.0180
6	0.1160	-0.0400
7	0.2050	-0.0030
8	0.1440	-0.0140
9	0.0880	-0.0550
A	0.3720	0.1290
AA	0.3530	0.1610
AB	0.0860	-0.0290
AC	0.1120	-0.0300
AD	0.0790	-0.0240
AE	0.0550	-0.0000
AF	0.1470	0.0480
AG	0.2040	0.0500
AH	0.1250	0.0140
AI	0.1210	-0.0410
AJ	0.1840	0.0820
AK	0.1510	0.0190
AL	0.3490	0.1360
AM	0.1400	0.0840
AN	0.2740	0.1610
B	0.2350	0.0230
C	0.2400	0.0400
D	0.2570	0.0880
E	0.1560	-0.0290
F	0.1420	-0.0180
G	0.1410	-0.0740
H	0.2740	0.0940
I	0.2080	0.0490
J	0.2510	0.0610

Continued on next page...

Continued from previous page...

Chain	Atom inclusion	Q-score
K	0.3040	0.1040
L	0.2110	0.0210
M	0.1580	-0.0290
N	0.2570	0.0620
O	0.3150	0.1580
P	0.2730	0.1030
Q	0.1800	0.0590
R	0.1370	-0.0110
S	0.2130	0.0240
T	0.2130	0.0240
U	0.2550	0.0410
V	0.1340	-0.0330
W	0.3080	0.1450
X	0.1330	-0.0630
Y	0.4630	0.2740
Z	0.2640	0.1370
a	0.1590	-0.0290
b	0.1660	-0.0290
c	0.3160	0.1000
d	0.2170	0.0080
e	0.0610	0.0030
f	0.0350	-0.0030
g	0.1530	0.0320
h	0.2830	0.1290
i	0.2280	0.1230
j	0.1670	0.0520
k	0.3150	0.1960
l	0.1930	0.0450
m	0.2250	0.0820
n	0.2680	0.1090
o	0.1760	0.0380
p	0.2240	0.0940
q	0.2830	0.1260
r	0.2650	0.1550
s	0.1540	-0.0260
t	0.2220	0.0840
u	0.2200	0.0720
v	0.0940	-0.0100
w	0.1450	0.0160
x	0.2470	0.1060
y	0.1550	0.0340
z	0.3290	0.1900