Full wwPDB EM Validation Report ⓘ

Nov 10, 2024 – 07:05 am GMT

PDB ID	:	5FMF
EMDB ID	:	EMD-3114
Title	:	the P-lobe of RNA polymerase II pre-initiation complex
Authors	:	Murakami, K.; Tsai, K.; Kalisman, N.; Bushnell, D.A.; Asturias, F.J.; Kornberg, R.D.
Deposited on	:	2015-11-03
Resolution	:	6.00 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:

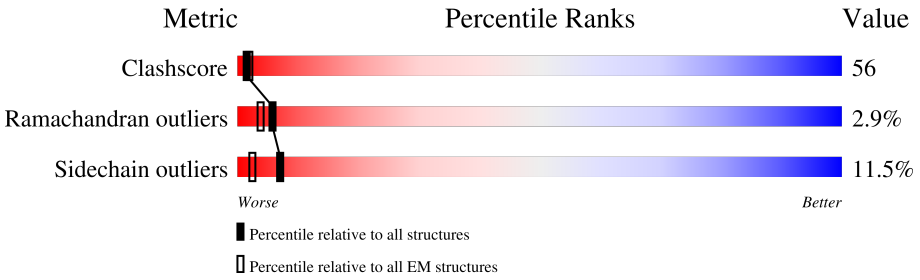
EMDB validation analysis	:	0.0.1.dev113
MolProbity	:	4.02b-467
Percentile statistics	:	20231227.v01 (using entries in the PDB archive December 27th 2023)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.39

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 6.00 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)
Clashscore	210492	15764
Ramachandran outliers	207382	16835
Sidechain outliers	206894	16415

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	1	492	66% 35% 52% 8%
2	2	174	60% 64% 28% 6%
3	A	1733	37% 53% 24% 18%
4	B	1224	52% 61% 29% 6%
5	C	266	34% 73% 22% 5%
6	D	178	57% 67% 26% 6%
7	E	214	43% 74% 24%
8	F	84	27% 60% 37%

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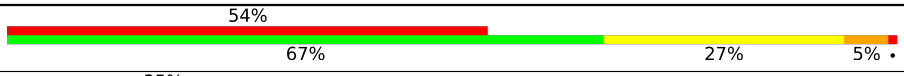
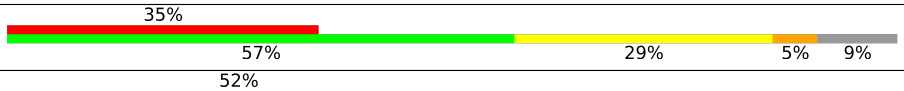
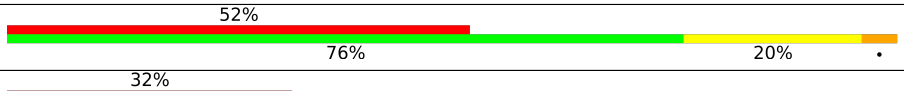
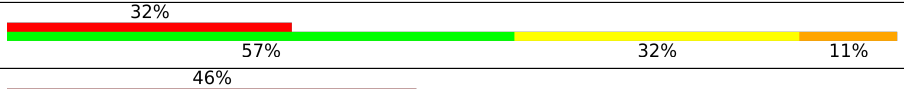
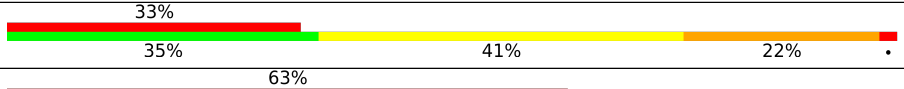
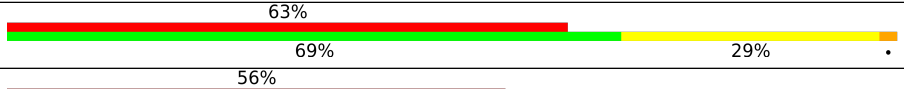
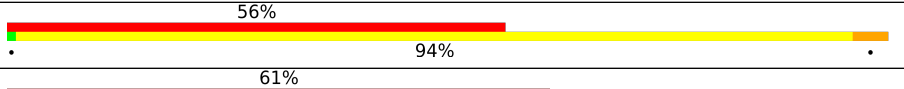
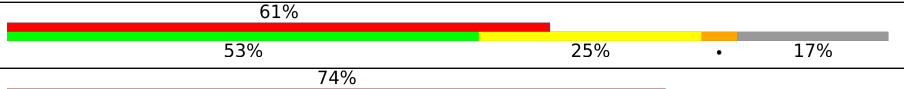
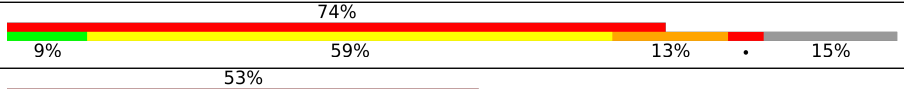
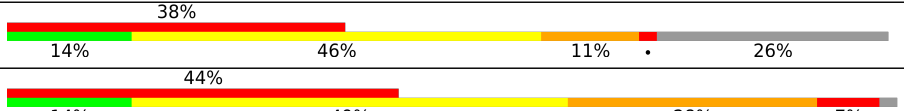
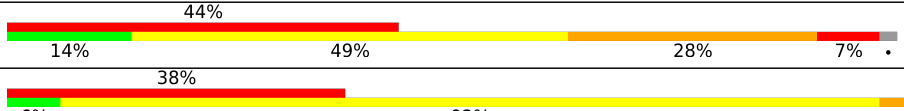
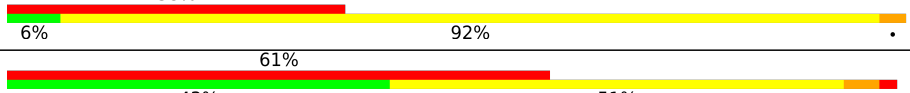
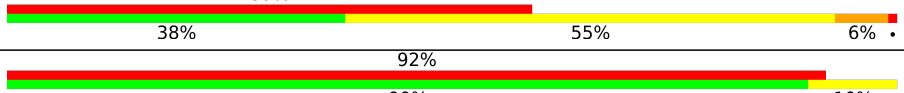
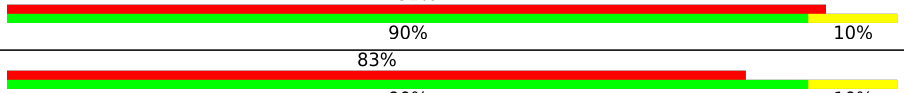
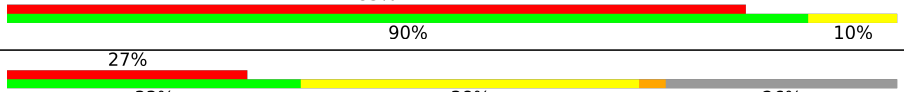
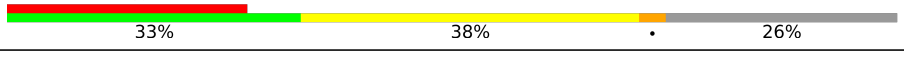
Mol	Chain	Length	Quality of chain
9	G	171	
10	H	146	
11	I	119	
12	J	65	
13	K	115	
14	L	46	
15	M	116	
16	N	72	
17	O	122	
18	P	345	
19	Q	180	
20	R	160	
21	S	123	
22	T	72	
23	U	150	
24	V	174	
25	W	62	
26	X	63	
27	Y	778	

2 Entry composition (i)

There are 29 unique types of molecules in this entry. The entry contains 55363 atoms, of which 691 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 DNA REPAIR HELICASE RAD25, SSL2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	1	473	3797	2390	664	720	23	0	0

- Molecule 2 is a protein called TRANSCRIPTION ELONGATION FACTOR S-II, DST1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
2	2	174	666	454	99	108	5	0	104

- Molecule 3 is a protein called DNA-DIRECTED RNA POLYMERASE II SUBUNIT RPB1.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	A	1422	11174	7036	1954	2122	62	0	0

- Molecule 4 is a protein called DNA-DIRECTED RNA POLYMERASE II SUBUNIT RPB2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	B	1156	9140	5781	1606	1697	56	0	0

- Molecule 5 is a protein called DNA-DIRECTED RNA POLYMERASE II SUBUNIT RPB3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	C	266	2095	1317	348	417	13	0	0

- Molecule 6 is a protein called RNA POLYMERASE II PRE-INITIATION COMPLEX, RPB4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
6	D	178	1434	887	257	288	2	0	0

- Molecule 7 is a protein called DNA-DIRECTED RNA POLYMERASES I, II, AND III SUBUNIT RPABC1, RPB5.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	E	214	Total	C	N	O	S	0	0
			1752	1111	309	321	11		

- Molecule 8 is a protein called DNA-DIRECTED RNA POLYMERASES I, II, AND III SUBUNIT RPABC2, RPB6.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	F	84	Total	C	N	O	S	0	0
			679	434	115	127	3		

- Molecule 9 is a protein called DNA-DIRECTED RNA POLYMERASE II SUBUNIT RPB7.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	G	171	Total	C	N	O	S	0	0
			1340	861	222	249	8		

- Molecule 10 is a protein called DNA-DIRECTED RNA POLYMERASES I, II, AND III SUBUNIT RPABC3, RPB8.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	H	133	Total	C	N	O	S	0	0
			1068	673	180	211	4		

- Molecule 11 is a protein called DNA-DIRECTED RNA POLYMERASE II SUBUNIT RPB9.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	I	119	Total	C	N	O	S	0	0
			971	596	179	186	10		

- Molecule 12 is a protein called DNA-DIRECTED RNA POLYMERASES I, II, AND III SUBUNIT RPABC5, RPB10.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	J	65	Total	C	N	O	S	0	0
			532	339	93	94	6		

- Molecule 13 is a protein called DNA-DIRECTED RNA POLYMERASE II SUBUNIT RPB11.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	K	115	Total	C	N	O	S	0	1
			920	590	157	171	2		

- Molecule 14 is a protein called DNA-DIRECTED RNA POLYMERASES I, II, AND III SUBUNIT RPABC4, RPB12.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	L	46	Total	C	N	O	S	0	0
			363	224	72	63	4		

- Molecule 15 is a protein called RNA POLYMERASE II PRE-INITIATION COMPLEX, TOA1.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	M	116	Total	C	N	O	S	0	0
			956	599	159	195	3		

- Molecule 16 is a DNA chain called NON-TEMPLATE STRAND DNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	N	72	Total	C	N	O	P	0	0
			1500	711	300	417	72		

- Molecule 17 is a protein called TRANSCRIPTION INITIATION FACTOR IIA SUBUNIT 2, TOA2.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	O	101	Total	C	N	O	S	0	0
			792	500	132	156	4		

- Molecule 18 is a protein called TRANSCRIPTION INITIATION FACTOR IIB, SUA7.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	P	293	Total	C	N	O	S	0	0
			2269	1437	386	428	18		

- Molecule 19 is a protein called TATA-BOX-BINDING PROTEIN, TBP.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	Q	180	Total	C	N	O	S	0	0
			1416	921	242	247	6		

- Molecule 20 is a protein called TRANSCRIPTION INITIATION FACTOR IIE SUBUNIT

ALPHA, TFA1.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	R	118	Total	C	N	O	S	0	0
			960	625	158	172	5		

- Molecule 21 is a protein called TRANSCRIPTION INITIATION FACTOR IIE SUBUNIT BETA, TFA2.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	S	121	Total	C	N	O	S	0	0
			1005	650	164	188	3		

- Molecule 22 is a DNA chain called TEMPLATE STRAND DNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	T	72	Total	C	N	O	P	0	0
			1452	700	233	447	72		

- Molecule 23 is a protein called RNA POLYMERASE II PRE-INITIATION COMPLEX, TFG1.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	U	150	Total	C	N	O	S	0	0
			1248	793	220	232	3		

- Molecule 24 is a protein called TRANSCRIPTION INITIATION FACTOR IIF SUBUNIT BETA, TFG2.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	V	174	Total	C	N	O	S	0	0
			1455	930	250	269	6		

- Molecule 25 is a protein called RNA POLYMERASE II TRANSCRIPTION FACTOR B SUBUNIT 2, TFB2.

Mol	Chain	Residues	Atoms				AltConf	Trace
25	W	62	Total	C	N	O	0	0
			518	334	83	101		

- Molecule 26 is a protein called RNA POLYMERASE II TRANSCRIPTION FACTOR B SUBUNIT 5, TFB5.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	X	63	Total	C	N	O	S	0	0
			499	316	88	93	2		

- Molecule 27 is a protein called DNA REPAIR HELICASE RAD3.

Mol	Chain	Residues	Atoms						AltConf	Trace
27	Y	578	Total	C	H	N	O	S	0	0
			5351	2975	691	790	862	33		

- Molecule 28 is MAGNESIUM ION (three-letter code: MG) (formula: Mg).

Mol	Chain	Residues	Atoms		AltConf
28	2	1	Total	Mg	0
			1	1	
28	A	1	Total	Mg	0
			1	1	

- Molecule 29 is ZINC ION (three-letter code: ZN) (formula: Zn).

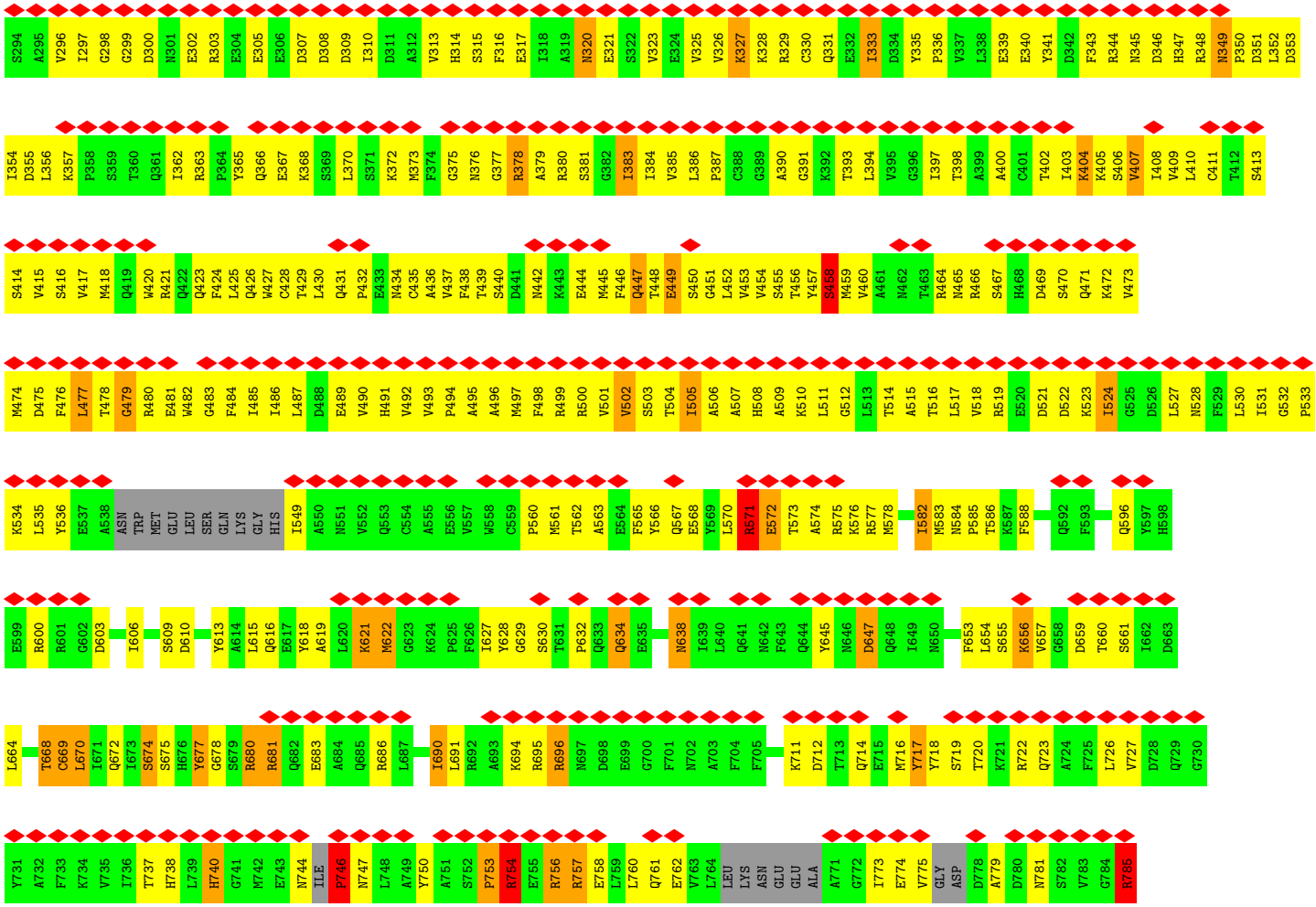
Mol	Chain	Residues	Atoms		AltConf
29	2	1	Total	Zn	0
			1	1	
29	A	2	Total	Zn	0
			2	2	
29	B	1	Total	Zn	0
			1	1	
29	C	1	Total	Zn	0
			1	1	
29	I	2	Total	Zn	0
			2	2	
29	J	1	Total	Zn	0
			1	1	
29	L	1	Total	Zn	0
			1	1	

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.

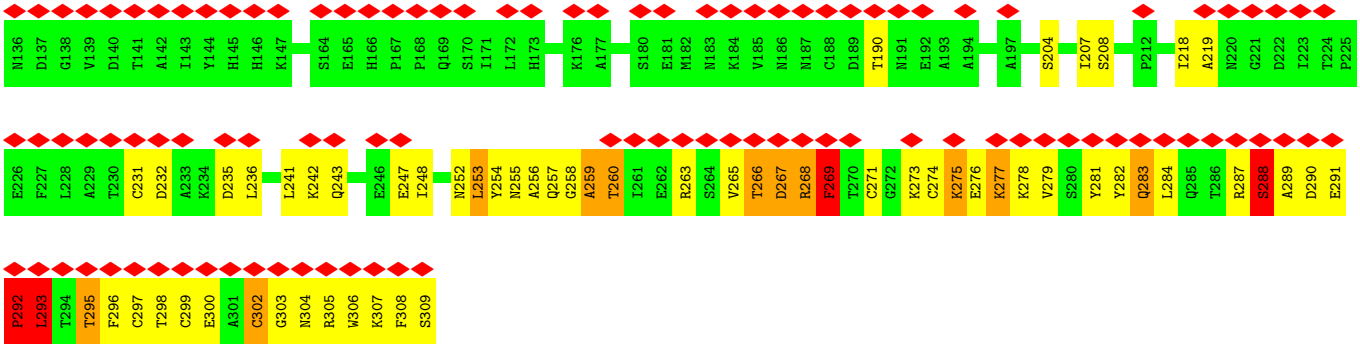
• Molecule 1: DNA REPAIR HELICASE RAD25, SSL2

Chain 1:



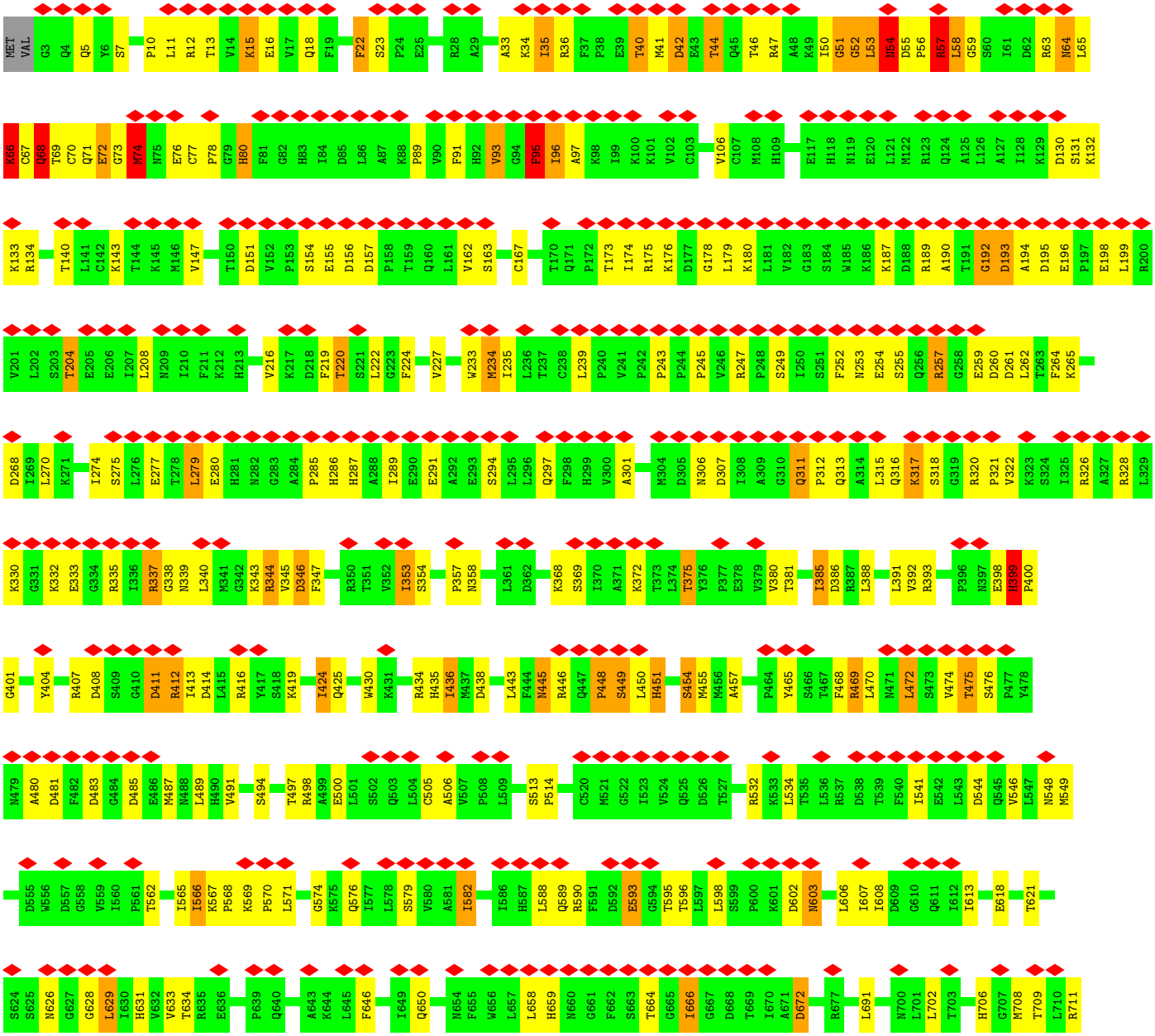
• Molecule 2: TRANSCRIPTION ELONGATION FACTOR S-II, DST1

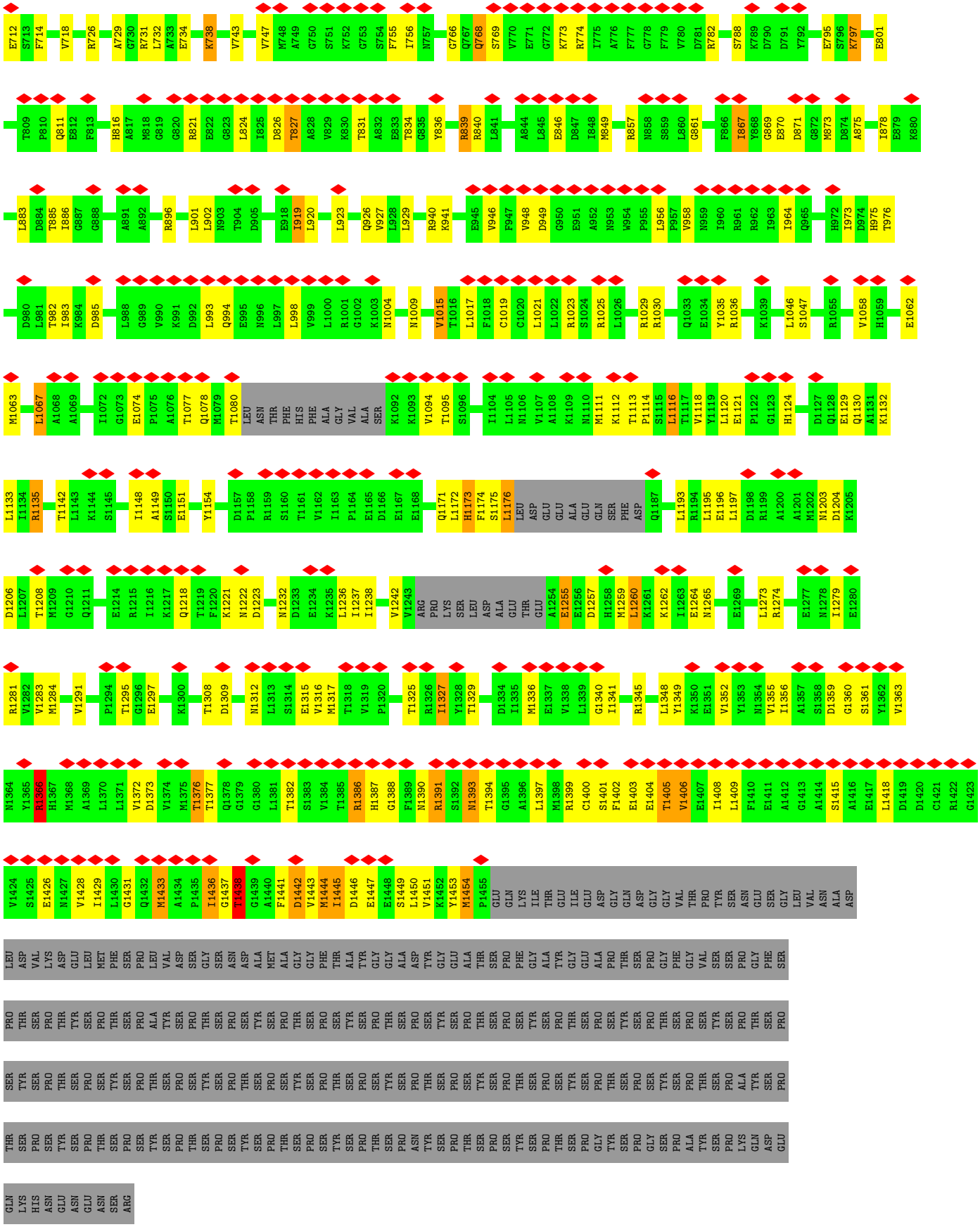
Chain 2:



• Molecule 3: DNA-DIRECTED RNA POLYMERASE II SUBUNIT RPB1

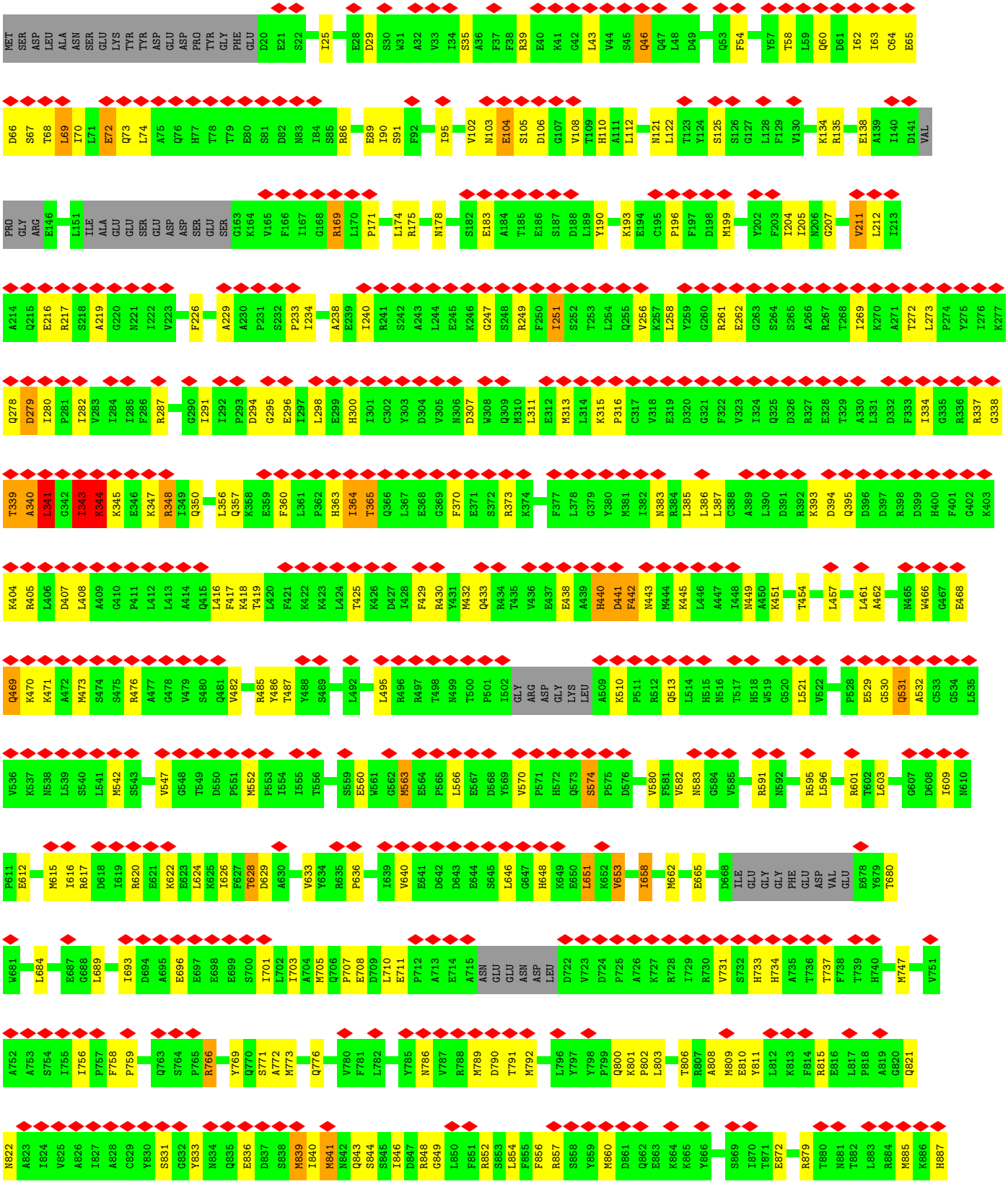
Chain A: 37% 53% 24% 18%

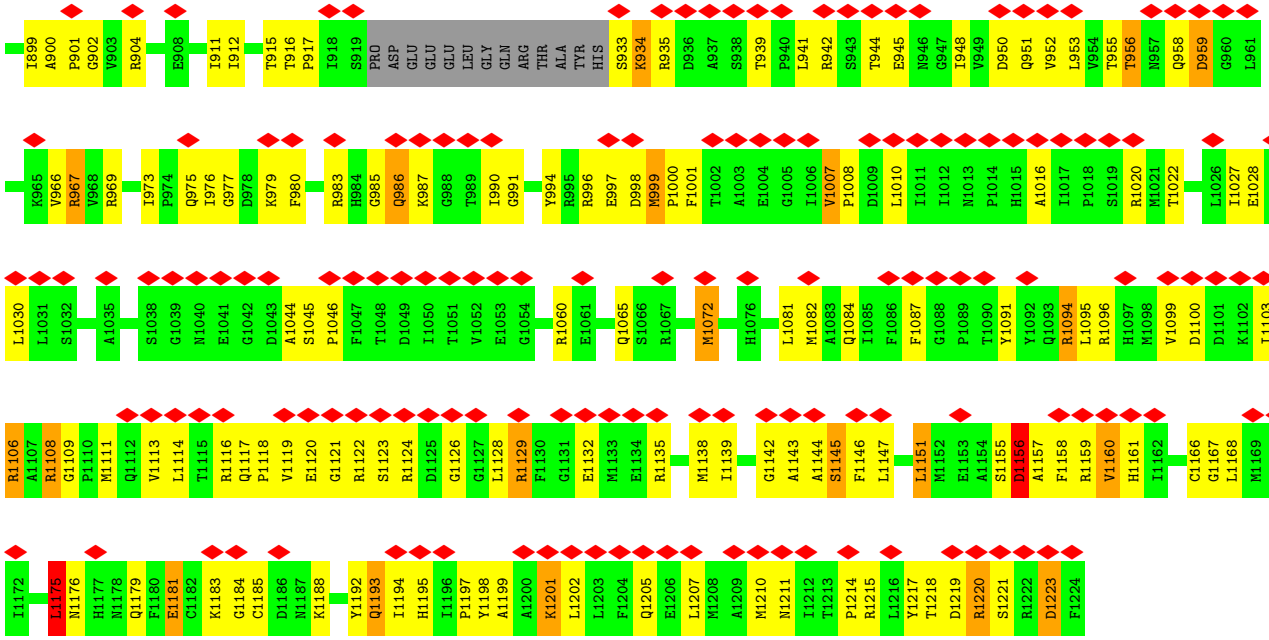



E712 S713 F714 V718 R726 A729 G730 R731 L732 A733 E734 K738 V743 V747 M748 A749 G750 S751 K752 G753 S754 F755 I756 N757 G766 Q767 Q768 S769 V770 E771 G772 K773 R774 I775 A776 F777 G778 F779 V780 D781 R782 S788 K789 D790 D791 Y792 E795 S796 K797 E801
T809 P810 Q811 E812 F813 H816 A817 M818 G819 G820 R821 E822 G823 L824 I825 D826 T827 A828 V829 K830 T831 A832 E833 T834 G835 Y836 R839 R840 L841 A844 L845 E846 D847 I848 M849 R857 N858 S859 L860 G861 F866 I867 Y868 G869 E870 D871 G872 M873 D874 A875 I878 E879 K880
L883 D884 T885 I886 G887 G888 A891 A892 R896 L901 L902 N903 T904 D905 E918 I919 L920 L923 Q926 V927 L928 L929 R940 K941 E945 V946 F947 V948 D949 G950 E951 A952 N953 W954 P955 L956 P957 V958 N959 I960 R961 R962 I963 I964 Q965 H972 I973 D974 H975 T976
D980 L981 T982 I983 K984 D985 L988 G989 V990 K991 D992 L993 Q994 E995 N996 L997 L998 V999 L1000 R1001 G1002 K1003 N1004 N1009 V1015 T1016 L1017 F1018 C1019 C1020 C1021 L1022 R1023 S1024 R1025 L1026 R1029 R1030 Q1033 E1034 Y1035 R1036 K1039 L1046 S1047 R1055 V1058 H1059 E1062
M1063 L1067 A1068 A1069 I1072 G1073 E1074 P1075 A1076 T1077 Q1078 M1079 T1080 LEU ASN THR PHE HIS PHE ALA GLY VAL ALA SER K1092 K1093 V1094 T1095 S1096 I1104 L1105 N1106 V1107 A1108 K1109 N1110 M1111 K1112 T1113 P1114 S1115 L1116 T1117 V1118 Y1119 L1120 E1121 P1122 G1123 H1124 D1127 Q1128 E1129 Q1130 A1131 K1132
L1133 I1134 R1135 T1142 L1143 K1144 S1145 I1148 A1149 S1150 E1151 Y1154 D1157 P1158 R1159 S1160 T1161 V1162 I1163 P1164 E1165 D1166 E1167 E1168 Q1171 L1172 H1173 F1174 S1175 L1176 LEU ASP GLU GLU ALA GLU GLN SER PHE ASP Q1187 L1193 R1194 L1195 E1196 L1197 D1198 R1199 A1200 A1201 M1202 N1203 D1204 K1205
D1206 L1207 T1208 M1209 G1210 Q1211 E1214 R1215 I1216 K1217 Q1218 T1219 F1220 K1221 N1222 D1223 N1232 D1233 E1234 K1235 L1236 I1237 I1238 V1242 V1243 ARG PRO LYS SER LEU ASP ALA GLU THR GLU A1254 E1255 E1256 D1257 H1258 M1259 L1260 K1261 K1262 I1263 E1264 N1265 E1269 L1273 R1274 E1277 N1278 I1279 E1280
R1281 V1282 V1283 M1284 V1291 P1294 T1295 G1296 E1297 K1300 T1308 D1309 N1312 L1313 S1314 E1315 V1316 M1317 T1318 V1319 P1320 T1325 R1326 I1327 Y1328 T1329 D1334 I1335 M1336 E1337 V1338 L1339 G1340 I1341 R1345 L1348 Y1349 K1350 E1351 V1352 Y1353 N1354 V1355 I1356 A1357 S1358 D1359 G1360 S1361 Y1362 V1363
N1364 Y1365 R1366 H1367 M1368 A1369 L1370 L1371 V1372 D1373 V1374 M1375 T1376 T1377 Q1378 G1379 G1380 L1381 T1382 S1383 V1384 T1385 R1386 H1387 G1388 F1389 N1390 R1391 S1392 N1393 T1394 G1395 A1396 L1397 M1398 R1399 C1400 S1401 F1402 E1403 E1404 T1405 V1406 E1407 I1408 L1409 E1410 E1411 A1412 G1413 A1414 S1415 A1416 E1417 L1418 D1419 D1420 C1421 R1422 G1423
V1424 S1425 E1426 N1427 V1428 I1429 L1430 G1431 Q1432 M1433 A1434 P1435 I1436 G1437 T1438 G1439 A1440 F1441 D1442 V1443 M1444 I1445 D1446 E1447 E1448 S1449 L1450 V1451 K1452 Y1453 M1454 P1455 GLU GLN LYS ILE THR GLU ILE GLU ASP GLY GLN ASP GLY GLY VAL THR PRO TYR SER ASN GLU SER GLY LEU VAL ASN ALA ASP
LEU ASP VAL LYS ASP GLU LEU MET PHE SER PRO LEU VAL ASP SER GLY SER ASN ASP ALA MET ALA GLY GLY PHE THR ALA TYR GLY GLY ALA ASP TYR THR SER PRO PHE GLY ALA TYR GLY GLU ALA PRO GLY THR SER PRO GLY PHE GLY VAL SER SER SER PRO GLY PHE SER
PRO THR SER PRO THR TYR SER PRO THR SER PRO ALA TYR SER PRO THR SER PRO THR SER PRO SER TYR SER PRO THR SER PRO SER TYR SER PRO THR SER PRO SER TY

• Molecule 4: DNA-DIRECTED RNA POLYMERASE II SUBUNIT RPB2

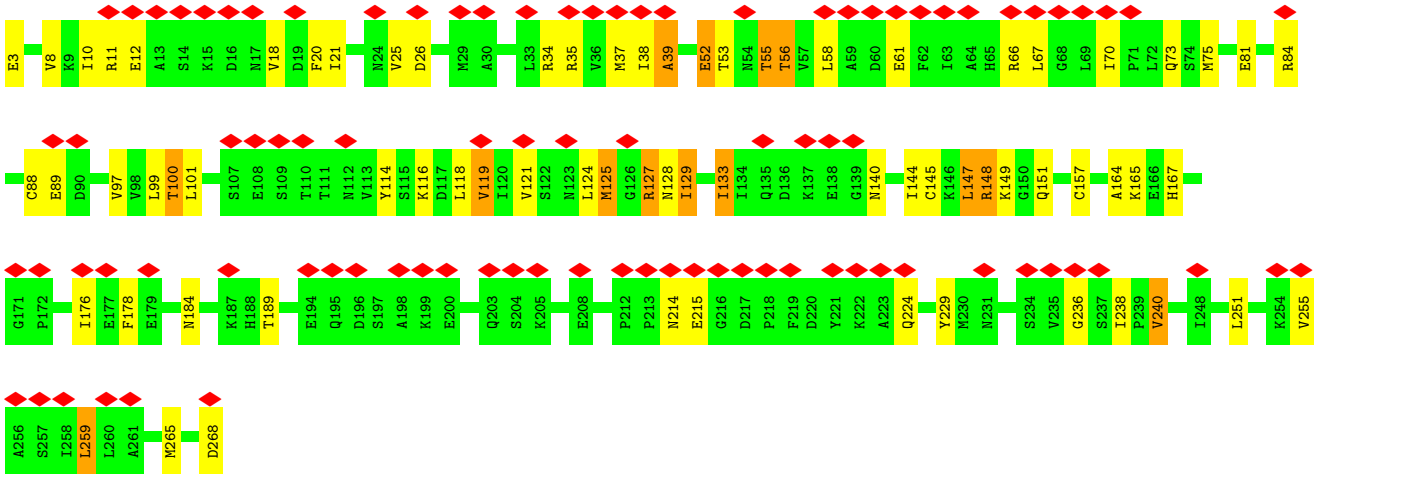
Chain B:





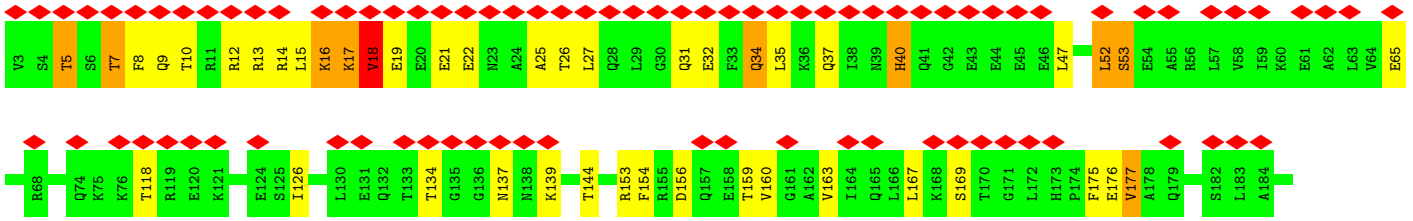
• Molecule 5: DNA-DIRECTED RNA POLYMERASE II SUBUNIT RPB3

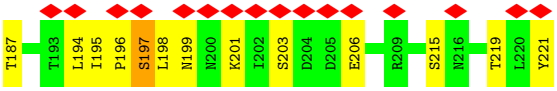
Chain C:



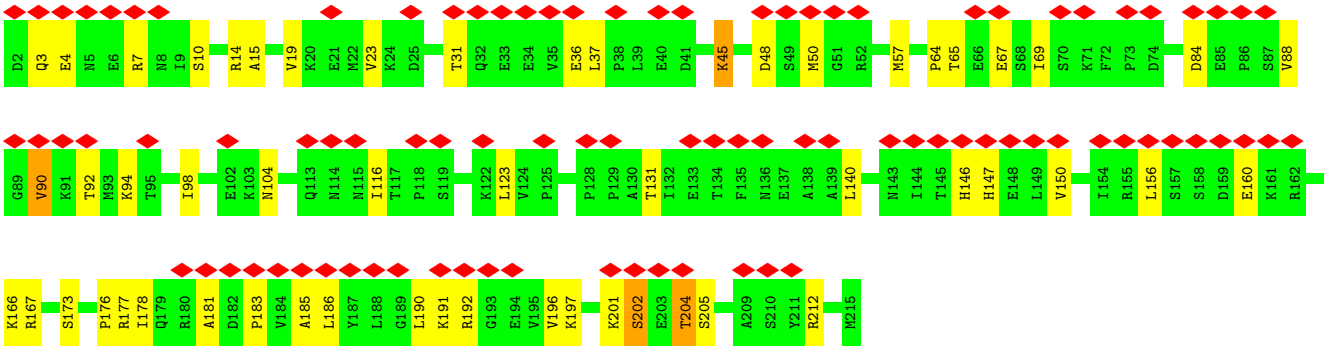
• Molecule 6: RNA POLYMERASE II PRE-INITIATION COMPLEX, RPB4

Chain D:

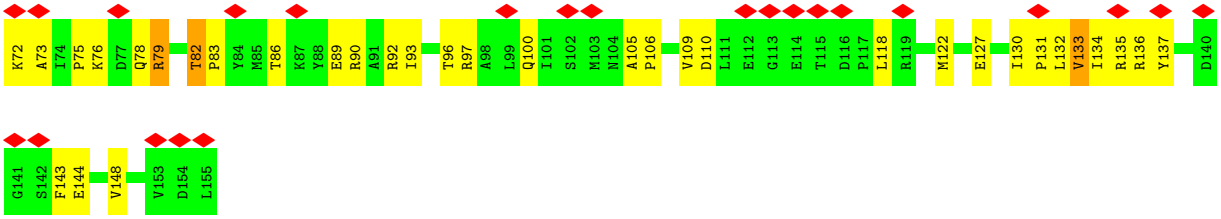




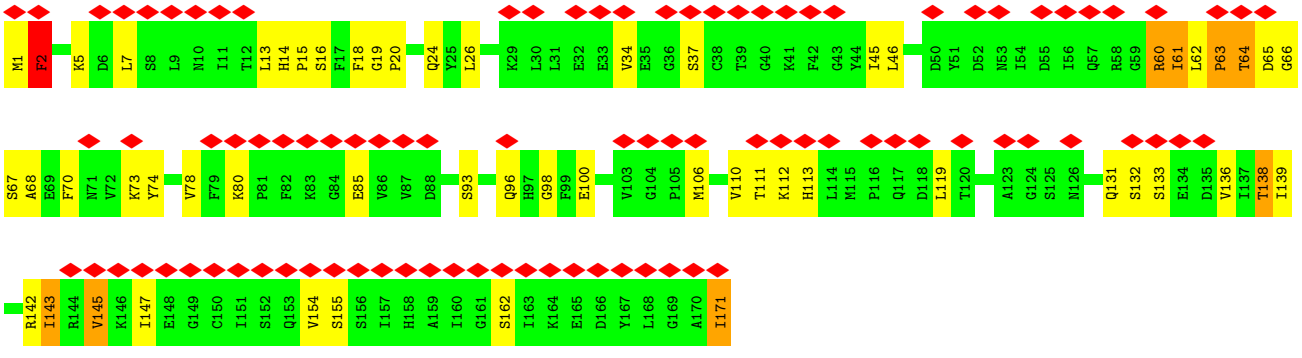
• Molecule 7: DNA-DIRECTED RNA POLYMERASES I, II, AND III SUBUNIT RPABC1, RPB5



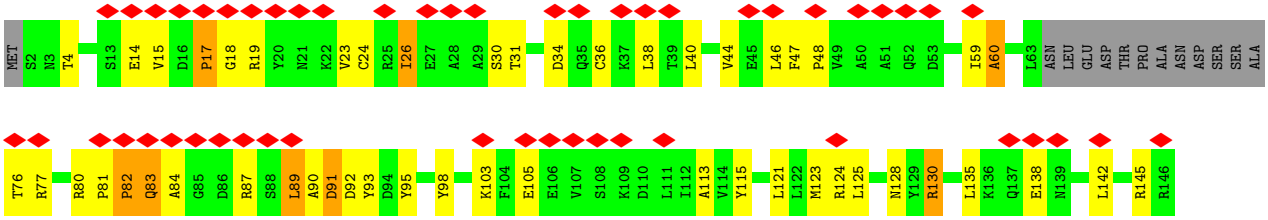
• Molecule 8: DNA-DIRECTED RNA POLYMERASES I, II, AND III SUBUNIT RPABC2, RPB6



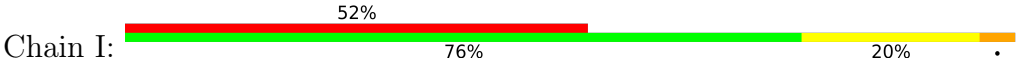
• Molecule 9: DNA-DIRECTED RNA POLYMERASE II SUBUNIT RPB7

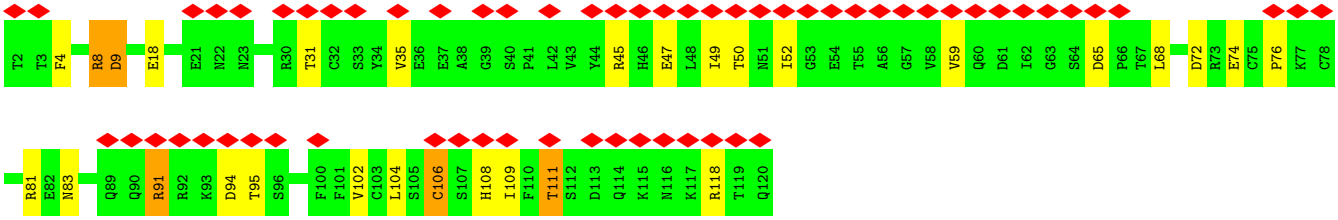


• Molecule 10: DNA-DIRECTED RNA POLYMERASES I, II, AND III SUBUNIT RPABC3, RPB8

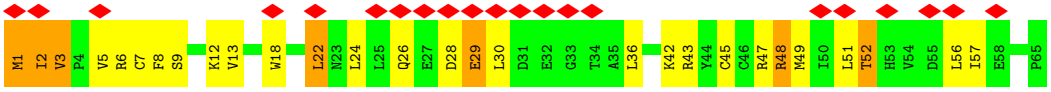


• Molecule 11: DNA-DIRECTED RNA POLYMERASE II SUBUNIT RPB9

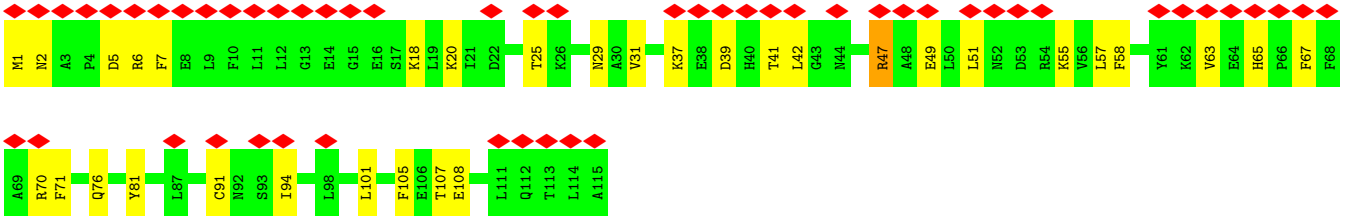




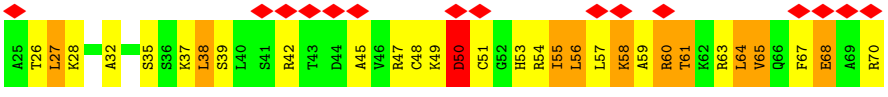
• Molecule 12: DNA-DIRECTED RNA POLYMERASES I, II, AND III SUBUNIT RPABC5, RPB10



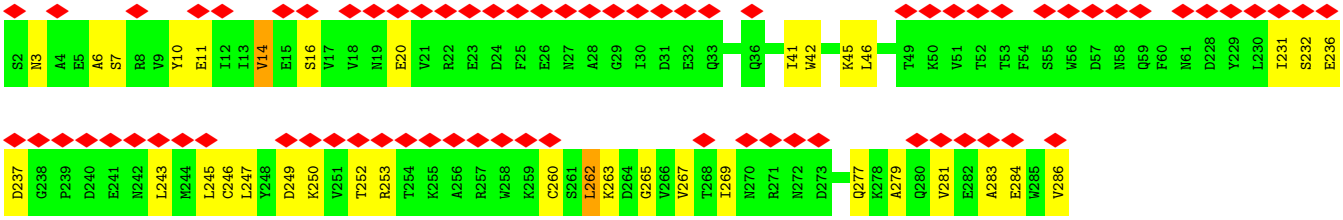
• Molecule 13: DNA-DIRECTED RNA POLYMERASE II SUBUNIT RPB11



• Molecule 14: DNA-DIRECTED RNA POLYMERASES I, II, AND III SUBUNIT RPABC4, RPB12

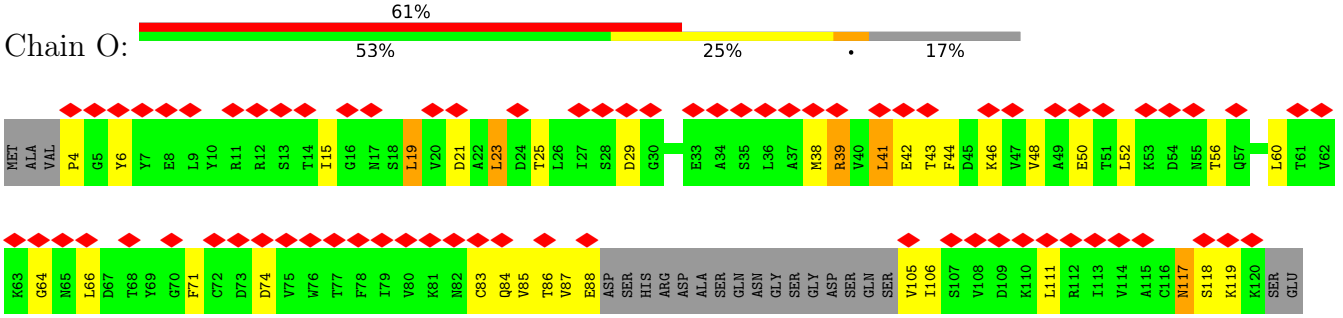


• Molecule 15: RNA POLYMERASE II PRE-INITIATION COMPLEX, TOA1

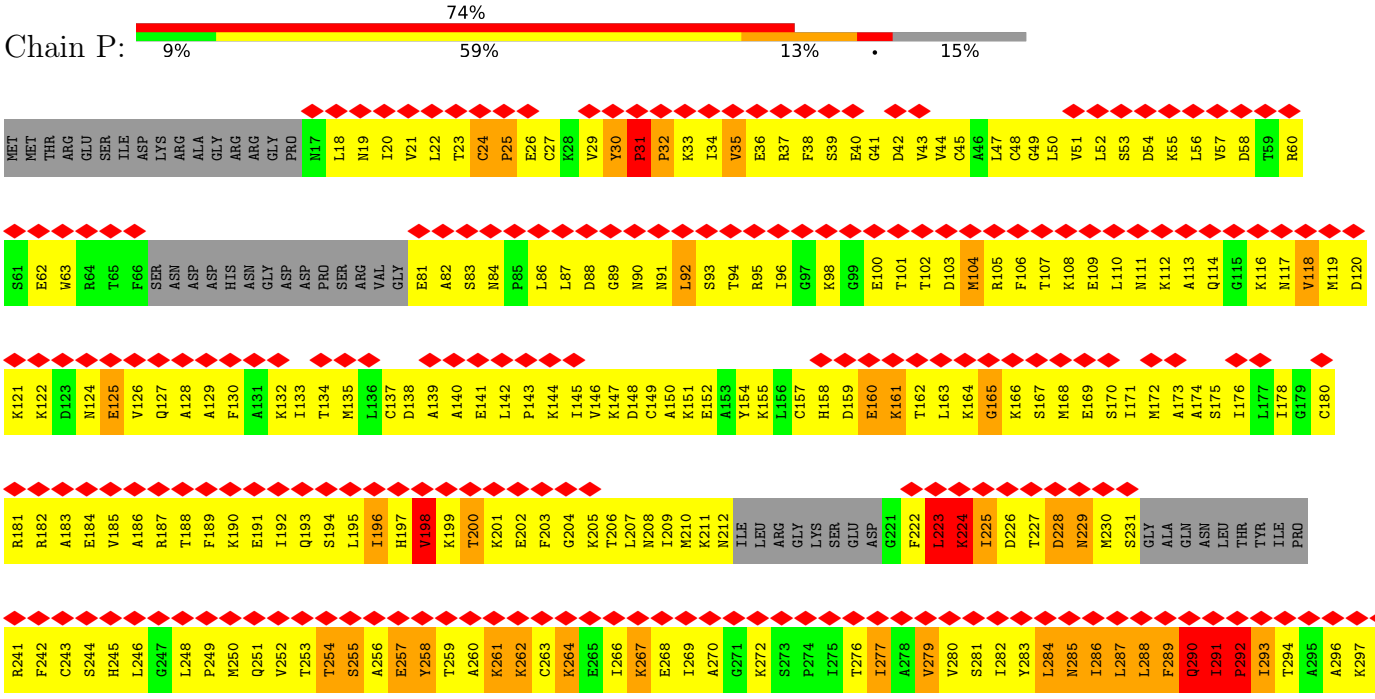


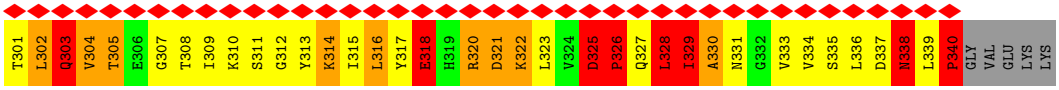
• Molecule 16: NON-TEMPLATE STRAND DNA

• Molecule 17: TRANSCRIPTION INITIATION FACTOR IIA SUBUNIT 2, TOA2



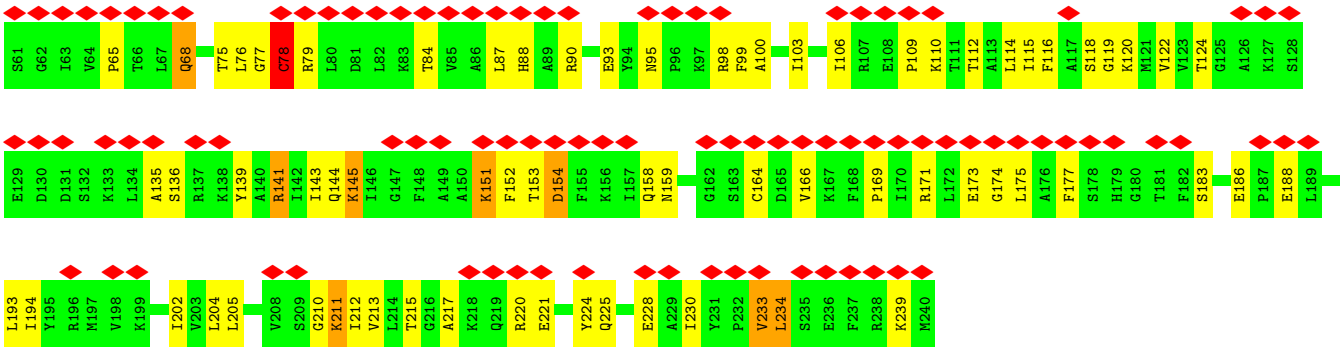
• Molecule 18: TRANSCRIPTION INITIATION FACTOR IIB, SUA7





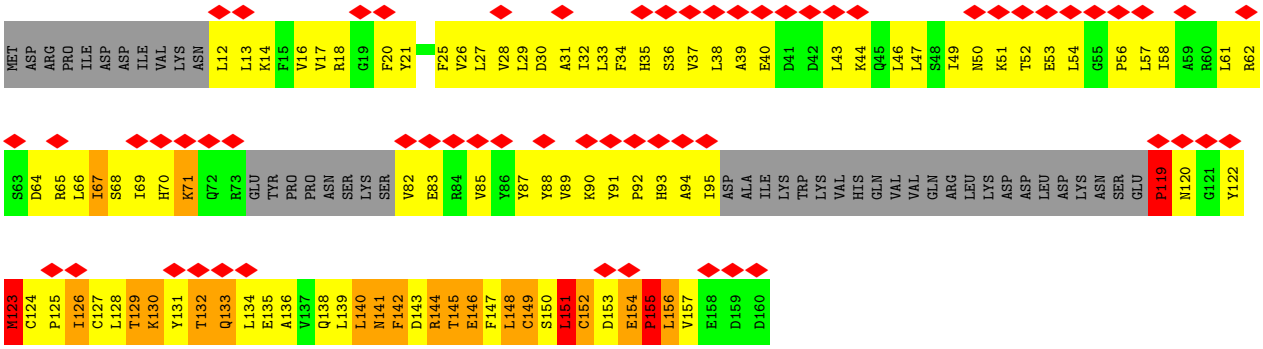
• Molecule 19: TATA-BOX-BINDING PROTEIN, TBP

Chain Q:



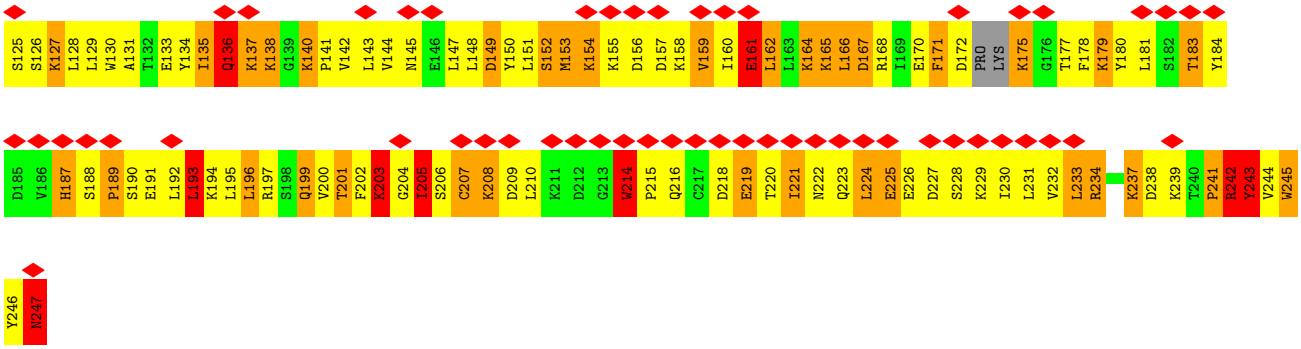
• Molecule 20: TRANSCRIPTION INITIATION FACTOR IIE SUBUNIT ALPHA, TFA1

Chain R:

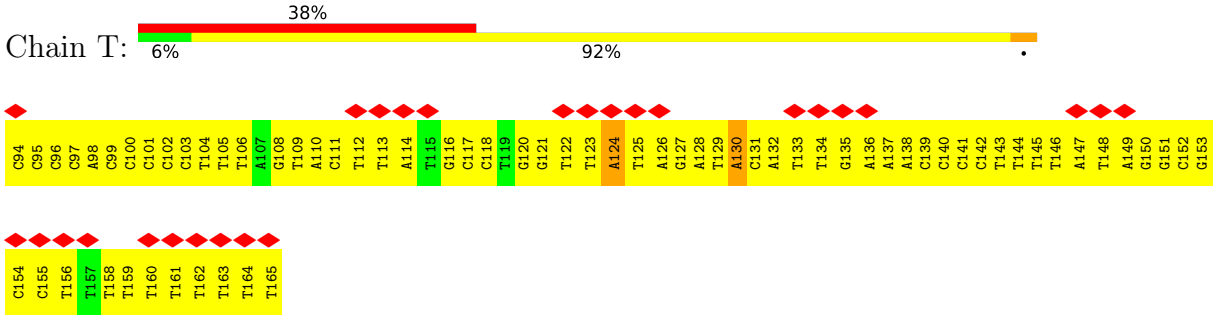


• Molecule 21: TRANSCRIPTION INITIATION FACTOR IIE SUBUNIT BETA, TFA2

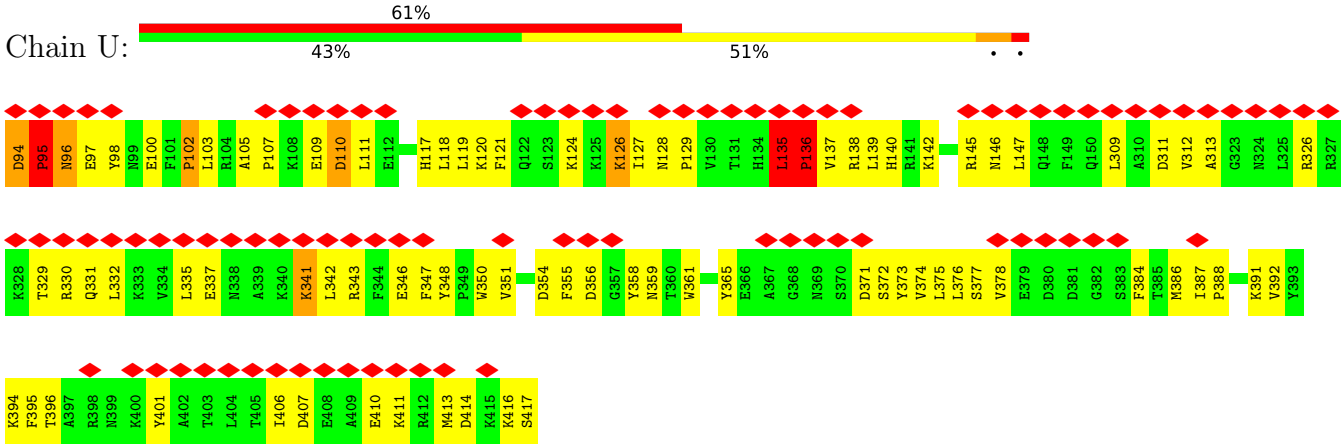
Chain S:



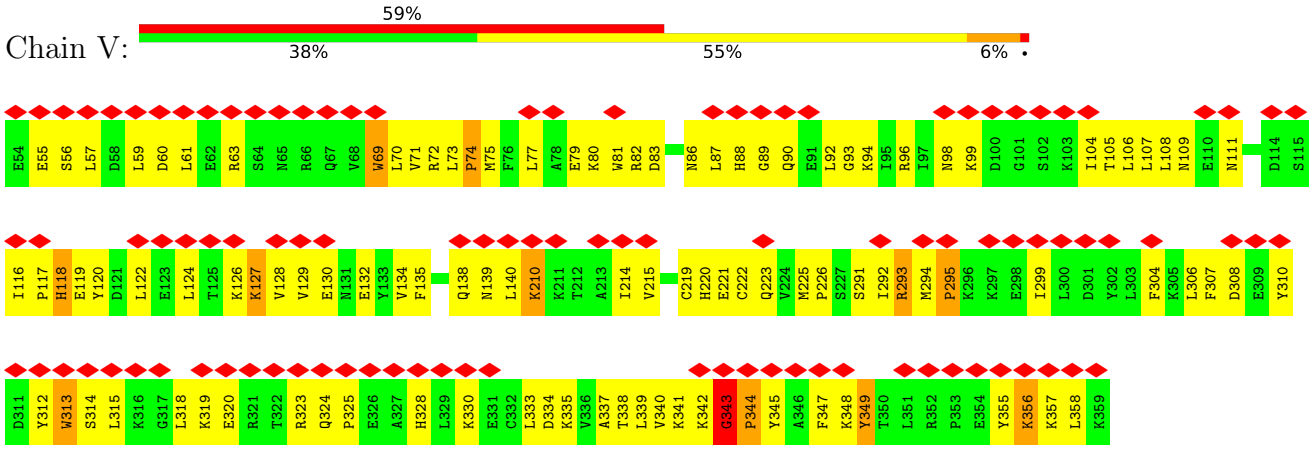
• Molecule 22: TEMPLATE STRAND DNA



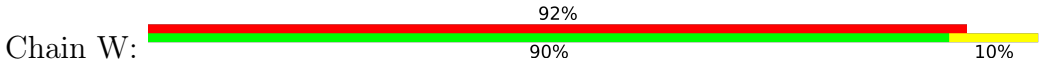
• Molecule 23: RNA POLYMERASE II PRE-INITIATION COMPLEX, TFG1

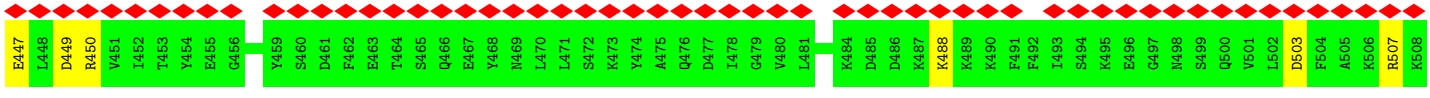


• Molecule 24: TRANSCRIPTION INITIATION FACTOR IIF SUBUNIT BETA, TFG2

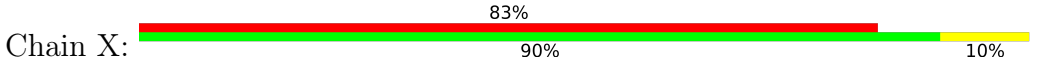


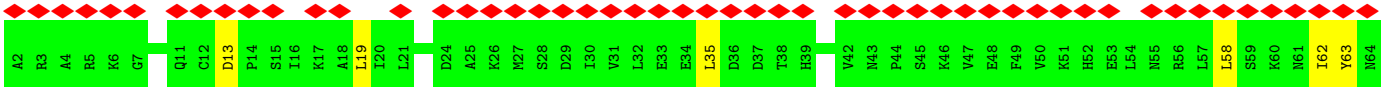
• Molecule 25: RNA POLYMERASE II TRANSCRIPTION FACTOR B SUBUNIT 2, TFB2



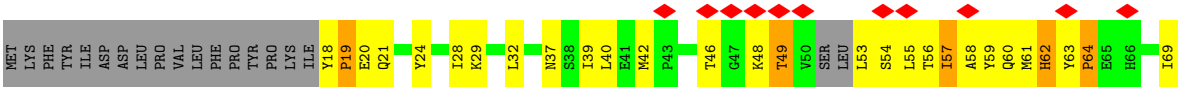


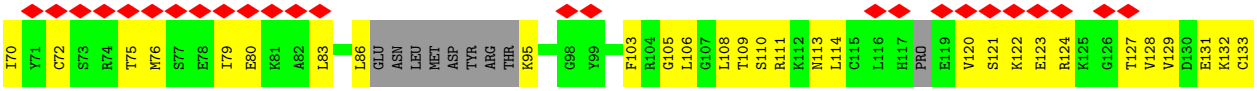
• Molecule 26: RNA POLYMERASE II TRANSCRIPTION FACTOR B SUBUNIT 5, TFB5

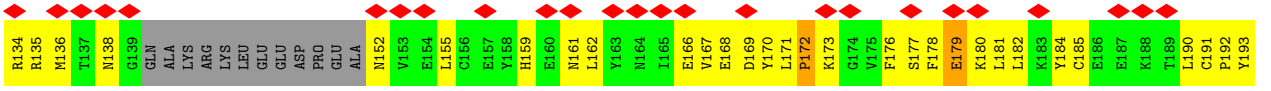


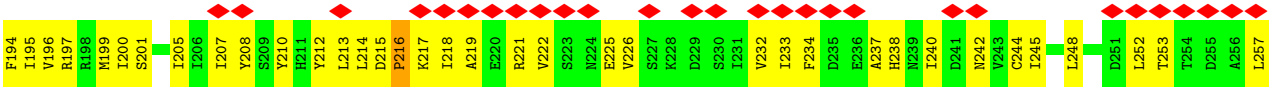


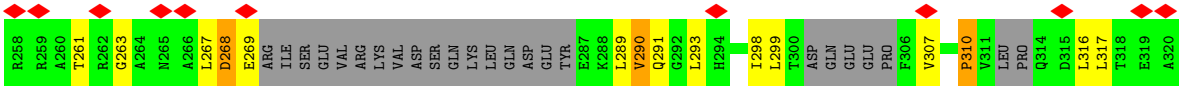
• Molecule 27: DNA REPAIR HELICASE RAD3

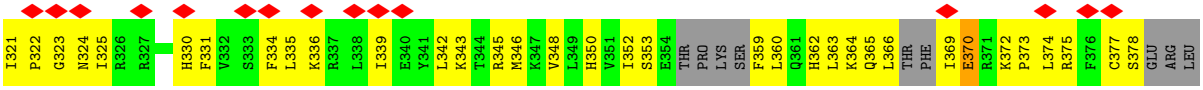


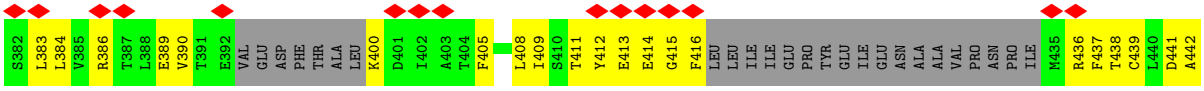


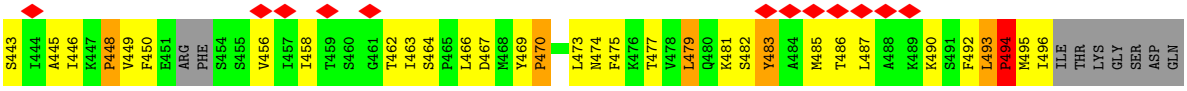


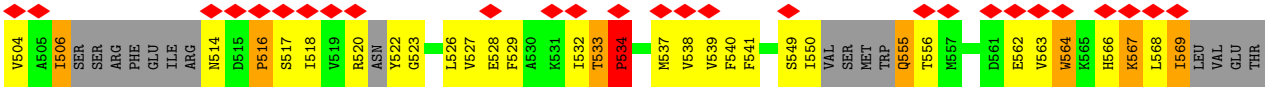


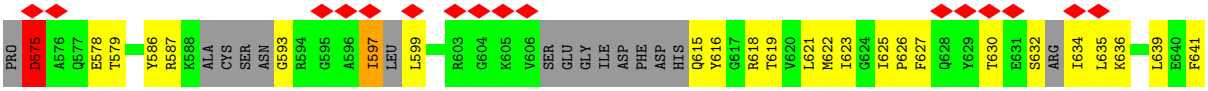


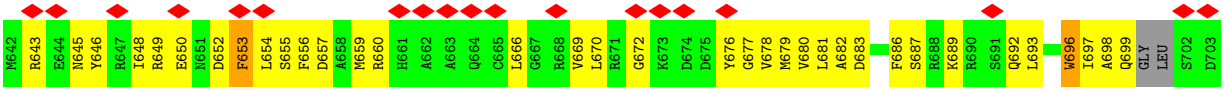


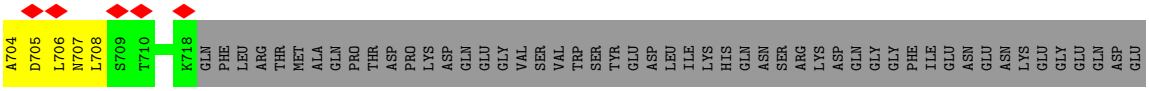


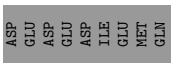











ASP
GLU
ASP
GLU
ASP
ILE
GLU
MET
GLN

4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	7578	Depositor
Resolution determination method	Not provided	
CTF correction method	SPARX	Depositor
Microscope	FEI TITAN KRIOS	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	40	Depositor
Minimum defocus (nm)	800	Depositor
Maximum defocus (nm)	4000	Depositor
Magnification	22500	Depositor
Image detector	GATAN K2 (4k x 4k)	Depositor
Maximum map value	9.151	Depositor
Minimum map value	-0.003	Depositor
Average map value	0.142	Depositor
Map value standard deviation	0.652	Depositor
Recommended contour level	3.99	Depositor
Map size (Å)	399.76, 399.76, 399.76	wwPDB
Map dimensions	152, 152, 152	wwPDB
Map angles (°)	90.0, 90.0, 90.0	wwPDB
Pixel spacing (Å)	2.63, 2.63, 2.63	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: ZN, MG

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	1	4.34	6/3867 (0.2%)	2.05	41/5221 (0.8%)
2	2	1.31	4/571 (0.7%)	1.64	7/765 (0.9%)
3	A	0.57	4/11374 (0.0%)	0.81	11/15384 (0.1%)
4	B	0.49	1/9316 (0.0%)	0.74	4/12564 (0.0%)
5	C	0.49	0/2133	0.78	2/2891 (0.1%)
6	D	0.51	0/1444	0.83	2/1935 (0.1%)
7	E	0.48	0/1788	0.72	0/2406
8	F	0.62	0/691	0.81	0/933
9	G	0.52	0/1368	0.81	0/1844
10	H	0.51	0/1086	0.80	0/1470
11	I	0.47	0/989	0.78	0/1331
12	J	0.54	0/541	0.88	1/727 (0.1%)
13	K	0.47	0/938	0.71	0/1267
14	L	0.54	0/365	0.95	0/485
15	M	0.40	0/970	0.57	0/1310
16	N	1.27	20/1692 (1.2%)	1.41	34/2613 (1.3%)
17	O	0.42	0/800	0.63	0/1080
18	P	4.21	7/2297 (0.3%)	2.23	41/3090 (1.3%)
19	Q	0.41	0/1443	0.62	0/1942
20	R	9.51	2/978 (0.2%)	3.28	11/1321 (0.8%)
21	S	5.35	7/1017 (0.7%)	3.30	36/1356 (2.7%)
22	T	1.38	45/1618 (2.8%)	1.50	49/2491 (2.0%)
23	U	0.93	4/1273 (0.3%)	0.92	9/1710 (0.5%)
24	V	1.09	3/1481 (0.2%)	0.88	10/1988 (0.5%)
25	W	0.67	0/527	0.68	0/704
26	X	0.60	0/504	0.69	0/679
27	Y	0.88	11/4735 (0.2%)	0.84	19/6369 (0.3%)
All	All	2.13	114/55806 (0.2%)	1.23	277/75876 (0.4%)

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
1	1	1	1
2	2	0	2
3	A	0	2
4	B	0	1
18	P	2	0
20	R	1	0
21	S	0	1
27	Y	0	2
All	All	4	9

All (114) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
20	R	155	PRO	N-CD	213.23	4.46	1.47
20	R	119	PRO	N-CD	204.92	4.34	1.47
1	1	753	PRO	N-CD	203.03	4.32	1.47
18	P	292	PRO	N-CD	198.01	4.25	1.47
1	1	746	PRO	N-CD	168.34	3.83	1.47
21	S	215	PRO	N-CD	162.76	3.75	1.47
21	S	189	PRO	N-CD	33.30	1.94	1.47
21	S	214	TRP	NE1-CE2	22.76	1.67	1.37
24	V	344	PRO	N-CD	22.21	1.78	1.47
18	P	258	TYR	CE2-CZ	-21.14	1.11	1.38
1	1	645	TYR	CE2-CZ	-20.95	1.11	1.38
27	Y	310	PRO	N-CD	19.56	1.75	1.47
23	U	136	PRO	N-CD	18.33	1.73	1.47
27	Y	470	PRO	N-CD	17.79	1.72	1.47
27	Y	216	PRO	N-CD	17.38	1.72	1.47
24	V	74	PRO	N-CD	17.32	1.72	1.47
21	S	214	TRP	CD1-NE1	17.29	1.67	1.38
24	V	295	PRO	N-CD	17.16	1.71	1.47
2	2	269	PHE	C-N	-16.93	0.95	1.34
23	U	102	PRO	N-CD	16.00	1.70	1.47
27	Y	64	PRO	N-CD	15.94	1.70	1.47
23	U	95	PRO	N-CD	15.73	1.69	1.47
21	S	189	PRO	CG-CD	15.41	2.01	1.50
3	A	1436	ILE	C-N	14.97	1.59	1.33
18	P	340	PRO	N-CD	14.61	1.68	1.47
3	A	95	PHE	C-N	-14.40	1.00	1.34
27	Y	448	PRO	N-CD	14.40	1.68	1.47
27	Y	516	PRO	N-CD	13.90	1.67	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
18	P	258	TYR	CG-CD1	-13.67	1.21	1.39
16	N	1	DA	P-O5'	13.61	1.73	1.59
1	1	645	TYR	CG-CD1	-13.51	1.21	1.39
27	Y	19	PRO	N-CD	12.92	1.66	1.47
27	Y	322	PRO	N-CD	12.58	1.65	1.47
27	Y	494	PRO	N-CD	12.54	1.65	1.47
3	A	234	MET	C-N	-11.64	1.07	1.34
23	U	129	PRO	N-CD	11.25	1.63	1.47
1	1	645	TYR	CE1-CZ	-10.65	1.24	1.38
18	P	258	TYR	CE1-CZ	-10.56	1.24	1.38
27	Y	534	PRO	N-CD	10.52	1.62	1.47
2	2	260	THR	CA-CB	10.44	1.80	1.53
21	S	243	TYR	CG-CD2	10.29	1.52	1.39
21	S	243	TYR	CG-CD1	10.05	1.52	1.39
4	B	973	ILE	C-N	9.22	1.51	1.34
22	T	127	DG	N1-C2	7.76	1.44	1.37
16	N	12	DG	N1-C2	7.72	1.44	1.37
16	N	14	DG	N1-C2	7.71	1.44	1.37
16	N	13	DC	N1-C6	7.58	1.41	1.37
16	N	11	DG	N1-C2	7.57	1.43	1.37
18	P	340	PRO	CG-CD	7.45	1.75	1.50
16	N	6	DA	C6-N6	7.13	1.39	1.33
22	T	161	DT	C2-N3	7.11	1.43	1.37
22	T	130	DA	C6-N6	7.09	1.39	1.33
16	N	2	DA	C6-N6	7.02	1.39	1.33
22	T	126	DA	C6-N6	7.01	1.39	1.33
22	T	128	DA	C6-N6	7.00	1.39	1.33
16	N	1	DA	C6-N6	7.00	1.39	1.33
16	N	9	DA	C6-N6	6.90	1.39	1.33
22	T	125	DT	C2-N3	6.89	1.43	1.37
22	T	165	DT	C2-N3	6.87	1.43	1.37
22	T	162	DT	C2-N3	6.87	1.43	1.37
16	N	3	DA	C6-N6	6.85	1.39	1.33
22	T	159	DT	C2-N3	6.84	1.43	1.37
22	T	163	DT	C2-N3	6.82	1.43	1.37
16	N	4	DA	C6-N6	6.80	1.39	1.33
22	T	124	DA	C6-N6	6.78	1.39	1.33
22	T	164	DT	C2-N3	6.75	1.43	1.37
16	N	8	DA	C6-N6	6.75	1.39	1.33
22	T	160	DT	C2-N3	6.73	1.43	1.37
16	N	7	DA	C6-N6	6.72	1.39	1.33
22	T	158	DT	C2-N3	6.72	1.43	1.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	T	129	DT	C2-N3	6.71	1.43	1.37
16	N	5	DA	C6-N6	6.66	1.39	1.33
16	N	10	DA	C6-N6	6.55	1.39	1.33
22	T	125	DT	N1-C6	6.48	1.42	1.38
22	T	163	DT	N1-C6	6.48	1.42	1.38
22	T	161	DT	N1-C6	6.45	1.42	1.38
22	T	162	DT	N1-C6	6.40	1.42	1.38
1	1	645	TYR	CD2-CE2	-6.39	1.29	1.39
22	T	165	DT	N1-C6	6.38	1.42	1.38
22	T	160	DT	N1-C2	6.37	1.43	1.38
18	P	258	TYR	CD2-CE2	-6.34	1.29	1.39
22	T	163	DT	N1-C2	6.29	1.43	1.38
3	A	1394	THR	C-N	-6.27	1.21	1.33
22	T	165	DT	N1-C2	6.26	1.43	1.38
22	T	162	DT	N1-C2	6.22	1.43	1.38
22	T	160	DT	N1-C6	6.21	1.42	1.38
22	T	161	DT	N1-C2	6.20	1.43	1.38
22	T	159	DT	N1-C6	6.19	1.42	1.38
22	T	129	DT	N1-C2	6.18	1.43	1.38
22	T	158	DT	N1-C6	6.18	1.42	1.38
22	T	158	DT	N1-C2	6.14	1.43	1.38
22	T	159	DT	N1-C2	6.10	1.43	1.38
22	T	164	DT	N1-C6	6.09	1.42	1.38
22	T	129	DT	N1-C6	6.08	1.42	1.38
2	2	268	ARG	CG-CD	6.05	1.67	1.51
2	2	267	ASP	C-O	6.04	1.34	1.23
22	T	164	DT	N1-C2	6.04	1.42	1.38
22	T	125	DT	N1-C2	5.96	1.42	1.38
22	T	125	DT	N3-C4	5.85	1.43	1.38
22	T	165	DT	N3-C4	5.72	1.43	1.38
22	T	158	DT	N3-C4	5.71	1.43	1.38
16	N	1	DA	P-OP2	5.66	1.58	1.49
16	N	1	DA	P-OP1	5.58	1.58	1.49
27	Y	172	PRO	N-CD	5.58	1.55	1.47
22	T	163	DT	N3-C4	5.57	1.43	1.38
22	T	161	DT	N3-C4	5.49	1.43	1.38
22	T	160	DT	N3-C4	5.44	1.43	1.38
22	T	162	DT	N3-C4	5.42	1.43	1.38
22	T	164	DT	N3-C4	5.38	1.43	1.38
16	N	13	DC	C4-N4	5.35	1.38	1.33
22	T	159	DT	N3-C4	5.28	1.42	1.38
22	T	129	DT	N3-C4	5.27	1.42	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
16	N	11	DG	P-O5'	5.17	1.65	1.59
16	N	14	DG	N9-C8	5.14	1.41	1.37

All (277) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
20	R	155	PRO	CA-N-CD	-66.71	18.11	111.50
20	R	119	PRO	N-CD-CG	-58.68	15.18	103.20
21	S	189	PRO	CA-N-CD	-53.80	36.18	111.50
1	1	753	PRO	N-CD-CG	-48.67	30.19	103.20
18	P	292	PRO	N-CD-CG	-48.02	31.17	103.20
18	P	24	CYS	C-N-CD	-47.85	15.32	120.60
1	1	753	PRO	CA-N-CD	-45.84	47.33	111.50
20	R	119	PRO	CA-N-CD	-42.24	52.37	111.50
1	1	746	PRO	CA-N-CD	-41.05	54.03	111.50
21	S	215	PRO	N-CD-CG	-39.75	43.58	103.20
20	R	155	PRO	N-CD-CG	-38.69	45.16	103.20
1	1	746	PRO	N-CD-CG	-36.38	48.62	103.20
21	S	215	PRO	CA-N-CD	-33.86	64.10	111.50
18	P	292	PRO	CA-N-CD	-33.13	65.11	111.50
21	S	189	PRO	N-CD-CG	29.58	147.56	103.20
21	S	242	ARG	CD-NE-CZ	-28.26	84.03	123.60
27	Y	533	THR	C-N-CD	-28.25	58.45	120.60
1	1	754	ARG	CD-NE-CZ	-28.25	84.06	123.60
1	1	785	ARG	CD-NE-CZ	-28.25	84.06	123.60
1	1	571	ARG	CD-NE-CZ	-28.23	84.08	123.60
18	P	340	PRO	CA-N-CD	-26.85	73.92	111.50
20	R	141	ASN	OD1-CG-ND2	-26.04	62.02	121.90
1	1	747	ASN	OD1-CG-ND2	-25.61	62.99	121.90
21	S	199	GLN	OE1-CD-NE2	-25.61	63.01	121.90
20	R	141	ASN	CB-CG-ND2	-25.24	56.12	116.70
1	1	747	ASN	CB-CG-ND2	-24.80	57.18	116.70
21	S	199	GLN	CG-CD-NE2	-24.78	57.22	116.70
18	P	326	PRO	CA-N-CD	-24.37	77.38	111.50
18	P	30	TYR	C-N-CD	-21.44	73.43	120.60
21	S	243	TYR	CB-CG-CD2	-21.24	108.25	121.00
21	S	189	PRO	CB-CG-CD	-20.75	25.59	106.50
18	P	326	PRO	CA-CB-CG	-20.72	64.63	104.00
21	S	247	ASN	CB-CG-OD1	19.89	161.39	121.60
1	1	567	GLN	CG-CD-OE1	19.86	161.31	121.60
1	1	781	ASN	CB-CG-OD1	19.86	161.31	121.60
21	S	136	GLN	CG-CD-OE1	19.85	161.31	121.60

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	1	744	ASN	CB-CG-OD1	19.85	161.30	121.60
1	1	616	GLN	CG-CD-OE1	19.85	161.30	121.60
18	P	229	ASN	CB-CG-OD1	19.85	161.29	121.60
1	1	638	ASN	CB-CG-OD1	19.84	161.28	121.60
18	P	290	GLN	CG-CD-OE1	19.84	161.28	121.60
21	S	216	GLN	CG-CD-OE1	19.83	161.26	121.60
18	P	338	ASN	CB-CG-OD1	19.83	161.26	121.60
18	P	340	PRO	N-CD-CG	19.40	132.30	103.20
2	2	269	PHE	O-C-N	-19.04	92.24	122.70
18	P	303	GLN	N-CA-CB	-18.94	76.50	110.60
18	P	258	TYR	CG-CD2-CE2	17.62	135.40	121.30
1	1	645	TYR	CG-CD2-CE2	17.38	135.21	121.30
18	P	303	GLN	CB-CA-C	-17.07	76.25	110.40
21	S	214	TRP	CE2-CD2-CG	17.04	120.93	107.30
18	P	258	TYR	CB-CG-CD2	16.95	131.17	121.00
2	2	269	PHE	C-N-CA	16.77	163.62	121.70
1	1	638	ASN	OD1-CG-ND2	-16.49	83.97	121.90
1	1	616	GLN	OE1-CD-NE2	-16.49	83.97	121.90
18	P	290	GLN	OE1-CD-NE2	-16.48	83.98	121.90
21	S	136	GLN	OE1-CD-NE2	-16.48	83.98	121.90
1	1	567	GLN	OE1-CD-NE2	-16.48	83.99	121.90
1	1	744	ASN	OD1-CG-ND2	-16.48	83.99	121.90
21	S	247	ASN	OD1-CG-ND2	-16.48	84.00	121.90
1	1	781	ASN	OD1-CG-ND2	-16.48	84.00	121.90
18	P	338	ASN	OD1-CG-ND2	-16.47	84.02	121.90
21	S	216	GLN	OE1-CD-NE2	-16.47	84.02	121.90
18	P	229	ASN	OD1-CG-ND2	-16.46	84.04	121.90
1	1	645	TYR	CB-CG-CD2	16.23	130.74	121.00
2	2	269	PHE	CA-C-N	16.09	152.60	117.20
18	P	338	ASN	CB-CG-ND2	-16.06	78.15	116.70
21	S	216	GLN	CG-CD-NE2	-16.06	78.16	116.70
18	P	229	ASN	CB-CG-ND2	-16.06	78.16	116.70
18	P	290	GLN	CG-CD-NE2	-16.04	78.20	116.70
1	1	744	ASN	CB-CG-ND2	-16.04	78.22	116.70
1	1	616	GLN	CG-CD-NE2	-16.03	78.23	116.70
1	1	638	ASN	CB-CG-ND2	-16.03	78.23	116.70
1	1	781	ASN	CB-CG-ND2	-16.03	78.22	116.70
21	S	136	GLN	CG-CD-NE2	-16.03	78.23	116.70
1	1	567	GLN	CG-CD-NE2	-16.02	78.24	116.70
21	S	247	ASN	CB-CG-ND2	-16.00	78.31	116.70
23	U	94	ASP	C-N-CD	-15.81	85.81	120.60
21	S	214	TRP	CD1-CG-CD2	15.73	118.89	106.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
21	S	214	TRP	CG-CD1-NE1	-15.44	94.66	110.10
21	S	243	TYR	CB-CG-CD1	-15.02	111.99	121.00
3	A	234	MET	O-C-N	-14.64	99.27	122.70
21	S	214	TRP	NE1-CE2-CD2	-13.48	93.82	107.30
18	P	326	PRO	N-CA-CB	12.47	118.27	103.30
27	Y	493	LEU	C-N-CD	-12.38	93.36	120.60
23	U	135	LEU	C-N-CD	-11.98	94.24	120.60
1	1	645	TYR	CD1-CE1-CZ	11.11	129.80	119.80
18	P	258	TYR	CD1-CE1-CZ	11.10	129.79	119.80
1	1	744	ASN	C-N-CD	-10.92	96.58	120.60
22	T	158	DT	C2-N3-C4	-10.59	120.85	127.20
18	P	325	ASP	C-N-CD	-10.58	97.33	120.60
22	T	165	DT	C2-N3-C4	-10.55	120.87	127.20
1	1	645	TYR	CD1-CG-CD2	-10.51	106.34	117.90
22	T	161	DT	C2-N3-C4	-10.49	120.90	127.20
18	P	258	TYR	CD1-CG-CD2	-10.38	106.48	117.90
22	T	163	DT	C2-N3-C4	-10.32	121.01	127.20
22	T	125	DT	C2-N3-C4	-10.26	121.05	127.20
22	T	129	DT	C2-N3-C4	-10.22	121.07	127.20
18	P	31	PRO	C-N-CD	-10.09	98.41	120.60
22	T	160	DT	C2-N3-C4	-10.04	121.17	127.20
22	T	159	DT	C2-N3-C4	-10.03	121.19	127.20
22	T	164	DT	C2-N3-C4	-10.01	121.19	127.20
22	T	162	DT	C2-N3-C4	-10.01	121.20	127.20
1	1	505	ILE	CB-CA-C	-10.00	91.60	111.60
21	S	243	TYR	CG-CD2-CE2	-9.81	113.45	121.30
16	N	9	DA	N1-C2-N3	-9.60	124.50	129.30
22	T	126	DA	N1-C2-N3	-9.60	124.50	129.30
22	T	124	DA	N1-C2-N3	-9.45	124.57	129.30
16	N	7	DA	N1-C2-N3	-9.40	124.60	129.30
16	N	2	DA	N1-C2-N3	-9.38	124.61	129.30
16	N	4	DA	N1-C2-N3	-9.31	124.64	129.30
16	N	1	DA	C2-N3-C4	9.23	115.22	110.60
21	S	243	TYR	CG-CD1-CE1	-9.23	113.92	121.30
16	N	1	DA	N1-C2-N3	-9.20	124.70	129.30
16	N	8	DA	C2-N3-C4	9.13	115.17	110.60
22	T	128	DA	N1-C2-N3	-9.14	124.73	129.30
16	N	8	DA	N1-C2-N3	-9.10	124.75	129.30
16	N	5	DA	N1-C2-N3	-9.09	124.76	129.30
16	N	10	DA	C2-N3-C4	9.09	115.14	110.60
16	N	5	DA	C2-N3-C4	9.05	115.12	110.60
16	N	6	DA	N1-C2-N3	-9.05	124.78	129.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
16	N	3	DA	C2-N3-C4	9.03	115.12	110.60
24	V	344	PRO	CA-N-CD	-9.02	98.88	111.50
16	N	9	DA	C2-N3-C4	9.01	115.11	110.60
22	T	126	DA	C2-N3-C4	8.97	115.09	110.60
22	T	130	DA	C2-N3-C4	8.92	115.06	110.60
18	P	326	PRO	N-CD-CG	-8.91	89.83	103.20
16	N	3	DA	N1-C2-N3	-8.87	124.86	129.30
16	N	2	DA	C2-N3-C4	8.83	115.02	110.60
22	T	130	DA	N1-C2-N3	-8.81	124.89	129.30
16	N	10	DA	N1-C2-N3	-8.80	124.90	129.30
22	T	128	DA	C2-N3-C4	8.78	114.99	110.60
16	N	4	DA	C2-N3-C4	8.75	114.98	110.60
16	N	6	DA	C2-N3-C4	8.74	114.97	110.60
22	T	124	DA	C2-N3-C4	8.71	114.96	110.60
16	N	7	DA	C2-N3-C4	8.69	114.94	110.60
21	S	214	TRP	CG-CD2-CE3	-8.56	126.19	133.90
21	S	188	SER	C-N-CD	8.53	146.31	128.40
18	P	340	PRO	CB-CG-CD	-8.29	74.19	106.50
24	V	74	PRO	N-CA-CB	8.28	113.23	103.30
23	U	102	PRO	N-CA-CB	8.27	113.23	103.30
3	A	234	MET	CA-C-N	8.02	134.85	117.20
3	A	95	PHE	C-N-CA	-8.00	101.69	121.70
24	V	74	PRO	CA-N-CD	-7.97	100.34	111.50
23	U	136	PRO	N-CA-CB	7.93	112.81	103.30
23	U	136	PRO	CA-N-CD	-7.88	100.46	111.50
23	U	102	PRO	CA-N-CD	-7.62	100.83	111.50
3	A	346	ASP	O-C-N	-7.54	110.64	122.70
24	V	295	PRO	CA-N-CD	-7.53	100.95	111.50
1	1	645	TYR	CG-CD1-CE1	-7.43	115.35	121.30
16	N	12	DG	C6-N1-C2	-7.40	120.66	125.10
18	P	258	TYR	CG-CD1-CE1	-7.33	115.44	121.30
22	T	127	DG	C6-N1-C2	-7.32	120.71	125.10
16	N	11	DG	C6-N1-C2	-7.24	120.75	125.10
3	A	399	HIS	N-CA-CB	7.23	123.61	110.60
16	N	14	DG	C6-N1-C2	-7.22	120.77	125.10
24	V	295	PRO	N-CA-CB	7.14	111.87	103.30
20	R	123	MET	CG-SD-CE	-7.12	88.81	100.20
16	N	12	DG	C2-N3-C4	6.95	115.37	111.90
18	P	340	PRO	N-CA-CB	6.87	111.55	103.30
16	N	14	DG	C2-N3-C4	6.84	115.32	111.90
16	N	11	DG	C2-N3-C4	6.82	115.31	111.90
21	S	243	TYR	CD1-CG-CD2	-6.81	110.41	117.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
2	2	253	LEU	CA-CB-CG	-6.81	99.64	115.30
24	V	344	PRO	N-CA-CB	6.79	111.45	103.30
27	Y	516	PRO	N-CA-CB	6.69	111.33	103.30
27	Y	310	PRO	CA-N-CD	-6.68	102.14	111.50
3	A	234	MET	C-N-CA	6.61	138.23	121.70
22	T	127	DG	C2-N3-C4	6.58	115.19	111.90
27	Y	516	PRO	CA-N-CD	-6.49	102.42	111.50
27	Y	216	PRO	CA-N-CD	-6.41	102.53	111.50
1	1	746	PRO	N-CA-CB	6.35	110.92	103.30
23	U	95	PRO	CA-N-CD	-6.34	102.63	111.50
27	Y	310	PRO	N-CA-CB	6.27	110.82	103.30
1	1	477	LEU	C-N-CA	-6.25	106.08	121.70
23	U	95	PRO	N-CA-CB	6.19	110.72	103.30
3	A	95	PHE	CA-C-N	-6.14	103.70	117.20
6	D	25	ALA	C-N-CA	6.12	136.99	121.70
24	V	343	GLY	C-N-CD	6.11	141.23	128.40
1	1	670	LEU	CB-CG-CD1	-6.10	100.63	111.00
18	P	258	TYR	CZ-CE2-CD2	-6.06	114.35	119.80
27	Y	216	PRO	N-CA-CB	6.06	110.57	103.30
1	1	645	TYR	CZ-CE2-CD2	-6.03	114.37	119.80
1	1	753	PRO	N-CA-CB	5.99	110.49	103.30
2	2	292	PRO	N-CA-C	5.96	127.59	112.10
27	Y	470	PRO	CA-N-CD	-5.93	103.19	111.50
16	N	12	DG	C5-C6-N1	5.93	114.47	111.50
21	S	241	PRO	N-CA-CB	5.90	110.38	103.30
27	Y	448	PRO	CA-N-CD	-5.90	103.24	111.50
21	S	215	PRO	N-CA-CB	5.88	110.36	103.30
21	S	224	LEU	CB-CG-CD1	5.85	120.95	111.00
21	S	224	LEU	CB-CG-CD2	5.85	120.94	111.00
22	T	158	DT	N3-C4-C5	5.83	118.70	115.20
16	N	14	DG	C5-C6-N1	5.83	114.41	111.50
21	S	193	LEU	CB-CG-CD2	5.80	120.87	111.00
22	T	161	DT	N3-C4-C5	5.80	118.68	115.20
18	P	292	PRO	N-CA-CB	5.79	110.24	103.30
21	S	193	LEU	CB-CG-CD1	5.77	120.81	111.00
18	P	328	LEU	CB-CG-CD1	5.74	120.75	111.00
3	A	58	LEU	CA-CB-CG	5.72	128.47	115.30
22	T	127	DG	C5-C6-N1	5.70	114.35	111.50
22	T	165	DT	N3-C4-C5	5.70	118.62	115.20
27	Y	696	TRP	CZ3-CH2-CZ2	5.67	128.41	121.60
4	B	340	ALA	C-N-CA	5.67	135.87	121.70
3	A	194	ALA	C-N-CA	5.66	135.86	121.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	V	69	TRP	CZ3-CH2-CZ2	5.66	128.39	121.60
16	N	11	DG	C5-C6-N1	5.65	114.33	111.50
23	U	361	TRP	CZ3-CH2-CZ2	5.64	128.37	121.60
24	V	81	TRP	CZ3-CH2-CZ2	5.64	128.37	121.60
22	T	125	DT	N3-C4-C5	5.61	118.56	115.20
18	P	325	ASP	CA-CB-CG	-5.60	101.08	113.40
24	V	313	TRP	CZ3-CH2-CZ2	5.59	128.30	121.60
22	T	129	DT	N3-C4-C5	5.58	118.55	115.20
27	Y	564	TRP	CZ3-CH2-CZ2	5.58	128.29	121.60
1	1	632	PRO	N-CA-CB	5.58	109.99	103.30
21	S	215	PRO	CA-CB-CG	5.55	115.34	104.80
22	T	163	DT	N3-C4-C5	5.53	118.52	115.20
22	T	160	DT	N3-C4-C5	5.52	118.51	115.20
6	D	26	THR	N-CA-C	-5.49	96.19	111.00
27	Y	64	PRO	CA-N-CD	-5.48	103.83	111.50
22	T	164	DT	N3-C4-C5	5.47	118.48	115.20
27	Y	448	PRO	N-CA-CB	5.47	109.86	103.30
4	B	628	THR	C-N-CA	5.46	135.34	121.70
5	C	39	ALA	N-CA-C	5.44	125.69	111.00
22	T	124	DA	O4'-C1'-N9	5.44	111.81	108.00
22	T	159	DT	N3-C4-C5	5.42	118.45	115.20
18	P	328	LEU	CB-CG-CD2	5.42	120.22	111.00
27	Y	470	PRO	N-CA-CB	5.42	109.80	103.30
22	T	162	DT	N3-C4-C5	5.41	118.45	115.20
1	1	746	PRO	CA-CB-CG	5.40	115.06	104.80
22	T	165	DT	C5-C6-N1	-5.33	120.50	123.70
20	R	151	LEU	CB-CG-CD2	5.33	120.06	111.00
20	R	140	LEU	CB-CG-CD1	5.31	120.02	111.00
27	Y	494	PRO	CA-N-CD	-5.31	104.07	111.50
5	C	89	GLU	N-CA-C	-5.29	96.72	111.00
3	A	1394	THR	C-N-CA	5.28	133.39	122.30
27	Y	64	PRO	N-CA-CB	5.28	109.64	103.30
16	N	14	DG	O4'-C1'-N9	5.27	111.69	108.00
22	T	128	DA	O4'-C4'-C3'	5.27	109.16	106.00
22	T	128	DA	C4-C5-N7	5.26	113.33	110.70
20	R	151	LEU	CB-CG-CD1	5.26	119.94	111.00
22	T	127	DG	O4'-C1'-N9	5.25	111.68	108.00
20	R	140	LEU	CB-CG-CD2	5.24	119.91	111.00
18	P	165	GLY	N-CA-C	-5.23	100.02	113.10
22	T	163	DT	C5-C6-N1	-5.23	120.56	123.70
16	N	13	DC	C5-C6-N1	-5.22	118.39	121.00
18	P	318	GLU	CA-CB-CG	-5.20	101.96	113.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
27	Y	494	PRO	N-CA-CB	5.19	109.53	103.30
2	2	302	CYS	CA-CB-SG	5.18	123.32	114.00
21	S	214	TRP	C-N-CD	5.16	139.23	128.40
4	B	1181	GLU	N-CA-C	5.15	124.90	111.00
16	N	12	DG	C4-C5-N7	5.14	112.86	110.80
22	T	125	DT	C5-C6-N1	-5.14	120.61	123.70
18	P	292	PRO	CA-CB-CG	5.14	114.56	104.80
1	1	479	GLY	N-CA-C	5.13	125.93	113.10
22	T	163	DT	C4-C5-C6	5.13	121.08	118.00
22	T	161	DT	C5-C6-N1	-5.13	120.62	123.70
16	N	11	DG	C8-N9-C4	-5.12	104.35	106.40
22	T	162	DT	C5-C6-N1	-5.11	120.63	123.70
22	T	127	DG	C1'-O4'-C4'	-5.10	105.00	110.10
22	T	165	DT	O4'-C1'-N1	5.10	111.57	108.00
1	1	502	VAL	CB-CA-C	-5.10	101.71	111.40
2	2	303	GLY	N-CA-C	5.10	125.84	113.10
22	T	129	DT	O4'-C4'-C3'	5.10	109.06	106.00
18	P	318	GLU	CB-CG-CD	-5.08	100.48	114.20
22	T	129	DT	C5-C6-N1	-5.08	120.65	123.70
22	T	160	DT	C5-C6-N1	-5.08	120.65	123.70
1	1	458	SER	N-CA-CB	5.07	118.11	110.50
18	P	161	LYS	N-CA-C	5.07	124.69	111.00
18	P	198	VAL	CB-CA-C	-5.07	101.77	111.40
22	T	165	DT	C4-C5-C6	5.05	121.03	118.00
22	T	164	DT	C5-C6-N1	-5.05	120.67	123.70
27	Y	322	PRO	CA-N-CD	-5.05	104.43	111.50
3	A	346	ASP	CA-C-N	5.03	128.26	117.20
4	B	1156	ASP	N-CA-C	5.02	124.56	111.00
22	T	158	DT	C5-C6-N1	-5.02	120.69	123.70
16	N	9	DA	O4'-C1'-N9	5.02	111.51	108.00
12	J	5	VAL	N-CA-C	-5.01	97.46	111.00

All (4) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	1	690	ILE	CB
18	P	269	ILE	CB
18	P	277	ILE	CB
20	R	126	ILE	CB

All (9) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	1	661	SER	Peptide
2	2	269	PHE	Peptide,Sidechain
3	A	234	MET	Mainchain
3	A	95	PHE	Mainchain
4	B	43	LEU	Mainchain
21	S	243	TYR	Sidechain
27	Y	555	GLN	Peptide
27	Y	593	GLY	Peptide

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	1	3797	0	3727	916	0
2	2	666	0	546	251	0
3	A	11174	0	11217	712	0
4	B	9140	0	9107	421	0
5	C	2095	0	2051	43	0
6	D	1434	0	1460	69	0
7	E	1752	0	1776	30	0
8	F	679	0	699	94	0
9	G	1340	0	1353	174	0
10	H	1068	0	1040	21	0
11	I	971	0	927	16	0
12	J	532	0	542	14	0
13	K	920	0	929	19	0
14	L	363	0	386	24	0
15	M	956	0	916	32	0
16	N	1500	0	805	235	0
17	O	792	0	806	49	0
18	P	2269	0	2346	1242	0
19	Q	1416	0	1491	154	0
20	R	960	0	969	345	0
21	S	1005	0	1024	580	0
22	T	1452	0	822	273	0
23	U	1248	0	1229	236	0
24	V	1455	0	1465	465	0
25	W	518	0	514	27	0
26	X	499	0	525	12	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
27	Y	4660	691	4743	807	0
28	2	1	0	0	0	0
28	A	1	0	0	0	0
29	2	1	0	0	0	0
29	A	2	0	0	0	0
29	B	1	0	0	0	0
29	C	1	0	0	0	0
29	I	2	0	0	0	0
29	J	1	0	0	0	0
29	L	1	0	0	0	0
All	All	54672	691	53415	6017	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 56.

All (6017) 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)
22:T:134:DT:C6	24:V:323:ARG:HD2	1.24	1.69
18:P:279:VAL:HG23	18:P:302:LEU:CG	1.19	1.66
20:R:34:PHE:CE2	20:R:134:LEU:HD11	1.25	1.65
18:P:137:CYS:SG	18:P:142:LEU:HB3	1.34	1.64
27:Y:132:LYS:HD3	27:Y:155:LEU:CD1	1.24	1.64
21:S:203:LYS:CB	21:S:242:ARG:HG3	1.18	1.64
21:S:129:LEU:HD23	24:V:347:PHE:CD2	1.29	1.63
18:P:223:LEU:HG	19:Q:177:PHE:CZ	1.25	1.63
21:S:203:LYS:HE3	21:S:242:ARG:CZ	1.19	1.63
21:S:130:TRP:CE3	24:V:339:LEU:HG	1.31	1.62
1:1:773:ILE:CD1	1:1:775:VAL:H	1.06	1.62
21:S:129:LEU:HD23	24:V:347:PHE:CE2	1.13	1.61
2:2:253:LEU:HD22	3:A:1132:LYS:CD	1.24	1.60
18:P:142:LEU:HD22	18:P:147:LYS:CG	1.22	1.60
1:1:717:TYR:CE2	1:1:718:TYR:CE1	1.89	1.59
3:A:1443:VAL:CB	9:G:63:PRO:HA	1.16	1.59
18:P:279:VAL:CB	18:P:302:LEU:CD2	1.77	1.59
21:S:148:LEU:HB3	21:S:154:LYS:CE	1.30	1.59
2:2:257:GLN:CG	3:A:1284:MET:CE	1.80	1.59
20:R:46:LEU:HD21	20:R:132:THR:CG2	1.22	1.59
18:P:340:PRO:CG	18:P:340:PRO:CD	1.75	1.58
1:1:561:MET:CB	25:W:450:ARG:HH22	1.13	1.58
18:P:310:LYS:HZ3	18:P:340:PRO:CB	1.08	1.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:639:LEU:HD12	27:Y:653:PHE:CE2	1.32	1.58
2:2:253:LEU:CD2	3:A:1132:LYS:HD3	1.24	1.57
18:P:340:PRO:CD	18:P:340:PRO:N	1.68	1.57
24:V:63:ARG:CG	24:V:215:VAL:HA	1.27	1.57
2:2:260:THR:CA	2:2:260:THR:CB	1.80	1.56
27:Y:400:LYS:HB3	27:Y:437:PHE:CZ	1.37	1.56
20:R:27:LEU:HD22	20:R:129:THR:CA	1.13	1.56
18:P:184:GLU:HB2	18:P:241:ARG:CG	1.13	1.56
20:R:34:PHE:CE2	20:R:134:LEU:CD1	1.80	1.56
1:1:757:ARG:HH22	1:1:760:LEU:CG	1.04	1.55
21:S:130:TRP:CZ2	24:V:334:ASP:HA	1.40	1.55
21:S:207:CYS:SG	21:S:208:LYS:HE2	1.46	1.55
27:Y:639:LEU:CD2	27:Y:649:ARG:HD2	1.30	1.54
1:1:606:ILE:HD12	1:1:690:ILE:CD1	1.33	1.54
21:S:129:LEU:CD2	24:V:347:PHE:CD2	1.87	1.53
1:1:585:PRO:CB	1:1:756:ARG:NH1	1.69	1.53
21:S:234:ARG:CB	21:S:234:ARG:NH1	1.71	1.52
21:S:203:LYS:CD	21:S:204:GLY:N	1.71	1.52
3:A:1443:VAL:HB	9:G:63:PRO:CA	1.28	1.52
20:R:27:LEU:CD2	20:R:129:THR:HA	1.40	1.52
1:1:757:ARG:NH1	1:1:760:LEU:CD2	1.67	1.52
3:A:867:ILE:CG1	3:A:867:ILE:CD1	1.83	1.51
21:S:203:LYS:HB3	21:S:242:ARG:CG	1.10	1.51
2:2:204:SER:CA	3:A:1176:LEU:C	1.80	1.50
2:2:269:PHE:CZ	2:2:297:CYS:SG	2.04	1.50
18:P:142:LEU:CD2	18:P:147:LYS:CB	1.83	1.50
18:P:143:PRO:CB	18:P:182:ARG:HE	1.24	1.50
20:R:123:MET:CA	20:R:130:LYS:NZ	1.69	1.50
19:Q:99:PHE:CB	22:T:143:DT:H5'	1.41	1.50
27:Y:639:LEU:CD1	27:Y:653:PHE:CE2	1.89	1.50
4:B:1185:CYS:SG	6:D:17:LYS:HD3	1.52	1.49
18:P:34:ILE:CD1	18:P:43:VAL:HB	1.36	1.49
18:P:340:PRO:CD	18:P:340:PRO:CA	1.90	1.49
4:B:959:ASP:CB	18:P:182:ARG:NH1	1.71	1.49
2:2:283:GLN:CD	3:A:756:ILE:HD13	1.32	1.48
21:S:203:LYS:CE	21:S:242:ARG:NH2	1.77	1.48
27:Y:132:LYS:CD	27:Y:155:LEU:HD11	1.40	1.48
1:1:773:ILE:HD11	1:1:775:VAL:CB	1.38	1.48
18:P:142:LEU:CD2	18:P:147:LYS:CG	1.91	1.48
4:B:1215:ARG:CD	6:D:15:LEU:CD1	1.91	1.47
21:S:125:SER:N	21:S:127:LYS:HZ3	1.11	1.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:154:LYS:HZ3	21:S:154:LYS:N	1.01	1.47
8:F:92:ARG:NH2	9:G:63:PRO:CB	1.75	1.47
4:B:296:GLU:CD	23:U:124:LYS:NZ	1.67	1.47
8:F:92:ARG:CZ	9:G:63:PRO:HB2	1.44	1.47
18:P:184:GLU:CB	18:P:241:ARG:CG	1.91	1.47
27:Y:639:LEU:CG	27:Y:653:PHE:CE2	1.96	1.46
17:O:4:PRO:HD2	24:V:357:LYS:CB	1.42	1.46
27:Y:257:LEU:CD2	27:Y:383:LEU:HD11	1.44	1.46
27:Y:639:LEU:HD21	27:Y:649:ARG:CD	1.45	1.45
20:R:34:PHE:CE2	20:R:134:LEU:CG	1.98	1.45
21:S:129:LEU:N	24:V:341:LYS:HE3	1.29	1.44
23:U:95:PRO:CD	23:U:95:PRO:N	1.69	1.44
18:P:184:GLU:HB2	18:P:241:ARG:CD	1.42	1.44
18:P:290:GLN:HG2	18:P:331:ASN:ND2	1.30	1.44
2:2:257:GLN:CG	3:A:1284:MET:HE3	1.39	1.44
27:Y:190:LEU:HD13	27:Y:195:ILE:CD1	1.47	1.43
27:Y:400:LYS:HB3	27:Y:437:PHE:CE2	1.52	1.43
18:P:29:VAL:CG1	18:P:32:PRO:CD	1.94	1.43
1:1:757:ARG:NH2	1:1:760:LEU:HG	1.17	1.43
18:P:279:VAL:CG2	18:P:302:LEU:CG	1.80	1.43
27:Y:64:PRO:CD	27:Y:64:PRO:N	1.70	1.43
2:2:248:ILE:CB	3:A:1203:ASN:OD1	1.68	1.42
1:1:773:ILE:HD12	1:1:775:VAL:N	1.16	1.42
2:2:241:LEU:HD21	3:A:1232:ASN:ND2	1.29	1.42
19:Q:99:PHE:HB3	22:T:143:DT:C5'	1.47	1.42
20:R:124:CYS:N	20:R:130:LYS:NZ	1.68	1.42
2:2:253:LEU:HD13	3:A:1132:LYS:NZ	1.24	1.42
18:P:223:LEU:CG	19:Q:177:PHE:CZ	2.01	1.42
24:V:69:TRP:HB2	24:V:219:CYS:SG	1.60	1.42
20:R:126:ILE:CG2	20:R:154:GLU:HG2	1.46	1.41
18:P:143:PRO:HB2	18:P:182:ARG:NE	1.35	1.41
21:S:203:LYS:CE	21:S:242:ARG:CZ	1.99	1.41
1:1:757:ARG:NH1	1:1:760:LEU:HD23	1.08	1.41
18:P:34:ILE:CD1	18:P:43:VAL:CB	1.98	1.41
21:S:154:LYS:CE	21:S:154:LYS:HA	1.36	1.41
2:2:269:PHE:CE2	2:2:297:CYS:SG	2.14	1.40
8:F:96:THR:HG23	9:G:65:ASP:C	1.42	1.40
1:1:717:TYR:HE2	1:1:718:TYR:CE1	1.28	1.40
4:B:449:ASN:HD21	18:P:138:ASP:CG	1.25	1.40
19:Q:103:ILE:CG1	22:T:143:DT:H2"	1.44	1.40
27:Y:639:LEU:HB2	27:Y:653:PHE:CD2	1.57	1.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:132:LYS:CD	27:Y:155:LEU:CD1	1.94	1.39
1:1:757:ARG:CZ	1:1:760:LEU:HD23	1.52	1.39
18:P:190:LYS:HE3	18:P:242:PHE:CE1	1.56	1.39
21:S:164:LYS:CE	21:S:165:LYS:HG2	1.48	1.39
18:P:187:ARG:HB2	18:P:189:PHE:N	1.38	1.38
18:P:286:ILE:CG1	18:P:293:ILE:HD11	1.54	1.38
24:V:295:PRO:CD	24:V:295:PRO:N	1.71	1.38
27:Y:493:LEU:CD2	27:Y:696:TRP:HE1	1.35	1.38
18:P:286:ILE:HD12	18:P:292:PRO:CA	1.51	1.37
21:S:202:PHE:CB	21:S:242:ARG:HH22	1.36	1.37
24:V:74:PRO:CD	24:V:74:PRO:N	1.72	1.37
1:1:585:PRO:HB2	1:1:756:ARG:CZ	1.50	1.37
18:P:340:PRO:CD	18:P:340:PRO:CB	1.98	1.37
3:A:1451:VAL:CG1	9:G:20:PRO:HA	1.54	1.37
27:Y:448:PRO:CD	27:Y:448:PRO:N	1.68	1.37
18:P:143:PRO:O	18:P:147:LYS:CB	1.72	1.37
21:S:130:TRP:HZ2	24:V:334:ASP:CA	1.36	1.37
20:R:27:LEU:CD1	20:R:128:LEU:O	1.69	1.37
21:S:148:LEU:CB	21:S:154:LYS:CE	2.01	1.37
27:Y:493:LEU:HD23	27:Y:696:TRP:NE1	1.34	1.37
18:P:184:GLU:CB	18:P:241:ARG:HG2	1.50	1.36
20:R:27:LEU:CD2	20:R:129:THR:CA	1.93	1.36
21:S:237:LYS:CG	21:S:241:PRO:HG2	1.55	1.36
27:Y:470:PRO:CD	27:Y:470:PRO:N	1.72	1.36
19:Q:103:ILE:HG12	22:T:143:DT:C2'	1.55	1.36
21:S:125:SER:N	21:S:127:LYS:NZ	1.67	1.36
16:N:23:DA:C2	19:Q:116:PHE:CZ	2.14	1.36
18:P:286:ILE:CD1	18:P:292:PRO:HA	1.52	1.36
20:R:46:LEU:CD2	20:R:132:THR:CG2	2.04	1.36
22:T:134:DT:C6	24:V:323:ARG:CD	2.06	1.36
1:1:561:MET:HB2	25:W:450:ARG:NH2	1.37	1.36
18:P:263:CYS:H	18:P:264:LYS:NZ	1.23	1.36
1:1:561:MET:CB	25:W:450:ARG:NH2	1.89	1.35
1:1:585:PRO:HB2	1:1:756:ARG:NH2	1.40	1.35
2:2:241:LEU:CD2	3:A:1232:ASN:HD22	1.35	1.35
18:P:329:ILE:CG2	18:P:330:ALA:H	1.23	1.35
1:1:561:MET:O	25:W:450:ARG:CZ	1.72	1.35
18:P:286:ILE:HG13	18:P:293:ILE:CD1	1.54	1.35
20:R:123:MET:HA	20:R:130:LYS:NZ	1.09	1.35
21:S:234:ARG:CB	21:S:234:ARG:HH11	1.30	1.35
23:U:138:ARG:NH2	24:V:57:LEU:HB2	1.40	1.35

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:V:313:TRP:HB2	24:V:349:TYR:CE1	1.60	1.35
24:V:344:PRO:N	24:V:344:PRO:CD	1.78	1.35
27:Y:683:ASP:O	27:Y:686:PHE:CD2	1.79	1.35
18:P:263:CYS:N	18:P:264:LYS:HZ3	1.24	1.35
22:T:134:DT:C1'	24:V:323:ARG:HD3	1.54	1.35
27:Y:216:PRO:CD	27:Y:216:PRO:N	1.72	1.35
1:1:575:ARG:NH2	22:T:102:DC:OP1	1.60	1.35
2:2:241:LEU:CD2	3:A:1232:ASN:ND2	1.86	1.35
2:2:253:LEU:CG	3:A:1132:LYS:HD3	1.55	1.35
3:A:411:ASP:OD1	18:P:51:VAL:CG1	1.72	1.35
18:P:223:LEU:HG	19:Q:177:PHE:CE1	1.59	1.34
4:B:433:GLN:OE1	23:U:326:ARG:CD	1.74	1.34
21:S:237:LYS:O	21:S:241:PRO:CD	1.75	1.34
4:B:959:ASP:HB2	18:P:182:ARG:NH1	1.01	1.34
18:P:145:ILE:CG1	18:P:182:ARG:HD2	1.57	1.34
18:P:142:LEU:CD2	18:P:147:LYS:HG3	1.49	1.34
18:P:142:LEU:HD23	18:P:147:LYS:CB	1.42	1.34
4:B:1221:SER:OG	6:D:14:ARG:NH1	1.59	1.33
4:B:885:MET:HB2	18:P:33:LYS:NZ	1.41	1.33
21:S:203:LYS:NZ	21:S:205:ILE:HB	1.43	1.33
4:B:959:ASP:OD2	18:P:145:ILE:CD1	1.75	1.33
21:S:175:LYS:HA	21:S:175:LYS:CE	1.32	1.33
27:Y:310:PRO:CD	27:Y:310:PRO:N	1.75	1.33
4:B:1215:ARG:HD2	6:D:15:LEU:CD1	1.50	1.33
18:P:279:VAL:CB	18:P:302:LEU:HD23	1.38	1.33
24:V:63:ARG:HB2	24:V:214:ILE:O	1.23	1.33
24:V:63:ARG:HG3	24:V:215:VAL:CA	1.57	1.33
21:S:214:TRP:CZ3	21:S:218:ASP:OD2	1.80	1.32
21:S:175:LYS:NZ	21:S:175:LYS:CB	1.87	1.32
4:B:1220:ARG:CA	6:D:14:ARG:HH22	1.43	1.32
18:P:226:ASP:OD2	18:P:260:ALA:CB	1.75	1.32
21:S:170:GLU:O	21:S:179:LYS:CD	1.76	1.32
23:U:136:PRO:CD	23:U:136:PRO:N	1.73	1.32
18:P:187:ARG:HD3	18:P:189:PHE:CB	1.59	1.31
20:R:34:PHE:CD2	20:R:134:LEU:HD11	1.62	1.31
21:S:202:PHE:CB	21:S:242:ARG:NH2	1.87	1.31
4:B:1215:ARG:NE	6:D:15:LEU:HD11	1.45	1.31
27:Y:103:PHE:CE1	27:Y:205:ILE:HD12	1.64	1.31
18:P:310:LYS:NZ	18:P:340:PRO:CB	1.93	1.31
22:T:134:DT:O4'	24:V:323:ARG:CD	1.71	1.31
17:O:4:PRO:CD	24:V:357:LYS:HB3	1.59	1.31

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:2:253:LEU:HD22	3:A:1132:LYS:CG	1.60	1.31
18:P:102:THR:HG21	18:P:104:MET:CE	1.61	1.31
20:R:130:LYS:CE	20:R:130:LYS:HA	1.39	1.31
21:S:127:LYS:HB2	21:S:153:MET:CE	1.58	1.31
18:P:22:LEU:CD2	18:P:34:ILE:HD13	1.61	1.30
21:S:164:LYS:HE2	21:S:165:LYS:CG	1.29	1.30
3:A:291:GLU:OE2	18:P:116:LYS:HD3	1.29	1.30
24:V:63:ARG:CB	24:V:215:VAL:HA	1.60	1.30
3:A:315:LEU:O	18:P:92:LEU:HD23	1.32	1.30
16:N:23:DA:C2	19:Q:116:PHE:CE1	2.18	1.30
18:P:150:ALA:CB	18:P:178:ILE:HG13	1.60	1.30
21:S:187:HIS:CE1	21:S:225:GLU:HB3	1.65	1.30
3:A:1450:LEU:C	9:G:18:PHE:O	1.70	1.29
4:B:560:GLU:O	24:V:225:MET:CE	1.78	1.29
17:O:4:PRO:HG3	24:V:357:LYS:O	1.12	1.29
1:1:561:MET:O	25:W:450:ARG:NH1	1.62	1.29
1:1:757:ARG:NH2	1:1:760:LEU:CG	1.76	1.29
18:P:263:CYS:HB2	18:P:264:LYS:NZ	1.40	1.29
18:P:313:TYR:O	18:P:316:LEU:CD2	1.80	1.29
16:N:24:DG:H4'	19:Q:118:SER:CB	1.62	1.29
21:S:129:LEU:CD2	24:V:347:PHE:CE2	2.08	1.29
21:S:191:GLU:O	21:S:195:LEU:HD22	1.27	1.29
1:1:773:ILE:CD1	1:1:775:VAL:HB	1.60	1.29
18:P:180:CYS:SG	18:P:187:ARG:HG2	1.73	1.29
18:P:320:ARG:HG3	18:P:321:ASP:OD1	1.29	1.29
1:1:621:LYS:NZ	1:1:621:LYS:HB3	1.40	1.28
18:P:287:LEU:HD12	18:P:338:ASN:OD1	1.26	1.28
21:S:237:LYS:HG3	21:S:241:PRO:CG	1.61	1.28
27:Y:28:ILE:CG2	27:Y:57:ILE:HG13	1.62	1.28
2:2:284:LEU:CB	3:A:1080:THR:HG21	1.63	1.28
18:P:29:VAL:HG11	18:P:32:PRO:CG	1.62	1.28
18:P:187:ARG:HB2	18:P:188:THR:C	1.52	1.28
3:A:1442:ASP:CB	9:G:60:ARG:HH12	1.40	1.28
1:1:754:ARG:HH11	1:1:754:ARG:CB	1.47	1.27
3:A:1451:VAL:CG1	9:G:20:PRO:CA	2.13	1.27
4:B:1220:ARG:C	6:D:14:ARG:NH2	1.86	1.27
18:P:184:GLU:OE1	18:P:231:SER:HB3	1.20	1.27
27:Y:257:LEU:HD23	27:Y:383:LEU:CD1	1.62	1.27
1:1:560:PRO:O	1:1:586:THR:HG21	1.21	1.27
27:Y:193:TYR:CZ	27:Y:197:ARG:HD2	1.69	1.27
20:R:123:MET:C	20:R:130:LYS:NZ	1.84	1.27

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:360:LEU:CB	27:Y:375:ARG:HD2	1.63	1.27
8:F:105:ALA:CB	9:G:14:HIS:CE1	2.18	1.27
20:R:34:PHE:HE2	20:R:134:LEU:CG	1.36	1.27
1:1:754:ARG:CB	1:1:754:ARG:NH1	1.98	1.27
3:A:291:GLU:CG	18:P:116:LYS:HE2	1.65	1.27
18:P:184:GLU:OE1	18:P:231:SER:CB	1.82	1.27
18:P:226:ASP:OD2	18:P:260:ALA:HB3	1.29	1.26
18:P:34:ILE:CD1	18:P:43:VAL:CG2	2.14	1.26
20:R:123:MET:CE	20:R:130:LYS:HD2	1.64	1.26
2:2:248:ILE:HG23	3:A:1203:ASN:CG	0.89	1.26
4:B:959:ASP:OD2	18:P:145:ILE:HD13	1.08	1.26
18:P:63:TRP:NE1	18:P:81:GLU:HG2	1.50	1.25
18:P:263:CYS:CB	18:P:264:LYS:HZ2	1.48	1.25
27:Y:405:PHE:HB3	27:Y:437:PHE:CE1	1.69	1.25
3:A:1442:ASP:CB	9:G:60:ARG:NH1	1.94	1.25
3:A:1443:VAL:CG2	9:G:63:PRO:HA	1.66	1.25
2:2:253:LEU:HD13	3:A:1132:LYS:CE	1.66	1.25
21:S:148:LEU:CB	21:S:154:LYS:HE3	1.62	1.25
21:S:207:CYS:SG	21:S:208:LYS:CE	2.22	1.25
21:S:203:LYS:HE3	21:S:203:LYS:N	1.50	1.25
21:S:164:LYS:CE	21:S:165:LYS:CG	1.95	1.25
27:Y:639:LEU:CB	27:Y:653:PHE:CD2	2.19	1.25
1:1:712:ASP:HB3	25:W:447:GLU:OE2	1.08	1.24
3:A:419:LYS:NZ	18:P:47:LEU:O	1.67	1.24
4:B:343:ILE:HG13	22:T:121:DG:C5'	1.65	1.24
18:P:27:CYS:HB3	18:P:47:LEU:CD2	1.66	1.24
21:S:137:LYS:N	21:S:137:LYS:HD2	1.40	1.24
23:U:102:PRO:CD	23:U:102:PRO:N	1.70	1.24
3:A:344:ARG:NH2	4:B:1120:GLU:HG3	1.48	1.24
20:R:130:LYS:HE2	20:R:130:LYS:CA	1.02	1.24
20:R:142:PHE:HD1	20:R:142:PHE:N	0.99	1.24
21:S:140:LYS:NZ	21:S:141:PRO:C	1.90	1.24
2:2:241:LEU:CG	3:A:1232:ASN:HD22	1.46	1.24
21:S:143:LEU:HD13	21:S:144:VAL:N	1.53	1.24
27:Y:28:ILE:HG22	27:Y:57:ILE:CG1	1.68	1.24
27:Y:60:GLN:O	27:Y:64:PRO:HD3	1.36	1.24
18:P:34:ILE:HD12	18:P:43:VAL:CG2	1.68	1.24
18:P:263:CYS:N	18:P:264:LYS:NZ	1.81	1.23
18:P:310:LYS:NZ	18:P:340:PRO:HB3	1.49	1.23
21:S:129:LEU:CA	24:V:341:LYS:HE3	1.68	1.23
21:S:191:GLU:O	21:S:195:LEU:CD2	1.86	1.23

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:2:257:GLN:HG3	3:A:1284:MET:CE	1.54	1.23
18:P:43:VAL:HG13	18:P:55:LYS:CE	1.66	1.23
18:P:137:CYS:SG	18:P:142:LEU:CB	2.26	1.23
24:V:292:ILE:C	24:V:295:PRO:HD2	1.59	1.23
1:1:572:GLU:OE2	1:1:576:LYS:HB3	1.28	1.23
1:1:606:ILE:CD1	1:1:690:ILE:HD11	1.68	1.23
18:P:34:ILE:HD12	18:P:43:VAL:CB	1.59	1.23
18:P:190:LYS:HE3	18:P:242:PHE:CZ	1.72	1.23
21:S:175:LYS:HZ2	21:S:175:LYS:C	1.40	1.23
21:S:221:ILE:H	21:S:221:ILE:CD1	1.48	1.23
24:V:318:LEU:HD21	24:V:349:TYR:OH	1.35	1.23
18:P:94:THR:HG22	18:P:110:LEU:CD2	1.67	1.22
23:U:94:ASP:C	23:U:95:PRO:CD	2.08	1.22
24:V:307:PHE:CZ	24:V:349:TYR:CE1	2.27	1.22
4:B:433:GLN:OE1	23:U:326:ARG:NE	1.71	1.22
4:B:433:GLN:OE1	23:U:326:ARG:HD3	1.27	1.22
21:S:175:LYS:NZ	21:S:175:LYS:N	1.86	1.22
18:P:248:LEU:HD21	18:P:286:ILE:CG1	1.69	1.22
3:A:1446:ASP:N	9:G:61:ILE:HD11	1.50	1.22
20:R:123:MET:CB	20:R:130:LYS:HD3	1.69	1.22
2:2:241:LEU:HD21	3:A:1232:ASN:CG	1.51	1.22
2:2:253:LEU:CD1	3:A:1132:LYS:NZ	2.00	1.22
18:P:34:ILE:CG1	18:P:43:VAL:HB	1.69	1.22
18:P:310:LYS:CE	18:P:340:PRO:HB3	1.69	1.22
23:U:138:ARG:HH21	24:V:57:LEU:CD1	1.51	1.22
27:Y:244:CYS:CB	27:Y:442:ALA:HB1	1.68	1.22
21:S:125:SER:O	24:V:341:LYS:CG	1.65	1.21
21:S:127:LYS:CB	21:S:153:MET:HE3	1.69	1.21
16:N:23:DA:O3'	19:Q:120:LYS:CD	1.85	1.21
4:B:1215:ARG:CD	6:D:15:LEU:HD13	1.62	1.21
18:P:26:GLU:OE1	18:P:50:LEU:CD1	1.88	1.21
18:P:29:VAL:HG11	18:P:32:PRO:CD	1.58	1.21
1:1:717:TYR:CE2	1:1:718:TYR:CD1	2.28	1.21
18:P:58:ASP:OD1	18:P:60:ARG:HG2	1.40	1.21
18:P:224:LYS:NZ	18:P:229:ASN:OD1	1.72	1.21
27:Y:639:LEU:CD1	27:Y:653:PHE:HE2	1.34	1.21
1:1:606:ILE:CD1	1:1:690:ILE:CD1	2.19	1.20
2:2:253:LEU:CD2	3:A:1132:LYS:CD	1.96	1.20
21:S:130:TRP:CE3	24:V:339:LEU:CG	2.23	1.20
21:S:141:PRO:HB2	21:S:177:THR:CG2	1.69	1.20
21:S:219:GLU:O	21:S:223:GLN:OE1	1.59	1.20

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:221:ILE:HD13	21:S:221:ILE:N	1.45	1.20
8:F:96:THR:CG2	9:G:65:ASP:O	1.90	1.20
27:Y:400:LYS:CB	27:Y:437:PHE:CZ	2.25	1.20
18:P:257:GLU:H	18:P:257:GLU:CD	1.42	1.20
18:P:303:GLN:NE2	18:P:304:VAL:HG23	1.55	1.20
19:Q:99:PHE:CB	22:T:143:DT:C5'	2.10	1.20
4:B:343:ILE:CG1	22:T:121:DG:H5'	1.70	1.20
23:U:119:LEU:HD21	24:V:135:PHE:CE2	1.76	1.20
2:2:277:LYS:CE	3:A:593:GLU:OE2	1.90	1.20
4:B:296:GLU:OE1	23:U:124:LYS:NZ	1.72	1.20
20:R:120:ASN:CG	20:R:133:GLN:HB3	1.61	1.20
20:R:34:PHE:HZ	20:R:135:GLU:N	1.22	1.19
3:A:411:ASP:OD1	18:P:51:VAL:HG12	1.03	1.19
18:P:87:LEU:CD1	18:P:126:VAL:CG2	2.20	1.19
21:S:137:LYS:CD	21:S:137:LYS:H	1.52	1.19
18:P:187:ARG:HD3	18:P:189:PHE:CA	1.70	1.19
23:U:374:VAL:CG2	24:V:73:LEU:HG	1.72	1.19
3:A:291:GLU:OE2	18:P:116:LYS:CD	1.91	1.19
21:S:130:TRP:CH2	24:V:333:LEU:O	1.96	1.19
23:U:372:SER:CB	24:V:80:LYS:NZ	2.06	1.19
27:Y:639:LEU:HB2	27:Y:653:PHE:CE2	1.77	1.19
2:2:235:ASP:CA	2:2:242:LYS:HE2	1.72	1.18
18:P:143:PRO:CB	18:P:182:ARG:NE	1.95	1.18
18:P:145:ILE:CG1	18:P:182:ARG:CD	2.21	1.18
21:S:154:LYS:N	21:S:154:LYS:NZ	1.66	1.18
27:Y:639:LEU:CB	27:Y:653:PHE:CE2	2.23	1.18
2:2:277:LYS:HE3	3:A:593:GLU:CD	1.64	1.18
3:A:317:LYS:O	4:B:471:LYS:NZ	1.73	1.18
18:P:310:LYS:HZ3	18:P:340:PRO:CG	1.56	1.18
4:B:343:ILE:CD1	22:T:121:DG:O3'	1.92	1.18
4:B:1215:ARG:NE	6:D:15:LEU:CD1	1.99	1.18
21:S:201:THR:OG1	21:S:243:TYR:OH	1.57	1.18
27:Y:331:PHE:CE2	27:Y:335:LEU:HD11	1.78	1.18
1:1:585:PRO:HB3	1:1:756:ARG:NH1	1.33	1.18
3:A:227:VAL:CG2	6:D:16:LYS:HE3	1.72	1.18
16:N:23:DA:O3'	19:Q:120:LYS:HD2	1.01	1.18
18:P:288:LEU:C	18:P:288:LEU:HD13	1.64	1.18
21:S:237:LYS:NZ	21:S:241:PRO:HB2	1.57	1.18
27:Y:321:ILE:HD11	27:Y:409:ILE:HG22	1.25	1.18
27:Y:639:LEU:HD12	27:Y:653:PHE:CZ	1.77	1.18
18:P:154:TYR:HA	18:P:157:CYS:SG	1.84	1.18

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:202:GLU:CG	18:P:205:LYS:HE2	1.73	1.18
21:S:170:GLU:O	21:S:179:LYS:HD2	1.39	1.18
2:2:253:LEU:HD13	3:A:1132:LYS:CD	1.72	1.17
18:P:42:ASP:OD1	18:P:54:ASP:HA	1.40	1.17
18:P:184:GLU:CB	18:P:241:ARG:CD	2.19	1.17
20:R:34:PHE:HE2	20:R:134:LEU:CD2	1.56	1.17
20:R:46:LEU:CD2	20:R:132:THR:HG21	1.70	1.17
1:1:527:LEU:HD22	1:1:531:ILE:HD12	1.21	1.17
18:P:43:VAL:HG13	18:P:55:LYS:HE2	1.23	1.17
18:P:289:PHE:CE1	18:P:290:GLN:HB2	1.68	1.17
17:O:4:PRO:CG	24:V:357:LYS:O	1.92	1.17
21:S:130:TRP:HH2	24:V:333:LEU:O	1.22	1.17
21:S:154:LYS:NZ	21:S:154:LYS:C	1.95	1.17
21:S:234:ARG:NH1	21:S:234:ARG:HB2	0.84	1.17
27:Y:28:ILE:HG22	27:Y:57:ILE:CD1	1.72	1.17
27:Y:405:PHE:CB	27:Y:437:PHE:CE1	2.26	1.17
2:2:253:LEU:O	3:A:1135:ARG:NH2	1.77	1.17
3:A:1450:LEU:O	9:G:18:PHE:O	1.59	1.17
4:B:451:LYS:HZ2	18:P:147:LYS:NZ	1.42	1.17
4:B:1220:ARG:C	6:D:14:ARG:HH22	1.41	1.17
8:F:92:ARG:CZ	9:G:63:PRO:CB	2.12	1.17
18:P:44:VAL:HG23	18:P:50:LEU:O	1.43	1.17
23:U:138:ARG:NH2	24:V:57:LEU:CB	2.07	1.17
27:Y:60:GLN:O	27:Y:64:PRO:CD	1.90	1.17
4:B:104:GLU:OE2	14:L:54:ARG:HD3	1.44	1.17
8:F:92:ARG:HE	9:G:64:THR:N	1.40	1.17
20:R:27:LEU:HD11	20:R:128:LEU:O	1.39	1.17
1:1:410:LEU:HD11	1:1:457:TYR:HA	1.17	1.16
3:A:1451:VAL:HG13	9:G:20:PRO:CA	1.75	1.16
4:B:343:ILE:HD12	22:T:121:DG:O3'	1.43	1.16
18:P:94:THR:HG21	18:P:110:LEU:HG	1.27	1.16
18:P:152:GLU:HG3	18:P:155:LYS:CE	1.72	1.16
18:P:202:GLU:HG3	18:P:205:LYS:CE	1.75	1.16
1:1:754:ARG:NH1	1:1:754:ARG:HG3	1.49	1.16
4:B:296:GLU:CG	23:U:124:LYS:NZ	2.07	1.16
1:1:773:ILE:HD11	1:1:775:VAL:CA	1.75	1.16
2:2:284:LEU:HB3	3:A:1080:THR:CG2	1.75	1.16
18:P:142:LEU:CD2	18:P:147:LYS:HB2	1.56	1.16
20:R:34:PHE:CZ	20:R:134:LEU:CD1	2.28	1.16
21:S:135:ILE:HD11	21:S:180:TYR:HD2	1.02	1.16
21:S:137:LYS:N	21:S:137:LYS:CD	2.08	1.16

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:757:ARG:CZ	1:1:760:LEU:HB3	1.76	1.16
3:A:411:ASP:OD1	18:P:51:VAL:N	1.76	1.16
8:F:92:ARG:NH2	9:G:63:PRO:HB2	0.84	1.16
18:P:116:LYS:O	18:P:119:MET:HG2	1.42	1.16
18:P:143:PRO:HB3	18:P:182:ARG:NH2	1.61	1.16
18:P:329:ILE:CG2	18:P:330:ALA:N	1.99	1.16
3:A:1443:VAL:HG23	9:G:63:PRO:HB3	1.26	1.15
18:P:22:LEU:HG	18:P:52:LEU:CD1	1.74	1.15
23:U:374:VAL:HG23	24:V:73:LEU:CD2	1.76	1.15
1:1:487:LEU:HD23	1:1:493:VAL:HG21	1.19	1.15
18:P:285:ASN:C	18:P:285:ASN:HD22	1.48	1.15
21:S:148:LEU:CB	21:S:154:LYS:HE2	1.67	1.15
21:S:203:LYS:HE3	21:S:242:ARG:NE	1.61	1.15
27:Y:193:TYR:CE2	27:Y:197:ARG:HD2	1.80	1.15
20:R:127:CYS:SG	20:R:129:THR:HG22	1.87	1.15
21:S:203:LYS:HE2	21:S:242:ARG:NH2	1.49	1.15
1:1:428:CYS:HB2	1:1:434:ASN:HB2	1.26	1.15
4:B:959:ASP:HB2	18:P:182:ARG:CZ	1.76	1.15
21:S:203:LYS:HD2	21:S:204:GLY:N	0.83	1.15
4:B:1215:ARG:CZ	6:D:15:LEU:HD11	1.77	1.15
16:N:60:DA:H2"	16:N:61:DA:H5'	1.29	1.15
18:P:22:LEU:CG	18:P:52:LEU:HD13	1.76	1.15
18:P:248:LEU:HD21	18:P:293:ILE:HD11	1.22	1.15
20:R:34:PHE:CZ	20:R:135:GLU:N	2.05	1.15
27:Y:495:MET:HG2	27:Y:686:PHE:HB2	1.29	1.15
18:P:29:VAL:CG1	18:P:32:PRO:HD3	1.67	1.14
18:P:143:PRO:O	18:P:147:LYS:HB2	1.36	1.14
18:P:154:TYR:HE1	18:P:171:ILE:CG2	1.59	1.14
21:S:135:ILE:CG1	21:S:180:TYR:HB2	1.76	1.14
21:S:203:LYS:HD2	21:S:204:GLY:CA	1.76	1.14
27:Y:639:LEU:CD1	27:Y:653:PHE:CZ	2.28	1.14
1:1:712:ASP:CB	25:W:447:GLU:OE2	1.94	1.14
16:N:61:DA:H2"	16:N:62:DA:H5'	1.23	1.14
18:P:302:LEU:H	18:P:302:LEU:HD12	0.99	1.14
20:R:123:MET:HA	20:R:130:LYS:CE	1.77	1.14
2:2:289:ALA:O	4:B:769:TYR:CE2	1.86	1.14
4:B:959:ASP:CA	18:P:182:ARG:NH1	2.10	1.14
27:Y:400:LYS:CB	27:Y:437:PHE:CE2	2.31	1.14
1:1:474:MET:HB3	1:1:482:TRP:H	1.13	1.14
4:B:885:MET:CB	18:P:33:LYS:NZ	2.09	1.14
4:B:1220:ARG:HA	6:D:14:ARG:HH22	1.11	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:187:ARG:HH21	18:P:192:ILE:CG2	1.60	1.13
18:P:290:GLN:CG	18:P:331:ASN:ND2	2.09	1.13
18:P:303:GLN:HG2	18:P:304:VAL:HG22	1.15	1.13
23:U:119:LEU:HG	24:V:135:PHE:HD2	1.07	1.13
18:P:226:ASP:CG	18:P:260:ALA:HB1	1.67	1.13
18:P:250:MET:O	18:P:254:THR:HG22	1.48	1.13
20:R:34:PHE:CZ	20:R:134:LEU:HG	1.82	1.13
20:R:123:MET:HB2	20:R:130:LYS:HD3	1.25	1.13
23:U:373:TYR:CE2	24:V:72:ARG:NH1	2.15	1.13
1:1:773:ILE:CD1	1:1:775:VAL:N	1.78	1.13
16:N:23:DA:H4'	19:Q:120:LYS:HD3	1.29	1.13
18:P:87:LEU:HD11	18:P:126:VAL:CG2	1.74	1.13
18:P:100:GLU:OE1	18:P:101:THR:HG23	1.47	1.13
18:P:184:GLU:OE2	18:P:241:ARG:N	1.82	1.13
18:P:248:LEU:CD2	18:P:286:ILE:HG12	1.77	1.13
20:R:156:LEU:CD2	20:R:156:LEU:H	1.58	1.13
21:S:130:TRP:HH2	24:V:337:ALA:HB3	1.07	1.13
21:S:158:LYS:NZ	21:S:162:LEU:HG	1.60	1.13
21:S:175:LYS:CB	21:S:175:LYS:HZ2	1.51	1.13
27:Y:353:SER:HB2	27:Y:378:SER:HB2	1.17	1.13
18:P:145:ILE:CD1	18:P:182:ARG:HD2	1.79	1.13
18:P:152:GLU:HG3	18:P:155:LYS:HE3	1.23	1.13
18:P:248:LEU:CD2	18:P:286:ILE:CG1	2.26	1.13
20:R:27:LEU:HD21	20:R:129:THR:N	1.61	1.13
21:S:130:TRP:CD2	24:V:339:LEU:HG	1.63	1.13
2:2:253:LEU:CD1	3:A:1132:LYS:CD	2.27	1.13
18:P:184:GLU:CB	18:P:241:ARG:HD3	1.75	1.13
18:P:223:LEU:CB	19:Q:177:PHE:CZ	2.32	1.12
20:R:46:LEU:HD21	20:R:132:THR:HG22	1.20	1.12
18:P:29:VAL:CG1	18:P:32:PRO:HD2	1.72	1.12
18:P:173:ALA:HA	18:P:176:ILE:HG12	1.30	1.12
24:V:107:LEU:HD11	24:V:119:GLU:HG3	1.28	1.12
4:B:560:GLU:O	24:V:225:MET:HE1	0.95	1.12
18:P:223:LEU:HB2	19:Q:177:PHE:CZ	1.82	1.12
21:S:154:LYS:NZ	21:S:154:LYS:CB	2.09	1.12
3:A:192:GLY:CA	22:T:117:DC:P	2.37	1.12
3:A:1443:VAL:HG23	9:G:63:PRO:CB	1.80	1.12
2:2:257:GLN:HG2	3:A:1284:MET:CE	1.51	1.12
4:B:350:GLN:HG3	23:U:407:ASP:CG	1.68	1.12
18:P:279:VAL:CB	18:P:302:LEU:HD22	1.57	1.12
20:R:27:LEU:HD13	20:R:128:LEU:O	1.48	1.12

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:621:LYS:NZ	1:1:621:LYS:CB	2.10	1.11
3:A:1451:VAL:HG13	9:G:20:PRO:CB	1.80	1.11
20:R:27:LEU:CD2	20:R:129:THR:N	2.13	1.11
27:Y:400:LYS:HD2	27:Y:437:PHE:CE2	1.84	1.11
1:1:477:LEU:HA	1:1:501:VAL:HB	1.20	1.11
1:1:754:ARG:NH2	1:1:758:GLU:OE2	1.83	1.11
3:A:227:VAL:HG21	6:D:16:LYS:HE3	1.18	1.11
8:F:96:THR:CG2	9:G:65:ASP:C	2.18	1.11
18:P:27:CYS:CB	18:P:47:LEU:HD21	1.81	1.11
18:P:94:THR:HG22	18:P:110:LEU:HD21	1.13	1.11
24:V:63:ARG:CG	24:V:215:VAL:CA	2.22	1.11
4:B:887:HIS:CE1	18:P:38:PHE:HB3	1.84	1.11
8:F:96:THR:OG1	9:G:64:THR:O	1.65	1.11
18:P:169:GLU:HG3	18:P:197:HIS:CE1	1.86	1.11
20:R:17:VAL:CG1	20:R:66:LEU:HG	1.79	1.11
23:U:138:ARG:HH21	24:V:57:LEU:HD12	1.13	1.11
27:Y:405:PHE:CB	27:Y:437:PHE:CZ	2.34	1.11
27:Y:495:MET:HG2	27:Y:686:PHE:CB	1.81	1.11
1:1:460:VAL:HB	16:N:63:DG:H4'	1.12	1.11
2:2:258:GLY:N	3:A:1284:MET:H	1.47	1.11
18:P:154:TYR:HE1	18:P:171:ILE:HG23	1.05	1.11
18:P:223:LEU:CB	19:Q:177:PHE:HZ	1.62	1.11
18:P:310:LYS:NZ	18:P:340:PRO:CG	2.10	1.11
18:P:333:VAL:HG22	18:P:336:LEU:HD12	1.24	1.11
21:S:135:ILE:HD11	21:S:180:TYR:CD2	1.85	1.11
23:U:374:VAL:HG23	24:V:73:LEU:CG	1.80	1.11
2:2:248:ILE:HG22	3:A:1203:ASN:OD1	1.36	1.11
4:B:343:ILE:HD12	22:T:122:DT:P	1.91	1.11
20:R:17:VAL:HG12	20:R:66:LEU:CG	1.79	1.11
21:S:141:PRO:HB2	21:S:177:THR:HG21	1.31	1.11
1:1:408:ILE:HG12	1:1:475:ASP:HB3	1.28	1.10
8:F:105:ALA:CA	9:G:14:HIS:HE1	1.64	1.10
16:N:27:DG:H3'	24:V:291:SER:C	1.70	1.10
18:P:143:PRO:HB3	18:P:182:ARG:HH21	1.07	1.10
21:S:128:LEU:HD22	21:S:162:LEU:HD12	1.29	1.10
27:Y:643:ARG:HB2	27:Y:649:ARG:HB3	1.26	1.10
18:P:133:ILE:HG13	18:P:151:LYS:HD3	1.26	1.10
21:S:164:LYS:NZ	21:S:165:LYS:HG2	1.65	1.10
27:Y:386:ARG:O	27:Y:390:VAL:HG23	1.51	1.10
2:2:283:GLN:CD	3:A:756:ILE:CD1	2.19	1.10
3:A:192:GLY:HA2	22:T:117:DC:P	1.91	1.10

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:430:ARG:HA	23:U:326:ARG:NH1	1.66	1.10
16:N:24:DG:C4'	19:Q:118:SER:HB3	1.79	1.10
18:P:145:ILE:HG12	18:P:182:ARG:HD2	1.29	1.10
21:S:127:LYS:HA	21:S:153:MET:HE1	1.24	1.10
24:V:318:LEU:HD21	24:V:349:TYR:CZ	1.87	1.10
1:1:757:ARG:CZ	1:1:760:LEU:CD2	2.21	1.10
2:2:277:LYS:HE3	3:A:593:GLU:OE1	1.51	1.10
8:F:96:THR:HG21	9:G:65:ASP:O	1.48	1.10
18:P:22:LEU:HD11	18:P:43:VAL:HG21	1.15	1.10
18:P:22:LEU:HD11	18:P:34:ILE:CD1	1.82	1.10
18:P:86:LEU:CD2	18:P:155:LYS:HE2	1.79	1.10
18:P:102:THR:HG21	18:P:104:MET:HE2	1.33	1.10
18:P:184:GLU:CG	18:P:241:ARG:HG2	1.78	1.10
23:U:119:LEU:CD2	24:V:135:PHE:CE2	2.34	1.10
24:V:69:TRP:CB	24:V:219:CYS:SG	2.40	1.10
1:1:757:ARG:NH2	1:1:760:LEU:CB	2.13	1.10
2:2:248:ILE:HG12	3:A:1203:ASN:ND2	1.65	1.10
2:2:258:GLY:H	3:A:1284:MET:N	1.48	1.10
18:P:86:LEU:HD23	18:P:155:LYS:HE2	1.25	1.10
24:V:74:PRO:CD	24:V:222:CYS:O	2.00	1.10
3:A:404:TYR:OH	18:P:37:ARG:NH2	1.85	1.09
16:N:63:DG:H2"	16:N:64:DG:H5"	1.30	1.09
18:P:190:LYS:CE	18:P:242:PHE:CZ	2.36	1.09
18:P:202:GLU:HG3	18:P:205:LYS:HE2	1.11	1.09
24:V:292:ILE:O	24:V:295:PRO:HD2	1.51	1.09
27:Y:321:ILE:HD11	27:Y:409:ILE:CG2	1.81	1.09
18:P:313:TYR:O	18:P:316:LEU:HD23	1.51	1.09
20:R:34:PHE:CE2	20:R:134:LEU:HG	1.78	1.09
21:S:128:LEU:C	24:V:341:LYS:HE3	1.73	1.09
21:S:129:LEU:HD22	24:V:347:PHE:CD2	1.77	1.09
2:2:266:THR:HG23	3:A:731:ARG:HD3	1.23	1.09
3:A:1445:ILE:C	9:G:61:ILE:CD1	2.08	1.09
4:B:350:GLN:HG3	23:U:407:ASP:OD2	1.49	1.09
4:B:350:GLN:HE21	23:U:411:LYS:CE	1.64	1.09
18:P:94:THR:CG2	18:P:110:LEU:HG	1.82	1.09
18:P:104:MET:HG3	18:P:105:ARG:H	1.09	1.09
18:P:279:VAL:HG11	18:P:309:ILE:HG12	1.33	1.09
23:U:103:LEU:HD23	24:V:92:LEU:HD11	1.29	1.09
27:Y:353:SER:HB2	27:Y:378:SER:CB	1.83	1.09
27:Y:495:MET:HB3	27:Y:686:PHE:CD2	1.86	1.09
1:1:460:VAL:HG11	16:N:63:DG:C3'	1.79	1.09

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:695:ARG:HA	1:1:696:ARG:NH2	1.66	1.09
1:1:785:ARG:NE	1:1:785:ARG:O	1.85	1.09
2:2:241:LEU:HD22	3:A:1232:ASN:HA	1.13	1.09
18:P:133:ILE:CG1	18:P:151:LYS:CD	2.31	1.09
18:P:188:THR:HB	18:P:245:HIS:HE1	1.09	1.09
27:Y:449:VAL:HG12	27:Y:456:VAL:HG21	1.34	1.09
4:B:350:GLN:HE21	23:U:411:LYS:HE3	0.94	1.09
20:R:44:LYS:HG3	20:R:51:LYS:HA	1.12	1.09
21:S:154:LYS:HZ3	21:S:154:LYS:CB	1.65	1.09
1:1:410:LEU:HD22	1:1:477:LEU:HD11	1.35	1.08
18:P:87:LEU:CD1	18:P:126:VAL:HG21	1.77	1.08
18:P:196:ILE:HG13	18:P:197:HIS:N	1.58	1.08
18:P:263:CYS:CB	18:P:264:LYS:NZ	2.07	1.08
18:P:298:VAL:CG1	18:P:302:LEU:HD21	1.82	1.08
18:P:303:GLN:HG2	18:P:304:VAL:CG2	1.83	1.08
18:P:109:GLU:HA	18:P:112:LYS:HE3	1.30	1.08
18:P:207:LEU:HD22	19:Q:186:GLU:OE1	1.51	1.08
18:P:264:LYS:N	18:P:264:LYS:CD	2.16	1.08
21:S:129:LEU:HD22	24:V:347:PHE:CG	1.88	1.08
21:S:138:LYS:CB	21:S:138:LYS:HZ2	1.66	1.08
21:S:156:ASP:O	21:S:159:VAL:HG13	1.54	1.08
1:1:566:TYR:HB2	25:W:450:ARG:HH21	0.92	1.08
2:2:306:TRP:HA	3:A:1360:GLY:CA	1.83	1.08
3:A:317:LYS:N	18:P:92:LEU:HD22	1.69	1.08
3:A:411:ASP:CG	18:P:51:VAL:H	1.55	1.08
18:P:263:CYS:CA	18:P:264:LYS:HZ3	1.67	1.08
27:Y:128:VAL:HG23	27:Y:373:PRO:HD2	1.17	1.08
1:1:421:ARG:HG2	1:1:430:LEU:HG	1.30	1.08
1:1:476:PHE:HD1	1:1:485:ILE:HD12	1.17	1.08
1:1:757:ARG:CZ	1:1:760:LEU:CG	2.32	1.08
3:A:192:GLY:HA3	22:T:117:DC:OP1	1.54	1.08
18:P:63:TRP:HE1	18:P:81:GLU:HG2	1.04	1.08
21:S:134:TYR:OH	21:S:138:LYS:HE3	1.53	1.08
21:S:203:LYS:HE2	21:S:242:ARG:HH21	0.96	1.08
21:S:237:LYS:HZ3	21:S:241:PRO:CB	1.67	1.08
1:1:455:SER:HB3	1:1:466:ARG:HH11	1.14	1.08
2:2:257:GLN:CG	3:A:1284:MET:HE2	1.55	1.08
3:A:89:PRO:HG2	3:A:204:THR:HB	1.35	1.08
18:P:29:VAL:HG13	18:P:32:PRO:HD3	1.14	1.08
18:P:288:LEU:O	18:P:288:LEU:HD22	1.54	1.08
18:P:321:ASP:OD1	18:P:321:ASP:N	1.76	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:231:LEU:CD2	21:S:232:VAL:HG13	1.82	1.08
1:1:408:ILE:HB	1:1:482:TRP:HD1	1.16	1.07
2:2:283:GLN:OE1	3:A:756:ILE:HD13	1.52	1.07
8:F:105:ALA:HB2	9:G:14:HIS:NE2	1.67	1.07
20:R:43:LEU:HD23	20:R:54:LEU:HD11	1.15	1.07
20:R:126:ILE:CG2	20:R:154:GLU:CG	2.32	1.07
21:S:202:PHE:HB3	21:S:242:ARG:NH2	1.07	1.07
23:U:376:LEU:HG	24:V:73:LEU:HD22	1.25	1.07
27:Y:360:LEU:HB3	27:Y:375:ARG:HD2	1.09	1.07
3:A:836:TYR:OH	3:A:1403:GLU:OE2	1.69	1.07
18:P:22:LEU:HD21	18:P:34:ILE:HD13	1.14	1.07
18:P:102:THR:HG21	18:P:104:MET:HE3	1.32	1.07
18:P:163:LEU:HD23	18:P:163:LEU:O	1.51	1.07
18:P:196:ILE:HG13	18:P:197:HIS:H	1.06	1.07
18:P:226:ASP:CG	18:P:260:ALA:CB	2.22	1.07
21:S:129:LEU:CD2	24:V:347:PHE:CG	2.36	1.07
24:V:306:LEU:HD11	24:V:313:TRP:CZ3	1.87	1.07
18:P:133:ILE:HG12	18:P:151:LYS:CG	1.84	1.07
18:P:154:TYR:CE1	18:P:171:ILE:HG23	1.89	1.07
23:U:137:VAL:HG13	24:V:59:LEU:HB3	1.25	1.07
27:Y:405:PHE:HB2	27:Y:437:PHE:CZ	1.89	1.07
1:1:424:PHE:HB3	1:1:449:GLU:HG2	1.28	1.07
2:2:266:THR:CG2	3:A:731:ARG:HD3	1.83	1.07
18:P:142:LEU:HD21	18:P:147:LYS:HA	1.34	1.07
18:P:289:PHE:HE1	18:P:290:GLN:CB	1.68	1.07
24:V:82:ARG:HE	24:V:108:LEU:HD11	1.01	1.07
1:1:472:LYS:HG2	1:1:473:VAL:HG13	1.37	1.07
18:P:22:LEU:HD11	18:P:34:ILE:HD11	1.34	1.07
18:P:29:VAL:HG13	18:P:32:PRO:CD	1.69	1.07
18:P:329:ILE:HG22	18:P:330:ALA:N	1.60	1.07
20:R:119:PRO:HD3	20:R:120:ASN:ND2	1.70	1.07
27:Y:132:LYS:HD2	27:Y:155:LEU:HD13	1.35	1.07
27:Y:244:CYS:HB3	27:Y:442:ALA:HB1	1.34	1.07
3:A:16:GLU:OE1	6:D:14:ARG:NH1	1.86	1.06
3:A:1443:VAL:CB	9:G:63:PRO:CA	2.01	1.06
8:F:105:ALA:HA	9:G:14:HIS:HE1	1.18	1.06
18:P:198:VAL:O	18:P:198:VAL:HG12	1.30	1.06
21:S:129:LEU:CA	24:V:341:LYS:CE	2.32	1.06
1:1:405:LYS:HD3	1:1:483:GLY:HA3	1.35	1.06
2:2:284:LEU:HB3	3:A:1080:THR:HG21	1.13	1.06
4:B:449:ASN:ND2	18:P:138:ASP:CG	2.07	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:264:LYS:N	18:P:264:LYS:HD3	1.32	1.06
27:Y:128:VAL:CG2	27:Y:373:PRO:HD2	1.84	1.06
27:Y:257:LEU:HD23	27:Y:383:LEU:HD11	1.07	1.06
1:1:647:ASP:OD1	1:1:647:ASP:N	1.84	1.06
18:P:195:LEU:O	18:P:196:ILE:HG22	1.54	1.06
21:S:129:LEU:HA	24:V:341:LYS:CE	1.85	1.06
23:U:372:SER:CB	24:V:80:LYS:HZ1	1.62	1.06
23:U:376:LEU:HG	24:V:73:LEU:CD2	1.84	1.06
24:V:318:LEU:HD11	24:V:349:TYR:CE2	1.90	1.06
18:P:143:PRO:O	18:P:147:LYS:HB3	1.49	1.06
21:S:130:TRP:CH2	24:V:337:ALA:HB3	1.89	1.06
24:V:63:ARG:HB3	24:V:215:VAL:C	1.76	1.06
27:Y:479:LEU:O	27:Y:479:LEU:HD22	1.55	1.06
27:Y:639:LEU:HG	27:Y:653:PHE:CE2	1.84	1.06
2:2:306:TRP:HA	3:A:1360:GLY:HA3	1.08	1.06
3:A:192:GLY:CA	22:T:117:DC:OP1	2.03	1.06
18:P:187:ARG:CD	18:P:189:PHE:HA	1.85	1.06
21:S:170:GLU:O	21:S:179:LYS:HD3	1.49	1.06
27:Y:353:SER:CB	27:Y:378:SER:HB2	1.86	1.06
27:Y:650:GLU:HA	27:Y:653:PHE:CE1	1.91	1.06
16:N:21:DA:H2"	16:N:22:DA:H5'	1.33	1.05
18:P:187:ARG:HD3	18:P:189:PHE:HA	1.35	1.05
18:P:298:VAL:HG12	18:P:302:LEU:CD2	1.85	1.05
20:R:46:LEU:HD21	20:R:132:THR:HG23	1.32	1.05
3:A:317:LYS:H	18:P:92:LEU:HD22	1.16	1.05
18:P:248:LEU:HD21	18:P:286:ILE:HG13	1.12	1.05
21:S:194:LYS:HZ2	21:S:210:LEU:HD11	1.16	1.05
24:V:306:LEU:HD11	24:V:313:TRP:CE3	1.92	1.05
27:Y:495:MET:SD	27:Y:696:TRP:CE3	2.49	1.05
1:1:502:VAL:HG11	1:1:530:LEU:HB3	1.35	1.05
1:1:621:LYS:HB3	1:1:621:LYS:HZ3	0.95	1.05
3:A:1443:VAL:HB	9:G:63:PRO:N	1.71	1.05
18:P:298:VAL:HG12	18:P:302:LEU:HD21	1.08	1.05
21:S:129:LEU:N	24:V:341:LYS:CE	2.18	1.05
21:S:148:LEU:HB3	21:S:154:LYS:HE3	1.21	1.05
21:S:231:LEU:HD23	21:S:232:VAL:CG1	1.86	1.05
23:U:137:VAL:HG11	24:V:61:LEU:HD21	1.35	1.05
2:2:248:ILE:CD1	3:A:1203:ASN:HD21	1.68	1.05
3:A:1443:VAL:CG1	9:G:61:ILE:HG22	1.86	1.05
3:A:1443:VAL:HG12	9:G:61:ILE:CG2	1.86	1.05
18:P:34:ILE:HD11	18:P:43:VAL:CB	1.83	1.05

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:578:MET:SD	1:1:779:ALA:O	2.15	1.05
2:2:235:ASP:CA	2:2:242:LYS:CE	2.34	1.05
3:A:1445:ILE:C	9:G:61:ILE:HD11	1.54	1.05
20:R:124:CYS:H	20:R:130:LYS:NZ	1.36	1.05
21:S:127:LYS:HB2	21:S:153:MET:SD	1.97	1.05
8:F:132:LEU:HB3	9:G:61:ILE:HG21	1.37	1.04
16:N:19:DT:H2"	16:N:20:DA:H5'	1.38	1.04
18:P:94:THR:HG22	18:P:110:LEU:CG	1.86	1.04
18:P:187:ARG:HB2	18:P:189:PHE:CA	1.87	1.04
18:P:223:LEU:HB2	19:Q:177:PHE:HZ	0.94	1.04
21:S:127:LYS:CB	21:S:153:MET:CE	2.27	1.04
2:2:241:LEU:HG	3:A:1232:ASN:HD22	1.13	1.04
23:U:137:VAL:CG1	24:V:59:LEU:HB3	1.87	1.04
27:Y:128:VAL:CG2	27:Y:372:LYS:HA	1.88	1.04
27:Y:248:LEU:HD21	27:Y:445:ALA:HB2	1.37	1.04
1:1:505:ILE:HG22	1:1:507:ALA:H	1.21	1.04
1:1:756:ARG:HH11	1:1:756:ARG:CG	1.69	1.04
3:A:1442:ASP:HB3	9:G:60:ARG:NH1	1.12	1.04
18:P:150:ALA:CB	18:P:178:ILE:CG1	2.34	1.04
18:P:150:ALA:HB2	18:P:178:ILE:HG13	1.10	1.04
18:P:254:THR:C	18:P:257:GLU:OE1	1.96	1.04
18:P:279:VAL:CA	18:P:302:LEU:HD23	1.86	1.04
21:S:127:LYS:HB2	21:S:153:MET:HE3	1.21	1.04
21:S:138:LYS:CB	21:S:138:LYS:NZ	2.16	1.04
21:S:138:LYS:NZ	21:S:138:LYS:HB3	1.70	1.04
21:S:194:LYS:NZ	21:S:210:LEU:HD11	1.70	1.04
22:T:134:DT:N1	24:V:323:ARG:CD	2.21	1.04
23:U:119:LEU:HG	24:V:135:PHE:CD2	1.93	1.04
24:V:63:ARG:CB	24:V:215:VAL:CA	2.36	1.04
8:F:105:ALA:HB2	9:G:14:HIS:CE1	1.91	1.04
21:S:183:THR:HA	21:S:222:ASN:ND2	1.73	1.04
27:Y:28:ILE:CG2	27:Y:57:ILE:CG1	2.32	1.04
27:Y:42:MET:SD	27:Y:48:LYS:HG2	1.96	1.04
2:2:248:ILE:HG23	3:A:1203:ASN:CB	1.88	1.03
3:A:78:PRO:O	4:B:1201:LYS:NZ	1.89	1.03
18:P:94:THR:CG2	18:P:110:LEU:CG	2.35	1.03
18:P:279:VAL:HG22	18:P:298:VAL:HG12	1.39	1.03
18:P:287:LEU:CD1	18:P:338:ASN:OD1	2.05	1.03
20:R:126:ILE:HG21	20:R:154:GLU:HG2	1.08	1.03
1:1:515:ALA:C	1:1:681:ARG:HD3	1.76	1.03
2:2:306:TRP:CA	3:A:1360:GLY:HA3	1.89	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:1220:ARG:CA	6:D:14:ARG:NH2	2.14	1.03
27:Y:537:MET:SD	27:Y:621:LEU:HD13	1.98	1.03
1:1:568:GLU:O	1:1:571:ARG:NH1	1.65	1.03
18:P:27:CYS:HB3	18:P:47:LEU:HD21	1.28	1.03
24:V:333:LEU:O	24:V:337:ALA:HB3	1.58	1.03
3:A:63:ARG:O	18:P:20:ILE:HG12	1.58	1.03
3:A:89:PRO:CG	3:A:204:THR:HB	1.88	1.03
3:A:1451:VAL:HG11	9:G:20:PRO:HA	1.13	1.03
4:B:296:GLU:HG3	23:U:124:LYS:NZ	1.74	1.03
4:B:350:GLN:NE2	23:U:411:LYS:HE3	1.72	1.03
4:B:902:GLY:O	14:L:65:VAL:HG11	1.59	1.03
18:P:172:MET:O	18:P:176:ILE:HG23	1.59	1.03
20:R:28:VAL:HG13	20:R:43:LEU:HD21	1.37	1.03
20:R:144:ARG:NH1	20:R:144:ARG:HA	1.52	1.03
21:S:143:LEU:CD1	21:S:145:ASN:H	1.72	1.03
27:Y:215:ASP:O	27:Y:218:ILE:HG22	1.59	1.03
27:Y:360:LEU:CG	27:Y:375:ARG:HD2	1.89	1.03
27:Y:495:MET:HG2	27:Y:686:PHE:CG	1.93	1.03
1:1:303:ARG:HG2	1:1:504:THR:HB	1.40	1.03
16:N:58:DC:H2"	16:N:59:DT:H5'	1.40	1.03
23:U:135:LEU:C	23:U:136:PRO:CD	2.26	1.03
27:Y:28:ILE:HG22	27:Y:57:ILE:HG13	1.19	1.03
27:Y:683:ASP:O	27:Y:686:PHE:HD2	1.26	1.03
1:1:566:TYR:HB2	25:W:450:ARG:NH2	1.73	1.02
1:1:757:ARG:NH1	1:1:760:LEU:CB	2.22	1.02
3:A:344:ARG:CZ	4:B:1120:GLU:HG3	1.88	1.02
16:N:18:DA:H2"	16:N:19:DT:H5'	1.38	1.02
18:P:180:CYS:SG	18:P:187:ARG:CG	2.46	1.02
18:P:279:VAL:CG1	18:P:309:ILE:HG12	1.88	1.02
19:Q:114:LEU:HB3	22:T:143:DT:O2	1.59	1.02
21:S:237:LYS:NZ	21:S:241:PRO:CB	2.21	1.02
22:T:135:DG:H2'	22:T:136:DA:C8	1.94	1.02
27:Y:289:LEU:HD22	27:Y:348:VAL:HG12	1.41	1.02
27:Y:494:PRO:HD2	27:Y:679:MET:O	1.59	1.02
3:A:317:LYS:O	4:B:471:LYS:CE	2.06	1.02
18:P:142:LEU:CD2	18:P:147:LYS:CA	2.37	1.02
20:R:27:LEU:HD21	20:R:128:LEU:C	1.79	1.02
21:S:133:GLU:HG3	21:S:137:LYS:HE3	1.34	1.02
21:S:135:ILE:CD1	21:S:180:TYR:HD2	1.70	1.02
22:T:145:DT:C6	22:T:146:DT:H72	1.95	1.02
18:P:102:THR:CG2	18:P:104:MET:CE	2.37	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:252:VAL:HG13	18:P:285:ASN:ND2	1.73	1.02
1:1:460:VAL:HB	16:N:63:DG:C4'	1.77	1.02
1:1:757:ARG:HH22	1:1:760:LEU:CB	1.70	1.02
2:2:291:GLU:N	2:2:292:PRO:HD2	1.72	1.02
4:B:433:GLN:OE1	23:U:326:ARG:CZ	2.07	1.02
18:P:43:VAL:HG22	18:P:55:LYS:HZ3	1.22	1.02
18:P:93:SER:HB3	18:P:114:GLN:OE1	1.59	1.02
18:P:170:SER:OG	18:P:205:LYS:HE3	1.59	1.02
18:P:225:ILE:C	18:P:225:ILE:HD12	1.80	1.02
18:P:257:GLU:OE1	18:P:257:GLU:N	1.92	1.02
18:P:329:ILE:HG23	18:P:330:ALA:H	1.24	1.02
27:Y:103:PHE:CD1	27:Y:205:ILE:HD12	1.95	1.02
27:Y:190:LEU:HD13	27:Y:195:ILE:HD11	1.42	1.02
27:Y:495:MET:HG3	27:Y:681:LEU:HB2	1.38	1.02
16:N:23:DA:H2"	19:Q:120:LYS:HB2	1.42	1.02
21:S:203:LYS:HG3	21:S:242:ARG:NE	1.75	1.02
21:S:203:LYS:HZ2	21:S:204:GLY:C	1.60	1.02
1:1:425:LEU:HG	1:1:429:THR:HA	1.40	1.01
1:1:754:ARG:HH11	1:1:754:ARG:HG3	1.05	1.01
4:B:1185:CYS:SG	6:D:17:LYS:CD	2.48	1.01
18:P:184:GLU:CD	18:P:241:ARG:N	2.12	1.01
18:P:188:THR:HB	18:P:245:HIS:CE1	1.96	1.01
21:S:233:LEU:HD13	21:S:245:TRP:O	1.60	1.01
21:S:234:ARG:CB	21:S:234:ARG:CZ	2.37	1.01
21:S:234:ARG:HB2	21:S:234:ARG:CZ	1.90	1.01
1:1:588:PHE:CE2	1:1:621:LYS:NZ	2.26	1.01
1:1:588:PHE:CZ	1:1:621:LYS:HE2	1.95	1.01
2:2:283:GLN:OE1	3:A:756:ILE:CD1	2.07	1.01
18:P:130:PHE:O	18:P:133:ILE:HG22	1.60	1.01
18:P:133:ILE:HG12	18:P:151:LYS:HG2	1.38	1.01
18:P:310:LYS:HE2	18:P:340:PRO:HB3	1.38	1.01
20:R:156:LEU:H	20:R:156:LEU:HD23	1.21	1.01
21:S:151:LEU:HD23	21:S:151:LEU:O	1.60	1.01
21:S:203:LYS:NZ	21:S:204:GLY:C	2.14	1.01
4:B:1215:ARG:HD2	6:D:15:LEU:HD13	1.03	1.01
18:P:227:THR:O	18:P:227:THR:HG22	1.61	1.01
21:S:127:LYS:CA	21:S:153:MET:CE	2.38	1.01
27:Y:681:LEU:HD22	27:Y:696:TRP:CZ3	1.95	1.01
3:A:227:VAL:HG11	6:D:16:LYS:CG	1.90	1.01
3:A:291:GLU:HG2	18:P:116:LYS:CE	1.89	1.01
4:B:105:SER:HB2	18:P:183:ALA:CB	1.90	1.01

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:29:VAL:HG11	18:P:32:PRO:HG3	1.36	1.01
18:P:198:VAL:O	18:P:198:VAL:CG1	2.07	1.01
22:T:117:DC:H2"	22:T:118:DC:H5'	1.38	1.01
18:P:193:GLN:NE2	18:P:203:PHE:CD2	2.29	1.01
22:T:108:DG:H2"	22:T:109:DT:H5'	1.42	1.01
23:U:119:LEU:CG	24:V:135:PHE:CD2	2.44	1.01
23:U:374:VAL:HG23	24:V:73:LEU:HD21	1.41	1.01
27:Y:360:LEU:CB	27:Y:375:ARG:CD	2.39	1.01
27:Y:449:VAL:CG1	27:Y:456:VAL:HG21	1.91	1.01
2:2:241:LEU:CD2	3:A:1232:ASN:HA	1.89	1.00
3:A:291:GLU:HG2	18:P:116:LYS:HE2	1.01	1.00
3:A:1443:VAL:HG12	9:G:61:ILE:HG22	1.40	1.00
18:P:26:GLU:OE1	18:P:50:LEU:HD11	1.60	1.00
18:P:280:VAL:CG1	18:P:313:TYR:HA	1.91	1.00
21:S:203:LYS:HZ3	21:S:205:ILE:CB	1.73	1.00
27:Y:70:ILE:HB	27:Y:208:TYR:HE2	1.23	1.00
1:1:756:ARG:NH1	1:1:756:ARG:HG2	1.53	1.00
1:1:757:ARG:CZ	1:1:760:LEU:CB	2.39	1.00
4:B:430:ARG:HA	23:U:326:ARG:HH12	1.20	1.00
16:N:23:DA:N3	19:Q:116:PHE:CE1	2.28	1.00
16:N:56:DT:H2"	16:N:57:DA:H5'	1.41	1.00
16:N:58:DC:H2'	16:N:59:DT:C6	1.96	1.00
18:P:184:GLU:OE2	18:P:241:ARG:CA	2.09	1.00
20:R:30:ASP:OD1	20:R:151:LEU:HD12	1.59	1.00
21:S:129:LEU:HG	24:V:341:LYS:HE2	1.42	1.00
1:1:384:ILE:HD13	1:1:511:LEU:HD11	1.41	1.00
2:2:253:LEU:CD2	3:A:1132:LYS:HB3	1.90	1.00
8:F:105:ALA:HA	9:G:14:HIS:CE1	1.95	1.00
18:P:133:ILE:HG13	18:P:151:LYS:CD	1.89	1.00
18:P:329:ILE:HG22	18:P:330:ALA:H	0.86	1.00
21:S:219:GLU:CB	21:S:222:ASN:HD22	1.73	1.00
3:A:1386:ARG:NH1	3:A:1403:GLU:OE1	1.95	1.00
18:P:130:PHE:C	18:P:133:ILE:HG22	1.82	1.00
1:1:460:VAL:CB	16:N:63:DG:H4'	1.92	1.00
21:S:133:GLU:HA	21:S:137:LYS:HE2	1.41	1.00
27:Y:132:LYS:CD	27:Y:155:LEU:HD13	1.85	1.00
2:2:248:ILE:CG1	3:A:1203:ASN:HD21	1.74	1.00
19:Q:114:LEU:HD13	22:T:143:DT:C2	1.96	1.00
24:V:74:PRO:HD2	24:V:222:CYS:O	1.58	0.99
27:Y:678:VAL:HG11	27:Y:708:LEU:HG	1.41	0.99
1:1:560:PRO:O	1:1:586:THR:CG2	2.09	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:343:ILE:HG13	22:T:121:DG:H5'	1.02	0.99
16:N:35:DG:H2"	16:N:36:DT:H71	1.43	0.99
18:P:34:ILE:HD12	18:P:43:VAL:HB	1.17	0.99
18:P:225:ILE:HD13	18:P:227:THR:N	1.76	0.99
21:S:134:TYR:CZ	21:S:138:LYS:HE3	1.97	0.99
3:A:192:GLY:HA2	22:T:116:DG:O3'	1.61	0.99
23:U:374:VAL:CG2	24:V:73:LEU:CG	2.37	0.99
27:Y:360:LEU:HB3	27:Y:375:ARG:CD	1.91	0.99
27:Y:481:LYS:HD3	27:Y:483:TYR:CE2	1.97	0.99
1:1:376:ASN:H	1:1:380:ARG:HB2	1.22	0.99
1:1:459:MET:HB2	1:1:464:ARG:HD2	1.41	0.99
1:1:460:VAL:HG11	16:N:63:DG:H3'	1.39	0.99
3:A:1451:VAL:HG13	9:G:20:PRO:CG	1.92	0.99
18:P:310:LYS:NZ	18:P:340:PRO:HG3	1.76	0.99
21:S:128:LEU:HG	24:V:341:LYS:NZ	1.76	0.99
21:S:154:LYS:C	21:S:154:LYS:HZ2	1.59	0.99
3:A:1443:VAL:CG2	9:G:63:PRO:CA	2.33	0.99
2:2:252:ASN:ND2	3:A:1206:ASP:OD1	1.95	0.99
21:S:126:SER:O	24:V:339:LEU:HB3	1.62	0.99
27:Y:400:LYS:HD2	27:Y:437:PHE:CD2	1.97	0.99
18:P:187:ARG:HH21	18:P:192:ILE:HG21	1.22	0.99
21:S:131:ALA:O	21:S:135:ILE:CG2	2.11	0.99
21:S:214:TRP:HZ3	21:S:218:ASP:OD2	1.27	0.99
18:P:22:LEU:CD2	18:P:34:ILE:HG21	1.93	0.99
21:S:131:ALA:O	21:S:135:ILE:HG22	1.62	0.99
21:S:133:GLU:HG3	21:S:137:LYS:CE	1.92	0.99
3:A:416:ARG:HH12	18:P:37:ARG:HE	1.10	0.98
18:P:133:ILE:HG12	18:P:151:LYS:CD	1.91	0.98
18:P:173:ALA:HA	18:P:176:ILE:CG1	1.93	0.98
18:P:310:LYS:HZ3	18:P:340:PRO:HB3	1.03	0.98
21:S:158:LYS:HZ3	21:S:162:LEU:HG	1.16	0.98
1:1:376:ASN:HB2	1:1:380:ARG:HD3	1.45	0.98
18:P:184:GLU:OE2	18:P:241:ARG:HA	1.62	0.98
20:R:127:CYS:SG	20:R:129:THR:CG2	2.51	0.98
22:T:133:DT:O2	24:V:323:ARG:NH1	1.90	0.98
27:Y:128:VAL:HG23	27:Y:373:PRO:CD	1.93	0.98
27:Y:245:ILE:HG23	27:Y:439:CYS:O	1.63	0.98
18:P:27:CYS:SG	18:P:47:LEU:HD21	2.03	0.98
18:P:102:THR:CG2	18:P:104:MET:HE2	1.91	0.98
27:Y:639:LEU:CD2	27:Y:649:ARG:CD	2.20	0.98
18:P:43:VAL:HG22	18:P:55:LYS:NZ	1.78	0.98

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:285:ASN:C	18:P:285:ASN:ND2	2.15	0.98
16:N:39:DC:H2'	16:N:40:DT:C6	1.99	0.98
1:1:408:ILE:HB	1:1:482:TRP:CD1	1.98	0.98
1:1:410:LEU:HB2	1:1:466:ARG:HH22	1.26	0.98
4:B:105:SER:HB2	18:P:183:ALA:HB1	1.46	0.98
4:B:1217:TYR:OH	6:D:15:LEU:HA	1.64	0.98
18:P:152:GLU:CG	18:P:155:LYS:HE3	1.94	0.98
20:R:123:MET:HE2	20:R:130:LYS:HD2	1.39	0.98
27:Y:136:MET:HE2	27:Y:159:HIS:HD2	1.25	0.98
3:A:344:ARG:HD2	4:B:1118:PRO:O	1.64	0.98
2:2:248:ILE:CG1	3:A:1203:ASN:ND2	2.26	0.98
24:V:82:ARG:NE	24:V:108:LEU:HD11	1.78	0.98
27:Y:331:PHE:CZ	27:Y:335:LEU:HD11	1.99	0.98
1:1:477:LEU:CA	1:1:501:VAL:HB	1.92	0.98
18:P:225:ILE:CD1	18:P:227:THR:N	2.26	0.98
18:P:310:LYS:HZ3	18:P:340:PRO:CA	1.77	0.98
27:Y:495:MET:HB3	27:Y:686:PHE:CE2	1.98	0.98
18:P:63:TRP:HE1	18:P:81:GLU:CG	1.77	0.97
18:P:188:THR:CB	18:P:245:HIS:CE1	2.47	0.97
27:Y:190:LEU:HD13	27:Y:195:ILE:HD12	1.46	0.97
1:1:668:THR:HG21	1:1:694:LYS:HB2	1.44	0.97
18:P:145:ILE:HG12	18:P:182:ARG:CD	1.90	0.97
18:P:206:THR:O	18:P:209:ILE:HG12	1.64	0.97
18:P:250:MET:O	18:P:254:THR:CG2	2.11	0.97
18:P:288:LEU:HD21	18:P:328:LEU:CD1	1.93	0.97
18:P:320:ARG:HH21	18:P:337:ASP:HB2	1.28	0.97
21:S:134:TYR:OH	21:S:138:LYS:CE	2.12	0.97
22:T:134:DT:N1	24:V:323:ARG:HD3	1.76	0.97
18:P:193:GLN:NE2	18:P:203:PHE:CE2	2.32	0.97
22:T:104:DT:H2"	22:T:105:DT:H5'	1.46	0.97
27:Y:193:TYR:OH	27:Y:221:ARG:NH2	1.97	0.97
18:P:263:CYS:H	18:P:264:LYS:HZ1	1.08	0.97
21:S:183:THR:CG2	21:S:184:TYR:HD1	1.77	0.97
21:S:203:LYS:CE	21:S:242:ARG:NE	2.23	0.97
8:F:92:ARG:HE	9:G:64:THR:CA	1.77	0.97
21:S:231:LEU:HD23	21:S:232:VAL:HG13	0.99	0.97
1:1:476:PHE:CD1	1:1:485:ILE:HD12	1.98	0.97
2:2:253:LEU:CG	3:A:1132:LYS:CD	2.36	0.97
18:P:22:LEU:HD23	18:P:22:LEU:O	1.64	0.97
18:P:187:ARG:HD3	18:P:189:PHE:HB3	1.44	0.97
27:Y:185:CYS:HB2	27:Y:192:PRO:HG3	1.47	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:87:LEU:HD13	18:P:126:VAL:CG2	1.94	0.97
18:P:310:LYS:HZ1	18:P:340:PRO:HG3	1.27	0.97
21:S:127:LYS:HE3	21:S:127:LYS:H	1.24	0.97
21:S:135:ILE:HG13	21:S:180:TYR:HB2	1.46	0.97
23:U:119:LEU:CG	24:V:135:PHE:HD2	1.75	0.97
18:P:173:ALA:CA	18:P:176:ILE:HG12	1.93	0.97
18:P:187:ARG:CB	18:P:188:THR:C	2.32	0.97
1:1:297:ILE:HG22	1:1:308:ASP:HB2	1.47	0.96
4:B:1215:ARG:CD	6:D:15:LEU:HD11	1.74	0.96
16:N:22:DA:C2	19:Q:122:VAL:HG11	2.00	0.96
18:P:142:LEU:HD21	18:P:147:LYS:CA	1.92	0.96
18:P:291:ILE:H	18:P:291:ILE:HD13	1.30	0.96
1:1:757:ARG:NH1	1:1:760:LEU:CG	2.27	0.96
4:B:451:LYS:NZ	18:P:147:LYS:NZ	2.11	0.96
27:Y:237:ALA:CB	27:Y:458:ILE:HG23	1.95	0.96
2:2:241:LEU:HG	3:A:1232:ASN:ND2	1.79	0.96
4:B:72:GLU:OE2	23:U:311:ASP:O	1.81	0.96
4:B:449:ASN:ND2	18:P:138:ASP:OD1	1.99	0.96
18:P:87:LEU:CD2	18:P:126:VAL:HG21	1.94	0.96
18:P:198:VAL:HG11	18:P:202:GLU:OE1	1.65	0.96
18:P:248:LEU:HD21	18:P:293:ILE:CD1	1.94	0.96
27:Y:190:LEU:CD1	27:Y:195:ILE:CD1	2.42	0.96
18:P:184:GLU:CA	18:P:241:ARG:HD3	1.95	0.96
18:P:263:CYS:CA	18:P:264:LYS:NZ	2.27	0.96
21:S:142:VAL:HG21	21:S:147:LEU:HG	1.45	0.96
18:P:24:CYS:HB2	18:P:48:CYS:SG	2.06	0.96
18:P:171:ILE:HD13	18:P:209:ILE:HD12	1.47	0.96
18:P:252:VAL:O	18:P:285:ASN:OD1	1.83	0.96
27:Y:128:VAL:HG21	27:Y:372:LYS:HA	1.46	0.96
18:P:150:ALA:HB1	18:P:178:ILE:CG1	1.95	0.96
27:Y:128:VAL:CG2	27:Y:373:PRO:CD	2.42	0.96
27:Y:193:TYR:CE2	27:Y:197:ARG:CD	2.48	0.96
18:P:87:LEU:HD11	18:P:126:VAL:HG21	1.37	0.96
22:T:147:DA:H2"	22:T:148:DT:H5'	1.45	0.96
27:Y:639:LEU:HB2	27:Y:653:PHE:HD2	1.19	0.96
1:1:474:MET:H	1:1:481:GLU:H	1.07	0.96
18:P:142:LEU:O	18:P:147:LYS:HD3	1.64	0.96
20:R:43:LEU:HB3	20:R:54:LEU:HD21	1.48	0.96
20:R:44:LYS:HE2	20:R:44:LYS:HA	1.44	0.96
1:1:495:ALA:HB3	1:1:498:PHE:HD2	1.29	0.96
18:P:87:LEU:HD11	18:P:126:VAL:HG23	1.48	0.96

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:143:PRO:CG	18:P:182:ARG:HE	1.77	0.96
27:Y:244:CYS:HB2	27:Y:442:ALA:HB1	1.44	0.96
1:1:397:ILE:HG23	1:1:427:TRP:CZ2	2.01	0.95
1:1:572:GLU:OE2	1:1:576:LYS:CB	2.13	0.95
21:S:133:GLU:CD	24:V:330:LYS:HD3	1.85	0.95
21:S:237:LYS:O	21:S:241:PRO:HD2	0.79	0.95
27:Y:541:PHE:CE1	27:Y:599:LEU:HD22	1.99	0.95
1:1:588:PHE:CZ	1:1:621:LYS:CE	2.49	0.95
1:1:656:LYS:HD2	1:1:656:LYS:O	1.66	0.95
18:P:145:ILE:HD11	18:P:182:ARG:HD2	1.48	0.95
18:P:223:LEU:CD1	19:Q:173:GLU:HB2	1.95	0.95
23:U:138:ARG:NH2	24:V:57:LEU:HD12	1.80	0.95
16:N:22:DA:H2	19:Q:122:VAL:HG11	1.29	0.95
21:S:129:LEU:HD23	24:V:347:PHE:CZ	2.01	0.95
23:U:138:ARG:HH22	24:V:57:LEU:HB2	1.22	0.95
1:1:585:PRO:CB	1:1:756:ARG:CZ	2.22	0.95
18:P:34:ILE:CD1	18:P:43:VAL:HG21	1.95	0.95
2:2:241:LEU:HD22	3:A:1232:ASN:CA	1.97	0.95
3:A:320:ARG:HH12	18:P:81:GLU:HB2	1.30	0.95
4:B:583:ASN:HD21	4:B:628:THR:HG22	1.27	0.95
18:P:26:GLU:OE1	18:P:50:LEU:HD13	1.66	0.95
18:P:140:ALA:O	18:P:141:GLU:HG2	1.64	0.95
21:S:127:LYS:HA	21:S:153:MET:CE	1.97	0.95
23:U:374:VAL:HG22	24:V:73:LEU:HG	1.47	0.95
27:Y:136:MET:CE	27:Y:159:HIS:HD2	1.78	0.95
1:1:458:SER:HA	1:1:465:ASN:HB2	1.47	0.95
1:1:584:ASN:HD21	1:1:586:THR:CG2	1.78	0.95
1:1:561:MET:HB3	25:W:450:ARG:NH2	1.81	0.95
18:P:276:THR:O	18:P:280:VAL:HG23	1.67	0.95
27:Y:350:HIS:HB2	27:Y:384:LEU:HD12	1.46	0.95
1:1:376:ASN:HB3	1:1:380:ARG:H	1.31	0.95
18:P:169:GLU:HG3	18:P:197:HIS:HE1	1.30	0.95
21:S:203:LYS:HG3	21:S:242:ARG:HE	1.27	0.95
18:P:22:LEU:CD1	18:P:34:ILE:CD1	2.44	0.95
20:R:34:PHE:HE2	20:R:134:LEU:HD21	1.32	0.95
21:S:187:HIS:HE1	21:S:225:GLU:HB3	1.32	0.95
18:P:142:LEU:HG	18:P:143:PRO:HD2	1.46	0.94
18:P:187:ARG:HA	18:P:188:THR:HB	1.46	0.94
20:R:119:PRO:CD	20:R:120:ASN:HD22	1.78	0.94
21:S:154:LYS:NZ	21:S:154:LYS:CA	0.80	0.94
1:1:407:VAL:HG13	1:1:452:LEU:H	1.29	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:17:VAL:HG12	20:R:66:LEU:HG	1.37	0.94
21:S:126:SER:N	21:S:127:LYS:HZ2	1.65	0.94
21:S:159:VAL:HG22	21:S:160:ILE:HG23	1.46	0.94
27:Y:495:MET:HB3	27:Y:686:PHE:CG	2.01	0.94
1:1:474:MET:HB2	1:1:480:ARG:CA	1.97	0.94
18:P:320:ARG:HH21	18:P:337:ASP:CB	1.79	0.94
21:S:125:SER:O	21:S:129:LEU:HD12	1.32	0.94
24:V:306:LEU:HG	24:V:313:TRP:CE2	2.03	0.94
1:1:421:ARG:HA	1:1:424:PHE:HD2	1.29	0.94
4:B:350:GLN:NE2	23:U:411:LYS:CE	2.27	0.94
8:F:92:ARG:NE	9:G:64:THR:N	2.15	0.94
18:P:23:THR:O	18:P:25:PRO:HD3	1.65	0.94
24:V:74:PRO:HD2	24:V:223:GLN:HA	1.47	0.94
3:A:416:ARG:NH2	18:P:37:ARG:HH21	1.64	0.94
17:O:87:VAL:HG12	17:O:88:GLU:H	1.32	0.94
18:P:248:LEU:HD22	18:P:286:ILE:HG12	1.46	0.94
18:P:326:PRO:HD2	18:P:328:LEU:H	1.27	0.94
2:2:248:ILE:HG21	3:A:1203:ASN:OD1	1.13	0.94
4:B:885:MET:HB2	18:P:33:LYS:HZ3	1.00	0.94
18:P:171:ILE:CD1	18:P:209:ILE:HD12	1.97	0.94
18:P:263:CYS:HB2	18:P:264:LYS:HZ2	0.88	0.94
18:P:264:LYS:HD3	18:P:264:LYS:H	1.18	0.94
22:T:134:DT:H6	24:V:323:ARG:HD2	1.15	0.94
23:U:119:LEU:HD21	24:V:135:PHE:CD2	2.03	0.94
23:U:138:ARG:NH2	24:V:57:LEU:CD1	2.31	0.94
27:Y:666:LEU:HD23	27:Y:679:MET:SD	2.07	0.94
2:2:253:LEU:HD22	3:A:1132:LYS:CB	1.96	0.94
18:P:264:LYS:CD	18:P:264:LYS:H	1.72	0.94
18:P:329:ILE:HG23	18:P:330:ALA:N	1.81	0.94
3:A:315:LEU:C	18:P:92:LEU:HD23	1.87	0.94
3:A:1450:LEU:HD11	9:G:15:PRO:O	1.66	0.94
27:Y:28:ILE:HG21	27:Y:57:ILE:HG21	1.47	0.94
27:Y:517:SER:O	27:Y:522:TYR:HD2	1.51	0.94
27:Y:649:ARG:O	27:Y:653:PHE:CD1	2.21	0.93
1:1:712:ASP:N	25:W:449:ASP:OD2	2.02	0.93
18:P:133:ILE:CG1	18:P:151:LYS:HG2	1.98	0.93
18:P:200:THR:HG23	18:P:201:LYS:H	1.33	0.93
24:V:313:TRP:HB2	24:V:349:TYR:HE1	1.01	0.93
27:Y:162:LEU:HD23	27:Y:195:ILE:HG13	1.48	0.93
3:A:315:LEU:O	18:P:92:LEU:CD2	2.16	0.93
18:P:248:LEU:HD22	18:P:252:VAL:HG11	1.48	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:F:105:ALA:CB	9:G:14:HIS:HE1	1.64	0.93
18:P:34:ILE:HG13	18:P:43:VAL:HB	1.49	0.93
18:P:263:CYS:HB2	18:P:264:LYS:CE	1.98	0.93
20:R:34:PHE:HZ	20:R:135:GLU:H	1.17	0.93
27:Y:18:TYR:CB	27:Y:19:PRO:HD3	1.98	0.93
1:1:297:ILE:CG2	1:1:308:ASP:HB2	1.99	0.93
1:1:466:ARG:HB2	1:1:477:LEU:HD22	1.48	0.93
1:1:584:ASN:OD1	1:1:586:THR:HG22	1.67	0.93
1:1:588:PHE:CE2	1:1:621:LYS:HE2	2.02	0.93
18:P:104:MET:O	18:P:107:THR:HG22	1.66	0.93
18:P:154:TYR:CE1	18:P:171:ILE:CG2	2.48	0.93
18:P:184:GLU:OE2	18:P:231:SER:C	2.06	0.93
21:S:133:GLU:OE1	24:V:330:LYS:HD3	1.69	0.93
3:A:227:VAL:HG11	6:D:16:LYS:HG3	1.50	0.93
18:P:261:LYS:NZ	18:P:261:LYS:HB3	1.80	0.93
18:P:299:GLY:O	18:P:303:GLN:OE1	1.86	0.93
18:P:302:LEU:HD12	18:P:302:LEU:N	1.84	0.93
2:2:252:ASN:ND2	3:A:1206:ASP:HA	1.82	0.93
18:P:145:ILE:HG13	18:P:182:ARG:CD	1.97	0.93
18:P:193:GLN:HG2	18:P:199:LYS:HG3	1.50	0.93
23:U:372:SER:OG	24:V:80:LYS:CE	2.15	0.93
18:P:184:GLU:HB2	18:P:241:ARG:HG2	0.93	0.93
18:P:188:THR:CB	18:P:245:HIS:HE1	1.81	0.93
27:Y:28:ILE:CB	27:Y:57:ILE:HG13	1.96	0.93
27:Y:657:ASP:OD1	27:Y:660:ARG:NH2	2.02	0.93
1:1:410:LEU:HD11	1:1:457:TYR:CA	1.99	0.93
16:N:36:DT:H2"	16:N:37:DA:C8	2.04	0.93
18:P:128:ALA:HB1	18:P:132:LYS:NZ	1.83	0.93
18:P:224:LYS:CE	18:P:229:ASN:OD1	2.17	0.93
20:R:120:ASN:ND2	20:R:133:GLN:HB3	1.83	0.93
21:S:210:LEU:HB3	21:S:214:TRP:HH2	1.34	0.93
18:P:292:PRO:C	18:P:293:ILE:HD13	1.89	0.93
21:S:175:LYS:CB	21:S:175:LYS:HZ3	1.66	0.93
21:S:183:THR:HG23	21:S:184:TYR:HD1	1.30	0.93
27:Y:62:HIS:HD2	27:Y:63:TYR:N	1.66	0.93
27:Y:450:PHE:HZ	27:Y:475:PHE:HA	1.33	0.93
2:2:253:LEU:HD13	3:A:1132:LYS:HZ2	1.14	0.92
2:2:277:LYS:NZ	3:A:593:GLU:OE2	2.01	0.92
18:P:43:VAL:CG1	18:P:55:LYS:CE	2.47	0.92
21:S:148:LEU:HB3	21:S:154:LYS:HE2	0.93	0.92
27:Y:103:PHE:HE1	27:Y:205:ILE:HD12	1.19	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:639:LEU:HD23	27:Y:649:ARG:HB2	1.50	0.92
1:1:439:THR:HG22	1:1:440:SER:H	1.34	0.92
3:A:64:ASN:OD1	18:P:18:LEU:HB3	1.68	0.92
18:P:187:ARG:CB	18:P:189:PHE:N	2.32	0.92
27:Y:492:PHE:CE2	27:Y:707:ASN:OD1	2.21	0.92
18:P:277:ILE:O	18:P:277:ILE:HD13	1.69	0.92
20:R:17:VAL:HG11	20:R:29:LEU:HD22	1.52	0.92
21:S:219:GLU:OE1	21:S:219:GLU:HA	1.69	0.92
24:V:307:PHE:HZ	24:V:349:TYR:CE1	1.86	0.92
27:Y:569:ILE:HA	27:Y:575:ASP:HB2	1.52	0.92
1:1:621:LYS:HB3	1:1:621:LYS:HZ2	1.35	0.92
8:F:105:ALA:HB2	9:G:14:HIS:HE2	1.32	0.92
27:Y:18:TYR:HB2	27:Y:19:PRO:CD	1.99	0.92
4:B:1109:GLY:HA2	18:P:39:SER:O	1.68	0.92
1:1:424:PHE:CE1	1:1:450:SER:HB3	2.04	0.92
1:1:585:PRO:CG	1:1:756:ARG:NH1	2.32	0.92
2:2:281:TYR:HH	3:A:755:PHE:HE2	1.05	0.92
4:B:885:MET:H	18:P:33:LYS:HZ2	1.05	0.92
18:P:184:GLU:CB	18:P:241:ARG:HG3	1.97	0.92
18:P:258:TYR:CZ	18:P:262:LYS:HE3	2.04	0.92
21:S:133:GLU:CA	21:S:137:LYS:HE2	1.98	0.92
22:T:152:DC:H2"	22:T:153:DG:H5'	1.51	0.92
24:V:86:ASN:HD21	24:V:92:LEU:HB3	1.35	0.92
2:2:258:GLY:N	3:A:1284:MET:N	2.13	0.92
16:N:63:DG:H2"	16:N:64:DG:C5'	1.99	0.92
16:N:69:DG:H3'	26:X:63:TYR:HE1	1.35	0.92
18:P:26:GLU:CD	18:P:50:LEU:HD21	1.90	0.92
18:P:94:THR:CG2	18:P:110:LEU:CD2	2.47	0.92
18:P:184:GLU:HA	18:P:241:ARG:HD3	1.50	0.92
18:P:268:GLU:C	18:P:269:ILE:HD12	1.90	0.92
18:P:320:ARG:HG3	18:P:321:ASP:N	1.84	0.92
21:S:127:LYS:CA	21:S:153:MET:HE1	1.96	0.92
21:S:214:TRP:CE3	21:S:218:ASP:OD2	2.22	0.92
1:1:424:PHE:HB3	1:1:449:GLU:CG	2.00	0.92
3:A:416:ARG:HH22	18:P:37:ARG:NH2	1.67	0.92
16:N:69:DG:H3'	26:X:63:TYR:CE1	2.05	0.92
18:P:34:ILE:HD11	18:P:43:VAL:HG21	1.46	0.92
21:S:203:LYS:CG	21:S:242:ARG:NE	2.33	0.92
27:Y:42:MET:SD	27:Y:53:LEU:HD12	2.10	0.92
1:1:368:LYS:HD2	1:1:372:LYS:HE2	1.50	0.92
1:1:773:ILE:CD1	1:1:775:VAL:CA	2.40	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:2:284:LEU:HB2	3:A:1080:THR:HG21	1.50	0.92
16:N:41:DA:H2"	16:N:42:DT:H5"	1.52	0.92
21:S:148:LEU:HB2	21:S:154:LYS:CE	1.99	0.92
21:S:183:THR:HA	21:S:222:ASN:HD21	1.27	0.92
2:2:241:LEU:CD2	3:A:1232:ASN:CA	2.47	0.91
18:P:290:GLN:HE21	18:P:331:ASN:HD21	0.97	0.91
18:P:316:LEU:HD23	18:P:317:TYR:N	1.85	0.91
23:U:376:LEU:HD11	24:V:73:LEU:HD13	1.49	0.91
18:P:223:LEU:HG	19:Q:177:PHE:CE2	2.05	0.91
18:P:293:ILE:HD13	18:P:293:ILE:N	1.85	0.91
27:Y:342:LEU:HD23	27:Y:345:ARG:NH2	1.83	0.91
1:1:403:ILE:CG2	1:1:405:LYS:HG2	2.00	0.91
20:R:126:ILE:HG23	20:R:154:GLU:HG2	1.48	0.91
16:N:60:DA:H2"	16:N:61:DA:C5'	2.00	0.91
21:S:164:LYS:CD	21:S:165:LYS:HG2	2.00	0.91
1:1:397:ILE:HG23	1:1:427:TRP:CH2	2.05	0.91
23:U:371:ASP:OD1	24:V:75:MET:O	1.87	0.91
27:Y:400:LYS:CD	27:Y:437:PHE:CE2	2.53	0.91
1:1:474:MET:HB3	1:1:482:TRP:N	1.85	0.91
1:1:477:LEU:HA	1:1:501:VAL:CB	2.00	0.91
1:1:527:LEU:HD22	1:1:531:ILE:CD1	2.00	0.91
1:1:585:PRO:HB2	1:1:756:ARG:HH22	1.28	0.91
2:2:277:LYS:CE	3:A:593:GLU:CD	2.35	0.91
3:A:416:ARG:HH22	18:P:37:ARG:HH21	0.96	0.91
4:B:430:ARG:CA	23:U:326:ARG:HH12	1.82	0.91
18:P:22:LEU:CD1	18:P:34:ILE:HD11	2.01	0.91
18:P:143:PRO:HB2	18:P:182:ARG:HE	0.87	0.91
18:P:302:LEU:H	18:P:302:LEU:CD1	1.80	0.91
21:S:202:PHE:HB2	21:S:242:ARG:HH22	1.36	0.91
27:Y:185:CYS:CB	27:Y:192:PRO:HG3	1.99	0.91
1:1:408:ILE:HD11	1:1:466:ARG:HD3	1.53	0.91
18:P:338:ASN:H	18:P:338:ASN:ND2	1.65	0.91
27:Y:70:ILE:HD12	27:Y:208:TYR:OH	1.70	0.91
4:B:887:HIS:HE1	18:P:38:PHE:HB3	1.29	0.91
16:N:58:DC:H2"	16:N:59:DT:C5'	2.01	0.91
21:S:129:LEU:HA	24:V:341:LYS:HE2	1.53	0.91
21:S:130:TRP:CD1	21:S:151:LEU:HG	2.05	0.91
1:1:403:ILE:HG22	1:1:405:LYS:HG2	1.53	0.91
1:1:429:THR:HB	1:1:432:PRO:HD2	1.50	0.91
8:F:96:THR:OG1	9:G:64:THR:C	2.08	0.91
18:P:320:ARG:CG	18:P:321:ASP:OD1	2.18	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:135:ILE:HG12	21:S:180:TYR:HB2	1.53	0.91
22:T:134:DT:H2"	24:V:323:ARG:O	1.71	0.91
1:1:307:ASP:HB2	1:1:323:VAL:HB	1.53	0.91
18:P:187:ARG:NH2	18:P:192:ILE:CG2	2.31	0.91
20:R:156:LEU:HD23	20:R:156:LEU:N	1.86	0.91
21:S:138:LYS:HZ2	21:S:138:LYS:HB2	1.33	0.91
21:S:154:LYS:HZ3	21:S:154:LYS:CA	0.57	0.91
27:Y:237:ALA:HB1	27:Y:458:ILE:HG23	1.51	0.91
1:1:585:PRO:CB	1:1:756:ARG:NH2	2.31	0.90
18:P:223:LEU:CD1	19:Q:173:GLU:CB	2.49	0.90
21:S:134:TYR:CZ	21:S:138:LYS:CE	2.54	0.90
1:1:588:PHE:CE2	1:1:621:LYS:CE	2.53	0.90
2:2:279:VAL:HG22	2:2:299:CYS:HA	1.51	0.90
2:2:284:LEU:HD13	3:A:1080:THR:HG22	1.53	0.90
4:B:1220:ARG:HA	6:D:14:ARG:NH2	1.82	0.90
8:F:105:ALA:HB1	9:G:14:HIS:CE1	2.04	0.90
17:O:86:THR:HG22	17:O:105:VAL:HG22	1.53	0.90
18:P:289:PHE:CZ	18:P:291:ILE:HG12	2.05	0.90
2:2:253:LEU:CD1	3:A:1132:LYS:HD2	2.01	0.90
18:P:143:PRO:HD3	18:P:185:VAL:HG11	1.54	0.90
20:R:17:VAL:CG1	20:R:66:LEU:CD1	2.50	0.90
23:U:119:LEU:CD2	24:V:135:PHE:CD2	2.53	0.90
3:A:1451:VAL:HG11	9:G:20:PRO:CA	1.90	0.90
18:P:190:LYS:CE	18:P:242:PHE:CE1	2.51	0.90
21:S:141:PRO:HB2	21:S:177:THR:HG23	1.52	0.90
21:S:219:GLU:HB2	21:S:222:ASN:HD22	1.33	0.90
27:Y:317:LEU:HD23	27:Y:409:ILE:CG2	2.01	0.90
1:1:467:SER:N	1:1:477:LEU:HD23	1.86	0.90
2:2:252:ASN:CB	3:A:1206:ASP:HB2	2.01	0.90
2:2:253:LEU:CD1	3:A:1132:LYS:HZ3	1.72	0.90
2:2:258:GLY:H	3:A:1284:MET:H	0.97	0.90
18:P:193:GLN:HG2	18:P:199:LYS:CG	2.02	0.90
24:V:292:ILE:CA	24:V:295:PRO:HD2	2.02	0.90
1:1:516:THR:HA	1:1:681:ARG:CZ	2.01	0.90
21:S:125:SER:O	21:S:129:LEU:CD1	2.18	0.90
21:S:133:GLU:CD	24:V:330:LYS:CD	2.40	0.90
21:S:210:LEU:HB3	21:S:214:TRP:CH2	2.05	0.90
27:Y:532:ILE:C	27:Y:534:PRO:HD3	1.91	0.90
1:1:588:PHE:CZ	1:1:621:LYS:NZ	2.39	0.90
18:P:63:TRP:CD1	18:P:81:GLU:HG2	2.05	0.90
18:P:257:GLU:CD	18:P:257:GLU:N	2.24	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:459:MET:HB2	1:1:464:ARG:CD	2.01	0.90
4:B:885:MET:N	18:P:33:LYS:NZ	2.18	0.90
16:N:61:DA:C2'	16:N:62:DA:H5'	2.01	0.90
20:R:44:LYS:CD	20:R:54:LEU:HB2	2.02	0.90
21:S:131:ALA:HA	21:S:151:LEU:HD12	1.51	0.90
27:Y:360:LEU:CG	27:Y:375:ARG:CD	2.49	0.90
27:Y:646:TYR:HB2	27:Y:648:ILE:HG12	1.51	0.90
1:1:487:LEU:CD2	1:1:490:VAL:HG23	2.02	0.90
3:A:1443:VAL:CG1	9:G:61:ILE:CG2	2.49	0.90
18:P:26:GLU:OE1	18:P:50:LEU:CD2	2.20	0.90
21:S:137:LYS:H	21:S:137:LYS:HD3	1.35	0.90
21:S:183:THR:CA	21:S:222:ASN:HD21	1.85	0.90
24:V:299:ILE:HD11	24:V:324:GLN:OE1	1.72	0.90
27:Y:103:PHE:CE1	27:Y:205:ILE:CD1	2.53	0.90
18:P:150:ALA:HB2	18:P:178:ILE:CG1	1.99	0.89
21:S:143:LEU:HD13	21:S:144:VAL:H	1.37	0.89
27:Y:103:PHE:HE1	27:Y:205:ILE:CD1	1.85	0.89
4:B:885:MET:N	18:P:33:LYS:HZ2	1.70	0.89
16:N:23:DA:C3'	19:Q:120:LYS:HD2	2.02	0.89
18:P:94:THR:CG2	18:P:110:LEU:HD21	2.01	0.89
27:Y:400:LYS:CD	27:Y:437:PHE:CD2	2.55	0.89
27:Y:495:MET:CB	27:Y:686:PHE:CD1	2.55	0.89
3:A:313:GLN:CD	18:P:98:LYS:HD3	1.92	0.89
18:P:143:PRO:CD	18:P:185:VAL:HG11	2.02	0.89
27:Y:171:LEU:HB2	27:Y:172:PRO:HD3	1.52	0.89
1:1:417:VAL:HG13	1:1:454:VAL:CG1	2.01	0.89
1:1:516:THR:N	1:1:681:ARG:HD3	1.83	0.89
16:N:24:DG:H4'	19:Q:118:SER:HB3	0.90	0.89
21:S:194:LYS:NZ	21:S:210:LEU:CD1	2.35	0.89
27:Y:317:LEU:HD23	27:Y:409:ILE:HG22	1.53	0.89
18:P:223:LEU:HD12	19:Q:173:GLU:HB2	1.55	0.89
27:Y:131:GLU:OE1	27:Y:134:ARG:NH1	2.06	0.89
27:Y:346:MET:HB3	27:Y:384:LEU:HD21	1.53	0.89
16:N:23:DA:H2	19:Q:116:PHE:CE1	1.81	0.89
20:R:34:PHE:CZ	20:R:134:LEU:CG	2.40	0.89
22:T:135:DG:H2"	22:T:136:DA:H5'	1.52	0.89
24:V:307:PHE:CZ	24:V:349:TYR:CZ	2.60	0.89
1:1:757:ARG:NH1	1:1:760:LEU:HB3	1.85	0.89
3:A:1451:VAL:CG1	9:G:20:PRO:CB	2.46	0.89
18:P:286:ILE:CD1	18:P:292:PRO:CA	2.23	0.89
18:P:325:ASP:OD1	18:P:325:ASP:N	2.00	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:28:VAL:HG13	20:R:43:LEU:CD2	2.03	0.89
21:S:138:LYS:HB3	21:S:138:LYS:HZ3	1.38	0.89
1:1:347:HIS:CD2	1:1:348:ARG:HG3	2.08	0.89
1:1:405:LYS:HD3	1:1:483:GLY:CA	2.03	0.89
1:1:588:PHE:HE2	1:1:621:LYS:HZ1	0.95	0.89
20:R:44:LYS:HG3	20:R:51:LYS:CA	1.99	0.89
3:A:227:VAL:CG2	6:D:16:LYS:CE	2.50	0.89
16:N:18:DA:H2"	16:N:19:DT:C5'	2.03	0.89
18:P:22:LEU:HD21	18:P:34:ILE:CD1	2.01	0.89
21:S:153:MET:C	21:S:154:LYS:NZ	2.25	0.89
2:2:204:SER:CA	3:A:1176:LEU:O	2.21	0.88
20:R:17:VAL:CG1	20:R:66:LEU:CG	2.46	0.88
21:S:187:HIS:NE2	21:S:225:GLU:HB3	1.87	0.88
27:Y:248:LEU:CD2	27:Y:445:ALA:HB2	2.03	0.88
2:2:253:LEU:CD1	3:A:1132:LYS:HZ2	1.77	0.88
3:A:1438:THR:HG22	4:B:1144:ALA:HB3	1.52	0.88
20:R:142:PHE:N	20:R:142:PHE:CD1	1.76	0.88
21:S:133:GLU:OE2	24:V:330:LYS:NZ	2.06	0.88
8:F:76:LYS:HA	8:F:79:ARG:HD3	1.56	0.88
8:F:132:LEU:CD2	9:G:66:GLY:O	2.21	0.88
19:Q:99:PHE:HB2	22:T:143:DT:O5'	1.71	0.88
24:V:306:LEU:HD12	24:V:313:TRP:CZ2	2.07	0.88
27:Y:190:LEU:HD13	27:Y:195:ILE:HD13	1.52	0.88
1:1:408:ILE:HG21	1:1:475:ASP:CA	2.04	0.88
4:B:343:ILE:HD11	22:T:121:DG:O3'	1.73	0.88
18:P:34:ILE:HD12	18:P:43:VAL:HG23	1.54	0.88
18:P:333:VAL:CG2	18:P:336:LEU:HD12	2.03	0.88
24:V:104:ILE:CG2	24:V:122:LEU:HD22	2.03	0.88
27:Y:400:LYS:CG	27:Y:437:PHE:CE2	2.56	0.88
18:P:142:LEU:C	18:P:147:LYS:HD3	1.93	0.88
1:1:457:TYR:HB3	1:1:498:PHE:CD1	2.08	0.88
3:A:411:ASP:OD1	18:P:51:VAL:CA	2.22	0.88
21:S:126:SER:O	24:V:339:LEU:CB	2.20	0.88
4:B:959:ASP:HB2	18:P:182:ARG:HH11	1.26	0.88
18:P:143:PRO:HB3	18:P:182:ARG:CZ	2.04	0.88
18:P:340:PRO:CD	18:P:340:PRO:HA	2.01	0.88
24:V:333:LEU:HD22	24:V:349:TYR:CD2	2.08	0.88
1:1:477:LEU:HG	1:1:501:VAL:HG11	1.56	0.88
2:2:290:ASP:C	4:B:766:ARG:NH2	2.27	0.88
3:A:411:ASP:CG	18:P:51:VAL:HG12	1.92	0.88
3:A:416:ARG:HH12	18:P:37:ARG:NE	1.72	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:27:DG:H2'	24:V:291:SER:O	1.71	0.88
16:N:56:DT:H2"	16:N:57:DA:C5'	2.03	0.88
18:P:187:ARG:CB	18:P:189:PHE:HA	2.04	0.88
18:P:280:VAL:CG1	18:P:313:TYR:CA	2.51	0.88
27:Y:495:MET:CB	27:Y:686:PHE:CG	2.56	0.88
1:1:362:ILE:HG23	1:1:366:GLN:HB2	1.54	0.88
21:S:155:LYS:O	21:S:159:VAL:HG12	1.73	0.88
21:S:207:CYS:SG	21:S:208:LYS:NZ	2.46	0.88
27:Y:124:ARG:HG2	27:Y:374:LEU:CA	2.04	0.88
27:Y:639:LEU:HD11	27:Y:649:ARG:NH1	1.89	0.88
18:P:100:GLU:CD	18:P:101:THR:HG23	1.95	0.88
21:S:128:LEU:HB3	24:V:341:LYS:HD2	1.53	0.88
1:1:460:VAL:CG1	16:N:63:DG:C3'	2.44	0.87
21:S:214:TRP:CZ3	21:S:218:ASP:CG	2.47	0.87
24:V:63:ARG:CB	24:V:214:ILE:O	2.18	0.87
27:Y:70:ILE:HB	27:Y:208:TYR:CE2	2.09	0.87
27:Y:650:GLU:HA	27:Y:653:PHE:HE1	1.34	0.87
1:1:446:PHE:HB2	1:1:452:LEU:HD21	1.54	0.87
4:B:451:LYS:HZ2	18:P:147:LYS:HZ3	1.22	0.87
8:F:105:ALA:CA	9:G:14:HIS:CE1	2.48	0.87
21:S:127:LYS:CA	21:S:153:MET:HE3	2.01	0.87
23:U:374:VAL:O	24:V:73:LEU:HD23	1.73	0.87
27:Y:124:ARG:HG3	27:Y:373:PRO:O	1.72	0.87
1:1:424:PHE:CD1	1:1:450:SER:HB3	2.10	0.87
1:1:427:TRP:CH2	1:1:450:SER:HB2	2.10	0.87
16:N:63:DG:C2'	16:N:64:DG:H5"	2.03	0.87
18:P:195:LEU:O	18:P:196:ILE:CG2	2.20	0.87
22:T:134:DT:O4'	24:V:323:ARG:HD3	0.96	0.87
18:P:289:PHE:CE1	18:P:291:ILE:CD1	2.57	0.87
18:P:289:PHE:HE1	18:P:290:GLN:HB2	1.04	0.87
23:U:135:LEU:HB2	23:U:136:PRO:CD	2.04	0.87
24:V:306:LEU:CD1	24:V:313:TRP:CH2	2.57	0.87
24:V:306:LEU:CD2	24:V:318:LEU:HD23	2.03	0.87
2:2:253:LEU:HD11	3:A:1129:GLU:OE1	1.74	0.87
21:S:130:TRP:CE3	24:V:338:THR:C	2.48	0.87
24:V:318:LEU:HD11	24:V:349:TYR:CD2	2.09	0.87
27:Y:360:LEU:HG	27:Y:375:ARG:CD	2.03	0.87
27:Y:506:ILE:HB	27:Y:522:TYR:CE2	2.10	0.87
3:A:411:ASP:OD1	18:P:51:VAL:CB	2.22	0.87
3:A:1445:ILE:CA	9:G:68:ALA:HB2	1.76	0.87
21:S:144:VAL:HG22	21:S:178:PHE:HE2	1.40	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:493:LEU:CD2	27:Y:696:TRP:NE1	2.10	0.87
1:1:421:ARG:HA	1:1:424:PHE:CD2	2.09	0.87
1:1:717:TYR:CE2	1:1:718:TYR:HE1	1.56	0.87
16:N:60:DA:H2'	16:N:61:DA:C8	2.10	0.87
18:P:225:ILE:C	18:P:225:ILE:CD1	2.42	0.87
18:P:279:VAL:HG21	18:P:303:GLN:NE2	1.90	0.87
19:Q:145:LYS:HA	19:Q:145:LYS:HE3	1.55	0.87
21:S:203:LYS:HB3	21:S:242:ARG:CD	2.04	0.87
1:1:621:LYS:CB	1:1:621:LYS:HZ3	1.74	0.87
16:N:39:DC:H2'	16:N:40:DT:H71	1.57	0.87
18:P:104:MET:HG3	18:P:105:ARG:N	1.90	0.87
20:R:123:MET:CB	20:R:130:LYS:CD	2.52	0.87
27:Y:360:LEU:HG	27:Y:375:ARG:NE	1.89	0.87
27:Y:692:GLN:O	27:Y:693:LEU:HD22	1.75	0.87
1:1:376:ASN:HB2	1:1:380:ARG:CD	2.05	0.87
3:A:91:PHE:HB3	3:A:96:ILE:HG13	1.56	0.87
4:B:1113:VAL:HG22	18:P:57:VAL:HG23	1.55	0.87
20:R:27:LEU:CD2	20:R:128:LEU:C	2.41	0.87
24:V:318:LEU:CD1	24:V:349:TYR:CE2	2.57	0.87
1:1:410:LEU:CD2	1:1:477:LEU:HD11	2.05	0.86
1:1:477:LEU:HG	1:1:501:VAL:CG1	2.04	0.86
18:P:21:VAL:HG22	18:P:23:THR:H	1.40	0.86
22:T:130:DA:C5	22:T:131:DC:C2	2.62	0.86
3:A:64:ASN:OD1	18:P:18:LEU:HD13	1.75	0.86
18:P:288:LEU:C	18:P:288:LEU:CD1	2.41	0.86
20:R:119:PRO:CD	20:R:120:ASN:ND2	2.36	0.86
23:U:137:VAL:CG1	24:V:61:LEU:HD21	2.04	0.86
24:V:104:ILE:HD12	24:V:124:LEU:HD21	1.55	0.86
1:1:584:ASN:HD21	1:1:586:THR:HG23	1.39	0.86
1:1:634:GLN:OE1	1:1:634:GLN:HA	1.75	0.86
4:B:104:GLU:OE2	14:L:54:ARG:CD	2.22	0.86
18:P:188:THR:O	18:P:188:THR:HG22	1.74	0.86
18:P:277:ILE:CD1	18:P:277:ILE:C	2.44	0.86
21:S:203:LYS:CB	21:S:242:ARG:CD	2.51	0.86
27:Y:538:VAL:HG13	27:Y:597:ILE:HG22	1.58	0.86
18:P:200:THR:HG23	18:P:201:LYS:N	1.89	0.86
18:P:226:ASP:OD2	18:P:260:ALA:HB1	1.65	0.86
19:Q:100:ALA:N	22:T:142:DC:O2	2.08	0.86
21:S:125:SER:O	24:V:341:LYS:HG3	1.05	0.86
21:S:141:PRO:CB	21:S:177:THR:CG2	2.53	0.86
27:Y:375:ARG:NH1	27:Y:377:CYS:SG	2.48	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:383:ILE:HG22	1:1:512:GLY:HA3	1.57	0.86
18:P:184:GLU:HB2	18:P:241:ARG:HD3	1.37	0.86
22:T:132:DA:H2"	22:T:133:DT:H72	1.55	0.86
23:U:386:MET:HE3	24:V:75:MET:SD	2.16	0.86
1:1:425:LEU:HG	1:1:429:THR:HG23	1.57	0.86
18:P:128:ALA:C	18:P:132:LYS:HZ3	1.79	0.86
18:P:207:LEU:CD1	19:Q:188:GLU:OE2	2.24	0.86
27:Y:124:ARG:HG2	27:Y:374:LEU:HA	1.55	0.86
1:1:757:ARG:NH2	1:1:760:LEU:HB3	1.83	0.86
2:2:248:ILE:HG12	3:A:1203:ASN:HD21	1.33	0.86
18:P:170:SER:CB	18:P:205:LYS:HE3	2.05	0.86
21:S:131:ALA:N	21:S:151:LEU:HD11	1.91	0.86
1:1:470:SER:CA	1:1:478:THR:HG23	2.05	0.86
2:2:290:ASP:HA	4:B:766:ARG:NH2	1.89	0.86
18:P:207:LEU:HD13	19:Q:188:GLU:OE2	1.74	0.86
21:S:170:GLU:C	21:S:179:LYS:HD2	1.94	0.86
21:S:203:LYS:NZ	21:S:205:ILE:CB	2.34	0.86
22:T:108:DG:H2"	22:T:109:DT:C5'	2.05	0.86
22:T:121:DG:H2"	22:T:122:DT:H5'	1.58	0.86
24:V:318:LEU:CD2	24:V:349:TYR:OH	2.21	0.86
27:Y:495:MET:CG	27:Y:686:PHE:CG	2.58	0.86
1:1:717:TYR:CD2	1:1:718:TYR:CE1	2.64	0.86
18:P:87:LEU:CD1	18:P:126:VAL:HG23	2.04	0.86
20:R:120:ASN:CG	20:R:133:GLN:CB	2.45	0.86
23:U:98:TYR:CZ	24:V:96:ARG:NH2	2.43	0.86
24:V:74:PRO:HD3	24:V:222:CYS:O	1.73	0.86
18:P:22:LEU:HD11	18:P:43:VAL:CG2	2.05	0.85
18:P:93:SER:CB	18:P:114:GLN:OE1	2.24	0.85
20:R:17:VAL:HG12	20:R:66:LEU:CD1	2.04	0.85
20:R:30:ASP:CG	20:R:151:LEU:HD11	1.96	0.85
27:Y:18:TYR:HB2	27:Y:19:PRO:HD3	1.57	0.85
27:Y:248:LEU:HD11	27:Y:445:ALA:HB2	1.58	0.85
3:A:413:ILE:HA	18:P:49:GLY:O	1.76	0.85
18:P:187:ARG:CD	18:P:189:PHE:CA	2.50	0.85
21:S:233:LEU:HD22	21:S:233:LEU:C	1.97	0.85
1:1:447:GLN:N	1:1:452:LEU:HD13	1.89	0.85
1:1:474:MET:SD	1:1:506:ALA:HB3	2.16	0.85
21:S:158:LYS:HZ3	21:S:162:LEU:CG	1.90	0.85
22:T:132:DA:C2'	22:T:133:DT:H72	2.06	0.85
24:V:104:ILE:HG22	24:V:122:LEU:HD22	1.56	0.85
27:Y:267:LEU:O	27:Y:268:ASP:HB2	1.76	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:656:PHE:HD1	27:Y:659:MET:SD	1.98	0.85
1:1:757:ARG:NH1	1:1:760:LEU:HD22	1.88	0.85
2:2:252:ASN:HD22	3:A:1206:ASP:CG	1.78	0.85
2:2:253:LEU:CD2	3:A:1132:LYS:CB	2.51	0.85
18:P:137:CYS:SG	18:P:142:LEU:HD22	2.16	0.85
21:S:210:LEU:CB	21:S:214:TRP:HH2	1.90	0.85
18:P:143:PRO:CB	18:P:182:ARG:CZ	2.54	0.85
18:P:289:PHE:CZ	18:P:291:ILE:HD11	2.12	0.85
2:2:190:THR:CA	7:E:50:MET:CE	2.55	0.85
18:P:142:LEU:CD2	18:P:147:LYS:HA	2.04	0.85
18:P:258:TYR:OH	18:P:262:LYS:HE3	1.74	0.85
27:Y:493:LEU:HD23	27:Y:696:TRP:HE1	0.68	0.85
27:Y:566:HIS:CE1	27:Y:569:ILE:HG13	2.11	0.85
18:P:290:GLN:HE21	18:P:331:ASN:ND2	1.70	0.85
2:2:265:VAL:CG1	2:2:278:LYS:HA	2.06	0.85
18:P:208:ASN:O	18:P:211:LYS:HG2	1.76	0.85
20:R:91:TYR:HB3	20:R:92:PRO:HD3	1.59	0.85
21:S:153:MET:C	21:S:154:LYS:HZ1	1.80	0.85
21:S:203:LYS:HD2	21:S:203:LYS:C	1.95	0.85
23:U:140:HIS:HB3	24:V:57:LEU:HD22	1.57	0.85
16:N:69:DG:OP1	26:X:63:TYR:HA	1.74	0.85
24:V:63:ARG:HG3	24:V:215:VAL:HA	0.85	0.85
1:1:328:LYS:HD3	1:1:530:LEU:CD2	2.07	0.85
1:1:487:LEU:CD2	1:1:493:VAL:HG21	2.05	0.85
18:P:34:ILE:HD11	18:P:43:VAL:CG2	1.90	0.85
20:R:32:ILE:CG2	20:R:89:VAL:HG23	2.07	0.85
20:R:43:LEU:HD23	20:R:54:LEU:CD1	2.05	0.85
1:1:417:VAL:HG13	1:1:454:VAL:HG11	1.57	0.84
1:1:487:LEU:HD22	1:1:490:VAL:HG23	1.59	0.84
3:A:291:GLU:CD	18:P:116:LYS:CD	2.44	0.84
18:P:130:PHE:O	18:P:133:ILE:CG2	2.24	0.84
27:Y:353:SER:CB	27:Y:378:SER:CA	2.55	0.84
1:1:407:VAL:HG13	1:1:452:LEU:N	1.93	0.84
16:N:28:DT:C6	24:V:291:SER:O	2.21	0.84
18:P:290:GLN:HG2	18:P:331:ASN:HD22	1.41	0.84
27:Y:321:ILE:CD1	27:Y:409:ILE:HG22	2.05	0.84
27:Y:493:LEU:HD21	27:Y:666:LEU:HG	1.57	0.84
1:1:470:SER:C	1:1:478:THR:HG23	1.97	0.84
3:A:11:LEU:HD11	4:B:1195:HIS:CD2	2.11	0.84
16:N:16:DC:H2"	16:N:17:DT:H5'	1.57	0.84
27:Y:681:LEU:CD2	27:Y:696:TRP:CZ3	2.60	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:566:TYR:CB	25:W:450:ARG:HH21	1.86	0.84
18:P:173:ALA:HA	18:P:176:ILE:CD1	2.06	0.84
27:Y:539:VAL:CG1	27:Y:623:ILE:HG12	2.07	0.84
1:1:756:ARG:HH11	1:1:756:ARG:HG2	0.75	0.84
18:P:223:LEU:CG	19:Q:177:PHE:CE1	2.43	0.84
1:1:457:TYR:HB3	1:1:498:PHE:CE1	2.12	0.84
1:1:606:ILE:HD12	1:1:690:ILE:HD12	1.58	0.84
16:N:22:DA:H5"	19:Q:158:GLN:NE2	1.91	0.84
18:P:313:TYR:O	18:P:316:LEU:HD22	1.77	0.84
1:1:456:THR:HB	1:1:465:ASN:CG	1.98	0.84
1:1:785:ARG:CG	1:1:785:ARG:NH1	2.18	0.84
3:A:315:LEU:HD12	18:P:95:ARG:O	1.77	0.84
3:A:902:LEU:HG	3:A:926:GLN:HG3	1.59	0.84
16:N:16:DC:H2'	16:N:17:DT:C6	2.12	0.84
16:N:28:DT:OP2	24:V:291:SER:O	1.95	0.84
18:P:171:ILE:CD1	18:P:209:ILE:CD1	2.55	0.84
20:R:123:MET:CG	20:R:130:LYS:CD	2.56	0.84
21:S:136:GLN:CD	21:S:137:LYS:HZ2	1.81	0.84
23:U:374:VAL:HG21	24:V:75:MET:SD	2.17	0.84
27:Y:60:GLN:O	27:Y:64:PRO:HD2	1.77	0.84
27:Y:257:LEU:CD2	27:Y:383:LEU:CD1	2.32	0.84
1:1:425:LEU:HG	1:1:429:THR:CA	2.07	0.84
19:Q:99:PHE:CB	22:T:143:DT:O5'	2.23	0.84
21:S:203:LYS:HZ3	21:S:205:ILE:HB	0.78	0.84
24:V:307:PHE:CE2	24:V:349:TYR:CZ	2.65	0.84
27:Y:346:MET:CA	27:Y:384:LEU:HD21	2.08	0.84
3:A:419:LYS:HZ1	18:P:47:LEU:HG	1.41	0.84
16:N:25:DG:P	19:Q:79:ARG:HH22	2.00	0.84
24:V:306:LEU:HD11	24:V:313:TRP:CH2	2.12	0.84
27:Y:289:LEU:HB3	27:Y:348:VAL:HG11	1.59	0.84
3:A:344:ARG:HA	4:B:1129:ARG:HA	1.57	0.83
27:Y:257:LEU:HD23	27:Y:383:LEU:HD12	1.58	0.83
27:Y:541:PHE:HE1	27:Y:599:LEU:HD22	1.37	0.83
1:1:421:ARG:HE	1:1:430:LEU:HD11	1.41	0.83
1:1:473:VAL:H	1:1:478:THR:HG22	1.42	0.83
20:R:31:ALA:HB3	20:R:43:LEU:HD11	1.58	0.83
21:S:234:ARG:HH22	21:S:242:ARG:HG2	1.43	0.83
18:P:193:GLN:CG	18:P:199:LYS:HG3	2.08	0.83
24:V:89:GLY:O	24:V:90:GLN:HB2	1.78	0.83
27:Y:400:LYS:CG	27:Y:437:PHE:CD2	2.61	0.83
1:1:466:ARG:NH2	1:1:477:LEU:HD13	1.92	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:476:PHE:CE1	1:1:502:VAL:HG22	2.13	0.83
3:A:414:ASP:CB	18:P:44:VAL:HG11	2.08	0.83
18:P:63:TRP:NE1	18:P:81:GLU:CG	2.35	0.83
18:P:86:LEU:CD2	18:P:155:LYS:CE	2.56	0.83
18:P:176:ILE:HD12	18:P:187:ARG:HH22	1.43	0.83
18:P:252:VAL:HG13	18:P:285:ASN:CG	1.98	0.83
21:S:171:PHE:N	21:S:171:PHE:CD1	2.40	0.83
21:S:164:LYS:CD	21:S:165:LYS:CG	2.56	0.83
27:Y:405:PHE:CG	27:Y:437:PHE:CZ	2.66	0.83
1:1:372:LYS:O	1:1:380:ARG:HB3	1.78	0.83
1:1:408:ILE:HG21	1:1:475:ASP:HA	1.60	0.83
3:A:53:LEU:HD23	3:A:54:ASN:H	1.44	0.83
16:N:19:DT:H2'	16:N:20:DA:C8	2.14	0.83
18:P:225:ILE:HD13	18:P:227:THR:H	1.40	0.83
18:P:87:LEU:HD21	18:P:126:VAL:HG21	1.58	0.83
18:P:133:ILE:CG1	18:P:151:LYS:CG	2.53	0.83
18:P:290:GLN:CG	18:P:331:ASN:HD22	1.91	0.83
20:R:126:ILE:HG23	20:R:154:GLU:CG	2.03	0.83
1:1:407:VAL:CG1	1:1:451:GLY:HA2	2.08	0.83
4:B:885:MET:H	18:P:33:LYS:NZ	1.73	0.83
18:P:22:LEU:CD1	18:P:34:ILE:HD13	2.07	0.83
18:P:145:ILE:HG13	18:P:182:ARG:HD3	1.58	0.83
18:P:294:THR:OG1	18:P:297:LYS:HG3	1.78	0.83
20:R:17:VAL:HG11	20:R:66:LEU:HG	1.57	0.83
4:B:1184:GLY:O	6:D:17:LYS:NZ	2.12	0.83
16:N:23:DA:C4'	19:Q:120:LYS:HD3	2.09	0.83
18:P:145:ILE:CG1	18:P:182:ARG:HD3	2.08	0.83
18:P:150:ALA:CB	18:P:178:ILE:CD1	2.56	0.83
18:P:150:ALA:HA	18:P:178:ILE:CD1	2.08	0.83
18:P:223:LEU:HD11	19:Q:173:GLU:CB	2.09	0.83
20:R:44:LYS:CG	20:R:51:LYS:HA	2.03	0.83
21:S:143:LEU:HD12	21:S:145:ASN:H	1.41	0.83
21:S:175:LYS:HZ2	21:S:175:LYS:CA	0.24	0.83
27:Y:353:SER:HB3	27:Y:378:SER:N	1.94	0.83
3:A:313:GLN:HG3	18:P:98:LYS:CE	2.08	0.83
3:A:1443:VAL:CG2	9:G:63:PRO:CB	2.57	0.83
4:B:350:GLN:HG3	23:U:407:ASP:CB	2.08	0.83
27:Y:639:LEU:HD11	27:Y:649:ARG:HH11	1.43	0.83
1:1:376:ASN:N	1:1:380:ARG:HB2	1.92	0.82
1:1:505:ILE:HG22	1:1:507:ALA:N	1.94	0.82
18:P:34:ILE:HD12	18:P:43:VAL:O	1.77	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:44:LYS:HD2	20:R:54:LEU:HB2	1.61	0.82
27:Y:72:CYS:SG	27:Y:234:PHE:CD1	2.72	0.82
5:C:148:ARG:H	5:C:151:GLN:HG3	1.43	0.82
16:N:39:DC:H2'	16:N:40:DT:C5	2.13	0.82
18:P:252:VAL:HG13	18:P:285:ASN:HD21	1.38	0.82
20:R:43:LEU:HB3	20:R:54:LEU:CD2	2.09	0.82
21:S:221:ILE:H	21:S:221:ILE:HD13	0.66	0.82
21:S:233:LEU:HD22	21:S:233:LEU:O	1.79	0.82
21:S:234:ARG:HB2	21:S:234:ARG:HH12	1.41	0.82
27:Y:86:LEU:HD22	27:Y:103:PHE:CE1	2.15	0.82
1:1:335:TYR:HD1	1:1:336:PRO:HD3	1.44	0.82
21:S:142:VAL:CG2	21:S:147:LEU:HG	2.09	0.82
21:S:218:ASP:HB2	21:S:223:GLN:NE2	1.93	0.82
4:B:959:ASP:OD2	18:P:145:ILE:HD11	1.79	0.82
18:P:171:ILE:HD13	18:P:209:ILE:CD1	2.08	0.82
20:R:30:ASP:CG	20:R:151:LEU:CD1	2.47	0.82
24:V:306:LEU:CD1	24:V:313:TRP:CZ2	2.62	0.82
8:F:132:LEU:HD21	9:G:66:GLY:O	1.79	0.82
8:F:132:LEU:HD22	9:G:61:ILE:HG23	1.62	0.82
27:Y:42:MET:CG	27:Y:48:LYS:HG2	2.09	0.82
27:Y:208:TYR:CE1	27:Y:213:LEU:HB2	2.15	0.82
27:Y:639:LEU:HG	27:Y:653:PHE:CZ	2.15	0.82
18:P:102:THR:CG2	18:P:104:MET:HE3	2.06	0.82
1:1:478:THR:HG22	1:1:479:GLY:H	1.43	0.82
2:2:266:THR:HG23	3:A:731:ARG:CD	2.09	0.82
18:P:289:PHE:CZ	18:P:291:ILE:CG1	2.62	0.82
24:V:63:ARG:HB3	24:V:215:VAL:O	1.77	0.82
1:1:695:ARG:HA	1:1:696:ARG:CZ	2.09	0.82
18:P:45:CYS:SG	18:P:49:GLY:N	2.52	0.82
18:P:280:VAL:HG13	18:P:313:TYR:CA	2.08	0.82
20:R:12:LEU:O	20:R:16:VAL:HG23	1.80	0.82
27:Y:518:ILE:HG23	27:Y:550:ILE:HD13	1.60	0.82
2:2:291:GLU:H	2:2:292:PRO:HD2	1.42	0.82
4:B:885:MET:CA	18:P:33:LYS:NZ	2.41	0.82
21:S:151:LEU:HD22	21:S:153:MET:HG3	1.61	0.82
21:S:172:ASP:OD2	21:S:179:LYS:HG3	1.80	0.82
27:Y:481:LYS:HD3	27:Y:483:TYR:CD2	2.15	0.82
3:A:227:VAL:HG21	6:D:16:LYS:CE	2.07	0.82
18:P:320:ARG:NH2	18:P:337:ASP:H	1.77	0.82
27:Y:244:CYS:HB2	27:Y:442:ALA:CB	2.09	0.82
1:1:300:ASP:OD2	1:1:480:ARG:HD3	1.80	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:373:MET:HG3	1:1:381:SER:HA	1.61	0.81
1:1:410:LEU:HD21	1:1:457:TYR:CD2	2.15	0.81
2:2:288:SER:O	2:2:292:PRO:HD3	1.80	0.81
3:A:68:GLN:O	3:A:68:GLN:NE2	2.11	0.81
18:P:108:LYS:O	18:P:112:LYS:HG2	1.80	0.81
20:R:27:LEU:HD21	20:R:127:CYS:O	1.80	0.81
21:S:167:ASP:OD1	21:S:167:ASP:N	2.08	0.81
3:A:344:ARG:NH2	4:B:1120:GLU:CG	2.39	0.81
3:A:1445:ILE:C	9:G:68:ALA:HB2	2.01	0.81
8:F:92:ARG:HH22	9:G:63:PRO:HB2	1.02	0.81
8:F:96:THR:CB	9:G:64:THR:O	2.27	0.81
18:P:184:GLU:OE1	18:P:241:ARG:N	2.13	0.81
18:P:189:PHE:H	18:P:241:ARG:NH2	1.77	0.81
21:S:129:LEU:H	24:V:341:LYS:HG3	1.45	0.81
27:Y:28:ILE:CG2	27:Y:57:ILE:CD1	2.58	0.81
27:Y:135:ARG:NH1	27:Y:370:GLU:OE2	2.10	0.81
1:1:458:SER:CB	1:1:467:SER:HB3	2.11	0.81
2:2:253:LEU:CB	3:A:1132:LYS:HD3	2.09	0.81
3:A:55:ASP:HA	3:A:58:LEU:HB2	1.63	0.81
5:C:148:ARG:HD3	5:C:149:LYS:HG2	1.62	0.81
16:N:70:DG:OP2	26:X:63:TYR:OH	1.97	0.81
18:P:113:ALA:O	18:P:116:LYS:HG2	1.79	0.81
21:S:131:ALA:CA	21:S:151:LEU:HD12	2.09	0.81
22:T:141:DC:H2"	22:T:142:DC:H5'	1.61	0.81
23:U:135:LEU:HD12	23:U:355:PHE:CE1	2.15	0.81
1:1:331:GLN:HE22	1:1:378:ARG:HD2	1.45	0.81
21:S:136:GLN:CD	21:S:137:LYS:NZ	2.33	0.81
21:S:237:LYS:HG3	21:S:241:PRO:HG2	0.82	0.81
23:U:372:SER:OG	24:V:80:LYS:NZ	0.68	0.81
27:Y:42:MET:SD	27:Y:48:LYS:CG	2.69	0.81
27:Y:248:LEU:HD11	27:Y:445:ALA:CB	2.10	0.81
1:1:474:MET:HA	1:1:478:THR:O	1.79	0.81
3:A:312:PRO:HA	18:P:96:ILE:HG21	1.63	0.81
3:A:1445:ILE:C	9:G:61:ILE:HD12	2.01	0.81
16:N:23:DA:C2	19:Q:116:PHE:HZ	1.93	0.81
20:R:123:MET:HE3	20:R:130:LYS:HD2	1.60	0.81
21:S:181:LEU:HD21	21:S:183:THR:O	1.81	0.81
21:S:183:THR:HA	21:S:222:ASN:CG	2.00	0.81
4:B:445:LYS:O	18:P:139:ALA:HB1	1.79	0.81
16:N:24:DG:P	19:Q:120:LYS:HD2	2.21	0.81
27:Y:18:TYR:CB	27:Y:19:PRO:CD	2.57	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:257:LEU:HD22	27:Y:383:LEU:HD11	1.61	0.81
1:1:384:ILE:HD13	1:1:511:LEU:CD1	2.10	0.81
1:1:502:VAL:HA	1:1:505:ILE:CD1	2.10	0.81
18:P:286:ILE:CG1	18:P:293:ILE:CD1	2.33	0.81
18:P:326:PRO:HD2	18:P:328:LEU:N	1.93	0.81
27:Y:244:CYS:CB	27:Y:442:ALA:CB	2.57	0.81
27:Y:639:LEU:CG	27:Y:653:PHE:CZ	2.60	0.81
2:2:207:ILE:CA	3:A:1172:LEU:HD22	2.10	0.81
2:2:248:ILE:CG2	3:A:1203:ASN:OD1	0.51	0.81
18:P:154:TYR:CA	18:P:157:CYS:SG	2.69	0.81
20:R:123:MET:CA	20:R:130:LYS:HD3	2.11	0.81
15:M:236:GLU:HG3	15:M:237:ASP:H	1.46	0.81
21:S:184:TYR:HA	21:S:221:ILE:H	1.32	0.81
27:Y:346:MET:CB	27:Y:384:LEU:HD21	2.09	0.81
1:1:428:CYS:HB2	1:1:434:ASN:CB	2.08	0.81
16:N:35:DG:C2'	16:N:36:DT:H71	2.11	0.81
18:P:316:LEU:HD23	18:P:317:TYR:H	1.44	0.81
22:T:132:DA:H2"	22:T:133:DT:C7	2.10	0.81
1:1:410:LEU:HA	1:1:466:ARG:HH12	1.46	0.80
1:1:627:ILE:HB	1:1:654:LEU:HD23	1.62	0.80
3:A:320:ARG:HH12	18:P:81:GLU:CB	1.94	0.80
3:A:1445:ILE:O	9:G:68:ALA:CB	2.28	0.80
21:S:129:LEU:HG	24:V:341:LYS:CE	2.09	0.80
23:U:365:TYR:CE1	23:U:391:LYS:HD2	2.17	0.80
2:2:235:ASP:CA	2:2:242:LYS:CG	2.58	0.80
4:B:1221:SER:OG	6:D:14:ARG:CZ	2.28	0.80
21:S:141:PRO:CB	21:S:177:THR:HG23	2.10	0.80
23:U:135:LEU:HB2	23:U:136:PRO:HD2	1.63	0.80
4:B:416:LEU:HD23	4:B:457:LEU:HD23	1.61	0.80
21:S:130:TRP:HE3	24:V:339:LEU:HG	0.99	0.80
21:S:187:HIS:CE1	21:S:225:GLU:CB	2.59	0.80
22:T:147:DA:H2"	22:T:148:DT:C5'	2.10	0.80
27:Y:353:SER:CB	27:Y:378:SER:N	2.45	0.80
27:Y:353:SER:HA	27:Y:375:ARG:HG2	1.64	0.80
1:1:466:ARG:HB2	1:1:477:LEU:CD2	2.10	0.80
16:N:69:DG:P	26:X:62:ILE:O	2.40	0.80
18:P:150:ALA:HA	18:P:178:ILE:HD12	1.60	0.80
1:1:458:SER:CA	1:1:465:ASN:HB2	2.12	0.80
1:1:502:VAL:CG1	1:1:530:LEU:HB3	2.12	0.80
1:1:578:MET:O	1:1:582:ILE:HG13	1.81	0.80
2:2:252:ASN:HD22	3:A:1206:ASP:CB	1.95	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:23:DA:H2"	19:Q:120:LYS:CB	2.10	0.80
20:R:34:PHE:CE2	20:R:134:LEU:HD21	2.12	0.80
21:S:200:VAL:O	21:S:200:VAL:CG1	2.29	0.80
21:S:221:ILE:CD1	21:S:221:ILE:N	2.17	0.80
27:Y:659:MET:SD	27:Y:692:GLN:HG2	2.21	0.80
1:1:584:ASN:ND2	1:1:586:THR:HG23	1.96	0.80
2:2:241:LEU:CD2	3:A:1232:ASN:CG	2.32	0.80
4:B:350:GLN:CG	23:U:407:ASP:OD2	2.28	0.80
21:S:175:LYS:NZ	21:S:175:LYS:C	2.13	0.80
23:U:386:MET:CE	24:V:75:MET:SD	2.70	0.80
21:S:130:TRP:CH2	24:V:333:LEU:C	2.54	0.80
27:Y:317:LEU:HA	27:Y:321:ILE:HD13	1.63	0.80
2:2:257:GLN:HG3	3:A:1284:MET:HE2	0.81	0.80
4:B:849:GLY:HA2	4:B:852:ARG:HD2	1.63	0.80
18:P:196:ILE:CG1	18:P:197:HIS:H	1.76	0.80
18:P:289:PHE:CE1	18:P:291:ILE:HG12	2.16	0.80
27:Y:162:LEU:HD21	27:Y:191:CYS:HB3	1.64	0.80
1:1:502:VAL:HA	1:1:505:ILE:HD11	1.64	0.80
1:1:757:ARG:NH2	1:1:760:LEU:CD2	2.41	0.80
3:A:227:VAL:CG1	6:D:16:LYS:HG2	2.11	0.80
15:M:16:SER:O	15:M:20:GLU:HG2	1.81	0.80
18:P:202:GLU:HG3	18:P:205:LYS:NZ	1.96	0.80
20:R:141:ASN:C	20:R:142:PHE:HD1	1.84	0.80
21:S:130:TRP:HE3	24:V:339:LEU:CG	1.76	0.80
21:S:203:LYS:HB3	21:S:242:ARG:CB	2.12	0.80
27:Y:62:HIS:CD2	27:Y:63:TYR:N	2.49	0.80
1:1:353:ASP:OD2	1:1:405:LYS:HA	1.80	0.80
1:1:378:ARG:HH21	1:1:508:HIS:HA	1.45	0.80
18:P:140:ALA:O	18:P:141:GLU:CG	2.30	0.80
18:P:255:SER:HA	18:P:325:ASP:OD2	1.81	0.80
18:P:325:ASP:O	18:P:326:PRO:HG3	1.81	0.80
20:R:43:LEU:CD2	20:R:54:LEU:HD11	2.05	0.80
20:R:156:LEU:CD2	20:R:156:LEU:N	2.35	0.80
21:S:200:VAL:O	21:S:200:VAL:HG12	1.81	0.80
22:T:135:DG:H2"	22:T:136:DA:C5'	2.11	0.80
27:Y:310:PRO:HG2	27:Y:335:LEU:HD23	1.62	0.80
27:Y:639:LEU:CA	27:Y:653:PHE:CD2	2.65	0.80
1:1:398:THR:O	1:1:402:THR:HG23	1.83	0.79
2:2:253:LEU:HD13	3:A:1132:LYS:HD2	1.62	0.79
2:2:269:PHE:HZ	2:2:297:CYS:SG	1.97	0.79
24:V:333:LEU:C	24:V:337:ALA:HB3	2.02	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:443:SER:HB2	27:Y:474:ASN:HB2	1.64	0.79
3:A:836:TYR:HH	3:A:1403:GLU:CD	1.84	0.79
8:F:96:THR:HA	9:G:64:THR:O	1.82	0.79
18:P:104:MET:CG	18:P:105:ARG:H	1.92	0.79
18:P:173:ALA:C	18:P:176:ILE:HG12	2.02	0.79
22:T:102:DC:H2'	22:T:103:DC:C6	2.17	0.79
22:T:102:DC:H2"	22:T:103:DC:H5'	1.64	0.79
22:T:117:DC:H2'	22:T:118:DC:C6	2.16	0.79
24:V:56:SER:O	24:V:57:LEU:HB2	1.81	0.79
27:Y:479:LEU:O	27:Y:479:LEU:CD2	2.31	0.79
27:Y:586:TYR:HD1	27:Y:616:TYR:CE2	1.99	0.79
1:1:425:LEU:CG	1:1:429:THR:HA	2.12	0.79
1:1:459:MET:O	1:1:464:ARG:HG3	1.81	0.79
18:P:29:VAL:HG13	18:P:31:PRO:HA	1.65	0.79
18:P:279:VAL:HG22	18:P:298:VAL:CG1	2.12	0.79
21:S:140:LYS:NZ	21:S:141:PRO:O	2.14	0.79
27:Y:193:TYR:HE2	27:Y:197:ARG:HH11	1.29	0.79
27:Y:212:TYR:OH	27:Y:222:VAL:HG22	1.81	0.79
27:Y:298:ILE:CD1	27:Y:345:ARG:HD2	2.11	0.79
1:1:327:LYS:HA	1:1:327:LYS:HE3	1.65	0.79
3:A:1444:MET:HE1	8:F:135:ARG:HB2	1.62	0.79
18:P:22:LEU:HD22	18:P:34:ILE:HG21	1.63	0.79
21:S:130:TRP:HB3	21:S:151:LEU:HD21	1.62	0.79
21:S:170:GLU:C	21:S:179:LYS:CD	2.38	0.79
1:1:458:SER:HA	1:1:465:ASN:CB	2.12	0.79
8:F:96:THR:HG23	9:G:65:ASP:O	1.63	0.79
18:P:291:ILE:HD13	18:P:291:ILE:N	1.94	0.79
20:R:34:PHE:CZ	20:R:134:LEU:HD12	2.18	0.79
21:S:148:LEU:CD1	21:S:154:LYS:HE3	2.12	0.79
21:S:219:GLU:HB3	21:S:222:ASN:HD22	1.47	0.79
4:B:29:ASP:HB3	4:B:658:ILE:HG12	1.64	0.79
4:B:1215:ARG:HD2	6:D:15:LEU:HD12	1.60	0.79
18:P:286:ILE:CD1	18:P:293:ILE:HD13	2.13	0.79
21:S:164:LYS:HE2	21:S:165:LYS:HG3	1.58	0.79
18:P:193:GLN:HG2	18:P:199:LYS:CD	2.12	0.79
18:P:279:VAL:HA	18:P:302:LEU:HD23	1.63	0.79
19:Q:103:ILE:CG1	22:T:143:DT:C2'	2.22	0.79
20:R:30:ASP:OD1	20:R:151:LEU:CD1	2.30	0.79
27:Y:331:PHE:CE2	27:Y:335:LEU:CD1	2.65	0.79
1:1:494:PRO:HB2	1:1:519:ARG:NH1	1.98	0.79
1:1:785:ARG:HG2	1:1:785:ARG:HH11	1.47	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:192:GLY:C	22:T:117:DC:OP1	2.21	0.79
17:O:4:PRO:CD	24:V:357:LYS:CB	2.34	0.79
18:P:289:PHE:CE1	18:P:290:GLN:CB	2.39	0.79
21:S:127:LYS:N	24:V:339:LEU:O	2.16	0.79
27:Y:42:MET:CG	27:Y:48:LYS:CG	2.59	0.79
1:1:621:LYS:CB	1:1:621:LYS:HZ2	1.89	0.79
3:A:89:PRO:HB2	3:A:204:THR:CG2	2.13	0.79
16:N:55:DG:C2'	16:N:56:DT:H72	2.13	0.79
18:P:142:LEU:HB3	18:P:147:LYS:CD	2.12	0.79
18:P:286:ILE:CD1	18:P:293:ILE:CD1	2.61	0.79
18:P:35:VAL:HG12	18:P:37:ARG:H	1.45	0.79
18:P:124:ASN:OD1	18:P:128:ALA:HB2	1.83	0.79
21:S:151:LEU:HD22	21:S:153:MET:HE2	1.64	0.79
27:Y:400:LYS:HG3	27:Y:437:PHE:CD2	2.18	0.79
1:1:362:ILE:HG22	1:1:363:ARG:O	1.81	0.78
1:1:400:ALA:HB1	1:1:449:GLU:O	1.82	0.78
1:1:473:VAL:H	1:1:478:THR:CG2	1.96	0.78
1:1:584:ASN:ND2	1:1:586:THR:CG2	2.45	0.78
2:2:257:GLN:CD	3:A:1284:MET:CE	2.51	0.78
2:2:283:GLN:CG	3:A:756:ILE:HD13	2.12	0.78
4:B:900:ALA:HB3	14:L:61:THR:HG23	1.64	0.78
16:N:28:DT:OP2	24:V:292:ILE:C	2.21	0.78
18:P:22:LEU:HA	18:P:52:LEU:HD11	1.64	0.78
18:P:277:ILE:HD13	18:P:277:ILE:C	2.03	0.78
20:R:149:CYS:SG	20:R:151:LEU:HD22	2.24	0.78
1:1:773:ILE:HD11	1:1:775:VAL:HB	0.81	0.78
18:P:86:LEU:HD21	18:P:155:LYS:CE	2.13	0.78
18:P:285:ASN:ND2	18:P:286:ILE:N	2.30	0.78
27:Y:321:ILE:CD1	27:Y:409:ILE:CG2	2.61	0.78
1:1:439:THR:HG23	1:1:465:ASN:ND2	1.97	0.78
3:A:419:LYS:NZ	18:P:47:LEU:C	2.36	0.78
18:P:152:GLU:O	18:P:155:LYS:HG2	1.83	0.78
18:P:279:VAL:HG23	18:P:302:LEU:HG	1.57	0.78
18:P:338:ASN:ND2	18:P:338:ASN:N	2.27	0.78
21:S:154:LYS:CE	21:S:154:LYS:CA	2.13	0.78
21:S:210:LEU:CB	21:S:214:TRP:CH2	2.66	0.78
24:V:63:ARG:HB2	24:V:214:ILE:C	2.04	0.78
27:Y:405:PHE:HB3	27:Y:437:PHE:CD1	2.18	0.78
24:V:107:LEU:CD1	24:V:119:GLU:HG3	2.12	0.78
27:Y:39:ILE:HG12	27:Y:458:ILE:HB	1.63	0.78
27:Y:257:LEU:HD21	27:Y:383:LEU:HD11	1.64	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:526:LEU:HD13	27:Y:623:ILE:HD11	1.64	0.78
27:Y:569:ILE:CG2	27:Y:579:THR:OG1	2.32	0.78
18:P:43:VAL:HG13	18:P:55:LYS:NZ	1.98	0.78
18:P:222:PHE:O	18:P:223:LEU:HB2	1.84	0.78
27:Y:18:TYR:HB3	27:Y:19:PRO:HD3	1.66	0.78
27:Y:408:LEU:HD22	27:Y:634:ILE:HG13	1.64	0.78
1:1:485:ILE:CD1	1:1:510:LYS:HG2	2.14	0.78
12:J:48:ARG:HE	12:J:49:MET:HE2	1.47	0.78
18:P:187:ARG:CB	18:P:189:PHE:CA	2.62	0.78
18:P:289:PHE:CZ	18:P:291:ILE:CD1	2.66	0.78
21:S:203:LYS:CE	21:S:204:GLY:N	2.47	0.78
22:T:117:DC:H2"	22:T:118:DC:C5'	2.13	0.78
27:Y:215:ASP:HB3	27:Y:218:ILE:CG2	2.14	0.78
1:1:376:ASN:CB	1:1:380:ARG:H	1.97	0.78
18:P:193:GLN:NE2	18:P:203:PHE:CG	2.51	0.78
21:S:130:TRP:CZ3	24:V:338:THR:N	2.52	0.78
21:S:183:THR:CG2	21:S:184:TYR:CD1	2.65	0.78
21:S:184:TYR:H	21:S:222:ASN:ND2	1.81	0.78
21:S:203:LYS:HE3	21:S:203:LYS:CA	2.14	0.78
16:N:56:DT:H2'	16:N:57:DA:C8	2.19	0.78
18:P:288:LEU:HD13	18:P:289:PHE:N	1.98	0.78
20:R:156:LEU:H	20:R:156:LEU:HD22	1.47	0.78
4:B:433:GLN:CD	23:U:326:ARG:HD3	2.03	0.78
8:F:92:ARG:NH2	9:G:63:PRO:CA	2.46	0.78
18:P:130:PHE:HA	18:P:133:ILE:CG2	2.14	0.78
22:T:104:DT:C2'	22:T:105:DT:H5'	2.13	0.78
27:Y:111:ARG:NE	27:Y:129:VAL:HG21	1.98	0.78
1:1:425:LEU:HG	1:1:429:THR:CB	2.13	0.78
1:1:516:THR:HA	1:1:681:ARG:NE	1.99	0.78
2:2:271:CYS:SG	2:2:304:ASN:ND2	2.57	0.78
16:N:39:DC:H2"	16:N:40:DT:H5'	1.66	0.78
16:N:65:DG:H1'	16:N:66:DG:H5'	1.66	0.78
18:P:26:GLU:CD	18:P:50:LEU:CD2	2.51	0.78
18:P:188:THR:OG1	18:P:241:ARG:HB3	1.84	0.78
21:S:166:LEU:HD12	21:S:168:ARG:H	1.46	0.78
21:S:219:GLU:HB2	21:S:222:ASN:ND2	1.99	0.78
27:Y:136:MET:CE	27:Y:159:HIS:CD2	2.67	0.78
27:Y:289:LEU:HD22	27:Y:348:VAL:CG1	2.13	0.78
27:Y:681:LEU:HD22	27:Y:696:TRP:HZ3	1.45	0.78
1:1:476:PHE:HA	1:1:485:ILE:HB	1.66	0.77
2:2:252:ASN:ND2	3:A:1206:ASP:CB	2.47	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:290:GLN:NE2	18:P:331:ASN:HD21	1.79	0.77
18:P:296:ALA:O	18:P:300:GLN:NE2	2.16	0.77
22:T:121:DG:C2'	22:T:122:DT:H5'	2.14	0.77
27:Y:359:PHE:CE2	27:Y:363:LEU:HD11	2.19	0.77
1:1:363:ARG:HH21	1:1:366:GLN:HE22	1.32	0.77
1:1:425:LEU:CD1	1:1:429:THR:HG23	2.15	0.77
2:2:255:ASN:HB2	3:A:1204:ASP:O	1.84	0.77
4:B:451:LYS:NZ	18:P:147:LYS:HZ1	1.82	0.77
18:P:152:GLU:HG3	18:P:155:LYS:NZ	1.98	0.77
18:P:288:LEU:HD13	18:P:288:LEU:O	1.84	0.77
21:S:160:ILE:C	21:S:160:ILE:HD12	2.05	0.77
27:Y:298:ILE:HD11	27:Y:345:ARG:HD2	1.66	0.77
4:B:885:MET:CA	18:P:33:LYS:HZ1	1.97	0.77
18:P:45:CYS:SG	18:P:48:CYS:N	2.57	0.77
18:P:116:LYS:O	18:P:119:MET:CG	2.30	0.77
18:P:225:ILE:HD12	18:P:225:ILE:O	1.84	0.77
18:P:268:GLU:O	18:P:315:ILE:CG2	2.32	0.77
18:P:268:GLU:O	18:P:269:ILE:HD12	1.85	0.77
18:P:303:GLN:CD	18:P:304:VAL:HG23	2.04	0.77
27:Y:37:ASN:O	27:Y:477:THR:OG1	2.02	0.77
1:1:310:ILE:HD13	1:1:313:VAL:CG2	2.15	0.77
18:P:225:ILE:HD11	18:P:227:THR:C	2.05	0.77
18:P:303:GLN:CG	18:P:304:VAL:CG2	2.62	0.77
21:S:203:LYS:CD	21:S:203:LYS:C	2.49	0.77
27:Y:54:SER:O	27:Y:57:ILE:HG22	1.85	0.77
1:1:656:LYS:O	1:1:656:LYS:CD	2.33	0.77
2:2:252:ASN:HD21	3:A:1203:ASN:HA	1.50	0.77
2:2:265:VAL:HG13	2:2:278:LYS:HA	1.65	0.77
8:F:92:ARG:CZ	9:G:63:PRO:HB3	2.11	0.77
23:U:375:LEU:HD21	24:V:70:LEU:HD13	1.67	0.77
1:1:310:ILE:HD13	1:1:313:VAL:HG23	1.67	0.77
1:1:407:VAL:CG2	1:1:451:GLY:HA2	2.15	0.77
1:1:574:ALA:HB1	1:1:774:GLU:CD	2.03	0.77
2:2:281:TYR:OH	3:A:755:PHE:HE2	1.66	0.77
2:2:290:ASP:CA	4:B:766:ARG:NH2	2.47	0.77
3:A:1451:VAL:HG13	9:G:20:PRO:HG3	1.67	0.77
21:S:134:TYR:CE1	21:S:138:LYS:HE3	2.19	0.77
21:S:144:VAL:HG22	21:S:178:PHE:CE2	2.19	0.77
21:S:166:LEU:HD12	21:S:168:ARG:N	2.00	0.77
21:S:200:VAL:O	21:S:201:THR:HG23	1.84	0.77
21:S:203:LYS:CB	21:S:242:ARG:CG	2.02	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:U:94:ASP:C	23:U:95:PRO:HD3	2.02	0.77
27:Y:212:TYR:OH	27:Y:222:VAL:CG2	2.33	0.77
27:Y:346:MET:O	27:Y:384:LEU:HG	1.84	0.77
27:Y:639:LEU:HD23	27:Y:649:ARG:CB	2.15	0.77
1:1:406:SER:HB3	1:1:482:TRP:CE3	2.20	0.77
2:2:248:ILE:CG2	3:A:1203:ASN:CG	1.75	0.77
3:A:313:GLN:HG3	18:P:98:LYS:HD3	1.67	0.77
16:N:28:DT:OP2	24:V:293:ARG:N	2.17	0.77
18:P:288:LEU:O	18:P:288:LEU:CD2	2.32	0.77
18:P:339:LEU:C	18:P:340:PRO:CD	2.52	0.77
21:S:157:ASP:O	21:S:162:LEU:HD23	1.84	0.77
21:S:203:LYS:NZ	21:S:242:ARG:NH2	2.32	0.77
27:Y:369:ILE:O	27:Y:370:GLU:HB2	1.85	0.77
18:P:189:PHE:CD1	18:P:241:ARG:NH2	2.53	0.77
18:P:303:GLN:CG	18:P:304:VAL:HG22	2.08	0.77
19:Q:112:THR:HG21	22:T:144:DT:H4'	1.67	0.77
19:Q:114:LEU:HD22	22:T:143:DT:C2'	2.15	0.77
23:U:96:ASN:HD21	24:V:99:LYS:N	1.83	0.77
24:V:333:LEU:O	24:V:337:ALA:CB	2.32	0.77
1:1:326:VAL:HG11	1:1:503:SER:OG	1.83	0.76
2:2:257:GLN:HG2	3:A:1284:MET:HE3	0.77	0.76
21:S:127:LYS:HE3	21:S:127:LYS:N	2.00	0.76
22:T:102:DC:H2"	22:T:103:DC:C5'	2.15	0.76
24:V:306:LEU:HD12	24:V:313:TRP:CH2	2.20	0.76
18:P:42:ASP:OD1	18:P:54:ASP:CA	2.28	0.76
21:S:237:LYS:HZ2	21:S:241:PRO:HB2	1.47	0.76
24:V:59:LEU:CD2	24:V:214:ILE:HD11	2.16	0.76
27:Y:639:LEU:CD2	27:Y:649:ARG:HB2	2.13	0.76
1:1:425:LEU:HG	1:1:429:THR:CG2	2.15	0.76
3:A:95:PHE:O	3:A:96:ILE:C	2.13	0.76
21:S:166:LEU:CD1	21:S:168:ARG:H	1.96	0.76
1:1:568:GLU:HA	1:1:571:ARG:HG3	1.67	0.76
3:A:313:GLN:CG	18:P:98:LYS:HD3	2.14	0.76
4:B:885:MET:CB	18:P:33:LYS:HZ2	1.95	0.76
18:P:103:ASP:HB2	18:P:107:THR:HB	1.66	0.76
18:P:198:VAL:CG1	18:P:202:GLU:OE1	2.32	0.76
20:R:66:LEU:O	20:R:89:VAL:HG13	1.85	0.76
21:S:130:TRP:HH2	24:V:337:ALA:CB	1.93	0.76
21:S:175:LYS:NZ	21:S:175:LYS:CA	0.85	0.76
24:V:313:TRP:CB	24:V:349:TYR:HE1	1.92	0.76
27:Y:240:ILE:HG22	27:Y:473:LEU:CD1	2.16	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:368:LYS:HE2	3:A:399:HIS:HB2	1.66	0.76
18:P:184:GLU:CD	18:P:231:SER:OG	2.23	0.76
18:P:279:VAL:HG23	18:P:302:LEU:CB	2.15	0.76
18:P:299:GLY:CA	18:P:302:LEU:HD13	2.13	0.76
21:S:142:VAL:C	21:S:177:THR:OG1	2.23	0.76
23:U:98:TYR:CE1	24:V:96:ARG:NH2	2.53	0.76
23:U:146:ASN:HA	23:U:348:TYR:OH	1.86	0.76
23:U:376:LEU:CG	24:V:73:LEU:HD22	2.10	0.76
27:Y:360:LEU:CD1	27:Y:364:LYS:HD2	2.15	0.76
1:1:380:ARG:HA	1:1:535:LEU:HD22	1.65	0.76
16:N:39:DC:C2'	16:N:40:DT:H71	2.16	0.76
18:P:187:ARG:CD	18:P:189:PHE:CB	2.54	0.76
19:Q:99:PHE:HB2	22:T:143:DT:C5'	2.09	0.76
19:Q:114:LEU:HD13	22:T:143:DT:O2	1.86	0.76
21:S:158:LYS:NZ	21:S:162:LEU:CG	2.43	0.76
27:Y:493:LEU:HD23	27:Y:696:TRP:CE2	2.20	0.76
1:1:413:SER:O	1:1:417:VAL:HG23	1.85	0.76
1:1:446:PHE:C	1:1:452:LEU:HD22	2.06	0.76
1:1:447:GLN:H	1:1:452:LEU:HD13	1.49	0.76
1:1:474:MET:HE2	1:1:482:TRP:N	1.99	0.76
1:1:485:ILE:HD11	1:1:510:LYS:HG2	1.67	0.76
2:2:248:ILE:CD1	3:A:1203:ASN:ND2	2.46	0.76
6:D:40:HIS:HB3	9:G:73:LYS:HE3	1.67	0.76
16:N:55:DG:H2"	16:N:56:DT:C7	2.16	0.76
18:P:142:LEU:HD23	18:P:147:LYS:HB2	0.77	0.76
1:1:354:ILE:H	1:1:447:GLN:HE22	1.34	0.76
3:A:1116:LEU:HD12	3:A:1329:THR:HB	1.67	0.76
8:F:93:ILE:HD11	8:F:134:ILE:HD11	1.66	0.76
18:P:44:VAL:CG2	18:P:50:LEU:O	2.31	0.76
18:P:279:VAL:CG2	18:P:302:LEU:CB	2.63	0.76
23:U:137:VAL:HG13	24:V:59:LEU:CB	2.12	0.76
24:V:61:LEU:CD2	24:V:214:ILE:HD12	2.16	0.76
27:Y:627:PHE:CD1	27:Y:654:LEU:HD11	2.21	0.76
1:1:378:ARG:NH2	1:1:508:HIS:HA	2.01	0.76
1:1:425:LEU:CG	1:1:429:THR:HG23	2.16	0.76
3:A:64:ASN:OD1	18:P:18:LEU:HD22	1.86	0.76
3:A:1433:MET:CE	4:B:1145:SER:OG	2.33	0.76
16:N:59:DT:C2	16:N:60:DA:C8	2.74	0.76
20:R:14:LYS:O	20:R:17:VAL:HG22	1.86	0.76
21:S:237:LYS:NZ	21:S:241:PRO:CG	2.49	0.76
27:Y:136:MET:HE2	27:Y:159:HIS:CD2	2.16	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:1445:ILE:O	9:G:68:ALA:HB1	1.86	0.76
4:B:106:ASP:HA	18:P:184:GLU:HG2	1.67	0.76
8:F:92:ARG:HH21	9:G:64:THR:H	1.31	0.76
20:R:46:LEU:HD11	20:R:132:THR:HG23	1.68	0.76
21:S:162:LEU:HD22	21:S:162:LEU:N	2.01	0.76
23:U:377:SER:OG	24:V:70:LEU:HD22	1.85	0.76
27:Y:28:ILE:HG22	27:Y:57:ILE:HD12	1.68	0.76
1:1:335:TYR:CD1	1:1:336:PRO:HD3	2.21	0.75
1:1:596:GLN:NE2	1:1:746:PRO:HD3	2.01	0.75
3:A:65:LEU:HD13	18:P:19:ASN:O	1.86	0.75
18:P:42:ASP:HB3	18:P:51:VAL:HG23	1.66	0.75
18:P:86:LEU:HD21	18:P:155:LYS:HE2	1.68	0.75
20:R:123:MET:CG	20:R:130:LYS:HD2	2.15	0.75
23:U:120:LYS:HG2	24:V:132:GLU:HG2	1.66	0.75
27:Y:569:ILE:CA	27:Y:575:ASP:HB2	2.14	0.75
1:1:410:LEU:HB2	1:1:466:ARG:NH2	2.01	0.75
1:1:717:TYR:CD2	1:1:718:TYR:CD1	2.73	0.75
3:A:22:PHE:HB2	4:B:1211:ASN:CG	2.06	0.75
17:O:19:LEU:HD22	17:O:23:LEU:HD22	1.68	0.75
18:P:187:ARG:NH2	18:P:192:ILE:HB	2.01	0.75
20:R:124:CYS:CB	20:R:129:THR:HG23	2.16	0.75
21:S:130:TRP:CH2	24:V:337:ALA:CB	2.67	0.75
21:S:234:ARG:NH1	21:S:234:ARG:HB3	1.96	0.75
1:1:425:LEU:HD23	1:1:425:LEU:O	1.87	0.75
5:C:147:LEU:HB3	5:C:151:GLN:HB2	1.66	0.75
18:P:118:VAL:O	18:P:118:VAL:HG22	1.85	0.75
18:P:150:ALA:HB1	18:P:178:ILE:CD1	2.17	0.75
18:P:184:GLU:CD	18:P:241:ARG:CG	2.54	0.75
18:P:279:VAL:CA	18:P:302:LEU:CD2	2.56	0.75
24:V:292:ILE:O	24:V:295:PRO:CD	2.33	0.75
24:V:307:PHE:HZ	24:V:349:TYR:CD1	2.04	0.75
27:Y:128:VAL:HG22	27:Y:373:PRO:HD3	1.67	0.75
1:1:368:LYS:HZ2	1:1:372:LYS:HD2	1.51	0.75
1:1:410:LEU:HD22	1:1:477:LEU:CD1	2.15	0.75
2:2:307:LYS:HG3	3:A:1359:ASP:O	1.86	0.75
3:A:192:GLY:C	22:T:117:DC:P	2.64	0.75
18:P:35:VAL:HG12	18:P:37:ARG:N	2.00	0.75
21:S:172:ASP:C	21:S:175:LYS:HZ1	1.89	0.75
1:1:297:ILE:HD11	1:1:346:ASP:OD2	1.86	0.75
1:1:410:LEU:HD13	1:1:477:LEU:CD1	2.15	0.75
1:1:476:PHE:HZ	1:1:493:VAL:HG11	1.51	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:487:LEU:HD23	1:1:493:VAL:CG2	2.10	0.75
16:N:69:DG:OP2	26:X:62:ILE:O	2.04	0.75
21:S:219:GLU:CB	21:S:222:ASN:ND2	2.49	0.75
24:V:108:LEU:HD12	24:V:118:HIS:CE1	2.22	0.75
1:1:458:SER:HB3	1:1:467:SER:HB3	1.68	0.75
16:N:39:DC:H2'	16:N:40:DT:C7	2.15	0.75
18:P:286:ILE:HD12	18:P:293:ILE:HD13	1.68	0.75
21:S:128:LEU:HG	24:V:341:LYS:HZ1	1.51	0.75
21:S:202:PHE:C	21:S:203:LYS:HE3	2.06	0.75
22:T:134:DT:C1'	24:V:323:ARG:CD	2.25	0.75
18:P:198:VAL:HG21	18:P:202:GLU:OE1	1.87	0.75
18:P:202:GLU:O	18:P:205:LYS:HG2	1.87	0.75
20:R:44:LYS:CE	20:R:54:LEU:HB2	2.16	0.75
21:S:196:LEU:HD12	21:S:196:LEU:C	2.07	0.75
1:1:368:LYS:HD2	1:1:372:LYS:CE	2.16	0.75
1:1:519:ARG:HG3	1:1:524:ILE:CG2	2.17	0.75
3:A:1451:VAL:HG13	9:G:20:PRO:N	2.01	0.75
18:P:148:ASP:HA	18:P:151:LYS:HE2	1.68	0.75
18:P:189:PHE:HD1	18:P:241:ARG:NH2	1.84	0.75
20:R:144:ARG:HB3	20:R:146:GLU:CD	2.07	0.75
21:S:130:TRP:HH2	24:V:333:LEU:C	1.89	0.75
21:S:166:LEU:CD1	21:S:166:LEU:C	2.55	0.75
27:Y:405:PHE:HB2	27:Y:437:PHE:CE1	2.07	0.75
27:Y:693:LEU:HG	27:Y:696:TRP:CZ2	2.21	0.75
18:P:193:GLN:NE2	18:P:203:PHE:CZ	2.54	0.75
24:V:306:LEU:CD1	24:V:313:TRP:CE2	2.70	0.75
27:Y:532:ILE:O	27:Y:534:PRO:HD3	1.85	0.75
3:A:1390:ASN:O	3:A:1399:ARG:CD	2.34	0.74
4:B:430:ARG:CB	23:U:326:ARG:HH12	2.00	0.74
8:F:92:ARG:HH21	9:G:64:THR:N	1.85	0.74
27:Y:353:SER:CB	27:Y:378:SER:CB	2.53	0.74
1:1:315:SER:O	1:1:323:VAL:HG13	1.87	0.74
4:B:902:GLY:O	14:L:65:VAL:CG1	2.36	0.74
18:P:227:THR:O	18:P:227:THR:CG2	2.32	0.74
20:R:17:VAL:CG1	20:R:66:LEU:HD11	2.15	0.74
20:R:90:LYS:HB3	20:R:93:HIS:CB	2.17	0.74
23:U:98:TYR:CE1	24:V:96:ARG:CZ	2.70	0.74
27:Y:185:CYS:HB3	27:Y:190:LEU:O	1.86	0.74
1:1:297:ILE:HG13	1:1:344:ARG:HB2	1.69	0.74
1:1:333:ILE:HD13	1:1:333:ILE:O	1.87	0.74
1:1:561:MET:C	25:W:450:ARG:CZ	2.55	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:2:290:ASP:O	4:B:766:ARG:NH2	2.19	0.74
17:O:87:VAL:HG12	17:O:88:GLU:N	2.01	0.74
18:P:152:GLU:HA	18:P:155:LYS:HE3	1.68	0.74
19:Q:114:LEU:HD22	22:T:143:DT:C1'	2.16	0.74
27:Y:131:GLU:CD	27:Y:134:ARG:HH12	1.91	0.74
27:Y:586:TYR:CD1	27:Y:616:TYR:CE2	2.75	0.74
15:M:253:ARG:NH2	22:T:145:DT:OP1	2.20	0.74
18:P:145:ILE:HD11	18:P:182:ARG:CD	2.16	0.74
2:2:257:GLN:HG2	3:A:1284:MET:HB2	1.67	0.74
18:P:184:GLU:OE1	18:P:231:SER:OG	2.06	0.74
18:P:266:ILE:O	18:P:266:ILE:HG22	1.88	0.74
1:1:431:GLN:HB2	1:1:432:PRO:HD3	1.67	0.74
16:N:27:DG:C2'	24:V:291:SER:O	2.36	0.74
24:V:63:ARG:HG3	24:V:215:VAL:CB	2.16	0.74
24:V:313:TRP:CB	24:V:349:TYR:CE1	2.57	0.74
3:A:227:VAL:CG1	6:D:16:LYS:CG	2.65	0.74
17:O:4:PRO:HD2	24:V:357:LYS:HB2	1.64	0.74
18:P:27:CYS:HB3	18:P:47:LEU:HD22	1.68	0.74
20:R:46:LEU:CG	20:R:132:THR:CG2	2.66	0.74
21:S:203:LYS:CE	21:S:203:LYS:N	2.41	0.74
15:M:284:GLU:HG2	15:M:286:VAL:HG23	1.69	0.74
18:P:43:VAL:CG1	18:P:55:LYS:HE2	2.13	0.74
18:P:133:ILE:CG1	18:P:151:LYS:HD2	2.17	0.74
18:P:162:THR:HG23	18:P:162:THR:O	1.86	0.74
20:R:17:VAL:HG12	20:R:66:LEU:HD11	1.70	0.74
21:S:148:LEU:HB2	21:S:154:LYS:HE3	1.59	0.74
1:1:453:VAL:HG21	1:1:482:TRP:CZ2	2.22	0.74
1:1:470:SER:HA	1:1:478:THR:HG23	1.67	0.74
16:N:19:DT:H2"	16:N:20:DA:C5'	2.15	0.74
18:P:208:ASN:HA	18:P:211:LYS:HE3	1.70	0.74
20:R:119:PRO:HD3	20:R:120:ASN:HD21	1.53	0.74
1:1:429:THR:HB	1:1:432:PRO:CD	2.17	0.74
18:P:43:VAL:CG2	18:P:55:LYS:HZ3	1.98	0.74
20:R:144:ARG:O	20:R:146:GLU:OE2	2.03	0.74
21:S:234:ARG:CZ	21:S:234:ARG:HB3	2.18	0.74
27:Y:495:MET:HB3	27:Y:686:PHE:CZ	2.23	0.74
1:1:356:LEU:HG	1:1:427:TRP:HD1	1.53	0.73
2:2:235:ASP:CA	2:2:242:LYS:HG2	2.16	0.73
3:A:346:ASP:OD1	4:B:1106:ARG:NE	2.21	0.73
18:P:35:VAL:O	18:P:43:VAL:HG12	1.86	0.73
18:P:121:LYS:O	18:P:122:LYS:HG2	1.87	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:175:LYS:HZ3	21:S:175:LYS:HB2	1.50	0.73
21:S:190:SER:C	21:S:226:GLU:OE1	2.27	0.73
22:T:152:DC:H2"	22:T:153:DG:C5'	2.18	0.73
3:A:497:THR:HG22	4:B:1146:PHE:HD1	1.52	0.73
16:N:59:DT:C2	16:N:60:DA:N7	2.56	0.73
24:V:69:TRP:CZ3	24:V:220:HIS:HD2	2.04	0.73
27:Y:346:MET:O	27:Y:384:LEU:CG	2.35	0.73
16:N:28:DT:OP2	24:V:295:PRO:CD	2.36	0.73
27:Y:193:TYR:OH	27:Y:221:ARG:CZ	2.36	0.73
27:Y:248:LEU:CG	27:Y:445:ALA:HB2	2.18	0.73
2:2:256:ALA:O	3:A:1284:MET:HG3	1.87	0.73
4:B:451:LYS:NZ	18:P:147:LYS:HZ3	1.80	0.73
4:B:773:MET:HE1	4:B:985:GLY:HA2	1.70	0.73
4:B:1221:SER:N	6:D:14:ARG:NH2	2.36	0.73
18:P:206:THR:O	18:P:209:ILE:CG1	2.36	0.73
18:P:279:VAL:CG2	18:P:298:VAL:HG12	2.05	0.73
21:S:125:SER:N	21:S:127:LYS:HZ1	1.81	0.73
21:S:130:TRP:CE3	24:V:338:THR:O	2.40	0.73
23:U:119:LEU:CD2	24:V:135:PHE:HE2	2.00	0.73
23:U:135:LEU:CB	23:U:136:PRO:CD	2.66	0.73
24:V:306:LEU:CG	24:V:313:TRP:CE2	2.72	0.73
1:1:476:PHE:CE1	1:1:487:LEU:HD21	2.23	0.73
3:A:320:ARG:NH1	18:P:81:GLU:HB2	1.94	0.73
8:F:96:THR:CA	9:G:64:THR:O	2.36	0.73
17:O:4:PRO:CD	24:V:357:LYS:O	2.37	0.73
18:P:223:LEU:HD11	19:Q:173:GLU:HB2	1.69	0.73
18:P:322:LYS:N	18:P:322:LYS:CE	2.51	0.73
20:R:123:MET:HA	20:R:130:LYS:CD	2.18	0.73
22:T:140:DC:C2'	22:T:141:DC:H5	2.01	0.73
27:Y:128:VAL:HG22	27:Y:372:LYS:HA	1.68	0.73
27:Y:162:LEU:CD2	27:Y:195:ILE:HG13	2.17	0.73
27:Y:190:LEU:O	27:Y:190:LEU:HD12	1.88	0.73
27:Y:248:LEU:CD1	27:Y:445:ALA:HB2	2.18	0.73
27:Y:639:LEU:HD23	27:Y:649:ARG:HD2	1.62	0.73
3:A:1446:ASP:N	9:G:61:ILE:CD1	2.37	0.73
24:V:295:PRO:O	24:V:299:ILE:HG13	1.88	0.73
27:Y:307:VAL:C	27:Y:310:PRO:HD2	2.07	0.73
1:1:568:GLU:HA	1:1:571:ARG:CG	2.17	0.73
1:1:785:ARG:CG	1:1:785:ARG:HH11	1.73	0.73
2:2:252:ASN:ND2	3:A:1206:ASP:CA	2.50	0.73
16:N:21:DA:H2"	16:N:22:DA:C5'	2.15	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:133:ILE:HG12	18:P:151:LYS:HD2	1.70	0.73
1:1:383:ILE:HG13	1:1:517:LEU:HD13	1.71	0.73
3:A:91:PHE:HB3	3:A:96:ILE:CG1	2.18	0.73
3:A:836:TYR:CZ	3:A:1403:GLU:OE2	2.41	0.73
18:P:57:VAL:HG13	18:P:57:VAL:O	1.88	0.73
21:S:128:LEU:HD22	21:S:162:LEU:CD1	2.15	0.73
23:U:135:LEU:HD12	23:U:355:PHE:HE1	1.53	0.73
24:V:349:TYR:CD1	24:V:349:TYR:O	2.41	0.73
27:Y:449:VAL:CG1	27:Y:456:VAL:CG2	2.65	0.73
27:Y:462:THR:HG22	27:Y:660:ARG:HG3	1.71	0.73
27:Y:532:ILE:C	27:Y:534:PRO:CD	2.56	0.73
2:2:289:ALA:O	4:B:769:TYR:CD2	2.42	0.73
8:F:92:ARG:HD2	9:G:64:THR:OG1	1.89	0.73
18:P:187:ARG:CD	18:P:189:PHE:HB3	2.17	0.73
27:Y:208:TYR:CE1	27:Y:213:LEU:CB	2.72	0.73
27:Y:324:ASN:HB3	27:Y:408:LEU:HD11	1.70	0.73
1:1:447:GLN:O	1:1:452:LEU:HB3	1.88	0.73
1:1:455:SER:OG	1:1:466:ARG:HG3	1.89	0.73
3:A:1443:VAL:C	9:G:61:ILE:HG22	2.04	0.73
4:B:959:ASP:HA	18:P:182:ARG:NH1	2.02	0.73
16:N:28:DT:H6	24:V:291:SER:O	1.71	0.73
18:P:224:LYS:HE3	18:P:229:ASN:OD1	1.88	0.73
18:P:248:LEU:CD2	18:P:286:ILE:HG13	1.98	0.73
20:R:141:ASN:HD21	20:R:142:PHE:HE1	1.32	0.73
24:V:306:LEU:HD11	24:V:313:TRP:CD2	2.23	0.73
2:2:248:ILE:CG1	3:A:1203:ASN:OD1	2.36	0.72
2:2:252:ASN:HB2	3:A:1206:ASP:HB2	1.69	0.72
2:2:277:LYS:HE2	3:A:593:GLU:OE2	1.84	0.72
3:A:416:ARG:NH2	18:P:37:ARG:NH2	2.33	0.72
3:A:1443:VAL:HB	9:G:62:LEU:C	2.09	0.72
18:P:288:LEU:HD11	18:P:328:LEU:HD11	1.71	0.72
21:S:143:LEU:CD1	21:S:144:VAL:N	2.45	0.72
22:T:134:DT:C6	24:V:323:ARG:HB2	2.24	0.72
23:U:138:ARG:CZ	24:V:57:LEU:HB2	2.19	0.72
3:A:35:ILE:HA	3:A:52:GLY:O	1.89	0.72
4:B:1124:ARG:HG2	18:P:60:ARG:HE	1.54	0.72
18:P:37:ARG:NH2	18:P:40:GLU:HB2	2.04	0.72
18:P:261:LYS:HB3	18:P:261:LYS:HZ2	1.53	0.72
18:P:320:ARG:NE	18:P:337:ASP:OD2	2.22	0.72
19:Q:153:THR:HG22	19:Q:154:ASP:N	2.04	0.72
20:R:145:THR:C	20:R:146:GLU:OE1	2.26	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:127:LYS:H	21:S:127:LYS:CE	2.02	0.72
24:V:86:ASN:ND2	24:V:92:LEU:HB3	2.02	0.72
1:1:351:ASP:HB2	1:1:482:TRP:HZ3	1.52	0.72
18:P:100:GLU:OE1	18:P:101:THR:CG2	2.33	0.72
18:P:184:GLU:CD	18:P:241:ARG:HG2	2.08	0.72
21:S:233:LEU:HD13	21:S:233:LEU:H	1.52	0.72
27:Y:353:SER:CA	27:Y:375:ARG:HG2	2.19	0.72
4:B:952:VAL:O	14:L:58:LYS:HB2	1.89	0.72
13:K:58:PHE:HB3	13:K:76:GLN:HB3	1.71	0.72
18:P:286:ILE:HD12	18:P:292:PRO:HA	0.76	0.72
20:R:34:PHE:HZ	20:R:134:LEU:HG	1.48	0.72
21:S:131:ALA:CA	21:S:151:LEU:CD1	2.67	0.72
21:S:210:LEU:CA	21:S:214:TRP:CH2	2.71	0.72
22:T:134:DT:C5	24:V:323:ARG:HD2	2.15	0.72
22:T:140:DC:H2"	22:T:141:DC:C5	2.24	0.72
24:V:61:LEU:HD22	24:V:214:ILE:HD12	1.71	0.72
27:Y:162:LEU:HA	27:Y:195:ILE:HG12	1.69	0.72
1:1:428:CYS:CB	1:1:434:ASN:HB2	2.15	0.72
3:A:64:ASN:CG	18:P:18:LEU:HD13	2.09	0.72
6:D:203:SER:HB3	6:D:206:GLU:HB2	1.70	0.72
16:N:57:DA:H2"	16:N:58:DC:C5	2.25	0.72
20:R:123:MET:SD	20:R:130:LYS:HD2	2.30	0.72
21:S:151:LEU:HD22	21:S:153:MET:CG	2.18	0.72
21:S:183:THR:HA	21:S:222:ASN:OD1	1.90	0.72
27:Y:128:VAL:CG2	27:Y:373:PRO:HD3	2.19	0.72
1:1:362:ILE:CG2	1:1:366:GLN:HB2	2.17	0.72
2:2:248:ILE:HD13	3:A:1203:ASN:HD21	1.53	0.72
24:V:333:LEU:HD22	24:V:349:TYR:HD2	1.53	0.72
27:Y:290:VAL:HG22	27:Y:291:GLN:N	2.04	0.72
27:Y:643:ARG:HB2	27:Y:649:ARG:CB	2.14	0.72
1:1:446:PHE:HB2	1:1:452:LEU:CD2	2.18	0.72
1:1:475:ASP:HB2	1:1:478:THR:H	1.54	0.72
1:1:606:ILE:CD1	1:1:690:ILE:HD12	2.18	0.72
3:A:1450:LEU:CA	9:G:18:PHE:O	2.37	0.72
16:N:35:DG:H2"	16:N:36:DT:C7	2.19	0.72
18:P:279:VAL:CG2	18:P:302:LEU:CD1	2.65	0.72
21:S:162:LEU:H	21:S:162:LEU:CD2	2.02	0.72
27:Y:161:ASN:O	27:Y:167:VAL:HG21	1.90	0.72
1:1:495:ALA:CB	1:1:498:PHE:HD2	2.03	0.72
16:N:27:DG:C3'	24:V:291:SER:C	2.45	0.72
18:P:43:VAL:CG2	18:P:55:LYS:NZ	2.50	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:148:ASP:HA	18:P:151:LYS:CE	2.19	0.72
18:P:280:VAL:CG1	18:P:313:TYR:N	2.53	0.72
20:R:27:LEU:HD22	20:R:129:THR:CB	2.17	0.72
20:R:124:CYS:N	20:R:130:LYS:HZ1	1.85	0.72
3:A:313:GLN:HG3	18:P:98:LYS:CD	2.20	0.72
3:A:317:LYS:O	4:B:471:LYS:HE3	1.89	0.72
10:H:84:ALA:HA	10:H:87:ARG:HB2	1.71	0.72
16:N:23:DA:C2	19:Q:116:PHE:HE1	2.01	0.72
18:P:333:VAL:HG22	18:P:336:LEU:CD1	2.12	0.72
23:U:94:ASP:CA	23:U:95:PRO:CD	2.68	0.72
24:V:306:LEU:HD23	24:V:318:LEU:CD2	2.19	0.72
1:1:373:MET:HA	1:1:381:SER:HA	1.72	0.72
1:1:473:VAL:N	1:1:478:THR:HG22	2.05	0.72
1:1:474:MET:HA	1:1:478:THR:C	2.10	0.72
3:A:726:ARG:HD3	3:A:766:GLY:HA3	1.72	0.72
15:M:262:LEU:HB2	15:M:279:ALA:HB3	1.72	0.72
18:P:184:GLU:HB3	18:P:241:ARG:CG	2.15	0.72
20:R:32:ILE:HG21	20:R:89:VAL:HG23	1.71	0.72
20:R:126:ILE:O	20:R:128:LEU:HD22	1.89	0.72
27:Y:643:ARG:CB	27:Y:649:ARG:HB3	2.14	0.72
1:1:606:ILE:HD12	1:1:690:ILE:HD11	0.72	0.71
1:1:773:ILE:HD12	1:1:774:GLU:C	2.06	0.71
18:P:226:ASP:OD1	18:P:260:ALA:CB	2.36	0.71
18:P:313:TYR:C	18:P:316:LEU:CD2	2.58	0.71
21:S:129:LEU:CD2	24:V:347:PHE:CZ	2.68	0.71
27:Y:72:CYS:SG	27:Y:234:PHE:HA	2.30	0.71
27:Y:193:TYR:HH	27:Y:221:ARG:CZ	2.03	0.71
27:Y:495:MET:HB2	27:Y:686:PHE:CD1	2.24	0.71
1:1:429:THR:CB	1:1:432:PRO:HD2	2.20	0.71
1:1:585:PRO:CB	1:1:756:ARG:HH22	1.96	0.71
1:1:717:TYR:HE2	1:1:718:TYR:HE1	0.76	0.71
4:B:430:ARG:HG2	23:U:326:ARG:NH1	2.05	0.71
8:F:132:LEU:HD22	9:G:61:ILE:CG2	2.20	0.71
22:T:130:DA:C6	22:T:131:DC:O2	2.44	0.71
1:1:368:LYS:CD	1:1:372:LYS:HE2	2.19	0.71
1:1:380:ARG:CA	1:1:535:LEU:HD22	2.20	0.71
4:B:350:GLN:CG	23:U:407:ASP:HB3	2.19	0.71
16:N:25:DG:P	19:Q:79:ARG:NH2	2.60	0.71
16:N:39:DC:C3'	16:N:40:DT:H71	2.21	0.71
18:P:105:ARG:HA	18:P:108:LYS:HE3	1.71	0.71
18:P:128:ALA:C	18:P:132:LYS:NZ	2.42	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:325:ASP:O	18:P:326:PRO:CG	2.38	0.71
27:Y:240:ILE:HG22	27:Y:473:LEU:HD11	1.72	0.71
27:Y:467:ASP:C	27:Y:470:PRO:HD2	2.10	0.71
1:1:613:TYR:OH	1:1:762:GLU:HG2	1.91	0.71
18:P:150:ALA:CA	18:P:178:ILE:CD1	2.67	0.71
20:R:146:GLU:OE1	20:R:146:GLU:N	2.22	0.71
21:S:154:LYS:CA	21:S:154:LYS:HZ1	1.41	0.71
22:T:130:DA:C6	22:T:131:DC:C2	2.79	0.71
22:T:140:DC:C2'	22:T:141:DC:C5	2.73	0.71
27:Y:449:VAL:HG12	27:Y:456:VAL:CG2	2.17	0.71
1:1:408:ILE:HG12	1:1:475:ASP:CB	2.13	0.71
3:A:315:LEU:CD1	18:P:95:ARG:O	2.38	0.71
5:C:66:ARG:NH2	12:J:3:VAL:O	2.23	0.71
18:P:187:ARG:HB2	18:P:189:PHE:HA	1.61	0.71
20:R:27:LEU:CD2	20:R:129:THR:CB	2.68	0.71
20:R:120:ASN:OD1	20:R:133:GLN:CG	2.39	0.71
21:S:129:LEU:HA	24:V:341:LYS:HE3	1.51	0.71
1:1:773:ILE:HD12	1:1:775:VAL:H	0.54	0.71
2:2:257:GLN:CD	3:A:1284:MET:HE3	2.08	0.71
2:2:289:ALA:O	4:B:766:ARG:CZ	2.38	0.71
3:A:50:ILE:O	3:A:52:GLY:N	2.22	0.71
4:B:1215:ARG:NE	6:D:15:LEU:HD13	1.83	0.71
18:P:194:SER:OG	18:P:199:LYS:NZ	2.22	0.71
23:U:347:PHE:CD2	23:U:416:LYS:HB3	2.26	0.71
27:Y:28:ILE:HB	27:Y:57:ILE:HG13	1.71	0.71
27:Y:532:ILE:O	27:Y:534:PRO:CD	2.38	0.71
2:2:254:TYR:O	3:A:706:HIS:HB2	1.90	0.71
21:S:233:LEU:HD13	21:S:233:LEU:N	2.05	0.71
23:U:94:ASP:N	23:U:95:PRO:CD	2.53	0.71
23:U:375:LEU:HD22	24:V:134:VAL:HG11	1.73	0.71
27:Y:212:TYR:CE2	27:Y:222:VAL:HG21	2.24	0.71
1:1:561:MET:HB2	25:W:450:ARG:HH22	0.54	0.71
3:A:227:VAL:HG22	6:D:16:LYS:CE	2.20	0.71
3:A:414:ASP:HB3	18:P:44:VAL:HG11	1.73	0.71
16:N:55:DG:H2"	16:N:56:DT:H72	1.71	0.71
18:P:198:VAL:HG13	18:P:202:GLU:HB3	1.72	0.71
21:S:130:TRP:CZ3	24:V:338:THR:O	2.44	0.71
27:Y:171:LEU:HD21	27:Y:181:LEU:HD22	1.72	0.71
27:Y:346:MET:C	27:Y:384:LEU:HD21	2.11	0.71
1:1:516:THR:N	1:1:681:ARG:CD	2.52	0.71
3:A:91:PHE:HB2	3:A:96:ILE:HD11	1.72	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:343:ILE:HG13	22:T:121:DG:H5"	1.68	0.71
4:B:1215:ARG:HD3	6:D:15:LEU:CD1	2.16	0.71
21:S:234:ARG:HH11	21:S:234:ARG:CG	2.04	0.71
1:1:785:ARG:NH1	1:1:785:ARG:HG2	2.01	0.71
18:P:261:LYS:NZ	18:P:261:LYS:CB	2.53	0.71
21:S:203:LYS:CA	21:S:242:ARG:HG3	2.18	0.71
21:S:226:GLU:HG3	21:S:227:ASP:N	2.05	0.71
1:1:668:THR:CG2	1:1:694:LYS:HB2	2.21	0.70
3:A:291:GLU:CD	18:P:116:LYS:HD2	2.11	0.70
16:N:23:DA:H4'	19:Q:120:LYS:CD	2.16	0.70
18:P:187:ARG:HH21	18:P:192:ILE:CB	2.02	0.70
20:R:27:LEU:HD11	20:R:128:LEU:C	2.10	0.70
21:S:151:LEU:CD2	21:S:153:MET:HE2	2.20	0.70
22:T:151:DG:H2"	22:T:152:DC:C5	2.26	0.70
23:U:96:ASN:HD22	23:U:97:GLU:N	1.89	0.70
27:Y:122:LYS:HD3	27:Y:218:ILE:HD13	1.73	0.70
27:Y:167:VAL:HG22	27:Y:190:LEU:HD22	1.73	0.70
27:Y:692:GLN:C	27:Y:693:LEU:HD22	2.10	0.70
1:1:485:ILE:HG21	1:1:505:ILE:HD13	1.72	0.70
4:B:429:PHE:HA	4:B:432:MET:HE2	1.73	0.70
4:B:1198:TYR:CE2	4:B:1201:LYS:HE3	2.25	0.70
18:P:128:ALA:CB	18:P:132:LYS:NZ	2.53	0.70
18:P:280:VAL:HG11	18:P:313:TYR:N	2.05	0.70
24:V:292:ILE:HA	24:V:295:PRO:CD	2.21	0.70
27:Y:244:CYS:SG	27:Y:446:ILE:HD13	2.32	0.70
27:Y:481:LYS:CD	27:Y:483:TYR:CE2	2.74	0.70
1:1:455:SER:CB	1:1:466:ARG:HG3	2.21	0.70
1:1:476:PHE:CA	1:1:485:ILE:HB	2.20	0.70
2:2:291:GLU:N	2:2:292:PRO:CD	2.53	0.70
20:R:17:VAL:HG11	20:R:29:LEU:CD2	2.21	0.70
21:S:128:LEU:CB	24:V:341:LYS:HD2	2.20	0.70
21:S:135:ILE:CD1	21:S:180:TYR:CD2	2.60	0.70
21:S:187:HIS:CE1	21:S:222:ASN:O	2.44	0.70
23:U:355:PHE:O	23:U:356:ASP:HB3	1.89	0.70
27:Y:62:HIS:ND1	27:Y:69:ILE:CG1	2.54	0.70
27:Y:167:VAL:CG1	27:Y:195:ILE:CG2	2.68	0.70
27:Y:450:PHE:CZ	27:Y:475:PHE:CD2	2.80	0.70
2:2:248:ILE:CG1	3:A:1203:ASN:CG	2.57	0.70
4:B:430:ARG:HG2	23:U:326:ARG:HH12	1.55	0.70
8:F:96:THR:HG23	9:G:66:GLY:N	2.06	0.70
21:S:162:LEU:N	21:S:162:LEU:CD2	2.54	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:474:MET:HB2	1:1:480:ARG:N	2.07	0.70
1:1:477:LEU:HG	1:1:501:VAL:CB	2.20	0.70
1:1:500:ARG:HA	1:1:500:ARG:HE	1.56	0.70
18:P:290:GLN:O	18:P:292:PRO:HG3	1.92	0.70
20:R:142:PHE:O	20:R:144:ARG:NH2	2.25	0.70
21:S:130:TRP:CZ2	24:V:333:LEU:O	2.45	0.70
21:S:203:LYS:CE	21:S:203:LYS:CA	2.70	0.70
22:T:134:DT:H6	24:V:323:ARG:HB2	1.55	0.70
24:V:318:LEU:CD2	24:V:349:TYR:CZ	2.72	0.70
1:1:495:ALA:HB3	1:1:498:PHE:CD2	2.21	0.70
1:1:754:ARG:HH11	1:1:754:ARG:CG	0.10	0.70
1:1:754:ARG:NH1	1:1:754:ARG:CG	0.82	0.70
15:M:3:ASN:HD22	15:M:6:ALA:H	1.36	0.70
20:R:144:ARG:O	20:R:145:THR:OG1	2.09	0.70
1:1:356:LEU:HG	1:1:427:TRP:CD1	2.26	0.70
3:A:313:GLN:N	18:P:96:ILE:HG12	2.05	0.70
18:P:154:TYR:CE1	18:P:171:ILE:HG21	2.27	0.70
18:P:207:LEU:O	18:P:210:MET:HG2	1.92	0.70
18:P:288:LEU:HD21	18:P:328:LEU:HD11	1.72	0.70
21:S:151:LEU:O	21:S:152:SER:OG	2.10	0.70
24:V:82:ARG:HE	24:V:108:LEU:CD1	1.91	0.70
27:Y:193:TYR:OH	27:Y:221:ARG:NH1	2.24	0.70
1:1:354:ILE:H	1:1:447:GLN:NE2	1.89	0.70
3:A:64:ASN:OD1	18:P:18:LEU:CB	2.40	0.70
8:F:75:PRO:HG2	8:F:78:GLN:HB2	1.72	0.70
24:V:107:LEU:HG	24:V:119:GLU:HA	1.73	0.70
27:Y:237:ALA:CB	27:Y:458:ILE:CG2	2.69	0.70
4:B:959:ASP:CG	18:P:145:ILE:HD13	2.09	0.70
18:P:145:ILE:O	18:P:149:CYS:SG	2.50	0.70
20:R:123:MET:HG3	20:R:130:LYS:CD	2.21	0.70
23:U:119:LEU:HD22	23:U:395:PHE:CE1	2.27	0.70
27:Y:485:MET:HG3	27:Y:486:THR:HG23	1.72	0.70
1:1:474:MET:HB2	1:1:480:ARG:HA	1.73	0.70
1:1:475:ASP:HB2	1:1:478:THR:N	2.06	0.70
27:Y:389:GLU:O	27:Y:400:LYS:HG2	1.92	0.70
27:Y:405:PHE:CG	27:Y:437:PHE:CE2	2.80	0.70
27:Y:639:LEU:CG	27:Y:653:PHE:CD2	2.62	0.70
3:A:89:PRO:HG2	3:A:204:THR:CB	2.16	0.69
4:B:563:MET:HE2	4:B:580:VAL:HB	1.74	0.69
16:N:42:DT:O4	22:T:124:DA:N1	2.25	0.69
18:P:22:LEU:CG	18:P:34:ILE:HD13	2.22	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:243:CYS:SG	18:P:253:THR:HG22	2.32	0.69
27:Y:111:ARG:CD	27:Y:129:VAL:HG21	2.22	0.69
27:Y:215:ASP:O	27:Y:218:ILE:CG2	2.39	0.69
27:Y:463:ILE:HD11	27:Y:469:TYR:CD1	2.27	0.69
20:R:124:CYS:HB3	20:R:129:THR:CG2	2.21	0.69
20:R:128:LEU:HD22	20:R:128:LEU:N	2.07	0.69
21:S:175:LYS:HZ3	21:S:175:LYS:CA	1.35	0.69
23:U:373:TYR:CE2	24:V:74:PRO:HG3	2.27	0.69
27:Y:185:CYS:SG	27:Y:192:PRO:HA	2.33	0.69
27:Y:495:MET:CB	27:Y:686:PHE:CE1	2.75	0.69
1:1:362:ILE:HG23	1:1:366:GLN:CB	2.23	0.69
1:1:421:ARG:NE	1:1:430:LEU:HD11	2.07	0.69
3:A:870:GLU:HB2	7:E:204:THR:HG21	1.75	0.69
8:F:96:THR:HG23	9:G:65:ASP:CA	2.23	0.69
16:N:19:DT:OP1	19:Q:194:ILE:HD13	1.91	0.69
16:N:27:DG:H2'	16:N:28:DT:C6	2.27	0.69
18:P:160:GLU:O	18:P:161:LYS:HG2	1.91	0.69
18:P:326:PRO:CD	18:P:328:LEU:H	2.03	0.69
21:S:183:THR:HG23	21:S:184:TYR:CD1	2.22	0.69
1:1:373:MET:CG	1:1:381:SER:HA	2.22	0.69
1:1:410:LEU:HD22	1:1:476:PHE:CD2	2.27	0.69
1:1:466:ARG:CB	1:1:477:LEU:HB2	2.22	0.69
3:A:261:ASP:OD1	18:P:81:GLU:HB3	1.92	0.69
5:C:18:VAL:HG23	5:C:240:VAL:HB	1.74	0.69
18:P:138:ASP:OD1	18:P:139:ALA:N	2.25	0.69
18:P:187:ARG:NH2	18:P:192:ILE:CB	2.55	0.69
22:T:122:DT:C2'	22:T:123:DT:H72	2.22	0.69
23:U:342:LEU:HD23	23:U:348:TYR:CE1	2.27	0.69
1:1:397:ILE:CD1	1:1:423:GLN:HE21	2.05	0.69
1:1:400:ALA:CB	1:1:450:SER:HA	2.22	0.69
1:1:467:SER:HA	1:1:501:VAL:HG12	1.74	0.69
18:P:261:LYS:HB3	18:P:261:LYS:HZ1	1.55	0.69
18:P:320:ARG:HG3	18:P:321:ASP:H	1.56	0.69
20:R:147:PHE:HB3	20:R:156:LEU:HD11	1.74	0.69
21:S:234:ARG:HH22	21:S:242:ARG:CG	2.05	0.69
22:T:135:DG:OP2	24:V:319:LYS:HE3	1.93	0.69
1:1:351:ASP:HB2	1:1:482:TRP:CZ3	2.28	0.69
1:1:408:ILE:HG21	1:1:476:PHE:N	2.07	0.69
1:1:475:ASP:OD2	1:1:478:THR:HB	1.93	0.69
1:1:496:ALA:HA	1:1:499:ARG:HH12	1.57	0.69
3:A:411:ASP:OD2	18:P:51:VAL:O	2.10	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:1446:ASP:H	9:G:61:ILE:HD11	1.50	0.69
4:B:296:GLU:HG3	23:U:124:LYS:HZ1	1.56	0.69
18:P:60:ARG:O	18:P:62:GLU:OE1	2.09	0.69
18:P:130:PHE:CA	18:P:133:ILE:HG22	2.21	0.69
21:S:143:LEU:CD1	21:S:145:ASN:N	2.52	0.69
21:S:191:GLU:N	21:S:226:GLU:OE1	2.25	0.69
27:Y:656:PHE:CD1	27:Y:659:MET:SD	2.84	0.69
3:A:404:TYR:OH	18:P:40:GLU:CB	2.40	0.69
4:B:1124:ARG:HB3	18:P:60:ARG:HH21	1.58	0.69
18:P:150:ALA:HB1	18:P:178:ILE:HD11	1.75	0.69
18:P:226:ASP:CG	18:P:260:ALA:HB3	2.02	0.69
18:P:243:CYS:CB	18:P:253:THR:HG22	2.23	0.69
20:R:46:LEU:CG	20:R:132:THR:HG23	2.22	0.69
1:1:316:PHE:CZ	1:1:321:GLU:HA	2.27	0.69
1:1:407:VAL:HG12	1:1:448:THR:HA	1.74	0.69
3:A:1197:LEU:HD11	3:A:1238:ILE:HD11	1.74	0.69
9:G:1:MET:SD	9:G:2:PHE:N	2.63	0.69
18:P:207:LEU:CD2	19:Q:186:GLU:OE1	2.36	0.69
18:P:313:TYR:HA	18:P:316:LEU:HD21	1.74	0.69
19:Q:99:PHE:CG	22:T:143:DT:C5’	2.76	0.69
21:S:143:LEU:HD13	21:S:145:ASN:H	1.58	0.69
21:S:203:LYS:CE	21:S:203:LYS:C	2.61	0.69
21:S:233:LEU:CD1	21:S:245:TRP:O	2.40	0.69
24:V:140:LEU:O	24:V:210:LYS:CB	2.40	0.69
27:Y:72:CYS:SG	27:Y:234:PHE:HD1	2.14	0.69
27:Y:215:ASP:HB3	27:Y:218:ILE:HG21	1.75	0.69
27:Y:495:MET:HB2	27:Y:686:PHE:CE1	2.27	0.69
27:Y:564:TRP:CD1	27:Y:599:LEU:HD12	2.28	0.69
1:1:386:LEU:HB3	1:1:387:PRO:HD2	1.75	0.69
9:G:1:MET:HE1	9:G:80:LYS:O	1.92	0.69
18:P:88:ASP:OD1	18:P:89:GLY:N	2.26	0.69
20:R:71:LYS:O	20:R:71:LYS:HD2	1.93	0.69
3:A:291:GLU:CG	18:P:116:LYS:CE	2.57	0.69
16:N:41:DA:H2”	16:N:42:DT:C5’	2.23	0.69
1:1:298:GLY:O	1:1:346:ASP:HB2	1.93	0.68
1:1:561:MET:N	25:W:450:ARG:HH12	1.91	0.68
3:A:53:LEU:CD2	3:A:54:ASN:H	2.06	0.68
3:A:227:VAL:HG11	6:D:16:LYS:HG2	1.69	0.68
4:B:430:ARG:CG	23:U:326:ARG:HH12	2.07	0.68
23:U:375:LEU:CD2	24:V:134:VAL:HG11	2.23	0.68
24:V:306:LEU:CD1	24:V:313:TRP:CZ3	2.72	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:W:447:GLU:N	26:X:13:ASP:OD2	2.26	0.68
25:W:488:LYS:NZ	26:X:35:LEU:O	2.26	0.68
27:Y:267:LEU:O	27:Y:268:ASP:CB	2.40	0.68
2:2:307:LYS:HE2	3:A:1359:ASP:O	1.93	0.68
4:B:106:ASP:HA	18:P:184:GLU:CG	2.24	0.68
18:P:185:VAL:HG13	18:P:186:ALA:N	2.08	0.68
22:T:139:DC:H2'	22:T:140:DC:C6	2.28	0.68
27:Y:538:VAL:HG22	27:Y:597:ILE:HB	1.74	0.68
1:1:516:THR:CA	1:1:681:ARG:NE	2.44	0.68
4:B:106:ASP:HB2	18:P:231:SER:OG	1.94	0.68
4:B:885:MET:HB2	18:P:33:LYS:HZ1	1.55	0.68
16:N:27:DG:C3'	24:V:291:SER:O	2.41	0.68
18:P:29:VAL:HG12	18:P:32:PRO:HD2	1.74	0.68
21:S:130:TRP:HE3	24:V:338:THR:C	1.97	0.68
21:S:166:LEU:HD13	21:S:167:ASP:N	2.08	0.68
24:V:69:TRP:HB2	24:V:219:CYS:HG	1.56	0.68
1:1:448:THR:O	1:1:452:LEU:HB2	1.92	0.68
1:1:473:VAL:O	1:1:478:THR:HB	1.92	0.68
1:1:485:ILE:HD11	1:1:510:LYS:CG	2.24	0.68
7:E:185:ALA:HA	7:E:190:LEU:HD12	1.74	0.68
21:S:164:LYS:HZ3	21:S:165:LYS:HG2	1.56	0.68
21:S:166:LEU:HD12	21:S:166:LEU:C	2.14	0.68
27:Y:62:HIS:CD2	27:Y:62:HIS:C	2.67	0.68
1:1:571:ARG:HD3	1:1:571:ARG:N	2.08	0.68
2:2:283:GLN:NE2	3:A:756:ILE:HD13	2.06	0.68
4:B:343:ILE:CD1	22:T:122:DT:P	2.74	0.68
21:S:184:TYR:HB3	21:S:219:GLU:HG3	1.75	0.68
23:U:94:ASP:CA	23:U:95:PRO:HD3	2.23	0.68
1:1:310:ILE:CD1	1:1:313:VAL:HG23	2.24	0.68
1:1:373:MET:HG3	1:1:381:SER:CA	2.23	0.68
1:1:439:THR:HG23	1:1:465:ASN:HD22	1.58	0.68
1:1:456:THR:O	1:1:465:ASN:HB3	1.94	0.68
1:1:476:PHE:CD1	1:1:487:LEU:HD11	2.28	0.68
3:A:1443:VAL:CG2	9:G:63:PRO:HB3	2.16	0.68
18:P:51:VAL:HG22	18:P:52:LEU:N	2.09	0.68
18:P:263:CYS:C	18:P:264:LYS:HD3	2.13	0.68
21:S:230:ILE:HG22	21:S:232:VAL:CG1	2.24	0.68
23:U:103:LEU:CD2	24:V:92:LEU:HD11	2.16	0.68
1:1:405:LYS:CD	1:1:483:GLY:HA3	2.19	0.68
18:P:302:LEU:N	18:P:303:GLN:OE1	2.14	0.68
18:P:314:LYS:O	18:P:318:GLU:OE2	2.11	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:179:LYS:HD3	21:S:179:LYS:H	1.58	0.68
21:S:203:LYS:NZ	21:S:204:GLY:O	2.26	0.68
27:Y:248:LEU:HD21	27:Y:445:ALA:CB	2.20	0.68
2:2:190:THR:CA	7:E:50:MET:HE2	2.24	0.68
3:A:445:ASN:HB2	3:A:455:MET:HG2	1.76	0.68
18:P:30:TYR:CD2	18:P:30:TYR:O	2.47	0.68
22:T:134:DT:OP2	24:V:320:GLU:O	2.12	0.68
24:V:306:LEU:HG	24:V:313:TRP:CD2	2.29	0.68
27:Y:95:LYS:NZ	27:Y:173:LYS:O	2.26	0.68
27:Y:244:CYS:SG	27:Y:446:ILE:HB	2.34	0.68
1:1:466:ARG:HB2	1:1:477:LEU:HB2	1.76	0.68
1:1:476:PHE:HA	1:1:485:ILE:CB	2.24	0.68
1:1:476:PHE:HB2	1:1:485:ILE:HB	1.76	0.68
1:1:522:ASP:HA	1:1:524:ILE:CD1	2.24	0.68
7:E:4:GLU:HB3	7:E:7:ARG:HE	1.59	0.68
19:Q:109:PRO:HG2	19:Q:135:ALA:HB2	1.74	0.68
21:S:203:LYS:HZ2	21:S:203:LYS:C	1.97	0.68
27:Y:167:VAL:CG1	27:Y:195:ILE:HG21	2.23	0.68
1:1:383:ILE:HG22	1:1:512:GLY:CA	2.24	0.68
1:1:695:ARG:CA	1:1:696:ARG:CZ	2.71	0.68
1:1:740:HIS:O	1:1:740:HIS:CD2	2.47	0.68
3:A:1451:VAL:CG1	9:G:20:PRO:HB3	2.24	0.68
17:O:38:MET:O	17:O:42:GLU:HG3	1.94	0.68
18:P:164:LYS:HG2	18:P:166:LYS:CA	2.23	0.68
20:R:123:MET:HG3	20:R:130:LYS:HD2	1.76	0.68
24:V:306:LEU:CD2	24:V:318:LEU:CD2	2.72	0.68
27:Y:62:HIS:ND1	27:Y:69:ILE:HG12	2.08	0.68
1:1:477:LEU:CB	1:1:501:VAL:HB	2.24	0.67
3:A:140:THR:HA	3:A:143:LYS:HE2	1.75	0.67
3:A:347:PHE:HE1	3:A:375:THR:HG22	1.60	0.67
5:C:259:LEU:HD22	13:K:91:CYS:HB3	1.75	0.67
18:P:154:TYR:O	18:P:157:CYS:SG	2.52	0.67
18:P:289:PHE:CE1	18:P:291:ILE:CG1	2.78	0.67
21:S:164:LYS:NZ	21:S:165:LYS:CG	2.42	0.67
1:1:519:ARG:HG3	1:1:524:ILE:HG22	1.77	0.67
3:A:871:ASP:HB3	7:E:204:THR:HG23	1.76	0.67
18:P:287:LEU:HA	18:P:292:PRO:HG2	1.76	0.67
18:P:303:GLN:CD	18:P:304:VAL:H	1.98	0.67
20:R:124:CYS:HB2	20:R:129:THR:HG23	1.77	0.67
23:U:377:SER:HA	24:V:70:LEU:HD22	1.75	0.67
24:V:318:LEU:HD11	24:V:349:TYR:CZ	2.29	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:656:PHE:HA	27:Y:659:MET:CE	2.24	0.67
1:1:410:LEU:HD22	1:1:476:PHE:HD2	1.60	0.67
9:G:138:THR:HG22	9:G:139:ILE:H	1.59	0.67
16:N:16:DC:H2'	16:N:17:DT:C5	2.28	0.67
18:P:170:SER:OG	18:P:205:LYS:CE	2.41	0.67
18:P:298:VAL:HG12	18:P:302:LEU:HD11	1.76	0.67
27:Y:182:LEU:HD12	27:Y:192:PRO:HG2	1.75	0.67
27:Y:639:LEU:HD21	27:Y:649:ARG:CG	2.21	0.67
1:1:407:VAL:HG13	1:1:451:GLY:HA2	1.76	0.67
1:1:434:ASN:HB3	1:1:449:GLU:OE1	1.95	0.67
1:1:455:SER:CB	1:1:466:ARG:HH11	2.01	0.67
1:1:476:PHE:CD2	1:1:477:LEU:HD12	2.29	0.67
2:2:253:LEU:CD2	3:A:1132:LYS:HD2	2.16	0.67
3:A:1443:VAL:HG13	9:G:61:ILE:HG22	1.76	0.67
16:N:23:DA:C3'	19:Q:120:LYS:CD	2.66	0.67
18:P:128:ALA:HB1	18:P:132:LYS:HZ2	1.56	0.67
20:R:119:PRO:O	20:R:120:ASN:HB2	1.94	0.67
20:R:147:PHE:CB	20:R:156:LEU:HD11	2.23	0.67
21:S:151:LEU:O	21:S:151:LEU:CD2	2.39	0.67
21:S:200:VAL:O	21:S:201:THR:CG2	2.42	0.67
21:S:231:LEU:CD2	21:S:232:VAL:CG1	2.58	0.67
23:U:107:PRO:HA	24:V:90:GLN:OE1	1.94	0.67
27:Y:400:LYS:HD2	27:Y:437:PHE:HE2	1.51	0.67
27:Y:656:PHE:O	27:Y:659:MET:HG2	1.93	0.67
2:2:218:ILE:CA	2:2:219:ALA:CA	2.73	0.67
2:2:248:ILE:HD13	3:A:1203:ASN:ND2	2.09	0.67
3:A:344:ARG:HA	4:B:1128:LEU:O	1.93	0.67
18:P:252:VAL:CG1	18:P:285:ASN:OD1	2.42	0.67
18:P:333:VAL:HG13	18:P:336:LEU:HD13	1.75	0.67
18:P:338:ASN:O	18:P:340:PRO:HD2	1.93	0.67
19:Q:141:ARG:HD3	19:Q:141:ARG:O	1.93	0.67
24:V:333:LEU:HB3	24:V:337:ALA:CB	2.25	0.67
27:Y:185:CYS:SG	27:Y:192:PRO:CA	2.82	0.67
1:1:477:LEU:HG	1:1:501:VAL:HB	1.74	0.67
1:1:477:LEU:CG	1:1:501:VAL:HB	2.25	0.67
1:1:757:ARG:HH22	1:1:760:LEU:HG	0.50	0.67
2:2:257:GLN:HA	3:A:1284:MET:HB2	1.76	0.67
17:O:44:PHE:O	17:O:48:VAL:HG23	1.93	0.67
18:P:63:TRP:CD1	18:P:81:GLU:HA	2.29	0.67
24:V:333:LEU:HA	24:V:337:ALA:HB2	1.76	0.67
27:Y:212:TYR:CZ	27:Y:222:VAL:HG21	2.29	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:2:253:LEU:HD12	3:A:1132:LYS:HZ3	1.60	0.67
3:A:63:ARG:O	18:P:20:ILE:CG1	2.41	0.67
3:A:132:LYS:HZ2	3:A:1415:SER:CB	2.08	0.67
20:R:123:MET:CA	20:R:130:LYS:CD	2.73	0.67
22:T:140:DC:H2"	22:T:141:DC:H5	1.60	0.67
22:T:155:DC:O5'	22:T:155:DC:H6	1.78	0.67
23:U:135:LEU:CB	23:U:136:PRO:HD3	2.25	0.67
27:Y:517:SER:O	27:Y:522:TYR:CD2	2.43	0.67
27:Y:656:PHE:HA	27:Y:659:MET:HE3	1.76	0.67
1:1:403:ILE:HD13	1:1:484:PHE:CD2	2.30	0.67
1:1:672:GLN:OE1	1:1:686:ARG:NH2	2.27	0.67
18:P:93:SER:HB3	18:P:114:GLN:CD	2.15	0.67
19:Q:99:PHE:CD2	22:T:143:DT:C5'	2.78	0.67
21:S:160:ILE:O	21:S:160:ILE:CD1	2.42	0.67
21:S:191:GLU:O	21:S:195:LEU:HD23	1.93	0.67
23:U:358:TYR:CG	23:U:359:ASN:N	2.61	0.67
24:V:292:ILE:HA	24:V:295:PRO:HD2	1.75	0.67
27:Y:61:MET:C	27:Y:64:PRO:HD2	2.14	0.67
27:Y:492:PHE:CZ	27:Y:707:ASN:OD1	2.48	0.67
3:A:404:TYR:OH	18:P:40:GLU:CG	2.43	0.67
4:B:1221:SER:N	6:D:14:ARG:HH22	1.91	0.67
18:P:252:VAL:HG13	18:P:285:ASN:OD1	1.95	0.67
21:S:156:ASP:O	21:S:160:ILE:HG13	1.95	0.67
23:U:119:LEU:HD23	24:V:135:PHE:HE2	1.59	0.67
27:Y:413:GLU:O	27:Y:414:GLU:HB2	1.94	0.67
1:1:303:ARG:HG2	1:1:504:THR:CB	2.22	0.67
18:P:205:LYS:O	18:P:209:ILE:HG23	1.95	0.67
21:S:125:SER:C	21:S:127:LYS:HZ2	1.97	0.67
21:S:166:LEU:CD1	21:S:167:ASP:N	2.58	0.67
24:V:140:LEU:O	24:V:210:LYS:HB3	1.95	0.67
2:2:290:ASP:HA	4:B:766:ARG:HH22	1.57	0.66
2:2:302:CYS:SG	2:2:304:ASN:ND2	2.68	0.66
3:A:317:LYS:N	18:P:92:LEU:CD2	2.55	0.66
3:A:1443:VAL:HG12	9:G:61:ILE:HG23	1.76	0.66
4:B:959:ASP:CB	18:P:182:ARG:HH11	1.84	0.66
18:P:58:ASP:OD1	18:P:60:ARG:CG	2.32	0.66
18:P:159:ASP:OD1	18:P:160:GLU:N	2.28	0.66
18:P:279:VAL:CG1	18:P:302:LEU:HD22	2.24	0.66
21:S:175:LYS:CE	21:S:175:LYS:CA	2.10	0.66
21:S:237:LYS:HZ3	21:S:241:PRO:CG	2.06	0.66
27:Y:124:ARG:HD3	27:Y:374:LEU:HD23	1.77	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:566:HIS:CE1	27:Y:569:ILE:CG1	2.77	0.66
1:1:356:LEU:CG	1:1:427:TRP:HD1	2.07	0.66
1:1:427:TRP:HB2	1:1:449:GLU:CD	2.15	0.66
18:P:130:PHE:HA	18:P:133:ILE:HG21	1.76	0.66
18:P:163:LEU:O	18:P:163:LEU:CD2	2.35	0.66
20:R:44:LYS:NZ	20:R:49:ILE:HB	2.11	0.66
21:S:129:LEU:CG	24:V:341:LYS:HE2	2.23	0.66
22:T:134:DT:C6	24:V:323:ARG:CB	2.77	0.66
27:Y:346:MET:O	27:Y:384:LEU:CD2	2.42	0.66
27:Y:639:LEU:HD12	27:Y:653:PHE:HE2	0.82	0.66
1:1:370:LEU:HD11	1:1:398:THR:CG2	2.25	0.66
18:P:29:VAL:O	18:P:30:TYR:CD1	2.48	0.66
19:Q:99:PHE:CD2	22:T:143:DT:C4'	2.61	0.66
20:R:34:PHE:CZ	20:R:134:LEU:HD11	2.07	0.66
21:S:138:LYS:HZ2	21:S:138:LYS:HB3	1.41	0.66
21:S:187:HIS:CE1	21:S:226:GLU:N	2.63	0.66
27:Y:28:ILE:HG21	27:Y:57:ILE:CG2	2.24	0.66
27:Y:59:TYR:HA	27:Y:62:HIS:CE1	2.31	0.66
4:B:296:GLU:OE1	23:U:124:LYS:CE	2.44	0.66
4:B:433:GLN:CD	23:U:326:ARG:CD	2.59	0.66
8:F:106:PRO:HG2	9:G:16:SER:O	1.87	0.66
18:P:121:LYS:O	18:P:122:LYS:CG	2.43	0.66
21:S:233:LEU:C	21:S:233:LEU:CD2	2.64	0.66
24:V:79:GLU:OE2	24:V:106:LEU:HD23	1.95	0.66
27:Y:346:MET:O	27:Y:384:LEU:HD21	1.95	0.66
18:P:42:ASP:O	18:P:43:VAL:HG22	1.95	0.66
18:P:133:ILE:CD1	18:P:151:LYS:HG2	2.24	0.66
18:P:196:ILE:HG23	18:P:197:HIS:N	2.10	0.66
18:P:226:ASP:OD1	18:P:260:ALA:HB1	1.95	0.66
18:P:286:ILE:HG21	18:P:293:ILE:HG12	1.78	0.66
20:R:120:ASN:OD1	20:R:133:GLN:HG2	1.95	0.66
21:S:131:ALA:O	21:S:135:ILE:HG23	1.94	0.66
21:S:160:ILE:HD12	21:S:160:ILE:O	1.93	0.66
24:V:105:THR:OG1	24:V:119:GLU:HG2	1.95	0.66
27:Y:56:THR:HG22	27:Y:60:GLN:NE2	2.10	0.66
27:Y:162:LEU:HD23	27:Y:195:ILE:CG1	2.24	0.66
27:Y:170:TYR:HD2	27:Y:176:PHE:HZ	1.41	0.66
3:A:15:LYS:NZ	4:B:1220:ARG:HE	1.93	0.66
3:A:1451:VAL:HA	9:G:19:GLY:HA2	1.75	0.66
18:P:164:LYS:HG2	18:P:166:LYS:HB3	1.76	0.66
21:S:142:VAL:O	21:S:177:THR:OG1	2.14	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:171:LEU:CB	27:Y:172:PRO:HD3	2.22	0.66
3:A:312:PRO:HA	18:P:96:ILE:CG2	2.25	0.66
3:A:1445:ILE:H	9:G:68:ALA:HA	1.60	0.66
16:N:33:DA:H2'	16:N:34:DT:H72	1.77	0.66
18:P:184:GLU:CD	18:P:231:SER:CB	2.64	0.66
18:P:298:VAL:HG12	18:P:302:LEU:CG	2.26	0.66
19:Q:114:LEU:CB	22:T:143:DT:O2	2.42	0.66
27:Y:123:GLU:OE1	27:Y:217:LYS:NZ	2.27	0.66
3:A:57:ARG:O	3:A:68:GLN:HG2	1.96	0.66
19:Q:114:LEU:CD2	22:T:143:DT:H2'	2.26	0.66
20:R:31:ALA:O	20:R:34:PHE:HB3	1.96	0.66
1:1:452:LEU:O	1:1:452:LEU:HD23	1.96	0.66
2:2:289:ALA:O	4:B:769:TYR:HE2	1.18	0.66
3:A:311:GLN:HG3	3:A:312:PRO:HD2	1.77	0.66
18:P:128:ALA:HB1	18:P:132:LYS:HZ1	1.61	0.66
18:P:223:LEU:CD1	19:Q:173:GLU:HB3	2.24	0.66
20:R:44:LYS:HE3	20:R:54:LEU:HD13	1.78	0.66
22:T:134:DT:H6	24:V:323:ARG:CB	2.09	0.66
23:U:376:LEU:HG	24:V:73:LEU:HD21	1.77	0.66
27:Y:541:PHE:CZ	27:Y:599:LEU:HD22	2.30	0.66
3:A:414:ASP:HB2	18:P:44:VAL:HG11	1.77	0.66
16:N:39:DC:H3'	16:N:40:DT:H71	1.76	0.66
18:P:87:LEU:CG	18:P:126:VAL:HG21	2.26	0.66
21:S:181:LEU:HD23	21:S:181:LEU:C	2.16	0.66
21:S:244:VAL:N	21:S:245:TRP:CZ3	2.63	0.66
27:Y:171:LEU:HD21	27:Y:181:LEU:CD2	2.26	0.66
27:Y:555:GLN:HG2	27:Y:562:GLU:OE2	1.96	0.66
1:1:353:ASP:HB2	1:1:448:THR:OG1	1.96	0.65
1:1:356:LEU:HD12	1:1:427:TRP:HB3	1.78	0.65
3:A:388:LEU:O	3:A:392:VAL:HG23	1.96	0.65
3:A:416:ARG:NH1	18:P:37:ARG:HE	1.88	0.65
3:A:1442:ASP:HB2	8:F:137:TYR:HE1	1.61	0.65
4:B:296:GLU:O	4:B:300:HIS:HD2	1.80	0.65
5:C:56:THR:HG21	5:C:145:CYS:SG	2.36	0.65
18:P:22:LEU:CD1	18:P:43:VAL:HG21	2.09	0.65
18:P:95:ARG:O	18:P:95:ARG:HG3	1.94	0.65
21:S:158:LYS:CE	21:S:162:LEU:HG	2.25	0.65
1:1:430:LEU:O	1:1:430:LEU:HD23	1.96	0.65
1:1:439:THR:HG22	1:1:440:SER:N	2.10	0.65
16:N:16:DC:H2"	16:N:17:DT:C5'	2.25	0.65
16:N:39:DC:H6	16:N:39:DC:O5'	1.78	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:O:4:PRO:HD2	24:V:357:LYS:HB3	0.68	0.65
18:P:159:ASP:O	18:P:160:GLU:HB3	1.96	0.65
18:P:280:VAL:HG11	18:P:313:TYR:HA	1.76	0.65
20:R:67:ILE:HD13	20:R:67:ILE:H	1.60	0.65
20:R:68:SER:HB3	20:R:90:LYS:NZ	2.12	0.65
23:U:312:VAL:HG22	23:U:335:LEU:HG	1.78	0.65
1:1:351:ASP:CB	1:1:482:TRP:HZ3	2.09	0.65
1:1:408:ILE:HD11	1:1:466:ARG:CD	2.25	0.65
1:1:459:MET:C	1:1:464:ARG:HG3	2.17	0.65
2:2:265:VAL:HG11	2:2:278:LYS:HA	1.76	0.65
3:A:46:THR:HG22	3:A:47:ARG:H	1.61	0.65
3:A:204:THR:HG22	3:A:235:ILE:HG21	1.79	0.65
4:B:872:GLU:HG2	4:B:916:THR:HG22	1.78	0.65
20:R:126:ILE:CB	20:R:154:GLU:HG2	2.24	0.65
24:V:59:LEU:HD23	24:V:214:ILE:HD11	1.78	0.65
27:Y:289:LEU:HD21	27:Y:352:ILE:HG13	1.78	0.65
27:Y:353:SER:HB2	27:Y:378:SER:CA	2.24	0.65
27:Y:495:MET:HB3	27:Y:686:PHE:CD1	2.24	0.65
1:1:356:LEU:HD23	1:1:448:THR:HG21	1.76	0.65
1:1:385:VAL:O	1:1:386:LEU:HD23	1.97	0.65
1:1:455:SER:HB3	1:1:466:ARG:HD3	1.77	0.65
3:A:419:LYS:CE	18:P:47:LEU:HA	2.25	0.65
4:B:433:GLN:HB2	23:U:326:ARG:CZ	2.27	0.65
16:N:16:DC:H6	16:N:16:DC:O5'	1.78	0.65
18:P:42:ASP:H	18:P:55:LYS:CG	2.10	0.65
21:S:134:TYR:CZ	21:S:138:LYS:NZ	2.64	0.65
22:T:141:DC:H2"	22:T:142:DC:C5'	2.26	0.65
27:Y:681:LEU:HD21	27:Y:696:TRP:CH2	2.31	0.65
1:1:485:ILE:HG23	1:1:507:ALA:CB	2.26	0.65
1:1:505:ILE:HG21	1:1:507:ALA:HB3	1.78	0.65
1:1:677:TYR:O	1:1:677:TYR:CD1	2.50	0.65
18:P:184:GLU:CG	18:P:241:ARG:CG	2.56	0.65
20:R:140:LEU:HD13	20:R:147:PHE:CE1	2.32	0.65
23:U:96:ASN:HB3	23:U:98:TYR:CE2	2.31	0.65
24:V:333:LEU:CA	24:V:337:ALA:HB3	2.27	0.65
27:Y:493:LEU:HB3	27:Y:696:TRP:CD1	2.31	0.65
1:1:373:MET:HG3	1:1:381:SER:CB	2.27	0.65
1:1:410:LEU:CB	1:1:466:ARG:HH22	2.07	0.65
2:2:253:LEU:HB3	3:A:1132:LYS:CE	2.27	0.65
3:A:264:PHE:CE2	18:P:90:ASN:O	2.50	0.65
3:A:404:TYR:OH	18:P:40:GLU:HG3	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:74:LEU:H	23:U:313:ALA:H	1.43	0.65
4:B:1215:ARG:CD	6:D:15:LEU:HD12	2.15	0.65
18:P:150:ALA:CA	18:P:178:ILE:HD11	2.27	0.65
1:1:352:LEU:O	1:1:447:GLN:HB3	1.95	0.65
1:1:473:VAL:CG1	1:1:481:GLU:HG3	2.27	0.65
3:A:316:GLN:O	3:A:318:SER:N	2.30	0.65
4:B:343:ILE:CD1	22:T:121:DG:C3'	2.74	0.65
4:B:433:GLN:HB2	23:U:326:ARG:NH2	2.12	0.65
19:Q:220:ARG:HD3	19:Q:224:TYR:CE2	2.32	0.65
21:S:203:LYS:NZ	21:S:203:LYS:C	2.50	0.65
21:S:203:LYS:HZ2	21:S:204:GLY:CA	2.09	0.65
24:V:306:LEU:HG	24:V:313:TRP:NE1	2.10	0.65
1:1:455:SER:HB3	1:1:466:ARG:NH1	2.00	0.65
1:1:476:PHE:O	1:1:505:ILE:HD11	1.97	0.65
9:G:1:MET:CE	9:G:80:LYS:O	2.45	0.65
14:L:61:THR:CG2	14:L:63:ARG:HG2	2.26	0.65
24:V:108:LEU:HD12	24:V:118:HIS:HE1	1.60	0.65
1:1:411:CYS:O	1:1:456:THR:HA	1.97	0.65
1:1:476:PHE:CB	1:1:485:ILE:HB	2.27	0.65
16:N:23:DA:H2	19:Q:116:PHE:HE1	1.40	0.65
16:N:28:DT:OP2	24:V:295:PRO:HD3	1.96	0.65
16:N:40:DT:O5'	16:N:40:DT:H6	1.80	0.65
18:P:279:VAL:HG21	18:P:303:GLN:HE22	1.62	0.65
21:S:203:LYS:CA	21:S:242:ARG:CG	2.75	0.65
27:Y:185:CYS:SG	27:Y:192:PRO:HG3	2.36	0.65
27:Y:213:LEU:O	27:Y:213:LEU:HD13	1.96	0.65
27:Y:289:LEU:HB3	27:Y:348:VAL:CG1	2.26	0.65
27:Y:564:TRP:NE1	27:Y:599:LEU:HD12	2.11	0.65
1:1:487:LEU:HD23	1:1:490:VAL:HG23	1.76	0.65
3:A:1409:LEU:HD13	4:B:1207:LEU:HD21	1.79	0.65
3:A:1433:MET:HE2	4:B:1145:SER:OG	1.97	0.65
18:P:196:ILE:HD11	18:P:197:HIS:HD2	1.61	0.65
18:P:206:THR:HG23	18:P:209:ILE:HD11	1.79	0.65
20:R:44:LYS:HA	20:R:44:LYS:CE	2.16	0.65
27:Y:167:VAL:CG2	27:Y:190:LEU:HD22	2.27	0.65
1:1:456:THR:HB	1:1:465:ASN:ND2	2.11	0.64
18:P:22:LEU:HD22	18:P:34:ILE:CG2	2.27	0.64
20:R:37:VAL:HG12	20:R:88:TYR:HB2	1.77	0.64
20:R:124:CYS:CB	20:R:129:THR:CG2	2.75	0.64
21:S:200:VAL:C	21:S:201:THR:CG2	2.65	0.64
1:1:415:VAL:HA	1:1:418:MET:CE	2.28	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:466:ARG:HD2	1:1:475:ASP:OD2	1.96	0.64
4:B:857:ARG:NH1	4:B:945:GLU:OE2	2.29	0.64
4:B:887:HIS:HE1	18:P:38:PHE:CB	2.08	0.64
4:B:959:ASP:O	18:P:182:ARG:NH1	2.30	0.64
4:B:996:ARG:HG3	4:B:1007:VAL:HG11	1.79	0.64
15:M:249:ASP:OD1	15:M:263:LYS:HE3	1.97	0.64
18:P:34:ILE:HD11	18:P:43:VAL:CG1	2.27	0.64
18:P:202:GLU:HG3	18:P:205:LYS:HZ1	1.61	0.64
18:P:204:GLY:O	18:P:208:ASN:ND2	2.30	0.64
18:P:286:ILE:HD12	18:P:292:PRO:C	2.17	0.64
18:P:338:ASN:C	18:P:340:PRO:HD2	2.18	0.64
20:R:40:GLU:HA	20:R:54:LEU:HD23	1.79	0.64
21:S:183:THR:HG22	21:S:184:TYR:CD1	2.32	0.64
1:1:453:VAL:HG21	1:1:482:TRP:HZ2	1.62	0.64
1:1:456:THR:HG22	1:1:457:TYR:H	1.63	0.64
3:A:192:GLY:CA	22:T:116:DG:H3'	2.28	0.64
3:A:317:LYS:H	18:P:92:LEU:CD2	2.03	0.64
16:N:28:DT:P	24:V:291:SER:O	2.55	0.64
16:N:69:DG:OP1	26:X:62:ILE:O	2.15	0.64
18:P:152:GLU:CA	18:P:155:LYS:HE3	2.27	0.64
18:P:277:ILE:O	18:P:277:ILE:CD1	2.44	0.64
19:Q:221:GLU:O	19:Q:225:GLN:HG3	1.96	0.64
21:S:143:LEU:HD13	21:S:144:VAL:CA	2.27	0.64
22:T:135:DG:P	24:V:319:LYS:HE3	2.37	0.64
23:U:372:SER:CB	24:V:80:LYS:HZ3	1.91	0.64
23:U:377:SER:HA	24:V:70:LEU:CD2	2.27	0.64
24:V:333:LEU:CA	24:V:337:ALA:CB	2.75	0.64
27:Y:32:LEU:HD12	27:Y:57:ILE:HD11	1.79	0.64
27:Y:353:SER:CB	27:Y:375:ARG:HG2	2.26	0.64
2:2:269:PHE:HE2	2:2:297:CYS:SG	2.14	0.64
8:F:92:ARG:NH2	9:G:64:THR:N	2.46	0.64
16:N:40:DT:H2'	16:N:41:DA:C8	2.32	0.64
18:P:150:ALA:CB	18:P:178:ILE:HD11	2.28	0.64
20:R:46:LEU:HD23	20:R:132:THR:HG21	1.70	0.64
22:T:152:DC:H2'	22:T:153:DG:C8	2.32	0.64
24:V:306:LEU:CG	24:V:313:TRP:CD2	2.80	0.64
24:V:333:LEU:CD2	24:V:349:TYR:CD2	2.79	0.64
27:Y:506:ILE:HB	27:Y:522:TYR:CD2	2.33	0.64
1:1:476:PHE:HD2	1:1:477:LEU:CD1	2.11	0.64
2:2:283:GLN:NE2	3:A:756:ILE:CD1	2.61	0.64
3:A:64:ASN:OD1	18:P:18:LEU:CD1	2.44	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:154:LYS:HZ2	21:S:154:LYS:CA	1.00	0.64
27:Y:215:ASP:HB3	27:Y:218:ILE:HG22	1.78	0.64
27:Y:445:ALA:O	27:Y:448:PRO:HD2	1.96	0.64
1:1:527:LEU:CD2	1:1:531:ILE:HD12	2.14	0.64
2:2:235:ASP:CA	2:2:242:LYS:HE3	2.26	0.64
3:A:419:LYS:HZ1	18:P:47:LEU:CA	2.11	0.64
4:B:806:THR:HG22	4:B:808:ALA:H	1.63	0.64
16:N:38:DT:H2"	16:N:39:DC:C5	2.32	0.64
17:O:87:VAL:CG1	17:O:88:GLU:H	2.09	0.64
18:P:34:ILE:O	18:P:35:VAL:HB	1.97	0.64
18:P:303:GLN:CD	18:P:304:VAL:N	2.50	0.64
18:P:322:LYS:N	18:P:322:LYS:CD	2.61	0.64
20:R:17:VAL:HG12	20:R:66:LEU:CD2	2.26	0.64
20:R:90:LYS:HB3	20:R:93:HIS:HB2	1.79	0.64
21:S:143:LEU:HD12	21:S:145:ASN:N	2.12	0.64
27:Y:193:TYR:HE2	27:Y:197:ARG:NH1	1.95	0.64
27:Y:289:LEU:CB	27:Y:348:VAL:HG11	2.28	0.64
1:1:343:PHE:HE2	1:1:345:ASN:HB2	1.63	0.64
1:1:456:THR:HG22	1:1:457:TYR:N	2.13	0.64
1:1:474:MET:N	1:1:481:GLU:H	1.87	0.64
2:2:307:LYS:CG	3:A:1359:ASP:O	2.45	0.64
3:A:192:GLY:O	22:T:117:DC:OP2	2.16	0.64
3:A:291:GLU:CD	18:P:116:LYS:HE2	2.18	0.64
4:B:68:THR:HG22	4:B:91:SER:HA	1.80	0.64
14:L:28:LYS:HB2	14:L:39:SER:HA	1.80	0.64
18:P:22:LEU:HD21	18:P:34:ILE:HG21	1.79	0.64
18:P:198:VAL:CG1	18:P:202:GLU:HB3	2.28	0.64
18:P:280:VAL:HG13	18:P:313:TYR:HB2	1.79	0.64
23:U:342:LEU:HD12	23:U:413:MET:CE	2.28	0.64
27:Y:495:MET:SD	27:Y:696:TRP:HE3	2.14	0.64
27:Y:569:ILE:HG21	27:Y:579:THR:OG1	1.98	0.64
1:1:500:ARG:O	1:1:504:THR:HG23	1.97	0.64
3:A:411:ASP:CG	18:P:50:LEU:HB3	2.18	0.64
4:B:999:MET:HG3	4:B:1000:PRO:HD2	1.80	0.64
15:M:260:CYS:HB2	15:M:281:VAL:HB	1.78	0.64
18:P:195:LEU:C	18:P:196:ILE:HG22	2.17	0.64
20:R:127:CYS:HG	20:R:129:THR:HG22	1.60	0.64
21:S:164:LYS:HD2	21:S:165:LYS:HG2	1.77	0.64
27:Y:648:ILE:CD1	27:Y:652:ASP:OD2	2.46	0.64
2:2:282:TYR:CE1	2:2:296:PHE:HB2	2.33	0.64
3:A:16:GLU:HB3	3:A:1418:LEU:HD11	1.79	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:1111:MET:HB2	18:P:56:LEU:CA	2.03	0.64
4:B:1113:VAL:CG2	18:P:57:VAL:HG23	2.24	0.64
17:O:21:ASP:O	17:O:25:THR:HG23	1.98	0.64
18:P:103:ASP:CB	18:P:107:THR:HB	2.27	0.64
18:P:143:PRO:HD3	18:P:185:VAL:HG21	1.80	0.64
18:P:143:PRO:HD3	18:P:185:VAL:CG1	2.28	0.64
18:P:190:LYS:CD	18:P:242:PHE:CZ	2.81	0.64
21:S:131:ALA:N	21:S:151:LEU:CD1	2.60	0.64
27:Y:170:TYR:HD2	27:Y:176:PHE:CZ	2.15	0.64
27:Y:197:ARG:NH2	27:Y:225:GLU:OE2	2.31	0.64
1:1:410:LEU:HD13	1:1:477:LEU:HD13	1.79	0.64
1:1:596:GLN:HE22	1:1:746:PRO:HD3	1.63	0.64
16:N:38:DT:H2"	16:N:39:DC:H5	1.62	0.64
18:P:22:LEU:HD22	18:P:34:ILE:HD13	1.73	0.64
18:P:108:LYS:HA	18:P:111:ASN:ND2	2.13	0.64
18:P:160:GLU:O	18:P:160:GLU:CD	2.36	0.64
20:R:44:LYS:HD3	20:R:49:ILE:O	1.97	0.64
20:R:152:CYS:SG	20:R:154:GLU:HB2	2.37	0.64
21:S:194:LYS:HZ1	21:S:210:LEU:CD1	2.09	0.64
23:U:138:ARG:NH2	24:V:57:LEU:CG	2.60	0.64
27:Y:83:LEU:CD1	27:Y:177:SER:HA	2.27	0.64
2:2:279:VAL:HG13	2:2:298:THR:O	1.98	0.63
18:P:143:PRO:HD2	18:P:185:VAL:HG11	1.79	0.63
20:R:31:ALA:HB3	20:R:43:LEU:CD1	2.28	0.63
21:S:156:ASP:O	21:S:159:VAL:CG1	2.40	0.63
23:U:138:ARG:HH21	24:V:57:LEU:HD13	1.56	0.63
23:U:372:SER:HG	24:V:80:LYS:NZ	0.89	0.63
27:Y:29:LYS:HG3	27:Y:61:MET:SD	2.38	0.63
1:1:403:ILE:HG21	1:1:405:LYS:HG2	1.78	0.63
18:P:55:LYS:O	18:P:56:LEU:HB2	1.98	0.63
18:P:180:CYS:SG	18:P:187:ARG:HG3	2.37	0.63
18:P:187:ARG:CA	18:P:188:THR:C	2.66	0.63
23:U:138:ARG:HA	24:V:57:LEU:O	1.98	0.63
27:Y:569:ILE:HA	27:Y:575:ASP:CB	2.27	0.63
2:2:253:LEU:HD21	3:A:1132:LYS:HB3	1.80	0.63
18:P:262:LYS:O	18:P:266:ILE:HG13	1.98	0.63
27:Y:321:ILE:HG23	27:Y:323:GLY:O	1.99	0.63
1:1:400:ALA:HB2	1:1:450:SER:O	1.99	0.63
1:1:563:ALA:HA	25:W:450:ARG:HE	1.62	0.63
4:B:917:PRO:HA	4:B:934:LYS:HB3	1.80	0.63
16:N:17:DT:O5'	16:N:17:DT:H6	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:188:THR:OG1	18:P:245:HIS:CE1	2.50	0.63
18:P:268:GLU:O	18:P:315:ILE:HG21	1.98	0.63
20:R:44:LYS:HE3	20:R:54:LEU:HD22	1.80	0.63
20:R:46:LEU:CD1	20:R:132:THR:HG23	2.28	0.63
21:S:203:LYS:HZ1	21:S:205:ILE:HB	1.60	0.63
27:Y:58:ALA:HB1	27:Y:69:ILE:HD12	1.81	0.63
1:1:575:ARG:NH2	22:T:102:DC:P	2.72	0.63
3:A:404:TYR:HH	18:P:40:GLU:HB3	1.62	0.63
3:A:1445:ILE:O	9:G:68:ALA:HB2	1.96	0.63
16:N:58:DC:H2'	16:N:59:DT:H6	1.58	0.63
18:P:279:VAL:HB	18:P:302:LEU:HD23	1.69	0.63
20:R:46:LEU:CG	20:R:132:THR:HG21	2.29	0.63
20:R:124:CYS:HB3	20:R:129:THR:HG23	1.78	0.63
21:S:156:ASP:HA	21:S:159:VAL:CG1	2.28	0.63
21:S:208:LYS:H	21:S:208:LYS:HD2	1.63	0.63
24:V:89:GLY:O	24:V:90:GLN:CB	2.47	0.63
1:1:378:ARG:H	1:1:381:SER:H	1.46	0.63
1:1:473:VAL:HB	1:1:481:GLU:HG3	1.81	0.63
1:1:484:PHE:HZ	1:1:511:LEU:HB2	1.64	0.63
3:A:1451:VAL:HA	9:G:19:GLY:CA	2.28	0.63
18:P:171:ILE:HD12	18:P:209:ILE:CD1	2.28	0.63
18:P:320:ARG:CZ	18:P:337:ASP:OD2	2.47	0.63
27:Y:234:PHE:HZ	27:Y:449:VAL:HG21	1.62	0.63
1:1:502:VAL:HB	1:1:530:LEU:HD13	1.79	0.63
1:1:680:ARG:NH1	1:1:683:GLU:OE2	2.32	0.63
2:2:266:THR:HG22	3:A:731:ARG:HD3	1.78	0.63
2:2:279:VAL:HG13	2:2:298:THR:C	2.19	0.63
3:A:255:SER:O	18:P:84:ASN:OD1	2.17	0.63
3:A:1444:MET:SD	9:G:60:ARG:NH1	2.72	0.63
18:P:207:LEU:HD11	19:Q:188:GLU:OE2	1.98	0.63
27:Y:76:MET:HA	27:Y:79:ILE:HD12	1.79	0.63
27:Y:495:MET:HB3	27:Y:686:PHE:CE1	2.34	0.63
1:1:448:THR:HG22	1:1:449:GLU:N	2.14	0.63
17:O:4:PRO:CD	24:V:357:LYS:C	2.67	0.63
18:P:145:ILE:HD11	18:P:182:ARG:CG	2.29	0.63
21:S:130:TRP:CE2	24:V:334:ASP:OD1	2.52	0.63
22:T:150:DG:O5'	22:T:150:DG:H8	1.82	0.63
1:1:372:LYS:HB3	1:1:535:LEU:HD23	1.80	0.63
1:1:459:MET:HB2	1:1:464:ARG:NE	2.14	0.63
1:1:474:MET:H	1:1:481:GLU:N	1.89	0.63
16:N:29:DT:OP2	24:V:294:MET:HE2	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:90:LYS:HB3	20:R:93:HIS:HB3	1.81	0.63
20:R:129:THR:HG21	20:R:131:TYR:HH	1.64	0.63
27:Y:42:MET:HG3	27:Y:48:LYS:HG3	1.79	0.63
1:1:397:ILE:HD11	1:1:423:GLN:HE21	1.64	0.62
4:B:959:ASP:C	18:P:182:ARG:NH1	2.52	0.62
18:P:280:VAL:HG13	18:P:313:TYR:CB	2.29	0.62
18:P:285:ASN:O	18:P:288:LEU:HD12	1.98	0.62
18:P:316:LEU:HD22	18:P:316:LEU:H	1.63	0.62
19:Q:103:ILE:CG2	22:T:144:DT:H5"	2.29	0.62
21:S:128:LEU:HG	24:V:341:LYS:HZ2	1.60	0.62
22:T:138:DA:H2"	22:T:139:DC:C5	2.34	0.62
23:U:109:GLU:O	23:U:110:ASP:HB2	1.99	0.62
27:Y:131:GLU:CD	27:Y:134:ARG:NH1	2.52	0.62
27:Y:208:TYR:CD1	27:Y:213:LEU:HB2	2.33	0.62
27:Y:646:TYR:CB	27:Y:648:ILE:HG12	2.24	0.62
1:1:409:VAL:HG22	1:1:486:ILE:HD12	1.80	0.62
1:1:474:MET:HB2	1:1:480:ARG:C	2.18	0.62
1:1:491:HIS:O	1:1:494:PRO:HD2	1.99	0.62
2:2:274:CYS:O	2:2:276:GLU:N	2.32	0.62
4:B:343:ILE:HD12	22:T:122:DT:OP1	2.00	0.62
5:C:10:ILE:HD12	13:K:108:GLU:HB3	1.81	0.62
15:M:3:ASN:ND2	15:M:6:ALA:H	1.96	0.62
18:P:310:LYS:NZ	18:P:340:PRO:CA	2.51	0.62
21:S:131:ALA:HB2	21:S:151:LEU:CD1	2.29	0.62
21:S:184:TYR:H	21:S:219:GLU:HB3	1.62	0.62
21:S:237:LYS:HG2	21:S:241:PRO:HG2	1.70	0.62
23:U:396:THR:OG1	23:U:401:TYR:CE2	2.50	0.62
24:V:306:LEU:CD1	24:V:313:TRP:CD2	2.82	0.62
27:Y:193:TYR:HH	27:Y:221:ARG:NH2	1.95	0.62
27:Y:317:LEU:CD1	27:Y:415:GLY:HA3	2.29	0.62
2:2:253:LEU:HD12	3:A:1132:LYS:NZ	2.09	0.62
3:A:64:ASN:HA	18:P:20:ILE:HB	1.81	0.62
22:T:134:DT:C6	24:V:323:ARG:CG	2.83	0.62
1:1:476:PHE:HZ	1:1:493:VAL:CG1	2.12	0.62
4:B:433:GLN:OE1	23:U:326:ARG:NH1	2.32	0.62
20:R:49:ILE:HG22	20:R:50:ASN:N	2.15	0.62
21:S:151:LEU:HD22	21:S:153:MET:CE	2.28	0.62
27:Y:28:ILE:HD11	27:Y:40:LEU:HD22	1.80	0.62
27:Y:110:SER:HB3	27:Y:212:TYR:CD1	2.34	0.62
27:Y:641:PHE:O	27:Y:645:ASN:ND2	2.33	0.62
1:1:476:PHE:HA	1:1:485:ILE:CG2	2.30	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:499:ARG:HG3	1:1:530:LEU:HD12	1.80	0.62
3:A:22:PHE:N	4:B:1211:ASN:O	2.32	0.62
3:A:340:LEU:HD13	3:A:1429:ILE:HG23	1.81	0.62
5:C:67:LEU:HA	5:C:70:ILE:HD12	1.82	0.62
13:K:49:GLU:HG3	13:K:94:ILE:HG13	1.81	0.62
21:S:133:GLU:OE1	24:V:315:LEU:HD11	1.99	0.62
21:S:200:VAL:C	21:S:201:THR:HG22	2.20	0.62
22:T:122:DT:H2"	22:T:123:DT:C7	2.30	0.62
27:Y:653:PHE:CD1	27:Y:654:LEU:N	2.67	0.62
1:1:408:ILE:HG21	1:1:475:ASP:C	2.19	0.62
1:1:485:ILE:HD13	1:1:505:ILE:CD1	2.30	0.62
1:1:501:VAL:O	1:1:505:ILE:HG13	2.00	0.62
4:B:269:ILE:HD11	4:B:386:LEU:HD21	1.82	0.62
8:F:132:LEU:HA	9:G:61:ILE:HG12	1.81	0.62
18:P:29:VAL:O	18:P:30:TYR:CG	2.53	0.62
18:P:86:LEU:HD21	18:P:155:LYS:HE3	1.80	0.62
18:P:159:ASP:O	18:P:160:GLU:CB	2.48	0.62
18:P:187:ARG:CG	18:P:189:PHE:HA	2.30	0.62
18:P:188:THR:HG21	18:P:245:HIS:ND1	2.14	0.62
21:S:127:LYS:HD2	21:S:128:LEU:H	1.64	0.62
21:S:130:TRP:CE3	24:V:339:LEU:CD2	2.82	0.62
21:S:164:LYS:HZ3	21:S:165:LYS:CG	2.12	0.62
21:S:219:GLU:OE1	21:S:219:GLU:CA	2.47	0.62
24:V:104:ILE:HG21	24:V:122:LEU:HD22	1.80	0.62
24:V:313:TRP:O	24:V:349:TYR:CD1	2.53	0.62
27:Y:190:LEU:CD1	27:Y:195:ILE:HD12	2.20	0.62
27:Y:539:VAL:CG1	27:Y:623:ILE:CG1	2.77	0.62
27:Y:567:LYS:HG2	27:Y:568:LEU:N	2.14	0.62
1:1:436:ALA:CB	1:1:452:LEU:HD21	2.29	0.62
4:B:1220:ARG:O	6:D:14:ARG:NH2	2.32	0.62
8:F:132:LEU:CB	9:G:61:ILE:HG21	2.22	0.62
16:N:20:DA:N1	22:T:146:DT:O4	2.32	0.62
18:P:152:GLU:CB	18:P:155:LYS:HE3	2.30	0.62
19:Q:124:THR:HG21	22:T:144:DT:O2	1.99	0.62
21:S:187:HIS:CE1	21:S:226:GLU:H	2.18	0.62
27:Y:167:VAL:CG1	27:Y:195:ILE:HG23	2.30	0.62
27:Y:494:PRO:CD	27:Y:679:MET:O	2.43	0.62
1:1:428:CYS:HB3	1:1:432:PRO:HB2	1.82	0.62
1:1:449:GLU:HB2	1:1:452:LEU:HA	1.81	0.62
3:A:64:ASN:OD1	18:P:18:LEU:CG	2.48	0.62
3:A:89:PRO:CB	3:A:204:THR:HB	2.29	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:344:ARG:CZ	4:B:1120:GLU:CG	2.74	0.62
4:B:843:GLN:HA	4:B:846:ILE:HD12	1.82	0.62
16:N:20:DA:O4'	19:Q:215:THR:HG21	1.98	0.62
21:S:128:LEU:C	24:V:341:LYS:CE	2.60	0.62
21:S:133:GLU:HG3	21:S:137:LYS:HE2	1.82	0.62
1:1:377:GLY:HA2	1:1:381:SER:HB2	1.82	0.62
1:1:561:MET:CA	25:W:450:ARG:NH2	2.63	0.62
1:1:618:TYR:HB3	1:1:622:MET:HE1	1.81	0.62
3:A:11:LEU:CD1	4:B:1195:HIS:CD2	2.82	0.62
3:A:91:PHE:CB	3:A:96:ILE:HD11	2.30	0.62
16:N:69:DG:C3'	26:X:63:TYR:HE1	2.08	0.62
18:P:189:PHE:H	18:P:241:ARG:CZ	2.09	0.62
21:S:125:SER:OG	24:V:342:LYS:CA	2.47	0.62
24:V:59:LEU:HD21	24:V:214:ILE:HD11	1.82	0.62
1:1:345:ASN:ND2	1:1:348:ARG:HE	1.97	0.62
1:1:773:ILE:CD1	1:1:775:VAL:CB	2.29	0.62
18:P:187:ARG:HD3	18:P:189:PHE:HB2	1.71	0.62
18:P:320:ARG:HH21	18:P:337:ASP:CG	2.03	0.62
18:P:322:LYS:H	18:P:322:LYS:HE2	1.65	0.62
20:R:32:ILE:HG22	20:R:89:VAL:HG23	1.80	0.62
21:S:210:LEU:HD22	21:S:214:TRP:CH2	2.33	0.62
1:1:296:VAL:HA	1:1:309:ASP:HB2	1.82	0.61
1:1:326:VAL:HG12	1:1:503:SER:O	1.99	0.61
1:1:458:SER:N	1:1:465:ASN:HB2	2.16	0.61
3:A:66:LYS:HE2	3:A:68:GLN:H	1.65	0.61
4:B:841:MET:HB3	4:B:846:ILE:HD11	1.81	0.61
6:D:176:GLU:OE2	6:D:197:SER:HB2	1.99	0.61
15:M:41:ILE:O	15:M:45:LYS:HG2	2.00	0.61
18:P:124:ASN:O	18:P:125:GLU:HB2	2.00	0.61
18:P:128:ALA:CB	18:P:132:LYS:HZ1	2.13	0.61
18:P:279:VAL:HG21	18:P:302:LEU:CG	1.83	0.61
19:Q:76:LEU:HA	19:Q:151:LYS:O	2.00	0.61
20:R:35:HIS:CG	20:R:36:SER:H	2.18	0.61
22:T:136:DA:H8	22:T:136:DA:O5'	1.82	0.61
27:Y:493:LEU:HD22	27:Y:696:TRP:HE1	1.53	0.61
27:Y:549:SER:O	27:Y:556:THR:O	2.17	0.61
1:1:446:PHE:O	1:1:453:VAL:HG23	2.00	0.61
1:1:603:ASP:HB3	1:1:669:CYS:SG	2.40	0.61
18:P:42:ASP:O	18:P:43:VAL:CG2	2.47	0.61
18:P:48:CYS:O	18:P:50:LEU:HD12	2.00	0.61
18:P:125:GLU:OE1	18:P:126:VAL:N	2.34	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:313:TYR:HA	18:P:316:LEU:CD2	2.29	0.61
21:S:175:LYS:N	21:S:175:LYS:HZ1	1.71	0.61
27:Y:109:THR:HB	27:Y:114:LEU:CD1	2.31	0.61
4:B:430:ARG:HA	23:U:326:ARG:CZ	2.19	0.61
15:M:10:TYR:O	15:M:14:VAL:HG13	2.00	0.61
16:N:59:DT:N1	16:N:60:DA:N7	2.48	0.61
18:P:48:CYS:O	18:P:50:LEU:CD1	2.47	0.61
18:P:187:ARG:HA	18:P:188:THR:CB	2.18	0.61
18:P:202:GLU:HG2	18:P:205:LYS:HE2	1.74	0.61
18:P:208:ASN:CA	18:P:211:LYS:HE3	2.29	0.61
21:S:125:SER:CA	21:S:127:LYS:NZ	2.60	0.61
27:Y:124:ARG:CG	27:Y:373:PRO:O	2.47	0.61
27:Y:639:LEU:CD2	27:Y:649:ARG:CG	2.76	0.61
27:Y:683:ASP:O	27:Y:686:PHE:CE2	2.47	0.61
2:2:257:GLN:HA	3:A:1284:MET:H	1.65	0.61
3:A:192:GLY:CA	22:T:116:DG:O3'	2.40	0.61
4:B:350:GLN:CG	23:U:407:ASP:CB	2.74	0.61
5:C:11:ARG:HH21	5:C:229:TYR:HD2	1.48	0.61
18:P:142:LEU:HB3	18:P:147:LYS:HD3	1.81	0.61
27:Y:450:PHE:CZ	27:Y:475:PHE:HA	2.25	0.61
1:1:348:ARG:C	1:1:350:PRO:HD3	2.21	0.61
1:1:470:SER:O	1:1:478:THR:HG23	2.00	0.61
3:A:53:LEU:HD23	3:A:54:ASN:N	2.15	0.61
3:A:419:LYS:HZ1	18:P:47:LEU:CG	2.13	0.61
3:A:946:VAL:HG22	7:E:201:LYS:HD2	1.82	0.61
3:A:1443:VAL:HB	9:G:63:PRO:HA	0.65	0.61
16:N:26:DG:H2"	24:V:291:SER:CB	2.31	0.61
18:P:133:ILE:CG1	18:P:151:LYS:HD3	2.02	0.61
18:P:198:VAL:CG2	18:P:202:GLU:OE1	2.48	0.61
19:Q:77:GLY:O	19:Q:78:CYS:HB3	2.01	0.61
20:R:40:GLU:CA	20:R:54:LEU:HD23	2.30	0.61
27:Y:523:GLY:O	27:Y:527:VAL:HG23	2.00	0.61
27:Y:655:SER:HA	27:Y:689:LYS:HZ3	1.65	0.61
1:1:376:ASN:CB	1:1:380:ARG:HD3	2.27	0.61
1:1:425:LEU:HA	1:1:429:THR:HA	1.83	0.61
1:1:447:GLN:C	1:1:452:LEU:HB3	2.21	0.61
3:A:326:ARG:HG3	3:A:1406:VAL:HG21	1.83	0.61
3:A:1130:GLN:HA	3:A:1133:LEU:HD12	1.83	0.61
7:E:202:SER:HB3	7:E:205:SER:H	1.66	0.61
18:P:160:GLU:OE1	18:P:162:THR:HG22	2.00	0.61
19:Q:114:LEU:CD2	22:T:143:DT:C2'	2.77	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:46:LEU:CD2	20:R:132:THR:HG23	2.02	0.61
21:S:148:LEU:CG	21:S:154:LYS:HE3	2.29	0.61
1:1:484:PHE:CD2	1:1:509:ALA:HB3	2.36	0.61
3:A:291:GLU:OE2	18:P:116:LYS:HD2	1.93	0.61
3:A:448:PRO:O	3:A:449:SER:HB2	2.01	0.61
3:A:1111:MET:HG3	3:A:1114:PRO:HG3	1.83	0.61
4:B:911:ILE:HD11	4:B:941:LEU:HD12	1.82	0.61
18:P:174:ALA:HB2	18:P:206:THR:CG2	2.30	0.61
20:R:143:ASP:OD1	20:R:144:ARG:CD	2.49	0.61
21:S:129:LEU:CA	24:V:341:LYS:HE2	2.16	0.61
21:S:143:LEU:HD11	21:S:145:ASN:OD1	2.00	0.61
21:S:164:LYS:NZ	21:S:164:LYS:O	2.33	0.61
23:U:371:ASP:OD1	24:V:75:MET:C	2.39	0.61
24:V:295:PRO:O	24:V:299:ILE:N	2.30	0.61
27:Y:374:LEU:HD13	27:Y:375:ARG:N	2.15	0.61
1:1:478:THR:HG22	1:1:479:GLY:N	2.16	0.61
1:1:484:PHE:CE1	1:1:486:ILE:HG12	2.36	0.61
3:A:1390:ASN:O	3:A:1399:ARG:HG2	2.01	0.61
4:B:350:GLN:HG2	23:U:407:ASP:HB3	1.82	0.61
4:B:486:TYR:HB3	4:B:1096:ARG:CZ	2.31	0.61
8:F:132:LEU:HD22	9:G:66:GLY:O	2.00	0.61
16:N:22:DA:H5’	19:Q:158:GLN:HB3	1.81	0.61
16:N:46:DC:O5’	16:N:46:DC:H6	1.84	0.61
18:P:160:GLU:O	18:P:161:LYS:CG	2.48	0.61
21:S:136:GLN:OE1	21:S:137:LYS:NZ	2.31	0.61
22:T:134:DT:H6	24:V:323:ARG:CG	2.14	0.61
22:T:141:DC:O5’	22:T:141:DC:H6	1.83	0.61
23:U:354:ASP:O	23:U:358:TYR:HB3	2.01	0.61
27:Y:190:LEU:HB2	27:Y:195:ILE:HD11	1.83	0.61
1:1:368:LYS:CE	1:1:372:LYS:HE2	2.31	0.61
1:1:407:VAL:HG22	1:1:451:GLY:HA2	1.82	0.61
1:1:415:VAL:HA	1:1:418:MET:HE2	1.83	0.61
3:A:317:LYS:C	4:B:471:LYS:HZ2	1.99	0.61
3:A:372:LYS:HA	3:A:435:HIS:CD2	2.36	0.61
15:M:20:GLU:HB2	17:O:43:THR:HG21	1.82	0.61
16:N:71:DG:H2”	16:N:72:DG:OP2	2.01	0.61
18:P:146:VAL:HA	18:P:149:CYS:SG	2.40	0.61
18:P:290:GLN:HB3	18:P:291:ILE:HD13	1.83	0.61
20:R:30:ASP:OD2	20:R:151:LEU:HD11	2.01	0.61
22:T:140:DC:C2	22:T:141:DC:C4	2.88	0.61
27:Y:171:LEU:HD11	27:Y:195:ILE:HG22	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:427:TRP:HB2	1:1:449:GLU:OE2	2.01	0.61
1:1:561:MET:C	25:W:450:ARG:NH2	2.53	0.61
3:A:192:GLY:CA	22:T:116:DG:C3'	2.79	0.61
7:E:4:GLU:HB3	7:E:7:ARG:NE	2.16	0.61
18:P:254:THR:O	18:P:257:GLU:OE1	2.19	0.61
23:U:387:ILE:HG23	23:U:388:PRO:HD2	1.81	0.61
1:1:370:LEU:HD11	1:1:398:THR:HG21	1.83	0.60
1:1:452:LEU:HD23	1:1:452:LEU:C	2.21	0.60
3:A:1193:LEU:HB2	3:A:1260:LEU:HD21	1.81	0.60
18:P:150:ALA:HB1	18:P:178:ILE:HG13	1.52	0.60
20:R:143:ASP:OD1	20:R:144:ARG:NE	2.33	0.60
21:S:164:LYS:HD2	21:S:165:LYS:CG	2.29	0.60
27:Y:242:ASN:HD21	27:Y:660:ARG:HH22	1.49	0.60
27:Y:563:VAL:HG12	27:Y:564:TRP:N	2.16	0.60
27:Y:646:TYR:HB2	27:Y:648:ILE:CG1	2.29	0.60
1:1:585:PRO:C	1:1:756:ARG:HH22	2.05	0.60
3:A:419:LYS:HE3	18:P:47:LEU:HA	1.83	0.60
18:P:184:GLU:HB3	18:P:241:ARG:HG3	1.77	0.60
18:P:310:LYS:CE	18:P:340:PRO:CB	2.55	0.60
21:S:154:LYS:CB	21:S:154:LYS:HZ2	1.96	0.60
22:T:140:DC:C2	22:T:141:DC:C5	2.88	0.60
27:Y:176:PHE:N	27:Y:176:PHE:CD1	2.68	0.60
27:Y:237:ALA:HA	27:Y:240:ILE:HG12	1.83	0.60
27:Y:310:PRO:HG2	27:Y:335:LEU:CD2	2.31	0.60
27:Y:493:LEU:CB	27:Y:696:TRP:CD1	2.84	0.60
1:1:375:GLY:HA3	1:1:380:ARG:HG2	1.82	0.60
1:1:460:VAL:CG1	16:N:63:DG:C4'	2.79	0.60
2:2:284:LEU:CB	3:A:1080:THR:CG2	2.48	0.60
3:A:404:TYR:OH	18:P:40:GLU:HB3	2.01	0.60
4:B:343:ILE:HD12	22:T:121:DG:C3'	2.31	0.60
5:C:184:ASN:HD21	5:C:189:THR:H	1.50	0.60
18:P:143:PRO:HB2	18:P:182:ARG:CD	2.27	0.60
18:P:196:ILE:CG1	18:P:197:HIS:N	2.34	0.60
18:P:298:VAL:HG12	18:P:302:LEU:CD1	2.31	0.60
24:V:340:VAL:CG1	24:V:348:LYS:HB2	2.31	0.60
27:Y:290:VAL:HG22	27:Y:291:GLN:H	1.65	0.60
2:2:298:THR:HG23	2:2:305:ARG:HG2	1.82	0.60
8:F:132:LEU:HD23	9:G:61:ILE:HG12	1.82	0.60
18:P:246:LEU:HD22	18:P:293:ILE:HG21	1.82	0.60
18:P:299:GLY:HA2	18:P:302:LEU:HD13	1.84	0.60
18:P:310:LYS:HE2	18:P:340:PRO:CB	2.24	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:313:TYR:O	18:P:316:LEU:HD21	1.92	0.60
19:Q:205:LEU:HB2	19:Q:213:VAL:HB	1.83	0.60
20:R:33:LEU:HD21	20:R:89:VAL:HG11	1.83	0.60
21:S:233:LEU:HB3	21:S:247:ASN:ND2	2.16	0.60
27:Y:21:GLN:HA	27:Y:53:LEU:HD21	1.83	0.60
27:Y:109:THR:CG2	27:Y:113:ASN:HD22	2.14	0.60
27:Y:190:LEU:CD1	27:Y:195:ILE:HD11	2.22	0.60
2:2:257:GLN:HA	3:A:1284:MET:CB	2.32	0.60
2:2:290:ASP:C	4:B:766:ARG:HH21	2.05	0.60
3:A:1454:MET:HG2	9:G:20:PRO:HD3	1.82	0.60
4:B:205:ILE:HD11	4:B:461:LEU:HD13	1.82	0.60
18:P:202:GLU:CG	18:P:205:LYS:CE	2.54	0.60
18:P:259:THR:O	18:P:264:LYS:NZ	2.33	0.60
18:P:288:LEU:HD22	18:P:330:ALA:HA	1.81	0.60
21:S:128:LEU:HG	24:V:341:LYS:CE	2.32	0.60
21:S:158:LYS:HZ2	21:S:162:LEU:HG	1.64	0.60
21:S:201:THR:OG1	21:S:201:THR:O	2.20	0.60
27:Y:103:PHE:CZ	27:Y:105:GLY:HA3	2.36	0.60
1:1:352:LEU:HD22	1:1:352:LEU:H	1.67	0.60
1:1:356:LEU:HD21	1:1:448:THR:HB	1.83	0.60
3:A:5:GLN:HG3	4:B:1175:LEU:HD11	1.81	0.60
3:A:483:ASP:HB2	4:B:987:LYS:HE3	1.84	0.60
3:A:1063:MET:SD	3:A:1436:ILE:HB	2.42	0.60
3:A:1443:VAL:CB	9:G:63:PRO:N	2.49	0.60
3:A:1445:ILE:N	9:G:68:ALA:HB2	2.16	0.60
16:N:58:DC:C2'	16:N:59:DT:H5'	2.26	0.60
21:S:175:LYS:HA	21:S:175:LYS:HZ1	0.85	0.60
27:Y:124:ARG:CG	27:Y:374:LEU:HA	2.31	0.60
3:A:132:LYS:NZ	3:A:1415:SER:CB	2.64	0.60
10:H:82:PRO:C	10:H:84:ALA:H	2.05	0.60
20:R:40:GLU:HA	20:R:54:LEU:CD2	2.31	0.60
20:R:123:MET:CG	20:R:130:LYS:HD3	2.20	0.60
21:S:183:THR:CA	21:S:222:ASN:ND2	2.52	0.60
23:U:386:MET:HE1	24:V:75:MET:SD	2.41	0.60
27:Y:350:HIS:HB2	27:Y:384:LEU:CD1	2.27	0.60
1:1:622:MET:HE3	1:1:653:PHE:CZ	2.36	0.60
2:2:287:ARG:HD3	2:2:291:GLU:OE1	2.01	0.60
3:A:416:ARG:NH1	18:P:37:ARG:NE	2.48	0.60
16:N:21:DA:C2'	16:N:22:DA:H5'	2.21	0.60
18:P:279:VAL:HG13	18:P:309:ILE:HG23	1.84	0.60
19:Q:75:THR:O	19:Q:153:THR:HB	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:27:LEU:CD2	20:R:128:LEU:O	2.47	0.60
21:S:125:SER:OG	24:V:342:LYS:N	2.05	0.60
21:S:230:ILE:HG22	21:S:232:VAL:HG12	1.84	0.60
22:T:121:DG:C5	22:T:122:DT:C4	2.89	0.60
24:V:73:LEU:HD23	24:V:73:LEU:H	1.66	0.60
27:Y:28:ILE:CG2	27:Y:57:ILE:HD12	2.28	0.60
27:Y:111:ARG:HD3	27:Y:129:VAL:HG21	1.83	0.60
1:1:487:LEU:HD13	1:1:511:LEU:O	2.01	0.60
3:A:51:GLY:HA2	3:A:56:PRO:HA	1.84	0.60
3:A:1387:HIS:O	3:A:1391:ARG:HG2	2.02	0.60
3:A:1442:ASP:CA	9:G:60:ARG:HH12	2.13	0.60
4:B:976:ILE:O	4:B:990:ILE:HB	2.02	0.60
16:N:29:DT:OP2	24:V:294:MET:CE	2.50	0.60
16:N:66:DG:H2"	16:N:67:DG:OP2	2.01	0.60
18:P:103:ASP:O	18:P:106:PHE:N	2.35	0.60
18:P:289:PHE:CE1	18:P:291:ILE:HD11	2.31	0.60
22:T:94:DC:H2"	22:T:95:DC:OP2	2.00	0.60
23:U:342:LEU:HD23	23:U:348:TYR:CD1	2.37	0.60
27:Y:263:GLY:O	27:Y:267:LEU:HG	2.02	0.60
27:Y:541:PHE:HE1	27:Y:599:LEU:CD2	2.12	0.60
3:A:1428:VAL:HG13	4:B:1151:LEU:HD21	1.83	0.60
4:B:249:ARG:HH12	4:B:418:LYS:HD2	1.66	0.60
8:F:92:ARG:CZ	9:G:64:THR:N	2.65	0.60
18:P:279:VAL:HG23	18:P:302:LEU:HD23	0.90	0.60
18:P:325:ASP:HB2	18:P:326:PRO:HD3	1.84	0.60
19:Q:114:LEU:HD22	22:T:143:DT:H2'	1.84	0.60
20:R:62:ARG:N	20:R:67:ILE:HD11	2.17	0.60
21:S:161:GLU:HB3	21:S:162:LEU:HD22	1.83	0.60
22:T:145:DT:C2'	22:T:146:DT:H72	2.32	0.60
27:Y:317:LEU:CD2	27:Y:409:ILE:HG22	2.30	0.60
1:1:373:MET:HE2	1:1:384:ILE:CD1	2.31	0.59
3:A:22:PHE:CB	4:B:1211:ASN:OD1	2.50	0.59
18:P:37:ARG:NH2	18:P:40:GLU:HG3	2.17	0.59
18:P:107:THR:HG23	18:P:108:LYS:N	2.17	0.59
21:S:133:GLU:CD	24:V:330:LYS:HD2	2.21	0.59
21:S:203:LYS:HZ2	21:S:204:GLY:N	1.95	0.59
23:U:374:VAL:O	24:V:73:LEU:CD2	2.48	0.59
27:Y:263:GLY:HA3	27:Y:375:ARG:HH22	1.66	0.59
1:1:386:LEU:HB3	1:1:390:ALA:CB	2.32	0.59
1:1:522:ASP:C	1:1:524:ILE:HD13	2.22	0.59
3:A:419:LYS:NZ	18:P:47:LEU:CA	2.66	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:94:THR:HG22	18:P:110:LEU:CD1	2.31	0.59
20:R:27:LEU:CG	20:R:128:LEU:O	2.49	0.59
21:S:130:TRP:HZ3	24:V:338:THR:N	2.00	0.59
22:T:135:DG:H2'	22:T:136:DA:H8	1.59	0.59
27:Y:185:CYS:SG	27:Y:190:LEU:CD1	2.90	0.59
27:Y:346:MET:HB3	27:Y:384:LEU:CD2	2.28	0.59
27:Y:466:LEU:HG	27:Y:479:LEU:CB	2.32	0.59
1:1:394:LEU:HD12	1:1:394:LEU:N	2.17	0.59
1:1:424:PHE:O	1:1:427:TRP:HE3	1.84	0.59
1:1:475:ASP:CB	1:1:478:THR:H	2.15	0.59
3:A:257:ARG:O	18:P:83:SER:O	2.19	0.59
4:B:363:HIS:O	4:B:364:ILE:HB	2.02	0.59
16:N:60:DA:C2'	16:N:61:DA:H5'	2.19	0.59
18:P:35:VAL:CG1	18:P:37:ARG:H	2.14	0.59
20:R:90:LYS:O	20:R:93:HIS:HB3	2.01	0.59
21:S:130:TRP:HZ2	24:V:334:ASP:HA	0.51	0.59
21:S:137:LYS:HE3	24:V:330:LYS:HZ2	1.67	0.59
22:T:95:DC:H2"	22:T:96:DC:OP2	2.01	0.59
24:V:349:TYR:CD1	24:V:349:TYR:C	2.73	0.59
27:Y:360:LEU:CD1	27:Y:375:ARG:HD2	2.31	0.59
1:1:356:LEU:HD22	1:1:356:LEU:N	2.16	0.59
1:1:370:LEU:CD1	1:1:398:THR:HG21	2.32	0.59
3:A:72:GLU:HB3	3:A:76:GLU:HB3	1.83	0.59
4:B:950:ASP:HB3	4:B:967:ARG:HG2	1.84	0.59
8:F:96:THR:CG2	9:G:66:GLY:HA2	2.33	0.59
18:P:125:GLU:OE2	18:P:158:HIS:CE1	2.56	0.59
18:P:269:ILE:CD1	18:P:315:ILE:HG22	2.32	0.59
18:P:289:PHE:CE1	18:P:291:ILE:HD13	2.37	0.59
19:Q:99:PHE:CG	22:T:143:DT:H5'	2.29	0.59
21:S:130:TRP:CZ3	24:V:338:THR:C	2.74	0.59
24:V:306:LEU:HD23	24:V:318:LEU:HD23	1.79	0.59
3:A:291:GLU:CD	18:P:116:LYS:CE	2.71	0.59
16:N:14:DG:H2"	16:N:15:DC:O5'	2.02	0.59
18:P:269:ILE:HD12	18:P:315:ILE:HG22	1.84	0.59
19:Q:114:LEU:HD22	22:T:143:DT:H1'	1.84	0.59
19:Q:183:SER:HB2	19:Q:193:LEU:HD21	1.84	0.59
3:A:566:ILE:HD11	10:H:98:TYR:HB2	1.85	0.59
14:L:61:THR:HG21	14:L:63:ARG:HG2	1.84	0.59
18:P:184:GLU:CD	18:P:241:ARG:CA	2.68	0.59
23:U:377:SER:CA	24:V:70:LEU:HD22	2.33	0.59
24:V:307:PHE:CZ	24:V:349:TYR:CD1	2.82	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:240:ILE:HG22	27:Y:473:LEU:HD12	1.84	0.59
27:Y:493:LEU:HD21	27:Y:666:LEU:CG	2.29	0.59
1:1:397:ILE:HG12	1:1:427:TRP:HH2	1.67	0.59
3:A:380:VAL:HG13	3:A:385:ILE:HG12	1.83	0.59
4:B:653:VAL:HG22	4:B:689:LEU:HB3	1.84	0.59
4:B:1221:SER:CB	6:D:14:ARG:CZ	2.80	0.59
14:L:47:ARG:HH21	14:L:54:ARG:HH21	1.50	0.59
18:P:135:MET:HA	18:P:138:ASP:OD2	2.02	0.59
18:P:164:LYS:CG	18:P:166:LYS:HB3	2.04	0.59
18:P:279:VAL:HG13	18:P:309:ILE:HG12	1.82	0.59
21:S:191:GLU:C	21:S:195:LEU:CD2	2.68	0.59
22:T:101:DC:H2"	22:T:102:DC:OP2	2.02	0.59
23:U:138:ARG:CZ	24:V:57:LEU:CB	2.77	0.59
1:1:326:VAL:HG12	1:1:327:LYS:N	2.18	0.59
1:1:328:LYS:HD3	1:1:530:LEU:HD22	1.84	0.59
1:1:373:MET:CA	1:1:381:SER:HA	2.32	0.59
4:B:1215:ARG:HD3	6:D:15:LEU:HD11	1.80	0.59
18:P:37:ARG:NH2	18:P:40:GLU:CB	2.65	0.59
18:P:142:LEU:O	18:P:147:LYS:CD	2.45	0.59
19:Q:114:LEU:HD13	22:T:143:DT:N3	2.18	0.59
21:S:171:PHE:N	21:S:171:PHE:HD1	1.95	0.59
21:S:175:LYS:CA	21:S:175:LYS:HZ1	1.35	0.59
23:U:375:LEU:HD21	24:V:70:LEU:CD1	2.32	0.59
1:1:336:PRO:HB3	1:1:341:TYR:HB3	1.85	0.59
3:A:590:ARG:NH2	3:A:621:THR:OG1	2.36	0.59
3:A:857:ARG:HD3	3:A:861:GLY:O	2.03	0.59
3:A:871:ASP:OD1	3:A:1366:ARG:NH2	2.34	0.59
8:F:92:ARG:NE	9:G:63:PRO:C	2.56	0.59
16:N:26:DG:H2"	16:N:27:DG:OP2	2.03	0.59
18:P:42:ASP:H	18:P:55:LYS:HG3	1.66	0.59
18:P:128:ALA:O	18:P:132:LYS:NZ	2.26	0.59
20:R:124:CYS:SG	20:R:154:GLU:HB3	2.43	0.59
23:U:358:TYR:CE2	23:U:359:ASN:HB2	2.38	0.59
24:V:349:TYR:O	24:V:349:TYR:HD1	1.83	0.59
27:Y:167:VAL:HG11	27:Y:195:ILE:CG2	2.33	0.59
27:Y:504:VAL:CG1	27:Y:686:PHE:CZ	2.86	0.59
27:Y:504:VAL:HG13	27:Y:686:PHE:CZ	2.38	0.59
1:1:385:VAL:HA	1:1:514:THR:O	2.03	0.59
3:A:629:LEU:O	3:A:633:VAL:HG23	2.02	0.59
16:N:42:DT:H2"	16:N:43:DA:H8	1.68	0.59
21:S:129:LEU:CG	24:V:341:LYS:CE	2.81	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:T:140:DC:N1	22:T:141:DC:C5	2.70	0.59
24:V:306:LEU:HG	24:V:313:TRP:CD1	2.38	0.59
1:1:477:LEU:O	1:1:501:VAL:HA	2.03	0.58
3:A:315:LEU:C	18:P:92:LEU:CD2	2.66	0.58
8:F:96:THR:OG1	9:G:64:THR:HA	2.02	0.58
16:N:17:DT:H71	16:N:17:DT:OP2	2.02	0.58
16:N:19:DT:C2'	16:N:20:DA:H5'	2.25	0.58
20:R:130:LYS:CE	20:R:130:LYS:CA	1.94	0.58
21:S:130:TRP:CZ2	24:V:334:ASP:CA	2.29	0.58
22:T:116:DG:C4	22:T:117:DC:C6	2.90	0.58
22:T:141:DC:H2'	22:T:142:DC:C5	2.38	0.58
23:U:119:LEU:HD23	24:V:135:PHE:CE2	2.29	0.58
23:U:365:TYR:CE1	23:U:391:LYS:CD	2.85	0.58
27:Y:492:PHE:CE2	27:Y:494:PRO:HG3	2.38	0.58
1:1:356:LEU:CD2	1:1:448:THR:HG21	2.32	0.58
1:1:378:ARG:N	1:1:381:SER:HB3	2.18	0.58
1:1:411:CYS:O	1:1:456:THR:HG23	2.03	0.58
3:A:89:PRO:HB2	3:A:204:THR:HG21	1.83	0.58
23:U:406:ILE:O	23:U:410:GLU:HG3	2.03	0.58
24:V:69:TRP:HB3	24:V:219:CYS:SG	2.41	0.58
27:Y:110:SER:HB3	27:Y:212:TYR:CE1	2.38	0.58
1:1:619:ALA:HA	1:1:622:MET:HE2	1.83	0.58
4:B:343:ILE:HD11	22:T:121:DG:H4'	1.85	0.58
16:N:39:DC:H2"	16:N:40:DT:C5'	2.33	0.58
18:P:103:ASP:CG	18:P:107:THR:HB	2.23	0.58
18:P:124:ASN:O	18:P:125:GLU:CB	2.52	0.58
18:P:140:ALA:C	18:P:141:GLU:HG2	2.23	0.58
18:P:188:THR:O	18:P:188:THR:CG2	2.48	0.58
18:P:225:ILE:CD1	18:P:226:ASP:N	2.66	0.58
18:P:279:VAL:CG2	18:P:302:LEU:HD21	1.15	0.58
27:Y:586:TYR:CE1	27:Y:616:TYR:CZ	2.91	0.58
27:Y:639:LEU:HD23	27:Y:649:ARG:CD	2.25	0.58
1:1:400:ALA:HB3	1:1:450:SER:HA	1.86	0.58
3:A:68:GLN:O	3:A:70:CYS:N	2.31	0.58
7:E:147:HIS:HB3	7:E:150:VAL:HG23	1.84	0.58
8:F:92:ARG:NH2	9:G:64:THR:H	2.01	0.58
18:P:187:ARG:NH2	18:P:192:ILE:HG21	2.05	0.58
18:P:188:THR:N	18:P:241:ARG:CB	2.67	0.58
18:P:196:ILE:HD11	18:P:197:HIS:CD2	2.38	0.58
22:T:122:DT:H2"	22:T:123:DT:OP1	2.03	0.58
22:T:130:DA:C8	22:T:131:DC:C6	2.92	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:T:145:DT:H2'	22:T:146:DT:H72	1.84	0.58
23:U:140:HIS:HB3	24:V:57:LEU:CD2	2.29	0.58
27:Y:42:MET:SD	27:Y:48:LYS:HA	2.43	0.58
27:Y:193:TYR:CE2	27:Y:197:ARG:HD3	2.36	0.58
27:Y:317:LEU:CD1	27:Y:415:GLY:CA	2.81	0.58
27:Y:479:LEU:CD2	27:Y:479:LEU:C	2.72	0.58
1:1:327:LYS:HG3	1:1:506:ALA:CA	2.33	0.58
1:1:352:LEU:HD22	1:1:352:LEU:N	2.18	0.58
1:1:476:PHE:CZ	1:1:487:LEU:HD21	2.38	0.58
3:A:416:ARG:HH22	18:P:40:GLU:HG3	1.68	0.58
3:A:436:ILE:HD11	3:A:491:VAL:HG11	1.85	0.58
18:P:208:ASN:CB	18:P:211:LYS:HE3	2.33	0.58
18:P:279:VAL:HG21	18:P:302:LEU:CD1	2.32	0.58
18:P:291:ILE:H	18:P:291:ILE:CD1	1.90	0.58
20:R:44:LYS:HD2	20:R:50:ASN:O	2.04	0.58
20:R:67:ILE:HD13	20:R:67:ILE:N	2.19	0.58
22:T:130:DA:N7	22:T:131:DC:C2	2.70	0.58
22:T:147:DA:H8	22:T:147:DA:O5'	1.86	0.58
27:Y:386:ARG:O	27:Y:390:VAL:CG2	2.40	0.58
2:2:190:THR:CA	7:E:50:MET:HE1	2.34	0.58
3:A:836:TYR:CE1	3:A:1403:GLU:OE2	2.57	0.58
4:B:810:GLU:HA	4:B:815:ARG:HH12	1.69	0.58
8:F:92:ARG:NH1	9:G:63:PRO:CB	2.65	0.58
20:R:64:ASP:HB2	20:R:66:LEU:CD2	2.34	0.58
24:V:292:ILE:HD12	24:V:328:HIS:NE2	2.18	0.58
27:Y:374:LEU:HD13	27:Y:374:LEU:C	2.24	0.58
1:1:349:ASN:N	1:1:350:PRO:HD3	2.19	0.58
1:1:484:PHE:HE1	1:1:486:ILE:HG12	1.69	0.58
1:1:757:ARG:O	1:1:761:GLN:HG2	2.03	0.58
1:1:785:ARG:O	1:1:785:ARG:CD	2.52	0.58
2:2:284:LEU:HD13	3:A:1080:THR:CG2	2.31	0.58
4:B:885:MET:N	18:P:33:LYS:HZ1	1.96	0.58
17:O:46:LYS:O	17:O:50:GLU:HG3	2.03	0.58
18:P:108:LYS:O	18:P:112:LYS:CG	2.52	0.58
18:P:171:ILE:HD12	18:P:209:ILE:HD11	1.86	0.58
18:P:223:LEU:CG	19:Q:177:PHE:CE2	2.77	0.58
22:T:154:DC:H2"	22:T:155:DC:OP2	2.03	0.58
24:V:299:ILE:CD1	24:V:324:GLN:OE1	2.48	0.58
27:Y:218:ILE:HD11	27:Y:221:ARG:HH21	1.68	0.58
27:Y:458:ILE:HD13	27:Y:469:TYR:CE2	2.38	0.58
27:Y:479:LEU:HD22	27:Y:479:LEU:C	2.21	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:373:MET:HG3	1:1:381:SER:OG	2.04	0.58
1:1:408:ILE:CG2	1:1:475:ASP:HA	2.33	0.58
3:A:901:LEU:HD22	3:A:919:ILE:HG23	1.85	0.58
8:F:97:ARG:HH12	9:G:15:PRO:HB2	1.68	0.58
16:N:22:DA:C5'	19:Q:158:GLN:NE2	2.65	0.58
16:N:31:DC:H2"	16:N:32:DA:OP1	2.03	0.58
18:P:26:GLU:OE1	18:P:50:LEU:HD22	2.01	0.58
18:P:225:ILE:O	18:P:228:ASP:HB2	2.04	0.58
19:Q:153:THR:HG22	19:Q:154:ASP:H	1.68	0.58
20:R:120:ASN:OD1	20:R:133:GLN:CB	2.51	0.58
24:V:333:LEU:O	24:V:337:ALA:N	2.36	0.58
27:Y:61:MET:O	27:Y:64:PRO:HD2	2.03	0.58
27:Y:506:ILE:HB	27:Y:522:TYR:CZ	2.39	0.58
2:2:295:THR:O	2:2:295:THR:HG22	2.02	0.58
3:A:64:ASN:OD1	18:P:18:LEU:CD2	2.52	0.58
15:M:283:ALA:HA	17:O:64:GLY:O	2.03	0.58
16:N:32:DA:H2'	16:N:33:DA:C8	2.38	0.58
18:P:180:CYS:O	18:P:183:ALA:O	2.21	0.58
18:P:280:VAL:HG12	18:P:316:LEU:HD11	1.86	0.58
20:R:29:LEU:CD1	20:R:66:LEU:HB3	2.33	0.58
21:S:130:TRP:CZ2	24:V:334:ASP:N	2.72	0.58
21:S:134:TYR:CE2	21:S:147:LEU:HD23	2.39	0.58
21:S:158:LYS:HD3	21:S:162:LEU:HG	1.85	0.58
21:S:181:LEU:CD2	21:S:183:THR:O	2.51	0.58
27:Y:132:LYS:HA	27:Y:155:LEU:CD1	2.34	0.58
27:Y:167:VAL:HG11	27:Y:195:ILE:HG23	1.86	0.58
27:Y:263:GLY:HA3	27:Y:375:ARG:NH2	2.18	0.58
27:Y:360:LEU:CG	27:Y:375:ARG:NE	2.64	0.58
27:Y:681:LEU:CD2	27:Y:696:TRP:HZ3	2.10	0.58
16:N:22:DA:H4'	19:Q:158:GLN:CD	2.23	0.58
20:R:53:GLU:O	20:R:57:LEU:HG	2.03	0.58
21:S:164:LYS:CD	21:S:165:LYS:HG3	2.34	0.58
22:T:151:DG:C2'	22:T:152:DC:C5	2.86	0.58
1:1:354:ILE:O	1:1:356:LEU:HD22	2.03	0.57
1:1:773:ILE:HD12	1:1:774:GLU:N	2.19	0.57
10:H:47:PHE:HB3	10:H:95:TYR:CD2	2.38	0.57
18:P:150:ALA:HB1	18:P:175:SER:HA	1.86	0.57
27:Y:69:ILE:CD1	27:Y:232:VAL:HB	2.34	0.57
1:1:333:ILE:HD11	1:1:343:PHE:CZ	2.39	0.57
1:1:363:ARG:NH2	1:1:366:GLN:HE22	2.02	0.57
1:1:405:LYS:HD3	1:1:483:GLY:C	2.24	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:561:MET:H	25:W:450:ARG:HH12	1.51	0.57
2:2:236:LEU:CA	2:2:242:LYS:HE3	2.34	0.57
2:2:296:PHE:HE2	3:A:1359:ASP:OD1	1.86	0.57
3:A:95:PHE:C	3:A:97:ALA:N	2.54	0.57
18:P:45:CYS:O	18:P:49:GLY:HA2	2.05	0.57
21:S:187:HIS:HE1	21:S:225:GLU:CB	2.07	0.57
27:Y:339:ILE:CG2	27:Y:343:LYS:HE3	2.34	0.57
27:Y:405:PHE:CD2	27:Y:437:PHE:CD2	2.92	0.57
27:Y:678:VAL:HG11	27:Y:708:LEU:CG	2.26	0.57
1:1:408:ILE:HG23	1:1:408:ILE:O	2.03	0.57
1:1:425:LEU:CA	1:1:429:THR:HA	2.35	0.57
3:A:839:ARG:NH2	3:A:1401:SER:O	2.35	0.57
3:A:1390:ASN:O	3:A:1399:ARG:HD3	2.04	0.57
4:B:65:GLU:OE1	4:B:247:GLY:HA2	2.04	0.57
8:F:92:ARG:HE	9:G:63:PRO:C	2.06	0.57
16:N:49:DG:H2"	16:N:50:DC:OP1	2.04	0.57
16:N:55:DG:H2"	16:N:56:DT:OP1	2.04	0.57
18:P:193:GLN:NE2	18:P:203:PHE:CE1	2.72	0.57
20:R:141:ASN:OD1	20:R:142:PHE:HE1	1.87	0.57
21:S:130:TRP:CZ2	24:V:333:LEU:C	2.78	0.57
22:T:130:DA:C4	22:T:131:DC:O4'	2.58	0.57
22:T:146:DT:H2"	22:T:147:DA:OP2	2.03	0.57
27:Y:466:LEU:HG	27:Y:479:LEU:HB2	1.85	0.57
27:Y:528:GLU:O	27:Y:532:ILE:HB	2.04	0.57
1:1:485:ILE:HG13	1:1:485:ILE:O	2.03	0.57
2:2:241:LEU:O	2:2:242:LYS:C	2.43	0.57
2:2:300:GLU:HG3	2:2:300:GLU:O	2.04	0.57
4:B:296:GLU:CG	23:U:124:LYS:HZ1	2.06	0.57
6:D:159:THR:O	6:D:163:VAL:HG23	2.05	0.57
15:M:277:GLN:HB2	17:O:56:THR:HG23	1.85	0.57
16:N:15:DC:H2"	16:N:16:DC:OP2	2.04	0.57
20:R:144:ARG:C	20:R:145:THR:OG1	2.41	0.57
21:S:134:TYR:OH	21:S:138:LYS:HE2	2.00	0.57
22:T:113:DT:H2"	22:T:114:DA:OP1	2.04	0.57
23:U:372:SER:HG	24:V:80:LYS:CE	2.05	0.57
24:V:63:ARG:HG3	24:V:215:VAL:CG1	2.34	0.57
27:Y:56:THR:CG2	27:Y:60:GLN:NE2	2.67	0.57
27:Y:639:LEU:HD21	27:Y:649:ARG:HD2	0.61	0.57
27:Y:653:PHE:HD1	27:Y:654:LEU:N	2.02	0.57
1:1:303:ARG:HD3	1:1:504:THR:CG2	2.35	0.57
1:1:347:HIS:HD2	1:1:348:ARG:HG3	1.66	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:376:ASN:HB3	1:1:380:ARG:N	2.11	0.57
1:1:436:ALA:HB3	1:1:452:LEU:CD2	2.34	0.57
3:A:192:GLY:HA2	22:T:116:DG:C3'	2.35	0.57
16:N:34:DT:H2"	16:N:35:DG:OP1	2.03	0.57
16:N:44:DA:H2"	16:N:45:DC:OP1	2.03	0.57
18:P:145:ILE:HG13	18:P:146:VAL:N	2.20	0.57
18:P:164:LYS:HG2	18:P:166:LYS:CB	2.34	0.57
20:R:46:LEU:O	20:R:46:LEU:HD13	2.04	0.57
27:Y:293:LEU:HD12	27:Y:345:ARG:HD3	1.84	0.57
27:Y:504:VAL:HG13	27:Y:686:PHE:HZ	1.67	0.57
1:1:372:LYS:HB3	1:1:535:LEU:CD2	2.35	0.57
1:1:415:VAL:HG13	1:1:416:SER:N	2.20	0.57
1:1:424:PHE:HE1	1:1:450:SER:HB3	1.63	0.57
1:1:505:ILE:HD12	1:1:510:LYS:NZ	2.19	0.57
2:2:253:LEU:HB3	3:A:1132:LYS:HZ3	1.70	0.57
3:A:588:LEU:HD23	3:A:607:ILE:HD12	1.86	0.57
10:H:44:VAL:HG13	10:H:48:PRO:HA	1.87	0.57
18:P:43:VAL:CG1	18:P:55:LYS:NZ	2.65	0.57
18:P:137:CYS:SG	18:P:142:LEU:CG	2.91	0.57
18:P:187:ARG:CZ	18:P:192:ILE:HB	2.35	0.57
18:P:264:LYS:H	18:P:264:LYS:CE	2.17	0.57
18:P:287:LEU:HD12	18:P:338:ASN:CG	2.18	0.57
23:U:145:ARG:HA	23:U:145:ARG:CZ	2.35	0.57
24:V:318:LEU:CD1	24:V:349:TYR:CD2	2.86	0.57
27:Y:639:LEU:HG	27:Y:653:PHE:CD2	2.34	0.57
1:1:303:ARG:HD3	1:1:504:THR:HG22	1.86	0.57
1:1:460:VAL:CG1	16:N:63:DG:H4'	2.34	0.57
3:A:56:PRO:HD2	3:A:58:LEU:HG	1.86	0.57
4:B:121:ASN:HA	4:B:207:GLY:HA3	1.87	0.57
18:P:137:CYS:SG	18:P:142:LEU:CD2	2.78	0.57
20:R:130:LYS:NZ	20:R:130:LYS:HA	2.15	0.57
21:S:159:VAL:HG22	21:S:160:ILE:CG2	2.28	0.57
21:S:195:LEU:O	21:S:246:TYR:OH	2.20	0.57
27:Y:639:LEU:CD2	27:Y:649:ARG:CB	2.78	0.57
27:Y:648:ILE:HD12	27:Y:652:ASP:OD2	2.04	0.57
1:1:335:TYR:HB3	1:1:336:PRO:HD3	1.86	0.57
1:1:476:PHE:CZ	1:1:502:VAL:HG22	2.40	0.57
2:2:252:ASN:HA	3:A:1204:ASP:O	2.05	0.57
5:C:39:ALA:HA	5:C:164:ALA:HB3	1.87	0.57
16:N:67:DG:H2"	16:N:68:DT:OP2	2.05	0.57
18:P:26:GLU:OE1	18:P:50:LEU:CG	2.51	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:187:ARG:NH2	18:P:192:ILE:HG22	2.18	0.57
18:P:264:LYS:HZ3	18:P:264:LYS:N	2.03	0.57
18:P:316:LEU:CD2	18:P:316:LEU:H	2.16	0.57
19:Q:115:ILE:HD13	19:Q:143:ILE:HD11	1.87	0.57
21:S:187:HIS:HE1	21:S:226:GLU:H	1.52	0.57
22:T:116:DG:N9	22:T:117:DC:C5	2.73	0.57
23:U:358:TYR:CD2	23:U:359:ASN:HB2	2.40	0.57
27:Y:185:CYS:SG	27:Y:192:PRO:CG	2.93	0.57
27:Y:495:MET:CE	27:Y:696:TRP:HB3	2.35	0.57
1:1:344:ARG:HA	1:1:344:ARG:HE	1.70	0.57
1:1:473:VAL:O	1:1:473:VAL:HG23	2.05	0.57
1:1:474:MET:CB	1:1:482:TRP:H	2.03	0.57
3:A:1442:ASP:HB3	9:G:60:ARG:HH12	0.71	0.57
4:B:74:LEU:H	23:U:313:ALA:N	2.02	0.57
16:N:45:DC:H2'	16:N:46:DC:C6	2.40	0.57
18:P:22:LEU:HA	18:P:52:LEU:CD1	2.34	0.57
20:R:13:LEU:HD22	20:R:13:LEU:N	2.19	0.57
21:S:142:VAL:HG23	21:S:143:LEU:O	2.05	0.57
21:S:203:LYS:CG	21:S:242:ARG:CG	2.80	0.57
23:U:107:PRO:HA	24:V:90:GLN:CD	2.25	0.57
23:U:377:SER:OG	24:V:70:LEU:CD2	2.52	0.57
27:Y:39:ILE:HG12	27:Y:458:ILE:HD12	1.87	0.57
27:Y:109:THR:HG21	27:Y:113:ASN:HD22	1.69	0.57
27:Y:681:LEU:CD2	27:Y:696:TRP:CH2	2.87	0.57
1:1:394:LEU:HD12	1:1:394:LEU:H	1.69	0.57
1:1:473:VAL:HB	1:1:481:GLU:CG	2.35	0.57
3:A:93:VAL:HA	3:A:96:ILE:HD12	1.86	0.57
3:A:419:LYS:NZ	18:P:47:LEU:HA	2.20	0.57
16:N:24:DG:H2"	16:N:25:DG:H5"	1.86	0.57
18:P:191:GLU:OE1	18:P:192:ILE:HD13	2.05	0.57
18:P:289:PHE:CD1	18:P:291:ILE:N	2.72	0.57
20:R:44:LYS:HG2	20:R:54:LEU:HD22	1.87	0.57
20:R:61:LEU:HB3	20:R:66:LEU:HB2	1.86	0.57
27:Y:39:ILE:CG1	27:Y:458:ILE:HD12	2.35	0.57
1:1:475:ASP:C	1:1:485:ILE:HG22	2.25	0.56
1:1:712:ASP:CB	25:W:447:GLU:CD	2.70	0.56
2:2:283:GLN:OE1	3:A:756:ILE:HD11	2.03	0.56
8:F:96:THR:HG1	9:G:64:THR:C	1.97	0.56
17:O:117:ASN:HD22	17:O:118:SER:N	2.03	0.56
18:P:91:ASN:O	18:P:92:LEU:HB3	2.05	0.56
20:R:143:ASP:OD1	20:R:144:ARG:CG	2.53	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:134:TYR:CE1	21:S:138:LYS:CE	2.86	0.56
22:T:100:DC:C4	22:T:101:DC:N4	2.73	0.56
22:T:139:DC:O5'	22:T:139:DC:H6	1.87	0.56
1:1:368:LYS:HD2	1:1:372:LYS:CD	2.35	0.56
3:A:5:GLN:HG3	4:B:1175:LEU:CD1	2.35	0.56
3:A:346:ASP:HB3	4:B:1108:ARG:H	1.70	0.56
3:A:1443:VAL:HG13	9:G:61:ILE:CG2	2.33	0.56
4:B:1215:ARG:NH1	6:D:15:LEU:HD11	2.19	0.56
18:P:22:LEU:CD2	18:P:22:LEU:O	2.46	0.56
18:P:299:GLY:CA	18:P:309:ILE:HD11	2.35	0.56
21:S:157:ASP:C	21:S:162:LEU:HD23	2.25	0.56
21:S:192:LEU:HA	21:S:195:LEU:HD23	1.87	0.56
27:Y:57:ILE:HG23	27:Y:58:ALA:N	2.20	0.56
27:Y:132:LYS:HA	27:Y:155:LEU:HD12	1.87	0.56
27:Y:208:TYR:CZ	27:Y:213:LEU:HG	2.40	0.56
27:Y:462:THR:CG2	27:Y:660:ARG:HG3	2.35	0.56
1:1:373:MET:HE2	1:1:384:ILE:HD11	1.86	0.56
1:1:487:LEU:HD12	1:1:487:LEU:N	2.19	0.56
1:1:584:ASN:CG	1:1:586:THR:HG22	2.25	0.56
4:B:343:ILE:HD11	22:T:121:DG:C4'	2.35	0.56
4:B:433:GLN:HB2	23:U:326:ARG:NE	2.20	0.56
4:B:911:ILE:HG22	4:B:912:ILE:HG13	1.87	0.56
6:D:167:LEU:HB3	6:D:177:VAL:HG22	1.87	0.56
18:P:21:VAL:HG22	18:P:22:LEU:N	2.20	0.56
18:P:279:VAL:HG21	18:P:302:LEU:CB	2.32	0.56
20:R:13:LEU:HG	20:R:91:TYR:HD1	1.71	0.56
20:R:13:LEU:CD2	20:R:91:TYR:HE1	2.18	0.56
20:R:27:LEU:HD11	20:R:128:LEU:CB	2.35	0.56
21:S:128:LEU:CG	24:V:341:LYS:HD2	2.35	0.56
21:S:184:TYR:N	21:S:222:ASN:ND2	2.53	0.56
21:S:203:LYS:CB	21:S:242:ARG:NE	2.66	0.56
24:V:210:LYS:HG2	24:V:210:LYS:O	2.05	0.56
27:Y:443:SER:CB	27:Y:474:ASN:HB2	2.34	0.56
1:1:436:ALA:HB1	1:1:444:GLU:HB2	1.88	0.56
1:1:455:SER:HB3	1:1:466:ARG:CD	2.36	0.56
2:2:257:GLN:HG2	3:A:1284:MET:CB	2.34	0.56
18:P:185:VAL:HG13	18:P:186:ALA:H	1.71	0.56
18:P:193:GLN:CD	18:P:199:LYS:HG3	2.26	0.56
18:P:313:TYR:C	18:P:316:LEU:HD22	2.23	0.56
20:R:28:VAL:CG1	20:R:43:LEU:HD21	2.26	0.56
20:R:44:LYS:HE3	20:R:54:LEU:HB2	1.85	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:210:LEU:CD2	21:S:214:TRP:HH2	2.18	0.56
27:Y:207:ILE:HD12	27:Y:207:ILE:N	2.20	0.56
27:Y:293:LEU:CD1	27:Y:345:ARG:HD3	2.34	0.56
27:Y:441:ASP:HB2	27:Y:641:PHE:CZ	2.41	0.56
27:Y:479:LEU:HD13	27:Y:479:LEU:N	2.21	0.56
2:2:291:GLU:H	2:2:292:PRO:CD	2.14	0.56
3:A:412:ARG:O	18:P:50:LEU:HA	2.06	0.56
18:P:189:PHE:N	18:P:241:ARG:CZ	2.68	0.56
18:P:288:LEU:O	18:P:288:LEU:CD1	2.53	0.56
21:S:210:LEU:HD22	21:S:214:TRP:HH2	1.71	0.56
22:T:144:DT:H2"	22:T:145:DT:OP2	2.03	0.56
24:V:74:PRO:HD2	24:V:223:GLN:CA	2.31	0.56
1:1:756:ARG:NH1	1:1:756:ARG:CG	2.41	0.56
15:M:45:LYS:HE3	17:O:21:ASP:HB3	1.88	0.56
18:P:267:LYS:HE3	18:P:269:ILE:H	1.70	0.56
18:P:320:ARG:NH2	18:P:337:ASP:CG	2.58	0.56
20:R:130:LYS:HA	20:R:130:LYS:HE2	0.56	0.56
21:S:233:LEU:HD12	21:S:247:ASN:N	2.20	0.56
24:V:306:LEU:HD23	24:V:349:TYR:OH	2.06	0.56
24:V:333:LEU:HB3	24:V:337:ALA:HB3	1.86	0.56
27:Y:639:LEU:HD21	27:Y:649:ARG:HH11	1.70	0.56
1:1:466:ARG:HB3	1:1:477:LEU:HB2	1.87	0.56
16:N:23:DA:N1	19:Q:116:PHE:CZ	2.70	0.56
18:P:22:LEU:HG	18:P:52:LEU:HD13	0.80	0.56
18:P:152:GLU:O	18:P:155:LYS:CG	2.54	0.56
18:P:207:LEU:HA	18:P:210:MET:CE	2.36	0.56
18:P:208:ASN:O	18:P:211:LYS:CG	2.52	0.56
18:P:326:PRO:CD	18:P:328:LEU:N	2.64	0.56
20:R:13:LEU:HD22	20:R:13:LEU:H	1.70	0.56
21:S:154:LYS:HA	21:S:154:LYS:HZ1	1.14	0.56
22:T:151:DG:H2"	22:T:152:DC:C6	2.41	0.56
23:U:309:LEU:HD23	23:U:337:GLU:HG2	1.87	0.56
1:1:429:THR:N	1:1:432:PRO:HG2	2.20	0.56
2:2:248:ILE:HG12	3:A:1203:ASN:CG	2.21	0.56
18:P:200:THR:CG2	18:P:201:LYS:H	2.02	0.56
1:1:370:LEU:O	1:1:370:LEU:HD23	2.06	0.56
1:1:498:PHE:O	1:1:501:VAL:HG22	2.05	0.56
3:A:192:GLY:HA3	22:T:116:DG:H3'	1.88	0.56
4:B:54:PHE:HA	4:B:58:THR:HB	1.88	0.56
9:G:34:VAL:O	9:G:37:SER:HB3	2.06	0.56
15:M:279:ALA:HA	17:O:60:LEU:O	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:27:DG:H3'	24:V:291:SER:O	2.02	0.56
22:T:141:DC:H2'	22:T:142:DC:C6	2.41	0.56
27:Y:389:GLU:C	27:Y:400:LYS:HE2	2.25	0.56
1:1:475:ASP:O	1:1:505:ILE:HG12	2.06	0.56
1:1:522:ASP:OD1	1:1:524:ILE:HD11	2.06	0.56
2:2:252:ASN:HB3	3:A:1206:ASP:HB2	1.87	0.56
2:2:253:LEU:CB	3:A:1132:LYS:HZ3	2.18	0.56
4:B:952:VAL:HG22	4:B:966:VAL:HG13	1.88	0.56
8:F:96:THR:CG2	9:G:66:GLY:N	2.66	0.56
16:N:29:DT:H2"	16:N:30:DT:OP2	2.05	0.56
18:P:108:LYS:HA	18:P:111:ASN:HD21	1.70	0.56
27:Y:639:LEU:HD11	27:Y:653:PHE:CZ	2.35	0.56
1:1:378:ARG:HH21	1:1:508:HIS:CA	2.16	0.55
1:1:470:SER:HA	1:1:478:THR:CG2	2.36	0.55
2:2:290:ASP:CA	4:B:766:ARG:HH22	2.16	0.55
9:G:111:THR:HG22	9:G:113:HIS:H	1.72	0.55
16:N:28:DT:OP2	24:V:292:ILE:CA	2.54	0.55
16:N:60:DA:H2'	16:N:61:DA:H8	1.71	0.55
18:P:298:VAL:CG1	18:P:302:LEU:HD11	2.35	0.55
27:Y:479:LEU:HD13	27:Y:479:LEU:H	1.70	0.55
27:Y:621:LEU:HG	27:Y:680:VAL:CG1	2.36	0.55
1:1:383:ILE:HD13	1:1:383:ILE:H	1.71	0.55
1:1:428:CYS:HB3	1:1:432:PRO:CB	2.37	0.55
3:A:388:LEU:HA	3:A:391:LEU:HD12	1.88	0.55
3:A:1445:ILE:H	9:G:68:ALA:CA	2.19	0.55
12:J:3:VAL:HG11	12:J:18:TRP:HB2	1.87	0.55
18:P:94:THR:HG21	18:P:110:LEU:CG	2.08	0.55
22:T:146:DT:C4	22:T:147:DA:N6	2.73	0.55
1:1:333:ILE:HD11	1:1:343:PHE:CE1	2.41	0.55
1:1:421:ARG:CG	1:1:430:LEU:HG	2.21	0.55
1:1:431:GLN:HB2	1:1:432:PRO:CD	2.37	0.55
8:F:79:ARG:HG2	8:F:144:GLU:HB3	1.88	0.55
18:P:243:CYS:CB	18:P:253:THR:CG2	2.83	0.55
18:P:277:ILE:C	18:P:277:ILE:HD12	2.26	0.55
21:S:143:LEU:CD1	21:S:145:ASN:OD1	2.54	0.55
27:Y:495:MET:HG3	27:Y:681:LEU:CB	2.26	0.55
1:1:446:PHE:HB3	1:1:452:LEU:HD11	1.88	0.55
1:1:750:TYR:HB3	1:1:756:ARG:NH1	2.21	0.55
4:B:280:ILE:HD13	4:B:334:ILE:HG12	1.89	0.55
18:P:43:VAL:CG1	18:P:55:LYS:HE3	2.36	0.55
18:P:86:LEU:HD21	18:P:152:GLU:HG3	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:130:PHE:CA	18:P:133:ILE:CG2	2.82	0.55
18:P:142:LEU:HD22	18:P:147:LYS:HG3	0.56	0.55
18:P:144:LYS:O	18:P:148:ASP:OD2	2.25	0.55
18:P:289:PHE:CE2	18:P:291:ILE:HG12	2.40	0.55
19:Q:153:THR:CG2	19:Q:154:ASP:N	2.69	0.55
23:U:96:ASN:HD21	24:V:99:LYS:H	1.53	0.55
27:Y:124:ARG:HG2	27:Y:374:LEU:CB	2.36	0.55
27:Y:197:ARG:O	27:Y:200:ILE:HG22	2.07	0.55
27:Y:639:LEU:HA	27:Y:653:PHE:CD2	2.42	0.55
1:1:372:LYS:C	1:1:535:LEU:HD23	2.26	0.55
1:1:460:VAL:HG11	16:N:64:DG:OP2	2.00	0.55
4:B:226:PHE:HA	4:B:395:GLN:HG3	1.87	0.55
18:P:193:GLN:HG2	18:P:199:LYS:HD3	1.85	0.55
18:P:267:LYS:HE3	18:P:269:ILE:N	2.22	0.55
20:R:46:LEU:HD13	20:R:46:LEU:C	2.26	0.55
21:S:130:TRP:CZ2	24:V:334:ASP:OD1	2.59	0.55
21:S:183:THR:CB	21:S:222:ASN:HD21	2.20	0.55
21:S:210:LEU:CD2	21:S:214:TRP:CH2	2.90	0.55
27:Y:185:CYS:SG	27:Y:190:LEU:HD12	2.47	0.55
27:Y:586:TYR:CD1	27:Y:616:TYR:CZ	2.94	0.55
1:1:328:LYS:HD3	1:1:530:LEU:HD23	1.84	0.55
1:1:574:ALA:HB1	1:1:774:GLU:OE2	2.05	0.55
3:A:64:ASN:ND2	18:P:18:LEU:HD13	2.20	0.55
3:A:345:VAL:N	4:B:1128:LEU:O	2.39	0.55
3:A:353:ILE:HG21	3:A:487:MET:HE3	1.89	0.55
22:T:105:DT:H2"	22:T:106:DT:OP1	2.05	0.55
27:Y:129:VAL:CG1	27:Y:194:PHE:HE1	2.19	0.55
27:Y:562:GLU:CD	27:Y:599:LEU:HD11	2.27	0.55
1:1:485:ILE:HD13	1:1:505:ILE:HD13	1.87	0.55
1:1:493:VAL:HB	1:1:494:PRO:HD3	1.87	0.55
3:A:10:PRO:HG2	4:B:1192:TYR:HA	1.89	0.55
3:A:67:CYS:SG	3:A:77:CYS:SG	3.04	0.55
18:P:43:VAL:HG13	18:P:55:LYS:HZ3	1.71	0.55
18:P:188:THR:OG1	18:P:241:ARG:CB	2.55	0.55
18:P:255:SER:N	18:P:257:GLU:OE1	2.40	0.55
18:P:280:VAL:HG13	18:P:313:TYR:N	2.19	0.55
18:P:280:VAL:HG11	18:P:313:TYR:CA	2.30	0.55
23:U:118:LEU:HD12	23:U:392:VAL:HG22	1.89	0.55
27:Y:86:LEU:HD13	27:Y:103:PHE:CZ	2.42	0.55
27:Y:129:VAL:HG11	27:Y:194:PHE:HE1	1.71	0.55
1:1:466:ARG:C	1:1:477:LEU:HD23	2.26	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:34:LYS:H	3:A:57:ARG:HH11	1.55	0.55
3:A:768:GLN:HG2	3:A:816:HIS:HA	1.88	0.55
3:A:993:LEU:HD22	3:A:1046:LEU:HD22	1.88	0.55
3:A:1015:VAL:HG13	3:A:1019:CYS:SG	2.47	0.55
6:D:40:HIS:HB3	9:G:73:LYS:CE	2.35	0.55
8:F:96:THR:HG22	9:G:66:GLY:HA2	1.89	0.55
8:F:118:LEU:O	8:F:122:MET:HG3	2.06	0.55
18:P:279:VAL:HG21	18:P:302:LEU:HD22	0.58	0.55
18:P:283:TYR:CZ	18:P:287:LEU:HD11	2.41	0.55
19:Q:98:ARG:CZ	22:T:142:DC:H5"	2.37	0.55
20:R:52:THR:O	20:R:56:PRO:HD2	2.07	0.55
20:R:141:ASN:HB2	20:R:148:LEU:HD12	1.88	0.55
22:T:134:DT:C2'	24:V:323:ARG:O	2.38	0.55
23:U:107:PRO:CA	24:V:90:GLN:OE1	2.55	0.55
23:U:126:LYS:HB2	23:U:126:LYS:NZ	2.21	0.55
27:Y:109:THR:O	27:Y:114:LEU:HD22	2.06	0.55
1:1:310:ILE:CG1	1:1:313:VAL:HG23	2.36	0.55
1:1:717:TYR:CZ	1:1:718:TYR:CD1	2.91	0.55
3:A:253:ASN:O	3:A:255:SER:N	2.38	0.55
3:A:1399:ARG:HB3	3:A:1408:ILE:HD13	1.89	0.55
4:B:217:ARG:NH1	4:B:407:ASP:OD1	2.40	0.55
4:B:356:LEU:HA	4:B:360:PHE:HB3	1.89	0.55
18:P:42:ASP:C	18:P:43:VAL:HG22	2.26	0.55
18:P:225:ILE:HD11	18:P:227:THR:CA	2.36	0.55
24:V:69:TRP:CZ3	24:V:220:HIS:CD2	2.92	0.55
27:Y:317:LEU:HD11	27:Y:415:GLY:CA	2.37	0.55
27:Y:490:LYS:HD2	27:Y:676:TYR:CE1	2.42	0.55
1:1:365:TYR:CE2	1:1:366:GLN:HG3	2.42	0.55
1:1:455:SER:HB3	1:1:466:ARG:HG3	1.88	0.55
3:A:193:ASP:N	22:T:117:DC:OP1	2.40	0.55
3:A:608:ILE:HD12	3:A:613:ILE:HD13	1.89	0.55
4:B:350:GLN:CB	23:U:407:ASP:OD2	2.54	0.55
8:F:109:VAL:HG23	8:F:127:GLU:OE1	2.07	0.55
16:N:36:DT:C2'	16:N:37:DA:C8	2.86	0.55
21:S:129:LEU:N	24:V:341:LYS:HG3	2.18	0.55
21:S:187:HIS:CE1	21:S:229:LYS:HZ1	2.26	0.55
21:S:203:LYS:NZ	21:S:204:GLY:N	2.55	0.55
22:T:116:DG:C4	22:T:117:DC:C5	2.95	0.55
27:Y:111:ARG:HE	27:Y:129:VAL:HG21	1.71	0.55
27:Y:669:VAL:CG1	27:Y:677:GLY:HA3	2.37	0.55
1:1:524:ILE:HD13	1:1:524:ILE:N	2.21	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:2:243:GLN:O	2:2:247:GLU:HG3	2.07	0.54
3:A:74:MET:O	4:B:1116:ARG:NH2	2.39	0.54
3:A:344:ARG:CA	4:B:1128:LEU:O	2.55	0.54
3:A:419:LYS:HZ1	18:P:47:LEU:C	2.10	0.54
3:A:497:THR:HG23	4:B:1146:PHE:HA	1.89	0.54
4:B:486:TYR:HB3	4:B:1096:ARG:NH2	2.22	0.54
4:B:815:ARG:HH11	4:B:815:ARG:HG3	1.72	0.54
8:F:89:GLU:O	8:F:93:ILE:HD12	2.06	0.54
16:N:60:DA:C2'	16:N:61:DA:C8	2.86	0.54
17:O:117:ASN:ND2	17:O:119:LYS:HG2	2.22	0.54
18:P:184:GLU:CD	18:P:241:ARG:HG3	2.27	0.54
20:R:29:LEU:HD13	20:R:66:LEU:HB3	1.88	0.54
20:R:124:CYS:H	20:R:130:LYS:CE	2.18	0.54
22:T:149:DA:H2"	22:T:150:DG:OP2	2.07	0.54
24:V:56:SER:O	24:V:57:LEU:CB	2.50	0.54
24:V:107:LEU:HD11	24:V:119:GLU:CG	2.19	0.54
27:Y:353:SER:OG	27:Y:378:SER:HB2	2.06	0.54
27:Y:458:ILE:HD13	27:Y:469:TYR:HE2	1.73	0.54
1:1:429:THR:HG22	1:1:430:LEU:N	2.21	0.54
1:1:754:ARG:C	1:1:754:ARG:HH12	2.11	0.54
2:2:252:ASN:HA	3:A:1204:ASP:HA	1.89	0.54
3:A:204:THR:HG22	3:A:235:ILE:CG2	2.37	0.54
4:B:338:GLY:CA	4:B:339:THR:HB	2.38	0.54
15:M:231:ILE:HD13	19:Q:90:ARG:HE	1.72	0.54
18:P:320:ARG:NH2	18:P:337:ASP:CB	2.61	0.54
20:R:13:LEU:HD21	20:R:91:TYR:CE1	2.42	0.54
22:T:122:DT:C2'	22:T:123:DT:C7	2.86	0.54
23:U:135:LEU:CA	23:U:136:PRO:CD	2.85	0.54
24:V:128:VAL:O	24:V:130:GLU:N	2.40	0.54
27:Y:69:ILE:HD13	27:Y:232:VAL:HB	1.89	0.54
27:Y:353:SER:HB2	27:Y:375:ARG:HG2	1.90	0.54
27:Y:653:PHE:CD1	27:Y:653:PHE:C	2.78	0.54
1:1:458:SER:HB3	1:1:467:SER:CB	2.37	0.54
1:1:505:ILE:HG21	1:1:507:ALA:CB	2.37	0.54
1:1:561:MET:CA	25:W:450:ARG:HH22	2.06	0.54
3:A:33:ALA:HA	3:A:57:ARG:HD3	1.90	0.54
6:D:7:THR:HG21	9:G:5:LYS:HZ1	1.71	0.54
13:K:57:LEU:HB2	13:K:76:GLN:HG2	1.88	0.54
16:N:24:DG:H2"	16:N:25:DG:C5'	2.37	0.54
19:Q:99:PHE:CG	22:T:143:DT:O5'	2.60	0.54
19:Q:99:PHE:HA	22:T:142:DC:O2	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:143:ASP:OD1	20:R:144:ARG:HG2	2.07	0.54
21:S:129:LEU:CD2	24:V:347:PHE:CD1	2.89	0.54
21:S:214:TRP:CE3	21:S:218:ASP:CG	2.78	0.54
23:U:374:VAL:CG2	24:V:73:LEU:CD1	2.84	0.54
27:Y:70:ILE:O	27:Y:70:ILE:HG13	2.07	0.54
27:Y:76:MET:HG2	27:Y:178:PHE:HE1	1.72	0.54
27:Y:128:VAL:HG21	27:Y:372:LYS:CA	2.31	0.54
27:Y:166:GLU:O	27:Y:170:TYR:HD1	1.91	0.54
27:Y:289:LEU:HD12	27:Y:298:ILE:HG13	1.89	0.54
27:Y:627:PHE:HD1	27:Y:654:LEU:HD11	1.72	0.54
2:2:283:GLN:CD	3:A:756:ILE:CG1	2.75	0.54
3:A:257:ARG:HB2	3:A:257:ARG:HH11	1.71	0.54
9:G:45:ILE:HA	9:G:78:VAL:HG12	1.88	0.54
16:N:17:DT:H2'	16:N:18:DA:H8	1.72	0.54
18:P:27:CYS:CB	18:P:47:LEU:CD2	2.49	0.54
18:P:142:LEU:CD2	18:P:147:LYS:CD	2.79	0.54
18:P:225:ILE:HD13	18:P:226:ASP:N	2.23	0.54
20:R:127:CYS:SG	20:R:129:THR:HG21	2.46	0.54
21:S:158:LYS:HZ3	21:S:162:LEU:CD2	2.21	0.54
22:T:133:DT:H2'	22:T:134:DT:C6	2.42	0.54
24:V:63:ARG:CB	24:V:215:VAL:C	2.53	0.54
1:1:320:ASN:HD22	1:1:321:GLU:N	2.06	0.54
1:1:354:ILE:HG22	1:1:355:ASP:N	2.23	0.54
1:1:494:PRO:HB2	1:1:519:ARG:HH11	1.72	0.54
3:A:416:ARG:CZ	18:P:37:ARG:HH21	2.21	0.54
4:B:1100:ASP:OD2	13:K:1:MET:HB3	2.08	0.54
18:P:320:ARG:NH2	18:P:337:ASP:OD2	2.41	0.54
20:R:61:LEU:CB	20:R:67:ILE:HD12	2.38	0.54
22:T:96:DC:H2"	22:T:97:DC:OP2	2.06	0.54
23:U:100:GLU:OE2	24:V:96:ARG:HD2	2.08	0.54
1:1:345:ASN:HD21	1:1:348:ARG:HE	1.55	0.54
2:2:231:CYS:CA	2:2:232:ASP:CA	2.85	0.54
2:2:293:LEU:HD23	2:2:293:LEU:N	2.23	0.54
3:A:42:ASP:OD1	3:A:46:THR:N	2.41	0.54
3:A:338:GLY:HA2	4:B:1129:ARG:NH2	2.23	0.54
3:A:1349:TYR:HA	3:A:1372:VAL:HG21	1.90	0.54
3:A:1443:VAL:CA	9:G:63:PRO:N	2.68	0.54
18:P:196:ILE:HG23	18:P:197:HIS:H	1.71	0.54
18:P:279:VAL:HG22	18:P:302:LEU:HD21	0.63	0.54
21:S:130:TRP:CD2	24:V:339:LEU:CG	2.37	0.54
23:U:396:THR:HG1	23:U:401:TYR:HE2	1.49	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:353:SER:OG	27:Y:378:SER:HA	2.08	0.54
20:R:123:MET:HA	20:R:130:LYS:HD3	1.82	0.54
20:R:140:LEU:HD12	20:R:146:GLU:O	2.08	0.54
27:Y:185:CYS:CB	27:Y:192:PRO:CG	2.81	0.54
27:Y:244:CYS:HB3	27:Y:442:ALA:CB	2.22	0.54
27:Y:369:ILE:O	27:Y:370:GLU:CB	2.54	0.54
27:Y:383:LEU:C	27:Y:383:LEU:HD23	2.28	0.54
1:1:305:GLU:CB	1:1:327:LYS:HZ1	2.21	0.54
3:A:411:ASP:CG	18:P:51:VAL:N	2.39	0.54
6:D:18:VAL:HG22	6:D:19:GLU:HA	1.88	0.54
18:P:208:ASN:O	18:P:212:ASN:ND2	2.40	0.54
18:P:225:ILE:CD1	18:P:227:THR:C	2.76	0.54
19:Q:230:ILE:HG13	19:Q:234:LEU:HD13	1.90	0.54
20:R:129:THR:HG21	20:R:131:TYR:OH	2.07	0.54
24:V:82:ARG:NE	24:V:108:LEU:CD1	2.61	0.54
27:Y:360:LEU:HD13	27:Y:364:LYS:HD2	1.89	0.54
1:1:408:ILE:HG12	1:1:466:ARG:NE	2.22	0.54
1:1:410:LEU:HD13	1:1:477:LEU:CD2	2.38	0.54
1:1:467:SER:H	1:1:477:LEU:HD23	1.70	0.54
1:1:519:ARG:HH11	1:1:523:LYS:HB2	1.73	0.54
2:2:257:GLN:C	3:A:1284:MET:H	2.10	0.54
4:B:510:LYS:HB2	4:B:513:GLN:OE1	2.08	0.54
9:G:131:GLN:HG2	9:G:136:VAL:HG22	1.90	0.54
12:J:24:LEU:O	12:J:30:LEU:HB2	2.08	0.54
17:O:117:ASN:HD22	17:O:118:SER:H	1.55	0.54
18:P:170:SER:CB	18:P:205:LYS:CE	2.83	0.54
18:P:189:PHE:H	18:P:241:ARG:HH22	1.53	0.54
21:S:130:TRP:CZ3	24:V:338:THR:CA	2.91	0.54
23:U:377:SER:CB	24:V:70:LEU:HD22	2.37	0.54
24:V:306:LEU:HD23	24:V:318:LEU:HD21	1.87	0.54
27:Y:57:ILE:HD13	27:Y:57:ILE:C	2.28	0.54
1:1:357:LYS:HG3	1:1:357:LYS:O	2.08	0.54
1:1:499:ARG:CG	1:1:530:LEU:HD12	2.37	0.54
1:1:505:ILE:HG22	1:1:506:ALA:N	2.22	0.54
3:A:316:GLN:CA	18:P:92:LEU:HD23	2.38	0.54
4:B:343:ILE:CG1	22:T:121:DG:C5'	2.51	0.54
15:M:246:CYS:HB3	15:M:265:GLY:HA3	1.89	0.54
16:N:16:DC:H2'	16:N:17:DT:H71	1.90	0.54
19:Q:103:ILE:HG23	22:T:144:DT:H5"	1.89	0.54
20:R:129:THR:OG1	20:R:130:LYS:N	2.41	0.54
21:S:151:LEU:CD2	21:S:153:MET:CE	2.86	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:231:LEU:HA	21:S:232:VAL:HG12	1.90	0.54
22:T:116:DG:H1'	22:T:117:DC:H5'	1.90	0.54
24:V:333:LEU:CB	24:V:337:ALA:CB	2.86	0.54
27:Y:167:VAL:HG22	27:Y:190:LEU:CD2	2.37	0.54
27:Y:405:PHE:CD2	27:Y:437:PHE:CE2	2.96	0.54
27:Y:463:ILE:HD11	27:Y:469:TYR:CG	2.43	0.54
1:1:314:HIS:HB3	1:1:325:VAL:HG11	1.89	0.53
1:1:373:MET:CE	1:1:511:LEU:HD13	2.38	0.53
1:1:466:ARG:HB2	1:1:477:LEU:CB	2.38	0.53
2:2:235:ASP:CA	2:2:242:LYS:HG3	2.39	0.53
4:B:405:ARG:NH2	4:B:629:ASP:OD2	2.40	0.53
4:B:839:MET:HE3	4:B:1010:LEU:HD21	1.91	0.53
18:P:54:ASP:O	18:P:56:LEU:CD1	2.57	0.53
18:P:111:ASN:OD1	18:P:112:LYS:N	2.41	0.53
20:R:30:ASP:OD2	20:R:151:LEU:HD21	2.08	0.53
21:S:179:LYS:HD3	21:S:179:LYS:N	2.20	0.53
22:T:111:DC:H2"	22:T:112:DT:OP1	2.07	0.53
27:Y:635:LEU:O	27:Y:635:LEU:HD13	2.07	0.53
1:1:563:ALA:HA	25:W:450:ARG:NE	2.23	0.53
1:1:627:ILE:HB	1:1:654:LEU:CD2	2.37	0.53
3:A:982:THR:HB	3:A:985:ASP:H	1.73	0.53
7:E:94:LYS:HE2	7:E:98:ILE:HD11	1.89	0.53
16:N:50:DC:H2"	16:N:51:DA:OP1	2.08	0.53
18:P:133:ILE:CG2	18:P:151:LYS:HD2	2.37	0.53
20:R:34:PHE:CE2	20:R:134:LEU:CD2	2.49	0.53
21:S:136:GLN:HB3	21:S:137:LYS:CE	2.37	0.53
27:Y:109:THR:HB	27:Y:114:LEU:HD13	1.89	0.53
1:1:429:THR:H	1:1:432:PRO:HG2	1.74	0.53
1:1:485:ILE:CG1	1:1:510:LYS:HG2	2.39	0.53
2:2:305:ARG:O	3:A:1360:GLY:HA2	2.07	0.53
3:A:666:ILE:HD11	4:B:1030:LEU:HD13	1.90	0.53
4:B:90:ILE:HD11	4:B:134:LYS:HE2	1.91	0.53
8:F:92:ARG:NE	9:G:64:THR:CA	2.60	0.53
12:J:1:MET:HB2	12:J:56:LEU:HB2	1.89	0.53
18:P:37:ARG:CZ	18:P:40:GLU:HB2	2.39	0.53
21:S:143:LEU:HD13	21:S:145:ASN:N	2.20	0.53
22:T:155:DC:H2'	22:T:156:DT:C6	2.43	0.53
23:U:119:LEU:CD1	24:V:135:PHE:CD2	2.91	0.53
24:V:83:ASP:CG	24:V:92:LEU:HD22	2.28	0.53
24:V:118:HIS:ND1	24:V:120:TYR:CE2	2.77	0.53
27:Y:242:ASN:ND2	27:Y:660:ARG:HH22	2.05	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:317:LEU:CD2	27:Y:409:ILE:CG2	2.81	0.53
27:Y:353:SER:HB2	27:Y:378:SER:N	2.17	0.53
27:Y:360:LEU:HD11	27:Y:364:LYS:CE	2.38	0.53
1:1:474:MET:HE1	1:1:480:ARG:O	2.09	0.53
16:N:38:DT:H2"	16:N:39:DC:OP1	2.07	0.53
18:P:190:LYS:NZ	18:P:303:GLN:N	2.38	0.53
20:R:130:LYS:O	20:R:131:TYR:CD1	2.62	0.53
22:T:109:DT:H2"	22:T:110:DA:OP1	2.07	0.53
22:T:132:DA:H2"	22:T:133:DT:OP1	2.06	0.53
27:Y:705:ASP:OD1	27:Y:706:LEU:N	2.41	0.53
2:2:290:ASP:HA	4:B:766:ARG:CZ	2.38	0.53
3:A:412:ARG:H	18:P:51:VAL:HG12	1.73	0.53
3:A:1376:THR:HG23	7:E:212:ARG:HH22	1.72	0.53
4:B:343:ILE:O	4:B:344:LYS:HB2	2.07	0.53
4:B:350:GLN:NE2	23:U:411:LYS:NZ	2.56	0.53
16:N:55:DG:H2"	16:N:56:DT:H73	1.91	0.53
18:P:196:ILE:CG2	18:P:197:HIS:H	2.22	0.53
18:P:269:ILE:HD12	18:P:315:ILE:CG2	2.38	0.53
21:S:175:LYS:CE	21:S:175:LYS:C	2.72	0.53
21:S:218:ASP:CB	21:S:223:GLN:NE2	2.70	0.53
21:S:221:ILE:O	21:S:225:GLU:HB2	2.08	0.53
27:Y:42:MET:HG3	27:Y:48:LYS:CG	2.34	0.53
27:Y:245:ILE:CG2	27:Y:439:CYS:O	2.48	0.53
27:Y:506:ILE:C	27:Y:522:TYR:OH	2.47	0.53
1:1:466:ARG:HE	1:1:475:ASP:CB	2.22	0.53
1:1:695:ARG:HA	1:1:696:ARG:HH22	1.67	0.53
2:2:258:GLY:O	2:2:259:ALA:C	2.46	0.53
3:A:18:GLN:HG2	3:A:1418:LEU:HD13	1.89	0.53
7:E:19:VAL:O	7:E:23:VAL:HG23	2.08	0.53
20:R:61:LEU:HB2	20:R:67:ILE:HD12	1.89	0.53
20:R:124:CYS:HB3	20:R:129:THR:HG22	1.89	0.53
20:R:144:ARG:CB	20:R:146:GLU:CD	2.76	0.53
20:R:154:GLU:CD	20:R:155:PRO:N	2.62	0.53
21:S:196:LEU:HD12	21:S:197:ARG:N	2.23	0.53
3:A:541:ILE:HG22	3:A:546:VAL:HG23	1.91	0.53
16:N:19:DT:P	19:Q:194:ILE:HD13	2.49	0.53
16:N:20:DA:O4'	19:Q:215:THR:CG2	2.56	0.53
16:N:21:DA:O4'	19:Q:159:ASN:HB2	2.08	0.53
16:N:48:DG:C4	16:N:49:DG:N7	2.77	0.53
16:N:59:DT:H2"	16:N:60:DA:C8	2.44	0.53
18:P:116:LYS:HA	18:P:119:MET:HE3	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:143:PRO:CB	18:P:182:ARG:NH2	2.50	0.53
18:P:252:VAL:HG22	18:P:285:ASN:HD21	1.73	0.53
20:R:13:LEU:HG	20:R:91:TYR:CD1	2.42	0.53
20:R:34:PHE:CZ	20:R:134:LEU:C	2.81	0.53
20:R:125:PRO:CD	20:R:155:PRO:O	2.57	0.53
22:T:152:DC:H2'	22:T:153:DG:H8	1.73	0.53
23:U:142:LYS:HB2	23:U:351:VAL:HG23	1.91	0.53
24:V:333:LEU:CA	24:V:337:ALA:HB2	2.38	0.53
27:Y:42:MET:SD	27:Y:53:LEU:CD1	2.93	0.53
27:Y:526:LEU:HD12	27:Y:621:LEU:HD22	1.91	0.53
27:Y:555:GLN:HG3	27:Y:564:TRP:HE1	1.73	0.53
1:1:421:ARG:HD3	1:1:437:VAL:CG2	2.39	0.53
1:1:473:VAL:HG12	1:1:481:GLU:CG	2.39	0.53
1:1:596:GLN:O	1:1:600:ARG:HG3	2.09	0.53
1:1:737:THR:O	1:1:738:HIS:HD2	1.92	0.53
4:B:560:GLU:OE1	24:V:226:PRO:HG3	2.08	0.53
18:P:189:PHE:HD1	18:P:241:ARG:HH21	1.55	0.53
18:P:264:LYS:HZ3	18:P:264:LYS:H	1.56	0.53
18:P:303:GLN:NE2	18:P:304:VAL:CG2	2.49	0.53
18:P:313:TYR:CA	18:P:316:LEU:CD2	2.86	0.53
20:R:30:ASP:OD2	20:R:151:LEU:CD1	2.57	0.53
20:R:95:ILE:HG23	20:R:95:ILE:O	2.08	0.53
23:U:341:LYS:HE2	23:U:341:LYS:HA	1.90	0.53
24:V:72:ARG:HH21	24:V:221:GLU:CD	2.12	0.53
1:1:521:ASP:CG	1:1:523:LYS:HG2	2.28	0.53
3:A:1390:ASN:O	3:A:1399:ARG:CG	2.57	0.53
4:B:1103:ILE:O	4:B:1122:ARG:NH1	2.42	0.53
5:C:52:GLU:HA	14:L:64:LEU:HD22	1.91	0.53
16:N:68:DT:H2"	16:N:69:DG:OP2	2.09	0.53
18:P:63:TRP:HD1	18:P:82:ALA:H	1.54	0.53
18:P:190:LYS:HE3	18:P:242:PHE:CD1	2.31	0.53
21:S:130:TRP:NE1	24:V:334:ASP:OD1	2.41	0.53
21:S:136:GLN:C	21:S:137:LYS:HD2	2.21	0.53
21:S:244:VAL:N	21:S:245:TRP:HZ3	2.04	0.53
23:U:355:PHE:O	23:U:356:ASP:CB	2.55	0.53
27:Y:129:VAL:HG11	27:Y:194:PHE:CE1	2.44	0.53
27:Y:389:GLU:O	27:Y:400:LYS:HE2	2.09	0.53
27:Y:400:LYS:HG3	27:Y:437:PHE:CG	2.44	0.53
1:1:446:PHE:HB3	1:1:452:LEU:CD1	2.39	0.53
3:A:54:ASN:HB3	3:A:247:ARG:HH12	1.74	0.53
3:A:658:LEU:HD23	3:A:659:HIS:NE2	2.24	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:C:164:ALA:HA	5:C:167:HIS:O	2.09	0.53
8:F:96:THR:OG1	9:G:64:THR:CA	2.57	0.53
8:F:134:ILE:HG22	8:F:136:ARG:HG3	1.91	0.53
16:N:19:DT:C2'	16:N:20:DA:C5'	2.86	0.53
19:Q:103:ILE:HG12	22:T:143:DT:H2"	0.60	0.53
21:S:162:LEU:HD23	21:S:162:LEU:H	1.73	0.53
22:T:117:DC:C2'	22:T:118:DC:H5'	2.27	0.53
23:U:346:GLU:OE1	23:U:346:GLU:N	2.41	0.53
23:U:373:TYR:CD2	24:V:72:ARG:NH1	2.75	0.53
26:X:19:LEU:CD1	26:X:58:LEU:HD11	2.39	0.53
27:Y:350:HIS:N	27:Y:384:LEU:HG	2.24	0.53
27:Y:495:MET:HE1	27:Y:696:TRP:HB3	1.91	0.53
1:1:473:VAL:CB	1:1:481:GLU:HG3	2.38	0.52
3:A:338:GLY:HA2	4:B:1129:ARG:HH22	1.73	0.52
4:B:295:GLY:HA2	4:B:298:LEU:HB2	1.91	0.52
15:M:7:SER:O	15:M:11:GLU:HG3	2.08	0.52
18:P:30:TYR:O	18:P:30:TYR:HD2	1.92	0.52
18:P:144:LYS:O	18:P:148:ASP:CG	2.47	0.52
18:P:289:PHE:HZ	18:P:291:ILE:HD11	1.70	0.52
19:Q:65:PRO:HG2	19:Q:224:TYR:HD1	1.72	0.52
20:R:44:LYS:HE3	20:R:54:LEU:CG	2.39	0.52
20:R:123:MET:HE2	20:R:129:THR:O	2.08	0.52
23:U:330:ARG:HG3	23:U:331:GLN:HG2	1.91	0.52
1:1:487:LEU:HD22	1:1:490:VAL:CG2	2.33	0.52
3:A:320:ARG:HG2	3:A:321:PRO:HD2	1.89	0.52
4:B:885:MET:C	18:P:33:LYS:HZ1	2.12	0.52
5:C:73:GLN:O	5:C:129:ILE:HA	2.08	0.52
16:N:32:DA:O5'	16:N:32:DA:H8	1.93	0.52
18:P:181:ARG:HG2	18:P:181:ARG:O	2.09	0.52
21:S:136:GLN:CD	21:S:137:LYS:HZ3	2.11	0.52
24:V:333:LEU:HA	24:V:337:ALA:CB	2.37	0.52
27:Y:37:ASN:OD1	27:Y:477:THR:HB	2.10	0.52
27:Y:193:TYR:HH	27:Y:221:ARG:NH1	2.03	0.52
1:1:403:ILE:HD13	1:1:484:PHE:HD2	1.75	0.52
3:A:33:ALA:HB2	3:A:57:ARG:HB2	1.90	0.52
3:A:1397:LEU:HB3	3:A:1429:ILE:HD12	1.90	0.52
18:P:34:ILE:HD11	18:P:43:VAL:HG11	1.92	0.52
18:P:303:GLN:CG	18:P:304:VAL:N	2.70	0.52
19:Q:77:GLY:O	19:Q:151:LYS:HE2	2.09	0.52
20:R:27:LEU:CD1	20:R:128:LEU:C	2.64	0.52
27:Y:190:LEU:HD12	27:Y:190:LEU:C	2.29	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:193:TYR:OH	27:Y:197:ARG:HD2	2.09	0.52
3:A:78:PRO:C	4:B:1201:LYS:HZ3	2.11	0.52
4:B:291:ILE:H	4:B:291:ILE:HD12	1.74	0.52
16:N:23:DA:H2	19:Q:116:PHE:CZ	1.96	0.52
18:P:142:LEU:CB	18:P:147:LYS:HD3	2.39	0.52
18:P:167:SER:O	18:P:168:MET:HB3	2.09	0.52
21:S:187:HIS:HE1	21:S:226:GLU:N	2.05	0.52
27:Y:42:MET:CG	27:Y:48:LYS:HG3	2.35	0.52
1:1:458:SER:OG	1:1:467:SER:HB3	2.08	0.52
1:1:476:PHE:O	1:1:501:VAL:HG23	2.08	0.52
1:1:619:ALA:HA	1:1:622:MET:CE	2.39	0.52
3:A:12:ARG:NH1	4:B:1218:THR:OG1	2.43	0.52
3:A:91:PHE:HD2	3:A:179:LEU:O	1.92	0.52
3:A:646:PHE:O	3:A:650:GLN:HG2	2.10	0.52
4:B:249:ARG:HH12	4:B:418:LYS:CD	2.22	0.52
13:K:55:LYS:HB3	13:K:81:TYR:CD2	2.45	0.52
17:O:87:VAL:O	17:O:88:GLU:HB2	2.09	0.52
18:P:184:GLU:HG3	18:P:184:GLU:O	2.10	0.52
18:P:303:GLN:CG	18:P:304:VAL:HG23	2.34	0.52
19:Q:106:ILE:HG23	19:Q:139:TYR:CE1	2.45	0.52
20:R:122:TYR:CE2	20:R:136:ALA:HB2	2.44	0.52
21:S:134:TYR:CE1	21:S:138:LYS:NZ	2.77	0.52
27:Y:42:MET:HG2	27:Y:48:LYS:HG2	1.91	0.52
27:Y:111:ARG:HH22	27:Y:197:ARG:HH12	1.57	0.52
27:Y:384:LEU:O	27:Y:384:LEU:HD13	2.10	0.52
27:Y:506:ILE:HD13	27:Y:506:ILE:N	2.25	0.52
3:A:340:LEU:HD21	4:B:1199:ALA:HB3	1.91	0.52
16:N:69:DG:H2"	16:N:70:DG:OP2	2.08	0.52
18:P:94:THR:CG2	18:P:110:LEU:CD1	2.87	0.52
18:P:339:LEU:H	18:P:339:LEU:HD12	1.74	0.52
20:R:71:LYS:HD2	20:R:71:LYS:C	2.30	0.52
22:T:97:DC:H2"	22:T:98:DA:OP2	2.09	0.52
23:U:365:TYR:CZ	23:U:391:LYS:HD2	2.44	0.52
27:Y:24:TYR:CE2	27:Y:482:SER:CB	2.79	0.52
27:Y:32:LEU:HD12	27:Y:57:ILE:CD1	2.39	0.52
27:Y:697:ILE:HG21	27:Y:699:GLN:NE2	2.25	0.52
1:1:353:ASP:HB2	1:1:448:THR:HG1	1.75	0.52
1:1:356:LEU:CB	1:1:427:TRP:HD1	2.22	0.52
4:B:438:GLU:HG3	4:B:440:HIS:HB2	1.91	0.52
18:P:142:LEU:CG	18:P:143:PRO:HD2	2.31	0.52
18:P:289:PHE:CE1	18:P:291:ILE:N	2.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:64:ASP:O	20:R:65:ARG:HB2	2.09	0.52
20:R:139:LEU:HD22	20:R:148:LEU:O	2.10	0.52
21:S:141:PRO:HB3	21:S:177:THR:HG23	1.92	0.52
21:S:203:LYS:CD	21:S:242:ARG:NE	2.73	0.52
23:U:111:LEU:HB3	24:V:139:ASN:OD1	2.09	0.52
24:V:295:PRO:O	24:V:299:ILE:CG1	2.56	0.52
27:Y:179:GLU:HG2	27:Y:180:LYS:N	2.25	0.52
27:Y:185:CYS:HB3	27:Y:192:PRO:HD3	1.90	0.52
27:Y:412:TYR:N	27:Y:412:TYR:CD1	2.78	0.52
16:N:28:DT:OP2	24:V:295:PRO:HD2	2.07	0.52
18:P:29:VAL:C	18:P:30:TYR:CD1	2.83	0.52
18:P:51:VAL:CG2	18:P:52:LEU:N	2.73	0.52
18:P:152:GLU:CG	18:P:155:LYS:CE	2.63	0.52
18:P:252:VAL:C	18:P:285:ASN:OD1	2.46	0.52
18:P:320:ARG:CG	18:P:321:ASP:N	2.69	0.52
21:S:136:GLN:HB3	21:S:137:LYS:CD	2.40	0.52
27:Y:176:PHE:N	27:Y:176:PHE:HD1	2.05	0.52
27:Y:253:THR:HG22	27:Y:416:PHE:HB3	1.91	0.52
1:1:476:PHE:HD2	1:1:477:LEU:HD12	1.66	0.52
2:2:284:LEU:CD1	3:A:1080:THR:HG22	2.33	0.52
3:A:22:PHE:HB3	4:B:1211:ASN:OD1	2.08	0.52
3:A:494:SER:HB3	3:A:497:THR:OG1	2.10	0.52
7:E:156:LEU:HD11	7:E:197:LYS:HB2	1.90	0.52
9:G:119:LEU:HD12	9:G:132:SER:HB2	1.91	0.52
18:P:54:ASP:O	18:P:56:LEU:HD12	2.10	0.52
18:P:225:ILE:CD1	18:P:227:THR:CA	2.87	0.52
18:P:252:VAL:CG1	18:P:285:ASN:HD21	2.16	0.52
20:R:38:LEU:O	20:R:87:TYR:HD1	1.93	0.52
21:S:130:TRP:HE3	24:V:338:THR:O	1.88	0.52
24:V:63:ARG:HG3	24:V:215:VAL:HG12	1.92	0.52
27:Y:215:ASP:CB	27:Y:218:ILE:HG22	2.40	0.52
1:1:414:SER:O	1:1:417:VAL:HB	2.10	0.52
1:1:484:PHE:HD2	1:1:509:ALA:HB3	1.74	0.52
1:1:498:PHE:O	1:1:501:VAL:HG13	2.10	0.52
1:1:773:ILE:HD12	1:1:773:ILE:C	2.31	0.52
2:2:268:ARG:HG3	3:A:734:GLU:CD	2.31	0.52
3:A:22:PHE:HB2	4:B:1211:ASN:OD1	2.08	0.52
3:A:22:PHE:CB	4:B:1211:ASN:CG	2.78	0.52
3:A:227:VAL:CG1	6:D:16:LYS:HE3	2.40	0.52
4:B:174:LEU:HD11	4:B:204:ILE:HG13	1.91	0.52
20:R:135:GLU:HA	20:R:138:GLN:HG2	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:151:LEU:HD22	20:R:151:LEU:H	1.73	0.52
22:T:140:DC:C1'	22:T:141:DC:C5	2.92	0.52
24:V:127:LYS:HB3	24:V:221:GLU:HG3	1.92	0.52
24:V:333:LEU:HD13	24:V:349:TYR:HD2	1.75	0.52
27:Y:132:LYS:CA	27:Y:155:LEU:HD12	2.40	0.52
27:Y:213:LEU:HD13	27:Y:213:LEU:C	2.30	0.52
1:1:446:PHE:O	1:1:452:LEU:HD22	2.09	0.51
3:A:1116:LEU:H	3:A:1308:THR:HB	1.73	0.51
16:N:22:DA:H4'	19:Q:158:GLN:HG3	1.92	0.51
18:P:223:LEU:CD2	19:Q:177:PHE:CE1	2.93	0.51
18:P:313:TYR:CD2	18:P:340:PRO:HG2	2.45	0.51
22:T:130:DA:N9	22:T:131:DC:O4'	2.43	0.51
1:1:754:ARG:HH12	1:1:754:ARG:HG2	0.69	0.51
3:A:1149:ALA:HB2	11:I:47:GLU:HA	1.92	0.51
8:F:73:ALA:HB2	8:F:143:PHE:CZ	2.46	0.51
13:K:49:GLU:HG3	13:K:94:ILE:CG1	2.40	0.51
16:N:22:DA:H4'	19:Q:158:GLN:CG	2.40	0.51
18:P:143:PRO:O	18:P:147:LYS:CA	2.56	0.51
20:R:154:GLU:OE2	20:R:155:PRO:N	2.43	0.51
21:S:127:LYS:C	21:S:153:MET:HE3	2.30	0.51
21:S:148:LEU:CA	21:S:154:LYS:HE2	2.38	0.51
27:Y:28:ILE:HG22	27:Y:57:ILE:HD11	1.81	0.51
27:Y:252:LEU:HD11	27:Y:383:LEU:HG	1.92	0.51
27:Y:681:LEU:HD21	27:Y:696:TRP:HH2	1.75	0.51
1:1:410:LEU:CD2	1:1:457:TYR:CE2	2.94	0.51
1:1:424:PHE:CE2	1:1:454:VAL:CG2	2.94	0.51
2:2:207:ILE:CA	3:A:1172:LEU:CD2	2.86	0.51
3:A:179:LEU:HD13	3:A:297:GLN:HG3	1.91	0.51
3:A:227:VAL:HG13	6:D:16:LYS:HG2	1.91	0.51
3:A:940:ARG:HB3	3:A:941:LYS:HE2	1.92	0.51
18:P:41:GLY:O	18:P:42:ASP:HB2	2.09	0.51
20:R:126:ILE:CB	20:R:154:GLU:CG	2.84	0.51
22:T:121:DG:C2'	22:T:122:DT:C5'	2.86	0.51
23:U:387:ILE:CG2	23:U:388:PRO:HD2	2.40	0.51
27:Y:111:ARG:NH2	27:Y:197:ARG:NH1	2.58	0.51
27:Y:619:THR:HG22	27:Y:621:LEU:HD12	1.93	0.51
1:1:420:TRP:HB3	1:1:424:PHE:CE2	2.45	0.51
1:1:489:GLU:HB3	1:1:491:HIS:CE1	2.45	0.51
1:1:515:ALA:C	1:1:681:ARG:CD	2.65	0.51
3:A:357:PRO:HD2	4:B:833:TYR:CZ	2.45	0.51
18:P:302:LEU:HB2	18:P:304:VAL:HG23	1.72	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:68:SER:HB3	20:R:90:LYS:HZ3	1.74	0.51
22:T:136:DA:H2'	22:T:137:DA:C8	2.46	0.51
22:T:138:DA:H2"	22:T:139:DC:H5	1.75	0.51
1:1:490:VAL:O	1:1:490:VAL:HG22	2.11	0.51
2:2:260:THR:CA	2:2:260:THR:HB	2.20	0.51
3:A:7:SER:HG	4:B:1161:HIS:CE1	2.24	0.51
3:A:23:SER:HB2	3:A:233:TRP:CE2	2.45	0.51
17:O:71:PHE:HE2	19:Q:95:ASN:HB2	1.74	0.51
18:P:103:ASP:O	18:P:104:MET:C	2.47	0.51
18:P:206:THR:C	18:P:209:ILE:HG12	2.27	0.51
18:P:290:GLN:HG3	18:P:331:ASN:ND2	2.15	0.51
18:P:299:GLY:HA2	18:P:309:ILE:HD11	1.91	0.51
1:1:476:PHE:CZ	1:1:487:LEU:CD2	2.93	0.51
1:1:518:VAL:HA	1:1:524:ILE:HG21	1.92	0.51
1:1:596:GLN:NE2	1:1:746:PRO:CD	2.73	0.51
3:A:1444:MET:HB2	8:F:133:VAL:HG12	1.92	0.51
4:B:530:GLY:O	4:B:532:ALA:N	2.44	0.51
16:N:37:DA:H2"	16:N:38:DT:OP1	2.09	0.51
16:N:52:DT:H2"	16:N:53:DA:OP1	2.09	0.51
16:N:56:DT:C2'	16:N:57:DA:C5'	2.85	0.51
18:P:269:ILE:HD12	18:P:269:ILE:N	2.26	0.51
18:P:279:VAL:HG22	18:P:302:LEU:CD2	1.04	0.51
19:Q:166:VAL:HG11	19:Q:234:LEU:HD23	1.93	0.51
22:T:117:DC:C2'	22:T:118:DC:C5'	2.86	0.51
24:V:69:TRP:HZ3	24:V:71:VAL:CG2	2.24	0.51
27:Y:348:VAL:O	27:Y:352:ILE:HG12	2.10	0.51
1:1:327:LYS:HG3	1:1:506:ALA:N	2.25	0.51
1:1:376:ASN:HB2	1:1:380:ARG:HD2	1.90	0.51
1:1:476:PHE:CZ	1:1:502:VAL:CG2	2.94	0.51
1:1:522:ASP:HA	1:1:524:ILE:HD12	1.93	0.51
3:A:1431:GLY:HA3	4:B:1197:PRO:HD3	1.91	0.51
4:B:238:ALA:HB3	4:B:256:VAL:HB	1.93	0.51
4:B:773:MET:CE	4:B:985:GLY:HA2	2.40	0.51
16:N:23:DA:C4'	19:Q:120:LYS:CD	2.81	0.51
18:P:293:ILE:CD1	18:P:293:ILE:N	2.57	0.51
27:Y:486:THR:HG21	27:Y:670:LEU:CD2	2.40	0.51
1:1:302:GLU:O	1:1:303:ARG:HB2	2.10	0.51
1:1:310:ILE:HG23	1:1:310:ILE:O	2.09	0.51
1:1:446:PHE:CB	1:1:452:LEU:HD11	2.41	0.51
1:1:459:MET:H	1:1:464:ARG:HB3	1.74	0.51
1:1:476:PHE:CE1	1:1:487:LEU:HD11	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:472:LEU:O	3:A:475:THR:HB	2.10	0.51
3:A:1095:THR:HG21	3:A:1112:LYS:HB2	1.93	0.51
3:A:1348:LEU:O	3:A:1352:VAL:HG23	2.11	0.51
4:B:338:GLY:HA2	4:B:339:THR:HB	1.93	0.51
4:B:1124:ARG:CB	18:P:60:ARG:HH21	2.24	0.51
13:K:5:ASP:HB3	13:K:7:PHE:CE2	2.45	0.51
18:P:81:GLU:OE2	18:P:82:ALA:O	2.29	0.51
18:P:160:GLU:C	18:P:161:LYS:HG2	2.31	0.51
18:P:173:ALA:CA	18:P:176:ILE:CD1	2.86	0.51
20:R:144:ARG:HA	20:R:144:ARG:HH11	1.62	0.51
21:S:237:LYS:HZ2	21:S:241:PRO:HG2	1.74	0.51
22:T:134:DT:C2	22:T:135:DG:N7	2.79	0.51
24:V:127:LYS:HD3	24:V:127:LYS:H	1.76	0.51
27:Y:362:HIS:CE1	27:Y:366:LEU:HD11	2.45	0.51
27:Y:495:MET:SD	27:Y:696:TRP:CZ3	3.03	0.51
27:Y:630:THR:O	27:Y:636:LYS:HE3	2.11	0.51
27:Y:635:LEU:HD13	27:Y:635:LEU:C	2.31	0.51
27:Y:655:SER:O	27:Y:689:LYS:NZ	2.43	0.51
1:1:466:ARG:CB	1:1:477:LEU:CB	2.89	0.51
7:E:64:PRO:HB2	7:E:69:ILE:HD11	1.93	0.51
18:P:103:ASP:OD1	18:P:104:MET:N	2.44	0.51
18:P:116:LYS:HA	18:P:119:MET:CE	2.40	0.51
18:P:266:ILE:O	18:P:266:ILE:CG2	2.57	0.51
20:R:17:VAL:HG23	20:R:18:ARG:N	2.25	0.51
20:R:44:LYS:HG2	20:R:54:LEU:CD2	2.41	0.51
20:R:130:LYS:C	20:R:131:TYR:CG	2.84	0.51
27:Y:111:ARG:HH21	27:Y:129:VAL:HG11	1.76	0.51
27:Y:212:TYR:CZ	27:Y:222:VAL:CG2	2.93	0.51
1:1:406:SER:CB	1:1:482:TRP:CE3	2.94	0.51
1:1:484:PHE:CD2	1:1:509:ALA:CB	2.93	0.51
1:1:484:PHE:CE1	1:1:486:ILE:CG1	2.94	0.51
3:A:55:ASP:HA	3:A:58:LEU:H	1.76	0.51
3:A:313:GLN:HG3	18:P:98:LYS:HE3	1.90	0.51
3:A:919:ILE:HG12	3:A:983:ILE:HD13	1.93	0.51
3:A:1450:LEU:CB	9:G:18:PHE:O	2.46	0.51
4:B:1124:ARG:O	18:P:60:ARG:NH2	2.44	0.51
16:N:33:DA:C2'	16:N:34:DT:H72	2.41	0.51
18:P:108:LYS:HA	18:P:111:ASN:OD1	2.11	0.51
18:P:121:LYS:C	18:P:122:LYS:HG2	2.30	0.51
18:P:133:ILE:HD11	18:P:151:LYS:HG2	1.92	0.51
18:P:187:ARG:NE	18:P:189:PHE:HA	2.26	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:286:ILE:CG2	18:P:287:LEU:N	2.74	0.51
21:S:131:ALA:CB	21:S:151:LEU:CD1	2.89	0.51
21:S:154:LYS:CE	21:S:154:LYS:N	2.61	0.51
21:S:193:LEU:O	21:S:196:LEU:HG	2.10	0.51
22:T:147:DA:H2'	22:T:148:DT:C6	2.46	0.51
24:V:333:LEU:CD2	24:V:349:TYR:HD2	2.21	0.51
27:Y:185:CYS:SG	27:Y:192:PRO:CB	2.99	0.51
1:1:408:ILE:HG21	1:1:476:PHE:H	1.75	0.50
3:A:446:ARG:HD2	3:A:480:ALA:HB2	1.92	0.50
8:F:100:GLN:OE1	9:G:15:PRO:HG2	2.10	0.50
17:O:64:GLY:HA3	17:O:83:CYS:HB3	1.92	0.50
18:P:286:ILE:HD13	18:P:292:PRO:HA	1.76	0.50
19:Q:65:PRO:HG2	19:Q:224:TYR:CD1	2.46	0.50
19:Q:224:TYR:O	19:Q:228:GLU:HG2	2.11	0.50
21:S:233:LEU:N	21:S:233:LEU:CD1	2.74	0.50
24:V:126:LYS:HB3	24:V:128:VAL:HG23	1.93	0.50
2:2:252:ASN:ND2	3:A:1206:ASP:HB2	2.26	0.50
3:A:497:THR:CG2	4:B:1146:PHE:HD1	2.23	0.50
4:B:1201:LYS:HD3	4:B:1205:GLN:OE1	2.11	0.50
10:H:89:LEU:C	10:H:91:ASP:H	2.14	0.50
19:Q:153:THR:CG2	19:Q:154:ASP:H	2.23	0.50
20:R:123:MET:SD	20:R:130:LYS:CD	3.00	0.50
22:T:134:DT:H6	24:V:323:ARG:CD	1.83	0.50
23:U:119:LEU:CD2	23:U:395:PHE:CE1	2.94	0.50
3:A:312:PRO:CA	18:P:96:ILE:HG21	2.38	0.50
3:A:1436:ILE:HD13	4:B:1139:ILE:HG23	1.93	0.50
4:B:35:SER:HA	4:B:811:TYR:HE1	1.77	0.50
16:N:59:DT:C2	16:N:60:DA:C5	2.99	0.50
20:R:61:LEU:HB2	20:R:67:ILE:CD1	2.42	0.50
20:R:95:ILE:O	20:R:95:ILE:HG12	2.12	0.50
21:S:193:LEU:HD13	21:S:196:LEU:HD21	1.93	0.50
22:T:103:DC:C6	22:T:104:DT:H72	2.46	0.50
22:T:134:DT:H1'	22:T:135:DG:C8	2.47	0.50
24:V:109:ASN:OD1	24:V:111:ASN:OD1	2.29	0.50
1:1:585:PRO:HG2	1:1:756:ARG:NH1	2.22	0.50
3:A:67:CYS:O	3:A:70:CYS:HB3	2.11	0.50
4:B:701:ILE:HD11	4:B:703:ILE:HD11	1.94	0.50
7:E:15:ALA:O	7:E:19:VAL:HG23	2.10	0.50
11:I:65:ASP:HB3	11:I:68:LEU:HD12	1.93	0.50
12:J:48:ARG:HE	12:J:49:MET:CE	2.20	0.50
15:M:236:GLU:HG3	15:M:237:ASP:N	2.21	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:108:LYS:HA	18:P:111:ASN:CG	2.31	0.50
22:T:145:DT:H2"	22:T:146:DT:C6	2.45	0.50
22:T:147:DA:N3	22:T:148:DT:N3	2.60	0.50
24:V:333:LEU:O	24:V:337:ALA:CA	2.60	0.50
27:Y:218:ILE:CD1	27:Y:221:ARG:HH21	2.24	0.50
2:2:208:SER:CA	3:A:1172:LEU:CD1	2.89	0.50
3:A:89:PRO:HB2	3:A:204:THR:HB	1.93	0.50
3:A:344:ARG:CD	4:B:1118:PRO:O	2.47	0.50
3:A:870:GLU:HB2	7:E:204:THR:CG2	2.40	0.50
4:B:574:SER:HB3	4:B:591:ARG:HE	1.77	0.50
4:B:710:LEU:HA	4:B:733:HIS:HB3	1.93	0.50
10:H:17:PRO:HB3	10:H:24:CYS:SG	2.52	0.50
22:T:134:DT:C1'	22:T:135:DG:C8	2.95	0.50
27:Y:21:GLN:CB	27:Y:53:LEU:HD21	2.41	0.50
27:Y:32:LEU:HD12	27:Y:61:MET:HG3	1.93	0.50
27:Y:670:LEU:HD23	27:Y:672:GLY:H	1.76	0.50
1:1:447:GLN:CG	1:1:448:THR:H	2.20	0.50
1:1:534:LYS:HG3	1:1:534:LYS:O	2.11	0.50
2:2:296:PHE:HZ	3:A:1080:THR:OG1	1.94	0.50
18:P:130:PHE:HA	18:P:133:ILE:HG22	1.81	0.50
21:S:154:LYS:HA	21:S:154:LYS:NZ	0.37	0.50
21:S:166:LEU:HD12	21:S:167:ASP:N	2.25	0.50
21:S:184:TYR:O	21:S:221:ILE:CG2	2.58	0.50
21:S:208:LYS:HD2	21:S:208:LYS:N	2.25	0.50
22:T:134:DT:C2	22:T:135:DG:C8	3.00	0.50
24:V:59:LEU:HG	24:V:214:ILE:HG13	1.92	0.50
24:V:307:PHE:CE2	24:V:349:TYR:OH	2.65	0.50
27:Y:492:PHE:HE2	27:Y:707:ASN:OD1	1.86	0.50
27:Y:555:GLN:O	27:Y:555:GLN:CD	2.50	0.50
1:1:528:ASN:HA	1:1:532:GLY:C	2.32	0.50
3:A:714:PHE:O	3:A:718:VAL:HG23	2.12	0.50
4:B:373:ARG:HG2	4:B:566:LEU:HD23	1.92	0.50
18:P:106:PHE:N	18:P:106:PHE:CD1	2.80	0.50
20:R:144:ARG:NH1	20:R:144:ARG:CA	2.41	0.50
21:S:175:LYS:HA	21:S:175:LYS:HZ3	1.14	0.50
27:Y:106:LEU:HD13	27:Y:196:VAL:HG13	1.92	0.50
1:1:429:THR:C	1:1:432:PRO:HD2	2.31	0.50
1:1:485:ILE:HG12	1:1:510:LYS:HG2	1.93	0.50
2:2:269:PHE:HE2	2:2:306:TRP:CZ2	2.30	0.50
18:P:258:TYR:O	18:P:258:TYR:CD1	2.65	0.50
20:R:13:LEU:HD21	20:R:91:TYR:HE1	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:T:108:DG:C2'	22:T:109:DT:C5'	2.86	0.50
22:T:140:DC:C5	22:T:141:DC:N4	2.80	0.50
23:U:98:TYR:CE1	24:V:96:ARG:NH1	2.79	0.50
27:Y:37:ASN:ND2	27:Y:477:THR:HG21	2.26	0.50
27:Y:339:ILE:HG22	27:Y:343:LYS:HE3	1.93	0.50
27:Y:450:PHE:CE1	27:Y:475:PHE:CD2	3.00	0.50
27:Y:562:GLU:OE2	27:Y:599:LEU:HD11	2.11	0.50
1:1:424:PHE:HA	1:1:427:TRP:CZ3	2.47	0.50
1:1:621:LYS:HZ2	1:1:621:LYS:HB2	1.74	0.50
2:2:284:LEU:CD1	3:A:1080:THR:CG2	2.90	0.50
3:A:343:LYS:HB2	4:B:1117:GLN:OE1	2.11	0.50
3:A:416:ARG:HH12	18:P:37:ARG:CZ	2.22	0.50
4:B:70:ILE:HG22	4:B:89:GLU:HG2	1.93	0.50
4:B:1008:PRO:HB3	4:B:1087:PHE:HE1	1.77	0.50
18:P:87:LEU:HD13	18:P:126:VAL:HG22	1.85	0.50
18:P:118:VAL:O	18:P:118:VAL:CG2	2.58	0.50
18:P:174:ALA:O	18:P:178:ILE:HG12	2.12	0.50
18:P:269:ILE:HB	18:P:272:LYS:CG	2.41	0.50
20:R:27:LEU:CD2	20:R:129:THR:HB	2.42	0.50
20:R:28:VAL:HG21	20:R:57:LEU:CB	2.42	0.50
21:S:158:LYS:CD	21:S:162:LEU:HG	2.40	0.50
24:V:59:LEU:HD21	24:V:214:ILE:CG1	2.42	0.50
24:V:333:LEU:CB	24:V:337:ALA:HB3	2.42	0.50
27:Y:360:LEU:CB	27:Y:375:ARG:HD3	2.37	0.50
27:Y:464:SER:HA	27:Y:466:LEU:HD22	1.94	0.50
27:Y:467:ASP:CA	27:Y:470:PRO:HD2	2.41	0.50
27:Y:539:VAL:HG12	27:Y:623:ILE:HG12	1.92	0.50
27:Y:563:VAL:CG1	27:Y:564:TRP:N	2.75	0.50
1:1:303:ARG:CZ	1:1:471:GLN:HG3	2.41	0.49
1:1:305:GLU:OE1	1:1:330:CYS:HA	2.11	0.49
1:1:370:LEU:O	1:1:373:MET:HB3	2.11	0.49
1:1:473:VAL:HG12	1:1:481:GLU:HG3	1.94	0.49
3:A:192:GLY:C	22:T:117:DC:OP2	2.51	0.49
15:M:46:LEU:HD21	17:O:15:ILE:HA	1.93	0.49
18:P:106:PHE:N	18:P:106:PHE:HD1	2.09	0.49
27:Y:218:ILE:HG23	27:Y:219:ALA:N	2.27	0.49
27:Y:539:VAL:HG13	27:Y:623:ILE:HG12	1.93	0.49
27:Y:567:LYS:HG2	27:Y:568:LEU:HG	1.94	0.49
1:1:391:GLY:CA	1:1:394:LEU:HD13	2.42	0.49
1:1:403:ILE:CD1	1:1:484:PHE:CD2	2.94	0.49
1:1:723:GLN:O	1:1:727:VAL:HG22	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:132:LYS:HZ2	3:A:1415:SER:HB3	1.78	0.49
4:B:684:LEU:HA	4:B:689:LEU:HD12	1.93	0.49
18:P:42:ASP:C	18:P:55:LYS:HZ3	2.14	0.49
18:P:196:ILE:CG1	18:P:197:HIS:CD2	2.95	0.49
20:R:146:GLU:CD	20:R:146:GLU:N	2.64	0.49
22:T:108:DG:H2'	22:T:109:DT:C6	2.47	0.49
22:T:131:DC:H2"	22:T:132:DA:C8	2.46	0.49
22:T:150:DG:H2"	22:T:151:DG:H5'	1.94	0.49
27:Y:252:LEU:CD1	27:Y:383:LEU:HG	2.42	0.49
27:Y:495:MET:CG	27:Y:686:PHE:CB	2.73	0.49
27:Y:540:PHE:HB2	27:Y:622:MET:SD	2.52	0.49
1:1:350:PRO:HA	1:1:481:GLU:O	2.12	0.49
1:1:407:VAL:HG13	1:1:451:GLY:CA	2.42	0.49
1:1:425:LEU:HD23	1:1:425:LEU:C	2.31	0.49
1:1:476:PHE:CD1	1:1:487:LEU:CD1	2.95	0.49
1:1:490:VAL:CG2	1:1:531:ILE:HD13	2.43	0.49
1:1:494:PRO:HD3	1:1:527:LEU:HD21	1.94	0.49
1:1:712:ASP:OD1	25:W:449:ASP:N	2.43	0.49
2:2:252:ASN:HB3	3:A:1206:ASP:H	1.77	0.49
3:A:216:VAL:O	3:A:220:THR:HB	2.12	0.49
3:A:1193:LEU:HB2	3:A:1260:LEU:CD2	2.42	0.49
3:A:1442:ASP:OD1	9:G:63:PRO:CD	2.60	0.49
4:B:343:ILE:HG12	22:T:121:DG:H5'	1.81	0.49
4:B:433:GLN:CB	23:U:326:ARG:NE	2.76	0.49
5:C:116:LYS:HD3	5:C:140:ASN:HA	1.93	0.49
16:N:16:DC:H2'	16:N:17:DT:C7	2.42	0.49
16:N:28:DT:H72	24:V:292:ILE:CG2	2.43	0.49
18:P:252:VAL:HG23	18:P:289:PHE:CD2	2.47	0.49
22:T:136:DA:OP2	24:V:325:PRO:HG3	2.13	0.49
23:U:138:ARG:NH2	24:V:57:LEU:HB3	2.18	0.49
24:V:292:ILE:HD12	24:V:328:HIS:CE1	2.47	0.49
27:Y:237:ALA:HB1	27:Y:458:ILE:CG2	2.31	0.49
27:Y:666:LEU:HD23	27:Y:679:MET:CB	2.42	0.49
1:1:335:TYR:CB	1:1:336:PRO:HD3	2.42	0.49
1:1:457:TYR:O	1:1:477:LEU:HD21	2.12	0.49
3:A:268:ASP:OD1	18:P:91:ASN:ND2	2.31	0.49
4:B:449:ASN:ND2	18:P:138:ASP:OD2	2.33	0.49
16:N:57:DA:C2	16:N:58:DC:C2	3.00	0.49
18:P:173:ALA:O	18:P:176:ILE:HG12	2.12	0.49
18:P:279:VAL:HA	18:P:302:LEU:CD2	2.30	0.49
20:R:147:PHE:HB2	20:R:156:LEU:CG	2.43	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:130:TRP:CZ3	24:V:337:ALA:C	2.85	0.49
21:S:237:LYS:HZ2	21:S:241:PRO:CG	2.21	0.49
22:T:147:DA:C2	22:T:148:DT:N3	2.81	0.49
24:V:314:SER:CB	24:V:347:PHE:O	2.60	0.49
27:Y:360:LEU:HD11	27:Y:364:LYS:HD2	1.94	0.49
1:1:328:LYS:HE3	1:1:329:ARG:HE	1.77	0.49
2:2:290:ASP:C	4:B:766:ARG:HH22	2.14	0.49
3:A:1095:THR:HG23	3:A:1113:THR:HG23	1.92	0.49
16:N:36:DT:H2"	16:N:37:DA:H8	1.68	0.49
16:N:46:DC:H2"	16:N:47:DA:H5'	1.94	0.49
18:P:126:VAL:HG13	18:P:127:GLN:N	2.27	0.49
18:P:148:ASP:OD1	18:P:149:CYS:N	2.45	0.49
18:P:288:LEU:CD2	18:P:328:LEU:CD1	2.79	0.49
18:P:322:LYS:N	18:P:322:LYS:NZ	2.59	0.49
20:R:126:ILE:HB	20:R:154:GLU:CG	2.43	0.49
21:S:134:TYR:CD2	21:S:147:LEU:HD23	2.47	0.49
21:S:203:LYS:CG	21:S:204:GLY:N	2.54	0.49
21:S:233:LEU:CD1	21:S:246:TYR:C	2.80	0.49
23:U:374:VAL:HG21	24:V:73:LEU:HD11	1.95	0.49
23:U:374:VAL:HG11	24:V:75:MET:SD	2.53	0.49
27:Y:124:ARG:CD	27:Y:374:LEU:HD23	2.42	0.49
2:2:288:SER:HA	3:A:827:THR:HG21	1.93	0.49
3:A:12:ARG:O	4:B:1194:ILE:HG22	2.12	0.49
4:B:211:VAL:HG13	4:B:495:LEU:HD23	1.93	0.49
4:B:1072:MET:HB3	4:B:1081:LEU:HD12	1.94	0.49
8:F:97:ARG:NH1	9:G:15:PRO:CB	2.76	0.49
16:N:24:DG:H4'	19:Q:118:SER:OG	2.10	0.49
16:N:61:DA:C2'	16:N:62:DA:C5'	2.86	0.49
18:P:113:ALA:O	18:P:116:LYS:CG	2.56	0.49
18:P:135:MET:O	18:P:138:ASP:OD1	2.30	0.49
18:P:313:TYR:CA	18:P:316:LEU:HD21	2.40	0.49
20:R:13:LEU:CD2	20:R:91:TYR:CE1	2.96	0.49
21:S:210:LEU:HB3	21:S:214:TRP:CZ3	2.47	0.49
23:U:342:LEU:HD12	23:U:413:MET:HE3	1.94	0.49
24:V:340:VAL:O	24:V:340:VAL:HG13	2.11	0.49
27:Y:20:GLU:O	27:Y:24:TYR:CG	2.66	0.49
27:Y:346:MET:CA	27:Y:384:LEU:CD2	2.88	0.49
27:Y:360:LEU:HD12	27:Y:375:ARG:HD2	1.94	0.49
27:Y:450:PHE:CZ	27:Y:475:PHE:CG	3.01	0.49
1:1:476:PHE:N	1:1:485:ILE:HG22	2.28	0.49
2:2:190:THR:CA	7:E:50:MET:SD	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:192:GLY:HA3	22:T:116:DG:C3'	2.42	0.49
8:F:97:ARG:HH12	9:G:15:PRO:CB	2.26	0.49
16:N:24:DG:C3'	19:Q:118:SER:HB3	2.41	0.49
18:P:146:VAL:H	18:P:182:ARG:HD3	1.78	0.49
18:P:157:CYS:SG	18:P:171:ILE:HG12	2.53	0.49
18:P:160:GLU:OE2	18:P:162:THR:HB	2.13	0.49
18:P:174:ALA:HB2	18:P:206:THR:HG23	1.95	0.49
18:P:254:THR:CA	18:P:257:GLU:CD	2.81	0.49
20:R:144:ARG:O	20:R:145:THR:CB	2.61	0.49
20:R:147:PHE:HB2	20:R:156:LEU:HD21	1.94	0.49
21:S:148:LEU:HB2	21:S:154:LYS:CD	2.43	0.49
21:S:161:GLU:O	21:S:164:LYS:HD3	2.11	0.49
22:T:98:DA:H2"	22:T:99:DC:OP2	2.12	0.49
1:1:410:LEU:HD13	1:1:477:LEU:HD11	1.95	0.49
3:A:154:SER:HB3	3:A:162:VAL:HG23	1.95	0.49
3:A:1116:LEU:HG	3:A:1327:ILE:HD11	1.95	0.49
4:B:899:ILE:HD11	4:B:911:ILE:HA	1.94	0.49
16:N:59:DT:H2"	16:N:60:DA:H8	1.76	0.49
16:N:59:DT:C4	16:N:60:DA:C6	3.00	0.49
18:P:150:ALA:HA	18:P:178:ILE:HD11	1.88	0.49
18:P:195:LEU:HD23	18:P:196:ILE:HB	1.94	0.49
18:P:256:ALA:N	18:P:257:GLU:OE1	2.45	0.49
19:Q:175:LEU:HD23	19:Q:175:LEU:O	2.13	0.49
20:R:44:LYS:HZ3	20:R:49:ILE:HB	1.78	0.49
1:1:405:LYS:NZ	1:1:483:GLY:HA3	2.27	0.49
1:1:408:ILE:HG22	1:1:484:PHE:O	2.13	0.49
1:1:436:ALA:HB3	1:1:452:LEU:HD21	1.93	0.49
1:1:508:HIS:CE1	1:1:509:ALA:HB2	2.48	0.49
4:B:62:ILE:HG21	4:B:417:PHE:HD2	1.78	0.49
8:F:92:ARG:HH21	9:G:63:PRO:CA	2.24	0.49
18:P:190:LYS:HD3	18:P:242:PHE:CZ	2.47	0.49
18:P:209:ILE:HG13	18:P:210:MET:N	2.27	0.49
18:P:225:ILE:CD1	18:P:226:ASP:C	2.80	0.49
18:P:262:LYS:HB3	18:P:323:LEU:HD23	1.94	0.49
20:R:141:ASN:ND2	20:R:142:PHE:CE1	2.73	0.49
21:S:142:VAL:HG22	21:S:147:LEU:CD1	2.43	0.49
21:S:219:GLU:C	21:S:223:GLN:OE1	2.43	0.49
24:V:306:LEU:HD22	24:V:318:LEU:HD23	1.87	0.49
27:Y:129:VAL:CG1	27:Y:194:PHE:CE1	2.96	0.49
1:1:410:LEU:HD21	1:1:457:TYR:CE2	2.48	0.49
3:A:1004:ASN:CG	7:E:167:ARG:HD2	2.33	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:249:ARG:NH1	4:B:418:LYS:CD	2.76	0.49
20:R:123:MET:CE	20:R:130:LYS:CD	2.60	0.49
22:T:138:DA:C2'	22:T:139:DC:C5	2.96	0.49
1:1:380:ARG:CB	1:1:535:LEU:HD22	2.43	0.48
1:1:474:MET:HG3	1:1:505:ILE:CG2	2.43	0.48
1:1:516:THR:HG23	1:1:681:ARG:HE	1.77	0.48
1:1:609:SER:OG	1:1:615:LEU:HD13	2.13	0.48
2:2:274:CYS:O	2:2:276:GLU:HG3	2.13	0.48
3:A:1402:PHE:CE1	3:A:1403:GLU:HG3	2.48	0.48
4:B:977:GLY:HA3	4:B:1099:VAL:HB	1.95	0.48
9:G:1:MET:CG	9:G:2:PHE:N	2.76	0.48
9:G:142:ARG:HB3	9:G:171:ILE:HD12	1.95	0.48
18:P:289:PHE:O	18:P:331:ASN:HB3	2.12	0.48
19:Q:136:SER:HB3	19:Q:152:PHE:HE1	1.78	0.48
19:Q:141:ARG:HH12	19:Q:144:GLN:NE2	2.11	0.48
24:V:341:LYS:HB3	24:V:345:TYR:HD1	1.78	0.48
27:Y:353:SER:CB	27:Y:378:SER:HA	2.41	0.48
1:1:408:ILE:HG23	1:1:485:ILE:HA	1.94	0.48
1:1:476:PHE:CE1	1:1:487:LEU:CD2	2.94	0.48
2:2:253:LEU:HB3	3:A:1132:LYS:NZ	2.28	0.48
3:A:16:GLU:CD	6:D:14:ARG:HH12	2.16	0.48
3:A:929:LEU:HD21	3:A:983:ILE:HG21	1.95	0.48
18:P:280:VAL:HG11	18:P:312:GLY:C	2.34	0.48
18:P:329:ILE:O	18:P:330:ALA:CB	2.60	0.48
20:R:64:ASP:HB2	20:R:66:LEU:HD23	1.94	0.48
21:S:219:GLU:HB3	21:S:222:ASN:ND2	2.19	0.48
24:V:333:LEU:HD21	24:V:349:TYR:CE2	2.48	0.48
27:Y:290:VAL:CG2	27:Y:291:GLN:N	2.71	0.48
1:1:404:LYS:HA	1:1:448:THR:HG21	1.94	0.48
1:1:474:MET:HG2	1:1:482:TRP:O	2.13	0.48
1:1:516:THR:CG2	1:1:681:ARG:HE	2.26	0.48
2:2:254:TYR:O	2:2:256:ALA:N	2.47	0.48
3:A:245:PRO:O	4:B:1114:LEU:HD12	2.12	0.48
4:B:60:GLN:OE1	4:B:95:ILE:HG22	2.12	0.48
4:B:441:ASP:O	4:B:443:ASN:N	2.47	0.48
4:B:885:MET:CA	18:P:33:LYS:HZ2	2.18	0.48
5:C:38:ILE:HG13	5:C:176:ILE:HD12	1.95	0.48
5:C:99:LEU:HB2	5:C:157:CYS:HB2	1.94	0.48
10:H:40:LEU:HD13	10:H:123:MET:HG3	1.95	0.48
18:P:94:THR:HG22	18:P:110:LEU:HD11	1.95	0.48
18:P:164:LYS:HG2	18:P:166:LYS:HA	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:288:LEU:O	18:P:330:ALA:HA	2.13	0.48
20:R:44:LYS:HE3	20:R:54:LEU:CD1	2.42	0.48
20:R:148:LEU:O	20:R:149:CYS:O	2.32	0.48
21:S:181:LEU:HD23	21:S:181:LEU:O	2.14	0.48
23:U:119:LEU:HD11	24:V:135:PHE:CD2	2.48	0.48
23:U:342:LEU:HA	23:U:413:MET:SD	2.52	0.48
23:U:375:LEU:CD1	24:V:134:VAL:HG21	2.42	0.48
27:Y:679:MET:CE	27:Y:681:LEU:HD11	2.44	0.48
1:1:584:ASN:CG	1:1:586:THR:CG2	2.82	0.48
5:C:75:MET:HB3	5:C:128:ASN:HB3	1.95	0.48
5:C:114:TYR:HB2	5:C:116:LYS:HG2	1.94	0.48
6:D:195:ILE:HG22	6:D:198:LEU:HG	1.94	0.48
14:L:27:LEU:HD13	14:L:37:LYS:HG2	1.95	0.48
18:P:34:ILE:HG13	18:P:43:VAL:CB	2.32	0.48
19:Q:164:CYS:HB2	19:Q:212:ILE:HB	1.95	0.48
19:Q:183:SER:CB	19:Q:193:LEU:HD21	2.43	0.48
21:S:148:LEU:C	21:S:154:LYS:HE2	2.34	0.48
23:U:378:VAL:HG22	23:U:384:PHE:CZ	2.48	0.48
24:V:94:LYS:O	24:V:106:LEU:HD12	2.12	0.48
27:Y:269:GLU:O	27:Y:269:GLU:HG2	2.12	0.48
1:1:436:ALA:HB2	1:1:452:LEU:HD21	1.95	0.48
2:2:248:ILE:CB	3:A:1203:ASN:CG	2.47	0.48
2:2:254:TYR:C	2:2:256:ALA:H	2.17	0.48
3:A:260:ASP:OD1	3:A:328:ARG:NH2	2.42	0.48
3:A:568:PRO:HG2	10:H:46:LEU:HD12	1.95	0.48
3:A:1279:ILE:HG23	3:A:1308:THR:HG23	1.96	0.48
3:A:1312:ASN:O	3:A:1316:VAL:HG23	2.12	0.48
4:B:948:ILE:HD13	14:L:67:PHE:HE2	1.77	0.48
13:K:63:VAL:HG12	13:K:71:PHE:HB3	1.96	0.48
16:N:48:DG:C2	16:N:49:DG:C5	3.01	0.48
18:P:268:GLU:C	18:P:269:ILE:CD1	2.73	0.48
20:R:138:GLN:HG3	20:R:139:LEU:N	2.28	0.48
21:S:160:ILE:C	21:S:160:ILE:CD1	2.73	0.48
21:S:172:ASP:OD2	21:S:179:LYS:CG	2.55	0.48
24:V:63:ARG:HD2	24:V:215:VAL:O	2.14	0.48
27:Y:495:MET:HG2	27:Y:686:PHE:CD1	2.44	0.48
27:Y:529:PHE:CD1	27:Y:529:PHE:N	2.79	0.48
1:1:305:GLU:HB2	1:1:327:LYS:CE	2.43	0.48
1:1:352:LEU:H	1:1:352:LEU:CD2	2.25	0.48
4:B:105:SER:CB	18:P:183:ALA:HB1	2.30	0.48
4:B:258:LEU:HB2	4:B:385:LEU:HD21	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:640:VAL:HG22	4:B:651:LEU:HG	1.95	0.48
4:B:806:THR:HB	4:B:809:MET:HG3	1.94	0.48
10:H:80:ARG:HG2	13:K:57:LEU:HD22	1.95	0.48
14:L:68:GLU:HB2	14:L:70:ARG:HD2	1.96	0.48
18:P:196:ILE:HG13	18:P:197:HIS:CD2	2.48	0.48
20:R:139:LEU:O	20:R:147:PHE:HA	2.14	0.48
21:S:129:LEU:HB3	24:V:347:PHE:CD2	2.49	0.48
21:S:187:HIS:NE2	21:S:225:GLU:CB	2.71	0.48
22:T:143:DT:H2'	22:T:144:DT:H5'	1.95	0.48
24:V:73:LEU:HD23	24:V:73:LEU:N	2.29	0.48
27:Y:86:LEU:HD13	27:Y:103:PHE:HZ	1.78	0.48
27:Y:111:ARG:NH2	27:Y:197:ARG:HH12	2.12	0.48
27:Y:128:VAL:HG22	27:Y:373:PRO:CD	2.24	0.48
27:Y:325:ILE:O	27:Y:408:LEU:HD12	2.13	0.48
27:Y:343:LYS:HA	27:Y:346:MET:HE2	1.94	0.48
27:Y:533:THR:HG21	27:Y:708:LEU:HD22	1.96	0.48
27:Y:567:LYS:HG2	27:Y:568:LEU:H	1.77	0.48
1:1:348:ARG:HB3	1:1:350:PRO:HD3	1.96	0.48
3:A:40:THR:HG21	3:A:259:GLU:OE2	2.12	0.48
3:A:1172:LEU:C	3:A:1174:PHE:H	2.16	0.48
4:B:486:TYR:HB3	4:B:1096:ARG:NE	2.28	0.48
10:H:115:TYR:CE1	10:H:124:ARG:HG3	2.49	0.48
16:N:27:DG:H2"	16:N:28:DT:H5'	1.94	0.48
18:P:339:LEU:HD12	18:P:339:LEU:N	2.29	0.48
19:Q:114:LEU:CD1	22:T:143:DT:O2	2.58	0.48
27:Y:21:GLN:CA	27:Y:53:LEU:HD21	2.42	0.48
27:Y:49:THR:O	27:Y:55:LEU:HG	2.14	0.48
27:Y:408:LEU:HD22	27:Y:634:ILE:CG1	2.41	0.48
1:1:425:LEU:CB	1:1:429:THR:HA	2.44	0.48
1:1:477:LEU:HD12	1:1:477:LEU:N	2.28	0.48
1:1:619:ALA:CA	1:1:622:MET:HE2	2.44	0.48
3:A:71:GLN:O	3:A:73:GLY:N	2.47	0.48
3:A:956:LEU:HD21	3:A:1017:LEU:HG	1.96	0.48
3:A:1444:MET:CE	8:F:135:ARG:HB2	2.39	0.48
4:B:219:ALA:HB2	4:B:405:ARG:HG2	1.95	0.48
4:B:840:ILE:HG21	4:B:994:TYR:HD2	1.79	0.48
16:N:57:DA:C2'	16:N:58:DC:C5	2.94	0.48
17:O:23:LEU:HD23	17:O:41:LEU:HD13	1.95	0.48
17:O:74:ASP:OD2	17:O:117:ASN:HB2	2.13	0.48
21:S:136:GLN:NE2	21:S:137:LYS:NZ	2.61	0.48
27:Y:289:LEU:CD2	27:Y:348:VAL:HG12	2.30	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:413:GLU:O	27:Y:414:GLU:CB	2.61	0.48
2:2:236:LEU:CA	2:2:242:LYS:NZ	2.77	0.48
2:2:268:ARG:HG3	3:A:734:GLU:OE1	2.14	0.48
10:H:23:VAL:HG11	10:H:121:LEU:HD22	1.95	0.48
16:N:19:DT:C4	16:N:20:DA:N6	2.82	0.48
16:N:59:DT:H2"	16:N:60:DA:O5'	2.14	0.48
18:P:143:PRO:CB	18:P:182:ARG:HH21	2.00	0.48
20:R:44:LYS:HE3	20:R:54:LEU:CD2	2.43	0.48
21:S:175:LYS:HA	21:S:175:LYS:NZ	0.27	0.48
22:T:134:DT:N1	22:T:135:DG:N7	2.61	0.48
27:Y:463:ILE:HD11	27:Y:469:TYR:CE1	2.48	0.48
27:Y:493:LEU:HD11	27:Y:666:LEU:HD21	1.94	0.48
27:Y:495:MET:CG	27:Y:686:PHE:CD1	2.93	0.48
27:Y:693:LEU:HG	27:Y:696:TRP:CE2	2.48	0.48
1:1:367:GLU:OE1	1:1:367:GLU:HA	2.14	0.48
2:2:257:GLN:CG	3:A:1284:MET:HB2	2.39	0.48
3:A:261:ASP:HB3	3:A:322:VAL:HG13	1.95	0.48
3:A:280:GLU:HG2	3:A:289:ILE:HD13	1.95	0.48
3:A:875:ALA:HB2	3:A:1366:ARG:HD2	1.95	0.48
4:B:800:GLN:HB2	4:B:821:GLN:HA	1.96	0.48
7:E:176:PRO:O	7:E:212:ARG:HA	2.14	0.48
18:P:42:ASP:H	18:P:55:LYS:HG2	1.78	0.48
18:P:167:SER:CB	18:P:202:GLU:OE2	2.62	0.48
18:P:288:LEU:O	18:P:288:LEU:CG	2.61	0.48
19:Q:173:GLU:H	19:Q:173:GLU:CD	2.15	0.48
21:S:127:LYS:CG	21:S:153:MET:HE3	2.39	0.48
21:S:160:ILE:HD12	21:S:161:GLU:HB2	1.95	0.48
24:V:128:VAL:C	24:V:130:GLU:H	2.16	0.48
27:Y:120:VAL:HG22	27:Y:121:SER:N	2.29	0.48
27:Y:248:LEU:HD12	27:Y:439:CYS:SG	2.54	0.48
1:1:313:VAL:HG12	1:1:314:HIS:CE1	2.48	0.47
1:1:372:LYS:O	1:1:535:LEU:HD23	2.14	0.47
1:1:394:LEU:H	1:1:394:LEU:CD1	2.27	0.47
1:1:421:ARG:NE	1:1:430:LEU:HD21	2.29	0.47
1:1:447:GLN:HG3	1:1:448:THR:H	1.78	0.47
1:1:447:GLN:HG3	1:1:448:THR:N	2.28	0.47
1:1:494:PRO:HG3	1:1:527:LEU:HD21	1.94	0.47
3:A:579:SER:HA	3:A:582:ILE:HG13	1.96	0.47
18:P:269:ILE:CD1	18:P:269:ILE:N	2.77	0.47
18:P:288:LEU:CD1	18:P:328:LEU:HD11	2.44	0.47
18:P:294:THR:O	18:P:298:VAL:HG23	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:T:142:DC:H2"	22:T:143:DT:H5'	1.89	0.47
24:V:105:THR:HA	24:V:122:LEU:HD13	1.95	0.47
27:Y:237:ALA:O	27:Y:240:ILE:HG12	2.14	0.47
27:Y:495:MET:CB	27:Y:686:PHE:CZ	2.93	0.47
2:2:253:LEU:CD1	3:A:1129:GLU:OE1	2.54	0.47
3:A:89:PRO:HB2	3:A:204:THR:CB	2.44	0.47
3:A:264:PHE:HE2	18:P:90:ASN:O	1.97	0.47
3:A:411:ASP:CG	18:P:51:VAL:CG1	2.67	0.47
4:B:542:MET:HG3	4:B:747:MET:HB3	1.95	0.47
16:N:42:DT:O4	22:T:124:DA:C6	2.67	0.47
18:P:104:MET:O	18:P:107:THR:CG2	2.51	0.47
18:P:206:THR:HA	18:P:209:ILE:HG12	1.96	0.47
20:R:135:GLU:O	20:R:138:GLN:HG3	2.14	0.47
21:S:157:ASP:C	21:S:157:ASP:OD1	2.53	0.47
21:S:161:GLU:HB3	21:S:162:LEU:CD2	2.44	0.47
22:T:117:DC:H2'	22:T:118:DC:H6	1.77	0.47
22:T:142:DC:H2"	22:T:143:DT:C5'	2.43	0.47
23:U:105:ALA:HB2	24:V:92:LEU:HD23	1.95	0.47
24:V:116:ILE:HA	24:V:117:PRO:HD3	1.56	0.47
27:Y:253:THR:HG22	27:Y:416:PHE:CB	2.44	0.47
27:Y:359:PHE:CZ	27:Y:363:LEU:HD11	2.48	0.47
2:2:252:ASN:HD22	3:A:1206:ASP:HB2	1.78	0.47
2:2:269:PHE:CZ	2:2:308:PHE:CE1	3.03	0.47
3:A:11:LEU:HA	4:B:1193:GLN:HG2	1.95	0.47
3:A:91:PHE:CB	3:A:96:ILE:CG1	2.91	0.47
4:B:705:MET:H	4:B:710:LEU:HD12	1.79	0.47
4:B:1135:ARG:HG2	4:B:1139:ILE:HD11	1.94	0.47
4:B:1215:ARG:NH2	6:D:15:LEU:HD21	2.29	0.47
16:N:43:DA:H1'	16:N:44:DA:H5'	1.95	0.47
18:P:142:LEU:HD23	18:P:147:LYS:CG	1.92	0.47
18:P:160:GLU:O	18:P:160:GLU:CG	2.62	0.47
18:P:188:THR:CG2	18:P:245:HIS:CE1	2.97	0.47
18:P:251:GLN:O	18:P:254:THR:HG23	2.14	0.47
27:Y:136:MET:HE1	27:Y:159:HIS:CD2	2.48	0.47
27:Y:384:LEU:HD13	27:Y:384:LEU:C	2.34	0.47
27:Y:492:PHE:HB3	27:Y:678:VAL:HG22	1.96	0.47
1:1:466:ARG:NE	1:1:475:ASP:HB3	2.29	0.47
1:1:487:LEU:HD21	1:1:531:ILE:CD1	2.44	0.47
1:1:524:ILE:HD13	1:1:524:ILE:H	1.80	0.47
3:A:285:PRO:O	3:A:287:HIS:N	2.46	0.47
3:A:1345:ARG:HG3	3:A:1376:THR:HG21	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:M:250:LYS:HE2	15:M:252:THR:CG2	2.44	0.47
16:N:62:DA:H1'	16:N:63:DG:H5'	1.96	0.47
18:P:134:THR:O	18:P:138:ASP:OD2	2.32	0.47
18:P:185:VAL:CG1	18:P:186:ALA:N	2.76	0.47
20:R:47:LEU:HD22	20:R:130:LYS:HB2	1.96	0.47
22:T:155:DC:H2"	22:T:156:DT:H5'	1.94	0.47
23:U:94:ASP:N	23:U:95:PRO:HD3	2.28	0.47
24:V:333:LEU:CD2	24:V:349:TYR:CE2	2.96	0.47
27:Y:539:VAL:HG11	27:Y:623:ILE:CG1	2.44	0.47
27:Y:627:PHE:HD1	27:Y:654:LEU:CD1	2.27	0.47
18:P:43:VAL:CG2	18:P:55:LYS:HZ1	2.26	0.47
18:P:164:LYS:O	18:P:165:GLY:C	2.52	0.47
20:R:17:VAL:HG23	20:R:26:VAL:HG22	1.97	0.47
21:S:143:LEU:CD1	21:S:144:VAL:H	2.18	0.47
21:S:149:ASP:OD1	21:S:154:LYS:CD	2.63	0.47
22:T:99:DC:H2"	22:T:100:DC:OP2	2.14	0.47
22:T:149:DA:H1'	22:T:150:DG:C8	2.48	0.47
23:U:373:TYR:CZ	24:V:72:ARG:NH1	2.71	0.47
27:Y:54:SER:O	27:Y:57:ILE:CG2	2.57	0.47
27:Y:171:LEU:CD2	27:Y:181:LEU:HD22	2.43	0.47
1:1:384:ILE:HD12	1:1:384:ILE:N	2.30	0.47
1:1:474:MET:HB3	1:1:474:MET:HE2	1.54	0.47
1:1:499:ARG:HG2	1:1:530:LEU:CD1	2.45	0.47
4:B:756:ILE:O	4:B:759:PRO:HD3	2.15	0.47
6:D:8:PHE:HZ	6:D:37:GLN:NE2	2.13	0.47
10:H:123:MET:HE1	10:H:142:LEU:HD11	1.97	0.47
18:P:63:TRP:CD1	18:P:82:ALA:N	2.79	0.47
18:P:160:GLU:CD	18:P:160:GLU:C	2.72	0.47
19:Q:145:LYS:HA	19:Q:145:LYS:CE	2.36	0.47
20:R:37:VAL:CG1	20:R:88:TYR:HB2	2.44	0.47
20:R:126:ILE:HG23	20:R:154:GLU:HG3	1.89	0.47
20:R:126:ILE:O	20:R:128:LEU:CD2	2.61	0.47
22:T:130:DA:N7	22:T:131:DC:C4	2.82	0.47
27:Y:162:LEU:HD13	27:Y:194:PHE:HB3	1.97	0.47
27:Y:360:LEU:CD1	27:Y:364:LYS:CD	2.90	0.47
27:Y:495:MET:CB	27:Y:686:PHE:CD2	2.74	0.47
1:1:420:TRP:HB3	1:1:424:PHE:CZ	2.48	0.47
1:1:424:PHE:CE1	1:1:451:GLY:N	2.82	0.47
1:1:446:PHE:CB	1:1:452:LEU:CD1	2.93	0.47
1:1:446:PHE:CA	1:1:452:LEU:HD22	2.43	0.47
1:1:518:VAL:HG12	1:1:519:ARG:N	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:528:ASN:ND2	1:1:533:PRO:HA	2.30	0.47
3:A:66:LYS:H	18:P:18:LEU:HD22	1.00	0.47
3:A:91:PHE:CD2	3:A:179:LEU:O	2.68	0.47
3:A:227:VAL:CG1	6:D:16:LYS:CE	2.92	0.47
3:A:475:THR:HG21	4:B:836:GLU:OE2	2.14	0.47
4:B:693:ILE:HG21	4:B:701:ILE:HD13	1.95	0.47
12:J:9:SER:HB2	12:J:45:CYS:HB2	1.95	0.47
16:N:57:DA:H2"	16:N:58:DC:C6	2.49	0.47
18:P:22:LEU:HD11	18:P:34:ILE:HD13	1.72	0.47
18:P:45:CYS:C	18:P:47:LEU:H	2.17	0.47
18:P:148:ASP:HA	18:P:151:LYS:HE3	1.94	0.47
18:P:173:ALA:O	18:P:176:ILE:CG1	2.62	0.47
18:P:187:ARG:CG	18:P:189:PHE:CA	2.92	0.47
18:P:250:MET:HA	18:P:253:THR:OG1	2.14	0.47
18:P:325:ASP:CB	18:P:326:PRO:HD3	2.45	0.47
21:S:130:TRP:CH2	24:V:337:ALA:C	2.88	0.47
21:S:156:ASP:C	21:S:159:VAL:HG13	2.31	0.47
23:U:374:VAL:CG2	24:V:75:MET:SD	2.98	0.47
27:Y:615:GLN:N	27:Y:618:ARG:HE	2.12	0.47
1:1:310:ILE:HG12	1:1:313:VAL:HG23	1.97	0.47
1:1:353:ASP:HA	1:1:447:GLN:CD	2.34	0.47
1:1:410:LEU:HD11	1:1:457:TYR:N	2.30	0.47
1:1:519:ARG:N	1:1:524:ILE:HG21	2.29	0.47
1:1:716:MET:O	1:1:719:SER:HB2	2.15	0.47
3:A:275:SER:O	3:A:279:LEU:HD12	2.14	0.47
3:A:411:ASP:HB3	18:P:50:LEU:CG	2.45	0.47
3:A:457:ALA:HB3	3:A:506:ALA:HA	1.97	0.47
4:B:122:LEU:HD22	4:B:958:GLN:HG2	1.96	0.47
5:C:58:LEU:HD21	12:J:57:ILE:HD12	1.97	0.47
15:M:277:GLN:HA	17:O:56:THR:CG2	2.45	0.47
16:N:27:DG:H2"	16:N:28:DT:C5'	2.44	0.47
17:O:4:PRO:CG	24:V:357:LYS:HB3	2.37	0.47
20:R:13:LEU:CD2	20:R:13:LEU:H	2.27	0.47
20:R:69:ILE:HG22	20:R:70:HIS:N	2.28	0.47
20:R:152:CYS:O	20:R:154:GLU:N	2.48	0.47
21:S:130:TRP:CB	21:S:151:LEU:HD21	2.40	0.47
21:S:131:ALA:CB	21:S:151:LEU:HD12	2.45	0.47
21:S:244:VAL:N	21:S:245:TRP:CE3	2.83	0.47
23:U:376:LEU:HD23	23:U:386:MET:HB3	1.96	0.47
24:V:87:LEU:O	24:V:88:HIS:CG	2.68	0.47
27:Y:473:LEU:O	27:Y:474:ASN:CB	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:496:ILE:CG1	27:Y:682:ALA:HA	2.44	0.47
1:1:446:PHE:CB	1:1:452:LEU:CD2	2.92	0.47
2:2:257:GLN:CA	3:A:1284:MET:H	2.27	0.47
3:A:257:ARG:HB2	3:A:257:ARG:NH1	2.29	0.47
3:A:738:LYS:HA	10:H:19:ARG:HH12	1.79	0.47
9:G:85:GLU:HB3	9:G:147:ILE:HD12	1.96	0.47
16:N:21:DA:C2'	16:N:22:DA:C5'	2.86	0.47
18:P:107:THR:CG2	18:P:108:LYS:N	2.78	0.47
18:P:143:PRO:O	18:P:147:LYS:N	2.47	0.47
20:R:135:GLU:O	20:R:138:GLN:CG	2.63	0.47
22:T:145:DT:C2'	22:T:146:DT:C7	2.93	0.47
27:Y:350:HIS:H	27:Y:384:LEU:HG	1.80	0.47
27:Y:532:ILE:O	27:Y:534:PRO:HD2	2.12	0.47
1:1:327:LYS:HG3	1:1:506:ALA:HA	1.97	0.47
1:1:434:ASN:O	1:1:452:LEU:HD12	2.14	0.47
2:2:254:TYR:O	3:A:706:HIS:CB	2.61	0.47
3:A:34:LYS:N	3:A:57:ARG:HH11	2.13	0.47
3:A:93:VAL:HG13	3:A:301:ALA:HB1	1.97	0.47
3:A:399:HIS:O	3:A:401:GLY:N	2.48	0.47
3:A:836:TYR:CE2	3:A:840:ARG:HD2	2.50	0.47
4:B:345:LYS:HA	4:B:348:ARG:HD2	1.96	0.47
8:F:96:THR:CG2	9:G:66:GLY:CA	2.93	0.47
16:N:24:DG:H2"	16:N:25:DG:O5'	2.15	0.47
18:P:224:LYS:NZ	18:P:229:ASN:CG	2.60	0.47
22:T:148:DT:H3'	22:T:148:DT:H6	1.80	0.47
24:V:109:ASN:CG	24:V:111:ASN:OD1	2.53	0.47
27:Y:46:THR:O	27:Y:46:THR:HG22	2.15	0.47
27:Y:134:ARG:O	27:Y:138:ASN:ND2	2.48	0.47
1:1:310:ILE:HG21	1:1:313:VAL:CG2	2.44	0.46
1:1:410:LEU:CD1	1:1:477:LEU:HD11	2.45	0.46
1:1:484:PHE:CD1	1:1:485:ILE:N	2.83	0.46
1:1:659:ASP:CG	1:1:686:ARG:HD3	2.36	0.46
2:2:208:SER:CA	3:A:1172:LEU:HD13	2.46	0.46
2:2:292:PRO:HG2	4:B:766:ARG:NE	2.30	0.46
3:A:883:LEU:HD23	3:A:1021:LEU:HB2	1.97	0.46
3:A:1446:ASP:HB3	3:A:1449:SER:OG	2.15	0.46
4:B:291:ILE:HD12	4:B:291:ILE:N	2.30	0.46
4:B:1166:CYS:O	4:B:1168:LEU:N	2.42	0.46
6:D:5:THR:HG21	9:G:74:TYR:OH	2.15	0.46
16:N:42:DT:C4	22:T:124:DA:N1	2.82	0.46
18:P:269:ILE:CD1	18:P:315:ILE:CG2	2.94	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:17:VAL:HG12	20:R:66:LEU:HD21	1.96	0.46
22:T:122:DT:H2'	22:T:123:DT:H72	1.93	0.46
23:U:135:LEU:C	23:U:136:PRO:HD3	2.25	0.46
24:V:310:TYR:HD2	24:V:312:TYR:O	1.98	0.46
24:V:356:LYS:HG3	24:V:358:LEU:O	2.15	0.46
27:Y:39:ILE:HG12	27:Y:458:ILE:CB	2.39	0.46
27:Y:248:LEU:CD1	27:Y:439:CYS:SG	3.03	0.46
27:Y:321:ILE:CD1	27:Y:409:ILE:HG21	2.42	0.46
27:Y:621:LEU:HG	27:Y:680:VAL:HG12	1.97	0.46
1:1:445:MET:SD	1:1:473:VAL:HG11	2.54	0.46
1:1:478:THR:CG2	1:1:479:GLY:H	2.21	0.46
8:F:92:ARG:HH22	9:G:63:PRO:CB	1.84	0.46
11:I:106:CYS:SG	11:I:108:HIS:HB3	2.55	0.46
16:N:65:DG:H1'	16:N:66:DG:C5'	2.40	0.46
17:O:6:TYR:N	17:O:6:TYR:CD1	2.83	0.46
21:S:207:CYS:CB	21:S:208:LYS:HE2	2.37	0.46
27:Y:108:LEU:HD12	27:Y:196:VAL:HG11	1.95	0.46
27:Y:487:LEU:HD23	27:Y:490:LYS:HE3	1.96	0.46
1:1:305:GLU:HA	1:1:327:LYS:NZ	2.30	0.46
1:1:476:PHE:CE1	1:1:502:VAL:CG2	2.94	0.46
1:1:477:LEU:HA	1:1:501:VAL:CG2	2.45	0.46
3:A:11:LEU:HD13	4:B:1195:HIS:NE2	2.31	0.46
4:B:951:GLN:OE1	14:L:57:LEU:CD2	2.62	0.46
18:P:26:GLU:OE1	18:P:50:LEU:HD21	1.96	0.46
18:P:86:LEU:HD21	18:P:152:GLU:CG	2.44	0.46
18:P:173:ALA:HA	18:P:176:ILE:HD13	1.94	0.46
18:P:207:LEU:O	18:P:210:MET:CG	2.62	0.46
18:P:312:GLY:O	18:P:316:LEU:HD22	2.16	0.46
20:R:82:VAL:HG22	20:R:83:GLU:N	2.30	0.46
20:R:134:LEU:HG	20:R:135:GLU:N	2.29	0.46
21:S:218:ASP:HB2	21:S:223:GLN:HE22	1.75	0.46
23:U:111:LEU:O	24:V:138:GLN:HA	2.16	0.46
27:Y:108:LEU:HA	27:Y:196:VAL:HG11	1.96	0.46
27:Y:171:LEU:CB	27:Y:172:PRO:CD	2.93	0.46
27:Y:290:VAL:CG2	27:Y:291:GLN:H	2.28	0.46
27:Y:529:PHE:CZ	27:Y:704:ALA:HB3	2.50	0.46
1:1:460:VAL:C	1:1:464:ARG:HE	2.18	0.46
1:1:490:VAL:HG12	1:1:514:THR:HB	1.97	0.46
3:A:1443:VAL:HG23	9:G:63:PRO:CG	2.41	0.46
4:B:64:CYS:HA	4:B:67:SER:HB3	1.98	0.46
4:B:901:PRO:HG2	14:L:60:ARG:HA	1.96	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:D:144:THR:HG21	9:G:46:LEU:HD13	1.97	0.46
8:F:92:ARG:NH1	9:G:63:PRO:HB2	2.13	0.46
15:M:250:LYS:HE2	15:M:252:THR:HG21	1.97	0.46
19:Q:171:ARG:CZ	19:Q:174:GLY:HA3	2.45	0.46
23:U:145:ARG:NH1	23:U:147:LEU:O	2.40	0.46
24:V:69:TRP:CZ3	24:V:71:VAL:HG23	2.50	0.46
27:Y:20:GLU:O	27:Y:24:TYR:CD2	2.69	0.46
1:1:331:GLN:NE2	1:1:378:ARG:HD2	2.22	0.46
1:1:407:VAL:HG22	1:1:451:GLY:CA	2.44	0.46
1:1:677:TYR:HA	1:1:678:GLY:HA2	1.51	0.46
2:2:236:LEU:CA	2:2:242:LYS:CE	2.93	0.46
3:A:67:CYS:C	3:A:68:GLN:HG3	2.34	0.46
3:A:1428:VAL:HG13	4:B:1151:LEU:CD2	2.46	0.46
7:E:88:VAL:HB	7:E:116:ILE:HG12	1.97	0.46
8:F:92:ARG:HE	9:G:64:THR:CB	2.25	0.46
16:N:58:DC:C2'	16:N:59:DT:C5'	2.86	0.46
18:P:143:PRO:CG	18:P:182:ARG:NE	2.60	0.46
18:P:188:THR:HG1	18:P:245:HIS:CE1	2.33	0.46
19:Q:230:ILE:O	19:Q:233:VAL:HG13	2.15	0.46
20:R:30:ASP:OD2	20:R:151:LEU:CD2	2.63	0.46
20:R:44:LYS:CE	20:R:54:LEU:HD13	2.45	0.46
21:S:149:ASP:N	21:S:154:LYS:HD2	2.31	0.46
22:T:147:DA:H2'	22:T:148:DT:C5	2.50	0.46
27:Y:656:PHE:HA	27:Y:659:MET:SD	2.56	0.46
1:1:305:GLU:HB2	1:1:327:LYS:HZ1	1.80	0.46
1:1:455:SER:CB	1:1:466:ARG:HD3	2.46	0.46
2:2:256:ALA:HA	3:A:706:HIS:NE2	2.30	0.46
3:A:448:PRO:O	3:A:449:SER:CB	2.63	0.46
3:A:1345:ARG:HG2	3:A:1372:VAL:CG1	2.45	0.46
4:B:365:THR:HG21	4:B:370:PHE:CG	2.51	0.46
18:P:305:THR:HG22	18:P:308:THR:H	1.81	0.46
21:S:137:LYS:HE3	24:V:330:LYS:NZ	2.31	0.46
27:Y:400:LYS:HB2	27:Y:437:PHE:CZ	2.42	0.46
27:Y:438:THR:HG21	27:Y:634:ILE:HG12	1.98	0.46
27:Y:639:LEU:CD1	27:Y:649:ARG:HH11	2.21	0.46
2:2:253:LEU:O	2:2:256:ALA:HB3	2.14	0.46
2:2:269:PHE:CE2	2:2:297:CYS:CB	2.96	0.46
4:B:296:GLU:OE1	23:U:124:LYS:CD	2.63	0.46
4:B:451:LYS:HZ3	18:P:147:LYS:HZ1	1.62	0.46
4:B:1111:MET:H	18:P:56:LEU:HA	1.80	0.46
4:B:1184:GLY:C	6:D:17:LYS:NZ	2.69	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:I:102:VAL:HG22	11:I:109:ILE:HG12	1.97	0.46
16:N:51:DA:H2"	16:N:52:DT:OP1	2.14	0.46
16:N:59:DT:C4	16:N:60:DA:N6	2.84	0.46
18:P:293:ILE:HG22	18:P:297:LYS:HD2	1.98	0.46
20:R:120:ASN:CB	20:R:133:GLN:HB3	2.41	0.46
21:S:133:GLU:CG	24:V:330:LYS:HD2	2.46	0.46
22:T:133:DT:O5'	22:T:133:DT:H6	1.99	0.46
27:Y:218:ILE:O	27:Y:222:VAL:HG23	2.15	0.46
27:Y:622:MET:HG2	27:Y:679:MET:HE2	1.97	0.46
27:Y:639:LEU:CD1	27:Y:653:PHE:HZ	2.12	0.46
1:1:351:ASP:CB	1:1:482:TRP:CZ3	2.93	0.46
1:1:436:ALA:HB1	1:1:444:GLU:CB	2.45	0.46
3:A:180:LYS:CE	3:A:294:SER:HB3	2.46	0.46
17:O:44:PHE:CZ	17:O:48:VAL:HG21	2.50	0.46
18:P:250:MET:O	18:P:254:THR:HG23	2.12	0.46
20:R:156:LEU:C	20:R:157:VAL:HG23	2.35	0.46
22:T:146:DT:C2	22:T:147:DA:C5	3.04	0.46
23:U:137:VAL:HG11	24:V:59:LEU:HB3	1.85	0.46
24:V:118:HIS:CE1	24:V:120:TYR:CE2	3.03	0.46
24:V:307:PHE:HA	24:V:313:TRP:HE1	1.81	0.46
27:Y:124:ARG:O	27:Y:128:VAL:HG23	2.16	0.46
1:1:426:GLN:NE2	1:1:426:GLN:HA	2.30	0.46
3:A:58:LEU:HD22	3:A:80:HIS:O	2.16	0.46
4:B:542:MET:HE3	4:B:636:PRO:HG2	1.98	0.46
4:B:803:LEU:HG	12:J:52:THR:HG21	1.98	0.46
5:C:8:VAL:HG11	13:K:105:PHE:HD1	1.81	0.46
16:N:26:DG:H1'	24:V:291:SER:HB3	1.98	0.46
16:N:42:DT:H2"	16:N:43:DA:C8	2.48	0.46
17:O:4:PRO:HD3	24:V:357:LYS:C	2.36	0.46
18:P:51:VAL:HG22	18:P:52:LEU:H	1.77	0.46
18:P:173:ALA:CA	18:P:176:ILE:CG1	2.71	0.46
18:P:188:THR:HG22	18:P:191:GLU:HB3	1.97	0.46
21:S:127:LYS:H	24:V:340:VAL:HA	1.70	0.46
21:S:130:TRP:HZ3	24:V:338:THR:O	1.94	0.46
22:T:139:DC:H2"	22:T:140:DC:C5'	2.46	0.46
27:Y:353:SER:OG	27:Y:378:SER:CB	2.63	0.46
27:Y:360:LEU:HD11	27:Y:364:LYS:CD	2.45	0.46
27:Y:627:PHE:CD1	27:Y:654:LEU:CD1	2.96	0.46
1:1:303:ARG:NH2	1:1:470:SER:HB2	2.31	0.46
1:1:424:PHE:HE2	1:1:454:VAL:CG2	2.30	0.46
1:1:487:LEU:CD2	1:1:531:ILE:CD1	2.94	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:419:LYS:NZ	18:P:47:LEU:HG	2.21	0.46
3:A:598:LEU:HD23	3:A:598:LEU:HA	1.83	0.46
4:B:193:LYS:NZ	14:L:32:ALA:O	2.48	0.46
4:B:343:ILE:CD1	22:T:121:DG:C4'	2.93	0.46
5:C:100:THR:HG22	5:C:119:VAL:HG22	1.97	0.46
7:E:90:VAL:HG23	7:E:123:LEU:HD11	1.98	0.46
11:I:50:THR:HG22	11:I:52:ILE:H	1.81	0.46
16:N:39:DC:C2'	16:N:40:DT:C6	2.86	0.46
16:N:70:DG:H2"	16:N:71:DG:OP2	2.16	0.46
18:P:54:ASP:CG	18:P:56:LEU:HD13	2.36	0.46
18:P:286:ILE:HG23	18:P:287:LEU:HD23	1.98	0.46
18:P:288:LEU:HD21	18:P:328:LEU:HD13	1.91	0.46
18:P:316:LEU:CD2	18:P:316:LEU:N	2.76	0.46
21:S:143:LEU:HD13	21:S:143:LEU:C	2.30	0.46
22:T:102:DC:H6	22:T:102:DC:O5'	1.98	0.46
22:T:145:DT:H6	22:T:146:DT:H72	1.68	0.46
27:Y:197:ARG:NE	27:Y:225:GLU:OE2	2.49	0.46
27:Y:360:LEU:HD11	27:Y:364:LYS:HE3	1.97	0.46
27:Y:495:MET:HE1	27:Y:696:TRP:HE3	1.80	0.46
1:1:397:ILE:HD11	1:1:423:GLN:HG2	1.97	0.45
1:1:499:ARG:CG	1:1:530:LEU:CD1	2.95	0.45
2:2:273:LYS:C	2:2:275:LYS:H	2.18	0.45
3:A:337:ARG:NH1	4:B:1132:GLU:OE1	2.49	0.45
3:A:565:ILE:O	3:A:570:PRO:HA	2.16	0.45
3:A:1074:GLU:O	3:A:1077:THR:HB	2.16	0.45
3:A:1443:VAL:HB	9:G:62:LEU:O	2.15	0.45
5:C:18:VAL:HG12	5:C:20:PHE:HD1	1.81	0.45
15:M:253:ARG:CZ	22:T:145:DT:OP1	2.64	0.45
18:P:307:GLY:O	18:P:310:LYS:HB3	2.17	0.45
18:P:315:ILE:HG21	18:P:315:ILE:HD13	1.73	0.45
19:Q:230:ILE:HG23	19:Q:234:LEU:HD22	1.98	0.45
20:R:133:GLN:HG3	20:R:134:LEU:H	1.80	0.45
21:S:187:HIS:HE2	21:S:225:GLU:HB3	1.75	0.45
22:T:134:DT:O3'	24:V:319:LYS:HE3	2.16	0.45
23:U:394:LYS:CD	23:U:396:THR:HG23	2.45	0.45
24:V:63:ARG:HB2	24:V:215:VAL:HA	1.76	0.45
24:V:306:LEU:HG	24:V:313:TRP:CG	2.50	0.45
25:W:503:ASP:HB3	25:W:507:ARG:NH1	2.31	0.45
27:Y:649:ARG:HG3	27:Y:650:GLU:N	2.31	0.45
1:1:397:ILE:HD11	1:1:423:GLN:CG	2.45	0.45
1:1:571:ARG:N	1:1:571:ARG:HH11	2.13	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:2:252:ASN:ND2	3:A:1203:ASN:HA	2.23	0.45
2:2:266:THR:CG2	3:A:731:ARG:CD	2.75	0.45
2:2:283:GLN:HG2	2:2:295:THR:OG1	2.17	0.45
3:A:192:GLY:HA3	22:T:117:DC:P	2.33	0.45
3:A:709:THR:HG22	3:A:711:ARG:H	1.80	0.45
3:A:743:VAL:O	3:A:747:VAL:HG23	2.16	0.45
3:A:1151:GLU:HG2	11:I:45:ARG:HG3	1.98	0.45
3:A:1445:ILE:HG12	9:G:67:SER:HA	1.87	0.45
4:B:582:VAL:HG22	4:B:626:ILE:HB	1.97	0.45
8:F:96:THR:OG1	9:G:63:PRO:O	2.33	0.45
21:S:133:GLU:CD	24:V:330:LYS:HZ3	2.09	0.45
23:U:343:ARG:HB3	23:U:347:PHE:CD2	2.50	0.45
27:Y:375:ARG:HH11	27:Y:377:CYS:HB2	1.81	0.45
27:Y:462:THR:HG22	27:Y:462:THR:O	2.17	0.45
27:Y:670:LEU:HD23	27:Y:670:LEU:C	2.37	0.45
1:1:377:GLY:CA	1:1:381:SER:HB2	2.46	0.45
1:1:408:ILE:CG2	1:1:476:PHE:H	2.29	0.45
1:1:455:SER:CB	1:1:466:ARG:CG	2.93	0.45
1:1:474:MET:HB2	1:1:479:GLY:C	2.36	0.45
1:1:476:PHE:CA	1:1:485:ILE:CG2	2.95	0.45
3:A:411:ASP:HA	18:P:51:VAL:HG12	1.97	0.45
4:B:1111:MET:HB2	18:P:56:LEU:HA	1.89	0.45
18:P:52:LEU:O	18:P:53:SER:HB3	2.16	0.45
18:P:202:GLU:O	18:P:205:LYS:CG	2.62	0.45
18:P:296:ALA:O	18:P:300:GLN:HB2	2.16	0.45
20:R:54:LEU:O	20:R:58:ILE:HG12	2.17	0.45
21:S:125:SER:C	21:S:127:LYS:NZ	2.67	0.45
21:S:134:TYR:OH	21:S:150:TYR:CD2	2.64	0.45
22:T:152:DC:O5'	22:T:152:DC:H6	1.99	0.45
23:U:347:PHE:CD1	23:U:416:LYS:HD2	2.51	0.45
23:U:371:ASP:N	24:V:77:LEU:HG	2.32	0.45
27:Y:649:ARG:O	27:Y:653:PHE:CG	2.67	0.45
1:1:356:LEU:HD21	1:1:448:THR:CB	2.45	0.45
1:1:484:PHE:HZ	1:1:511:LEU:CB	2.27	0.45
3:A:56:PRO:O	3:A:57:ARG:HG3	2.16	0.45
3:A:316:GLN:HA	18:P:92:LEU:HD23	1.99	0.45
3:A:923:LEU:O	3:A:927:VAL:HG23	2.16	0.45
3:A:1393:ASN:ND2	3:A:1393:ASN:H	2.15	0.45
3:A:1442:ASP:C	9:G:60:ARG:HH12	2.20	0.45
4:B:46:GLN:H	4:B:46:GLN:HG3	1.38	0.45
4:B:662:MET:HA	4:B:665:GLU:HB2	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:885:MET:CG	18:P:33:LYS:HZ2	2.29	0.45
10:H:93:TYR:HA	10:H:145:ARG:HB3	1.99	0.45
16:N:56:DT:O5'	16:N:56:DT:H6	1.98	0.45
18:P:37:ARG:NH2	18:P:40:GLU:CG	2.79	0.45
18:P:143:PRO:HD3	18:P:185:VAL:CB	2.46	0.45
18:P:266:ILE:HB	18:P:268:GLU:HG3	1.97	0.45
18:P:310:LYS:CE	18:P:340:PRO:CG	2.91	0.45
20:R:64:ASP:CB	20:R:66:LEU:CD2	2.94	0.45
21:S:151:LEU:C	21:S:152:SER:OG	2.54	0.45
22:T:145:DT:H2'	22:T:146:DT:C7	2.46	0.45
23:U:121:PHE:O	24:V:130:GLU:HB2	2.17	0.45
27:Y:238:HIS:O	27:Y:660:ARG:NH1	2.50	0.45
27:Y:656:PHE:HA	27:Y:659:MET:HG2	1.99	0.45
1:1:303:ARG:CD	1:1:504:THR:CG2	2.94	0.45
1:1:383:ILE:HD13	1:1:383:ILE:N	2.31	0.45
1:1:466:ARG:HH21	1:1:476:PHE:HB3	1.81	0.45
1:1:467:SER:OG	1:1:497:MET:HG2	2.16	0.45
1:1:474:MET:CB	1:1:481:GLU:N	2.80	0.45
1:1:475:ASP:N	1:1:478:THR:H	2.15	0.45
1:1:476:PHE:CE1	1:1:487:LEU:CG	3.00	0.45
2:2:253:LEU:CB	3:A:1132:LYS:CD	2.87	0.45
3:A:187:LYS:HE3	3:A:198:GLU:HB2	1.99	0.45
3:A:316:GLN:N	18:P:92:LEU:HD23	2.29	0.45
3:A:449:SER:HA	3:A:454:SER:HB3	1.98	0.45
3:A:534:LEU:O	3:A:574:GLY:HA3	2.17	0.45
18:P:54:ASP:O	18:P:55:LYS:HB2	2.17	0.45
18:P:142:LEU:CG	18:P:147:LYS:HG3	2.36	0.45
18:P:264:LYS:NZ	18:P:264:LYS:H	2.14	0.45
18:P:284:LEU:HD22	18:P:284:LEU:HA	1.69	0.45
18:P:292:PRO:CA	18:P:293:ILE:HD13	2.46	0.45
21:S:130:TRP:CZ3	24:V:337:ALA:CB	2.99	0.45
22:T:121:DG:C6	22:T:122:DT:C4	3.04	0.45
27:Y:37:ASN:C	27:Y:477:THR:OG1	2.54	0.45
27:Y:124:ARG:NE	27:Y:374:LEU:HD22	2.31	0.45
27:Y:699:GLN:OE1	27:Y:707:ASN:CG	2.55	0.45
1:1:320:ASN:HD22	1:1:321:GLU:H	1.65	0.45
1:1:407:VAL:HG11	1:1:451:GLY:HA2	1.97	0.45
1:1:424:PHE:HE2	1:1:454:VAL:HG21	1.81	0.45
2:2:252:ASN:CG	3:A:1206:ASP:HA	2.35	0.45
5:C:70:ILE:HD11	5:C:144:ILE:HG12	1.98	0.45
11:I:72:ASP:O	11:I:81:ARG:HG2	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:N:48:DG:H2"	16:N:49:DG:OP1	2.17	0.45
18:P:154:TYR:C	18:P:157:CYS:SG	2.95	0.45
18:P:252:VAL:CG2	18:P:289:PHE:CD2	2.99	0.45
20:R:28:VAL:CG2	20:R:57:LEU:CD1	2.95	0.45
20:R:85:VAL:O	20:R:85:VAL:HG23	2.17	0.45
23:U:139:LEU:HG	23:U:350:TRP:CE3	2.51	0.45
27:Y:132:LYS:CB	27:Y:155:LEU:HD12	2.46	0.45
27:Y:353:SER:OG	27:Y:378:SER:CA	2.64	0.45
27:Y:492:PHE:HZ	27:Y:699:GLN:NE2	2.14	0.45
1:1:408:ILE:CG1	1:1:466:ARG:CZ	2.95	0.45
1:1:424:PHE:HB2	1:1:435:CYS:SG	2.56	0.45
1:1:466:ARG:NH2	1:1:476:PHE:HB3	2.32	0.45
1:1:474:MET:HG3	1:1:479:GLY:O	2.17	0.45
1:1:474:MET:CG	1:1:505:ILE:CG2	2.94	0.45
1:1:484:PHE:CD1	1:1:486:ILE:HG13	2.52	0.45
4:B:560:GLU:HB3	24:V:225:MET:HE3	1.99	0.45
6:D:31:GLN:O	6:D:34:GLN:HB2	2.17	0.45
9:G:98:GLY:HA3	9:G:110:VAL:O	2.17	0.45
16:N:60:DA:C2'	16:N:61:DA:C5'	2.86	0.45
18:P:102:THR:HG23	18:P:104:MET:HE2	1.90	0.45
20:R:127:CYS:C	20:R:128:LEU:HD22	2.36	0.45
21:S:158:LYS:HD3	21:S:158:LYS:HA	1.68	0.45
21:S:184:TYR:O	21:S:221:ILE:HG21	2.15	0.45
24:V:292:ILE:C	24:V:295:PRO:CD	2.54	0.45
24:V:335:LYS:O	24:V:355:TYR:OH	2.35	0.45
27:Y:62:HIS:HB3	27:Y:69:ILE:HD11	1.97	0.45
1:1:307:ASP:HB2	1:1:323:VAL:CB	2.36	0.45
1:1:376:ASN:CB	1:1:379:ALA:HB3	2.46	0.45
1:1:406:SER:HA	1:1:447:GLN:C	2.37	0.45
1:1:474:MET:N	1:1:480:ARG:N	2.65	0.45
2:2:252:ASN:CG	3:A:1206:ASP:CA	2.85	0.45
2:2:253:LEU:HD21	3:A:1132:LYS:CB	2.40	0.45
3:A:353:ILE:HG22	3:A:468:PHE:HB2	1.98	0.45
5:C:97:VAL:HG21	5:C:129:ILE:HG23	1.99	0.45
7:E:167:ARG:HD3	7:E:167:ARG:HA	1.78	0.45
8:F:130:ILE:HB	8:F:148:VAL:HG21	1.99	0.45
11:I:83:ASN:HA	11:I:104:LEU:HG	1.98	0.45
21:S:127:LYS:HE3	21:S:127:LYS:HB3	1.60	0.45
24:V:92:LEU:HD12	24:V:93:GLY:N	2.32	0.45
27:Y:400:LYS:CB	27:Y:437:PHE:CE1	2.92	0.45
27:Y:416:PHE:CE1	27:Y:436:ARG:HB2	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:410:LEU:HG	1:1:457:TYR:CE1	2.52	0.45
2:2:307:LYS:CE	3:A:1359:ASP:O	2.65	0.45
4:B:233:PRO:HG2	4:B:234:ILE:HD12	1.99	0.45
4:B:296:GLU:OE1	23:U:124:LYS:HD3	2.17	0.45
5:C:165:LYS:O	13:K:6:ARG:NH1	2.46	0.45
7:E:65:THR:O	7:E:69:ILE:HD12	2.16	0.45
16:N:35:DG:C2	16:N:36:DT:O4	2.70	0.45
18:P:21:VAL:HG22	18:P:23:THR:N	2.20	0.45
18:P:88:ASP:CG	18:P:89:GLY:H	2.19	0.45
18:P:143:PRO:HD3	18:P:185:VAL:CG2	2.46	0.45
19:Q:99:PHE:CA	22:T:142:DC:O2	2.59	0.45
20:R:141:ASN:CA	20:R:142:PHE:HD1	2.29	0.45
21:S:214:TRP:CE3	21:S:218:ASP:OD1	2.69	0.45
27:Y:57:ILE:CG2	27:Y:58:ALA:N	2.80	0.45
1:1:522:ASP:O	1:1:524:ILE:HD13	2.17	0.45
1:1:754:ARG:HH22	1:1:758:GLU:CD	2.15	0.45
18:P:94:THR:CG2	18:P:110:LEU:HD11	2.47	0.45
18:P:197:HIS:O	18:P:198:VAL:HB	2.17	0.45
18:P:223:LEU:HD11	19:Q:173:GLU:CA	2.46	0.45
20:R:61:LEU:CB	20:R:67:ILE:CD1	2.94	0.45
27:Y:307:VAL:CA	27:Y:310:PRO:HD2	2.47	0.45
27:Y:655:SER:HA	27:Y:689:LYS:NZ	2.31	0.45
1:1:299:GLY:C	1:1:347:HIS:HB3	2.38	0.44
1:1:366:GLN:HE22	1:1:394:LEU:HD22	1.82	0.44
1:1:449:GLU:CB	1:1:452:LEU:HA	2.46	0.44
1:1:574:ALA:CB	1:1:774:GLU:OE2	2.65	0.44
2:2:269:PHE:HZ	2:2:308:PHE:CE1	2.35	0.44
3:A:11:LEU:CD1	4:B:1195:HIS:NE2	2.80	0.44
3:A:1436:ILE:O	4:B:1144:ALA:HB2	2.17	0.44
10:H:105:GLU:HB3	10:H:113:ALA:HB3	1.99	0.44
17:O:39:ARG:HD3	17:O:39:ARG:O	2.17	0.44
18:P:129:ALA:O	18:P:133:ILE:HB	2.17	0.44
20:R:44:LYS:HE3	20:R:54:LEU:CB	2.47	0.44
22:T:103:DC:H2"	22:T:104:DT:H5'	1.99	0.44
22:T:140:DC:H2"	22:T:141:DC:C6	2.52	0.44
27:Y:83:LEU:HD13	27:Y:177:SER:HA	1.98	0.44
27:Y:495:MET:CE	27:Y:696:TRP:HE3	2.30	0.44
27:Y:697:ILE:HG22	27:Y:698:ALA:N	2.32	0.44
1:1:457:TYR:CB	1:1:498:PHE:CE1	2.94	0.44
1:1:609:SER:O	1:1:655:SER:HA	2.16	0.44
3:A:95:PHE:O	3:A:97:ALA:N	2.49	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:1447:GLU:HB2	9:G:70:PHE:HZ	1.83	0.44
4:B:849:GLY:HA2	4:B:852:ARG:CD	2.40	0.44
4:B:1001:PHE:HE2	5:C:178:PHE:HB3	1.81	0.44
8:F:100:GLN:CD	9:G:15:PRO:HG2	2.38	0.44
19:Q:76:LEU:HB2	19:Q:119:GLY:O	2.18	0.44
20:R:149:CYS:SG	20:R:151:LEU:CD2	3.00	0.44
22:T:144:DT:C4	22:T:145:DT:O4	2.70	0.44
23:U:343:ARG:HB3	23:U:347:PHE:CG	2.52	0.44
27:Y:307:VAL:O	27:Y:310:PRO:HD2	2.17	0.44
27:Y:496:ILE:O	27:Y:686:PHE:HE2	2.00	0.44
27:Y:666:LEU:HD13	27:Y:666:LEU:C	2.38	0.44
27:Y:686:PHE:CD1	27:Y:687:SER:N	2.85	0.44
1:1:434:ASN:HD22	1:1:434:ASN:N	2.15	0.44
1:1:476:PHE:HA	1:1:485:ILE:HG21	1.98	0.44
1:1:519:ARG:HB2	1:1:521:ASP:OD1	2.17	0.44
9:G:143:ILE:HG22	9:G:145:VAL:HG22	1.99	0.44
12:J:36:LEU:HD11	12:J:51:LEU:HB2	2.00	0.44
16:N:26:DG:H2"	24:V:291:SER:HB3	1.99	0.44
18:P:152:GLU:CG	18:P:155:LYS:NZ	2.75	0.44
20:R:16:VAL:O	20:R:20:PHE:HD1	2.00	0.44
20:R:27:LEU:HD23	20:R:129:THR:HB	2.00	0.44
20:R:40:GLU:H	20:R:87:TYR:HE1	1.65	0.44
23:U:107:PRO:CB	24:V:90:GLN:OE1	2.65	0.44
23:U:117:HIS:HD2	23:U:391:LYS:HB2	1.83	0.44
27:Y:185:CYS:CB	27:Y:190:LEU:O	2.63	0.44
27:Y:244:CYS:O	27:Y:248:LEU:HG	2.18	0.44
27:Y:537:MET:HA	27:Y:619:THR:O	2.17	0.44
1:1:356:LEU:CD2	1:1:448:THR:CG2	2.95	0.44
1:1:487:LEU:CD2	1:1:531:ILE:HD13	2.47	0.44
1:1:502:VAL:HA	1:1:505:ILE:CG1	2.47	0.44
3:A:132:LYS:NZ	3:A:1415:SER:HB3	2.30	0.44
3:A:994:GLN:HE22	3:A:1023:ARG:HE	1.66	0.44
3:A:1445:ILE:H	9:G:68:ALA:CB	2.30	0.44
4:B:102:VAL:HG23	4:B:112:LEU:HD22	2.00	0.44
4:B:468:GLU:HG2	4:B:469:GLN:HB2	1.99	0.44
8:F:132:LEU:CD2	9:G:61:ILE:HG12	2.46	0.44
18:P:190:LYS:HE2	18:P:242:PHE:CZ	2.42	0.44
19:Q:103:ILE:HD13	22:T:144:DT:C5'	2.45	0.44
20:R:37:VAL:HG12	20:R:88:TYR:CB	2.46	0.44
21:S:232:VAL:HG22	21:S:233:LEU:N	2.33	0.44
27:Y:493:LEU:HB3	27:Y:696:TRP:NE1	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:339:GLU:O	1:1:340:GLU:HB2	2.16	0.44
1:1:415:VAL:HA	1:1:418:MET:HE3	1.99	0.44
1:1:434:ASN:O	1:1:452:LEU:HG	2.18	0.44
1:1:448:THR:HG22	1:1:449:GLU:H	1.83	0.44
1:1:470:SER:HA	1:1:478:THR:CB	2.48	0.44
1:1:629:GLY:N	1:1:657:VAL:HG11	2.33	0.44
3:A:58:LEU:HB3	3:A:59:GLY:H	1.25	0.44
3:A:589:GLN:HG2	3:A:606:LEU:HD13	1.99	0.44
3:A:869:GLY:O	7:E:204:THR:HG21	2.18	0.44
3:A:875:ALA:HB2	3:A:1366:ARG:CD	2.48	0.44
3:A:1345:ARG:HD2	3:A:1373:ASP:OD1	2.18	0.44
4:B:394:ASP:OD2	11:I:91:ARG:HD2	2.17	0.44
4:B:901:PRO:O	14:L:60:ARG:HA	2.18	0.44
5:C:11:ARG:HE	5:C:21:ILE:HD11	1.82	0.44
10:H:30:SER:HB3	10:H:36:CYS:HB3	1.98	0.44
17:O:84:GLN:HA	17:O:84:GLN:HE21	1.83	0.44
18:P:21:VAL:CG2	18:P:22:LEU:N	2.80	0.44
18:P:269:ILE:O	18:P:272:LYS:HG2	2.18	0.44
19:Q:68:GLN:O	22:T:146:DT:H4'	2.17	0.44
20:R:92:PRO:HA	20:R:95:ILE:HG22	2.00	0.44
20:R:135:GLU:HA	20:R:138:GLN:CG	2.48	0.44
20:R:141:ASN:HA	20:R:142:PHE:CD1	2.52	0.44
23:U:98:TYR:CD1	24:V:98:ASN:CA	3.00	0.44
23:U:375:LEU:HD13	24:V:134:VAL:HG21	1.99	0.44
24:V:69:TRP:HZ3	24:V:71:VAL:HG23	1.80	0.44
27:Y:539:VAL:HB	27:Y:599:LEU:HD23	2.00	0.44
1:1:373:MET:CG	1:1:381:SER:CB	2.95	0.44
2:2:293:LEU:N	2:2:293:LEU:CD2	2.81	0.44
3:A:22:PHE:HD2	4:B:1211:ASN:HA	1.83	0.44
3:A:404:TYR:HE2	18:P:40:GLU:CD	2.20	0.44
4:B:89:GLU:HB2	4:B:135:ARG:HB2	1.99	0.44
13:K:65:HIS:HE1	13:K:67:PHE:CG	2.35	0.44
18:P:34:ILE:O	18:P:35:VAL:CB	2.64	0.44
20:R:120:ASN:CG	20:R:133:GLN:CG	2.85	0.44
21:S:133:GLU:OE1	24:V:330:LYS:CD	2.48	0.44
21:S:195:LEU:HD22	21:S:195:LEU:H	1.82	0.44
21:S:199:GLN:HG3	21:S:246:TYR:OH	2.18	0.44
22:T:146:DT:C5	22:T:147:DA:N6	2.85	0.44
23:U:96:ASN:HD22	23:U:96:ASN:C	2.20	0.44
23:U:98:TYR:OH	24:V:98:ASN:CG	2.19	0.44
23:U:377:SER:CB	24:V:70:LEU:CD2	2.96	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:124:ARG:HG2	27:Y:374:LEU:HB2	1.99	0.44
27:Y:248:LEU:HD11	27:Y:445:ALA:HB3	1.95	0.44
27:Y:261:THR:HA	27:Y:299:LEU:CD1	2.48	0.44
1:1:310:ILE:HG21	1:1:313:VAL:HG21	2.00	0.44
1:1:408:ILE:CD1	1:1:466:ARG:CD	2.95	0.44
2:2:253:LEU:HD22	3:A:1132:LYS:HD3	0.86	0.44
2:2:257:GLN:NE2	3:A:1284:MET:CE	2.80	0.44
2:2:258:GLY:N	3:A:1283:VAL:CA	2.79	0.44
3:A:70:CYS:O	3:A:72:GLU:HG2	2.17	0.44
3:A:412:ARG:CB	18:P:51:VAL:HB	2.48	0.44
3:A:446:ARG:HB2	3:A:487:MET:SD	2.57	0.44
3:A:514:PRO:HG2	3:A:1067:LEU:HD11	1.98	0.44
3:A:1445:ILE:N	9:G:68:ALA:CB	2.80	0.44
9:G:1:MET:HE3	9:G:80:LYS:O	2.18	0.44
16:N:57:DA:C2	16:N:58:DC:O2	2.70	0.44
16:N:59:DT:O2	16:N:60:DA:C8	2.70	0.44
18:P:102:THR:HG23	18:P:104:MET:CE	2.39	0.44
18:P:190:LYS:HD3	18:P:242:PHE:HZ	1.83	0.44
19:Q:114:LEU:HD22	22:T:143:DT:C2	2.52	0.44
22:T:117:DC:C4	22:T:118:DC:N4	2.85	0.44
22:T:155:DC:H2"	22:T:156:DT:C5'	2.47	0.44
24:V:59:LEU:HD21	24:V:214:ILE:CD1	2.46	0.44
24:V:82:ARG:NH2	24:V:120:TYR:OH	2.51	0.44
27:Y:54:SER:HB2	27:Y:233:ILE:HD13	2.00	0.44
27:Y:569:ILE:HG23	27:Y:579:THR:OG1	2.16	0.44
1:1:299:GLY:HA2	1:1:347:HIS:N	2.32	0.44
1:1:373:MET:CE	1:1:511:LEU:CD1	2.95	0.44
1:1:448:THR:CG2	1:1:449:GLU:N	2.81	0.44
1:1:455:SER:HB3	1:1:466:ARG:CG	2.48	0.44
2:2:289:ALA:HB2	3:A:824:LEU:HD21	2.00	0.44
3:A:412:ARG:HB2	18:P:51:VAL:HB	1.99	0.44
3:A:451:HIS:CD2	3:A:1074:GLU:HG3	2.52	0.44
4:B:1158:PHE:HE2	4:B:1160:VAL:HG13	1.83	0.44
6:D:7:THR:HG23	9:G:7:LEU:HD23	1.99	0.44
20:R:17:VAL:CG2	20:R:18:ARG:N	2.81	0.44
21:S:153:MET:O	21:S:154:LYS:NZ	2.28	0.44
21:S:179:LYS:HD3	21:S:179:LYS:C	2.38	0.44
21:S:210:LEU:HD22	21:S:214:TRP:CZ2	2.52	0.44
27:Y:321:ILE:HG21	27:Y:411:THR:HB	2.00	0.44
27:Y:342:LEU:HD23	27:Y:345:ARG:CZ	2.45	0.44
1:1:397:ILE:HD11	1:1:423:GLN:NE2	2.30	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:501:VAL:CG2	1:1:502:VAL:N	2.80	0.44
1:1:619:ALA:CA	1:1:622:MET:CE	2.96	0.44
3:A:332:LYS:HA	3:A:337:ARG:HB2	2.00	0.44
3:A:875:ALA:HA	3:A:878:ILE:HD12	1.99	0.44
4:B:86:ARG:HG2	4:B:138:GLU:HG3	1.98	0.44
16:N:17:DT:H2'	16:N:18:DA:C8	2.52	0.44
17:O:85:VAL:O	17:O:106:ILE:N	2.44	0.44
18:P:91:ASN:CG	18:P:92:LEU:H	2.21	0.44
18:P:134:THR:O	18:P:134:THR:HG22	2.17	0.44
18:P:290:GLN:O	18:P:292:PRO:N	2.51	0.44
20:R:17:VAL:HG13	20:R:66:LEU:HD11	1.95	0.44
20:R:147:PHE:CB	20:R:156:LEU:HD21	2.44	0.44
20:R:147:PHE:HB2	20:R:156:LEU:HD11	1.97	0.44
21:S:129:LEU:N	24:V:341:LYS:CG	2.81	0.44
22:T:151:DG:C2'	22:T:152:DC:H5	2.31	0.44
24:V:59:LEU:CD2	24:V:214:ILE:CD1	2.91	0.44
27:Y:290:VAL:O	27:Y:291:GLN:C	2.56	0.44
27:Y:360:LEU:HD13	27:Y:360:LEU:C	2.38	0.44
27:Y:416:PHE:CD1	27:Y:416:PHE:C	2.91	0.44
27:Y:473:LEU:O	27:Y:474:ASN:HB3	2.18	0.44
27:Y:486:THR:HG21	27:Y:670:LEU:HD21	2.00	0.44
27:Y:526:LEU:HD12	27:Y:621:LEU:CD2	2.48	0.44
1:1:400:ALA:CB	1:1:450:SER:CA	2.93	0.43
1:1:424:PHE:CD1	1:1:450:SER:CB	2.94	0.43
1:1:517:LEU:HD22	1:1:534:LYS:HB3	1.98	0.43
1:1:622:MET:HE2	1:1:622:MET:HB2	1.83	0.43
2:2:257:GLN:HA	3:A:1284:MET:N	2.31	0.43
3:A:151:ASP:HA	3:A:163:SER:HA	1.99	0.43
3:A:404:TYR:HH	18:P:40:GLU:CB	2.26	0.43
3:A:407:ARG:HG2	3:A:430:TRP:CZ2	2.53	0.43
3:A:1441:PHE:CZ	8:F:89:GLU:HA	2.53	0.43
10:H:15:VAL:HG22	10:H:26:ILE:HG13	2.00	0.43
15:M:231:ILE:CG2	15:M:232:SER:N	2.81	0.43
15:M:277:GLN:HA	17:O:56:THR:HG21	1.98	0.43
18:P:269:ILE:HB	18:P:272:LYS:HG2	2.00	0.43
20:R:66:LEU:N	20:R:66:LEU:HD22	2.32	0.43
21:S:179:LYS:CD	21:S:179:LYS:C	2.86	0.43
21:S:184:TYR:HA	21:S:221:ILE:N	2.06	0.43
21:S:203:LYS:CG	21:S:242:ARG:HE	2.05	0.43
22:T:122:DT:H2"	22:T:123:DT:H73	1.98	0.43
27:Y:109:THR:HG22	27:Y:110:SER:N	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:492:PHE:CD2	27:Y:494:PRO:HD3	2.53	0.43
27:Y:656:PHE:CA	27:Y:659:MET:HE3	2.46	0.43
1:1:378:ARG:NH2	1:1:510:LYS:HE2	2.33	0.43
1:1:466:ARG:HD2	1:1:475:ASP:CG	2.39	0.43
1:1:562:THR:CG2	1:1:585:PRO:HD2	2.48	0.43
1:1:572:GLU:OE1	1:1:574:ALA:N	2.50	0.43
4:B:125:SER:HA	4:B:171:PRO:HA	2.00	0.43
8:F:92:ARG:NH1	9:G:63:PRO:HB3	2.32	0.43
18:P:133:ILE:HG23	18:P:134:THR:N	2.33	0.43
18:P:173:ALA:HB1	18:P:176:ILE:HD11	2.00	0.43
18:P:243:CYS:HB3	18:P:253:THR:CG2	2.48	0.43
18:P:252:VAL:HG12	18:P:285:ASN:OD1	2.17	0.43
18:P:314:LYS:HB3	18:P:314:LYS:HE2	1.54	0.43
22:T:122:DT:C6	22:T:123:DT:H72	2.53	0.43
22:T:143:DT:O5'	22:T:143:DT:H6	2.00	0.43
22:T:144:DT:N3	22:T:145:DT:C4	2.86	0.43
27:Y:383:LEU:HD23	27:Y:383:LEU:O	2.19	0.43
27:Y:533:THR:CG2	27:Y:708:LEU:HD22	2.48	0.43
27:Y:653:PHE:CE1	27:Y:654:LEU:HB2	2.53	0.43
1:1:300:ASP:CG	1:1:480:ARG:HD3	2.37	0.43
1:1:303:ARG:HH21	1:1:470:SER:HB2	1.82	0.43
1:1:386:LEU:CB	1:1:387:PRO:HD2	2.45	0.43
1:1:473:VAL:CB	1:1:481:GLU:CG	2.95	0.43
1:1:675:SER:CB	1:1:722:ARG:HH22	2.31	0.43
2:2:253:LEU:HB3	3:A:1132:LYS:HE2	1.97	0.43
2:2:305:ARG:C	3:A:1360:GLY:HA2	2.38	0.43
3:A:22:PHE:HB2	4:B:1211:ASN:O	2.18	0.43
3:A:42:ASP:O	3:A:44:THR:N	2.51	0.43
3:A:91:PHE:HB3	3:A:96:ILE:CD1	2.48	0.43
3:A:190:ALA:O	22:T:116:DG:OP2	2.35	0.43
4:B:350:GLN:HE21	23:U:411:LYS:NZ	2.14	0.43
4:B:951:GLN:OE1	14:L:57:LEU:HD22	2.18	0.43
5:C:34:ARG:HA	5:C:37:MET:HE2	2.00	0.43
5:C:133:ILE:HG21	5:C:236:GLY:HA3	2.00	0.43
10:H:4:THR:HA	10:H:60:ALA:HB2	2.00	0.43
20:R:13:LEU:HD11	20:R:94:ALA:CB	2.47	0.43
21:S:202:PHE:HB2	21:S:205:ILE:HG21	2.00	0.43
21:S:244:VAL:H	21:S:245:TRP:HZ3	1.66	0.43
22:T:117:DC:O5'	22:T:117:DC:H6	2.01	0.43
27:Y:72:CYS:SG	27:Y:210:TYR:CE1	3.03	0.43
27:Y:506:ILE:HG13	27:Y:522:TYR:CD1	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:625:ILE:CG2	27:Y:626:PRO:HD2	2.49	0.43
1:1:327:LYS:CG	1:1:506:ALA:N	2.82	0.43
1:1:372:LYS:HE3	1:1:536:TYR:CD2	2.53	0.43
1:1:427:TRP:HE3	1:1:427:TRP:H	1.65	0.43
2:2:258:GLY:N	3:A:1283:VAL:HA	2.34	0.43
3:A:548:ASN:HD21	13:K:47:ARG:HH21	1.65	0.43
3:A:1259:MET:HA	3:A:1262:LYS:HD2	1.99	0.43
4:B:766:ARG:NH2	4:B:1020:ARG:HD3	2.33	0.43
15:M:42:TRP:CZ2	17:O:19:LEU:HG	2.53	0.43
18:P:51:VAL:CG2	18:P:52:LEU:H	2.32	0.43
21:S:126:SER:O	24:V:339:LEU:C	2.42	0.43
21:S:158:LYS:HA	21:S:162:LEU:HB2	2.01	0.43
21:S:196:LEU:C	21:S:196:LEU:CD1	2.79	0.43
27:Y:493:LEU:CD2	27:Y:666:LEU:HG	2.40	0.43
27:Y:639:LEU:HD23	27:Y:639:LEU:C	2.39	0.43
27:Y:708:LEU:O	27:Y:708:LEU:HD23	2.18	0.43
1:1:457:TYR:O	1:1:458:SER:HB3	2.19	0.43
1:1:466:ARG:HE	1:1:475:ASP:HB3	1.82	0.43
1:1:473:VAL:O	1:1:478:THR:CB	2.63	0.43
1:1:562:THR:OG1	1:1:565:PHE:CD1	2.72	0.43
1:1:656:LYS:CD	1:1:656:LYS:C	2.86	0.43
3:A:774:ARG:HH21	3:A:797:LYS:HB2	1.83	0.43
4:B:212:LEU:HA	4:B:212:LEU:HD23	1.73	0.43
4:B:935:ARG:H	4:B:935:ARG:HD2	1.84	0.43
4:B:955:THR:HG22	4:B:956:THR:N	2.34	0.43
8:F:106:PRO:HB2	9:G:16:SER:HA	1.89	0.43
15:M:277:GLN:CB	17:O:56:THR:HG23	2.48	0.43
16:N:37:DA:C2'	16:N:38:DT:H71	2.48	0.43
16:N:59:DT:C2'	16:N:60:DA:C8	3.01	0.43
18:P:171:ILE:O	18:P:171:ILE:HG13	2.18	0.43
18:P:258:TYR:CD1	18:P:258:TYR:C	2.92	0.43
21:S:134:TYR:HH	21:S:138:LYS:HE3	1.74	0.43
22:T:130:DA:H5"	23:U:331:GLN:HB3	1.99	0.43
23:U:138:ARG:CZ	24:V:57:LEU:HB3	2.48	0.43
24:V:88:HIS:CD2	24:V:89:GLY:H	2.36	0.43
27:Y:132:LYS:CB	27:Y:155:LEU:CD1	2.97	0.43
27:Y:212:TYR:O	27:Y:218:ILE:HG21	2.18	0.43
27:Y:708:LEU:HD23	27:Y:708:LEU:C	2.39	0.43
1:1:300:ASP:N	1:1:347:HIS:HA	2.32	0.43
1:1:327:LYS:HB3	1:1:504:THR:C	2.39	0.43
1:1:344:ARG:HA	1:1:344:ARG:NE	2.33	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:373:MET:SD	1:1:511:LEU:HD13	2.59	0.43
1:1:376:ASN:HB3	1:1:379:ALA:N	2.33	0.43
1:1:383:ILE:C	1:1:384:ILE:HD12	2.39	0.43
1:1:425:LEU:HD12	1:1:429:THR:HG23	1.95	0.43
1:1:453:VAL:CG2	1:1:482:TRP:CZ2	2.97	0.43
2:2:252:ASN:HA	3:A:1204:ASP:C	2.39	0.43
3:A:66:LYS:CE	3:A:68:GLN:H	2.31	0.43
3:A:130:ASP:HB3	3:A:133:LYS:HB2	2.00	0.43
3:A:358:ASN:HB2	13:K:65:HIS:HD2	1.84	0.43
3:A:419:LYS:HZ1	18:P:47:LEU:HA	1.80	0.43
3:A:1154:TYR:CE1	11:I:18:GLU:HG3	2.53	0.43
3:A:1356:ILE:HG21	3:A:1363:VAL:HG23	1.99	0.43
4:B:430:ARG:CA	23:U:326:ARG:NH1	2.50	0.43
4:B:617:ARG:HG3	4:B:624:LEU:HD12	2.00	0.43
4:B:802:PRO:HA	4:B:822:ASN:HD21	1.84	0.43
4:B:983:ARG:HD2	4:B:1091:TYR:HD2	1.84	0.43
5:C:55:THR:HB	5:C:151:GLN:HA	1.99	0.43
16:N:70:DG:P	26:X:63:TYR:OH	2.77	0.43
18:P:223:LEU:CD1	19:Q:177:PHE:CZ	2.93	0.43
18:P:311:SER:O	18:P:315:ILE:HG13	2.18	0.43
18:P:317:TYR:O	18:P:320:ARG:HB3	2.19	0.43
20:R:13:LEU:O	20:R:17:VAL:HG13	2.19	0.43
20:R:35:HIS:CG	20:R:36:SER:N	2.85	0.43
21:S:166:LEU:HD13	21:S:167:ASP:H	1.80	0.43
22:T:135:DG:C2'	22:T:136:DA:C5'	2.92	0.43
24:V:342:LYS:O	24:V:343:GLY:C	2.56	0.43
27:Y:54:SER:C	27:Y:57:ILE:HG22	2.37	0.43
27:Y:316:LEU:CD2	27:Y:409:ILE:CD1	2.97	0.43
27:Y:697:ILE:CG2	27:Y:699:GLN:NE2	2.82	0.43
1:1:477:LEU:CD1	1:1:477:LEU:N	2.82	0.43
2:2:296:PHE:N	2:2:296:PHE:CD1	2.86	0.43
3:A:1148:ILE:HA	11:I:49:ILE:HD12	2.00	0.43
4:B:104:GLU:CD	14:L:54:ARG:NE	2.71	0.43
4:B:343:ILE:HD11	22:T:121:DG:C3'	2.44	0.43
4:B:383:ASN:O	4:B:387:LEU:HB2	2.19	0.43
5:C:251:LEU:O	5:C:255:VAL:HG23	2.19	0.43
16:N:28:DT:H72	24:V:292:ILE:HG22	1.99	0.43
16:N:59:DT:N3	16:N:60:DA:C5	2.86	0.43
18:P:120:ASP:OD1	18:P:121:LYS:N	2.51	0.43
19:Q:99:PHE:HB2	22:T:143:DT:P	2.57	0.43
21:S:125:SER:HA	24:V:341:LYS:HB2	0.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:U:414:ASP:O	23:U:417:SER:O	2.37	0.43
27:Y:37:ASN:C	27:Y:477:THR:HG1	2.21	0.43
27:Y:169:ASP:O	27:Y:173:LYS:HB2	2.19	0.43
27:Y:408:LEU:CD1	27:Y:632:SER:HB3	2.48	0.43
27:Y:670:LEU:HD21	27:Y:672:GLY:O	2.19	0.43
1:1:609:SER:OG	1:1:615:LEU:HB2	2.17	0.43
3:A:449:SER:HA	3:A:454:SER:CB	2.49	0.43
3:A:541:ILE:HG21	3:A:549:MET:CE	2.49	0.43
4:B:915:THR:O	4:B:917:PRO:HD3	2.19	0.43
4:B:980:PHE:CD1	4:B:1094:ARG:HA	2.54	0.43
4:B:998:ASP:OD1	5:C:35:ARG:NH2	2.46	0.43
16:N:35:DG:C2'	16:N:36:DT:C7	2.86	0.43
18:P:81:GLU:CD	18:P:82:ALA:O	2.56	0.43
18:P:152:GLU:HG3	18:P:155:LYS:HZ1	1.81	0.43
18:P:223:LEU:O	18:P:224:LYS:CB	2.67	0.43
18:P:310:LYS:NZ	18:P:340:PRO:HA	2.33	0.43
18:P:320:ARG:HD3	18:P:334:VAL:HG22	1.36	0.43
18:P:322:LYS:N	18:P:322:LYS:HE2	2.23	0.43
18:P:333:VAL:HG23	18:P:335:SER:H	1.84	0.43
20:R:44:LYS:HZ1	20:R:54:LEU:HD13	1.84	0.43
20:R:65:ARG:HB3	20:R:90:LYS:HD2	2.01	0.43
21:S:130:TRP:HD1	21:S:151:LEU:HG	1.69	0.43
21:S:156:ASP:CA	21:S:159:VAL:CG1	2.96	0.43
23:U:342:LEU:HB3	23:U:348:TYR:CZ	2.54	0.43
24:V:69:TRP:CE3	24:V:219:CYS:HB2	2.54	0.43
24:V:87:LEU:C	24:V:88:HIS:CG	2.92	0.43
27:Y:240:ILE:CG2	27:Y:473:LEU:CD1	2.92	0.43
27:Y:289:LEU:CD2	27:Y:352:ILE:HG13	2.45	0.43
27:Y:298:ILE:HD12	27:Y:345:ARG:HD2	1.97	0.43
1:1:435:CYS:HA	1:1:452:LEU:HG	2.01	0.43
1:1:438:PHE:HE1	1:1:469:ASP:OD2	2.01	0.43
1:1:476:PHE:CD2	1:1:477:LEU:CD1	2.93	0.43
1:1:478:THR:CG2	1:1:479:GLY:N	2.81	0.43
1:1:485:ILE:HG23	1:1:507:ALA:HB1	1.98	0.43
2:2:252:ASN:OD1	3:A:1204:ASP:C	2.55	0.43
4:B:69:LEU:HD22	4:B:425:THR:HG23	2.00	0.43
5:C:184:ASN:ND2	5:C:189:THR:O	2.52	0.43
9:G:93:SER:OG	9:G:100:GLU:HB2	2.19	0.43
16:N:2:DA:H2'	16:N:3:DA:C8	2.53	0.43
16:N:59:DT:C1'	16:N:60:DA:C8	3.02	0.43
17:O:60:LEU:C	17:O:60:LEU:HD12	2.39	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:P:308:THR:CG2	22:T:151:DG:OP1	2.66	0.43
20:R:33:LEU:HD23	20:R:89:VAL:HG21	1.99	0.43
21:S:149:ASP:OD1	21:S:154:LYS:HD2	2.18	0.43
27:Y:75:THR:O	27:Y:79:ILE:HG13	2.19	0.43
27:Y:127:THR:HG23	27:Y:365:GLN:NE2	2.33	0.43
27:Y:316:LEU:HD23	27:Y:409:ILE:HD12	2.00	0.43
27:Y:316:LEU:HD21	27:Y:409:ILE:CD1	2.49	0.43
27:Y:317:LEU:HD13	27:Y:415:GLY:CA	2.48	0.43
1:1:335:TYR:HB3	1:1:336:PRO:CD	2.47	0.43
1:1:372:LYS:HE3	1:1:536:TYR:HD2	1.83	0.43
1:1:407:VAL:CG2	1:1:408:ILE:N	2.82	0.43
1:1:421:ARG:CZ	1:1:430:LEU:HD21	2.49	0.43
1:1:484:PHE:HE1	1:1:486:ILE:CG1	2.29	0.43
1:1:562:THR:OG1	1:1:565:PHE:HB2	2.19	0.43
3:A:33:ALA:HB1	3:A:56:PRO:HB2	2.00	0.43
3:A:270:LEU:HA	3:A:270:LEU:HD12	1.68	0.43
4:B:433:GLN:CD	23:U:326:ARG:NE	2.63	0.43
16:N:39:DC:H2'	16:N:40:DT:H6	1.69	0.43
18:P:38:PHE:CD1	18:P:39:SER:N	2.87	0.43
18:P:334:VAL:HA	18:P:337:ASP:OD2	2.19	0.43
21:S:135:ILE:CD1	21:S:180:TYR:HB2	2.44	0.43
23:U:94:ASP:HB2	23:U:95:PRO:HD3	2.01	0.43
23:U:329:THR:HA	23:U:332:LEU:HG	2.00	0.43
27:Y:184:TYR:CE1	27:Y:190:LEU:HD21	2.54	0.43
27:Y:504:VAL:HG12	27:Y:686:PHE:CZ	2.54	0.43
27:Y:697:ILE:HG22	27:Y:698:ALA:O	2.18	0.43
1:1:303:ARG:NE	1:1:471:GLN:HG3	2.34	0.42
1:1:313:VAL:CG1	1:1:314:HIS:CE1	3.02	0.42
1:1:354:ILE:CG2	1:1:355:ASP:N	2.82	0.42
1:1:456:THR:CG2	1:1:457:TYR:H	2.30	0.42
3:A:343:LYS:NZ	4:B:1156:ASP:HB2	2.33	0.42
3:A:1025:ARG:O	3:A:1035:TYR:HE2	2.01	0.42
3:A:1438:THR:HB	4:B:1142:GLY:O	2.19	0.42
14:L:49:LYS:O	14:L:50:ASP:HB2	2.19	0.42
15:M:267:VAL:HG22	15:M:269:ILE:HG13	2.00	0.42
18:P:20:ILE:HG23	18:P:20:ILE:O	2.19	0.42
18:P:146:VAL:HG12	18:P:182:ARG:HD3	1.52	0.42
18:P:279:VAL:HG13	18:P:309:ILE:CG2	2.49	0.42
18:P:305:THR:HG23	18:P:307:GLY:H	1.84	0.42
18:P:313:TYR:CA	18:P:316:LEU:HD22	2.49	0.42
20:R:119:PRO:CG	20:R:120:ASN:HD22	2.32	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:123:MET:HE3	20:R:130:LYS:CD	2.41	0.42
20:R:129:THR:CG2	20:R:131:TYR:HH	2.30	0.42
21:S:129:LEU:N	24:V:341:LYS:CD	2.79	0.42
21:S:202:PHE:C	21:S:203:LYS:HZ1	2.22	0.42
23:U:376:LEU:CD2	23:U:386:MET:HB3	2.49	0.42
27:Y:492:PHE:HE2	27:Y:494:PRO:HG3	1.81	0.42
1:1:326:VAL:HG12	1:1:327:LYS:H	1.84	0.42
1:1:407:VAL:CB	1:1:451:GLY:HA2	2.48	0.42
1:1:459:MET:HB2	1:1:464:ARG:CZ	2.49	0.42
1:1:717:TYR:CD1	1:1:717:TYR:C	2.92	0.42
3:A:11:LEU:HD21	4:B:1195:HIS:HD2	1.84	0.42
3:A:78:PRO:C	4:B:1201:LYS:NZ	2.69	0.42
3:A:729:ALA:HA	3:A:732:LEU:HD12	2.01	0.42
3:A:1340:GLY:HA2	7:E:183:PRO:HD2	2.01	0.42
5:C:99:LEU:HB3	5:C:118:LEU:HD22	2.01	0.42
8:F:82:THR:HG22	8:F:83:PRO:HD2	2.01	0.42
18:P:34:ILE:HB	18:P:43:VAL:O	2.20	0.42
18:P:94:THR:CB	18:P:110:LEU:CD2	2.97	0.42
19:Q:169:PRO:HB2	19:Q:239:LYS:HB2	2.01	0.42
20:R:154:GLU:OE1	20:R:154:GLU:HA	2.19	0.42
21:S:128:LEU:HB3	24:V:341:LYS:CD	2.37	0.42
21:S:203:LYS:HG3	21:S:242:ARG:HB3	2.00	0.42
27:Y:237:ALA:CA	27:Y:240:ILE:HG12	2.49	0.42
27:Y:697:ILE:CG2	27:Y:699:GLN:HE21	2.31	0.42
1:1:429:THR:CG2	1:1:430:LEU:N	2.81	0.42
1:1:535:LEU:O	1:1:535:LEU:HG	2.18	0.42
2:2:241:LEU:HD21	3:A:1232:ASN:CA	2.35	0.42
3:A:34:LYS:H	3:A:57:ARG:NH1	2.17	0.42
3:A:709:THR:HB	3:A:712:GLU:H	1.83	0.42
4:B:108:VAL:N	18:P:244:SER:HB3	2.35	0.42
4:B:169:ARG:HB2	4:B:454:THR:HG23	2.01	0.42
4:B:171:PRO:HG2	4:B:461:LEU:HD12	2.01	0.42
16:N:45:DC:O5'	16:N:45:DC:H6	2.03	0.42
17:O:23:LEU:HD12	17:O:23:LEU:HA	1.92	0.42
21:S:133:GLU:OE2	24:V:330:LYS:CD	2.67	0.42
21:S:179:LYS:HD3	21:S:179:LYS:O	2.19	0.42
22:T:116:DG:C2	22:T:117:DC:C2	3.07	0.42
24:V:333:LEU:HD13	24:V:349:TYR:CD2	2.55	0.42
27:Y:218:ILE:CG2	27:Y:219:ALA:N	2.82	0.42
27:Y:416:PHE:HE1	27:Y:436:ARG:HB2	1.84	0.42
1:1:408:ILE:CG2	1:1:476:PHE:N	2.80	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:474:MET:HB2	1:1:481:GLU:N	2.34	0.42
1:1:680:ARG:HD3	1:1:680:ARG:HA	1.55	0.42
2:2:254:TYR:C	2:2:256:ALA:N	2.73	0.42
3:A:91:PHE:CB	3:A:96:ILE:CD1	2.96	0.42
3:A:270:LEU:O	3:A:274:ILE:HG13	2.19	0.42
3:A:339:ASN:HB3	4:B:1117:GLN:HE22	1.84	0.42
4:B:521:LEU:HD22	4:B:633:VAL:HG12	2.01	0.42
16:N:28:DT:C7	24:V:292:ILE:CG2	2.98	0.42
18:P:26:GLU:CD	18:P:50:LEU:HD22	2.38	0.42
18:P:113:ALA:C	18:P:116:LYS:HG2	2.39	0.42
18:P:117:ASN:C	18:P:119:MET:H	2.23	0.42
20:R:34:PHE:HZ	20:R:134:LEU:C	2.05	0.42
20:R:62:ARG:HA	20:R:67:ILE:HD13	2.01	0.42
20:R:69:ILE:CG2	20:R:70:HIS:N	2.83	0.42
21:S:187:HIS:HE1	21:S:222:ASN:O	1.98	0.42
24:V:92:LEU:HD12	24:V:92:LEU:C	2.40	0.42
27:Y:62:HIS:HD2	27:Y:63:TYR:CA	2.31	0.42
27:Y:168:GLU:HG2	27:Y:199:MET:SD	2.59	0.42
27:Y:330:HIS:CE1	27:Y:334:PHE:HE1	2.37	0.42
1:1:420:TRP:O	1:1:424:PHE:CD2	2.73	0.42
1:1:487:LEU:N	1:1:487:LEU:CD1	2.82	0.42
3:A:595:THR:OG1	3:A:603:ASN:HB3	2.19	0.42
4:B:848:ARG:HD2	12:J:8:PHE:O	2.20	0.42
18:P:230:MET:SD	18:P:282:ILE:HD11	2.60	0.42
19:Q:204:LEU:HA	19:Q:213:VAL:O	2.20	0.42
20:R:21:TYR:CD2	20:R:64:ASP:OD2	2.73	0.42
20:R:40:GLU:N	20:R:87:TYR:CE1	2.88	0.42
22:T:132:DA:H2"	22:T:133:DT:H73	1.98	0.42
22:T:134:DT:H2"	22:T:135:DG:C8	2.54	0.42
23:U:354:ASP:OD2	23:U:358:TYR:CE2	2.72	0.42
24:V:118:HIS:CE1	24:V:120:TYR:HE2	2.38	0.42
27:Y:110:SER:HB3	27:Y:212:TYR:HD1	1.81	0.42
27:Y:182:LEU:CD1	27:Y:192:PRO:HG2	2.45	0.42
27:Y:321:ILE:HD11	27:Y:409:ILE:CB	2.46	0.42
1:1:331:GLN:HE22	1:1:378:ARG:CD	2.26	0.42
1:1:363:ARG:HH21	1:1:366:GLN:NE2	2.08	0.42
1:1:588:PHE:HZ	1:1:621:LYS:NZ	2.09	0.42
3:A:312:PRO:CA	18:P:96:ILE:CG2	2.97	0.42
3:A:332:LYS:O	3:A:333:GLU:HB2	2.19	0.42
3:A:481:ASP:OD1	3:A:485:ASP:OD1	2.37	0.42
3:A:497:THR:HG22	4:B:1146:PHE:CD1	2.42	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:B:226:PHE:HA	4:B:395:GLN:CG	2.49	0.42
18:P:279:VAL:HG21	18:P:302:LEU:CD2	1.24	0.42
20:R:67:ILE:HG22	20:R:89:VAL:HA	2.02	0.42
23:U:138:ARG:HG2	23:U:138:ARG:HH11	1.85	0.42
27:Y:59:TYR:O	27:Y:62:HIS:CD2	2.72	0.42
27:Y:375:ARG:HB3	27:Y:378:SER:HB3	2.01	0.42
27:Y:679:MET:HE2	27:Y:681:LEU:HD11	2.02	0.42
1:1:296:VAL:HG12	1:1:297:ILE:N	2.34	0.42
1:1:356:LEU:HB3	1:1:427:TRP:HD1	1.82	0.42
1:1:522:ASP:CA	1:1:524:ILE:CD1	2.95	0.42
3:A:262:LEU:HG	3:A:328:ARG:NH2	2.35	0.42
3:A:413:ILE:HD13	3:A:424:ILE:HD11	2.01	0.42
3:A:562:THR:O	3:A:576:GLN:NE2	2.53	0.42
3:A:873:MET:HB3	3:A:878:ILE:HD11	2.01	0.42
11:I:76:PRO:HD2	11:I:108:HIS:HD2	1.84	0.42
17:O:71:PHE:HB3	19:Q:93:GLU:HB3	2.01	0.42
18:P:22:LEU:CA	18:P:52:LEU:CD1	2.97	0.42
18:P:58:ASP:CG	18:P:60:ARG:HG2	2.27	0.42
18:P:188:THR:HG21	18:P:245:HIS:CE1	2.55	0.42
18:P:327:GLN:O	18:P:327:GLN:CD	2.58	0.42
20:R:134:LEU:CD1	20:R:135:GLU:HG2	2.41	0.42
21:S:158:LYS:HD3	21:S:162:LEU:HB2	2.00	0.42
23:U:342:LEU:HA	23:U:413:MET:HE1	2.01	0.42
27:Y:135:ARG:CB	27:Y:155:LEU:HG	2.49	0.42
27:Y:197:ARG:HE	27:Y:225:GLU:CD	2.22	0.42
27:Y:353:SER:HB2	27:Y:378:SER:H	1.85	0.42
27:Y:639:LEU:CG	27:Y:649:ARG:HB2	2.48	0.42
1:1:349:ASN:O	1:1:481:GLU:HA	2.19	0.42
1:1:356:LEU:HD21	1:1:448:THR:CG2	2.50	0.42
1:1:403:ILE:O	1:1:404:LYS:HD2	2.19	0.42
1:1:473:VAL:CG1	1:1:481:GLU:CG	2.95	0.42
1:1:474:MET:H	1:1:480:ARG:N	2.18	0.42
1:1:505:ILE:HD12	1:1:510:LYS:HZ2	1.84	0.42
1:1:519:ARG:CG	1:1:524:ILE:CG2	2.95	0.42
3:A:243:PRO:HB2	3:A:245:PRO:HD2	2.02	0.42
3:A:1348:LEU:HG	3:A:1372:VAL:HG22	2.00	0.42
4:B:65:GLU:HG3	4:B:66:ASP:H	1.85	0.42
8:F:131:PRO:CG	9:G:18:PHE:HD2	2.31	0.42
18:P:245:HIS:HB2	18:P:301:THR:HG21	2.01	0.42
18:P:321:ASP:OD1	18:P:334:VAL:HG11	2.17	0.42
19:Q:98:ARG:NE	22:T:142:DC:H5”	2.35	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:39:ALA:HA	20:R:87:TYR:CE1	2.55	0.42
20:R:120:ASN:HD22	20:R:120:ASN:N	2.18	0.42
23:U:396:THR:OG1	23:U:401:TYR:CZ	2.72	0.42
24:V:59:LEU:CG	24:V:214:ILE:HG13	2.50	0.42
27:Y:191:CYS:O	27:Y:195:ILE:HG13	2.18	0.42
1:1:326:VAL:CG1	1:1:327:LYS:N	2.83	0.42
1:1:425:LEU:HA	1:1:429:THR:CA	2.49	0.42
1:1:475:ASP:OD1	1:1:482:TRP:CD1	2.73	0.42
2:2:259:ALA:HB2	3:A:708:MET:HE2	2.01	0.42
3:A:11:LEU:HD21	4:B:1195:HIS:CD2	2.55	0.42
3:A:399:HIS:HB3	3:A:400:PRO:HD3	2.02	0.42
3:A:1036:ARG:HG2	3:A:1036:ARG:HH11	1.85	0.42
3:A:1345:ARG:HG2	3:A:1372:VAL:HG12	2.01	0.42
4:B:951:GLN:CD	14:L:57:LEU:HD22	2.41	0.42
4:B:955:THR:HG22	4:B:956:THR:H	1.85	0.42
16:N:37:DA:H2"	16:N:38:DT:H71	2.01	0.42
18:P:288:LEU:CD2	18:P:328:LEU:HD11	2.44	0.42
22:T:117:DC:N3	22:T:118:DC:C4	2.87	0.42
23:U:343:ARG:HB3	23:U:347:PHE:HB2	2.02	0.42
27:Y:167:VAL:HG13	27:Y:195:ILE:HG21	1.99	0.42
1:1:394:LEU:N	1:1:394:LEU:CD1	2.83	0.42
1:1:415:VAL:CG1	1:1:416:SER:N	2.83	0.42
1:1:426:GLN:CA	1:1:426:GLN:HE21	2.33	0.42
1:1:474:MET:HG3	1:1:505:ILE:HG22	2.01	0.42
1:1:475:ASP:CA	1:1:478:THR:H	2.33	0.42
1:1:524:ILE:CD1	1:1:524:ILE:H	2.33	0.42
2:2:296:PHE:CZ	3:A:1080:THR:HB	2.55	0.42
3:A:306:ASN:O	3:A:313:GLN:HG2	2.19	0.42
3:A:412:ARG:H	18:P:51:VAL:CG1	2.32	0.42
3:A:497:THR:CG2	4:B:1146:PHE:CD1	3.02	0.42
4:B:273:LEU:HD12	4:B:280:ILE:HD12	2.02	0.42
4:B:341:LEU:HD11	4:B:343:ILE:HB	2.02	0.42
4:B:1143:ALA:HB1	4:B:1146:PHE:HB3	2.01	0.42
15:M:243:LEU:HD21	15:M:245:LEU:HD21	2.02	0.42
18:P:91:ASN:CG	18:P:92:LEU:N	2.73	0.42
18:P:145:ILE:CD1	18:P:182:ARG:CD	2.62	0.42
18:P:288:LEU:HD21	18:P:328:LEU:HD12	1.91	0.42
18:P:317:TYR:HB3	18:P:318:GLU:OE2	2.20	0.42
21:S:208:LYS:HZ3	21:S:208:LYS:HG3	1.54	0.42
1:1:393:THR:O	1:1:397:ILE:HG13	2.19	0.41
1:1:424:PHE:CB	1:1:435:CYS:SG	3.07	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:11:LEU:HA	4:B:1193:GLN:O	2.19	0.41
3:A:332:LYS:HA	3:A:337:ARG:CB	2.49	0.41
3:A:469:ARG:NH2	4:B:991:GLY:O	2.53	0.41
4:B:831:SER:HG	4:B:994:TYR:HE2	1.65	0.41
4:B:904:ARG:HG3	4:B:948:ILE:HG13	2.02	0.41
4:B:1220:ARG:N	6:D:14:ARG:NH2	2.64	0.41
5:C:148:ARG:HG3	5:C:151:GLN:HG3	2.01	0.41
8:F:92:ARG:NH2	9:G:63:PRO:C	2.73	0.41
16:N:28:DT:H72	24:V:292:ILE:HA	1.45	0.41
19:Q:99:PHE:HB3	22:T:143:DT:H5'	0.55	0.41
19:Q:103:ILE:CG1	22:T:143:DT:C4'	2.86	0.41
20:R:58:ILE:HG21	20:R:87:TYR:CD2	2.55	0.41
20:R:67:ILE:N	20:R:67:ILE:CD1	2.82	0.41
20:R:156:LEU:C	20:R:157:VAL:CG2	2.89	0.41
21:S:234:ARG:NH2	21:S:242:ARG:HB2	2.35	0.41
22:T:120:DG:H2"	22:T:121:DG:O5'	2.20	0.41
1:1:691:LEU:HD23	1:1:691:LEU:HA	1.90	0.41
2:2:281:TYR:CD1	2:2:281:TYR:C	2.93	0.41
3:A:317:LYS:O	4:B:471:LYS:CD	2.68	0.41
4:B:190:TYR:CE2	4:B:196:PRO:HG3	2.55	0.41
4:B:1198:TYR:HE2	4:B:1201:LYS:HE3	1.83	0.41
4:B:1221:SER:N	6:D:14:ARG:CZ	2.83	0.41
7:E:181:ALA:HA	7:E:186:LEU:HD21	2.01	0.41
18:P:263:CYS:HB2	18:P:264:LYS:CD	2.48	0.41
20:R:27:LEU:HD22	20:R:129:THR:HA	0.44	0.41
21:S:127:LYS:C	21:S:153:MET:CE	2.88	0.41
22:T:100:DC:C2	22:T:101:DC:C5	3.08	0.41
22:T:121:DG:H2'	22:T:122:DT:C5'	2.50	0.41
22:T:142:DC:O5'	22:T:142:DC:H6	2.02	0.41
22:T:151:DG:H2"	22:T:152:DC:H5	1.79	0.41
27:Y:62:HIS:ND1	27:Y:69:ILE:HG13	2.33	0.41
27:Y:293:LEU:HD13	27:Y:345:ARG:HH11	1.85	0.41
27:Y:506:ILE:C	27:Y:522:TYR:CZ	2.94	0.41
27:Y:567:LYS:CG	27:Y:568:LEU:N	2.78	0.41
1:1:300:ASP:H	1:1:347:HIS:HA	1.85	0.41
1:1:383:ILE:HD13	1:1:533:PRO:C	2.40	0.41
1:1:476:PHE:CZ	1:1:493:VAL:CG1	2.97	0.41
2:2:252:ASN:HA	3:A:1204:ASP:CA	2.50	0.41
2:2:258:GLY:O	2:2:259:ALA:O	2.38	0.41
3:A:133:LYS:HE3	3:A:1391:ARG:HH12	1.85	0.41
3:A:1094:VAL:HG22	3:A:1113:THR:HB	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:A:1221:LYS:HB3	3:A:1222:ASN:H	1.72	0.41
5:C:99:LEU:HD12	5:C:118:LEU:HB3	2.02	0.41
18:P:142:LEU:HD23	18:P:147:LYS:CD	2.47	0.41
18:P:188:THR:CB	18:P:245:HIS:ND1	2.80	0.41
19:Q:202:ILE:CD1	19:Q:217:ALA:HB2	2.50	0.41
20:R:29:LEU:HD13	20:R:61:LEU:HD13	2.02	0.41
21:S:134:TYR:HE2	21:S:147:LEU:HD23	1.83	0.41
1:1:328:LYS:HG3	1:1:329:ARG:N	2.35	0.41
1:1:328:LYS:CD	1:1:530:LEU:HD23	2.50	0.41
1:1:583:MET:O	1:1:584:ASN:C	2.57	0.41
2:2:253:LEU:HD23	2:2:253:LEU:HA	1.37	0.41
3:A:1404:GLU:HB3	3:A:1408:ILE:HG13	2.02	0.41
4:B:315:LYS:N	4:B:316:PRO:HD2	2.36	0.41
4:B:986:GLN:OE1	4:B:1016:ALA:HB1	2.20	0.41
12:J:22:LEU:O	12:J:26:GLN:HG2	2.20	0.41
16:N:19:DT:H6	16:N:19:DT:H3'	1.86	0.41
17:O:52:LEU:O	17:O:56:THR:CG2	2.68	0.41
20:R:28:VAL:CG2	20:R:57:LEU:HD13	2.50	0.41
21:S:203:LYS:CG	21:S:242:ARG:HB3	2.51	0.41
23:U:371:ASP:OD1	24:V:75:MET:N	2.53	0.41
27:Y:541:PHE:CE1	27:Y:599:LEU:CD2	2.87	0.41
27:Y:625:ILE:HG23	27:Y:626:PRO:HD2	2.02	0.41
1:1:370:LEU:CD1	1:1:398:THR:CG2	2.94	0.41
1:1:431:GLN:CB	1:1:432:PRO:HD3	2.45	0.41
3:A:291:GLU:OE2	18:P:116:LYS:CE	2.62	0.41
3:A:312:PRO:HG3	18:P:110:LEU:HD22	2.01	0.41
3:A:340:LEU:CD2	4:B:1199:ALA:HB3	2.50	0.41
3:A:411:ASP:HB3	18:P:50:LEU:HG	2.02	0.41
3:A:1443:VAL:CB	9:G:62:LEU:C	2.85	0.41
7:E:10:SER:O	7:E:14:ARG:HG3	2.19	0.41
13:K:39:ASP:OD1	13:K:41:THR:HB	2.21	0.41
16:N:15:DC:H2"	16:N:16:DC:C5	2.56	0.41
18:P:100:GLU:OE2	18:P:101:THR:HG23	2.20	0.41
18:P:128:ALA:CA	18:P:132:LYS:NZ	2.83	0.41
18:P:170:SER:HG	18:P:206:THR:HG1	1.55	0.41
19:Q:211:LYS:HG2	22:T:148:DT:H4'	2.03	0.41
21:S:126:SER:O	24:V:339:LEU:HB2	2.13	0.41
23:U:94:ASP:CB	23:U:95:PRO:HD3	2.49	0.41
23:U:375:LEU:CD2	24:V:70:LEU:HD13	2.44	0.41
24:V:318:LEU:HD13	24:V:349:TYR:CE2	2.49	0.41
27:Y:200:ILE:HG23	27:Y:201:SER:N	2.36	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:234:PHE:CZ	27:Y:449:VAL:HG21	2.49	0.41
1:1:328:LYS:HA	1:1:505:ILE:O	2.21	0.41
1:1:427:TRP:CZ3	1:1:450:SER:HB2	2.52	0.41
1:1:456:THR:CG2	1:1:457:TYR:N	2.81	0.41
1:1:670:LEU:HA	1:1:670:LEU:HD12	1.84	0.41
4:B:199:MET:SD	4:B:199:MET:N	2.90	0.41
4:B:841:MET:HG2	4:B:1010:LEU:HD12	2.02	0.41
5:C:125:MET:HB2	5:C:127:ARG:NE	2.36	0.41
10:H:125:LEU:HG	10:H:130:ARG:HH22	1.85	0.41
16:N:59:DT:N1	16:N:60:DA:C8	2.89	0.41
18:P:103:ASP:OD2	18:P:107:THR:HB	2.20	0.41
22:T:104:DT:C2'	22:T:105:DT:C5'	2.93	0.41
23:U:374:VAL:HG21	24:V:73:LEU:CD1	2.50	0.41
27:Y:155:LEU:HD13	27:Y:155:LEU:C	2.40	0.41
1:1:305:GLU:HB2	1:1:327:LYS:HE3	2.03	0.41
1:1:352:LEU:N	1:1:352:LEU:CD2	2.84	0.41
1:1:356:LEU:HD22	1:1:356:LEU:H	1.83	0.41
1:1:421:ARG:HE	1:1:430:LEU:CD1	2.22	0.41
1:1:474:MET:HE3	1:1:482:TRP:C	2.41	0.41
1:1:481:GLU:O	1:1:482:TRP:CE3	2.73	0.41
1:1:528:ASN:CG	1:1:533:PRO:HB3	2.41	0.41
1:1:726:LEU:HD23	1:1:726:LEU:HA	1.85	0.41
4:B:856:PHE:CE2	4:B:969:ARG:HG3	2.55	0.41
4:B:1082:MET:HA	5:C:189:THR:HA	2.03	0.41
7:E:156:LEU:HD23	7:E:160:GLU:HB3	2.03	0.41
9:G:14:HIS:CD2	9:G:15:PRO:HD2	2.56	0.41
10:H:38:LEU:HD13	10:H:125:LEU:HD13	2.02	0.41
18:P:164:LYS:HD3	18:P:166:LYS:HB3	1.31	0.41
18:P:249:PRO:HG3	18:P:289:PHE:CE2	2.56	0.41
18:P:268:GLU:OE2	18:P:323:LEU:HD11	2.21	0.41
18:P:308:THR:HG23	22:T:151:DG:OP1	2.21	0.41
18:P:338:ASN:HB2	18:P:340:PRO:HD3	2.02	0.41
19:Q:166:VAL:HG22	19:Q:210:GLY:O	2.20	0.41
21:S:129:LEU:HB3	24:V:347:PHE:HD2	1.85	0.41
21:S:156:ASP:HA	21:S:159:VAL:HG11	2.00	0.41
21:S:202:PHE:O	21:S:203:LYS:NZ	2.49	0.41
22:T:143:DT:C2'	22:T:144:DT:C5'	2.99	0.41
24:V:333:LEU:HD21	24:V:349:TYR:HE2	1.85	0.41
1:1:335:TYR:HD1	1:1:336:PRO:CD	2.23	0.41
1:1:408:ILE:CG1	1:1:475:ASP:HB3	2.20	0.41
1:1:410:LEU:CD2	1:1:476:PHE:CD2	3.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:1:417:VAL:HG13	1:1:454:VAL:HG12	1.98	0.41
1:1:434:ASN:O	1:1:452:LEU:CG	2.69	0.41
1:1:457:TYR:CE2	1:1:492:VAL:HB	2.56	0.41
1:1:474:MET:O	1:1:482:TRP:CG	2.73	0.41
1:1:518:VAL:CG1	1:1:519:ARG:N	2.83	0.41
2:2:253:LEU:HD11	3:A:1132:LYS:HD2	1.95	0.41
3:A:626:ASN:O	3:A:631:HIS:ND1	2.53	0.41
4:B:216:GLU:OE2	4:B:404:LYS:HD2	2.20	0.41
16:N:15:DC:H2"	16:N:16:DC:H5	1.84	0.41
18:P:180:CYS:CB	18:P:187:ARG:HG2	2.45	0.41
18:P:320:ARG:NH2	18:P:337:ASP:HB2	2.12	0.41
21:S:136:GLN:NE2	21:S:137:LYS:HZ3	2.18	0.41
27:Y:342:LEU:HD23	27:Y:345:ARG:HH21	1.80	0.41
27:Y:389:GLU:HB3	27:Y:400:LYS:NZ	2.36	0.41
1:1:403:ILE:O	1:1:404:LYS:HG3	2.21	0.41
1:1:429:THR:HB	1:1:432:PRO:CG	2.51	0.41
1:1:429:THR:HG22	1:1:431:GLN:H	1.85	0.41
1:1:474:MET:CG	1:1:505:ILE:HG22	2.51	0.41
1:1:610:ASP:OD2	1:1:674:SER:OG	2.39	0.41
1:1:656:LYS:HD2	1:1:656:LYS:C	2.39	0.41
2:2:269:PHE:CE2	2:2:306:TRP:CZ2	3.08	0.41
3:A:261:ASP:OD1	18:P:81:GLU:CB	2.65	0.41
3:A:1356:ILE:HG23	3:A:1361:SER:HB2	2.03	0.41
5:C:148:ARG:N	5:C:151:GLN:HG3	2.23	0.41
5:C:255:VAL:HG21	13:K:94:ILE:HG21	2.03	0.41
8:F:92:ARG:HE	9:G:64:THR:HA	1.73	0.41
14:L:38:LEU:HD21	14:L:48:CYS:HA	2.02	0.41
18:P:36:GLU:O	18:P:37:ARG:HB2	2.20	0.41
18:P:164:LYS:HG2	18:P:166:LYS:N	2.35	0.41
18:P:188:THR:HG22	18:P:191:GLU:CB	2.51	0.41
18:P:190:LYS:CE	18:P:242:PHE:CE2	2.98	0.41
18:P:196:ILE:CD1	18:P:197:HIS:CD2	3.04	0.41
18:P:254:THR:CA	18:P:257:GLU:OE1	2.66	0.41
19:Q:114:LEU:HD21	22:T:143:DT:H2'	2.02	0.41
20:R:62:ARG:N	20:R:67:ILE:CD1	2.82	0.41
21:S:148:LEU:HD13	21:S:154:LYS:HE3	1.99	0.41
21:S:194:LYS:NZ	21:S:210:LEU:HD13	2.32	0.41
21:S:237:LYS:HZ2	21:S:241:PRO:CB	2.10	0.41
23:U:374:VAL:CG2	24:V:73:LEU:HD11	2.49	0.41
25:W:488:LYS:HE2	25:W:488:LYS:HB2	1.78	0.41
27:Y:214:LEU:O	27:Y:216:PRO:HD3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:Y:360:LEU:HD13	27:Y:360:LEU:O	2.21	0.41
27:Y:375:ARG:HH11	27:Y:377:CYS:CB	2.33	0.41
27:Y:494:PRO:HA	27:Y:697:ILE:O	2.20	0.41
27:Y:514:ASN:HB3	27:Y:516:PRO:HD2	2.03	0.41
27:Y:639:LEU:CA	27:Y:653:PHE:HD2	2.25	0.41
2:2:282:TYR:O	2:2:282:TYR:CG	2.73	0.41
2:2:308:PHE:O	2:2:309:SER:CB	2.69	0.41
3:A:354:SER:O	3:A:469:ARG:HA	2.21	0.41
3:A:369:SER:HB3	13:K:2:ASN:OD1	2.21	0.41
8:F:131:PRO:HG2	9:G:18:PHE:HD2	1.86	0.41
14:L:27:LEU:HD22	14:L:37:LYS:HE3	2.03	0.41
18:P:144:LYS:HA	18:P:147:LYS:HE2	2.02	0.41
18:P:258:TYR:O	18:P:258:TYR:CG	2.74	0.41
19:Q:114:LEU:CG	22:T:143:DT:O2	2.68	0.41
20:R:44:LYS:CE	20:R:44:LYS:CA	2.95	0.41
22:T:143:DT:H2'	22:T:144:DT:C5'	2.51	0.41
24:V:304:PHE:O	24:V:308:ASP:N	2.54	0.41
27:Y:108:LEU:HD13	27:Y:196:VAL:HG12	2.02	0.41
27:Y:184:TYR:HE1	27:Y:190:LEU:HD21	1.85	0.41
27:Y:238:HIS:ND1	27:Y:660:ARG:HD2	2.36	0.41
27:Y:458:ILE:HG21	27:Y:469:TYR:CZ	2.55	0.41
27:Y:562:GLU:OE1	27:Y:599:LEU:HD11	2.20	0.41
3:A:227:VAL:CB	6:D:16:LYS:HE3	2.47	0.40
3:A:982:THR:H	3:A:985:ASP:HB2	1.86	0.40
3:A:1447:GLU:HB2	9:G:70:PHE:CZ	2.57	0.40
4:B:279:ASP:OD1	4:B:279:ASP:N	2.53	0.40
4:B:1119:VAL:HG23	4:B:1126:GLY:HA2	2.03	0.40
4:B:1219:ASP:O	6:D:14:ARG:NH2	2.54	0.40
6:D:194:LEU:O	6:D:196:PRO:HD3	2.21	0.40
11:I:8:ARG:O	11:I:9:ASP:CB	2.69	0.40
12:J:28:ASP:C	12:J:30:LEU:H	2.24	0.40
12:J:43:ARG:O	12:J:47:ARG:HG3	2.21	0.40
16:N:37:DA:C5	16:N:38:DT:C4	3.08	0.40
17:O:117:ASN:CG	17:O:119:LYS:HG2	2.42	0.40
18:P:223:LEU:CD1	19:Q:177:PHE:CE2	3.04	0.40
20:R:133:GLN:HE21	20:R:133:GLN:HB2	1.53	0.40
21:S:203:LYS:CA	21:S:242:ARG:CD	2.55	0.40
22:T:116:DG:N3	22:T:117:DC:C6	2.89	0.40
22:T:140:DC:C4	22:T:141:DC:N4	2.89	0.40
23:U:96:ASN:ND2	23:U:97:GLU:N	2.64	0.40
23:U:127:ILE:O	23:U:127:ILE:HG23	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:U:375:LEU:HD22	24:V:134:VAL:CG1	2.47	0.40
27:Y:350:HIS:O	27:Y:353:SER:OG	2.26	0.40
27:Y:405:PHE:CE2	27:Y:439:CYS:HB2	2.56	0.40
27:Y:496:ILE:CG2	27:Y:704:ALA:HB2	2.50	0.40
27:Y:562:GLU:CD	27:Y:599:LEU:CD1	2.89	0.40
1:1:316:PHE:HZ	1:1:321:GLU:HG2	1.86	0.40
1:1:519:ARG:N	1:1:524:ILE:CG2	2.84	0.40
1:1:528:ASN:N	1:1:528:ASN:HD22	2.19	0.40
2:2:257:GLN:HA	3:A:1284:MET:HG3	2.04	0.40
3:A:412:ARG:O	18:P:50:LEU:CA	2.69	0.40
3:A:416:ARG:NH2	18:P:40:GLU:HG3	2.36	0.40
3:A:1443:VAL:HB	9:G:63:PRO:C	2.21	0.40
4:B:311:LEU:HB3	11:I:4:PHE:HE2	1.85	0.40
4:B:344:LYS:HB3	4:B:347:LYS:HB2	2.04	0.40
4:B:405:ARG:NE	4:B:629:ASP:OD2	2.54	0.40
4:B:758:PHE:CE1	4:B:1044:ALA:HA	2.56	0.40
4:B:854:LEU:HD23	4:B:854:LEU:HA	1.86	0.40
6:D:154:PHE:HB2	6:D:160:VAL:HG22	2.04	0.40
16:N:55:DG:H1'	16:N:56:DT:H5'	2.03	0.40
17:O:87:VAL:CG1	17:O:88:GLU:N	2.72	0.40
18:P:57:VAL:O	18:P:57:VAL:CG1	2.59	0.40
18:P:188:THR:N	18:P:241:ARG:HB3	2.35	0.40
18:P:206:THR:CA	18:P:209:ILE:HG12	2.51	0.40
18:P:320:ARG:NE	18:P:334:VAL:HG22	2.16	0.40
20:R:149:CYS:HB2	20:R:154:GLU:O	2.21	0.40
21:S:181:LEU:C	21:S:181:LEU:CD2	2.88	0.40
27:Y:666:LEU:HD13	27:Y:666:LEU:O	2.22	0.40
1:1:757:ARG:NH1	1:1:760:LEU:HB2	2.26	0.40
3:A:34:LYS:HG2	3:A:36:ARG:NH1	2.36	0.40
3:A:239:LEU:HD12	3:A:239:LEU:HA	1.77	0.40
4:B:39:ARG:HE	4:B:665:GLU:HG2	1.86	0.40
4:B:622:LYS:HE3	11:I:59:VAL:HG22	2.02	0.40
4:B:758:PHE:CE2	4:B:1027:ILE:HG22	2.57	0.40
4:B:979:LYS:HD3	4:B:1095:LEU:HD13	2.03	0.40
4:B:986:GLN:NE2	4:B:1022:THR:HG21	2.36	0.40
8:F:92:ARG:NE	9:G:64:THR:CB	2.84	0.40
18:P:93:SER:O	18:P:94:THR:OG1	2.39	0.40
19:Q:211:LYS:CG	22:T:148:DT:H4'	2.51	0.40
20:R:61:LEU:O	20:R:64:ASP:HB2	2.21	0.40
20:R:126:ILE:HG12	20:R:152:CYS:SG	2.61	0.40
21:S:135:ILE:HG12	21:S:180:TYR:CB	2.38	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:S:210:LEU:HA	21:S:214:TRP:CH2	2.54	0.40
23:U:96:ASN:HB3	23:U:98:TYR:HE2	1.85	0.40
27:Y:124:ARG:CZ	27:Y:374:LEU:HD22	2.51	0.40
27:Y:213:LEU:O	27:Y:219:ALA:HB2	2.21	0.40
1:1:316:PHE:CE2	1:1:317:GLU:O	2.74	0.40
1:1:387:PRO:HD2	1:1:390:ALA:HB2	2.03	0.40
1:1:436:ALA:CB	1:1:452:LEU:CD2	2.96	0.40
1:1:474:MET:SD	1:1:507:ALA:N	2.95	0.40
1:1:485:ILE:CG1	1:1:510:LYS:HA	2.50	0.40
1:1:588:PHE:CZ	1:1:622:MET:SD	3.15	0.40
3:A:227:VAL:HG11	6:D:16:LYS:HE3	2.03	0.40
3:A:346:ASP:OD1	4:B:1106:ARG:NH2	2.54	0.40
4:B:350:GLN:HB2	23:U:407:ASP:OD2	2.20	0.40
4:B:789:MET:HG3	4:B:953:LEU:HD21	2.02	0.40
11:I:111:THR:HG21	11:I:118:ARG:HD2	2.03	0.40
15:M:286:VAL:OXT	15:M:286:VAL:HG12	2.21	0.40
16:N:23:DA:O3'	19:Q:120:LYS:CE	2.62	0.40
18:P:22:LEU:HD13	18:P:34:ILE:CD1	2.42	0.40
18:P:152:GLU:C	18:P:155:LYS:HG2	2.40	0.40
19:Q:98:ARG:HH11	19:Q:98:ARG:HG2	1.87	0.40
20:R:88:TYR:CE2	20:R:89:VAL:O	2.74	0.40
20:R:120:ASN:CG	20:R:133:GLN:HG2	2.42	0.40
20:R:131:TYR:HH	20:R:149:CYS:HG	1.58	0.40
22:T:131:DC:H2"	22:T:132:DA:H8	1.86	0.40
24:V:306:LEU:HD11	24:V:313:TRP:CE2	2.47	0.40
27:Y:342:LEU:HD13	27:Y:346:MET:HG3	2.04	0.40
27:Y:506:ILE:CG1	27:Y:522:TYR:CE1	3.04	0.40
1:1:449:GLU:HB3	1:1:451:GLY:C	2.41	0.40
1:1:475:ASP:H	1:1:478:THR:H	1.69	0.40
1:1:584:ASN:HA	1:1:585:PRO:HD3	1.89	0.40
3:A:7:SER:HB2	4:B:1175:LEU:HD22	2.03	0.40
3:A:1196:GLU:HA	3:A:1236:LEU:O	2.21	0.40
4:B:72:GLU:CD	23:U:311:ASP:O	2.54	0.40
4:B:969:ARG:HD2	5:C:61:GLU:OE2	2.21	0.40
6:D:175:PHE:HZ	9:G:85:GLU:HG3	1.86	0.40
8:F:92:ARG:CZ	9:G:63:PRO:C	2.90	0.40
18:P:30:TYR:HA	18:P:31:PRO:HB3	2.04	0.40
18:P:86:LEU:HD21	18:P:152:GLU:CB	2.52	0.40
18:P:200:THR:HG23	18:P:201:LYS:HG2	2.04	0.40
19:Q:84:THR:HG23	19:Q:88:HIS:CD2	2.56	0.40
20:R:25:PHE:CD1	20:R:25:PHE:N	2.90	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:R:66:LEU:HD13	20:R:66:LEU:HA	1.84	0.40
20:R:129:THR:HG21	20:R:149:CYS:SG	2.61	0.40
23:U:135:LEU:HB2	23:U:136:PRO:HD3	1.83	0.40
24:V:343:GLY:C	24:V:345:TYR:H	2.24	0.40
24:V:344:PRO:O	24:V:345:TYR:HB2	2.22	0.40
27:Y:133:CYS:SG	27:Y:159:HIS:CE1	3.15	0.40
27:Y:135:ARG:HB2	27:Y:155:LEU:HG	2.03	0.40
27:Y:564:TRP:HE1	27:Y:599:LEU:HD12	1.82	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	1	467/492 (95%)	436 (93%)	26 (6%)	5 (1%)	12 47
2	2	68/174 (39%)	51 (75%)	10 (15%)	7 (10%)	0 6
3	A	1414/1733 (82%)	1250 (88%)	113 (8%)	51 (4%)	3 20
4	B	1140/1224 (93%)	1018 (89%)	86 (8%)	36 (3%)	3 21
5	C	264/266 (99%)	242 (92%)	20 (8%)	2 (1%)	16 55
6	D	174/178 (98%)	148 (85%)	18 (10%)	8 (5%)	2 17
7	E	212/214 (99%)	195 (92%)	13 (6%)	4 (2%)	6 32
8	F	82/84 (98%)	75 (92%)	7 (8%)	0	100 100
9	G	169/171 (99%)	158 (94%)	8 (5%)	3 (2%)	7 34
10	H	129/146 (88%)	106 (82%)	14 (11%)	9 (7%)	1 11
11	I	117/119 (98%)	98 (84%)	16 (14%)	3 (3%)	4 25
12	J	63/65 (97%)	51 (81%)	9 (14%)	3 (5%)	2 16
13	K	113/115 (98%)	109 (96%)	4 (4%)	0	100 100

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
14	L	44/46 (96%)	27 (61%)	9 (20%)	8 (18%)	0 2
15	M	110/116 (95%)	103 (94%)	7 (6%)	0	100 100
17	O	97/122 (80%)	93 (96%)	4 (4%)	0	100 100
18	P	287/345 (83%)	235 (82%)	33 (12%)	19 (7%)	1 12
19	Q	178/180 (99%)	170 (96%)	5 (3%)	3 (2%)	7 36
20	R	112/160 (70%)	100 (89%)	10 (9%)	2 (2%)	7 34
21	S	105/123 (85%)	94 (90%)	7 (7%)	4 (4%)	2 19
23	U	142/150 (95%)	131 (92%)	6 (4%)	5 (4%)	3 20
24	V	166/174 (95%)	145 (87%)	16 (10%)	5 (3%)	3 22
25	W	60/62 (97%)	60 (100%)	0	0	100 100
26	X	61/63 (97%)	58 (95%)	3 (5%)	0	100 100
27	Y	558/778 (72%)	515 (92%)	35 (6%)	8 (1%)	9 40
All	All	6332/7300 (87%)	5668 (90%)	479 (8%)	185 (3%)	6 23

All (185) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	1	447	GLN
1	1	458	SER
2	2	275	LYS
2	2	292	PRO
3	A	74	MET
3	A	96	ILE
3	A	189	ARG
3	A	195	ASP
3	A	286	HIS
3	A	317	LYS
3	A	399	HIS
3	A	449	SER
3	A	628	GLY
3	A	1377	THR
3	A	1405	THR
4	B	229	ALA
4	B	307	ASP
4	B	344	LYS
4	B	442	PHE
4	B	466	TRP
4	B	473	MET

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Mol	Chain	Res	Type
4	B	531	GLN
4	B	772	ALA
4	B	1046	PRO
4	B	1181	GLU
6	D	18	VAL
6	D	53	SER
6	D	199	ASN
11	I	9	ASP
11	I	95	THR
14	L	50	ASP
14	L	53	HIS
18	P	25	PRO
18	P	31	PRO
18	P	32	PRO
18	P	35	VAL
18	P	104	MET
18	P	125	GLU
18	P	200	THR
18	P	326	PRO
18	P	329	ILE
18	P	330	ALA
19	Q	154	ASP
20	R	149	CYS
21	S	203	LYS
21	S	205	ILE
23	U	95	PRO
23	U	136	PRO
24	V	129	VAL
24	V	210	LYS
27	Y	268	ASP
27	Y	494	PRO
27	Y	534	PRO
27	Y	567	LYS
1	1	378	ARG
1	1	449	GLU
2	2	259	ALA
3	A	40	THR
3	A	44	THR
3	A	51	GLY
3	A	52	GLY
3	A	57	ARG
3	A	66	LYS

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Mol	Chain	Res	Type
3	A	68	GLN
3	A	167	CYS
3	A	178	GLY
3	A	193	ASP
3	A	224	PHE
3	A	252	PHE
3	A	254	GLU
3	A	330	LYS
3	A	672	ASP
3	A	1175	SER
3	A	1281	ARG
4	B	262	GLU
4	B	282	ILE
4	B	339	THR
4	B	341	LEU
4	B	707	PRO
4	B	731	VAL
4	B	792	MET
4	B	1175	LEU
4	B	1176	ASN
6	D	16	LYS
6	D	52	LEU
6	D	169	SER
7	E	36	GLU
9	G	2	PHE
10	H	17	PRO
10	H	81	PRO
10	H	82	PRO
10	H	83	GLN
10	H	90	ALA
12	J	6	ARG
14	L	45	ALA
14	L	56	LEU
18	P	223	LEU
19	Q	78	CYS
20	R	153	ASP
24	V	118	HIS
27	Y	575	ASP
2	2	295	THR
3	A	54	ASN
3	A	975	HIS
3	A	1173	HIS

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Mol	Chain	Res	Type
4	B	340	ALA
4	B	343	ILE
4	B	711	GLU
4	B	1156	ASP
4	B	1157	ALA
4	B	1167	GLY
6	D	22	GLU
7	E	45	LYS
7	E	48	ASP
9	G	154	VAL
10	H	18	GLY
14	L	59	ALA
18	P	160	GLU
23	U	110	ASP
23	U	135	LEU
27	Y	483	TYR
2	2	288	SER
3	A	69	THR
3	A	72	GLU
3	A	465	TYR
3	A	569	LYS
3	A	846	GLU
3	A	958	VAL
3	A	1255	GLU
3	A	1438	THR
4	B	441	ASP
4	B	648	HIS
4	B	1108	ARG
4	B	1155	SER
5	C	88	CYS
11	I	91	ARG
12	J	29	GLU
14	L	26	THR
14	L	55	ILE
14	L	64	LEU
18	P	196	ILE
18	P	270	ALA
18	P	291	ILE
19	Q	110	LYS
21	S	161	GLU
24	V	60	ASP
2	2	277	LYS

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Mol	Chain	Res	Type
2	2	293	LEU
3	A	156	ASP
3	A	567	LYS
3	A	1171	GLN
3	A	1366	ARG
4	B	251	ILE
4	B	462	ALA
4	B	469	GLN
4	B	1223	ASP
6	D	21	GLU
10	H	60	ALA
10	H	128	ASN
12	J	2	ILE
18	P	118	VAL
18	P	224	LYS
23	U	126	LYS
24	V	343	GLY
27	Y	290	VAL
27	Y	370	GLU
3	A	35	ILE
3	A	155	GLU
3	A	885	THR
5	C	214	ASN
18	P	92	LEU
18	P	198	VAL
1	1	746	PRO
3	A	196	GLU
3	A	1388	GLY
3	A	1437	GLY
7	E	90	VAL
9	G	63	PRO
4	B	364	ILE
21	S	214	TRP
3	A	192	GLY
3	A	448	PRO
4	B	1121	GLY
4	B	1214	PRO
10	H	59	ILE

5.3.2 Protein sidechains (i)

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all 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	1	415/431 (96%)	370 (89%)	45 (11%)	5 19
2	2	62/151 (41%)	55 (89%)	7 (11%)	4 17
3	A	1240/1520 (82%)	1066 (86%)	174 (14%)	3 12
4	B	985/1061 (93%)	868 (88%)	117 (12%)	4 16
5	C	234/234 (100%)	206 (88%)	28 (12%)	4 16
6	D	160/160 (100%)	129 (81%)	31 (19%)	1 7
7	E	196/196 (100%)	175 (89%)	21 (11%)	5 19
8	F	74/74 (100%)	67 (90%)	7 (10%)	7 22
9	G	152/152 (100%)	135 (89%)	17 (11%)	5 17
10	H	117/128 (91%)	103 (88%)	14 (12%)	4 16
11	I	113/113 (100%)	106 (94%)	7 (6%)	15 36
12	J	60/60 (100%)	49 (82%)	11 (18%)	1 8
13	K	99/99 (100%)	87 (88%)	12 (12%)	4 16
14	L	40/40 (100%)	27 (68%)	13 (32%)	0 2
15	M	107/107 (100%)	104 (97%)	3 (3%)	38 57
17	O	91/108 (84%)	83 (91%)	8 (9%)	8 25
18	P	256/299 (86%)	215 (84%)	41 (16%)	2 10
19	Q	152/152 (100%)	143 (94%)	9 (6%)	16 38
20	R	108/149 (72%)	88 (82%)	20 (18%)	1 8
21	S	116/118 (98%)	69 (60%)	47 (40%)	0 0
23	U	136/136 (100%)	133 (98%)	3 (2%)	47 65
24	V	163/163 (100%)	158 (97%)	5 (3%)	35 54
25	W	57/57 (100%)	57 (100%)	0	100 100
26	X	57/57 (100%)	57 (100%)	0	100 100
27	Y	521/707 (74%)	504 (97%)	17 (3%)	33 52
All	All	5711/6472 (88%)	5054 (88%)	657 (12%)	7 16

All (657) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	1	320	ASN
1	1	327	LYS
1	1	333	ILE
1	1	349	ASN
1	1	383	ILE
1	1	404	LYS
1	1	407	VAL
1	1	442	ASN
1	1	524	ILE
1	1	549	ILE
1	1	570	LEU
1	1	571	ARG
1	1	572	GLU
1	1	573	THR
1	1	577	ARG
1	1	582	ILE
1	1	621	LYS
1	1	622	MET
1	1	628	TYR
1	1	630	SER
1	1	634	GLN
1	1	638	ASN
1	1	647	ASP
1	1	656	LYS
1	1	660	THR
1	1	664	LEU
1	1	668	THR
1	1	669	CYS
1	1	674	SER
1	1	677	TYR
1	1	680	ARG
1	1	681	ARG
1	1	690	ILE
1	1	696	ARG
1	1	711	LYS
1	1	714	GLN
1	1	717	TYR
1	1	720	THR
1	1	740	HIS
1	1	746	PRO
1	1	753	PRO
1	1	754	ARG

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Mol	Chain	Res	Type
1	1	756	ARG
1	1	757	ARG
1	1	785	ARG
2	2	263	ARG
2	2	266	THR
2	2	267	ASP
2	2	283	GLN
2	2	288	SER
2	2	292	PRO
2	2	293	LEU
3	A	13	THR
3	A	15	LYS
3	A	22	PHE
3	A	41	MET
3	A	42	ASP
3	A	53	LEU
3	A	54	ASN
3	A	57	ARG
3	A	64	ASN
3	A	66	LYS
3	A	68	GLN
3	A	74	MET
3	A	80	HIS
3	A	93	VAL
3	A	106	VAL
3	A	131	SER
3	A	134	ARG
3	A	147	VAL
3	A	157	ASP
3	A	173	THR
3	A	174	ILE
3	A	175	ARG
3	A	176	LYS
3	A	199	LEU
3	A	204	THR
3	A	208	LEU
3	A	219	PHE
3	A	220	THR
3	A	222	LEU
3	A	249	SER
3	A	257	ARG
3	A	265	LYS

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Mol	Chain	Res	Type
3	A	277	GLU
3	A	279	LEU
3	A	307	ASP
3	A	311	GLN
3	A	335	ARG
3	A	337	ARG
3	A	344	ARG
3	A	353	ILE
3	A	375	THR
3	A	381	THR
3	A	385	ILE
3	A	386	ASP
3	A	393	ARG
3	A	398	GLU
3	A	408	ASP
3	A	411	ASP
3	A	412	ARG
3	A	424	ILE
3	A	425	GLN
3	A	434	ARG
3	A	436	ILE
3	A	438	ASP
3	A	443	LEU
3	A	445	ASN
3	A	450	LEU
3	A	451	HIS
3	A	454	SER
3	A	469	ARG
3	A	470	LEU
3	A	472	LEU
3	A	474	VAL
3	A	475	THR
3	A	476	SER
3	A	489	LEU
3	A	498	ARG
3	A	500	GLU
3	A	505	CYS
3	A	513	SER
3	A	532	ARG
3	A	544	ASP
3	A	566	ILE
3	A	571	LEU

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Mol	Chain	Res	Type
3	A	582	ILE
3	A	593	GLU
3	A	596	THR
3	A	602	ASP
3	A	603	ASN
3	A	618	GLU
3	A	629	LEU
3	A	634	THR
3	A	664	THR
3	A	666	ILE
3	A	672	ASP
3	A	691	LEU
3	A	702	LEU
3	A	738	LYS
3	A	768	GLN
3	A	769	SER
3	A	773	LYS
3	A	782	ARG
3	A	788	SER
3	A	795	GLU
3	A	797	LYS
3	A	801	GLU
3	A	811	GLN
3	A	821	ARG
3	A	826	ASP
3	A	827	THR
3	A	831	THR
3	A	834	THR
3	A	839	ARG
3	A	849	MET
3	A	867	ILE
3	A	886	ILE
3	A	896	ARG
3	A	919	ILE
3	A	920	LEU
3	A	948	VAL
3	A	949	ASP
3	A	964	ILE
3	A	973	ILE
3	A	976	THR
3	A	998	LEU
3	A	1009	ASN

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Mol	Chain	Res	Type
3	A	1015	VAL
3	A	1029	ARG
3	A	1030	ARG
3	A	1047	SER
3	A	1058	VAL
3	A	1062	GLU
3	A	1067	LEU
3	A	1078	GLN
3	A	1116	LEU
3	A	1118	VAL
3	A	1120	LEU
3	A	1121	GLU
3	A	1124	HIS
3	A	1135	ARG
3	A	1142	THR
3	A	1173	HIS
3	A	1176	LEU
3	A	1195	LEU
3	A	1208	THR
3	A	1218	GLN
3	A	1223	ASP
3	A	1237	ILE
3	A	1242	VAL
3	A	1255	GLU
3	A	1257	ASP
3	A	1260	LEU
3	A	1264	GLU
3	A	1265	ASN
3	A	1273	LEU
3	A	1274	ARG
3	A	1291	VAL
3	A	1295	THR
3	A	1297	GLU
3	A	1309	ASP
3	A	1315	GLU
3	A	1317	MET
3	A	1325	THR
3	A	1327	ILE
3	A	1336	MET
3	A	1341	ILE
3	A	1355	VAL
3	A	1366	ARG

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Mol	Chain	Res	Type
3	A	1376	THR
3	A	1382	THR
3	A	1386	ARG
3	A	1391	ARG
3	A	1393	ASN
3	A	1400	CYS
3	A	1405	THR
3	A	1406	VAL
3	A	1426	GLU
3	A	1433	MET
3	A	1438	THR
3	A	1442	ASP
3	A	1444	MET
3	A	1445	ILE
3	A	1453	TYR
3	A	1454	MET
4	B	25	ILE
4	B	46	GLN
4	B	63	ILE
4	B	69	LEU
4	B	72	GLU
4	B	73	GLN
4	B	103	ASN
4	B	104	GLU
4	B	110	HIS
4	B	169	ARG
4	B	175	ARG
4	B	178	ASN
4	B	183	GLU
4	B	211	VAL
4	B	240	ILE
4	B	251	ILE
4	B	261	ARG
4	B	272	THR
4	B	278	GLN
4	B	279	ASP
4	B	287	ARG
4	B	294	ASP
4	B	313	MET
4	B	337	ARG
4	B	341	LEU
4	B	343	ILE

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Mol	Chain	Res	Type
4	B	344	LYS
4	B	348	ARG
4	B	357	GLN
4	B	365	THR
4	B	393	LYS
4	B	408	LEU
4	B	419	THR
4	B	440	HIS
4	B	442	PHE
4	B	470	LYS
4	B	476	ARG
4	B	482	VAL
4	B	485	ARG
4	B	487	THR
4	B	529	GLU
4	B	531	GLN
4	B	547	VAL
4	B	552	MET
4	B	563	MET
4	B	570	VAL
4	B	574	SER
4	B	595	ARG
4	B	596	LEU
4	B	601	ARG
4	B	603	LEU
4	B	609	ILE
4	B	612	GLU
4	B	615	MET
4	B	616	ILE
4	B	620	ARG
4	B	646	LEU
4	B	651	LEU
4	B	653	VAL
4	B	658	ILE
4	B	680	THR
4	B	696	GLU
4	B	708	GLU
4	B	734	HIS
4	B	737	THR
4	B	766	ARG
4	B	771	SER
4	B	776	GLN

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Mol	Chain	Res	Type
4	B	786	ASN
4	B	790	ASP
4	B	791	THR
4	B	801	LYS
4	B	839	MET
4	B	841	MET
4	B	844	SER
4	B	860	MET
4	B	879	ARG
4	B	933	SER
4	B	934	LYS
4	B	939	THR
4	B	942	ARG
4	B	944	THR
4	B	956	THR
4	B	959	ASP
4	B	967	ARG
4	B	975	GLN
4	B	986	GLN
4	B	997	GLU
4	B	999	MET
4	B	1007	VAL
4	B	1028	GLU
4	B	1045	SER
4	B	1060	ARG
4	B	1065	GLN
4	B	1072	MET
4	B	1084	GLN
4	B	1094	ARG
4	B	1106	ARG
4	B	1123	SER
4	B	1129	ARG
4	B	1138	MET
4	B	1145	SER
4	B	1147	LEU
4	B	1151	LEU
4	B	1156	ASP
4	B	1159	ARG
4	B	1160	VAL
4	B	1175	LEU
4	B	1179	GLN
4	B	1183	LYS

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Mol	Chain	Res	Type
4	B	1188	LYS
4	B	1193	GLN
4	B	1201	LYS
4	B	1202	LEU
4	B	1210	MET
4	B	1220	ARG
4	B	1223	ASP
5	C	3	GLU
5	C	12	GLU
5	C	25	VAL
5	C	26	ASP
5	C	52	GLU
5	C	53	THR
5	C	55	THR
5	C	56	THR
5	C	81	GLU
5	C	84	ARG
5	C	100	THR
5	C	101	LEU
5	C	119	VAL
5	C	121	VAL
5	C	124	LEU
5	C	125	MET
5	C	127	ARG
5	C	129	ILE
5	C	133	ILE
5	C	147	LEU
5	C	148	ARG
5	C	215	GLU
5	C	224	GLN
5	C	238	ILE
5	C	240	VAL
5	C	259	LEU
5	C	265	MET
5	C	268	ASP
6	D	5	THR
6	D	7	THR
6	D	9	GLN
6	D	10	THR
6	D	12	ARG
6	D	13	ARG
6	D	17	LYS

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Mol	Chain	Res	Type
6	D	18	VAL
6	D	27	LEU
6	D	32	GLU
6	D	34	GLN
6	D	35	LEU
6	D	40	HIS
6	D	47	LEU
6	D	52	LEU
6	D	53	SER
6	D	65	GLU
6	D	118	THR
6	D	126	ILE
6	D	134	THR
6	D	137	ASN
6	D	139	LYS
6	D	153	ARG
6	D	156	ASP
6	D	177	VAL
6	D	187	THR
6	D	197	SER
6	D	201	LYS
6	D	215	SER
6	D	219	THR
6	D	221	TYR
7	E	3	GLN
7	E	31	THR
7	E	37	LEU
7	E	45	LYS
7	E	57	MET
7	E	67	GLU
7	E	84	ASP
7	E	92	THR
7	E	104	ASN
7	E	131	THR
7	E	140	LEU
7	E	146	HIS
7	E	166	LYS
7	E	173	SER
7	E	177	ARG
7	E	178	ILE
7	E	191	LYS
7	E	192	ARG

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Mol	Chain	Res	Type
7	E	196	VAL
7	E	202	SER
7	E	204	THR
8	F	72	LYS
8	F	79	ARG
8	F	82	THR
8	F	86	THR
8	F	90	ARG
8	F	110	ASP
8	F	133	VAL
9	G	2	PHE
9	G	13	LEU
9	G	24	GLN
9	G	26	LEU
9	G	60	ARG
9	G	61	ILE
9	G	64	THR
9	G	96	GLN
9	G	106	MET
9	G	112	LYS
9	G	133	SER
9	G	138	THR
9	G	143	ILE
9	G	145	VAL
9	G	155	SER
9	G	162	SER
9	G	171	ILE
10	H	14	GLU
10	H	26	ILE
10	H	31	THR
10	H	34	ASP
10	H	76	THR
10	H	77	ARG
10	H	83	GLN
10	H	89	LEU
10	H	91	ASP
10	H	92	ASP
10	H	103	LYS
10	H	130	ARG
10	H	135	LEU
10	H	138	GLU
11	I	8	ARG

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Mol	Chain	Res	Type
11	I	31	THR
11	I	35	VAL
11	I	74	GLU
11	I	94	ASP
11	I	106	CYS
11	I	111	THR
12	J	1	MET
12	J	2	ILE
12	J	3	VAL
12	J	7	CYS
12	J	12	LYS
12	J	13	VAL
12	J	22	LEU
12	J	29	GLU
12	J	42	LYS
12	J	48	ARG
12	J	52	THR
13	K	18	LYS
13	K	20	LYS
13	K	25	THR
13	K	29	ASN
13	K	31	VAL
13	K	37	LYS
13	K	42	LEU
13	K	47	ARG
13	K	51	LEU
13	K	70	ARG
13	K	101	LEU
13	K	107	THR
14	L	27	LEU
14	L	35	SER
14	L	38	LEU
14	L	42	ARG
14	L	50	ASP
14	L	51	CYS
14	L	55	ILE
14	L	56	LEU
14	L	58	LYS
14	L	60	ARG
14	L	61	THR
14	L	65	VAL
14	L	68	GLU

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Mol	Chain	Res	Type
15	M	14	VAL
15	M	247	LEU
15	M	262	LEU
17	O	19	LEU
17	O	23	LEU
17	O	29	ASP
17	O	39	ARG
17	O	41	LEU
17	O	66	LEU
17	O	111	LEU
17	O	117	ASN
18	P	223	LEU
18	P	224	LYS
18	P	225	ILE
18	P	228	ASP
18	P	254	THR
18	P	255	SER
18	P	257	GLU
18	P	261	LYS
18	P	262	LYS
18	P	264	LYS
18	P	267	LYS
18	P	277	ILE
18	P	279	VAL
18	P	281	SER
18	P	284	LEU
18	P	285	ASN
18	P	286	ILE
18	P	287	LEU
18	P	288	LEU
18	P	289	PHE
18	P	290	GLN
18	P	291	ILE
18	P	292	PRO
18	P	293	ILE
18	P	300	GLN
18	P	302	LEU
18	P	303	GLN
18	P	304	VAL
18	P	305	THR
18	P	314	LYS
18	P	316	LEU

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Mol	Chain	Res	Type
18	P	318	GLU
18	P	320	ARG
18	P	321	ASP
18	P	322	LYS
18	P	325	ASP
18	P	326	PRO
18	P	328	LEU
18	P	329	ILE
18	P	338	ASN
18	P	340	PRO
19	Q	68	GLN
19	Q	78	CYS
19	Q	87	LEU
19	Q	141	ARG
19	Q	145	LYS
19	Q	151	LYS
19	Q	211	LYS
19	Q	233	VAL
19	Q	234	LEU
20	R	67	ILE
20	R	71	LYS
20	R	119	PRO
20	R	123	MET
20	R	126	ILE
20	R	129	THR
20	R	130	LYS
20	R	132	THR
20	R	133	GLN
20	R	142	PHE
20	R	144	ARG
20	R	145	THR
20	R	146	GLU
20	R	148	LEU
20	R	150	SER
20	R	151	LEU
20	R	152	CYS
20	R	154	GLU
20	R	155	PRO
20	R	156	LEU
21	S	127	LYS
21	S	135	ILE
21	S	136	GLN

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Mol	Chain	Res	Type
21	S	137	LYS
21	S	138	LYS
21	S	140	LYS
21	S	149	ASP
21	S	152	SER
21	S	153	MET
21	S	154	LYS
21	S	159	VAL
21	S	161	GLU
21	S	162	LEU
21	S	164	LYS
21	S	165	LYS
21	S	166	LEU
21	S	167	ASP
21	S	171	PHE
21	S	175	LYS
21	S	179	LYS
21	S	183	THR
21	S	187	HIS
21	S	189	PRO
21	S	193	LEU
21	S	196	LEU
21	S	201	THR
21	S	203	LYS
21	S	205	ILE
21	S	206	SER
21	S	207	CYS
21	S	208	LYS
21	S	209	ASP
21	S	219	GLU
21	S	220	THR
21	S	221	ILE
21	S	224	LEU
21	S	225	GLU
21	S	228	SER
21	S	233	LEU
21	S	234	ARG
21	S	237	LYS
21	S	238	ASP
21	S	239	LYS
21	S	242	ARG
21	S	243	TYR

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Mol	Chain	Res	Type
21	S	245	TRP
21	S	247	ASN
23	U	96	ASN
23	U	128	ASN
23	U	341	LYS
24	V	55	GLU
24	V	127	LYS
24	V	293	ARG
24	V	349	TYR
24	V	356	LYS
27	Y	49	THR
27	Y	57	ILE
27	Y	62	HIS
27	Y	80	GLU
27	Y	152	ASN
27	Y	179	GLU
27	Y	226	VAL
27	Y	336	LYS
27	Y	479	LEU
27	Y	506	ILE
27	Y	520	ARG
27	Y	569	ILE
27	Y	575	ASP
27	Y	578	GLU
27	Y	587	ARG
27	Y	597	ILE
27	Y	653	PHE

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (109) such sidechains are listed below:

Mol	Chain	Res	Type
1	1	320	ASN
1	1	331	GLN
1	1	349	ASN
1	1	361	GLN
1	1	366	GLN
1	1	423	GLN
1	1	426	GLN
1	1	434	ASN
1	1	447	GLN
1	1	471	GLN
1	1	491	HIS

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Mol	Chain	Res	Type
1	1	508	HIS
1	1	528	ASN
1	1	551	ASN
1	1	567	GLN
1	1	589	GLN
1	1	596	GLN
1	1	616	GLN
1	1	638	ASN
1	1	676	HIS
1	1	738	HIS
1	1	740	HIS
1	1	744	ASN
1	1	747	ASN
1	1	761	GLN
1	1	781	ASN
2	2	257	GLN
3	A	399	HIS
3	A	425	GLN
3	A	545	GLN
3	A	548	ASN
3	A	603	ASN
3	A	994	GLN
3	A	1106	ASN
3	A	1140	HIS
3	A	1173	HIS
3	A	1203	ASN
3	A	1232	ASN
3	A	1270	ASN
3	A	1393	ASN
4	B	300	HIS
4	B	325	GLN
4	B	350	GLN
4	B	357	GLN
4	B	449	ASN
4	B	842	ASN
4	B	887	HIS
4	B	975	GLN
4	B	1025	HIS
4	B	1193	GLN
4	B	1195	HIS
5	C	184	ASN
6	D	37	GLN

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Mol	Chain	Res	Type
6	D	143	ASN
7	E	3	GLN
9	G	71	ASN
9	G	102	GLN
10	H	35	GLN
10	H	83	GLN
11	I	83	ASN
11	I	89	GLN
11	I	108	HIS
15	M	3	ASN
15	M	40	ASN
15	M	43	GLN
15	M	59	GLN
15	M	270	ASN
15	M	272	ASN
17	O	57	GLN
17	O	84	GLN
17	O	117	ASN
18	P	84	ASN
18	P	197	HIS
18	P	251	GLN
18	P	300	GLN
18	P	331	ASN
19	Q	68	GLN
19	Q	88	HIS
19	Q	144	GLN
19	Q	158	GLN
19	Q	219	GLN
20	R	120	ASN
20	R	133	GLN
20	R	138	GLN
20	R	141	ASN
21	S	187	HIS
21	S	199	GLN
21	S	216	GLN
21	S	222	ASN
21	S	247	ASN
23	U	96	ASN
23	U	117	HIS
23	U	128	ASN
24	V	86	ASN
24	V	131	ASN

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Mol	Chain	Res	Type
24	V	220	HIS
26	X	11	GLN
26	X	22	GLN
27	Y	21	GLN
27	Y	60	GLN
27	Y	100	GLN
27	Y	113	ASN
27	Y	138	ASN
27	Y	152	ASN
27	Y	159	HIS
27	Y	242	ASN
27	Y	566	HIS
27	Y	628	GLN
27	Y	707	ASN

5.3.3 RNA

There are no RNA molecules in this entry.

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

Of 11 ligands modelled in this entry, 11 are monoatomic - leaving 0 for Mogul analysis.

There are no bond length outliers.

There are no bond angle outliers.

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

No monomer is involved in short contacts.

5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

The following chains have linkage breaks:

Mol	Chain	Number of breaks
21	S	7
27	Y	7
24	V	3
23	U	3
15	M	2
3	A	2
6	D	1
1	1	1
4	B	1
2	2	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	V	227:SER	C	291:SER	N	84.31
1	M	61:ASN	C	228:ASP	N	43.11
1	D	76:LYS	C	118:THR	N	35.68
1	S	184:TYR	C	185:ASP	N	14.79
1	U	313:ALA	C	323:GLY	N	13.13
1	Y	115:CYS	C	116:LEU	N	12.53
1	V	114:ASP	C	115:SER	N	11.28
1	M	232:SER	C	236:GLU	N	8.84
1	S	154:LYS	C	155:LYS	N	8.75
1	V	101:GLY	C	102:SER	N	6.62
1	S	201:THR	C	202:PHE	N	6.44
1	S	238:ASP	C	239:LYS	N	6.38
1	U	370:SER	C	371:ASP	N	6.17
1	Y	225:GLU	C	226:VAL	N	5.68
1	Y	335:LEU	C	336:LYS	N	5.53
1	S	231:LEU	C	232:VAL	N	5.27
1	S	215:PRO	C	216:GLN	N	5.21
1	S	138:LYS	C	139:GLY	N	5.07
1	Y	326:ARG	C	327:ARG	N	4.62
1	Y	321:ILE	C	322:PRO	N	4.40
1	1	695:ARG	C	696:ARG	N	4.11

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	Y	232:VAL	C	233:ILE	N	4.06
1	U	356:ASP	C	357:GLY	N	3.77
1	B	351:TYR	C	352:ALA	N	3.29
1	Y	160:GLU	C	161:ASN	N	3.13
1	A	234:MET	C	235:ILE	N	1.07
1	A	95:PHE	C	96:ILE	N	1.00
1	2	269:PHE	C	270:THR	N	0.95

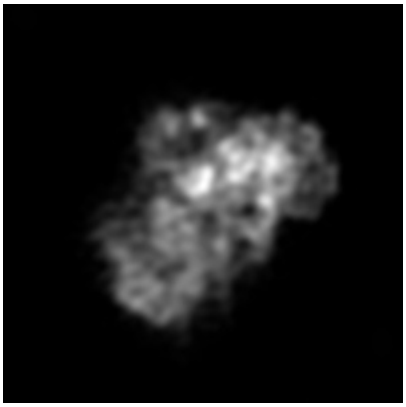
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-3114. These allow visual inspection of the internal detail of the map and identification of artifacts.

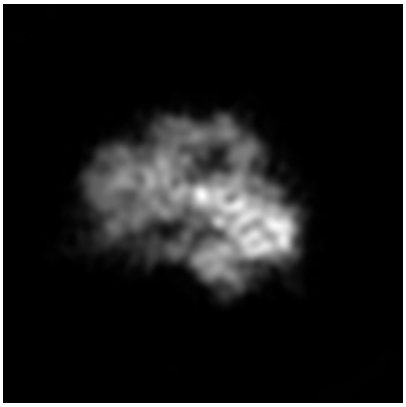
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

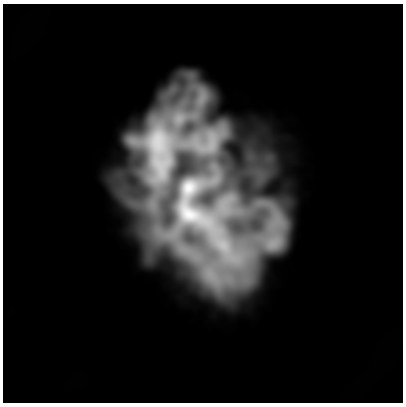
6.1.1 Primary map



X



Y

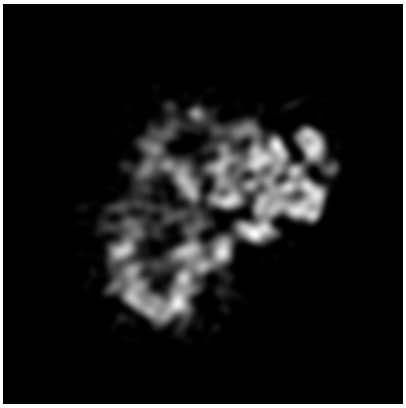


Z

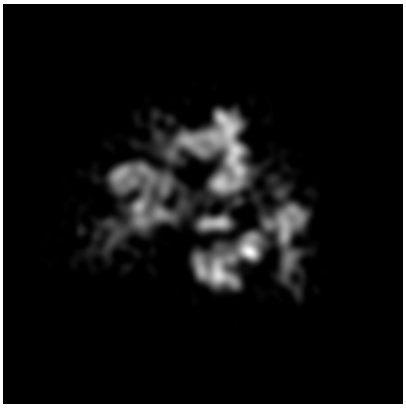
The images above show the map projected in three orthogonal directions.

6.2 Central slices

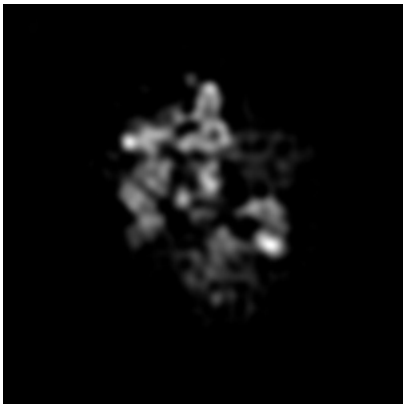
6.2.1 Primary map



X Index: 76



Y Index: 76

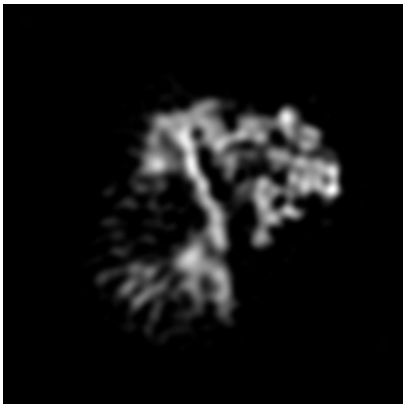


Z Index: 76

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

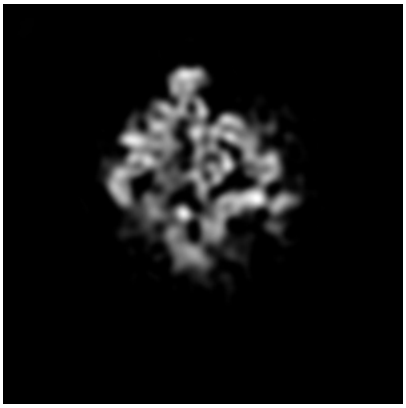
6.3 Largest variance slices (i)

6.3.1 Primary map



X Index: 69

Y Index: 99

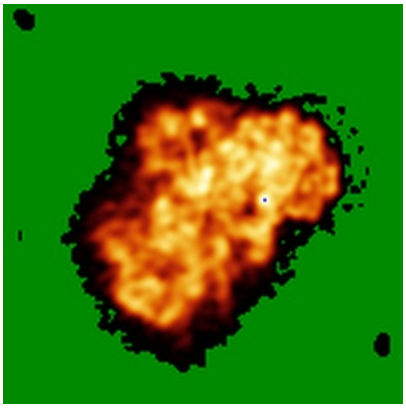


Z Index: 88

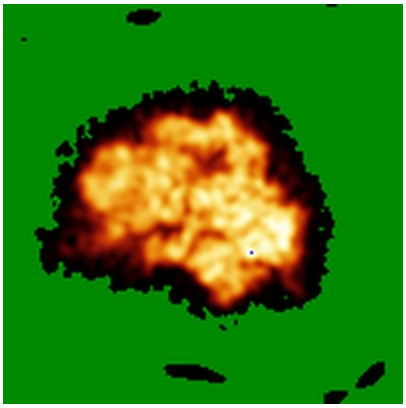
The images above show the largest variance slices of the map in three orthogonal directions.

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

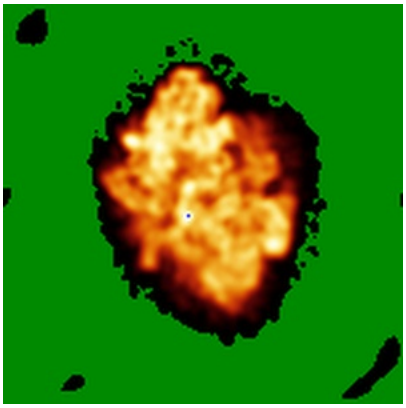
6.4.1 Primary map



X



Y

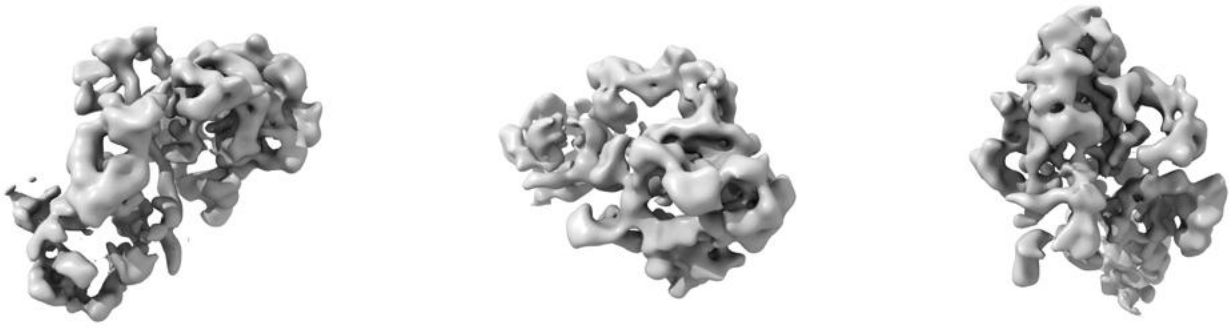


Z

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 3.99. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

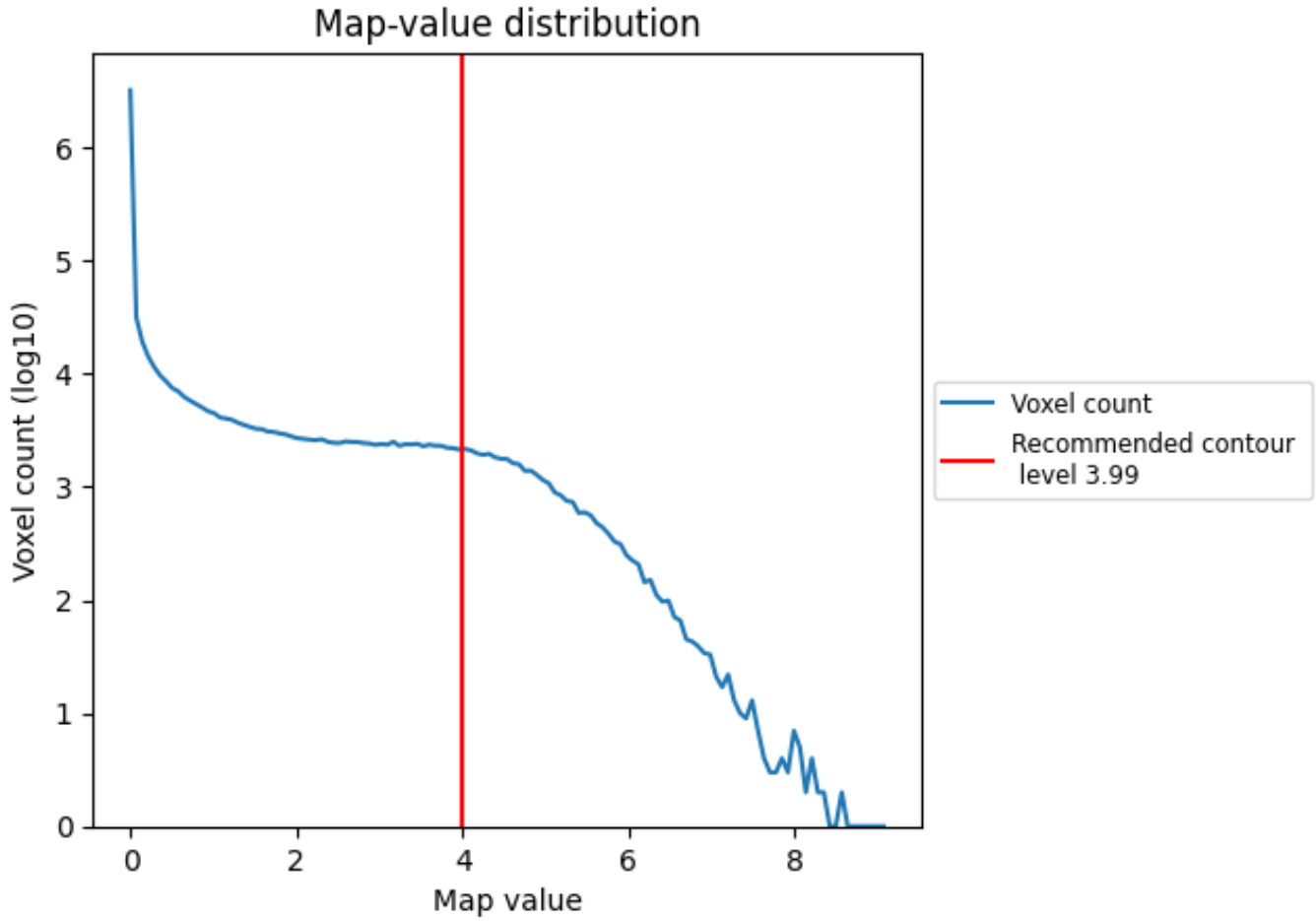
6.6 Mask visualisation (i)

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

7 Map analysis

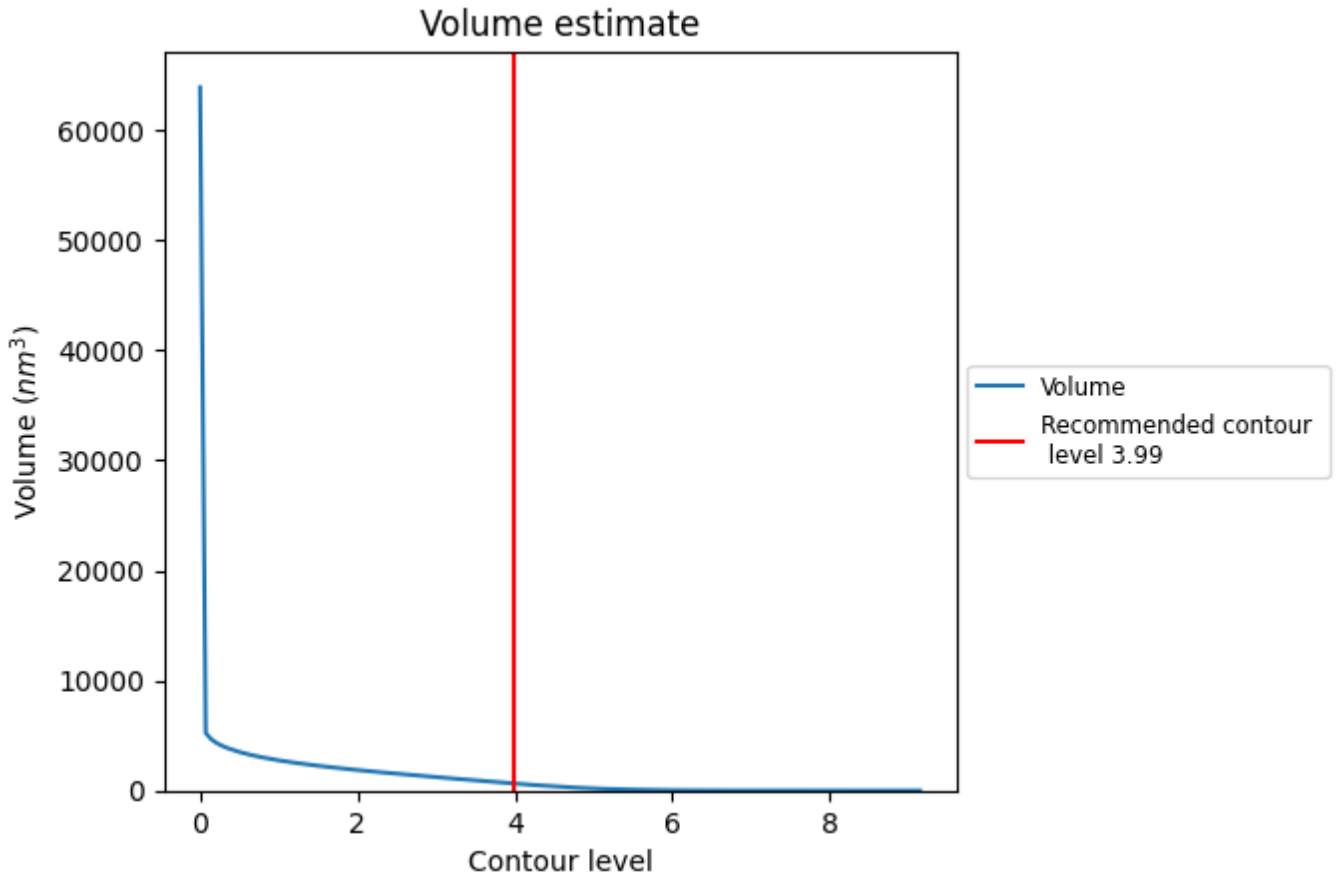
This section contains the results of statistical analysis of the map.

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.

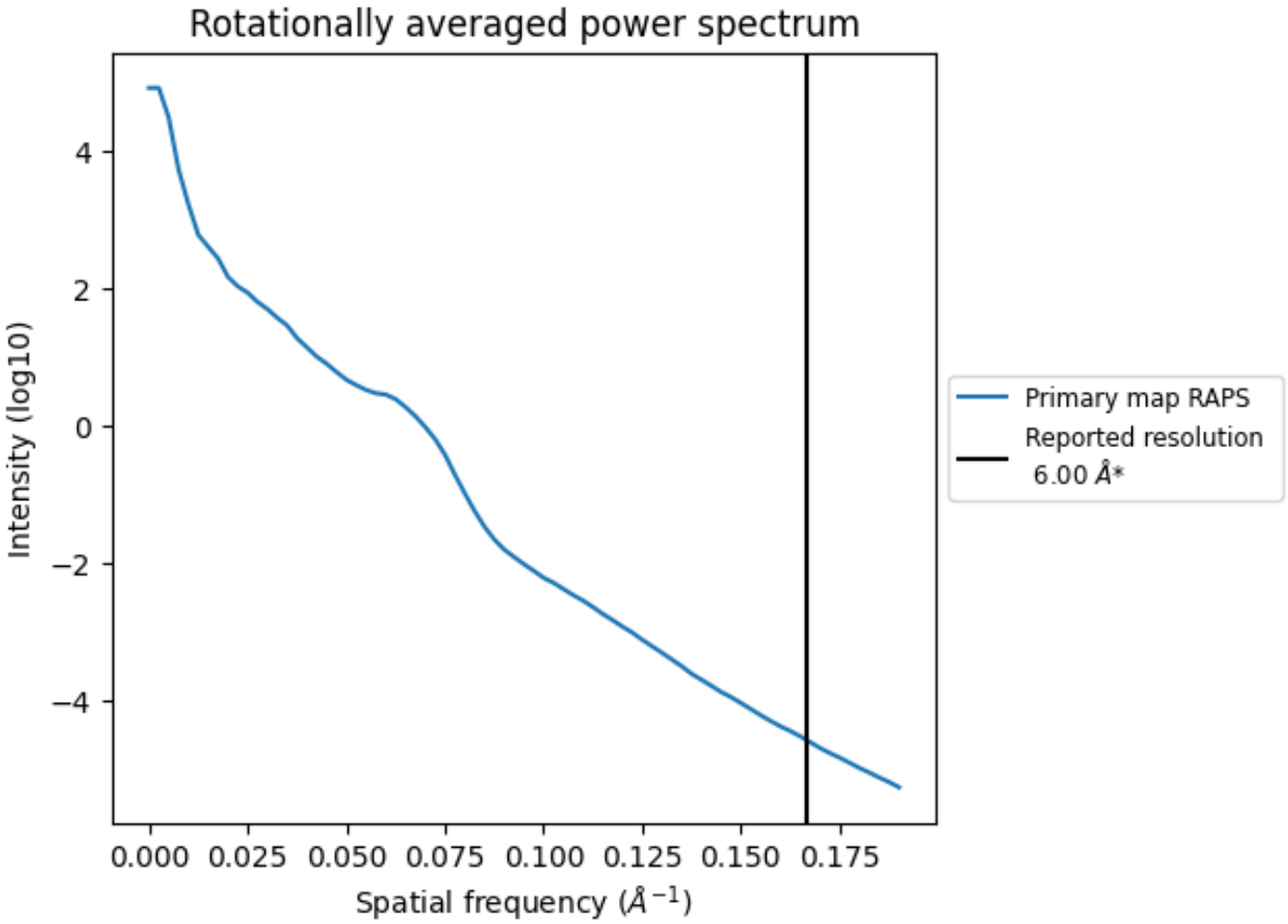
7.2 Volume estimate



The volume at the recommended contour level is 637 nm^3; this corresponds to an approximate mass of 575 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 0.167 Å^{-1}

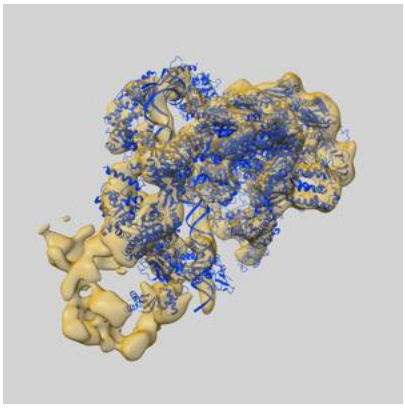
8 Fourier-Shell correlation (i)

This section was not generated. No FSC curve or half-maps provided.

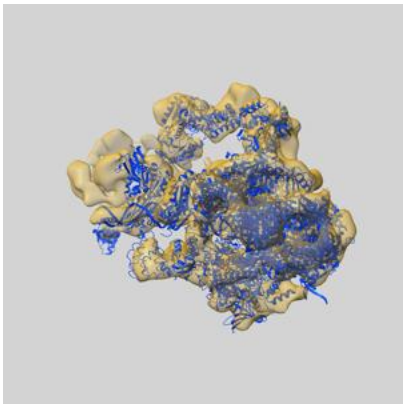
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-3114 and PDB model 5FMF. Per-residue inclusion information can be found in section 3 on page 9.

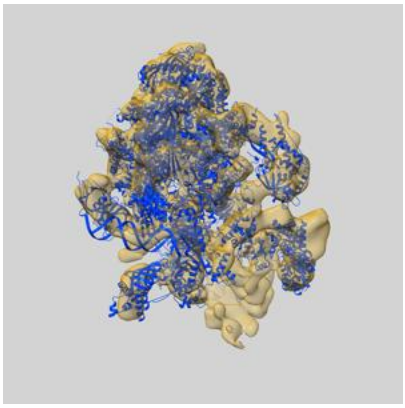
9.1 Map-model overlay



X



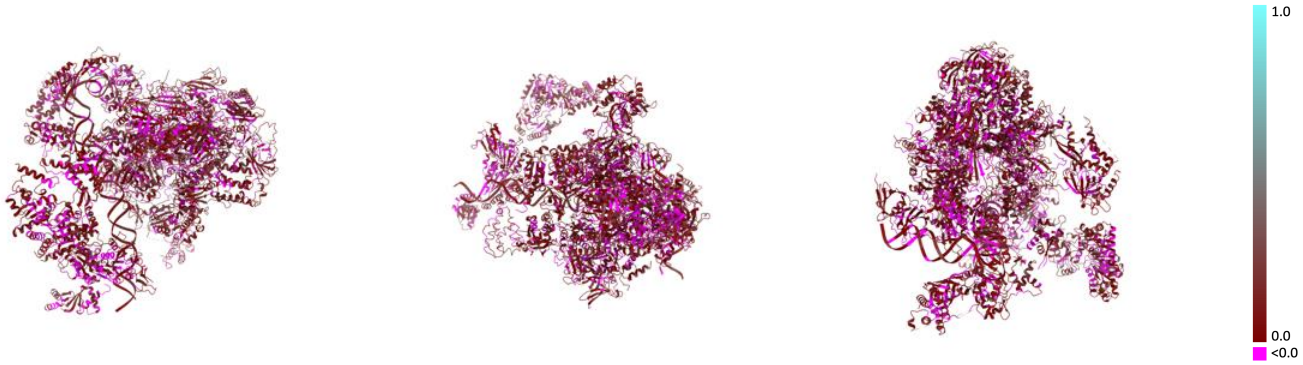
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 3.99 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.

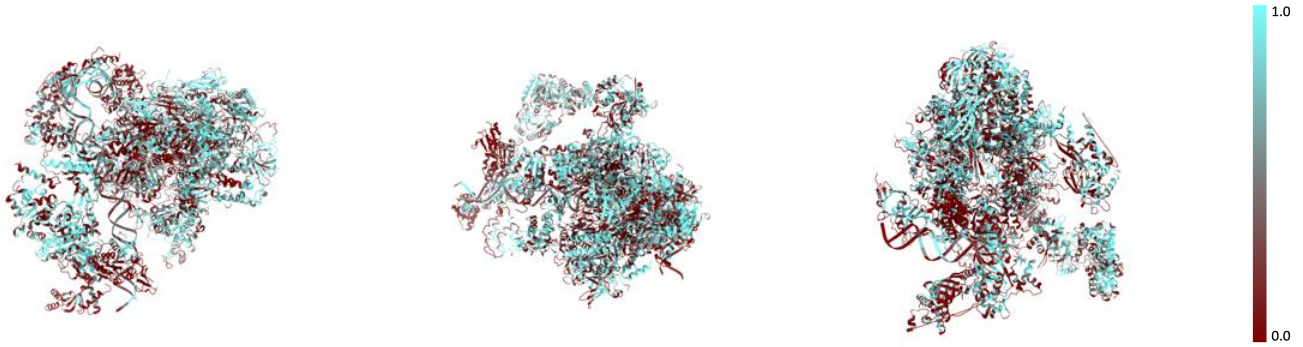
9.2 Q-score mapped to coordinate model (i)



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.

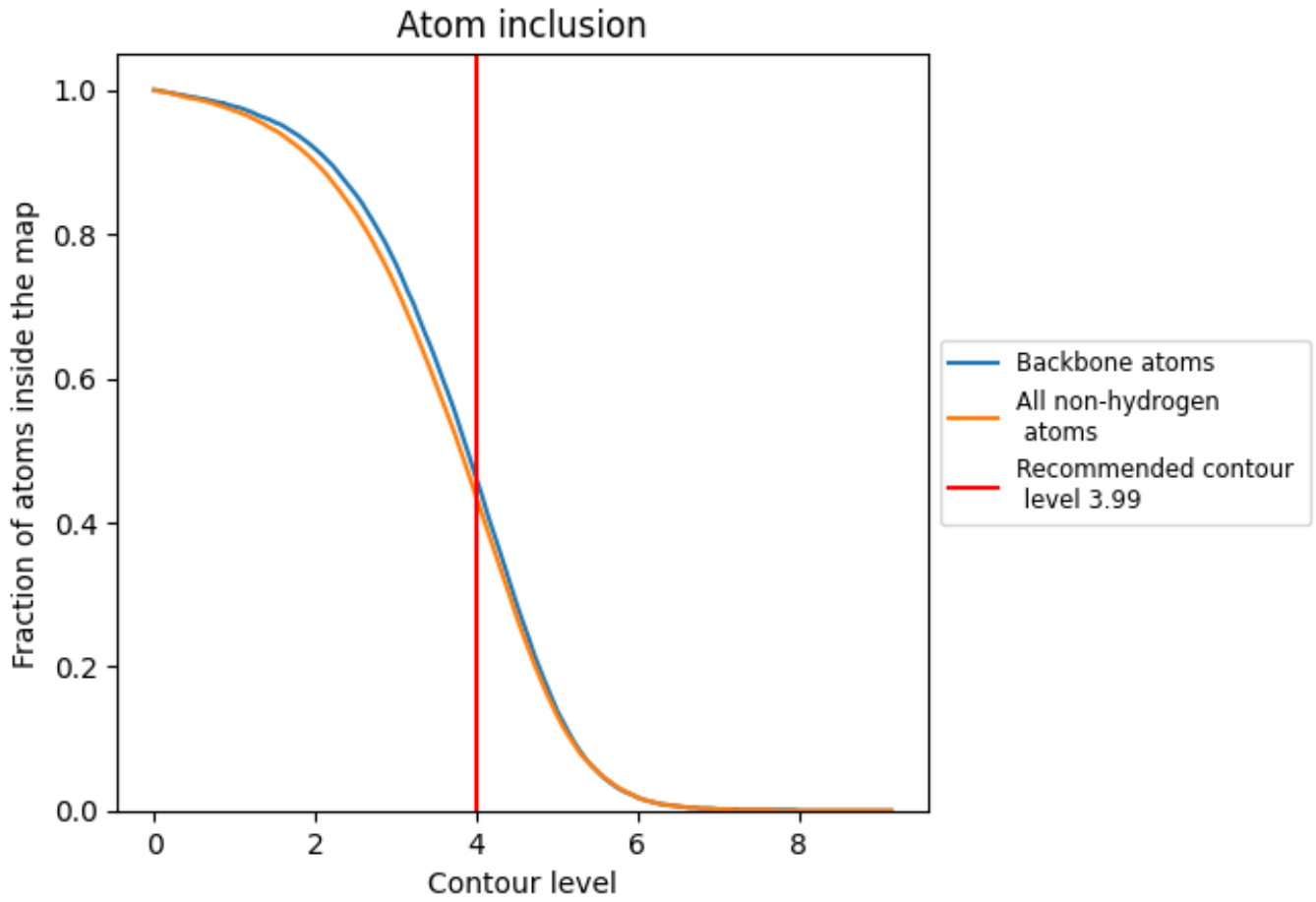
9.3 Atom inclusion mapped to coordinate model (i)



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 (3.99).

9.4 Atom inclusion (i)



At the recommended contour level, 46% of all backbone atoms, 44% 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 (3.99) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.4370	0.0620
1	0.2960	0.0410
2	0.2870	0.0410
A	0.5000	0.0770
B	0.4000	0.0490
C	0.6130	0.0640
D	0.3740	0.0700
E	0.5310	0.0900
F	0.6780	0.0690
G	0.4180	0.0690
H	0.5760	0.0720
I	0.4410	0.0600
J	0.5840	0.0660
K	0.5140	0.0540
L	0.6550	0.0600
M	0.3350	0.0730
N	0.3930	0.0730
O	0.2420	0.0580
P	0.1210	0.0240
Q	0.4330	0.0640
R	0.4710	0.0730
S	0.5090	0.1020
T	0.5020	0.1110
U	0.3740	0.0320
V	0.3860	0.0590
W	0.0920	0.0590
X	0.1870	0.0240
Y	0.5870	0.0570