Full wwPDB EM Validation Report

Mar 25, 2026 – 11:25 AM UTC

PDB ID	:	2J28 / pdb_00002j28
EMDB ID	:	EMD-1261
Title	:	MODEL OF E. COLI SRP BOUND TO 70S RNCS
Authors	:	Halic, M.; Blau, M.; Becker, T.; Mielke, T.; Pool, M.R.; Wild, K.; Sinning, I.; Beckmann, R.
Deposited on	:	2006-08-16
Resolution	:	9.50 Å(reported)

This is a Full wwPDB EM Validation Report for a publicly released PDB entry.

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

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

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

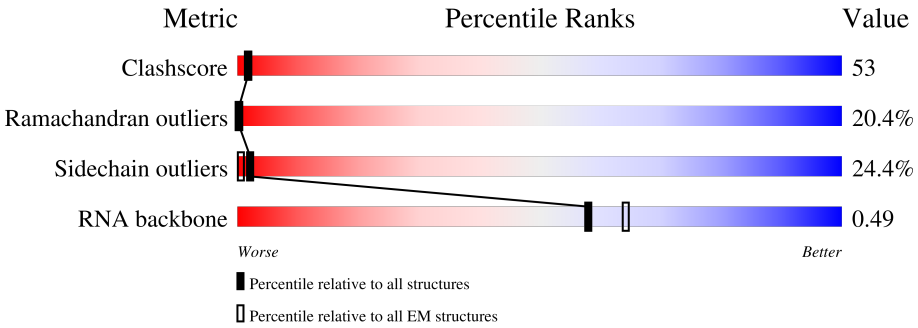
EMDB validation analysis	:	0.0.1.dev132
MolProbity	:	4-5-2 with Phenix2.0
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
EM percentile statistics	:	202505.v01 (Using data in the EMDB archive up until May 2025)
MapQ	:	1.9.13
Ideal geometry (proteins)	:	Engh &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

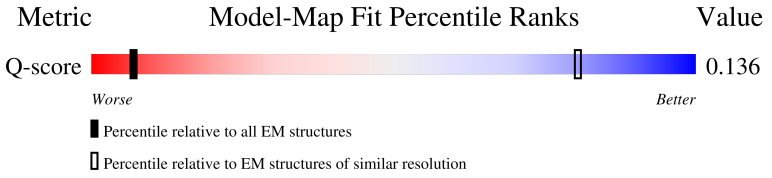
1 Overall quality at a glance

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

The reported resolution of this entry is 9.50 Å.

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





Metric	Whole archive (#Entries)	EM structures (#Entries)	Similar EM resolution (#Entries, resolution range(Å))
Clashscore	229148	23984	-
Ramachandran outliers	224038	23583	-
Sidechain outliers	223484	23102	-
RNA backbone	8273	3508	-
Q-score	-	25397	234 (9.00 - 10.00)

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	0	56	39% 11% 48% 32% 9%
2	1	54	33% 20% 43% 35% .
3	2	46	52% 26% 48% 15% 11%

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Mol	Chain	Length	Quality of chain
4	3	64	52% 25% 45% 27%
5	4	38	45% 5% 47% 24% 24%
6	7	18	22% 17% 72% 11%
7	8	74	5% 73% 19% 5%
8	9	430	76% 42% 45% 10%
9	A	117	26% 62% 12%
10	B	2904	27% 58% 12%
11	C	267	41% 12% 42% 36% 10%
12	D	209	21% 18% 42% 34% 6%
13	E	201	33% 18% 45% 31% 6%
14	F	178	8% 20% 47% 26% 7%
15	G	176	6% 30% 52% 16%
16	H	149	74% 20% 58% 17% 5%
17	I	141	36% 30% 62% 8%
18	J	140	28% 12% 49% 34%
19	K	121	19% 15% 44% 36% 5%
20	L	144	33% 15% 37% 29% 19%
21	M	136	32% 17% 43% 29% 10%
22	N	127	24% 21% 54% 22%
23	O	117	9% 18% 61% 18%
24	P	114	33% 10% 35% 32% 24%
25	Q	117	25% 19% 55% 21% 6%
26	R	103	24% 17% 37% 35% 11%
27	S	110	32% 21% 52% 25%
28	T	99	32% 13% 48% 33% 5%

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Mol	Chain	Length	Quality of chain
29	U	102	17% 18% 43% 32% 7%
30	V	94	31% 57% 11%
31	W	84	42% 13% 48% 35% 5%
32	X	63	14% 11% 60% 22% 6%
33	Y	58	10% 24% 55% 19%
34	Z	70	33% 19% 44% 31% 6%

2 Entry composition (i)

There are 36 unique types of molecules in this entry. The entry contains 95358 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
1	0	56	444	269	94	80	1	0	0

- Molecule 2 is a protein called 50S ribosomal protein L33.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
2	1	54	441	284	81	76	0	0

- Molecule 3 is a protein called 50S ribosomal protein L34.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	2	46	377	228	90	57	2	0	0

- Molecule 4 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	3	64	504	323	105	74	2	0	0

- Molecule 5 is a protein called 50S ribosomal protein L36.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	4	38	302	185	65	48	4	0	0

- Molecule 6 is a protein called SIGNAL SEQUENCE.

Mol	Chain	Residues	Atoms				AltConf	Trace
			Total	C	N	O		
6	7	18	149	103	23	23	0	0

- Molecule 7 is a RNA chain called 4.5S SIGNAL RECOGNITION PARTICLE RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	8	74	Total	C	N	O	P	0	0
			1590	709	295	512	74		

- Molecule 8 is a protein called Signal recognition particle protein.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	9	430	Total	C	N	O	S	0	0
			3306	2072	595	617	22		

- Molecule 9 is a RNA chain called 5S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	A	117	Total	C	N	O	P	0	0
			2507	1116	459	815	117		

- Molecule 10 is a RNA chain called 23S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	B	2841	Total	C	N	O	P	0	0
			60995	27210	11229	19715	2841		

- Molecule 11 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	C	267	Total	C	N	O	S	0	0
			2053	1271	416	359	7		

- Molecule 12 is a protein called 50S ribosomal protein L3.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	D	209	Total	C	N	O	S	0	0
			1565	979	288	294	4		

- Molecule 13 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	E	201	Total	C	N	O	S	0	0
			1552	974	283	290	5		

- Molecule 14 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	F	178	Total	C	N	O	S	0	0
			1420	905	251	258	6		

- Molecule 15 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	G	176	Total	C	N	O	S	0	0
			1323	832	243	246	2		

- Molecule 16 is a protein called 50S ribosomal protein L9.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	H	149	Total	C	N	O	S	0	0
			1111	699	197	214	1		

- Molecule 17 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	I	141	Total	C	N	O	S	0	0
			1032	651	179	196	6		

- Molecule 18 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	J	140	Total	C	N	O	S	0	0
			1112	704	210	194	4		

- Molecule 19 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	K	121	Total	C	N	O	S	0	0
			930	582	179	164	5		

- Molecule 20 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	L	144	Total	C	N	O	S	0	0
			1053	654	207	190	2		

- Molecule 21 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	M	136	Total	C	N	O	S	0	0
			1074	686	205	177	6		

- Molecule 22 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	N	127	Total	C	N	O	S	0	0
			1008	621	204	178	5		

- Molecule 23 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	O	117	Total	C	N	O	S	0	0
			900	557	179	163	1		

- Molecule 24 is a protein called 50S ribosomal protein L19.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	P	114	Total	C	N	O	S	0	0
			917	574	179	163	1		

- Molecule 25 is a protein called 50S ribosomal protein L20.

Mol	Chain	Residues	Atoms				AltConf	Trace
25	Q	117	Total	C	N	O	0	0
			947	604	192	151		

- Molecule 26 is a protein called 50S ribosomal protein L21.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	R	103	Total	C	N	O	S	0	0
			816	516	153	145	2		

- Molecule 27 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					AltConf	Trace
27	S	110	Total	C	N	O	S	0	0
			857	532	166	156	3		

- Molecule 28 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	T	99	Total	C	N	O	S	0	0
			777	491	145	139	2		

- Molecule 29 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms				AltConf	Trace
29	U	102	Total	C	N	O	0	0
			779	492	146	141		

- Molecule 30 is a protein called 50S ribosomal protein L25.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	V	94	Total	C	N	O	S	0	0
			753	479	137	134	3		

- Molecule 31 is a protein called 50S ribosomal protein L27.

Mol	Chain	Residues	Atoms					AltConf	Trace
31	W	84	Total	C	N	O	S	0	0
			634	391	129	113	1		

- Molecule 32 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	X	63	Total	C	N	O	S	0	0
			509	313	99	95	2		

- Molecule 33 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	Y	58	Total	C	N	O	S	0	0
			449	281	87	79	2		

- Molecule 34 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	Z	70	Total	C	N	O	S	0	0
			549	339	104	100	6		

- Molecule 35 is MAGNESIUM ION (CCD ID: MG) (formula: Mg).

Mol	Chain	Residues	Atoms	AltConf
35	B	110	Total Mg 110 110	0
35	N	1	Total Mg 1 1	0

- Molecule 36 is water.

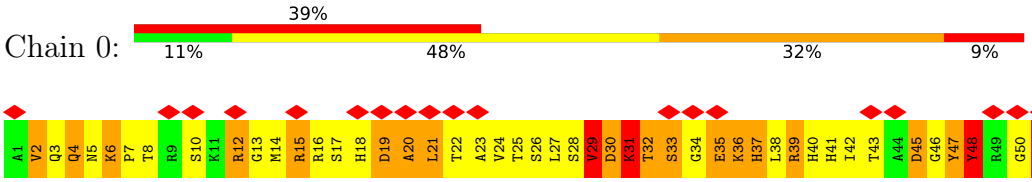
Mol	Chain	Residues	Atoms	AltConf
36	B	506	Total O 506 506	0
36	N	6	Total O 6 6	0

3 Residue-property plots (i)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and 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.

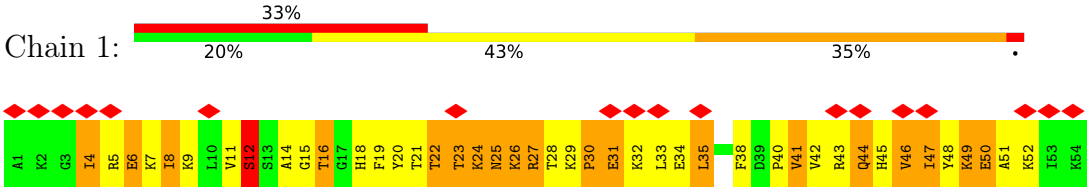
• Molecule 1: 50S ribosomal protein L32

Chain 0:



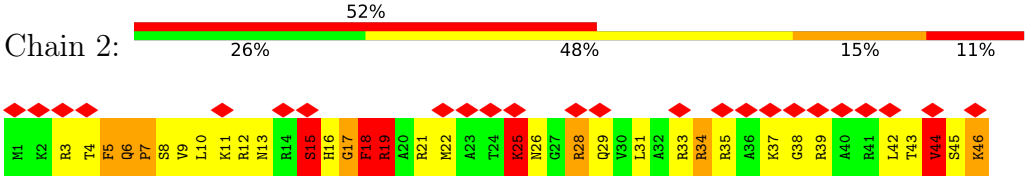
• Molecule 2: 50S ribosomal protein L33

Chain 1:



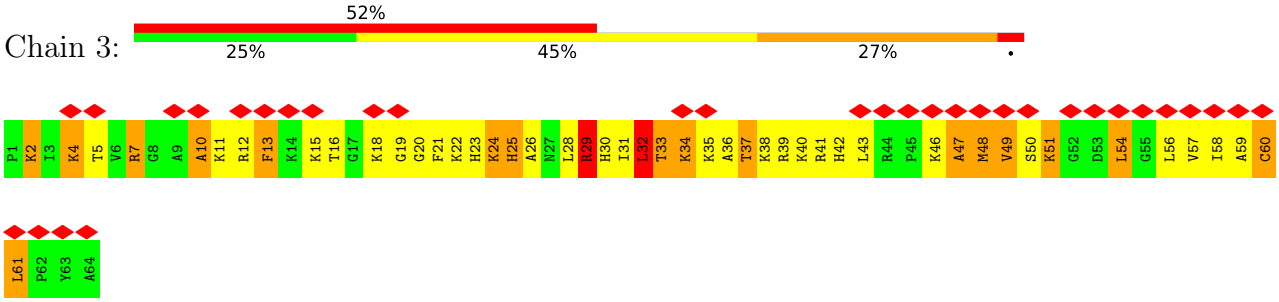
• Molecule 3: 50S ribosomal protein L34

Chain 2:



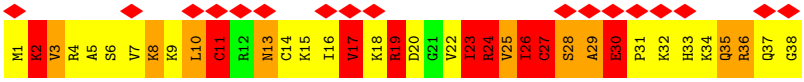
• Molecule 4: 50S ribosomal protein L35

Chain 3:



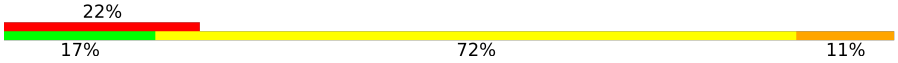
• Molecule 5: 50S ribosomal protein L36

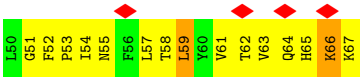
Chain 4:



• Molecule 6: SIGNAL SEQUENCE

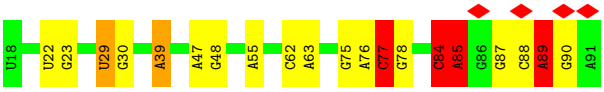
Chain 7:





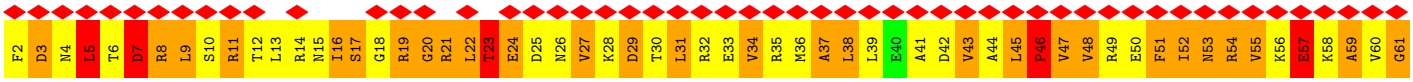
• Molecule 7: 4.5S SIGNAL RECOGNITION PARTICLE RNA

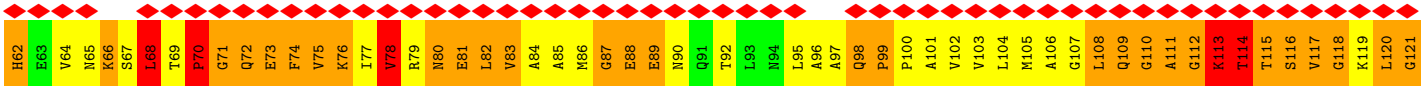
Chain 8:

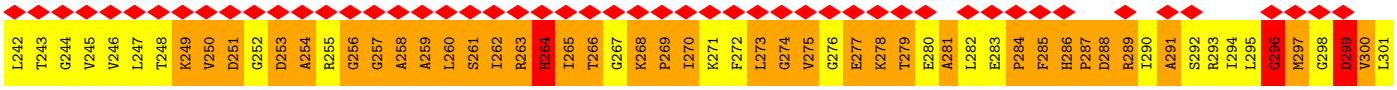


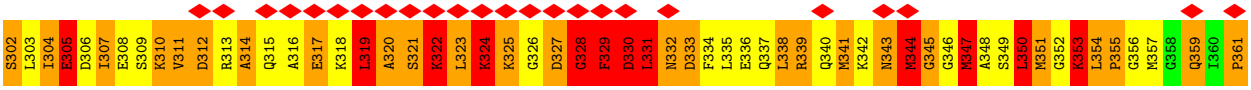
• Molecule 8: Signal recognition particle protein

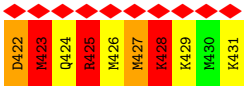
Chain 9:





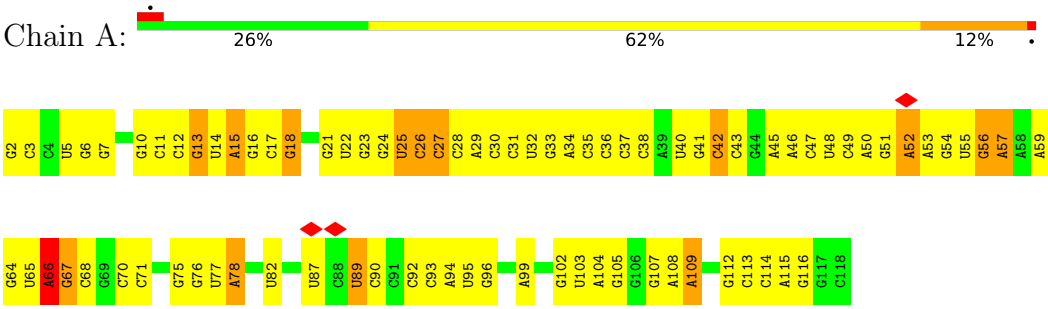






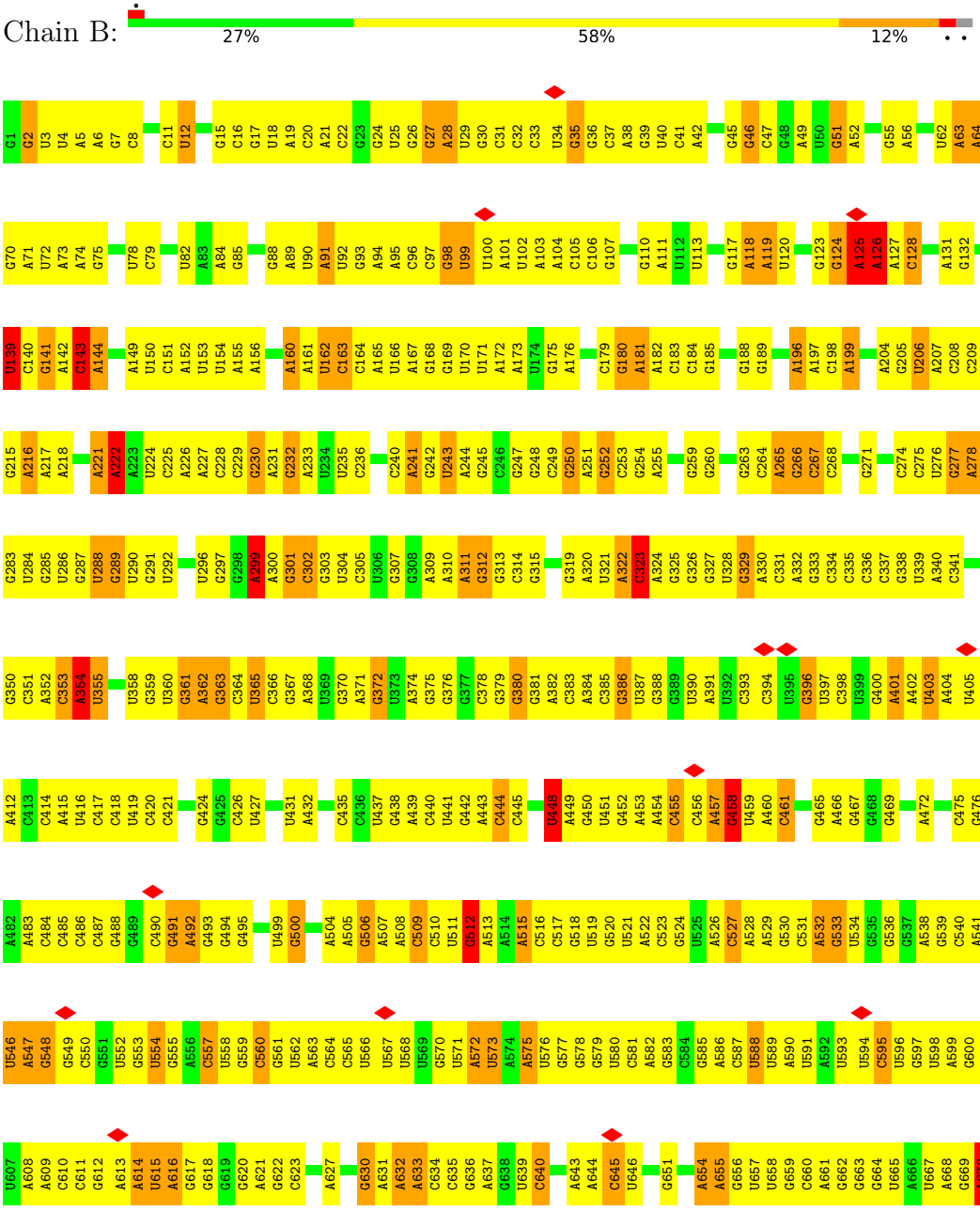
• Molecule 9: 5S RIBOSOMAL RNA

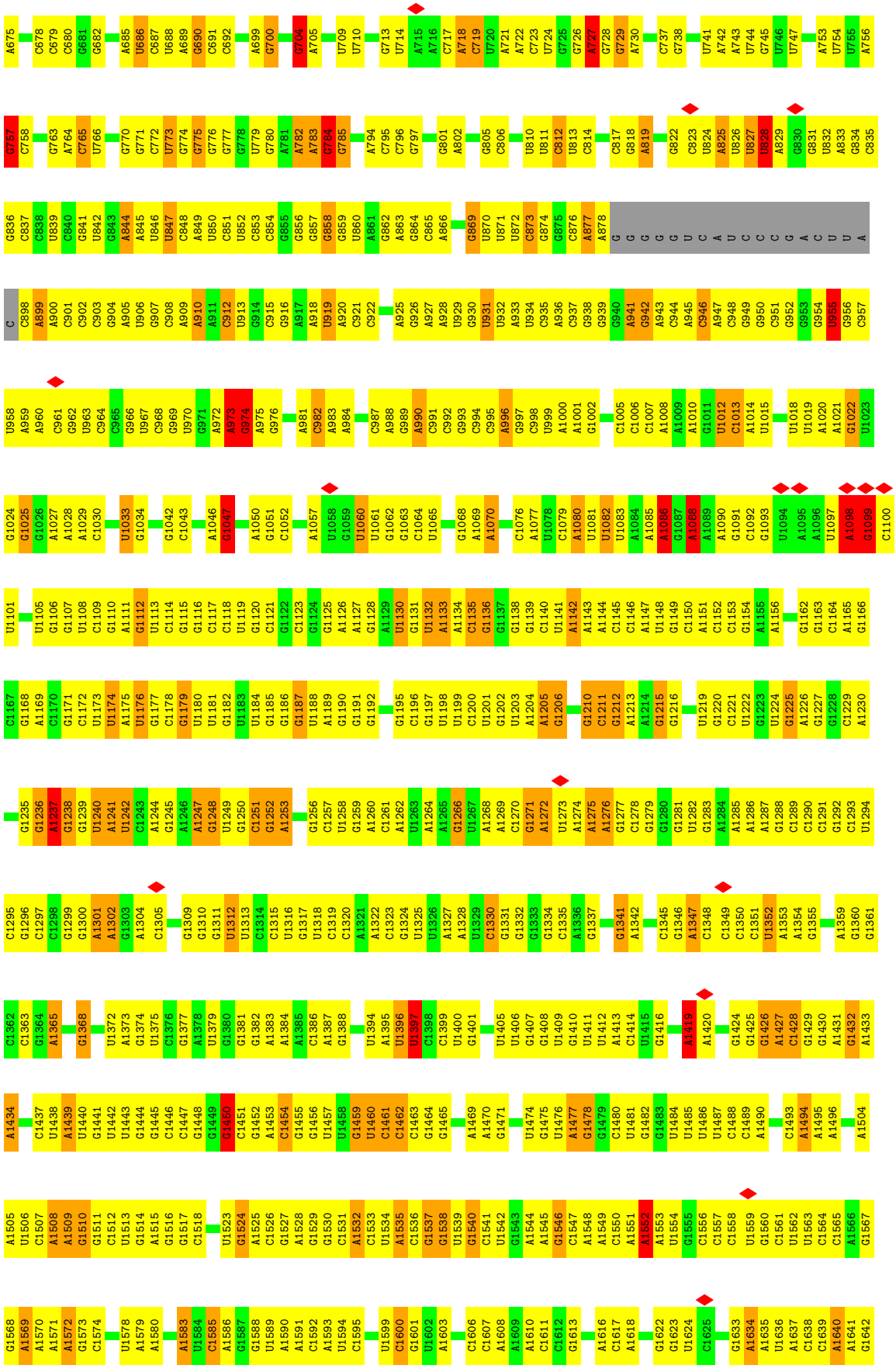
Chain A:



• Molecule 10: 23S RIBOSOMAL RNA

Chain B:

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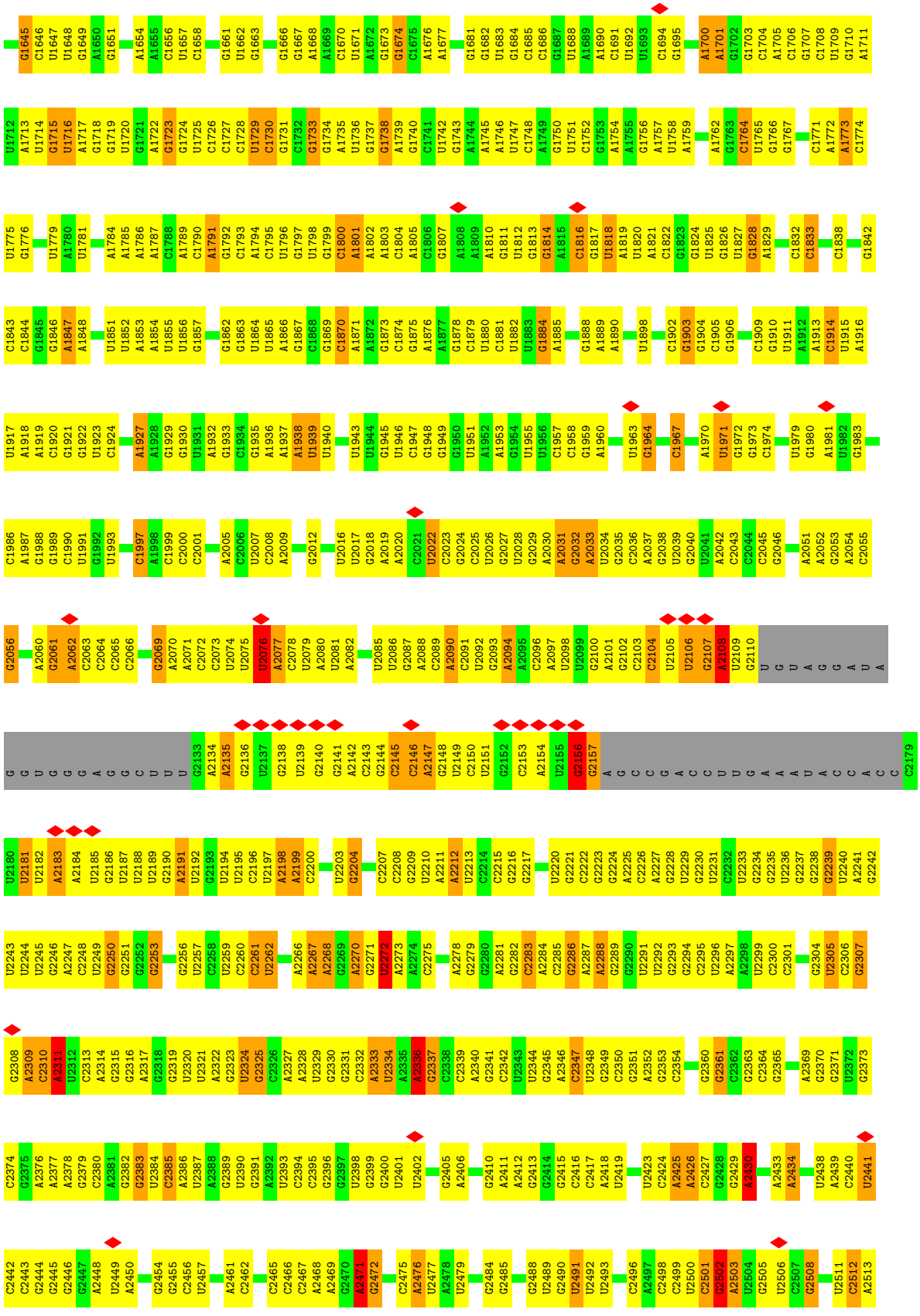
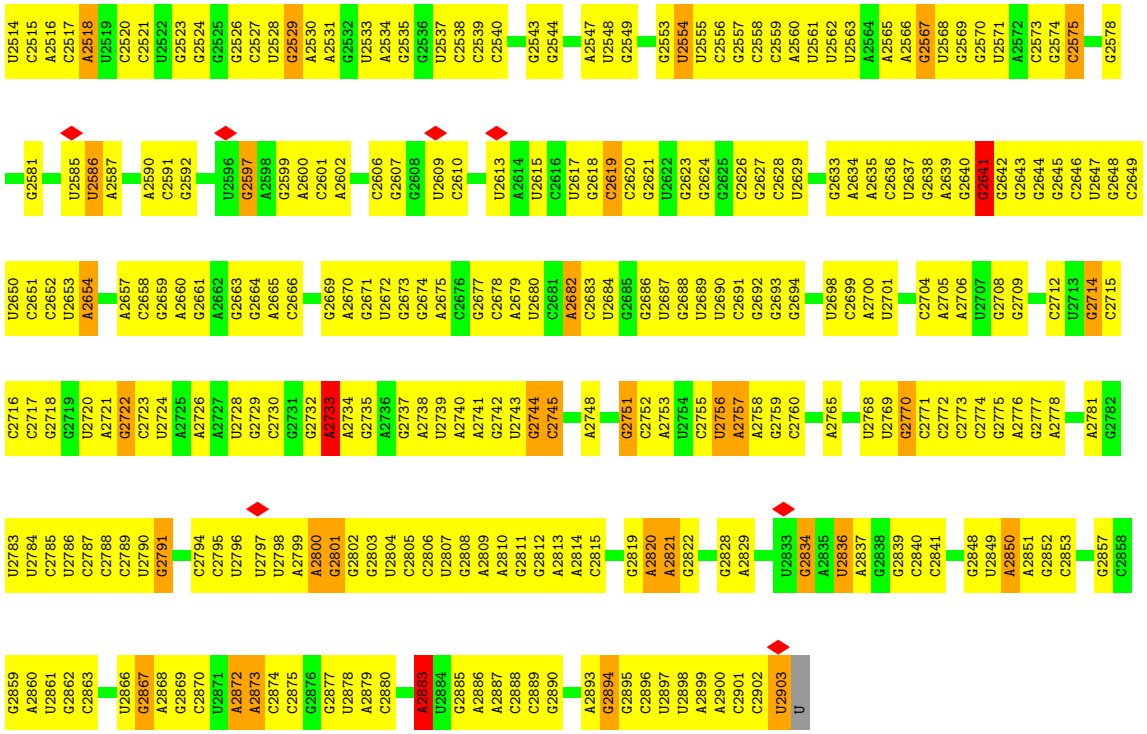
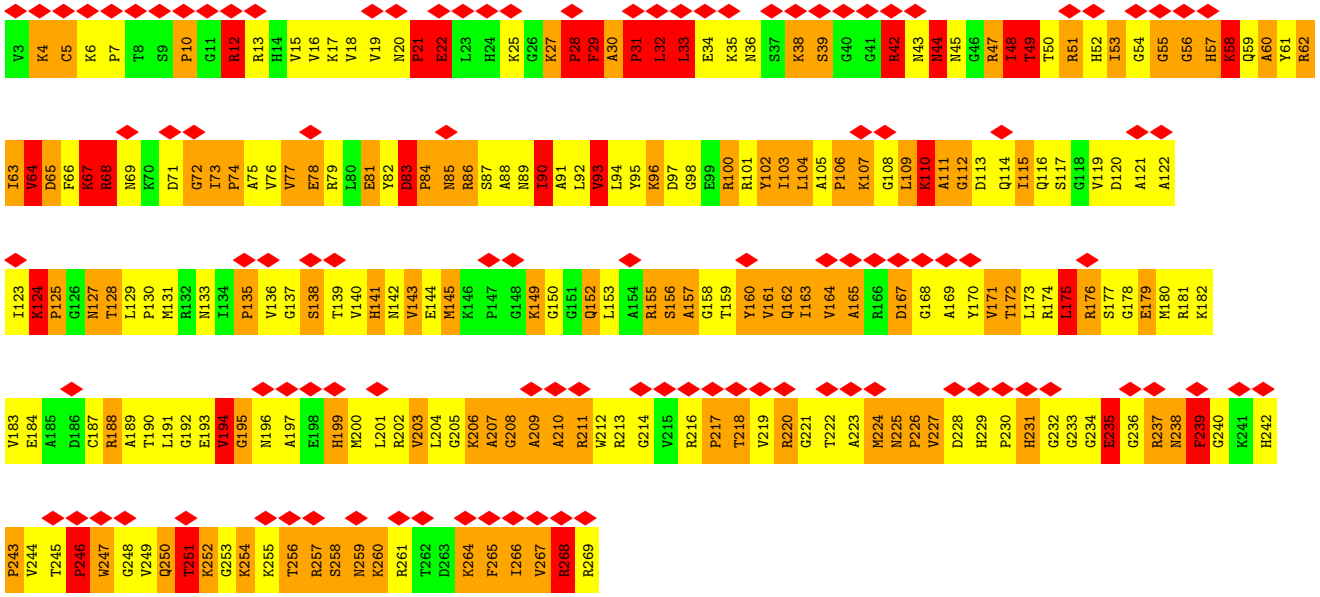
G757 C758 G763 A764 C765 U766 G770 G771 C772 U773 G774 G775 G776 G777 G778 U779 G780 A781 A782 A783 G784 G785 A794 C795 C796 G797 G801 A802 G805 C806 U810 U811 C812 U813 C814 C817 G818 A819 G822 C823 U824 A825 U826 U827 U828 A829 G830 G831 U832 A833 G834 C835
G836 C837 C838 U839 C840 G841 U842 G843 A844 A845 U846 U847 C848 A849 U850 C851 U852 C853 C854 G855 G856 G857 G858 G859 U860 A861 G862 A863 G864 C865 A866 G869 U870 U871 U872 C873 G874 G875 C876 A877 A878 G C C G A U C C C G A C U U A
C G898 A899 A900 C901 C902 C903 G904 A905 U906 G907 C908 A909 A910 A911 C912 U913 C914 C915 G916 A917 A918 U919 A920 C921 C922 A925 G926 A927 A928 U929 G930 U931 U932 A933 U934 C935 A936 C937 G938 G939 G940 A941 G942 A943 C944 A945 C946 A947 C948 G949 G950 C951 G952 G953 G954 U955 G956 C957
U958 A959 A960 C961 G962 U963 C964 C965 G966 U967 C968 G969 U970 G971 A972 A973 G974 A975 G976 A981 C982 A983 A984 C987 A988 G989 A990 C991 C992 G993 C994 C995 A996 G997 C998 U999 A1000 A1001 G1002 C1005 C1006 C1007 A1008 A1009 A1010 G1011 U1012 C1013 A1014 U1015 U1018 U1019 A1020 A1021 G1022 U1023
G1024 G1025 G1026 A1027 A1028 A1029 C1030 U1033 G1034 G1042 C1043 A1046 G1047 A1050 G1051 C1052 A1057 U1058 G1059 U1060 U1061 G1062 G1063 C1064 U1065 G1068 A1069 A1070 C1076 A1077 U1078 C1079 A1080 U1081 U1082 U1083 A1084 A1085 A1086 G1087 A1088 A1089 A1090 G1091 C1092 G1093 U1094 A1095 A1096 U1097 A1098 G1099 C1100
U1101 U1105 G1106 G1107 U1108 C1109 G1110 A1111 G1112 U1113 C1114 G1115 G1116 C1117 C1118 U1119 C1120 C1121 G1122 C1123 G1124 G1125 A1126 A1127 G1128 A1129 U1130 G1131 U1132 A1133 A1134 C1135 G1136 U1137 C1138 G1139 C1140 U1141 A1142 A1143 A1144 C1145 C1146 A1147 U1148 G1149 C1150 A1151 C1152 C1153 C1154 A1155 A1156 G1162 G1163 C1164 A1165 G1166
C1167 G1168 A1169 C1170 G1171 C1172 U1173 U1174 A1175 U1176 G1177 C1178 G1179 U1180 U1181 G1182 U1183 U1184 G1185 G1186 G1187 U1188 A1189 G1190 G1191 G1192 G1195 C1196 G1197 U1198 U1199 C1200 U1201 G1202 U1203 A1204 A1205 G1206 G1210 C1211 G1212 A1213 A1214 G1215 G1216 U1219 G1220 C1221 U1222 G1223 U1224 G1225 A1226 G1227 G1228 C1229 A1230
G1235 G1236 A1237 G1238 G1239 U1240 A1241 U1242 C1243 A1244 G1245 A1246 A1247 G1248 U1249 G1250 C1251 G1252 A1253 G1256 C1257 U1258 G1259 A1260 C1261 A1262 U1263 A1264 A1265 G1266 U1267 A1268 A1269 C1270 G1271 A1272 U1273 A1274 A1275 A1276 G1277 C1278 G1279 G1280 A1281 U1282 G1283 A1284 A1285 A1286 A1287 G1288 C1289 C1290 C1291 G1292 C1293 U1294
C1295 G1296 C1297 C1298 G1299 G1300 A1301 A1302 G1303 A1304 C1305 G1309 G1310 G1311 U1312 U1313 C1314 C1315 U1316 G1317 U1318 C1319 C1320 A1321 A1322 C1323 G1324 U1325 U1326 A1327 A1328 U1329 C1330 G1331 G1332 G1333 G1334 C1335 A1336 G1337 G1341 A1342 C1345 G1346 A1347 C1348 C1349 C1350 C1351 U1352 A1353 A1354 G1355 A1359 G1360 G1361
C1362 C1363 G1364 A1365 G1368 U1372 A1373 G1374 U1375 C1376 G1377 A1378 U1379 G1380 G1381 G1382 A1383 A1384 A1385 C1386 A1387 G1388 U1394 A1395 U1396 U1397 C1398 C1399 U1400 G1401 U1405 U1406 G1407 G1408 U1409 G1410 U1411 U1412 A1413 C1414 U1415 G1416 A1419 A1420 G1424 G1425 G1426 A1427 C1428 G1429 G1430 A1431 G1432 A1433
A1434 C1437 U1438 A1439 U1440 G1441 U1442 U1443 G1444 G1445 C1446 C1447 G1448 G1449 G1450 C1451 G1452 A1453 C1454 G1455 G1456 U1457 U1458 G1459 U1460 C1461 C1462 C1463 G1464 G1465 A1469 A1470 G1471 U1474 G1475 U1476 A1477 G1478 G1479 C1480 U1481 G1482 G1483 U1484 U1485 U1486 U1487 C1488 C1489 A1490 C1493 A1494 A1495 A1496 A1504
A1505 U1506 C1507 A1508 A1509 G1510 G1511 C1512 U1513 G1514 A1515 G1516 G1517 C1518 U1523 G1524 A1525 C1526 G1527 A1528 G1529 G1530 C1531 A1532 C1533 U1534 A1535 C1536 G1537 G1538 U1539 G1540 C1541 U1542 G1543 A1544 A1545 G1546 C1547 A1548 A1549 C1550 A1551 A1552 A1553 U1554 G1555 C1556 C1557 C1558 U1559 G1560 C1561 U1562 U1563 C1564 C1565 A1566 G1567
G1568 A1569 A1570 A1571 A1572 G1573 C1574 U1578 A1579 A1580 A1583 U1584 C1585 A1586 G1587 G1588 U1589 A1590 A1591 C1592 A1593 U1594 C1595 U1599 C1600 G1601 U1602 A1603 C1606 C1607 A1608 A1609 A1610 C1611 C1612 G1613 A1616 C1617 A1618 G1622 G1623 U1624 C1625 G1633 A1634 A1635 U1636 A1637 C1638 C1639 A1640 A1641 G1642





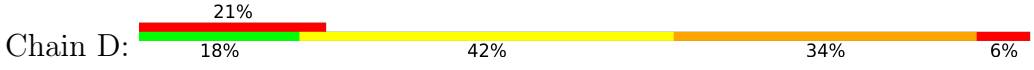
• Molecule 11: 50S ribosomal protein L2

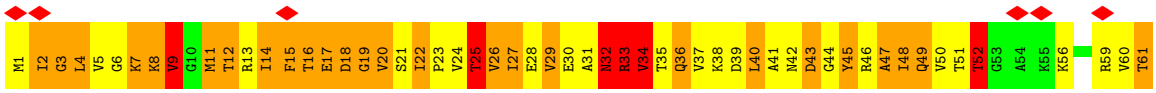
Chain C:

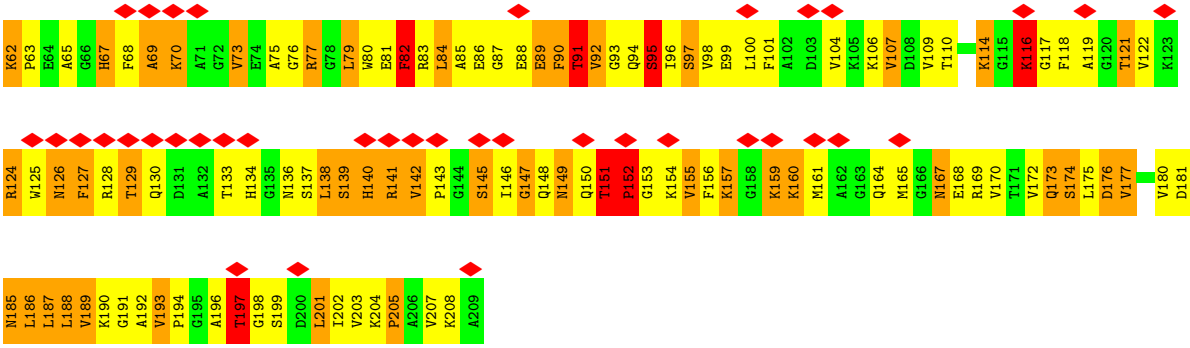


• Molecule 12: 50S ribosomal protein L3

Chain D:

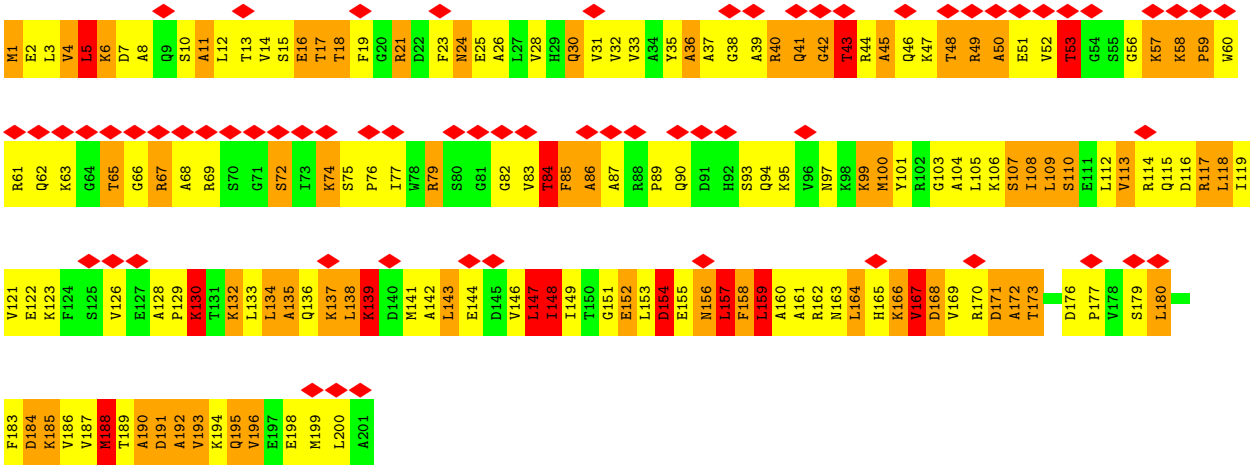






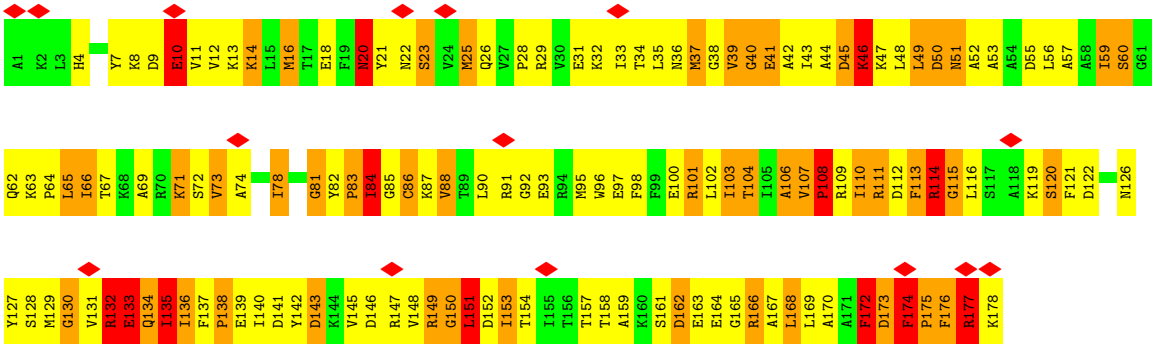
• Molecule 13: 50S ribosomal protein L4

Chain E:



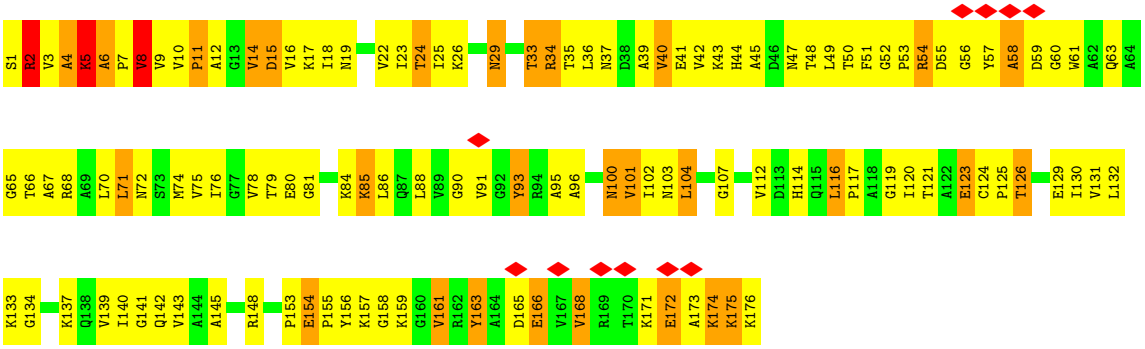
• Molecule 14: 50S ribosomal protein L5

Chain F:



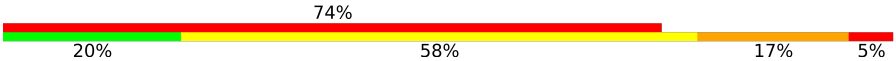
• Molecule 15: 50S ribosomal protein L6

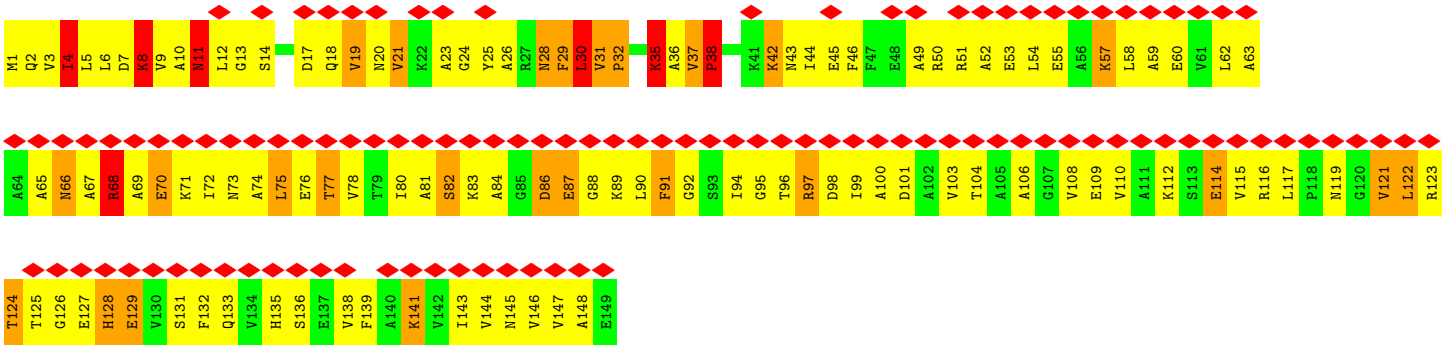
Chain G:



• Molecule 16: 50S ribosomal protein L9

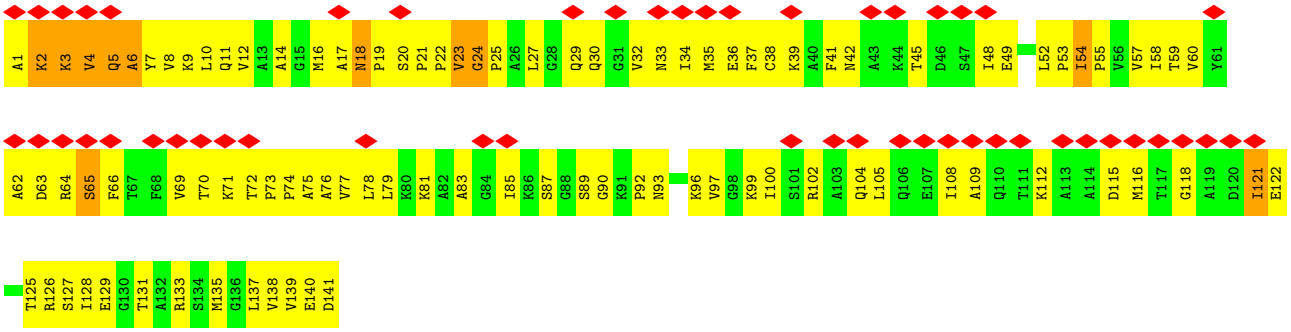
Chain H:





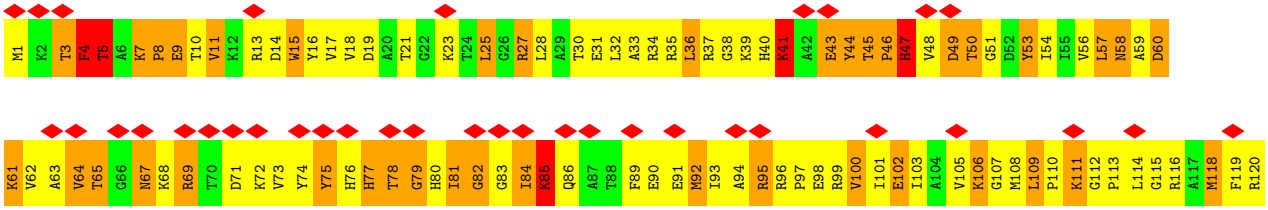
• Molecule 17: 50S ribosomal protein L11

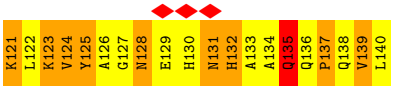
Chain I:



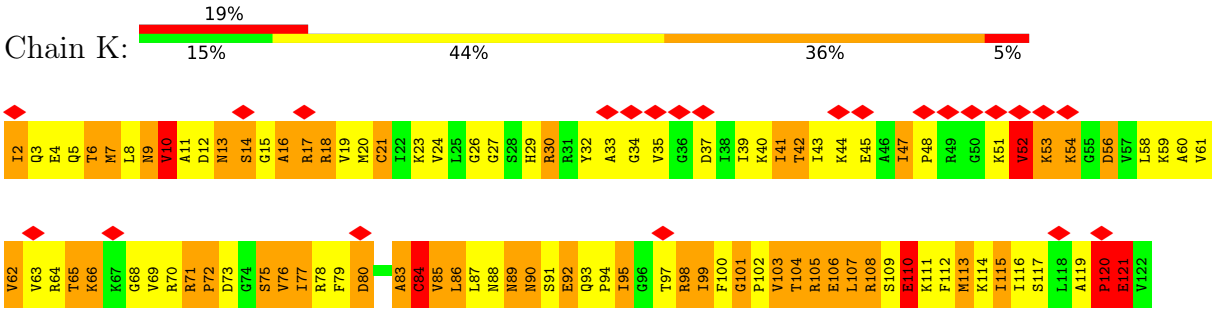
• Molecule 18: 50S ribosomal protein L13

Chain J:

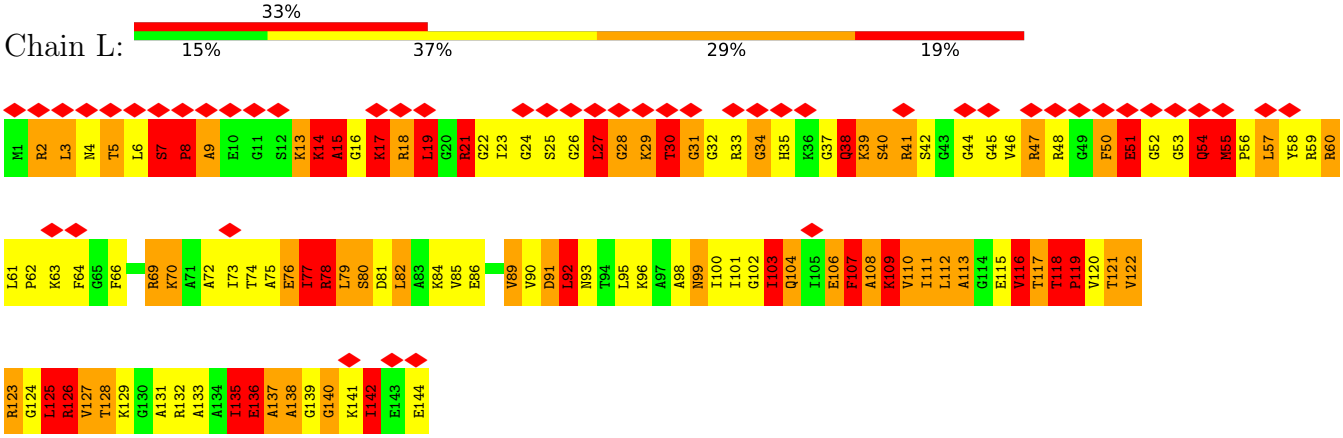




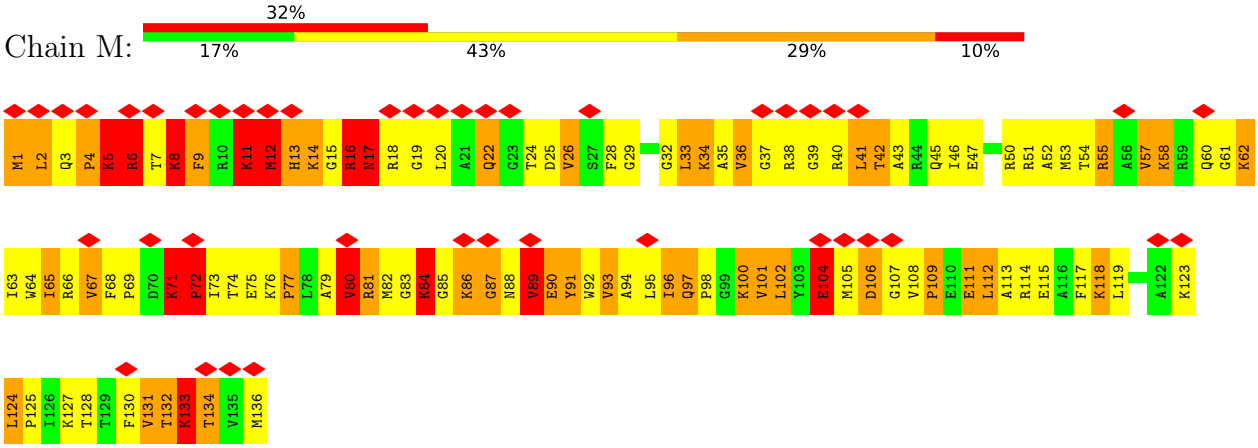
• Molecule 19: 50S ribosomal protein L14



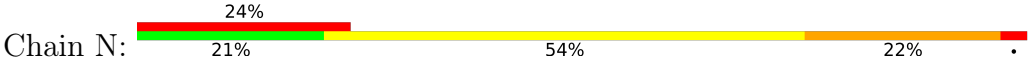
• Molecule 20: 50S ribosomal protein L15

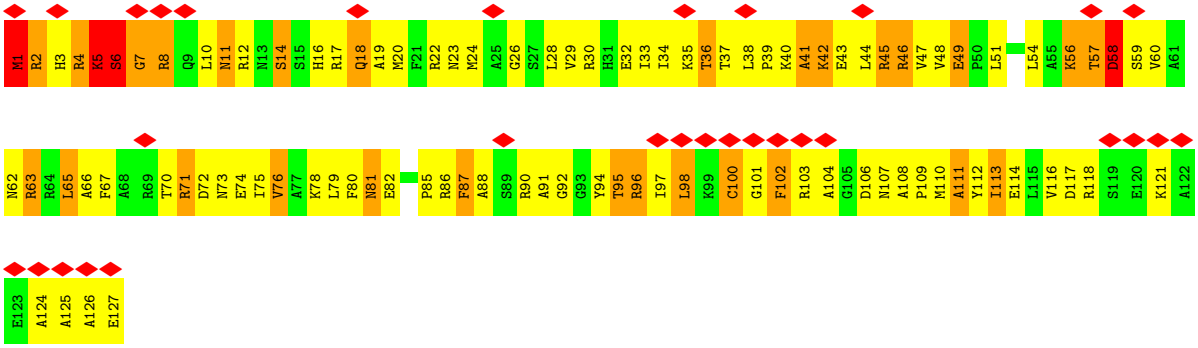


• Molecule 21: 50S ribosomal protein L16

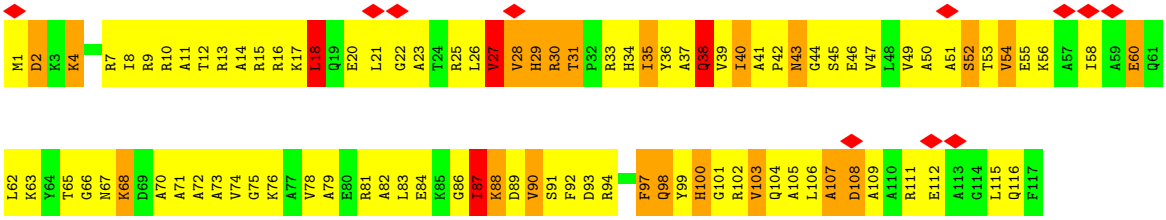


• Molecule 22: 50S ribosomal protein L17

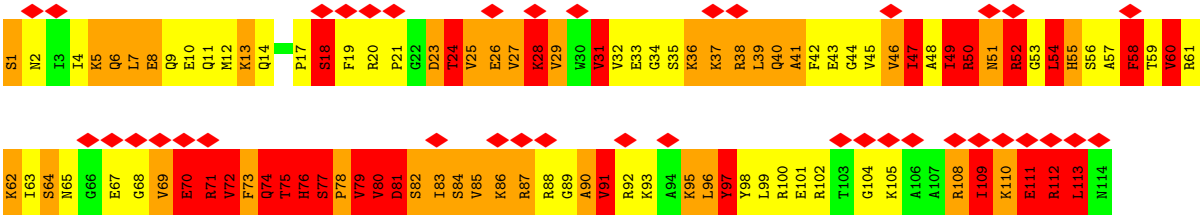




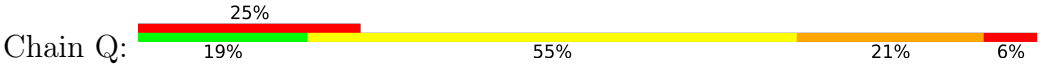
• Molecule 23: 50S ribosomal protein L18

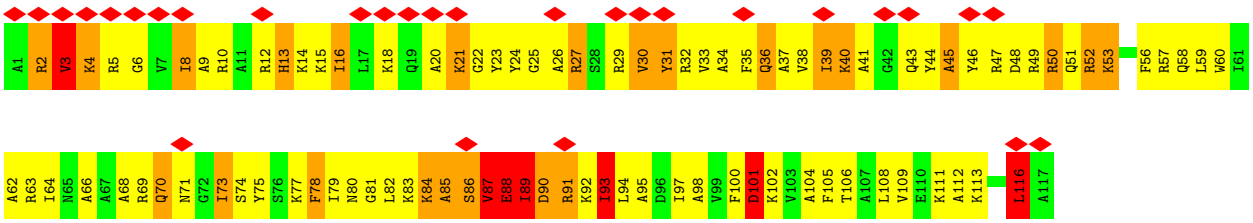


• Molecule 24: 50S ribosomal protein L19

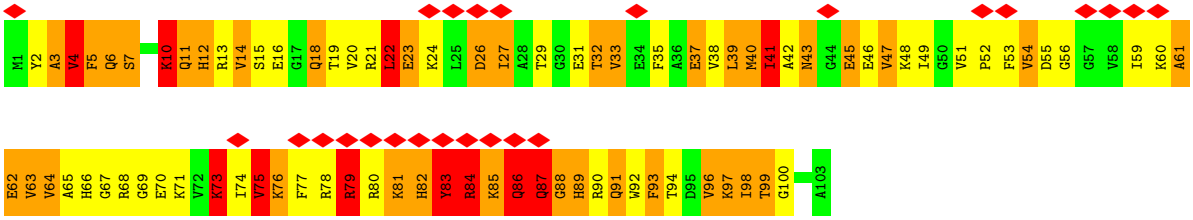


• Molecule 25: 50S ribosomal protein L20



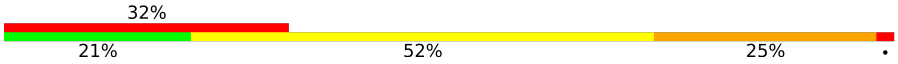


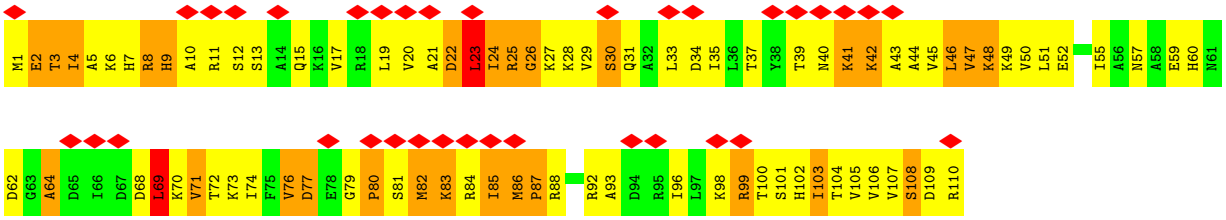
• Molecule 26: 50S ribosomal protein L21



• Molecule 27: 50S ribosomal protein L22

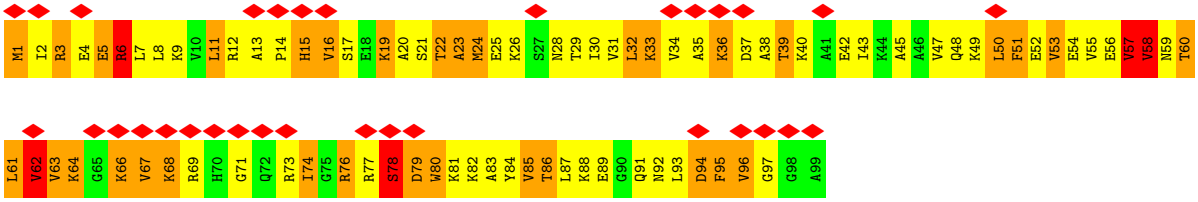
Chain S:





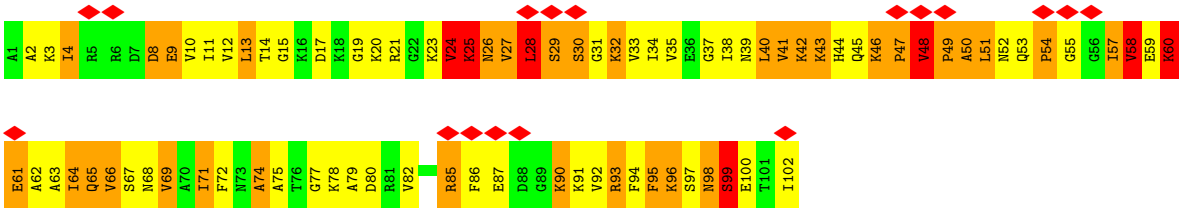
• Molecule 28: 50S ribosomal protein L23

Chain T:



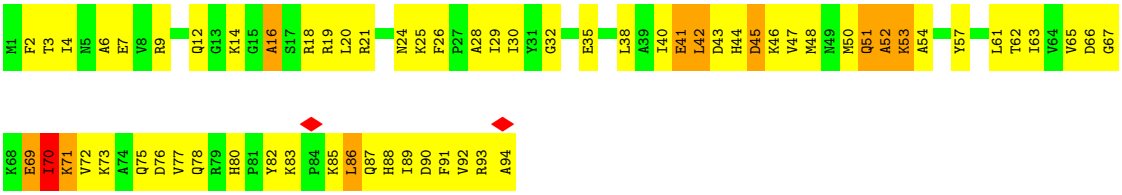
• Molecule 29: 50S ribosomal protein L24

Chain U:



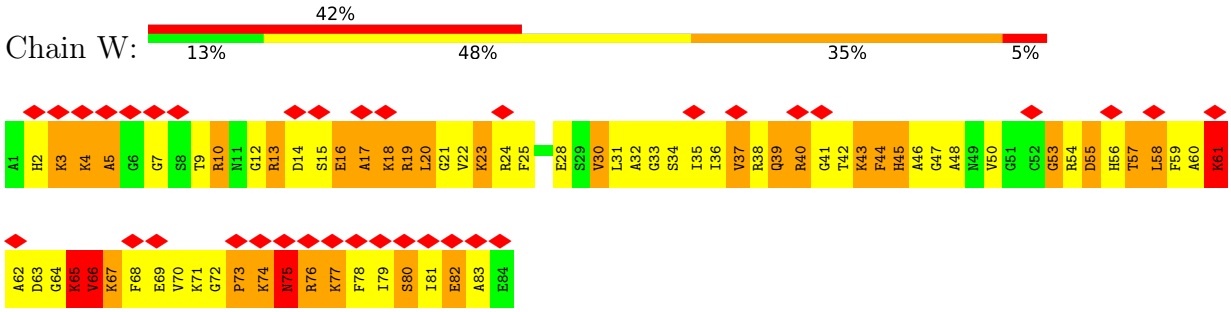
• Molecule 30: 50S ribosomal protein L25

Chain V:



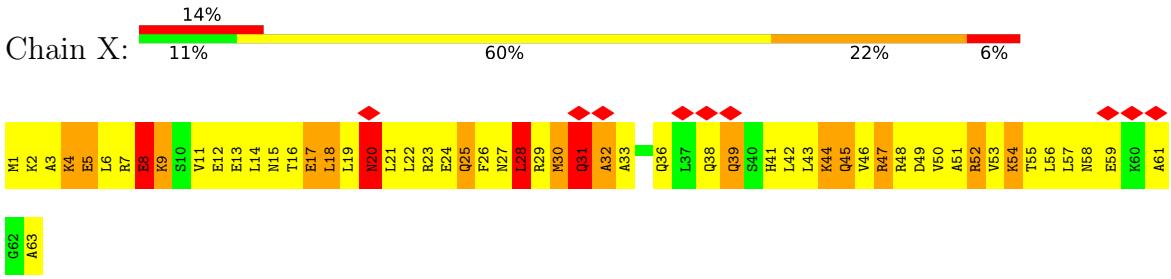
• Molecule 31: 50S ribosomal protein L27

Chain W:



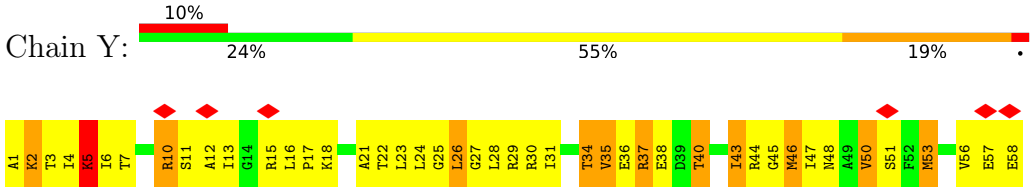
• Molecule 32: 50S ribosomal protein L29

Chain X:



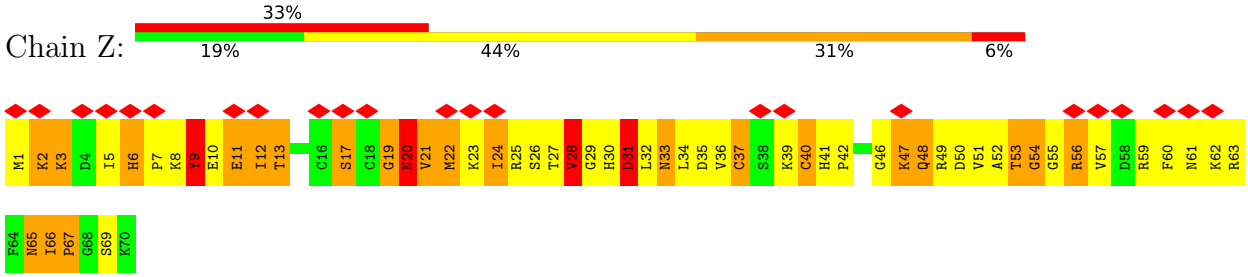
• Molecule 33: 50S ribosomal protein L30

Chain Y:



• Molecule 34: 50S ribosomal protein L31

Chain Z:



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	Not provided	
Resolution determination method	FSC 0.5 CUT-OFF	Depositor
CTF correction method	Not provided	
Microscope	FEI TECNAI F30	Depositor
Voltage (kV)	300	Depositor
Electron dose ($e^-/Å^2$)	Not provided	
Minimum defocus (nm)	Not provided	
Maximum defocus (nm)	Not provided	
Magnification	Not provided	
Image detector	KODAK SO-163 FILM	Depositor
Maximum map value	7.522	Depositor
Minimum map value	-4.419	Depositor
Average map value	0.037	Depositor
Map value standard deviation	0.632	Depositor
Recommended contour level	0.704	Depositor
Map size (Å)	361.62, 361.62, 361.62	wwPDB
Map dimensions	294, 294, 294	wwPDB
Map angles (°)	90, 90, 90	wwPDB
Pixel spacing (Å)	1.23, 1.23, 1.23	Depositor

5 Model quality

5.1 Standard geometry

Bond lengths and bond angles in the following residue types are not validated in this section: 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	0	0.53	0/450	1.29	6/599 (1.0%)
2	1	0.40	0/448	0.92	1/594 (0.2%)
3	2	0.36	0/380	0.97	1/498 (0.2%)
4	3	0.49	0/513	1.06	2/676 (0.3%)
5	4	0.39	0/303	1.14	5/397 (1.3%)
6	7	0.69	0/153	1.12	1/207 (0.5%)
7	8	1.21	10/1775 (0.6%)	1.45	17/2755 (0.6%)
8	9	4.08	67/3329 (2.0%)	3.51	139/4446 (3.1%)
9	A	0.29	0/2803	0.66	1/4371 (0.0%)
10	B	0.31	7/68314 (0.0%)	0.67	102/106569 (0.1%)
11	C	0.51	0/2092	1.27	30/2813 (1.1%)
12	D	0.47	0/1586	1.15	18/2134 (0.8%)
13	E	0.81	4/1571 (0.3%)	1.07	7/2113 (0.3%)
14	F	0.59	1/1444 (0.1%)	1.51	35/1937 (1.8%)
15	G	0.36	0/1343	0.94	4/1816 (0.2%)
16	H	0.40	0/1122	0.99	6/1515 (0.4%)
17	I	0.79	5/1046 (0.5%)	1.18	13/1410 (0.9%)
18	J	0.39	0/1135	1.12	8/1529 (0.5%)
19	K	0.47	0/939	1.48	22/1258 (1.7%)
20	L	1.03	3/1062 (0.3%)	2.06	51/1413 (3.6%)
21	M	0.55	1/1093 (0.1%)	1.30	14/1460 (1.0%)
22	N	0.50	1/1021 (0.1%)	1.09	8/1364 (0.6%)
23	O	0.39	0/910	1.02	8/1219 (0.7%)
24	P	0.80	3/929 (0.3%)	1.97	43/1242 (3.5%)
25	Q	0.42	0/960	1.11	7/1278 (0.5%)
26	R	0.46	0/829	1.16	9/1107 (0.8%)
27	S	0.33	0/864	0.94	5/1156 (0.4%)
28	T	0.58	2/784 (0.3%)	1.08	7/1048 (0.7%)
29	U	0.47	0/787	1.44	18/1051 (1.7%)
30	V	0.30	0/766	0.77	1/1025 (0.1%)
31	W	0.47	0/642	1.10	5/848 (0.6%)
32	X	0.34	0/510	1.05	5/677 (0.7%)

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
33	Y	0.37	0/453	0.97	1/605 (0.2%)
34	Z	0.63	0/559	1.34	11/745 (1.5%)
All	All	0.84	104/102915 (0.1%)	1.04	611/153875 (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	0	0	1
7	8	0	1
8	9	1	15
9	A	0	1
10	B	1	65
11	C	0	2
24	P	0	1
26	R	0	1
34	Z	0	1
All	All	2	88

All (104) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	9	299	ASP	CB-CG	74.24	3.37	1.52
8	9	333	ASP	CB-CG	69.51	3.25	1.52
8	9	300	VAL	CB-CG1	68.35	3.78	1.52
8	9	319	LEU	C-N	-64.23	0.43	1.33
8	9	344	MET	C-N	-58.70	0.47	1.33
8	9	370	ASP	CB-CG	57.20	2.95	1.52
8	9	371	LYS	C-N	-49.61	0.66	1.33
8	9	350	LEU	CB-CG	49.42	2.52	1.53
8	9	300	VAL	CB-CG2	48.28	3.11	1.52
8	9	344	MET	CB-CG	43.15	2.81	1.52
8	9	291	ALA	C-N	41.83	1.92	1.33
8	9	353	LYS	CB-CG	35.26	2.58	1.52
8	9	347	MET	C-N	-31.95	0.89	1.33
8	9	330	ASP	CB-CG	-31.65	0.72	1.52
7	8	77	C	O3'-P	31.02	2.07	1.61
8	9	17	SER	C-N	-29.02	1.00	1.33
8	9	332	ASN	CB-CG	26.84	2.19	1.52
8	9	21	ARG	C-N	-24.64	1.00	1.33

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	9	20	GLY	C-N	-24.34	1.00	1.33
8	9	331	LEU	C-N	24.27	1.72	1.33
8	9	129	LYS	C-N	-24.23	1.00	1.33
8	9	362	ASP	C-N	24.03	1.69	1.33
8	9	127	LYS	C-N	-23.82	1.00	1.33
8	9	22	LEU	C-N	-23.71	1.00	1.33
8	9	130	LYS	C-N	-23.62	1.00	1.33
8	9	194	ARG	C-N	-23.46	1.00	1.33
8	9	198	ASP	C-N	-22.90	1.00	1.33
8	9	19	ARG	C-N	-22.67	1.00	1.33
8	9	24	GLU	C-N	-22.40	1.00	1.33
13	E	79	ARG	CD-NE	22.37	1.77	1.46
8	9	368	MET	C-N	-21.34	1.02	1.33
8	9	196	HIS	C-N	-21.20	1.00	1.33
7	8	84	C	O3'-P	20.58	1.92	1.61
8	9	128	HIS	N-CA	20.18	1.72	1.46
8	9	195	LEU	N-CA	18.28	1.69	1.46
8	9	375	ARG	CB-CG	18.08	2.06	1.52
7	8	85	A	P-O5'	-17.76	1.33	1.59
8	9	23	THR	N-CA	17.46	1.68	1.46
20	L	77	ILE	CA-CB	-16.84	1.31	1.54
7	8	77	C	P-O5'	16.05	1.83	1.59
8	9	331	LEU	CB-CG	-14.82	1.23	1.53
8	9	374	VAL	C-N	14.78	1.54	1.33
17	I	3	LYS	CA-C	14.48	1.70	1.53
8	9	199	GLU	N-CA	14.37	1.65	1.46
8	9	22	LEU	N-CA	-13.52	1.29	1.46
7	8	85	A	P-OP2	13.28	1.75	1.49
8	9	130	LYS	N-CA	-13.27	1.29	1.46
8	9	129	LYS	N-CA	13.08	1.63	1.46
8	9	296	GLY	C-N	-12.38	1.16	1.33
8	9	324	LYS	C-O	11.96	1.39	1.24
14	F	39	VAL	CA-CB	11.91	1.66	1.54
10	B	448	U	O4'-C1'	11.01	1.58	1.41
13	E	79	ARG	NE-CZ	11.01	1.45	1.33
7	8	29	U	O3'-P	-9.74	1.46	1.61
17	I	3	LYS	CG-CD	9.68	1.81	1.52
8	9	196	HIS	N-CA	-9.56	1.32	1.46
8	9	196	HIS	CG-CD2	9.27	1.46	1.35
8	9	264	HIS	CG-CD2	9.25	1.46	1.35
8	9	62	HIS	CG-CD2	9.23	1.46	1.35
8	9	128	HIS	CG-CD2	9.20	1.46	1.35

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	9	209	HIS	CG-CD2	9.19	1.46	1.35
8	9	286	HIS	CG-CD2	9.16	1.46	1.35
13	E	79	ARG	CG-CD	8.80	1.78	1.52
21	M	5	LYS	CA-C	-8.55	1.48	1.53
8	9	197	VAL	N-CA	8.49	1.55	1.46
8	9	46	PRO	N-CD	8.40	1.59	1.47
10	B	448	U	C4'-O4'	8.03	1.57	1.45
8	9	328	GLY	C-N	-8.03	1.22	1.33
10	B	1086	A	C5-C6	-7.94	1.25	1.41
8	9	356	GLY	C-N	-7.72	1.22	1.33
7	8	77	C	P-OP2	7.68	1.64	1.49
24	P	25	VAL	CA-CB	-7.58	1.45	1.53
8	9	325	LYS	C-O	7.51	1.33	1.24
17	I	3	LYS	CD-CE	7.42	1.74	1.52
8	9	19	ARG	N-CA	7.22	1.55	1.46
28	T	1	MET	CG-SD	7.08	1.98	1.80
7	8	89	A	O3'-P	7.07	1.71	1.61
10	B	448	U	C3'-C2'	7.07	1.63	1.52
8	9	18	GLY	N-CA	-6.98	1.35	1.44
17	I	4	VAL	N-CA	6.82	1.54	1.46
7	8	77	C	O5'-C5'	-6.33	1.32	1.42
8	9	327	ASP	CA-CB	-6.12	1.43	1.53
8	9	370	ASP	CA-C	6.04	1.65	1.52
20	L	112	LEU	CA-C	-5.96	1.45	1.52
8	9	351	MET	CA-CB	5.91	1.62	1.53
8	9	70	PRO	N-CD	5.89	1.55	1.47
10	B	448	U	C2'-C1'	5.82	1.62	1.53
13	E	79	ARG	CB-CG	5.75	1.69	1.52
8	9	325	LYS	CA-C	-5.59	1.45	1.52
8	9	323	LEU	CA-C	5.58	1.59	1.52
10	B	1099	G	C5'-C4'	5.52	1.59	1.51
28	T	1	MET	SD-CE	5.48	1.93	1.79
22	N	125	ALA	CA-CB	-5.48	1.44	1.53
8	9	324	LYS	CA-C	-5.45	1.45	1.52
20	L	77	ILE	CB-CG1	5.42	1.64	1.53
24	P	80	VAL	CA-CB	5.41	1.61	1.54
10	B	1098	A	C1'-N9	5.39	1.56	1.48
8	9	327	ASP	CB-CG	-5.32	1.38	1.52
8	9	322	LYS	C-N	-5.24	1.26	1.33
8	9	369	ASP	N-CA	5.18	1.52	1.46
24	P	79	VAL	CA-C	5.08	1.59	1.52
17	I	4	VAL	CA-C	5.05	1.59	1.52

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
8	9	264	HIS	CD2-NE2	-5.04	1.32	1.37
7	8	85	A	P-OP1	-5.04	1.38	1.49

All (611) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
8	9	374	VAL	O-C-N	-113.18	8.76	121.94
8	9	299	ASP	CA-CB-CG	-82.38	30.22	112.60
8	9	370	ASP	CA-CB-CG	-53.17	59.43	112.60
8	9	333	ASP	CA-CB-CG	-44.91	67.69	112.60
8	9	319	LEU	O-C-N	-39.61	68.81	123.07
8	9	319	LEU	CA-C-N	-39.43	46.23	121.54
8	9	319	LEU	C-N-CA	-39.43	46.23	121.54
7	8	84	C	O3'-P-O5'	35.22	156.83	104.00
8	9	332	ASN	CA-CB-CG	-35.17	77.42	112.60
8	9	300	VAL	CA-CB-CG2	-35.11	50.71	110.40
8	9	300	VAL	CA-CB-CG1	-34.07	52.49	110.40
8	9	300	VAL	CG1-CB-CG2	-31.93	40.56	110.80
8	9	324	LYS	CA-C-O	27.08	159.23	120.51
8	9	327	ASP	N-CA-CB	25.43	153.46	110.49
7	8	84	C	P-O3'-C3'	23.05	154.77	120.20
8	9	353	LYS	CB-CG-CD	22.78	163.70	111.30
8	9	330	ASP	CA-CB-CG	21.78	134.38	112.60
7	8	77	C	O5'-C5'-C4'	21.54	143.81	111.50
7	8	89	A	O3'-P-O5'	-21.43	71.85	104.00
8	9	291	ALA	O-C-N	-21.23	89.03	123.00
8	9	296	GLY	O-C-N	-20.65	101.69	123.58
7	8	84	C	OP2-P-O3'	-19.93	48.22	108.00
8	9	353	LYS	CA-CB-CG	-18.81	76.48	114.10
8	9	324	LYS	N-CA-C	18.74	150.71	110.80
7	8	77	C	P-O5'-C5'	-18.73	92.80	120.90
8	9	331	LEU	CB-CG-CD2	-17.28	58.85	110.70
8	9	324	LYS	O-C-N	-17.28	99.61	122.59
8	9	328	GLY	O-C-N	-17.27	100.25	122.70
7	8	84	C	OP1-P-O3'	-17.24	56.28	108.00
8	9	350	LEU	CB-CG-CD2	-16.66	60.71	110.70
8	9	371	LYS	CA-C-N	16.63	151.91	121.97
8	9	371	LYS	C-N-CA	16.63	151.91	121.97
10	B	448	U	N1-C1'-C2'	16.55	136.82	112.00
8	9	375	ARG	CA-CB-CG	-16.54	81.03	114.10
8	9	331	LEU	CB-CG-CD1	15.97	158.62	110.70
20	L	77	ILE	CB-CA-C	-15.31	86.19	111.29

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
8	9	296	GLY	CA-C-N	15.27	150.70	121.54
8	9	296	GLY	C-N-CA	15.27	150.70	121.54
8	9	368	MET	O-C-N	-15.16	102.18	122.49
8	9	199	GLU	N-CA-C	-14.77	93.62	112.23
14	F	113	PHE	N-CA-C	-14.67	84.74	109.24
8	9	368	MET	CA-C-N	14.62	144.43	122.65
8	9	368	MET	C-N-CA	14.62	144.43	122.65
8	9	344	MET	CA-C-N	-14.61	92.78	121.41
8	9	344	MET	C-N-CA	-14.61	92.78	121.41
8	9	299	ASP	CB-CG-OD1	-14.23	85.67	118.40
20	L	118	THR	N-CA-C	13.90	140.53	109.81
7	8	77	C	P-O3'-C3'	-13.88	99.39	120.20
21	M	8	LYS	N-CA-C	-13.76	89.75	108.74
24	P	72	VAL	N-CA-C	13.49	137.39	109.34
8	9	351	MET	CB-CA-C	-13.44	91.39	112.09
8	9	350	LEU	CB-CG-CD1	13.31	150.65	110.70
15	G	172	GLU	N-CA-C	-13.27	88.23	109.59
8	9	324	LYS	CB-CA-C	-13.08	84.39	110.42
8	9	343	ASN	N-CA-C	-13.03	94.34	112.45
8	9	21	ARG	N-CA-C	-12.89	96.81	112.54
8	9	130	LYS	N-CA-C	12.75	126.81	110.24
14	F	39	VAL	CB-CA-C	-12.70	92.41	111.08
10	B	1098	A	N9-C1'-C2'	12.25	130.38	112.00
8	9	344	MET	CA-CB-CG	-12.20	89.70	114.10
24	P	70	GLU	N-CA-C	12.18	128.30	108.32
24	P	79	VAL	N-CA-C	12.18	134.68	109.34
29	U	48	VAL	CA-C-N	-12.09	104.72	119.84
29	U	48	VAL	C-N-CA	-12.09	104.72	119.84
8	9	160	PHE	C-N-CD	-11.98	75.88	125.00
8	9	347	MET	O-C-N	-11.85	106.83	122.59
7	8	85	A	O5'-P-OP1	11.85	143.54	108.00
7	8	77	C	O5'-P-OP1	-11.79	72.62	108.00
14	F	38	GLY	N-CA-C	11.71	125.10	111.63
20	L	77	ILE	CA-C-N	11.69	143.87	121.54
20	L	77	ILE	C-N-CA	11.69	143.87	121.54
24	P	47	ILE	N-CA-C	11.66	122.76	108.53
20	L	77	ILE	N-CA-C	11.62	133.51	109.34
11	C	238	ASN	N-CA-C	11.57	127.81	114.62
20	L	140	GLY	N-CA-C	11.55	140.56	113.18
22	N	126	ALA	N-CA-C	-11.54	95.22	108.49
8	9	314	ALA	N-CA-C	-11.53	97.00	111.75
8	9	371	LYS	O-C-N	-11.21	105.06	123.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
8	9	350	LEU	CA-CB-CG	-11.21	77.06	116.30
8	9	369	ASP	CB-CG-OD1	-11.13	92.79	118.40
14	F	135	ILE	N-CA-C	-11.10	99.53	110.30
8	9	369	ASP	CB-CG-OD2	11.08	143.88	118.40
20	L	85	VAL	N-CA-C	-11.07	98.93	111.00
24	P	78	PRO	N-CA-C	11.06	127.61	111.13
13	E	79	ARG	CD-NE-CZ	11.06	139.88	124.40
20	L	79	LEU	N-CA-C	10.97	124.55	111.82
11	C	264	LYS	N-CA-C	10.95	123.34	108.23
24	P	77	SER	CA-C-N	-10.88	109.75	120.52
24	P	77	SER	C-N-CA	-10.88	109.75	120.52
7	8	85	A	P-O5'-C5'	10.82	137.13	120.90
18	J	5	THR	N-CA-C	-10.82	92.12	108.46
20	L	113	ALA	N-CA-C	-10.81	87.78	110.80
8	9	323	LEU	O-C-N	10.77	136.04	123.12
8	9	329	PHE	CA-CB-CG	10.57	124.37	113.80
24	P	28	LYS	N-CA-C	-10.52	91.80	108.63
24	P	71	ARG	N-CA-C	10.28	132.69	110.80
24	P	40	GLN	N-CA-C	-10.22	89.03	110.80
8	9	98	GLN	C-N-CD	-10.21	83.15	125.00
10	B	2791	G	O5'-P-OP2	-10.21	77.37	108.00
29	U	46	LYS	CA-C-N	10.18	130.13	119.85
29	U	46	LYS	C-N-CA	10.18	130.13	119.85
21	M	5	LYS	N-CA-C	10.14	118.48	108.75
27	S	47	VAL	N-CA-C	-10.10	102.05	111.45
21	M	130	PHE	N-CA-C	-10.04	95.67	110.23
21	M	4	PRO	CA-C-N	-9.97	112.46	123.13
21	M	4	PRO	C-N-CA	-9.97	112.46	123.13
10	B	2790	U	OP2-P-O3'	9.92	137.77	108.00
8	9	267	GLY	N-CA-C	-9.90	101.66	115.32
20	L	21	ARG	N-CA-C	-9.87	99.56	111.69
19	K	107	LEU	N-CA-C	-9.82	101.30	113.38
26	R	87	GLN	N-CA-C	9.78	131.63	110.80
8	9	359	GLN	OE1-CD-NE2	-9.78	112.82	122.60
8	9	141	ARG	CA-C-N	9.76	132.04	119.84
8	9	141	ARG	C-N-CA	9.76	132.04	119.84
14	F	50	ASP	N-CA-C	-9.75	101.51	113.41
14	F	74	ALA	N-CA-C	9.70	124.38	108.96
18	J	82	GLY	N-CA-C	-9.67	100.20	114.61
8	9	322	LYS	CA-C-N	9.61	135.63	121.31
8	9	322	LYS	C-N-CA	9.61	135.63	121.31
26	R	39	LEU	N-CA-C	-9.59	100.70	111.82

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
19	K	13	ASN	N-CA-C	9.48	121.31	108.23
20	L	139	GLY	N-CA-C	9.47	123.29	110.69
14	F	40	GLY	N-CA-C	-9.47	90.74	113.18
20	L	19	LEU	N-CA-C	-9.45	90.67	110.80
8	9	402	ILE	N-CA-C	-9.45	101.35	110.42
8	9	327	ASP	CA-CB-CG	9.42	122.02	112.60
8	9	109	GLN	N-CA-C	-9.41	98.19	110.33
14	F	106	ALA	N-CA-C	9.40	124.13	112.47
19	K	77	ILE	N-CA-C	-9.38	96.61	109.55
8	9	250	VAL	N-CA-C	-9.37	102.68	111.48
20	L	41	ARG	N-CA-C	-9.33	101.45	112.92
19	K	91	SER	N-CA-C	-9.32	93.71	108.90
17	I	3	LYS	CA-C-N	9.30	136.62	122.68
17	I	3	LYS	C-N-CA	9.30	136.62	122.68
8	9	130	LYS	CA-C-N	9.21	135.95	122.41
8	9	130	LYS	C-N-CA	9.21	135.95	122.41
20	L	26	GLY	N-CA-C	-9.19	91.41	113.18
28	T	94	ASP	N-CA-C	-9.16	98.69	111.52
26	R	41	ILE	N-CA-C	-9.06	97.89	109.58
31	W	43	LYS	N-CA-C	-9.05	102.38	113.97
8	9	237	ASN	N-CA-C	-9.05	100.17	111.75
29	U	48	VAL	N-CA-C	9.04	128.41	108.88
10	B	2076	U	C2'-C3'-O3'	9.02	127.23	113.70
20	L	125	LEU	N-CA-C	8.99	123.60	108.13
20	L	17	LYS	N-CA-C	8.97	129.90	110.80
10	B	143	C	N1-C1'-C2'	8.94	125.41	112.00
8	9	323	LEU	CB-CA-C	8.92	123.71	109.61
10	B	1350	C	C5'-C4'-C3'	-8.92	102.62	116.00
19	K	90	ASN	N-CA-C	8.90	123.69	113.01
11	C	138	SER	N-CA-C	-8.88	102.62	113.19
1	0	6	LYS	N-CA-C	8.86	122.29	109.71
20	L	77	ILE	CG1-CB-CG2	8.84	137.22	110.70
20	L	117	THR	N-CA-C	-8.80	92.61	108.02
11	C	30	ALA	CA-C-N	-8.78	108.87	119.84
11	C	30	ALA	C-N-CA	-8.78	108.87	119.84
12	D	90	PHE	N-CA-C	-8.72	92.23	110.80
8	9	359	GLN	CA-C-N	8.69	138.21	122.13
8	9	359	GLN	C-N-CA	8.69	138.21	122.13
13	E	147	LEU	N-CA-C	8.58	129.08	110.80
29	U	54	PRO	N-CA-C	-8.56	102.35	113.57
20	L	80	SER	N-CA-C	-8.56	101.89	111.14
10	B	944	C	C5'-C4'-C3'	-8.55	103.17	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
11	C	111	ALA	N-CA-C	8.54	122.55	110.50
21	M	133	LYS	N-CA-C	-8.50	96.50	108.23
29	U	47	PRO	N-CA-C	-8.48	97.89	111.38
1	0	48	TYR	CA-CB-CG	-8.48	98.64	113.90
8	9	328	GLY	CA-C-N	8.48	137.73	121.54
8	9	328	GLY	C-N-CA	8.48	137.73	121.54
29	U	50	ALA	N-CA-C	-8.47	96.17	109.72
10	B	560	C	C5'-C4'-C3'	-8.45	103.32	116.00
11	C	83	ASP	CA-C-N	8.43	130.38	119.84
11	C	83	ASP	C-N-CA	8.43	130.38	119.84
24	P	74	GLN	N-CA-C	-8.38	100.05	111.87
24	P	81	ASP	N-CA-C	-8.35	93.55	107.32
24	P	14	GLN	N-CA-C	-8.34	93.03	110.80
7	8	77	C	O5'-P-OP2	8.31	132.94	108.00
29	U	49	PRO	N-CA-C	-8.30	95.37	112.47
10	B	670	A	C4'-C3'-O3'	8.29	121.84	109.40
10	B	2791	G	O5'-P-OP1	8.28	132.85	108.00
12	D	19	GLY	N-CA-C	-8.22	104.97	115.42
21	M	6	ARG	N-CA-C	-8.22	93.28	110.80
11	C	32	LEU	N-CA-C	8.22	128.31	110.80
17	I	4	VAL	N-CA-C	8.21	121.37	108.89
34	Z	11	GLU	N-CA-C	-8.18	99.50	110.55
13	E	79	ARG	N-CA-C	-8.17	99.52	110.55
10	B	773	U	C5'-C4'-C3'	-8.15	103.77	116.00
14	F	174	PHE	CA-C-N	-8.15	112.33	120.31
14	F	174	PHE	C-N-CA	-8.15	112.33	120.31
20	L	22	GLY	N-CA-C	-8.14	102.80	112.64
13	E	159	LEU	N-CA-C	-8.12	102.33	112.72
24	P	25	VAL	N-CA-C	8.10	119.54	107.15
10	B	34	U	C4'-C3'-O3'	-8.10	100.86	113.00
10	B	2760	C	C5'-C4'-C3'	-8.06	103.90	116.00
25	Q	52	ARG	N-CA-C	8.02	120.93	111.71
20	L	76	GLU	CA-C-O	-8.00	112.59	121.87
8	9	82	LEU	N-CA-C	-7.98	102.53	111.07
14	F	130	GLY	N-CA-C	-7.97	102.77	111.93
32	X	45	GLN	N-CA-C	-7.96	104.10	113.88
8	9	331	LEU	O-C-N	7.95	132.78	122.68
10	B	380	G	C5'-C4'-C3'	-7.95	104.07	116.00
20	L	7	SER	N-CA-C	-7.93	92.28	109.81
19	K	89	ASN	N-CA-C	7.89	127.61	110.80
7	8	29	U	OP2-P-O3'	-7.85	84.45	108.00
18	J	71	ASP	N-CA-C	7.85	123.82	113.30

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
8	9	368	MET	N-CA-C	7.83	123.14	113.50
31	W	74	LYS	N-CA-C	7.81	127.43	110.80
12	D	151	THR	N-CA-C	-7.74	92.70	109.81
24	P	82	SER	N-CA-C	7.74	127.30	110.80
3	2	19	ARG	N-CA-C	-7.74	102.76	112.90
32	X	54	LYS	N-CA-C	-7.73	103.11	112.54
10	B	2790	U	O3'-P-O5'	-7.73	92.41	104.00
14	F	47	LYS	N-CA-C	-7.73	103.11	112.54
8	9	198	ASP	N-CA-C	-7.73	103.31	112.89
24	P	50	ARG	N-CA-C	-7.72	96.04	108.55
12	D	97	SER	N-CA-C	-7.71	103.89	113.38
8	9	370	ASP	CB-CG-OD2	-7.71	100.67	118.40
18	J	3	THR	N-CA-C	7.69	120.07	108.46
10	B	544	C	C4'-C3'-O3'	7.68	124.51	113.00
19	K	16	ALA	N-CA-C	7.67	127.14	110.80
16	H	8	LYS	N-CA-C	-7.67	96.90	109.40
34	Z	53	THR	N-CA-C	-7.66	99.71	110.50
10	B	1098	A	O4'-C1'-C2'	-7.64	99.96	107.60
10	B	512	G	C4'-C3'-O3'	-7.63	101.55	113.00
24	P	71	ARG	CA-C-N	7.63	135.71	121.97
24	P	71	ARG	C-N-CA	7.63	135.71	121.97
17	I	4	VAL	CB-CA-C	-7.58	98.75	110.95
7	8	29	U	P-O3'-C3'	7.57	131.56	120.20
8	9	366	SER	N-CA-C	7.54	122.90	112.04
8	9	356	GLY	CA-C-N	-7.54	109.82	122.64
8	9	356	GLY	C-N-CA	-7.54	109.82	122.64
10	B	448	U	C2'-C3'-O3'	7.51	124.97	113.70
24	P	29	VAL	N-CA-C	-7.51	93.72	109.34
8	9	374	VAL	CA-C-N	7.51	135.88	121.54
8	9	374	VAL	C-N-CA	7.51	135.88	121.54
20	L	112	LEU	N-CA-C	-7.49	97.01	109.07
29	U	60	LYS	N-CA-C	-7.48	94.86	110.80
14	F	44	ALA	N-CA-C	7.47	121.31	111.75
8	9	101	ALA	N-CA-C	7.47	120.42	109.07
14	F	119	LYS	N-CA-C	7.46	121.70	112.59
20	L	70	LYS	N-CA-C	-7.46	103.08	111.07
25	Q	45	ALA	N-CA-C	7.45	120.11	111.02
24	P	95	LYS	N-CA-C	-7.42	103.35	113.30
8	9	97	ALA	N-CA-C	-7.40	102.16	112.45
8	9	389	ALA	N-CA-C	-7.40	103.87	113.12
8	9	363	ASN	N-CA-C	7.38	122.57	112.90
17	I	3	LYS	N-CA-C	7.38	122.65	107.37

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
10	B	1098	A	C1'-O4'-C4'	7.37	117.27	109.90
10	B	2262	U	C5'-C4'-C3'	-7.37	104.94	116.00
34	Z	20	ASN	N-CA-C	7.36	120.51	108.52
14	F	73	VAL	N-CA-C	7.34	124.61	109.34
8	9	327	ASP	CB-CA-C	-7.33	95.84	110.42
10	B	2076	U	C4'-C3'-O3'	7.32	123.97	113.00
19	K	80	ASP	N-CA-C	-7.31	102.36	112.30
34	Z	22	MET	N-CA-C	-7.28	101.82	110.41
23	O	31	THR	CA-C-N	-7.28	110.74	119.84
23	O	31	THR	C-N-CA	-7.28	110.74	119.84
20	L	15	ALA	N-CA-C	7.26	126.27	110.80
24	P	6	GLN	N-CA-C	-7.26	104.30	113.01
8	9	323	LEU	N-CA-C	-7.21	100.25	110.35
24	P	62	LYS	N-CA-C	-7.20	99.49	110.30
2	1	6	GLU	N-CA-C	-7.18	101.29	110.19
11	C	28	PRO	CA-C-N	7.16	135.22	121.54
11	C	28	PRO	C-N-CA	7.16	135.22	121.54
14	F	175	PRO	N-CA-C	-7.16	100.69	111.57
10	B	825	A	C5'-C4'-C3'	-7.16	105.26	116.00
8	9	34	VAL	N-CA-C	-7.14	102.80	110.23
10	B	458	G	C4'-C3'-O3'	-7.14	102.29	113.00
10	B	1818	U	C4'-C3'-O3'	-7.10	102.34	113.00
20	L	136	GLU	N-CA-C	-7.08	104.61	113.18
8	9	96	ALA	N-CA-C	7.08	121.12	110.64
14	F	14	LYS	N-CA-C	-7.06	95.76	110.80
19	K	66	LYS	N-CA-C	7.06	120.01	111.82
8	9	8	ARG	N-CA-C	-7.05	102.72	111.75
11	C	28	PRO	N-CA-C	7.02	126.93	112.47
8	9	320	ALA	CA-C-O	-7.01	110.48	120.51
12	D	167	ASN	N-CA-C	-7.00	102.84	113.89
32	X	32	ALA	N-CA-C	-6.99	103.84	113.56
31	W	4	LYS	N-CA-C	6.99	125.68	110.80
33	Y	2	LYS	N-CA-C	-6.99	95.92	110.80
14	F	20	ASN	N-CA-C	6.97	125.66	110.80
14	F	133	GLU	N-CA-C	6.97	125.65	110.80
24	P	104	GLY	N-CA-C	6.97	129.70	113.18
21	M	17	ASN	N-CA-C	-6.96	95.97	110.80
6	7	66	LYS	N-CA-C	6.96	121.38	112.34
10	B	955	U	C5'-C4'-C3'	-6.94	105.59	116.00
14	F	51	ASN	N-CA-C	-6.93	104.55	112.87
14	F	39	VAL	N-CA-C	-6.93	98.83	109.78
17	I	3	LYS	CD-CE-NZ	6.93	134.07	111.90

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
20	L	30	THR	N-CA-C	-6.92	98.75	109.76
26	R	61	ALA	N-CA-C	-6.90	102.85	112.45
8	9	251	ASP	N-CA-C	-6.89	104.99	113.19
16	H	78	VAL	N-CA-C	-6.89	98.53	109.20
10	B	745	G	C5'-C4'-C3'	-6.88	105.69	116.00
19	K	30	ARG	N-CA-C	-6.87	100.27	110.23
8	9	131	LYS	N-CA-C	6.86	120.05	107.99
19	K	106	GLU	N-CA-C	-6.86	104.95	113.38
16	H	19	VAL	N-CA-C	6.85	117.47	107.75
26	R	79	ARG	N-CA-C	6.82	125.32	110.80
10	B	690	G	C5'-C4'-C3'	-6.80	105.80	116.00
20	L	92	LEU	N-CA-C	6.79	125.26	110.80
19	K	115	ILE	N-CA-C	6.77	117.47	110.36
24	P	24	THR	CA-C-N	-6.76	114.04	122.48
24	P	24	THR	C-N-CA	-6.76	114.04	122.48
19	K	101	GLY	CA-C-N	6.75	127.28	119.99
19	K	101	GLY	C-N-CA	6.75	127.28	119.99
8	9	341	MET	N-CA-C	6.75	125.17	110.80
12	D	18	ASP	N-CA-C	-6.74	96.44	110.80
5	4	2	LYS	N-CA-C	-6.74	104.68	113.17
17	I	3	LYS	CG-CD-CE	6.71	126.74	111.30
8	9	90	ASN	N-CA-C	-6.71	96.52	110.80
12	D	20	VAL	N-CA-C	-6.71	102.71	111.09
23	O	16	ARG	N-CA-C	-6.71	104.57	112.89
10	B	2471	A	C4'-C3'-O3'	6.70	119.45	109.40
24	P	109	ILE	N-CA-C	-6.70	95.41	109.34
8	9	186	VAL	N-CA-C	6.70	117.95	108.17
8	9	7	ASP	N-CA-C	-6.69	104.76	113.12
8	9	286	HIS	C-N-CD	-6.68	97.61	125.00
12	D	95	SER	N-CA-C	-6.68	96.58	110.80
8	9	359	GLN	CG-CD-NE2	6.64	126.36	116.40
7	8	85	A	OP1-P-OP2	-6.64	99.68	119.60
34	Z	6	HIS	CA-C-N	6.64	128.14	119.84
34	Z	6	HIS	C-N-CA	6.64	128.14	119.84
8	9	11	ARG	N-CA-C	-6.63	104.29	112.38
4	3	25	HIS	N-CA-C	-6.62	98.86	109.39
18	J	4	PHE	N-CA-C	6.62	124.91	110.80
20	L	122	VAL	N-CA-C	6.61	119.03	108.85
4	3	4	LYS	N-CA-C	-6.57	99.20	109.25
8	9	354	LEU	C-N-CD	-6.54	98.17	125.00
19	K	21	CYS	N-CA-C	-6.54	100.81	110.48
18	J	9	GLU	N-CA-C	-6.53	106.26	114.56

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
11	C	251	THR	CB-CA-C	-6.51	109.08	116.63
12	D	61	THR	N-CA-C	6.49	118.94	111.02
8	9	414	ASN	N-CA-C	-6.49	100.67	111.37
20	L	99	ASN	N-CA-C	-6.49	102.81	111.96
10	B	143	C	C2'-C3'-O3'	-6.48	103.98	113.70
12	D	11	MET	N-CA-C	6.47	117.00	108.07
14	F	39	VAL	N-CA-CB	6.47	124.29	110.64
28	T	6	ARG	N-CA-C	-6.46	99.12	109.39
27	S	30	SER	N-CA-C	-6.46	104.32	111.36
26	R	86	GLN	N-CA-C	-6.44	97.09	110.80
20	L	14	LYS	N-CA-C	6.43	124.50	110.80
10	B	2336	A	C2'-C3'-O3'	6.43	119.15	109.50
20	L	112	LEU	N-CA-CB	6.42	120.65	110.57
8	9	419	GLN	N-CA-C	-6.41	104.53	113.37
12	D	17	GLU	N-CA-C	6.41	120.73	111.56
15	G	158	GLY	N-CA-C	-6.35	106.92	114.48
29	U	41	VAL	N-CA-C	6.34	122.54	109.34
22	N	6	SER	N-CA-C	-6.34	103.62	112.25
34	Z	54	GLY	N-CA-C	-6.33	98.18	113.18
20	L	98	ALA	CB-CA-C	-6.33	109.26	116.54
8	9	126	GLU	N-CA-C	-6.32	104.60	113.20
20	L	54	GLN	N-CA-C	6.32	124.27	110.80
14	F	143	ASP	N-CA-C	-6.31	105.89	113.97
24	P	49	ILE	N-CA-C	6.31	122.47	109.34
22	N	5	LYS	N-CA-C	6.30	124.22	110.80
11	C	31	PRO	N-CA-C	6.28	125.41	112.47
17	I	65	SER	N-CA-C	-6.28	102.69	110.41
28	T	74	ILE	N-CA-C	6.28	116.53	108.12
8	9	344	MET	O-C-N	6.27	129.27	123.50
27	S	48	LYS	N-CA-C	-6.27	104.55	111.82
8	9	307	ILE	N-CA-C	-6.26	103.72	110.23
10	B	974	G	C4'-C3'-O3'	-6.25	100.02	109.40
10	B	2641	G	N9-C1'-C2'	-6.24	102.63	112.00
25	Q	89	ILE	N-CA-C	6.23	122.30	109.34
24	P	58	PHE	N-CA-C	-6.22	102.03	110.68
9	A	66	A	C4'-C3'-O3'	-6.22	103.67	113.00
17	I	127	SER	N-CA-C	-6.21	104.59	111.36
10	B	323	C	N1-C1'-C2'	6.21	123.31	114.00
11	C	44	ASN	N-CA-C	-6.20	99.30	108.79
20	L	77	ILE	O-C-N	6.20	130.32	122.57
17	I	3	LYS	CB-CG-CD	6.19	125.53	111.30
8	9	5	LEU	N-CA-C	-6.18	97.63	110.80

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
8	9	219	PHE	N-CA-C	-6.17	101.07	110.14
10	B	2619	C	C5'-C4'-C3'	-6.17	106.75	116.00
11	C	21	PRO	N-CA-C	6.16	125.15	112.47
34	Z	17	SER	N-CA-C	-6.14	105.77	113.20
22	N	1	MET	N-CA-C	-6.13	93.84	111.00
26	R	14	VAL	N-CA-C	6.13	116.75	108.17
10	B	126	A	N9-C1'-C2'	6.13	121.19	112.00
11	C	64	VAL	N-CA-C	6.12	122.08	109.34
8	9	239	ALA	N-CA-C	-6.12	103.55	111.02
20	L	95	LEU	N-CA-C	6.12	121.68	113.72
29	U	28	LEU	CA-CB-CG	-6.12	94.87	116.30
10	B	784	G	C4'-C3'-O3'	-6.12	103.82	113.00
10	B	139	U	C4'-C3'-O3'	6.12	118.58	109.40
31	W	73	PRO	N-CA-C	-6.10	106.11	113.98
10	B	2790	U	C2'-C3'-O3'	-6.09	104.56	113.70
5	4	29	ALA	N-CA-C	-6.08	103.53	111.74
10	B	2430	A	C4'-C3'-O3'	-6.07	103.89	113.00
8	9	198	ASP	CA-C-N	-6.06	110.38	120.68
8	9	198	ASP	C-N-CA	-6.06	110.38	120.68
8	9	330	ASP	CB-CG-OD1	-6.06	104.47	118.40
10	B	2502	G	C4'-C3'-O3'	-6.06	103.91	113.00
24	P	7	LEU	N-CA-C	6.05	118.67	111.71
8	9	128	HIS	CA-C-N	6.03	133.05	121.54
8	9	128	HIS	C-N-CA	6.03	133.05	121.54
22	N	81	ASN	N-CA-C	6.02	117.71	111.03
15	G	163	TYR	N-CA-C	-6.01	102.03	110.50
19	K	76	VAL	N-CA-C	6.01	115.39	106.85
23	O	43	ASN	CB-CA-C	-6.01	108.41	117.07
5	4	30	GLU	CA-C-N	5.99	127.33	119.84
5	4	30	GLU	C-N-CA	5.99	127.33	119.84
14	F	97	GLU	N-CA-C	-5.98	105.83	113.01
20	L	91	ASP	N-CA-C	-5.98	99.88	109.39
11	C	100	ARG	N-CA-C	5.98	118.66	108.02
20	L	126	ARG	N-CA-C	5.97	123.52	110.80
10	B	973	A	C5'-C4'-C3'	-5.96	106.27	115.20
8	9	359	GLN	O-C-N	-5.95	115.27	123.12
10	B	1807	G	C5'-C4'-C3'	5.94	124.92	116.00
21	M	79	ALA	N-CA-C	5.94	118.87	110.14
24	P	52	ARG	N-CA-C	-5.92	99.30	108.42
34	Z	52	ALA	N-CA-C	-5.92	104.75	111.14
10	B	401	A	C5'-C4'-C3'	5.91	124.87	116.00
10	B	299	A	N9-C1'-C2'	5.91	120.86	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	N	63	ARG	N-CA-C	-5.90	105.34	112.54
10	B	1187	G	C4'-C3'-O3'	-5.90	104.15	113.00
10	B	1098	A	O4'-C4'-C3'	-5.90	98.10	104.00
12	D	33	ARG	N-CA-C	5.88	118.17	111.11
8	9	367	GLN	O-C-N	-5.87	115.99	122.09
24	P	25	VAL	CB-CA-C	-5.87	104.31	111.88
10	B	614	A	C4'-C3'-O3'	-5.86	100.61	109.40
8	9	422	ASP	N-CA-C	-5.85	105.81	113.12
10	B	1523	U	C4'-C3'-O3'	-5.84	104.24	113.00
10	B	700	G	C5'-C4'-C3'	-5.83	107.25	116.00
10	B	1397	U	C5'-C4'-C3'	-5.83	106.45	115.20
10	B	1363	C	C5'-C4'-C3'	-5.83	107.25	116.00
7	8	89	A	OP2-P-O3'	5.82	125.47	108.00
28	T	28	ASN	N-CA-C	-5.82	105.48	112.58
24	P	91	VAL	N-CA-C	5.81	121.42	109.34
18	J	102	GLU	N-CA-C	-5.80	105.03	111.36
19	K	9	ASN	CA-C-O	5.80	121.98	118.33
11	C	42	ARG	N-CA-C	5.79	117.40	109.18
24	P	86	LYS	N-CA-C	5.79	117.77	110.24
24	P	36	LYS	N-CA-C	5.79	118.02	109.69
23	O	88	LYS	N-CA-C	-5.78	100.87	109.94
10	B	1135	C	C5'-C4'-C3'	5.77	124.65	116.00
20	L	28	GLY	N-CA-C	-5.77	101.41	111.62
11	C	73	ILE	CA-C-N	5.76	125.74	120.03
11	C	73	ILE	C-N-CA	5.76	125.74	120.03
8	9	96	ALA	CB-CA-C	-5.75	102.73	109.80
21	M	71	LYS	N-CA-C	5.75	122.52	109.81
12	D	116	LYS	N-CA-C	-5.75	104.65	111.03
20	L	77	ILE	CA-C-O	5.75	127.97	120.78
8	9	89	GLU	N-CA-C	5.75	117.41	107.93
11	C	207	ALA	CB-CA-C	-5.74	109.94	116.54
10	B	241	A	C4'-C3'-O3'	-5.73	100.80	109.40
34	Z	13	THR	N-CA-C	-5.73	100.83	108.34
8	9	130	LYS	CB-CA-C	-5.73	99.50	109.64
8	9	382	SER	N-CA-C	-5.71	106.12	112.57
19	K	9	ASN	CB-CA-C	-5.71	108.14	116.53
29	U	74	ALA	N-CA-C	5.69	113.45	108.78
8	9	369	ASP	O-C-N	-5.69	116.53	123.19
13	E	53	THR	N-CA-C	-5.68	105.45	112.90
30	V	54	ALA	N-CA-C	-5.68	106.39	113.38
21	M	6	ARG	CA-C-N	-5.68	114.15	122.78
21	M	6	ARG	C-N-CA	-5.68	114.15	122.78

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
20	L	137	ALA	N-CA-C	-5.66	106.17	112.57
20	L	77	ILE	CB-CG1-CD1	5.66	125.69	113.80
18	J	47	HIS	N-CA-C	5.66	120.46	113.50
26	R	73	LYS	N-CA-C	5.65	122.83	110.80
14	F	10	GLU	N-CA-C	5.64	122.82	110.80
8	9	112	GLY	N-CA-C	-5.64	99.81	113.18
10	B	1294	U	C5'-C4'-C3'	-5.63	107.55	116.00
10	B	2501	C	C4'-C3'-O3'	-5.63	104.55	113.00
8	9	366	SER	CB-CA-C	-5.63	100.26	110.56
10	B	2575	C	C2'-C3'-O3'	-5.63	105.26	113.70
10	B	461	C	C5'-C4'-C3'	-5.62	107.57	116.00
10	B	2430	A	N9-C1'-C2'	5.62	120.42	112.00
10	B	2253	G	C5'-C4'-C3'	-5.61	107.58	116.00
10	B	2733	A	N9-C1'-C2'	-5.61	103.59	112.00
14	F	111	ARG	N-CA-C	-5.60	102.34	110.24
10	B	375	G	C5'-C4'-C3'	-5.60	107.60	116.00
10	B	1236	G	C4'-C3'-O3'	-5.60	104.60	113.00
10	B	783	A	C4'-C3'-O3'	5.58	121.37	113.00
16	H	52	ALA	N-CA-C	5.58	117.82	111.02
25	Q	88	GLU	N-CA-C	5.58	122.68	110.80
19	K	5	GLN	N-CA-C	-5.58	98.92	110.80
10	B	2722	G	C3'-C2'-O2'	5.56	119.04	110.70
10	B	1240	U	C4'-C3'-O3'	-5.56	104.67	113.00
19	K	18	ARG	N-CA-C	5.55	118.12	110.35
10	B	126	A	C5'-C4'-C3'	5.55	124.33	116.00
20	L	123	ARG	N-CA-C	5.55	117.83	109.23
11	C	110	LYS	CB-CA-C	-5.54	109.69	117.23
11	C	57	HIS	N-CA-C	5.54	116.56	108.14
23	O	21	LEU	CB-CA-C	-5.54	110.21	116.63
5	4	30	GLU	N-CA-C	-5.53	97.53	108.71
8	9	242	LEU	N-CA-C	-5.52	106.25	112.87
25	Q	116	LEU	N-CA-C	5.52	117.73	108.96
12	D	90	PHE	CA-C-N	-5.51	113.89	122.16
12	D	90	PHE	C-N-CA	-5.51	113.89	122.16
8	9	213	ASN	CA-C-N	5.51	125.41	119.85
8	9	213	ASN	C-N-CA	5.51	125.41	119.85
25	Q	84	LYS	N-CA-C	-5.50	106.60	113.15
11	C	48	ILE	N-CA-C	5.50	120.78	109.34
17	I	62	ALA	N-CA-C	-5.49	105.40	111.71
20	L	86	GLU	N-CA-C	5.48	122.48	110.80
14	F	150	GLY	N-CA-C	5.48	126.16	113.18
23	O	14	ALA	N-CA-C	-5.48	105.00	110.97

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
24	P	31	VAL	N-CA-C	-5.47	99.76	107.75
10	B	1600	C	C5'-C4'-C3'	-5.47	107.80	116.00
24	P	37	LYS	N-CA-C	-5.47	98.84	108.08
14	F	115	GLY	N-CA-C	-5.46	102.91	112.53
10	B	354	A	N9-C1'-C2'	5.46	120.19	112.00
24	P	51	ASN	N-CA-C	5.46	122.43	110.80
10	B	2894	G	C5'-C4'-C3'	-5.44	107.84	116.00
19	K	53	LYS	N-CA-C	5.44	117.53	108.99
14	F	60	SER	N-CA-C	-5.43	106.66	113.72
8	9	369	ASP	CA-CB-CG	5.43	118.03	112.60
10	B	1240	U	N1-C1'-C2'	5.42	120.14	112.00
7	8	89	A	P-O3'-C3'	-5.41	112.08	120.20
27	S	79	GLY	CA-C-N	5.41	126.61	119.84
27	S	79	GLY	C-N-CA	5.41	126.61	119.84
10	B	1237	A	C4'-C3'-O3'	-5.41	104.89	113.00
14	F	71	LYS	N-CA-C	5.41	117.53	109.25
11	C	74	PRO	N-CA-C	5.41	119.52	111.41
1	0	30	ASP	N-CA-C	-5.40	105.72	114.09
10	B	675	A	C4'-C3'-O3'	-5.40	104.89	113.00
10	B	2745	C	C5'-C4'-C3'	-5.40	107.90	116.00
13	E	180	LEU	N-CA-C	-5.40	105.05	111.69
1	0	47	TYR	CA-C-N	-5.39	111.24	121.54
1	0	47	TYR	C-N-CA	-5.39	111.24	121.54
10	B	1552	A	N9-C1'-C2'	-5.39	103.91	112.00
24	P	113	LEU	N-CA-C	-5.39	100.00	108.63
24	P	64	SER	N-CA-C	5.39	118.24	107.62
14	F	110	ILE	N-CA-C	5.39	117.46	109.17
17	I	24	GLY	CA-C-N	5.38	125.72	119.47
17	I	24	GLY	C-N-CA	5.38	125.72	119.47
20	L	135	ILE	N-CA-C	5.38	120.54	109.34
10	B	2236	U	C5'-C4'-C3'	-5.37	107.95	116.00
24	P	73	PHE	N-CA-C	-5.37	99.37	110.80
20	L	116	VAL	N-CA-C	5.36	120.49	109.34
31	W	67	LYS	N-CA-C	5.36	118.21	110.28
10	B	1903	G	C5'-C4'-C3'	5.36	124.04	116.00
25	Q	3	VAL	CB-CA-C	-5.36	102.50	111.29
8	9	268	LYS	C-N-CD	-5.36	103.04	125.00
24	P	54	LEU	N-CA-C	5.36	122.21	110.80
10	B	2272	U	C5'-C4'-C3'	-5.34	107.99	116.00
8	9	324	LYS	CA-C-N	-5.34	111.35	121.54
8	9	324	LYS	C-N-CA	-5.34	111.35	121.54
8	9	381	ASN	N-CA-C	-5.32	106.48	112.87

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
10	B	595	C	C5'-C4'-C3'	-5.32	108.02	116.00
8	9	23	THR	N-CA-C	-5.32	99.48	110.80
24	P	72	VAL	CB-CA-C	-5.32	102.57	111.29
10	B	1818	U	N1-C1'-C2'	5.31	119.97	112.00
10	B	1552	A	C4'-C3'-O3'	5.31	120.96	113.00
10	B	1960	A	C5'-C4'-C3'	-5.30	108.04	116.00
20	L	102	GLY	N-CA-C	-5.30	106.58	115.80
20	L	18	ARG	N-CA-C	5.29	118.33	107.69
29	U	58	VAL	N-CA-C	-5.29	98.33	109.34
8	9	121	GLY	N-CA-C	-5.28	100.66	113.18
8	9	142	PRO	N-CA-C	5.26	123.31	112.47
29	U	32	LYS	N-CA-C	5.26	117.86	109.65
22	N	124	ALA	N-CA-C	-5.25	102.00	110.14
10	B	125	A	C2'-C3'-O3'	5.25	117.37	109.50
14	F	25	MET	N-CA-C	-5.25	106.19	112.59
10	B	403	U	C5'-C4'-C3'	-5.25	107.33	115.20
8	9	325	LYS	CA-C-O	-5.24	113.02	120.51
8	9	365	LYS	N-CA-C	5.24	117.67	111.33
29	U	50	ALA	CA-C-N	-5.23	113.18	122.07
29	U	50	ALA	C-N-CA	-5.23	113.18	122.07
20	L	112	LEU	CA-CB-CG	-5.23	97.99	116.30
12	D	184	ARG	N-CA-C	-5.23	104.06	110.65
10	B	954	G	C5'-C4'-C3'	-5.23	108.16	116.00
28	T	23	ALA	N-CA-C	-5.22	105.67	111.36
10	B	1237	A	N9-C1'-C2'	5.21	119.82	112.00
16	H	14	SER	N-CA-C	-5.21	103.52	110.55
11	C	247	TRP	N-CA-C	-5.20	107.31	113.97
14	F	131	VAL	N-CA-C	-5.20	98.50	107.24
20	L	8	PRO	CA-N-CD	-5.20	104.72	112.00
21	M	5	LYS	CB-CA-C	-5.19	108.91	116.53
29	U	51	LEU	N-CA-C	-5.19	100.33	108.63
12	D	92	VAL	N-CA-C	-5.18	98.56	109.34
10	B	828	U	C4'-C3'-O3'	-5.18	105.23	113.00
15	G	2	ARG	N-CA-C	-5.18	99.77	110.80
16	H	28	ASN	N-CA-C	-5.18	105.01	113.19
10	B	982	C	C4'-C3'-C2'	5.17	107.78	102.60
19	K	121	GLU	N-CA-C	5.17	121.81	110.80
10	B	704	G	C4'-C3'-O3'	-5.17	105.25	113.00
10	B	2191	A	O3'-P-O5'	-5.16	96.26	104.00
23	O	43	ASN	CA-C-O	5.16	120.93	117.94
10	B	465	G	C4'-C3'-O3'	-5.15	105.27	113.00
10	B	1257	C	C5'-C4'-C3'	-5.14	108.29	116.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
11	C	90	ILE	N-CA-C	5.13	120.02	109.34
8	9	164	VAL	N-CA-C	-5.13	98.67	109.34
14	F	65	LEU	N-CA-C	-5.13	107.15	113.41
13	E	139	LYS	N-CA-C	5.12	119.00	112.34
10	B	410	G	C4'-C3'-O3'	-5.11	105.34	113.00
28	T	5	GLU	N-CA-C	-5.11	100.71	109.24
20	L	42	SER	N-CA-C	-5.10	107.00	114.39
10	B	2311	A	C4'-C3'-O3'	-5.08	105.38	113.00
10	B	2471	A	C5'-C4'-C3'	-5.08	107.58	115.20
28	T	22	THR	N-CA-C	-5.08	105.93	111.82
32	X	48	ARG	N-CA-C	-5.07	105.94	111.82
11	C	268	ARG	NE-CZ-NH1	-5.07	116.43	121.50
10	B	1847	A	C4'-C3'-O3'	-5.07	105.40	113.00
12	D	91	THR	N-CA-C	-5.06	99.75	108.56
10	B	1419	A	N9-C1'-C2'	5.06	119.59	112.00
11	C	239	PHE	N-CA-C	5.05	121.57	110.80
10	B	1098	A	P-O5'-C5'	5.04	128.45	120.90
34	Z	37	CYS	N-CA-C	5.04	116.95	109.25
21	M	11	LYS	N-CA-C	5.03	117.30	109.60
32	X	4	LYS	N-CA-C	-5.03	105.98	111.82
10	B	1082	U	N1-C1'-C2'	5.02	119.53	112.00
14	F	39	VAL	CA-CB-CG2	5.02	118.94	110.40
26	R	84	ARG	CB-CA-C	-5.02	109.81	115.79
22	N	22	ARG	N-CA-C	-5.02	105.81	111.28
8	9	341	MET	CB-CA-C	-5.02	100.44	110.42
1	0	29	VAL	N-CA-C	5.01	116.81	108.99
10	B	1663	G	C5'-C4'-C3'	-5.01	108.48	116.00
10	B	512	G	N9-C1'-C2'	5.01	119.51	112.00
24	P	13	LYS	N-CA-C	-5.01	100.13	110.80

All (2) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
8	9	327	ASP	CA
10	B	2076	U	C3'

All (88) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	0	48	TYR	Sidechain
7	8	55	A	Sidechain
8	9	296	GLY	Peptide

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Mol	Chain	Res	Type	Group
8	9	299	ASP	Sidechain
8	9	319	LEU	Mainchain
8	9	324	LYS	Peptide
8	9	328	GLY	Mainchain,Peptide
8	9	329	PHE	Sidechain
8	9	344	MET	Mainchain
8	9	345	GLY	Mainchain
8	9	347	MET	Mainchain
8	9	370	ASP	Sidechain
8	9	371	LYS	Peptide
8	9	372	VAL	Mainchain
8	9	374	VAL	Mainchain,Peptide
9	A	78	A	Sidechain
10	B	1047	G	Sidechain
10	B	1060	U	Sidechain
10	B	1080	A	Sidechain
10	B	1086	A	Sidechain
10	B	1088	A	Sidechain
10	B	1098	A	Sidechain
10	B	1132	U	Sidechain
10	B	1142	A	Sidechain
10	B	1215	G	Sidechain
10	B	1247	A	Sidechain
10	B	1347	A	Sidechain
10	B	136	G	Sidechain
10	B	1377	G	Sidechain
10	B	1419	A	Sidechain
10	B	1426	G	Sidechain
10	B	1432	G	Sidechain
10	B	1439	A	Sidechain
10	B	1450	G	Sidechain
10	B	1462	C	Sidechain
10	B	1546	G	Sidechain
10	B	1572	A	Sidechain
10	B	1645	G	Sidechain
10	B	1814	G	Sidechain
10	B	1828	G	Sidechain
10	B	1869	G	Sidechain
10	B	1964	G	Sidechain
10	B	2062	A	Sidechain
10	B	2090	A	Sidechain
10	B	2108	A	Sidechain

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Mol	Chain	Res	Type	Group
10	B	214	G	Sidechain
10	B	2156	G	Sidechain
10	B	221	A	Sidechain
10	B	222	A	Sidechain
10	B	2261	C	Sidechain
10	B	2267	A	Sidechain
10	B	2272	U	Sidechain
10	B	2279	G	Sidechain
10	B	232	G	Sidechain
10	B	2471	A	Sidechain
10	B	2503	A	Sidechain
10	B	2508	G	Sidechain
10	B	2512	C	Sidechain
10	B	2575	C	Sidechain
10	B	2638	G	Sidechain
10	B	2641	G	Sidechain
10	B	2733	A	Sidechain
10	B	2770	G	Sidechain
10	B	28	A	Sidechain
10	B	2834	G	Sidechain
10	B	2848	G	Sidechain
10	B	2857	G	Sidechain
10	B	2883	A	Sidechain
10	B	299	A	Sidechain
10	B	370	G	Sidechain
10	B	448	U	Sidechain
10	B	481	G	Sidechain
10	B	500	G	Sidechain
10	B	557	C	Sidechain
10	B	630	G	Sidechain
10	B	633	A	Sidechain
10	B	727	A	Sidechain
10	B	729	G	Sidechain
10	B	757	G	Sidechain
10	B	858	G	Sidechain
10	B	942	G	Sidechain
11	C	160	TYR	Sidechain
11	C	29	PHE	Sidechain
24	P	97	TYR	Sidechain
26	R	83	TYR	Sidechain
34	Z	9	TYR	Sidechain

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	0	444	0	461	89	0
2	1	441	0	485	73	0
3	2	377	0	418	67	0
4	3	504	0	574	116	0
5	4	302	0	343	85	0
6	7	149	0	152	110	0
7	8	1590	0	808	80	0
8	9	3306	0	3403	1877	0
9	A	2507	0	1270	94	0
10	B	60995	0	30676	2402	0
11	C	2053	0	2122	435	0
12	D	1565	0	1616	324	0
13	E	1552	0	1619	283	0
14	F	1420	0	1460	183	0
15	G	1323	0	1374	165	0
16	H	1111	0	1148	155	0
17	I	1032	0	1088	222	0
18	J	1112	0	1147	237	0
19	K	930	0	1000	131	0
20	L	1053	0	1129	241	0
21	M	1074	0	1157	201	0
22	N	1008	0	1045	139	0
23	O	900	0	935	136	0
24	P	917	0	965	214	0
25	Q	947	0	1022	163	0
26	R	816	0	839	187	0
27	S	857	0	922	125	0
28	T	777	0	839	203	0
29	U	779	0	834	141	0
30	V	753	0	780	77	0
31	W	634	0	656	160	0
32	X	509	0	541	142	0
33	Y	449	0	491	68	0
34	Z	549	0	552	106	0
35	B	110	0	0	0	0
35	N	1	0	0	0	0
36	B	506	0	0	7	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
36	N	6	0	0	1	0
All	All	95358	0	63871	8357	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 53.

All (8357) 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)
8:9:410:VAL:CG1	10:B:485:C:H5"	1.27	1.65
8:9:145:ILE:CD1	8:9:161:PRO:HG2	1.17	1.64
8:9:334:PHE:CE2	8:9:420:PHE:HE2	1.02	1.63
8:9:2:PHE:CZ	8:9:295:LEU:HD13	1.31	1.62
8:9:334:PHE:CZ	8:9:420:PHE:CE2	1.87	1.62
13:E:79:ARG:CD	13:E:79:ARG:CG	1.78	1.61
8:9:230:ALA:CB	8:9:262:ILE:CG2	1.75	1.61
17:I:3:LYS:CD	17:I:3:LYS:CE	1.74	1.60
8:9:341:MET:HA	8:9:346:GLY:CA	1.21	1.57
8:9:364:VAL:CG1	8:9:368:MET:HB3	1.10	1.56
17:I:3:LYS:CD	17:I:3:LYS:CG	1.81	1.56
8:9:23:THR:N	8:9:23:THR:CA	1.68	1.56
8:9:340:GLN:C	8:9:341:MET:HB2	1.14	1.55
8:9:300:VAL:HG13	8:9:354:LEU:CD1	1.10	1.54
8:9:39:LEU:CD2	8:9:45:LEU:HD11	1.38	1.53
8:9:195:LEU:N	8:9:195:LEU:CA	1.68	1.53
8:9:128:HIS:N	8:9:128:HIS:CA	1.72	1.53
8:9:341:MET:CA	8:9:346:GLY:HA3	1.18	1.53
8:9:303:LEU:HD13	8:9:349:SER:C	1.13	1.52
8:9:303:LEU:CD2	8:9:349:SER:HA	1.07	1.52
8:9:145:ILE:HD11	8:9:161:PRO:CG	1.27	1.52
8:9:66:LYS:HG3	28:T:92:ASN:CB	1.38	1.51
6:7:67:LYS:C	8:9:376:MET:HA	1.27	1.51
8:9:303:LEU:CB	8:9:350:LEU:HG	1.09	1.51
8:9:230:ALA:CB	8:9:262:ILE:HG21	1.34	1.50
8:9:362:ASP:C	8:9:363:ASN:N	1.69	1.50
8:9:16:ILE:CD1	32:X:28:LEU:HD13	1.42	1.50
8:9:230:ALA:HB2	8:9:262:ILE:CG2	1.02	1.50
8:9:227:GLN:HA	8:9:262:ILE:CG1	1.38	1.49
8:9:303:LEU:CD1	8:9:349:SER:C	1.80	1.49
8:9:66:LYS:HG3	28:T:92:ASN:CG	1.13	1.48
8:9:352:GLY:C	8:9:353:LYS:HB3	1.29	1.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:145:ILE:CD1	8:9:161:PRO:CG	1.76	1.47
8:9:303:LEU:HD22	8:9:349:SER:CA	0.99	1.47
13:E:79:ARG:CD	13:E:79:ARG:NE	1.77	1.46
8:9:66:LYS:CG	28:T:92:ASN:CG	1.87	1.45
8:9:291:ALA:HB3	8:9:295:LEU:C	1.40	1.45
8:9:315:GLN:HG2	8:9:319:LEU:CD2	1.40	1.45
8:9:299:ASP:CB	8:9:300:VAL:N	1.77	1.45
8:9:251:ASP:CG	8:9:275:VAL:CG1	1.88	1.44
8:9:227:GLN:CA	8:9:262:ILE:HG13	1.47	1.44
8:9:331:LEU:C	8:9:332:ASN:N	1.72	1.44
8:9:66:LYS:HD2	28:T:92:ASN:N	1.21	1.43
8:9:364:VAL:HG13	8:9:368:MET:CB	0.96	1.43
8:9:379:ILE:HG22	8:9:383:MET:SD	1.56	1.43
8:9:334:PHE:CE2	8:9:420:PHE:CE2	1.94	1.43
8:9:145:ILE:CG1	8:9:161:PRO:HG3	1.48	1.42
8:9:293:ARG:CZ	8:9:300:VAL:CG1	1.97	1.41
8:9:338:LEU:O	8:9:341:MET:CG	1.68	1.40
8:9:303:LEU:N	8:9:350:LEU:HD11	1.26	1.40
8:9:303:LEU:HB2	8:9:350:LEU:CG	1.48	1.39
8:9:251:ASP:CG	8:9:275:VAL:HG13	1.46	1.38
8:9:366:SER:HG	8:9:367:GLN:N	1.18	1.38
8:9:361:PRO:CB	8:9:365:LYS:NZ	1.87	1.37
8:9:67:SER:H	28:T:93:LEU:N	1.12	1.36
6:7:64:GLN:HG2	8:9:419:GLN:CG	1.55	1.36
7:8:39:A:N1	8:9:398:ARG:HG2	1.39	1.36
8:9:315:GLN:CG	8:9:319:LEU:HD22	1.16	1.36
8:9:361:PRO:CB	8:9:365:LYS:HZ1	1.36	1.36
8:9:39:LEU:HD22	8:9:45:LEU:CD1	1.56	1.35
8:9:66:LYS:HG3	28:T:92:ASN:ND2	1.37	1.35
7:8:39:A:C6	8:9:398:ARG:HG2	1.60	1.35
8:9:64:VAL:HG22	8:9:73:GLU:CB	1.57	1.34
8:9:410:VAL:CB	10:B:485:C:H5”	1.56	1.34
6:7:64:GLN:CG	8:9:419:GLN:HG2	1.43	1.34
8:9:59:ALA:N	8:9:62:HIS:CE1	1.95	1.34
8:9:6:THR:HG22	8:9:295:LEU:CG	1.56	1.33
8:9:59:ALA:N	8:9:62:HIS:HE1	1.20	1.33
8:9:16:ILE:HA	32:X:24:GLU:C	1.52	1.33
8:9:303:LEU:CG	8:9:350:LEU:HG	1.56	1.33
8:9:415:ARG:NH1	10:B:484:C:OP2	1.60	1.33
8:9:361:PRO:HB2	8:9:365:LYS:NZ	0.99	1.32
8:9:431:LYS:C	10:B:1317:G:OP1	1.70	1.32

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:352:GLY:C	8:9:353:LYS:CB	2.00	1.32
8:9:300:VAL:CB	8:9:303:LEU:HB2	1.60	1.32
8:9:375:ARG:CG	8:9:375:ARG:CB	2.06	1.31
8:9:2:PHE:CE2	8:9:295:LEU:HB3	1.64	1.31
8:9:290:ILE:C	8:9:291:ALA:O	1.67	1.31
8:9:303:LEU:CB	8:9:350:LEU:CG	2.06	1.31
8:9:303:LEU:CG	8:9:350:LEU:CG	2.09	1.31
6:7:61:VAL:CG2	8:9:423:MET:SD	2.19	1.31
8:9:66:LYS:CB	28:T:92:ASN:HB2	1.61	1.31
8:9:303:LEU:HB3	8:9:349:SER:O	1.31	1.30
8:9:64:VAL:HG22	8:9:73:GLU:CG	1.62	1.30
8:9:313:ARG:O	8:9:316:ALA:CA	1.79	1.30
8:9:2:PHE:CZ	8:9:295:LEU:CD1	2.13	1.30
8:9:300:VAL:HA	8:9:301:LEU:N	1.46	1.30
8:9:299:ASP:OD1	8:9:350:LEU:HD22	1.16	1.29
8:9:16:ILE:CD1	32:X:28:LEU:CD1	2.09	1.29
6:7:65:HIS:ND1	8:9:416:LEU:O	1.62	1.29
8:9:347:MET:O	8:9:349:SER:N	1.66	1.29
8:9:66:LYS:HE3	28:T:92:ASN:OD1	1.15	1.28
8:9:291:ALA:C	8:9:292:SER:N	1.91	1.28
8:9:67:SER:N	28:T:93:LEU:H	1.29	1.28
8:9:299:ASP:HA	8:9:299:ASP:CG	1.54	1.28
6:7:67:LYS:O	8:9:376:MET:HA	1.14	1.28
8:9:2:PHE:CE2	8:9:295:LEU:HD13	1.67	1.27
8:9:340:GLN:C	8:9:341:MET:CB	2.04	1.27
8:9:364:VAL:HG11	8:9:368:MET:SD	1.72	1.27
6:7:61:VAL:HG21	8:9:423:MET:CG	1.64	1.27
8:9:313:ARG:O	8:9:316:ALA:HA	1.12	1.27
8:9:333:ASP:H	8:9:334:PHE:N	1.31	1.27
8:9:354:LEU:HB2	8:9:355:PRO:CD	1.63	1.27
8:9:16:ILE:HD11	32:X:28:LEU:CD1	1.65	1.27
8:9:354:LEU:CB	8:9:355:PRO:HD3	1.50	1.27
8:9:2:PHE:HE2	8:9:295:LEU:CB	1.48	1.26
8:9:315:GLN:O	8:9:319:LEU:HA	1.30	1.26
8:9:64:VAL:CG2	8:9:73:GLU:CB	2.12	1.26
8:9:379:ILE:HG23	8:9:402:ILE:CG2	1.63	1.26
8:9:66:LYS:CD	28:T:92:ASN:H	1.45	1.26
8:9:333:ASP:HB2	8:9:334:PHE:N	1.48	1.25
6:7:61:VAL:HG21	8:9:423:MET:SD	1.75	1.25
8:9:6:THR:CG2	8:9:295:LEU:HD12	1.66	1.24
8:9:379:ILE:CG2	8:9:383:MET:SD	2.25	1.24

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:66:LYS:CG	28:T:92:ASN:CB	2.06	1.24
8:9:422:ASP:N	10:B:490:C:H42	1.35	1.24
8:9:2:PHE:CE2	8:9:295:LEU:CD1	2.19	1.24
8:9:303:LEU:CG	8:9:349:SER:C	2.09	1.24
8:9:323:LEU:O	8:9:324:LYS:HG3	1.27	1.24
8:9:303:LEU:HD22	8:9:349:SER:C	1.63	1.23
8:9:422:ASP:CA	10:B:490:C:N4	1.98	1.23
8:9:106:ALA:HB3	8:9:219:PHE:CD1	1.72	1.23
8:9:251:ASP:OD2	8:9:275:VAL:HG13	1.09	1.23
8:9:333:ASP:CB	8:9:334:PHE:N	2.01	1.23
8:9:67:SER:OG	28:T:92:ASN:HB3	1.36	1.22
8:9:149:GLU:HG3	8:9:159:PHE:CZ	1.74	1.22
8:9:410:VAL:CG1	10:B:485:C:C5'	2.15	1.22
8:9:300:VAL:CG1	8:9:354:LEU:CD1	1.79	1.22
8:9:300:VAL:CG1	8:9:354:LEU:CG	2.16	1.22
8:9:331:LEU:O	8:9:388:ARG:O	1.58	1.22
8:9:2:PHE:CE2	8:9:295:LEU:CB	2.20	1.21
8:9:400:ARG:NH1	27:S:60:HIS:CD2	2.10	1.21
8:9:334:PHE:CZ	8:9:420:PHE:HE2	1.39	1.20
8:9:64:VAL:CG2	8:9:73:GLU:HB2	1.71	1.20
8:9:327:ASP:OD1	8:9:327:ASP:O	1.59	1.20
8:9:315:GLN:O	8:9:319:LEU:CA	1.90	1.20
8:9:370:ASP:O	8:9:373:LEU:HD12	1.42	1.20
8:9:251:ASP:OD1	8:9:275:VAL:HG11	1.42	1.20
8:9:350:LEU:CG	8:9:350:LEU:N	2.04	1.20
8:9:410:VAL:HG11	10:B:485:C:C5'	1.69	1.20
8:9:66:LYS:CG	28:T:92:ASN:ND2	1.97	1.19
8:9:67:SER:N	28:T:92:ASN:CB	2.05	1.19
8:9:95:LEU:HD21	8:9:127:LYS:NZ	1.56	1.19
8:9:303:LEU:HB2	8:9:350:LEU:CD1	1.72	1.19
6:7:64:GLN:HE21	8:9:419:GLN:HA	1.07	1.19
8:9:292:SER:C	8:9:293:ARG:HA	1.67	1.19
8:9:293:ARG:CZ	8:9:300:VAL:HG12	1.60	1.19
8:9:342:LYS:NZ	8:9:374:VAL:HG22	1.56	1.19
8:9:145:ILE:HD11	8:9:161:PRO:CB	1.73	1.19
8:9:288:ASP:O	8:9:291:ALA:C	1.86	1.19
8:9:66:LYS:CG	28:T:92:ASN:HB2	1.67	1.18
8:9:366:SER:OG	8:9:367:GLN:N	1.75	1.18
8:9:227:GLN:C	8:9:262:ILE:HG13	1.65	1.18
8:9:303:LEU:CD2	8:9:349:SER:C	2.15	1.18
6:7:67:LYS:O	8:9:376:MET:CA	1.91	1.18

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:300:VAL:CG2	8:9:304:ILE:HD11	1.72	1.18
10:B:1098:A:H3'	17:I:3:LYS:CA	1.73	1.17
6:7:67:LYS:HG3	8:9:412:ASP:C	1.69	1.17
8:9:350:LEU:CB	8:9:350:LEU:CD2	2.22	1.17
8:9:16:ILE:CD1	32:X:42:LEU:HD21	1.74	1.17
8:9:68:LEU:HG	28:T:95:PHE:O	1.45	1.17
8:9:291:ALA:CB	8:9:295:LEU:C	2.16	1.17
8:9:67:SER:CB	28:T:92:ASN:HB3	1.75	1.16
8:9:227:GLN:CA	8:9:262:ILE:CG1	2.08	1.16
8:9:300:VAL:HG11	8:9:354:LEU:CG	1.72	1.16
8:9:106:ALA:HB3	8:9:219:PHE:CE1	1.78	1.16
8:9:341:MET:CA	8:9:346:GLY:CA	1.79	1.16
8:9:332:ASN:CB	8:9:332:ASN:CG	2.19	1.16
8:9:66:LYS:CE	28:T:92:ASN:OD1	1.93	1.16
8:9:251:ASP:OD1	8:9:275:VAL:CG1	1.92	1.16
8:9:300:VAL:HB	8:9:303:LEU:CB	1.59	1.16
8:9:333:ASP:N	8:9:334:PHE:N	1.91	1.16
8:9:303:LEU:CB	8:9:350:LEU:N	2.03	1.15
8:9:300:VAL:CG2	8:9:304:ILE:CG1	2.24	1.15
6:7:57:LEU:CD2	8:9:427:MET:HG3	1.76	1.15
8:9:415:ARG:NH1	10:B:484:C:P	2.19	1.15
8:9:16:ILE:HA	32:X:24:GLU:CA	1.67	1.14
8:9:303:LEU:CD2	8:9:349:SER:CA	1.83	1.14
8:9:68:LEU:HD23	28:T:94:ASP:OD1	1.42	1.14
8:9:354:LEU:CB	8:9:355:PRO:CD	2.22	1.14
8:9:370:ASP:CG	8:9:370:ASP:HA	1.72	1.14
8:9:58:LYS:C	8:9:62:HIS:CE1	2.25	1.14
8:9:105:MET:HE1	8:9:218:LEU:HD11	1.21	1.14
8:9:195:LEU:HD13	8:9:200:ALA:HB1	1.16	1.14
10:B:1099:G:O5'	17:I:3:LYS:HA	1.44	1.14
8:9:67:SER:N	28:T:94:ASP:H	1.20	1.14
8:9:364:VAL:HG13	8:9:368:MET:CG	1.77	1.14
8:9:293:ARG:HG2	8:9:298:GLY:HA2	1.25	1.13
5:4:26:ILE:HG13	5:4:35:GLN:H	1.11	1.13
8:9:195:LEU:CD1	8:9:200:ALA:HB1	1.77	1.13
8:9:338:LEU:O	8:9:341:MET:HG3	1.32	1.13
11:C:124:LYS:HB2	11:C:125:PRO:HD3	1.22	1.13
24:P:25:VAL:HG13	24:P:88:ARG:H	1.13	1.13
6:7:67:LYS:C	8:9:376:MET:CA	2.21	1.13
8:9:5:LEU:HD11	8:9:34:VAL:HA	1.23	1.13
8:9:300:VAL:HG22	8:9:354:LEU:HD11	1.28	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:364:VAL:CG1	8:9:368:MET:SD	2.36	1.13
7:8:77:C:O3'	7:8:78:G:P	2.07	1.13
8:9:245:VAL:CG2	8:9:268:LYS:HE3	1.79	1.13
8:9:335:LEU:HD13	8:9:380:ILE:HG13	1.28	1.12
8:9:418:LYS:HE2	10:B:490:C:H1'	1.26	1.12
8:9:410:VAL:HG11	10:B:485:C:H5"	1.21	1.12
6:7:58:THR:CG2	8:9:337:GLN:HE22	1.62	1.12
8:9:300:VAL:HG11	8:9:354:LEU:CD2	1.78	1.12
8:9:303:LEU:HD21	8:9:349:SER:HA	1.26	1.12
10:B:1099:G:O4'	17:I:3:LYS:C	1.93	1.12
10:B:1081:U:H5'	17:I:126:ARG:HH12	1.01	1.11
8:9:227:GLN:HA	8:9:262:ILE:HG12	1.18	1.11
8:9:300:VAL:CG1	8:9:354:LEU:CD2	2.25	1.11
8:9:300:VAL:CG1	8:9:354:LEU:HD21	1.72	1.11
8:9:379:ILE:HG23	8:9:402:ILE:HG21	1.19	1.11
8:9:400:ARG:NH1	27:S:60:HIS:HD2	1.45	1.11
8:9:66:LYS:CD	28:T:92:ASN:CG	2.23	1.11
8:9:353:LYS:HE3	8:9:366:SER:OG	1.49	1.11
8:9:230:ALA:HB2	8:9:262:ILE:HG23	1.14	1.11
8:9:299:ASP:CG	8:9:299:ASP:CA	2.20	1.11
8:9:16:ILE:HA	32:X:24:GLU:O	1.47	1.11
8:9:368:MET:HE1	29:U:51:LEU:HB3	1.29	1.11
10:B:1099:G:P	17:I:3:LYS:HA	1.90	1.11
8:9:293:ARG:NH2	8:9:300:VAL:O	1.80	1.10
8:9:300:VAL:CA	8:9:301:LEU:N	2.14	1.10
8:9:410:VAL:HG21	10:B:485:C:H4'	1.32	1.10
8:9:422:ASP:N	10:B:490:C:N4	1.98	1.10
8:9:67:SER:OG	28:T:92:ASN:CB	1.99	1.10
8:9:227:GLN:HB3	8:9:258:ALA:HB1	1.23	1.10
27:S:46:LEU:HA	27:S:49:LYS:HB2	1.21	1.10
8:9:95:LEU:HD21	8:9:127:LYS:HZ1	0.96	1.09
8:9:293:ARG:CZ	8:9:300:VAL:HG13	1.67	1.09
7:8:30:G:C2	7:8:78:G:C4	2.39	1.09
10:B:323:C:H1'	13:E:164:LEU:HB3	1.23	1.09
6:7:58:THR:HG22	8:9:337:GLN:HE22	1.09	1.09
8:9:145:ILE:HG22	8:9:149:GLU:HB2	1.24	1.09
8:9:145:ILE:HD13	8:9:161:PRO:HG2	1.22	1.09
8:9:135:VAL:HG21	8:9:175:ALA:HB1	1.28	1.08
8:9:349:SER:C	8:9:350:LEU:CA	2.25	1.08
8:9:366:SER:C	8:9:367:GLN:N	2.10	1.08
6:7:57:LEU:HD21	8:9:427:MET:SD	1.92	1.08

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:398:ARG:HB3	8:9:398:ARG:HH11	1.18	1.08
6:7:61:VAL:CG2	8:9:423:MET:CG	2.32	1.08
8:9:67:SER:N	28:T:93:LEU:N	1.90	1.08
8:9:120:LEU:HD21	8:9:188:LEU:HD22	1.32	1.08
8:9:145:ILE:CG1	8:9:161:PRO:CG	2.16	1.08
8:9:66:LYS:HE3	28:T:92:ASN:CG	1.77	1.08
8:9:292:SER:C	8:9:293:ARG:O	1.95	1.08
8:9:300:VAL:CG2	8:9:304:ILE:CD1	2.31	1.08
8:9:379:ILE:CG2	8:9:402:ILE:HG21	1.82	1.08
8:9:6:THR:HG22	8:9:295:LEU:HG	1.23	1.08
8:9:291:ALA:HB3	8:9:296:GLY:N	1.64	1.08
8:9:354:LEU:HB3	8:9:355:PRO:HD3	1.36	1.08
20:L:90:VAL:HG12	20:L:122:VAL:HG21	1.32	1.08
8:9:300:VAL:C	8:9:304:ILE:HG12	1.79	1.07
8:9:303:LEU:HD12	8:9:350:LEU:CG	1.84	1.07
8:9:16:ILE:HD11	32:X:42:LEU:HD21	1.29	1.07
8:9:67:SER:N	28:T:94:ASP:N	2.03	1.07
8:9:313:ARG:O	8:9:316:ALA:CB	2.01	1.07
8:9:320:ALA:O	8:9:322:LYS:N	1.88	1.07
8:9:349:SER:C	8:9:350:LEU:N	2.13	1.07
8:9:410:VAL:HB	10:B:485:C:C5’	1.84	1.07
10:B:1099:G:O5’	17:I:3:LYS:CA	2.03	1.07
18:J:68:LYS:HD2	18:J:72:LYS:HB3	1.37	1.07
6:7:54:ILE:CG2	8:9:311:VAL:HG21	1.84	1.06
8:9:6:THR:HG23	8:9:295:LEU:HD12	1.10	1.06
8:9:227:GLN:HB2	8:9:262:ILE:CD1	1.85	1.06
18:J:34:ARG:HD3	18:J:39:LYS:HD3	1.37	1.06
2:1:46:VAL:HG13	2:1:47:ILE:HG13	1.28	1.06
6:7:61:VAL:HG22	8:9:423:MET:HB2	1.20	1.06
6:7:58:THR:HG23	8:9:337:GLN:OE1	1.56	1.06
8:9:67:SER:CA	28:T:93:LEU:H	1.67	1.06
8:9:119:LYS:HZ3	8:9:281:ALA:HB3	1.15	1.06
8:9:152:ALA:HB1	8:9:159:PHE:HD2	1.17	1.06
8:9:338:LEU:O	8:9:341:MET:SD	2.14	1.06
21:M:5:LYS:HB2	21:M:69:PRO:HG2	1.37	1.06
22:N:45:ARG:HH22	22:N:113:ILE:HG23	1.19	1.06
8:9:230:ALA:CA	8:9:262:ILE:CG2	2.34	1.06
8:9:152:ALA:CB	8:9:159:PHE:CD2	2.38	1.06
8:9:369:ASP:HB2	8:9:373:LEU:HD21	1.36	1.06
10:B:587:C:H3’	20:L:29:LYS:HD2	1.32	1.06
20:L:7:SER:HB2	20:L:8:PRO:HD3	1.34	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:67:SER:CA	28:T:92:ASN:HB3	1.85	1.05
8:9:300:VAL:HG23	8:9:304:ILE:HG13	1.37	1.05
10:B:1098:A:H2'	17:I:3:LYS:C	1.80	1.05
8:9:2:PHE:CE1	8:9:295:LEU:HD13	1.91	1.05
8:9:39:LEU:HB2	8:9:45:LEU:HD21	1.37	1.05
8:9:59:ALA:CA	8:9:62:HIS:CE1	2.38	1.05
8:9:66:LYS:C	28:T:92:ASN:HB2	1.79	1.05
8:9:230:ALA:CA	8:9:262:ILE:HG21	1.85	1.05
8:9:303:LEU:HB2	8:9:350:LEU:N	1.71	1.05
10:B:1081:U:H5'	17:I:126:ARG:NH1	1.70	1.05
8:9:299:ASP:OD1	8:9:350:LEU:CD2	2.04	1.05
8:9:299:ASP:CA	8:9:350:LEU:HD21	1.86	1.05
10:B:1099:G:H8	17:I:3:LYS:CA	1.69	1.05
8:9:6:THR:CG2	8:9:295:LEU:CD1	2.34	1.04
8:9:51:PHE:CE1	8:9:81:GLU:HB3	1.92	1.04
23:O:56:LYS:HE2	23:O:81:ARG:HE	1.22	1.04
8:9:300:VAL:HG21	8:9:304:ILE:CD1	1.86	1.04
8:9:303:LEU:CD1	8:9:350:LEU:CG	2.34	1.04
8:9:16:ILE:CG2	32:X:24:GLU:HB3	1.87	1.04
4:3:12:ARG:HG2	4:3:24:LYS:H	1.17	1.04
7:8:30:G:N2	7:8:78:G:C4	2.26	1.04
8:9:410:VAL:CB	10:B:485:C:C5'	2.32	1.04
28:T:24:MET:HE2	28:T:30:ILE:HA	1.37	1.04
8:9:67:SER:N	28:T:92:ASN:HB3	1.68	1.04
8:9:130:LYS:HA	8:9:185:ASP:OD1	1.58	1.04
8:9:292:SER:C	8:9:293:ARG:CA	2.30	1.04
8:9:410:VAL:HB	10:B:485:C:H5"	1.38	1.04
10:B:1098:A:H3'	17:I:3:LYS:HA	1.35	1.04
8:9:22:LEU:C	8:9:24:GLU:H	1.64	1.03
8:9:39:LEU:HD13	8:9:45:LEU:HG	1.40	1.03
8:9:303:LEU:N	8:9:350:LEU:CD1	2.21	1.03
6:7:54:ILE:HG21	8:9:311:VAL:CG2	1.87	1.03
6:7:58:THR:CG2	8:9:337:GLN:NE2	2.20	1.03
8:9:66:LYS:CE	28:T:92:ASN:CG	2.32	1.03
8:9:66:LYS:C	28:T:94:ASP:H	1.65	1.03
16:H:3:VAL:HG22	16:H:21:VAL:HG11	1.36	1.03
6:7:57:LEU:HD22	8:9:427:MET:HG3	1.35	1.03
8:9:106:ALA:CB	8:9:219:PHE:CE1	2.42	1.03
8:9:227:GLN:HB2	8:9:262:ILE:HD11	1.06	1.03
8:9:300:VAL:HG23	8:9:304:ILE:CG1	1.84	1.03
8:9:354:LEU:HB2	8:9:355:PRO:HD2	1.41	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:7:61:VAL:HG22	8:9:423:MET:CB	1.88	1.03
8:9:6:THR:HG22	8:9:295:LEU:CD1	1.89	1.03
8:9:66:LYS:CD	28:T:92:ASN:N	2.13	1.03
8:9:194:ARG:C	8:9:195:LEU:CA	2.30	1.03
8:9:299:ASP:HA	8:9:350:LEU:CD2	1.88	1.03
12:D:31:ALA:HA	12:D:51:THR:HA	1.37	1.03
8:9:366:SER:CA	8:9:367:GLN:N	2.22	1.02
8:9:410:VAL:HG11	10:B:485:C:C4’	1.88	1.02
8:9:67:SER:N	28:T:92:ASN:HB2	1.72	1.02
8:9:341:MET:N	8:9:346:GLY:CA	2.22	1.02
11:C:22:GLU:HB2	11:C:202:ARG:HG3	1.41	1.02
8:9:293:ARG:NH2	8:9:300:VAL:HG11	1.48	1.02
6:7:67:LYS:HG3	8:9:413:VAL:HA	1.39	1.02
8:9:424:GLN:HG2	8:9:428:LYS:HD2	1.42	1.02
8:9:5:LEU:HD11	8:9:34:VAL:CA	1.89	1.02
8:9:149:GLU:HG3	8:9:159:PHE:HZ	0.87	1.02
8:9:424:GLN:HA	8:9:427:MET:HE2	1.37	1.02
8:9:21:ARG:NH2	32:X:16:THR:CG2	2.22	1.01
8:9:64:VAL:HG22	8:9:73:GLU:HG2	1.42	1.01
8:9:119:LYS:NZ	8:9:281:ALA:HB3	1.76	1.01
18:J:15:TRP:HB2	18:J:139:VAL:HA	1.41	1.01
3:2:39:ARG:HB2	10:B:458:G:H5”	1.42	1.01
8:9:137:ALA:HB3	8:9:190:ASP:O	1.60	1.01
8:9:334:PHE:CZ	8:9:420:PHE:CD2	2.49	1.01
6:7:59:LEU:HD13	8:9:351:MET:CE	1.88	1.01
8:9:21:ARG:NH2	32:X:16:THR:HG22	1.73	1.01
24:P:47:ILE:HG22	24:P:48:ALA:H	1.22	1.01
6:7:54:ILE:HD13	8:9:311:VAL:HG11	1.43	1.01
8:9:66:LYS:HG3	28:T:92:ASN:HB2	1.28	1.01
8:9:5:LEU:CD1	8:9:34:VAL:HA	1.90	1.01
8:9:413:VAL:O	8:9:416:LEU:HG	1.61	1.01
10:B:1654:A:H4’	22:N:1:MET:HG2	1.43	1.01
18:J:40:HIS:HB2	25:Q:69:ARG:HH22	1.26	1.01
25:Q:97:ILE:HD12	26:R:13:ARG:HE	1.20	1.01
8:9:2:PHE:CZ	8:9:295:LEU:HB3	1.97	1.00
8:9:323:LEU:O	8:9:324:LYS:CG	2.08	1.00
11:C:230:PRO:HG2	11:C:245:THR:H	1.23	1.00
8:9:375:ARG:CG	8:9:375:ARG:CA	2.38	1.00
8:9:227:GLN:O	8:9:262:ILE:HG13	1.59	1.00
6:7:67:LYS:CG	8:9:412:ASP:C	2.34	1.00
8:9:333:ASP:CA	8:9:334:PHE:N	2.24	1.00

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:393:ILE:H	8:9:394:ILE:HD12	1.27	1.00
19:K:78:ARG:HH22	24:P:62:LYS:HZ2	1.05	1.00
2:1:29:LYS:HB2	2:1:30:PRO:HD3	1.38	0.99
8:9:16:ILE:HD12	32:X:28:LEU:CD1	1.90	0.99
8:9:135:VAL:HG21	8:9:175:ALA:CB	1.92	0.99
31:W:38:ARG:HH21	31:W:40:ARG:HD3	1.25	0.99
8:9:68:LEU:CD2	28:T:94:ASP:OD1	2.10	0.99
7:8:39:A:C6	8:9:398:ARG:CG	2.44	0.99
8:9:221:VAL:HG12	8:9:263:ARG:HH12	1.25	0.99
33:Y:4:ILE:HA	33:Y:36:GLU:HG2	1.39	0.99
8:9:152:ALA:HB1	8:9:159:PHE:CD2	1.98	0.99
2:1:47:ILE:HG22	2:1:48:TYR:H	1.28	0.99
8:9:59:ALA:HA	8:9:62:HIS:CE1	1.96	0.99
8:9:145:ILE:HG12	8:9:161:PRO:CG	1.85	0.99
8:9:245:VAL:HG22	8:9:268:LYS:HE3	1.41	0.99
8:9:349:SER:O	8:9:350:LEU:N	1.94	0.99
8:9:378:ALA:CB	8:9:408:MET:HE2	1.92	0.99
8:9:303:LEU:H	8:9:350:LEU:HD11	1.20	0.99
29:U:42:LYS:H	29:U:57:ILE:HD12	1.26	0.99
8:9:370:ASP:O	8:9:373:LEU:CD1	2.11	0.99
6:7:66:LYS:HB2	8:9:415:ARG:O	1.63	0.99
12:D:109:VAL:HG11	12:D:193:VAL:HG12	1.44	0.99
8:9:221:VAL:CG1	8:9:263:ARG:NH1	2.26	0.98
8:9:227:GLN:CB	8:9:258:ALA:HB1	1.92	0.98
8:9:230:ALA:CB	8:9:262:ILE:HG22	1.91	0.98
10:B:1025:G:H1'	10:B:1135:C:H5'	1.43	0.98
26:R:63:VAL:HG22	26:R:64:VAL:H	1.28	0.98
6:7:57:LEU:HD21	8:9:427:MET:CG	1.92	0.98
6:7:61:VAL:HG21	8:9:423:MET:HG2	1.45	0.98
8:9:105:MET:CE	8:9:218:LEU:HD11	1.92	0.98
8:9:303:LEU:HG	8:9:350:LEU:CG	1.89	0.98
18:J:124:VAL:HG23	18:J:125:TYR:H	1.26	0.98
8:9:341:MET:N	8:9:345:GLY:C	2.21	0.98
10:B:45:G:H5"	10:B:46:G:H5'	1.45	0.98
10:B:1099:G:H5'	17:I:4:VAL:HB	1.42	0.98
8:9:368:MET:O	8:9:368:MET:HG2	1.61	0.98
7:8:88:C:O3'	7:8:89:A:P	2.22	0.98
8:9:6:THR:O	8:9:294:ILE:HD12	1.62	0.98
8:9:300:VAL:HG21	8:9:304:ILE:HD11	0.99	0.98
8:9:292:SER:C	8:9:293:ARG:C	2.31	0.98
16:H:125:THR:HA	16:H:146:VAL:HB	1.43	0.97

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:219:PHE:CD2	8:9:236:PHE:CD2	2.52	0.97
8:9:340:GLN:CA	8:9:341:MET:HB2	1.93	0.97
8:9:341:MET:N	8:9:345:GLY:O	1.96	0.97
8:9:355:PRO:O	8:9:357:MET:HG3	1.64	0.97
11:C:139:THR:HA	11:C:193:GLU:CD	1.89	0.97
8:9:293:ARG:NE	8:9:354:LEU:HD22	1.75	0.97
13:E:148:ILE:HA	13:E:185:LYS:HB3	1.46	0.97
6:7:67:LYS:HG3	8:9:413:VAL:N	1.80	0.97
8:9:300:VAL:N	8:9:350:LEU:CD2	2.26	0.97
6:7:65:HIS:HB3	8:9:420:PHE:CE1	1.98	0.97
6:7:61:VAL:HG21	8:9:423:MET:CE	1.93	0.97
8:9:22:LEU:C	8:9:23:THR:CA	2.37	0.97
8:9:42:ASP:HB2	8:9:255:ARG:HB3	1.46	0.97
8:9:202:MET:O	8:9:205:ILE:HG22	1.65	0.97
8:9:240:LEU:HB3	8:9:243:THR:CG2	1.94	0.97
8:9:303:LEU:CA	8:9:350:LEU:HD11	1.95	0.97
10:B:1099:G:C8	17:I:3:LYS:N	2.33	0.97
6:7:67:LYS:CG	8:9:413:VAL:HA	1.91	0.97
8:9:299:ASP:HB3	8:9:350:LEU:HD13	1.47	0.97
11:C:10:PRO:HB2	11:C:202:ARG:HH12	1.28	0.97
8:9:58:LYS:C	8:9:62:HIS:ND1	2.23	0.96
10:B:64:A:H5'	28:T:76:ARG:HH11	1.29	0.96
34:Z:33:ASN:HB3	34:Z:46:GLY:HA2	1.47	0.96
10:B:2405:G:H5'	20:L:70:LYS:HG3	1.47	0.96
6:7:67:LYS:CD	8:9:413:VAL:N	2.29	0.96
6:7:67:LYS:HG3	8:9:413:VAL:CA	1.94	0.96
8:9:364:VAL:CB	8:9:368:MET:HB3	1.94	0.96
10:B:1098:A:C2'	17:I:3:LYS:C	2.37	0.96
8:9:5:LEU:HD21	8:9:34:VAL:HG13	1.44	0.96
5:4:30:GLU:HB3	5:4:33:HIS:HB2	1.47	0.96
8:9:151:LEU:HD23	8:9:151:LEU:H	1.29	0.96
18:J:35:ARG:HH12	18:J:40:HIS:H	0.97	0.96
8:9:195:LEU:HB3	8:9:200:ALA:CB	1.96	0.96
8:9:299:ASP:HA	8:9:350:LEU:HD21	1.43	0.96
8:9:303:LEU:HD22	8:9:349:SER:CB	1.95	0.96
8:9:341:MET:HA	8:9:346:GLY:HA2	1.45	0.96
14:F:64:PRO:HA	14:F:88:VAL:HG22	1.46	0.96
8:9:105:MET:HB3	8:9:190:ASP:HA	1.46	0.95
24:P:27:VAL:HA	24:P:86:LYS:HE2	1.48	0.95
8:9:320:ALA:CB	8:9:323:LEU:HD23	1.97	0.95
10:B:2333:A:H4'	10:B:2334:U:H5"	1.48	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:8:76:A:O3'	7:8:77:C:P	2.23	0.95
8:9:290:ILE:O	8:9:291:ALA:O	1.82	0.95
8:9:379:ILE:HG22	8:9:380:ILE:H	1.28	0.95
7:8:48:G:N3	8:9:381:ASN:ND2	2.14	0.95
8:9:303:LEU:CB	8:9:349:SER:O	2.13	0.95
27:S:29:VAL:HG22	27:S:71:VAL:HG23	1.49	0.95
8:9:300:VAL:CA	8:9:304:ILE:HG12	1.97	0.95
8:9:145:ILE:HG23	8:9:159:PHE:CE1	2.01	0.95
8:9:324:LYS:HB3	8:9:325:LYS:HA	1.46	0.95
11:C:127:ASN:HD22	11:C:128:THR:H	1.11	0.95
13:E:142:ALA:H	13:E:185:LYS:HZ1	1.14	0.95
8:9:272:PHE:HB3	8:9:282:LEU:HD11	1.44	0.95
8:9:354:LEU:HB2	8:9:355:PRO:HD3	1.24	0.95
8:9:361:PRO:O	8:9:362:ASP:OD1	1.85	0.94
8:9:16:ILE:CA	32:X:24:GLU:HA	1.94	0.94
8:9:103:VAL:HG21	8:9:188:LEU:HD23	1.48	0.94
10:B:1099:G:P	17:I:4:VAL:H	1.91	0.94
10:B:2377:A:H61	23:O:13:ARG:NH2	1.66	0.94
6:7:61:VAL:CG2	8:9:423:MET:HB2	1.98	0.94
6:7:61:VAL:HG23	8:9:423:MET:SD	2.07	0.94
8:9:16:ILE:CA	32:X:24:GLU:CA	2.29	0.94
10:B:2377:A:H61	23:O:13:ARG:HH21	1.14	0.94
8:9:315:GLN:HG2	8:9:319:LEU:CG	1.98	0.94
8:9:422:ASP:HA	10:B:490:C:N4	1.81	0.94
11:C:48:ILE:HG22	11:C:49:THR:H	1.29	0.94
6:7:67:LYS:HG3	8:9:412:ASP:O	1.67	0.94
8:9:35:ARG:HA	8:9:38:LEU:HD11	1.46	0.94
8:9:270:ILE:HG22	8:9:271:LYS:H	1.32	0.94
8:9:283:GLU:OE2	8:9:297:MET:HE3	1.67	0.94
16:H:114:GLU:HB3	16:H:133:GLN:HE21	1.31	0.94
29:U:9:GLU:HB2	29:U:71:ILE:HB	1.49	0.94
8:9:64:VAL:HG22	8:9:73:GLU:HB2	1.29	0.94
8:9:150:THR:HB	8:9:151:LEU:HD23	1.47	0.94
10:B:1024:G:H3'	10:B:1025:G:H5"	1.50	0.94
8:9:339:ARG:O	8:9:341:MET:HB3	1.67	0.94
24:P:50:ARG:HH12	24:P:62:LYS:HB2	1.32	0.94
8:9:22:LEU:O	8:9:24:GLU:N	2.01	0.93
28:T:14:PRO:HA	28:T:32:LEU:HA	1.48	0.93
10:B:1081:U:C5'	17:I:126:ARG:HH12	1.81	0.93
20:L:135:ILE:HG22	20:L:138:ALA:HB3	1.50	0.93
8:9:337:GLN:O	8:9:341:MET:HG3	1.69	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Q:73:ILE:HG13	25:Q:74:SER:H	1.30	0.93
26:R:6:GLN:HB3	26:R:41:ILE:HD13	1.48	0.93
8:9:15:ASN:HD22	32:X:27:ASN:HA	1.32	0.93
8:9:315:GLN:HG3	8:9:319:LEU:HD22	1.50	0.93
8:9:321:SER:O	8:9:322:LYS:HG3	1.68	0.93
8:9:344:MET:HG3	8:9:344:MET:O	1.67	0.93
10:B:1098:A:H2'	17:I:4:VAL:N	1.82	0.93
8:9:410:VAL:HG12	10:B:485:C:H5"	1.47	0.93
8:9:421:ASP:C	10:B:490:C:N4	2.25	0.93
8:9:431:LYS:O	10:B:1317:G:OP1	1.86	0.93
14:F:32:LYS:HB3	14:F:91:ARG:HB3	1.49	0.93
24:P:90:ALA:HB3	24:P:112:ARG:H	1.32	0.93
8:9:339:ARG:O	8:9:341:MET:CB	2.16	0.93
8:9:400:ARG:HH12	27:S:60:HIS:CD2	1.82	0.93
10:B:2304:G:H4'	14:F:129:MET:HA	1.49	0.93
7:8:76:A:H5"	7:8:77:C:P	2.07	0.93
8:9:245:VAL:HG21	8:9:268:LYS:CE	1.98	0.93
14:F:136:ILE:O	14:F:138:PRO:HD3	1.69	0.93
4:3:7:ARG:HG2	10:B:250:G:H5'	1.51	0.93
6:7:64:GLN:NE2	8:9:419:GLN:HA	1.82	0.93
10:B:1099:G:C8	17:I:3:LYS:HB2	2.03	0.93
4:3:49:VAL:HG22	4:3:50:SER:H	1.33	0.92
8:9:328:GLY:O	8:9:329:PHE:CD2	2.21	0.92
8:9:351:MET:O	8:9:351:MET:HG3	1.65	0.92
14:F:106:ALA:HB1	14:F:136:ILE:HG23	1.51	0.92
6:7:59:LEU:HD13	8:9:351:MET:SD	2.09	0.92
8:9:2:PHE:CZ	8:9:295:LEU:CG	2.53	0.92
7:8:75:G:C3'	7:8:76:A:OP1	2.17	0.92
10:B:1099:G:C5'	17:I:4:VAL:N	2.33	0.92
18:J:73:VAL:HG22	18:J:74:TYR:H	1.33	0.92
28:T:48:GLN:HA	28:T:53:VAL:HG22	1.52	0.92
7:8:75:G:O3'	7:8:76:A:OP1	1.88	0.92
10:B:1099:G:H5'	17:I:4:VAL:CB	1.99	0.92
8:9:368:MET:CG	8:9:368:MET:O	2.17	0.92
8:9:414:ASN:ND2	10:B:486:C:OP2	2.01	0.92
14:F:128:SER:HB3	14:F:154:THR:HG23	1.52	0.92
8:9:370:ASP:C	8:9:373:LEU:HD12	1.95	0.92
8:9:66:LYS:CB	28:T:92:ASN:CB	2.41	0.92
8:9:195:LEU:HD13	8:9:200:ALA:CB	2.00	0.92
8:9:400:ARG:HH11	27:S:60:HIS:HD2	1.12	0.92
8:9:245:VAL:HG21	8:9:268:LYS:HE3	1.52	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:290:ILE:CA	8:9:291:ALA:O	2.17	0.91
18:J:58:ASN:O	18:J:126:ALA:HA	1.69	0.91
24:P:47:ILE:HG23	24:P:63:ILE:HG23	1.51	0.91
30:V:9:ARG:HG2	30:V:41:GLU:HG2	1.50	0.91
2:1:49:LYS:HZ2	2:1:49:LYS:H	1.17	0.91
8:9:6:THR:CG2	8:9:295:LEU:CG	2.48	0.91
8:9:300:VAL:C	8:9:304:ILE:CG1	2.40	0.91
8:9:17:SER:HB2	32:X:24:GLU:HG2	1.52	0.91
10:B:1099:G:H8	17:I:3:LYS:CB	1.83	0.91
6:7:67:LYS:CG	8:9:413:VAL:N	2.33	0.91
7:8:39:A:N1	8:9:398:ARG:CG	2.33	0.91
8:9:240:LEU:O	8:9:243:THR:HG23	1.69	0.91
8:9:145:ILE:HG12	8:9:161:PRO:HG3	0.91	0.91
8:9:332:ASN:CG	8:9:332:ASN:CA	2.38	0.91
14:F:135:ILE:HD11	14:F:138:PRO:HA	1.50	0.91
8:9:69:THR:H	28:T:95:PHE:C	1.78	0.91
24:P:76:HIS:CD2	24:P:76:HIS:H	1.77	0.91
8:9:260:LEU:HD12	8:9:261:SER:N	1.85	0.91
8:9:361:PRO:CB	8:9:365:LYS:HZ2	1.72	0.91
10:B:1450:G:H21	10:B:1452:G:H1	1.15	0.91
8:9:5:LEU:HD22	8:9:37:ALA:HB3	1.49	0.91
8:9:410:VAL:HG11	10:B:485:C:C3'	1.99	0.91
11:C:15:VAL:HG13	11:C:16:VAL:HG23	1.50	0.91
11:C:109:LEU:HD21	11:C:115:ILE:HD11	1.51	0.91
26:R:22:LEU:HD12	26:R:24:LYS:H	1.35	0.91
8:9:350:LEU:CB	8:9:350:LEU:HD23	2.01	0.90
10:B:1825:U:H5'	11:C:244:VAL:CG2	2.01	0.90
8:9:300:VAL:HG11	8:9:354:LEU:HD21	1.35	0.90
29:U:33:VAL:HB	29:U:65:GLN:HA	1.53	0.90
10:B:161:A:H3'	10:B:162:U:H5"	1.49	0.90
10:B:1060:U:N3	10:B:1088:A:N7	2.18	0.90
8:9:325:LYS:HA	8:9:326:GLY:N	1.85	0.90
8:9:328:GLY:O	8:9:329:PHE:HD2	1.54	0.90
7:8:47:A:N1	8:9:381:ASN:HB2	1.84	0.90
8:9:146:LYS:HG2	8:9:147:GLN:H	1.36	0.90
8:9:240:LEU:O	8:9:243:THR:CG2	2.19	0.90
8:9:251:ASP:OD2	8:9:275:VAL:CG1	2.01	0.90
10:B:972:A:H3'	10:B:973:A:H5"	1.53	0.90
10:B:1098:A:H3'	17:I:3:LYS:C	1.96	0.90
23:O:53:THR:O	23:O:54:VAL:HB	1.71	0.90
31:W:60:ALA:HB3	31:W:80:SER:HA	1.54	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:383:MET:HB3	8:9:387:GLU:CD	1.96	0.90
17:I:105:LEU:HD11	17:I:139:VAL:HG21	1.54	0.90
8:9:221:VAL:HG12	8:9:263:ARG:NH1	1.83	0.90
12:D:24:VAL:HG11	12:D:193:VAL:HG11	1.51	0.90
13:E:3:LEU:HD22	13:E:119:ILE:HD11	1.52	0.90
8:9:64:VAL:HG21	8:9:73:GLU:HB2	1.51	0.90
8:9:290:ILE:O	8:9:291:ALA:C	2.11	0.90
8:9:340:GLN:HB2	8:9:341:MET:HG2	1.54	0.90
24:P:76:HIS:H	24:P:76:HIS:HD2	1.17	0.90
8:9:10:SER:HA	8:9:13:LEU:HG	1.52	0.90
24:P:32:VAL:HA	24:P:42:PHE:HB3	1.54	0.90
6:7:57:LEU:CD2	8:9:427:MET:CG	2.50	0.89
7:8:75:G:H3'	7:8:76:A:OP1	1.72	0.89
8:9:350:LEU:HD22	8:9:350:LEU:CB	2.01	0.89
26:R:65:ALA:HB3	26:R:100:GLY:H	1.35	0.89
8:9:148:LEU:HG	8:9:149:GLU:H	1.36	0.89
8:9:227:GLN:CB	8:9:262:ILE:HD11	2.00	0.89
8:9:342:LYS:HZ3	8:9:374:VAL:HG22	1.24	0.89
18:J:40:HIS:HA	25:Q:69:ARG:HH12	1.36	0.89
1:0:12:ARG:HH21	1:0:16:ARG:HG3	1.38	0.89
8:9:389:ALA:C	8:9:391:PRO:HD3	1.96	0.89
18:J:102:GLU:HG3	18:J:124:VAL:HG12	1.53	0.89
18:J:64:VAL:HG12	18:J:65:THR:H	1.34	0.89
20:L:7:SER:CB	20:L:8:PRO:HD3	2.03	0.89
6:7:61:VAL:CG2	8:9:423:MET:CE	2.49	0.89
8:9:260:LEU:HA	8:9:263:ARG:HD2	1.52	0.89
10:B:1283:G:H22	10:B:1286:A:H5'	1.37	0.89
20:L:19:LEU:H	20:L:19:LEU:HD22	1.36	0.89
20:L:39:LYS:HA	20:L:39:LYS:HZ2	1.37	0.89
33:Y:6:ILE:HG13	33:Y:35:VAL:H	1.38	0.89
3:2:25:LYS:H	3:2:25:LYS:HD2	1.38	0.89
7:8:63:A:H1'	8:9:381:ASN:O	1.72	0.89
8:9:67:SER:OG	28:T:92:ASN:CG	2.16	0.89
11:C:12:ARG:HB2	11:C:20:ASN:HA	1.55	0.89
16:H:31:VAL:HB	16:H:32:PRO:HD3	1.55	0.89
30:V:25:LYS:HE2	30:V:41:GLU:HB2	1.51	0.89
34:Z:3:LYS:HG2	34:Z:48:GLN:HB2	1.54	0.89
8:9:283:GLU:OE2	8:9:297:MET:CE	2.20	0.89
8:9:379:ILE:HG22	8:9:380:ILE:N	1.84	0.89
18:J:41:LYS:HD2	18:J:44:TYR:HB3	1.55	0.89
21:M:33:LEU:HD11	21:M:124:LEU:HD22	1.55	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:5:LEU:HD12	8:9:8:ARG:HG3	1.53	0.88
8:9:317:GLU:OE1	8:9:329:PHE:CG	2.26	0.88
8:9:400:ARG:HH11	27:S:60:HIS:CD2	1.84	0.88
8:9:2:PHE:HE2	8:9:295:LEU:HB2	1.36	0.88
8:9:137:ALA:HB2	8:9:189:VAL:HG12	1.52	0.88
19:K:64:ARG:H	19:K:83:ALA:HB3	1.36	0.88
8:9:66:LYS:CA	28:T:92:ASN:HB2	2.04	0.88
8:9:78:VAL:CG2	8:9:79:ARG:H	1.86	0.88
14:F:7:TYR:HA	14:F:11:VAL:HB	1.55	0.88
6:7:67:LYS:CG	8:9:413:VAL:CA	2.52	0.88
10:B:1060:U:H5	17:I:131:THR:HG22	1.38	0.88
11:C:124:LYS:HB2	11:C:125:PRO:CD	2.03	0.88
8:9:299:ASP:CA	8:9:300:VAL:N	2.36	0.88
11:C:243:PRO:HA	11:C:249:VAL:HG23	1.53	0.88
16:H:31:VAL:HA	16:H:36:ALA:HA	1.55	0.88
8:9:64:VAL:HG21	8:9:73:GLU:CB	2.01	0.88
8:9:105:MET:HE1	8:9:218:LEU:CD1	2.02	0.88
18:J:35:ARG:NH1	18:J:40:HIS:H	1.70	0.88
8:9:320:ALA:HB1	8:9:323:LEU:HD23	1.56	0.88
15:G:171:LYS:HD3	15:G:174:LYS:HD3	1.56	0.88
18:J:35:ARG:HH12	18:J:40:HIS:N	1.72	0.88
8:9:251:ASP:CG	8:9:275:VAL:HG12	1.99	0.88
11:C:107:LYS:HB2	11:C:194:VAL:HG21	1.55	0.88
8:9:383:MET:HG2	8:9:402:ILE:HD13	1.54	0.88
10:B:784:G:H5"	11:C:225:ASN:HD21	1.38	0.88
10:B:1080:A:H2'	10:B:1081:U:H6	1.39	0.88
8:9:39:LEU:HD21	8:9:45:LEU:HD11	1.55	0.87
8:9:315:GLN:CG	8:9:319:LEU:CD2	1.97	0.87
8:9:323:LEU:C	8:9:324:LYS:HG3	1.98	0.87
8:9:364:VAL:HG13	8:9:368:MET:HB2	1.51	0.87
14:F:36:ASN:HA	14:F:86:CYS:HB2	1.54	0.87
17:I:11:GLN:HG2	17:I:55:PRO:HB3	1.56	0.87
19:K:43:ILE:HG12	19:K:52:VAL:HG13	1.54	0.87
31:W:20:LEU:HD11	31:W:31:LEU:HB2	1.56	0.87
5:4:34:LYS:HG3	10:B:2527:C:H5"	1.54	0.87
8:9:45:LEU:HA	8:9:48:VAL:HG23	1.54	0.87
8:9:136:SER:HB3	8:9:161:PRO:HB3	1.57	0.87
18:J:84:ILE:HD12	18:J:85:LYS:H	1.36	0.87
8:9:17:SER:HB2	32:X:24:GLU:CG	2.04	0.87
6:7:54:ILE:HG21	8:9:311:VAL:HG21	0.93	0.87
8:9:349:SER:C	8:9:350:LEU:HA	1.86	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:E:169:VAL:HG13	13:E:170:ARG:H	1.36	0.87
8:9:299:ASP:CB	8:9:350:LEU:HD21	2.03	0.87
8:9:353:LYS:CG	8:9:353:LYS:HA	2.04	0.87
14:F:56:LEU:HA	14:F:59:ILE:HG22	1.57	0.87
24:P:31:VAL:HG13	24:P:81:ASP:HB3	1.57	0.87
6:7:61:VAL:CG2	8:9:423:MET:HE2	2.03	0.87
6:7:61:VAL:HG13	8:9:419:GLN:O	1.74	0.87
8:9:219:PHE:CD2	8:9:236:PHE:CE2	2.62	0.87
8:9:219:PHE:CE2	8:9:236:PHE:CD2	2.63	0.87
8:9:320:ALA:CB	8:9:323:LEU:CD2	2.51	0.87
24:P:36:LYS:HG2	24:P:37:LYS:H	1.38	0.87
4:3:12:ARG:NE	4:3:23:HIS:HB2	1.89	0.87
6:7:67:LYS:HD3	8:9:413:VAL:N	1.87	0.87
8:9:7:ASP:HB2	8:9:11:ARG:HE	1.39	0.87
8:9:88:GLU:H	8:9:264:HIS:CE1	1.92	0.87
24:P:25:VAL:CG1	24:P:88:ARG:H	1.87	0.87
31:W:42:THR:HG23	31:W:66:VAL:H	1.40	0.87
8:9:327:ASP:O	8:9:327:ASP:CG	2.08	0.87
14:F:140:ILE:HG21	14:F:145:VAL:HG22	1.55	0.87
17:I:27:LEU:HD12	17:I:32:VAL:HG11	1.56	0.87
1:0:53:VAL:HG13	1:0:54:ILE:HG13	1.57	0.86
7:8:39:A:C2	8:9:398:ARG:NH1	2.43	0.86
8:9:64:VAL:CG2	8:9:73:GLU:HB3	2.05	0.86
26:R:69:GLY:HA2	26:R:97:LYS:H	1.39	0.86
8:9:361:PRO:HB2	8:9:365:LYS:HZ2	1.23	0.86
13:E:191:ASP:HA	13:E:194:LYS:HE3	1.55	0.86
29:U:66:VAL:HG22	29:U:67:SER:H	1.39	0.86
8:9:303:LEU:CB	8:9:349:SER:C	2.48	0.86
10:B:654:A:H2'	10:B:655:A:H5"	1.57	0.86
8:9:293:ARG:HG2	8:9:298:GLY:CA	2.04	0.86
10:B:1064:C:C4'	17:I:90:GLY:HA2	2.05	0.86
22:N:3:HIS:HB3	22:N:4:ARG:CZ	2.06	0.86
8:9:22:LEU:C	8:9:24:GLU:N	2.33	0.86
10:B:2305:U:H5"	14:F:130:GLY:HA3	1.55	0.86
10:B:2597:G:H5"	11:C:239:PHE:HB2	1.58	0.86
23:O:58:ILE:HG13	23:O:60:GLU:H	1.40	0.86
31:W:46:ALA:HB2	31:W:77:LYS:HD3	1.58	0.86
5:4:23:ILE:HD12	5:4:24:ARG:H	1.40	0.86
8:9:29:ASP:HB3	8:9:33:GLU:OE2	1.76	0.86
8:9:66:LYS:HB2	28:T:92:ASN:HB2	1.56	0.86
15:G:8:VAL:HB	15:G:49:LEU:HD12	1.57	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:M:5:LYS:HZ1	21:M:8:LYS:HB2	1.39	0.86
21:M:33:LEU:HB3	21:M:101:VAL:HG21	1.57	0.86
8:9:64:VAL:CG2	8:9:73:GLU:CG	2.46	0.86
8:9:350:LEU:CG	8:9:350:LEU:CB	2.52	0.86
11:C:32:LEU:HB3	11:C:61:TYR:HE1	1.37	0.86
7:8:85:A:H3'	7:8:87:G:H4'	1.58	0.86
8:9:2:PHE:HZ	8:9:295:LEU:HD22	1.38	0.86
10:B:1098:A:C3'	17:I:3:LYS:C	2.48	0.86
34:Z:54:GLY:H	34:Z:57:VAL:HG23	1.40	0.86
8:9:230:ALA:HA	8:9:262:ILE:HG22	1.56	0.86
8:9:233:ALA:HB1	8:9:268:LYS:NZ	1.91	0.86
8:9:338:LEU:O	8:9:341:MET:CB	2.23	0.86
8:9:106:ALA:HB3	8:9:219:PHE:HD1	1.41	0.86
8:9:233:ALA:HB1	8:9:268:LYS:HZ3	1.41	0.86
8:9:282:LEU:HD12	8:9:283:GLU:H	1.37	0.86
14:F:39:VAL:HA	14:F:84:ILE:HB	1.57	0.86
6:7:58:THR:CG2	8:9:337:GLN:OE1	2.23	0.85
10:B:1064:C:H4'	17:I:90:GLY:HA2	1.57	0.85
10:B:1639:C:H2'	10:B:1640:A:H5"	1.56	0.85
11:C:28:PRO:HG2	11:C:79:ARG:HH21	1.38	0.85
18:J:81:ILE:HG13	18:J:82:GLY:N	1.91	0.85
11:C:220:ARG:CZ	11:C:220:ARG:HA	2.05	0.85
21:M:29:GLY:H	21:M:102:LEU:HD12	1.39	0.85
8:9:364:VAL:HG12	8:9:368:MET:HB3	1.50	0.85
12:D:17:GLU:HG3	24:P:80:VAL:HG12	1.58	0.85
8:9:6:THR:HG22	8:9:295:LEU:CB	2.06	0.85
8:9:227:GLN:HA	8:9:262:ILE:HG13	1.07	0.85
8:9:265:ILE:HG22	8:9:265:ILE:O	1.75	0.85
8:9:424:GLN:HA	8:9:427:MET:HB3	1.56	0.85
22:N:37:THR:HG22	22:N:39:PRO:HD2	1.55	0.85
8:9:51:PHE:HE1	8:9:81:GLU:HB3	1.41	0.85
8:9:369:ASP:CB	8:9:373:LEU:HD21	2.06	0.85
10:B:996:A:H5"	25:Q:93:ILE:HG21	1.57	0.85
10:B:2502:G:H5'	10:B:2503:A:H5"	1.57	0.85
30:V:72:VAL:HG12	30:V:93:ARG:HA	1.57	0.85
34:Z:59:ARG:HB3	34:Z:63:ARG:HB2	1.56	0.85
1:0:27:LEU:HG	10:B:2886:A:N7	1.92	0.85
5:4:3:VAL:HG12	5:4:4:ARG:H	1.41	0.85
8:9:108:LEU:HD11	8:9:232:THR:HG21	1.55	0.85
8:9:110:GLY:HA2	8:9:113:LYS:HB2	1.59	0.85
8:9:366:SER:CB	8:9:367:GLN:N	2.39	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:F:107:VAL:N	14:F:108:PRO:CD	2.40	0.85
8:9:300:VAL:HG11	8:9:354:LEU:HG	1.58	0.85
8:9:334:PHE:HZ	8:9:420:PHE:CE2	1.94	0.85
23:O:38:GLN:HA	23:O:50:ALA:HB3	1.57	0.85
7:8:30:G:C6	7:8:78:G:C6	2.65	0.85
17:I:27:LEU:HD23	17:I:27:LEU:H	1.38	0.85
7:8:48:G:N2	8:9:382:SER:OG	2.10	0.85
8:9:106:ALA:CB	8:9:219:PHE:HE1	1.90	0.85
8:9:378:ALA:HB3	8:9:408:MET:CE	2.06	0.85
17:I:25:PRO:O	17:I:29:GLN:HG3	1.75	0.85
7:8:75:G:O3'	7:8:76:A:P	2.35	0.84
10:B:448:U:H3'	13:E:79:ARG:HE	1.41	0.84
23:O:66:GLY:H	23:O:70:ALA:HB2	1.40	0.84
26:R:4:VAL:HG12	26:R:43:ASN:HB3	1.58	0.84
31:W:35:ILE:H	31:W:35:ILE:HD12	1.42	0.84
8:9:64:VAL:CG2	8:9:73:GLU:HG2	2.06	0.84
8:9:327:ASP:OD1	8:9:327:ASP:C	2.20	0.84
8:9:350:LEU:HG	8:9:350:LEU:N	1.80	0.84
8:9:379:ILE:HG12	8:9:402:ILE:HG22	1.57	0.84
8:9:394:ILE:CG2	8:9:399:LYS:HD3	2.07	0.84
6:7:58:THR:CG2	8:9:337:GLN:CD	2.50	0.84
7:8:48:G:N2	8:9:378:ALA:O	2.08	0.84
8:9:291:ALA:CB	8:9:295:LEU:O	2.24	0.84
12:D:122:VAL:HA	12:D:128:ARG:HG3	1.57	0.84
13:E:149:ILE:HD11	13:E:187:VAL:H	1.41	0.84
10:B:27:G:H22	10:B:512:G:H2'	1.39	0.84
1:0:26:SER:HB2	1:0:38:LEU:HD21	1.59	0.84
8:9:244:GLY:HA2	8:9:269:PRO:HG2	1.58	0.84
8:9:379:ILE:CG2	8:9:402:ILE:CG2	2.48	0.84
16:H:121:VAL:HG23	16:H:122:LEU:HD23	1.59	0.84
6:7:62:THR:HG22	8:9:373:LEU:HD22	1.58	0.84
8:9:104:LEU:HD21	8:9:205:ILE:HD11	1.60	0.84
19:K:19:VAL:HG12	19:K:43:ILE:HA	1.60	0.84
20:L:27:LEU:HG	20:L:28:GLY:N	1.92	0.84
3:2:7:PRO:HB2	10:B:1309:G:H4'	1.59	0.84
8:9:300:VAL:O	8:9:354:LEU:HD11	1.60	0.84
10:B:858:G:N3	10:B:2268:A:H2'	1.92	0.84
32:X:18:LEU:HD22	32:X:18:LEU:H	1.42	0.84
10:B:2484:G:H1'	21:M:119:LEU:HD12	1.60	0.83
20:L:124:GLY:H	20:L:142:ILE:HA	1.43	0.83
15:G:171:LYS:HD2	15:G:172:GLU:O	1.77	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:H:2:GLN:HB2	16:H:19:VAL:HA	1.59	0.83
8:9:394:ILE:HD12	8:9:394:ILE:H	1.43	0.83
28:T:76:ARG:HG2	28:T:77:ARG:O	1.78	0.83
10:B:1060:U:C2	10:B:1088:A:N7	2.46	0.83
24:P:25:VAL:HG11	24:P:87:ARG:HA	1.57	0.83
8:9:67:SER:H	28:T:92:ASN:C	1.87	0.83
8:9:219:PHE:H	8:9:245:VAL:HG12	1.44	0.83
8:9:429:LYS:HG3	8:9:429:LYS:O	1.79	0.83
12:D:29:VAL:HG22	12:D:30:GLU:H	1.43	0.83
27:S:21:ALA:HB1	27:S:74:ILE:HD12	1.57	0.83
28:T:66:LYS:H	28:T:76:ARG:HH21	1.26	0.83
8:9:227:GLN:HB3	8:9:258:ALA:CB	2.08	0.83
8:9:364:VAL:C	8:9:368:MET:H	1.86	0.83
20:L:78:ARG:HB3	20:L:78:ARG:HH11	1.43	0.83
29:U:27:VAL:HG12	29:U:33:VAL:HG13	1.60	0.83
7:8:30:G:N3	7:8:78:G:C2	2.46	0.83
8:9:78:VAL:CG2	8:9:79:ARG:N	2.40	0.83
8:9:300:VAL:HB	8:9:303:LEU:CA	2.08	0.83
8:9:306:ASP:O	8:9:309:SER:HB2	1.77	0.83
17:I:72:THR:HG21	17:I:112:LYS:HA	1.61	0.83
31:W:43:LYS:O	31:W:44:PHE:HB2	1.79	0.83
1:0:15:ARG:HD2	10:B:2046:G:H5'	1.61	0.83
8:9:240:LEU:CB	8:9:243:THR:HG23	2.09	0.83
10:B:1083:U:H1'	10:B:1086:A:H61	1.44	0.83
11:C:68:ARG:NH2	11:C:127:ASN:HA	1.93	0.83
16:H:86:ASP:HB2	16:H:89:LYS:HD3	1.59	0.83
8:9:131:LYS:HB3	8:9:184:TYR:HD2	1.43	0.83
8:9:221:VAL:CG1	8:9:263:ARG:HH12	1.91	0.83
8:9:240:LEU:HB3	8:9:243:THR:HG23	1.59	0.83
8:9:378:ALA:HB1	8:9:408:MET:HE2	1.60	0.83
11:C:21:PRO:N	11:C:202:ARG:HD2	1.92	0.83
12:D:197:THR:HG23	12:D:198:GLY:H	1.42	0.83
17:I:105:LEU:HD13	17:I:129:GLU:HG2	1.61	0.83
8:9:293:ARG:NH2	8:9:300:VAL:CG1	0.68	0.82
8:9:353:LYS:HA	8:9:353:LYS:HG2	1.61	0.82
10:B:1098:A:P	17:I:3:LYS:HG2	2.18	0.82
10:B:1099:G:H8	17:I:3:LYS:N	1.73	0.82
21:M:11:LYS:O	21:M:12:MET:HB2	1.77	0.82
21:M:15:GLY:O	21:M:16:ARG:HG3	1.79	0.82
30:V:63:ILE:H	30:V:70:ILE:HD11	1.44	0.82
31:W:56:HIS:HA	31:W:77:LYS:HE2	1.60	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:4:34:LYS:HE2	5:4:36:ARG:HH22	1.44	0.82
8:9:66:LYS:HG2	28:T:92:ASN:ND2	1.92	0.82
8:9:243:THR:O	8:9:269:PRO:HG2	1.77	0.82
10:B:2091:C:H3'	10:B:2092:U:H5"	1.60	0.82
8:9:16:ILE:CA	32:X:24:GLU:O	2.26	0.82
8:9:78:VAL:HG23	8:9:79:ARG:N	1.92	0.82
8:9:270:ILE:HG22	8:9:271:LYS:N	1.93	0.82
8:9:398:ARG:HH11	8:9:398:ARG:CB	1.92	0.82
8:9:401:ARG:O	8:9:405:GLY:N	2.12	0.82
10:B:1098:A:C2'	17:I:4:VAL:N	2.41	0.82
10:B:2574:G:H21	12:D:147:GLY:CA	1.91	0.82
28:T:66:LYS:N	28:T:76:ARG:HH21	1.77	0.82
7:8:30:G:N2	7:8:78:G:N9	2.26	0.82
8:9:227:GLN:CB	8:9:262:ILE:CG1	2.57	0.82
10:B:1198:U:H4'	25:Q:8:ILE:HD11	1.60	0.82
34:Z:24:ILE:HD13	34:Z:24:ILE:H	1.43	0.82
8:9:16:ILE:HD13	32:X:42:LEU:HD21	1.60	0.82
17:I:45:THR:HA	17:I:48:ILE:HG22	1.61	0.82
25:Q:39:ILE:HG13	25:Q:40:LYS:H	1.45	0.82
8:9:43:VAL:N	8:9:258:ALA:HB2	1.94	0.82
8:9:299:ASP:CB	8:9:350:LEU:HD13	2.03	0.82
10:B:1099:G:C8	17:I:3:LYS:CA	2.60	0.82
13:E:48:THR:C	13:E:49:ARG:HG2	2.04	0.82
5:4:26:ILE:HG13	5:4:35:GLN:N	1.93	0.82
6:7:61:VAL:CG2	8:9:423:MET:CB	2.53	0.82
10:B:1099:G:C8	17:I:3:LYS:CB	2.60	0.82
31:W:42:THR:HB	31:W:75:ASN:HB3	1.58	0.82
34:Z:62:LYS:C	34:Z:65:ASN:HD21	1.87	0.82
8:9:2:PHE:CE2	8:9:295:LEU:CG	2.62	0.82
8:9:291:ALA:O	8:9:296:GLY:HA2	1.78	0.82
10:B:631:A:HO2'	20:L:66:PHE:HD1	1.28	0.82
13:E:149:ILE:HG12	13:E:186:VAL:HA	1.62	0.82
26:R:47:VAL:HG12	26:R:49:ILE:HG12	1.61	0.82
8:9:300:VAL:HG12	8:9:354:LEU:CD2	2.02	0.82
18:J:135:GLN:NE2	18:J:138:GLN:H	1.78	0.82
25:Q:85:ALA:HB3	25:Q:88:GLU:HG3	1.60	0.82
6:7:59:LEU:HD13	8:9:351:MET:HE1	1.62	0.81
8:9:87:GLY:O	8:9:287:PRO:HG2	1.80	0.81
8:9:400:ARG:O	8:9:403:ALA:HB3	1.80	0.81
8:9:58:LYS:C	8:9:62:HIS:HD1	1.84	0.81
8:9:145:ILE:HD11	8:9:161:PRO:HB2	1.62	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:315:GLN:HG2	8:9:319:LEU:HD22	0.82	0.81
8:9:344:MET:O	8:9:344:MET:CG	2.27	0.81
8:9:353:LYS:CB	8:9:353:LYS:CG	2.58	0.81
10:B:2377:A:N6	23:O:13:ARG:HH21	1.77	0.81
19:K:2:ILE:HD13	19:K:6:THR:HG21	1.61	0.81
6:7:65:HIS:HA	8:9:416:LEU:HA	1.62	0.81
10:B:547:A:H2'	10:B:547:A:N3	1.94	0.81
13:E:112:LEU:HD12	13:E:115:GLN:HE21	1.45	0.81
13:E:152:GLU:HB2	13:E:158:PHE:HE1	1.45	0.81
18:J:84:ILE:CD1	18:J:85:LYS:H	1.92	0.81
8:9:111:ALA:C	8:9:113:LYS:H	1.84	0.81
8:9:299:ASP:HB3	8:9:302:SER:HB3	1.62	0.81
8:9:340:GLN:HB2	8:9:341:MET:CG	2.10	0.81
24:P:47:ILE:HG22	24:P:48:ALA:N	1.95	0.81
4:3:48:MET:HE3	4:3:49:VAL:H	1.46	0.81
10:B:28:A:H61	10:B:512:G:H1'	1.44	0.81
10:B:365:U:H2'	10:B:366:C:C6	2.16	0.81
11:C:171:VAL:HB	11:C:182:LYS:HB3	1.61	0.81
12:D:121:THR:HG21	12:D:143:PRO:HD3	1.63	0.81
18:J:98:GLU:HB3	18:J:124:VAL:HB	1.63	0.81
8:9:179:ALA:HB1	8:9:184:TYR:CD1	2.16	0.81
8:9:303:LEU:HB3	8:9:349:SER:C	2.04	0.81
10:B:2867:G:H2'	10:B:2867:G:N3	1.93	0.81
25:Q:39:ILE:HG13	25:Q:40:LYS:N	1.96	0.81
10:B:589:U:H4'	13:E:87:ALA:HB2	1.62	0.81
8:9:9:LEU:HD13	8:9:294:ILE:HG23	1.61	0.81
8:9:86:MET:O	8:9:264:HIS:CE1	2.34	0.81
8:9:340:GLN:O	8:9:344:MET:HG2	1.79	0.81
10:B:2880:C:H1'	22:N:92:GLY:O	1.80	0.81
12:D:48:ILE:HA	12:D:80:TRP:HB3	1.63	0.81
10:B:1199:U:H2'	10:B:1200:C:C6	2.15	0.81
1:0:27:LEU:HD22	1:0:27:LEU:H	1.46	0.80
7:8:30:G:C4	7:8:78:G:C2	2.69	0.80
8:9:195:LEU:CB	8:9:200:ALA:CB	2.59	0.80
8:9:399:LYS:NZ	8:9:417:LEU:HD11	1.96	0.80
10:B:142:A:H2'	10:B:143:C:C6	2.16	0.80
10:B:1098:A:C3'	17:I:4:VAL:N	2.44	0.80
16:H:37:VAL:O	16:H:38:PRO:C	2.23	0.80
7:8:48:G:C2	8:9:381:ASN:ND2	2.50	0.80
25:Q:97:ILE:HD12	26:R:13:ARG:NE	1.94	0.80
1:0:41:HIS:CG	1:0:42:ILE:H	1.99	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:8:30:G:N1	7:8:78:G:C5	2.49	0.80
8:9:293:ARG:NE	8:9:354:LEU:CD2	2.44	0.80
8:9:320:ALA:O	8:9:321:SER:C	2.24	0.80
24:P:25:VAL:HG12	24:P:27:VAL:H	1.47	0.80
24:P:50:ARG:HB2	24:P:50:ARG:HH11	1.45	0.80
5:4:2:LYS:HD2	10:B:2526:G:H21	1.47	0.80
8:9:120:LEU:HG	8:9:188:LEU:HD13	1.63	0.80
8:9:299:ASP:OD1	8:9:299:ASP:HA	1.80	0.80
10:B:2143:C:H2'	10:B:2144:G:O4'	1.80	0.80
21:M:133:LYS:HD2	21:M:134:THR:H	1.46	0.80
8:9:17:SER:CB	32:X:24:GLU:HG2	2.11	0.80
8:9:21:ARG:HA	32:X:20:ASN:O	1.81	0.80
8:9:137:ALA:O	8:9:191:THR:HA	1.81	0.80
14:F:53:ALA:HB1	14:F:64:PRO:HG2	1.63	0.80
16:H:26:ALA:C	16:H:28:ASN:H	1.88	0.80
18:J:133:ALA:HA	18:J:136:GLN:HB2	1.61	0.80
21:M:41:LEU:HB3	21:M:93:VAL:HB	1.64	0.80
8:9:120:LEU:HG	8:9:188:LEU:CD1	2.12	0.80
15:G:41:GLU:HG3	15:G:54:ARG:HH21	1.45	0.80
25:Q:47:ARG:HH12	25:Q:50:ARG:HG3	1.46	0.80
8:9:67:SER:HA	28:T:93:LEU:H	1.46	0.80
8:9:87:GLY:O	8:9:287:PRO:CG	2.29	0.80
9:A:38:C:H4'	23:O:100:HIS:NE2	1.96	0.80
20:L:6:LEU:HG	20:L:8:PRO:O	1.82	0.80
10:B:929:U:H4'	33:Y:2:LYS:HE3	1.61	0.80
11:C:124:LYS:CB	11:C:125:PRO:HD3	2.10	0.80
16:H:94:ILE:HG22	16:H:122:LEU:HG	1.62	0.80
18:J:81:ILE:HG23	18:J:82:GLY:H	1.46	0.80
7:8:30:G:C2	7:8:78:G:C5	2.70	0.80
8:9:340:GLN:C	8:9:344:MET:HG2	2.07	0.80
10:B:1199:U:H2'	10:B:1200:C:H6	1.45	0.80
8:9:28:LYS:O	8:9:31:LEU:HB3	1.82	0.80
8:9:45:LEU:HA	8:9:48:VAL:CG2	2.11	0.80
8:9:230:ALA:CA	8:9:262:ILE:HG22	2.06	0.80
10:B:1060:U:C5	17:I:131:THR:HG22	2.16	0.80
10:B:2314:A:H1'	14:F:154:THR:HG21	1.64	0.80
8:9:95:LEU:CD2	8:9:127:LYS:NZ	2.42	0.79
8:9:119:LYS:HA	8:9:122:LYS:HB3	1.65	0.79
8:9:134:VAL:HG23	8:9:159:PHE:HB2	1.61	0.79
8:9:370:ASP:O	8:9:373:LEU:CG	2.29	0.79
8:9:389:ALA:O	8:9:391:PRO:HD3	1.82	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:D:37:VAL:HB	12:D:46:ARG:HB2	1.64	0.79
8:9:5:LEU:C	8:9:7:ASP:H	1.87	0.79
8:9:195:LEU:CB	8:9:200:ALA:HB1	2.10	0.79
8:9:219:PHE:CE2	8:9:236:PHE:CG	2.70	0.79
10:B:1098:A:H2'	17:I:3:LYS:O	1.83	0.79
17:I:72:THR:HG22	17:I:115:ASP:OD2	1.81	0.79
24:P:90:ALA:H	24:P:112:ARG:NH2	1.81	0.79
27:S:64:ALA:H	27:S:110:ARG:NH2	1.80	0.79
34:Z:30:HIS:HB2	34:Z:48:GLN:HG2	1.63	0.79
8:9:245:VAL:CG2	8:9:268:LYS:CE	2.57	0.79
8:9:410:VAL:HB	10:B:485:C:H5'	1.63	0.79
10:B:2346:A:H3'	10:B:2347:C:H5"	1.64	0.79
12:D:96:ILE:HG22	12:D:98:VAL:H	1.47	0.79
12:D:130:GLN:HB3	12:D:140:HIS:HA	1.64	0.79
12:D:204:LYS:HB3	12:D:205:PRO:HD2	1.65	0.79
32:X:28:LEU:HD13	32:X:42:LEU:HD21	1.63	0.79
8:9:288:ASP:O	8:9:291:ALA:O	1.99	0.79
12:D:37:VAL:HG13	12:D:42:ASN:HB3	1.63	0.79
8:9:145:ILE:HG23	8:9:159:PHE:HE1	1.48	0.79
8:9:245:VAL:O	8:9:270:ILE:HA	1.82	0.79
8:9:250:VAL:HB	8:9:275:VAL:HA	1.63	0.79
11:C:21:PRO:HD2	11:C:202:ARG:NH1	1.98	0.79
12:D:73:VAL:HB	12:D:91:THR:HB	1.63	0.79
23:O:100:HIS:O	23:O:104:GLN:HB3	1.83	0.79
24:P:29:VAL:HG21	24:P:61:ARG:HH22	1.46	0.79
24:P:50:ARG:HB2	24:P:50:ARG:NH1	1.97	0.79
27:S:6:LYS:HA	27:S:104:THR:HA	1.63	0.79
30:V:7:GLU:HA	30:V:65:VAL:HG23	1.65	0.79
4:3:12:ARG:HG2	4:3:24:LYS:N	1.96	0.79
11:C:229:HIS:ND1	11:C:230:PRO:HD2	1.98	0.79
34:Z:1:MET:HA	34:Z:9:TYR:CE1	2.17	0.79
11:C:66:PHE:O	11:C:68:ARG:N	2.16	0.79
17:I:5:GLN:HB3	17:I:30:GLN:OE1	1.82	0.79
22:N:102:PHE:HD1	27:S:40:ASN:HD21	1.31	0.79
6:7:67:LYS:H	8:9:416:LEU:HB3	1.47	0.79
8:9:135:VAL:CG2	8:9:175:ALA:HB1	2.11	0.79
10:B:919:U:H2'	10:B:920:A:C8	2.17	0.79
8:9:17:SER:CA	32:X:24:GLU:HG2	2.12	0.79
19:K:108:ARG:HA	19:K:116:ILE:HD13	1.64	0.79
26:R:66:HIS:HA	26:R:98:ILE:HA	1.63	0.79
26:R:76:LYS:HD2	26:R:90:ARG:HB3	1.63	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:Z:28:VAL:HG23	34:Z:29:GLY:H	1.48	0.79
3:2:35:ARG:NH2	3:2:43:THR:H	1.81	0.78
8:9:134:VAL:HG23	8:9:159:PHE:CB	2.14	0.78
8:9:146:LYS:HG2	8:9:147:GLN:N	1.96	0.78
8:9:370:ASP:CG	8:9:370:ASP:CA	2.54	0.78
10:B:85:G:H5'	29:U:28:LEU:HB3	1.65	0.78
11:C:68:ARG:HH21	11:C:190:THR:HG23	1.47	0.78
11:C:72:GLY:O	11:C:73:ILE:HG13	1.83	0.78
26:R:47:VAL:HG22	26:R:48:LYS:H	1.48	0.78
7:8:77:C:C3'	7:8:78:G:P	2.70	0.78
8:9:39:LEU:HD13	8:9:45:LEU:CG	2.13	0.78
8:9:58:LYS:HB3	8:9:62:HIS:CE1	2.18	0.78
7:8:76:A:H5"	7:8:77:C:O5'	1.82	0.78
8:9:131:LYS:HB3	8:9:184:TYR:CD2	2.18	0.78
8:9:320:ALA:HB2	8:9:323:LEU:CD2	2.12	0.78
8:9:341:MET:N	8:9:346:GLY:HA2	1.99	0.78
10:B:1818:U:H2'	11:C:152:GLN:O	1.84	0.78
4:3:26:ALA:HB2	20:L:63:LYS:HB2	1.64	0.78
8:9:41:ALA:O	8:9:43:VAL:HG23	1.83	0.78
16:H:11:ASN:HD22	16:H:20:ASN:HD22	1.29	0.78
18:J:81:ILE:HG13	18:J:82:GLY:H	1.48	0.78
24:P:55:HIS:C	24:P:57:ALA:H	1.88	0.78
8:9:130:LYS:CA	8:9:185:ASP:OD1	2.32	0.78
10:B:899:A:H3'	10:B:900:A:H8	1.48	0.78
7:8:29:U:H2'	7:8:30:G:H8	1.49	0.78
8:9:179:ALA:CA	8:9:184:TYR:HD1	1.96	0.78
8:9:338:LEU:HD21	8:9:377:GLU:CD	2.09	0.78
8:9:425:ARG:HA	8:9:428:LYS:HD3	1.63	0.78
10:B:536:G:C5'	25:Q:52:ARG:HH22	1.97	0.78
10:B:928:A:H1'	33:Y:1:ALA:HA	1.66	0.78
10:B:2722:G:O2'	22:N:4:ARG:HD2	1.82	0.78
11:C:175:LEU:HD11	11:C:181:ARG:HG2	1.65	0.78
12:D:15:PHE:HA	24:P:79:VAL:HG11	1.64	0.78
14:F:116:LEU:HD22	14:F:129:MET:HE1	1.65	0.78
23:O:29:HIS:HB2	23:O:36:TYR:HB2	1.65	0.78
8:9:133:LEU:O	8:9:187:LEU:HD12	1.84	0.78
8:9:179:ALA:HB1	8:9:184:TYR:HD1	1.47	0.78
11:C:251:THR:O	11:C:252:LYS:HB2	1.83	0.78
8:9:148:LEU:O	8:9:151:LEU:HG	1.84	0.78
10:B:11:C:H2'	10:B:12:U:H5'	1.66	0.78
18:J:19:ASP:HB3	18:J:21:THR:HG23	1.66	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:7:52:PHE:HB3	6:7:53:PRO:HD3	1.65	0.78
7:8:39:A:N6	8:9:398:ARG:HG2	1.98	0.78
8:9:136:SER:OG	8:9:144:ALA:HB1	1.84	0.78
10:B:1080:A:H2'	10:B:1081:U:C6	2.17	0.78
10:B:2795:C:H2'	10:B:2796:U:O4'	1.83	0.78
28:T:55:VAL:HG22	28:T:56:GLU:H	1.48	0.78
8:9:399:LYS:NZ	8:9:417:LEU:CD1	2.46	0.77
10:B:635:C:H3'	20:L:126:ARG:HH21	1.49	0.77
11:C:50:THR:HG22	11:C:51:ARG:HG3	1.64	0.77
12:D:125:TRP:HD1	12:D:127:PHE:HB2	1.49	0.77
10:B:2081:U:H4'	34:Z:23:LYS:HD3	1.66	0.77
14:F:13:LYS:HA	14:F:16:MET:HB2	1.64	0.77
14:F:28:PRO:HB2	14:F:168:LEU:HD12	1.66	0.77
18:J:81:ILE:HG23	18:J:82:GLY:N	1.97	0.77
22:N:38:LEU:HB3	22:N:39:PRO:HD3	1.66	0.77
31:W:23:LYS:HD3	31:W:24:ARG:HD2	1.65	0.77
32:X:43:LEU:HB3	32:X:45:GLN:HE22	1.48	0.77
2:1:32:LYS:HG2	2:1:52:LYS:HE2	1.66	0.77
3:2:16:HIS:NE2	3:2:44:VAL:HA	1.99	0.77
8:9:119:LYS:HZ3	8:9:281:ALA:CB	1.94	0.77
10:B:360:U:H2'	10:B:361:G:O4'	1.84	0.77
15:G:41:GLU:HB2	15:G:52:GLY:HA3	1.65	0.77
29:U:29:SER:O	29:U:30:SER:HB3	1.85	0.77
33:Y:6:ILE:HA	33:Y:56:VAL:HG12	1.65	0.77
6:7:67:LYS:HG2	8:9:412:ASP:HB3	1.65	0.77
8:9:16:ILE:HG22	32:X:24:GLU:HB3	1.66	0.77
8:9:320:ALA:HB1	8:9:323:LEU:CD2	2.11	0.77
9:A:26:C:H2'	9:A:27:C:C6	2.19	0.77
10:B:1275:A:H3'	10:B:1275:A:N3	1.99	0.77
22:N:2:ARG:NH2	22:N:4:ARG:HD3	1.98	0.77
8:9:9:LEU:HD13	8:9:294:ILE:CG2	2.15	0.77
8:9:341:MET:N	8:9:346:GLY:N	2.27	0.77
8:9:399:LYS:HZ2	8:9:417:LEU:HD11	1.50	0.77
10:B:578:G:N2	25:Q:32:ARG:HH21	1.81	0.77
10:B:2331:G:H4'	31:W:69:GLU:HB2	1.66	0.77
6:7:61:VAL:HG21	8:9:423:MET:HE2	1.64	0.77
8:9:5:LEU:HD21	8:9:34:VAL:CG1	2.14	0.77
8:9:45:LEU:H	8:9:46:PRO:CD	1.97	0.77
24:P:52:ARG:HH11	24:P:52:ARG:HG3	1.48	0.77
8:9:71:GLY:O	8:9:74:PHE:HB3	1.84	0.77
8:9:145:ILE:CG2	8:9:149:GLU:HB2	2.10	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:149:GLU:CG	8:9:159:PHE:HZ	1.83	0.77
8:9:361:PRO:HB2	8:9:365:LYS:CE	2.11	0.77
10:B:856:G:H4'	31:W:23:LYS:HD2	1.67	0.77
10:B:2821:A:OP2	22:N:2:ARG:HD2	1.84	0.77
19:K:66:LYS:HG3	19:K:80:ASP:HA	1.65	0.77
29:U:12:VAL:HG11	29:U:17:ASP:HB3	1.67	0.77
8:9:315:GLN:HG2	8:9:319:LEU:CD1	2.14	0.77
8:9:335:LEU:CD1	8:9:380:ILE:HG13	2.12	0.77
8:9:400:ARG:HD3	10:B:486:C:C5'	2.14	0.77
10:B:1149:G:H2'	10:B:1150:C:C6	2.20	0.77
13:E:115:GLN:CD	13:E:184:ASP:HB2	2.09	0.77
15:G:120:ILE:HG12	15:G:134:GLY:HA3	1.66	0.77
17:I:21:PRO:HB2	17:I:22:PRO:HD3	1.66	0.77
18:J:73:VAL:HG22	18:J:74:TYR:N	2.00	0.77
20:L:55:MET:HB3	20:L:56:PRO:HD3	1.65	0.77
20:L:108:ALA:HB3	20:L:125:LEU:HB2	1.67	0.77
28:T:34:VAL:HG21	28:T:43:ILE:HD11	1.65	0.77
10:B:2756:U:H1'	10:B:2757:A:H5"	1.67	0.77
15:G:171:LYS:HZ3	15:G:174:LYS:H	1.30	0.77
25:Q:53:LYS:H	25:Q:53:LYS:HE2	1.49	0.77
5:4:16:ILE:HG23	5:4:18:LYS:H	1.49	0.77
8:9:257:GLY:HA2	8:9:260:LEU:HD11	1.65	0.77
8:9:282:LEU:HD12	8:9:283:GLU:N	2.00	0.77
15:G:175:LYS:HG2	15:G:176:LYS:H	1.50	0.77
26:R:6:GLN:NE2	26:R:41:ILE:HB	2.00	0.77
33:Y:18:LYS:H	33:Y:18:LYS:HD2	1.49	0.77
8:9:115:THR:OG1	8:9:116:SER:N	2.15	0.76
8:9:342:LYS:HZ1	8:9:374:VAL:HG22	1.48	0.76
4:3:49:VAL:HG13	4:3:51:LYS:H	1.49	0.76
6:7:67:LYS:H	8:9:416:LEU:CB	1.98	0.76
8:9:66:LYS:C	28:T:94:ASP:N	2.38	0.76
12:D:170:VAL:HB	12:D:194:PRO:HG2	1.67	0.76
13:E:4:VAL:HG13	13:E:5:LEU:H	1.50	0.76
8:9:32:ARG:HA	8:9:35:ARG:HB3	1.68	0.76
8:9:219:PHE:HE2	8:9:236:PHE:CG	2.03	0.76
8:9:270:ILE:N	8:9:270:ILE:HD12	2.01	0.76
8:9:300:VAL:N	8:9:350:LEU:HD21	1.99	0.76
10:B:7:G:H5'	18:J:134:ALA:O	1.85	0.76
13:E:48:THR:HG23	13:E:85:PHE:N	2.00	0.76
26:R:65:ALA:HB3	26:R:99:THR:HG23	1.68	0.76
8:9:331:LEU:CA	8:9:332:ASN:N	2.48	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:390:LYS:O	8:9:393:ILE:HG12	1.85	0.76
8:9:394:ILE:HD12	8:9:394:ILE:N	1.99	0.76
6:7:65:HIS:CG	8:9:416:LEU:O	2.39	0.76
7:8:29:U:H2'	7:8:30:G:C8	2.19	0.76
8:9:5:LEU:HD21	8:9:34:VAL:HA	1.68	0.76
8:9:416:LEU:HD12	8:9:417:LEU:N	2.00	0.76
10:B:534:U:H5'	25:Q:41:ALA:HA	1.65	0.76
8:9:179:ALA:CB	8:9:184:TYR:HD1	1.99	0.76
28:T:31:VAL:HG13	28:T:32:LEU:H	1.50	0.76
8:9:145:ILE:HD11	8:9:161:PRO:HG2	0.80	0.76
8:9:148:LEU:HG	8:9:149:GLU:N	2.00	0.76
17:I:1:ALA:H3	17:I:3:LYS:HE2	1.51	0.76
11:C:75:ALA:HB1	11:C:93:VAL:HG13	1.65	0.76
11:C:128:THR:HG22	11:C:188:ARG:HB2	1.68	0.76
13:E:116:ASP:HB3	13:E:185:LYS:HA	1.68	0.76
31:W:66:VAL:HG13	31:W:67:LYS:H	1.50	0.76
5:4:19:ARG:HH21	10:B:2755:C:H2'	1.49	0.76
8:9:76:LYS:O	8:9:80:ASN:HB2	1.86	0.76
10:B:1098:A:H3'	17:I:3:LYS:CB	2.16	0.76
24:P:64:SER:HB2	24:P:71:ARG:HD2	1.66	0.76
26:R:73:LYS:HD2	26:R:73:LYS:H	1.51	0.76
3:2:18:PHE:HA	3:2:21:ARG:HB2	1.66	0.75
8:9:300:VAL:HB	8:9:303:LEU:HB2	0.82	0.75
10:B:635:C:H3'	20:L:126:ARG:NH2	2.00	0.75
26:R:76:LYS:HA	26:R:91:GLN:H	1.50	0.75
29:U:59:GLU:HG3	29:U:62:ALA:HB2	1.66	0.75
18:J:60:ASP:HB3	18:J:126:ALA:HB1	1.66	0.75
22:N:30:ARG:NH1	22:N:74:GLU:HG2	2.01	0.75
23:O:28:VAL:HG22	23:O:106:LEU:HD13	1.66	0.75
33:Y:2:LYS:HB2	33:Y:37:ARG:HB2	1.67	0.75
10:B:1063:G:H1'	17:I:92:PRO:HG2	1.69	0.75
16:H:3:VAL:HB	16:H:37:VAL:HG11	1.68	0.75
22:N:8:ARG:HD2	22:N:46:ARG:NE	2.01	0.75
8:9:410:VAL:HG11	10:B:485:C:O3'	1.86	0.75
24:P:86:LYS:HE3	24:P:88:ARG:HB2	1.67	0.75
8:9:16:ILE:HD11	32:X:28:LEU:HD13	0.77	0.75
8:9:132:VAL:O	8:9:133:LEU:HB2	1.87	0.75
11:C:212:TRP:HZ3	11:C:217:PRO:HD3	1.50	0.75
17:I:73:PRO:HG2	17:I:78:LEU:HD21	1.68	0.75
20:L:78:ARG:HB3	20:L:78:ARG:NH1	2.01	0.75
24:P:25:VAL:HG13	24:P:88:ARG:N	1.97	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:3:12:ARG:HD3	20:L:62:PRO:HB3	1.69	0.75
8:9:23:THR:N	8:9:23:THR:C	2.45	0.75
8:9:66:LYS:HG3	28:T:92:ASN:HD22	1.46	0.75
10:B:1799:G:N7	11:C:178:GLY:HA3	2.01	0.75
17:I:20:SER:HB3	17:I:21:PRO:HD3	1.67	0.75
17:I:42:ASN:HA	17:I:45:THR:OG1	1.87	0.75
8:9:75:VAL:O	8:9:76:LYS:C	2.30	0.75
8:9:103:VAL:HB	8:9:188:LEU:HA	1.68	0.75
8:9:342:LYS:NZ	8:9:374:VAL:CG2	2.47	0.75
10:B:137:U:H2'	10:B:138:U:O4'	1.85	0.75
25:Q:69:ARG:HB3	25:Q:69:ARG:HH11	1.51	0.75
29:U:71:ILE:HG21	29:U:102:ILE:HD12	1.69	0.75
19:K:71:ARG:HB3	19:K:72:PRO:CD	2.16	0.75
19:K:108:ARG:NH2	24:P:36:LYS:H	1.84	0.75
21:M:5:LYS:HZ1	21:M:8:LYS:CB	2.00	0.75
12:D:8:LYS:HG3	24:P:5:LYS:NZ	2.02	0.75
2:1:31:GLU:HG2	2:1:32:LYS:HG3	1.67	0.74
8:9:66:LYS:HB2	28:T:92:ASN:CA	2.17	0.74
8:9:195:LEU:HB3	8:9:200:ALA:HB1	1.65	0.74
8:9:368:MET:HE1	29:U:51:LEU:CB	2.14	0.74
10:B:1006:C:H5"	18:J:34:ARG:NE	2.02	0.74
11:C:131:MET:HG3	11:C:187:CYS:SG	2.27	0.74
16:H:37:VAL:H	16:H:38:PRO:HD2	1.51	0.74
24:P:50:ARG:NH1	24:P:62:LYS:HB2	2.01	0.74
3:2:35:ARG:HH21	3:2:42:LEU:HD12	1.50	0.74
8:9:124:LEU:O	8:9:127:LYS:O	2.05	0.74
8:9:229:ALA:O	8:9:230:ALA:C	2.30	0.74
9:A:30:C:H2'	9:A:31:C:H5'	1.68	0.74
9:A:104:A:H2'	9:A:105:G:O4'	1.87	0.74
20:L:19:LEU:HD13	20:L:19:LEU:N	2.02	0.74
27:S:2:GLU:HB2	27:S:108:SER:HA	1.69	0.74
2:1:9:LYS:HA	2:1:24:LYS:HG2	1.69	0.74
8:9:410:VAL:CG2	10:B:485:C:H4'	2.15	0.74
8:9:413:VAL:O	8:9:416:LEU:CG	2.35	0.74
14:F:140:ILE:H	14:F:140:ILE:HD12	1.49	0.74
15:G:8:VAL:HG23	15:G:49:LEU:H	1.52	0.74
28:T:55:VAL:HG21	28:T:85:VAL:HB	1.67	0.74
30:V:48:MET:HE1	30:V:85:LYS:HA	1.69	0.74
2:1:49:LYS:HZ2	2:1:49:LYS:N	1.84	0.74
7:8:30:G:C2	7:8:78:G:N3	2.55	0.74
11:C:161:VAL:HG12	11:C:173:LEU:HD22	1.70	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:L:74:THR:HB	20:L:109:LYS:HE3	1.68	0.74
8:9:240:LEU:O	8:9:243:THR:OG1	2.05	0.74
12:D:125:TRP:HB2	12:D:160:LYS:HG2	1.67	0.74
16:H:10:ALA:O	16:H:11:ASN:HB3	1.86	0.74
27:S:3:THR:HG21	27:S:107:VAL:HG22	1.69	0.74
8:9:230:ALA:CB	8:9:262:ILE:HG23	1.83	0.74
8:9:272:PHE:CB	8:9:282:LEU:HD11	2.17	0.74
10:B:918:A:H2'	10:B:919:U:H5'	1.68	0.74
33:Y:4:ILE:HG12	33:Y:5:LYS:HG3	1.68	0.74
8:9:303:LEU:H	8:9:350:LEU:CD1	1.91	0.74
8:9:364:VAL:O	8:9:368:MET:N	2.20	0.74
8:9:393:ILE:N	8:9:394:ILE:HD12	2.00	0.74
10:B:162:U:H4'	10:B:163:C:OP1	1.86	0.74
10:B:1099:G:O5'	17:I:4:VAL:N	2.21	0.74
10:B:2751:G:H5'	15:G:3:VAL:HG21	1.70	0.74
11:C:22:GLU:CB	11:C:202:ARG:HG3	2.18	0.74
8:9:2:PHE:CZ	8:9:295:LEU:CB	2.61	0.74
8:9:32:ARG:O	8:9:36:MET:N	2.20	0.74
8:9:413:VAL:HA	8:9:416:LEU:HG	1.70	0.74
10:B:136:G:H2'	10:B:137:U:C6	2.22	0.74
10:B:2088:A:H2'	10:B:2089:C:C6	2.23	0.74
24:P:32:VAL:HB	24:P:80:VAL:O	1.88	0.74
32:X:4:LYS:HG3	32:X:7:ARG:HE	1.51	0.74
8:9:148:LEU:CG	8:9:149:GLU:N	2.51	0.74
8:9:324:LYS:HB3	8:9:325:LYS:CA	2.05	0.74
10:B:1021:A:H61	10:B:1142:A:N6	1.85	0.74
10:B:1064:C:H4'	17:I:90:GLY:CA	2.17	0.74
10:B:2498:C:O2'	10:B:2499:C:H5'	1.87	0.74
30:V:30:ILE:HG12	30:V:91:PHE:HB2	1.70	0.74
5:4:26:ILE:HG23	5:4:27:CYS:H	1.52	0.74
6:7:59:LEU:HB2	8:9:351:MET:HE1	1.69	0.74
8:9:8:ARG:HA	8:9:11:ARG:HB2	1.70	0.74
8:9:149:GLU:CG	8:9:159:PHE:CZ	2.65	0.74
8:9:303:LEU:CB	8:9:350:LEU:CD1	2.43	0.74
1:0:32:THR:HG21	1:0:41:HIS:NE2	2.03	0.73
8:9:230:ALA:HB1	8:9:262:ILE:CG2	2.08	0.73
8:9:303:LEU:HB3	8:9:350:LEU:N	2.00	0.73
10:B:1820:U:H3	11:C:197:ALA:HB1	1.53	0.73
10:B:2257:U:H5'	31:W:5:ALA:HB2	1.69	0.73
11:C:231:HIS:HD1	11:C:242:HIS:HA	1.52	0.73
18:J:89:PHE:HD1	18:J:92:MET:HG3	1.53	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:N:85:PRO:HA	22:N:88:ALA:HB2	1.69	0.73
28:T:67:VAL:HG12	28:T:68:LYS:H	1.50	0.73
8:9:179:ALA:HA	8:9:184:TYR:CD1	2.23	0.73
8:9:293:ARG:NH2	8:9:300:VAL:C	2.46	0.73
10:B:1099:G:H5'	17:I:4:VAL:N	2.01	0.73
10:B:1639:C:C2'	10:B:1640:A:H5"	2.18	0.73
11:C:42:ARG:HE	11:C:43:ASN:H	1.36	0.73
15:G:11:PRO:HD2	15:G:14:VAL:HG21	1.70	0.73
31:W:42:THR:HB	31:W:75:ASN:CB	2.17	0.73
5:4:24:ARG:HE	5:4:37:GLN:CA	2.01	0.73
8:9:114:THR:O	8:9:115:THR:C	2.30	0.73
8:9:243:THR:O	8:9:269:PRO:CG	2.35	0.73
14:F:31:GLU:HG3	14:F:158:THR:HG22	1.69	0.73
18:J:81:ILE:O	18:J:84:ILE:HG13	1.86	0.73
18:J:112:GLY:O	18:J:116:ARG:HB2	1.88	0.73
25:Q:2:ARG:HB3	25:Q:4:LYS:HZ1	1.51	0.73
30:V:63:ILE:N	30:V:70:ILE:HD11	2.03	0.73
8:9:16:ILE:HD12	32:X:28:LEU:HD13	1.56	0.73
8:9:39:LEU:CD2	8:9:45:LEU:CD1	2.34	0.73
10:B:2405:G:C5'	20:L:70:LYS:HG3	2.18	0.73
12:D:36:GLN:HG2	12:D:88:GLU:HA	1.70	0.73
27:S:74:ILE:HG22	27:S:105:VAL:HG23	1.70	0.73
8:9:16:ILE:CD1	32:X:28:LEU:HD12	2.13	0.73
8:9:300:VAL:C	8:9:301:LEU:N	2.45	0.73
10:B:1283:G:N2	10:B:1286:A:H5'	2.01	0.73
11:C:243:PRO:HB3	11:C:248:GLY:HA2	1.69	0.73
13:E:1:MET:HG3	13:E:18:THR:OG1	1.88	0.73
18:J:37:ARG:HH21	18:J:46:PRO:HB3	1.53	0.73
3:2:28:ARG:HH12	10:B:179:C:H5"	1.54	0.73
6:7:58:THR:HG21	8:9:337:GLN:NE2	2.01	0.73
8:9:21:ARG:CA	32:X:20:ASN:O	2.37	0.73
8:9:103:VAL:CG2	8:9:188:LEU:HD23	2.19	0.73
8:9:109:GLN:CD	8:9:110:GLY:H	1.96	0.73
8:9:274:GLY:CA	8:9:282:LEU:HA	2.19	0.73
8:9:413:VAL:HA	8:9:416:LEU:CG	2.18	0.73
10:B:458:G:N2	10:B:469:G:H2'	2.02	0.73
10:B:1469:A:H2'	10:B:1470:A:C8	2.23	0.73
34:Z:59:ARG:HA	34:Z:62:LYS:HB2	1.70	0.73
3:2:39:ARG:CB	10:B:458:G:H5"	2.17	0.73
8:9:127:LYS:C	8:9:128:HIS:CA	2.48	0.73
8:9:293:ARG:HE	8:9:354:LEU:HD22	1.52	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:A:32:U:H1'	9:A:52:A:N7	2.04	0.73
9:A:47:C:OP1	23:O:1:MET:HA	1.89	0.73
10:B:2511:U:H5"	12:D:129:THR:HG23	1.71	0.73
13:E:83:VAL:O	13:E:84:THR:HG22	1.88	0.73
14:F:133:GLU:HG3	14:F:147:ARG:HG2	1.70	0.73
25:Q:87:VAL:HB	26:R:54:VAL:HG11	1.71	0.73
33:Y:15:ARG:NE	33:Y:15:ARG:HA	2.03	0.73
34:Z:5:ILE:HG13	34:Z:51:VAL:HG13	1.69	0.73
11:C:48:ILE:HG22	11:C:49:THR:N	2.03	0.73
11:C:141:HIS:HB3	11:C:190:THR:HB	1.70	0.73
14:F:102:LEU:HG	14:F:107:VAL:HG23	1.70	0.73
23:O:50:ALA:HB1	23:O:78:VAL:HG13	1.69	0.73
27:S:23:LEU:HD13	27:S:25:ARG:HH22	1.52	0.73
27:S:85:ILE:HD11	27:S:93:ALA:HB1	1.70	0.73
31:W:42:THR:HG23	31:W:66:VAL:N	2.03	0.73
2:1:46:VAL:HG22	2:1:47:ILE:H	1.53	0.73
8:9:339:ARG:O	8:9:341:MET:HB2	1.87	0.73
10:B:1324:G:H1'	10:B:1616:A:N6	2.04	0.73
10:B:2633:G:H1'	12:D:62:LYS:HG3	1.71	0.73
12:D:42:ASN:O	12:D:43:ASP:HB2	1.89	0.73
22:N:45:ARG:NH2	22:N:113:ILE:HD12	2.03	0.73
25:Q:98:ALA:HA	25:Q:105:PHE:CD1	2.24	0.73
8:9:66:LYS:HD2	28:T:91:GLN:C	2.09	0.72
8:9:175:ALA:O	8:9:176:LEU:C	2.31	0.72
31:W:81:ILE:HG23	31:W:83:ALA:H	1.54	0.72
3:2:13:ASN:ND2	10:B:125:A:H4'	2.03	0.72
8:9:399:LYS:NZ	8:9:414:ASN:OD1	2.22	0.72
9:A:48:U:H2'	9:A:49:C:C6	2.23	0.72
10:B:2895:G:H2'	10:B:2896:C:C6	2.24	0.72
14:F:69:ALA:HB3	14:F:81:GLY:H	1.52	0.72
21:M:50:ARG:HA	21:M:53:MET:HE2	1.71	0.72
32:X:44:LYS:HG3	32:X:47:ARG:HB2	1.69	0.72
8:9:132:VAL:O	8:9:133:LEU:CB	2.37	0.72
8:9:334:PHE:CE1	8:9:420:PHE:CD2	2.77	0.72
8:9:340:GLN:C	8:9:341:MET:CA	2.61	0.72
17:I:108:ILE:HG22	17:I:128:ILE:HD13	1.71	0.72
26:R:63:VAL:HG22	26:R:64:VAL:N	2.03	0.72
8:9:379:ILE:HA	8:9:382:SER:HB2	1.71	0.72
10:B:28:A:N6	10:B:512:G:H1'	2.04	0.72
10:B:1099:G:O4'	17:I:3:LYS:O	2.07	0.72
11:C:224:MET:HA	11:C:233:GLY:H	1.54	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:E:31:VAL:HG21	13:E:104:ALA:HB2	1.71	0.72
30:V:21:ARG:HE	30:V:87:GLN:HA	1.54	0.72
8:9:274:GLY:HA3	8:9:282:LEU:HA	1.72	0.72
10:B:630:G:H1	20:L:69:ARG:HH12	1.37	0.72
10:B:1437:C:H2'	10:B:1438:U:C6	2.24	0.72
11:C:144:GLU:HG2	11:C:150:GLY:HA2	1.70	0.72
12:D:156:PHE:HB3	18:J:81:ILE:HG21	1.70	0.72
23:O:74:VAL:O	23:O:78:VAL:HG23	1.89	0.72
7:8:39:A:N6	8:9:398:ARG:CG	2.52	0.72
8:9:58:LYS:O	8:9:62:HIS:ND1	2.17	0.72
8:9:240:LEU:C	8:9:243:THR:HG23	2.14	0.72
8:9:332:ASN:HB2	8:9:388:ARG:CZ	2.19	0.72
34:Z:21:VAL:HG22	34:Z:23:LYS:H	1.54	0.72
8:9:145:ILE:HG22	8:9:149:GLU:CB	2.15	0.72
8:9:151:LEU:O	8:9:155:VAL:HG22	1.90	0.72
8:9:227:GLN:CB	8:9:262:ILE:CD1	2.65	0.72
27:S:84:ARG:HH21	27:S:98:LYS:NZ	1.87	0.72
8:9:221:VAL:HG13	8:9:263:ARG:NH1	2.04	0.72
10:B:1903:G:H5"	11:C:239:PHE:CE2	2.25	0.72
20:L:115:GLU:O	20:L:116:VAL:HG22	1.88	0.72
8:9:117:VAL:O	8:9:120:LEU:HB3	1.89	0.72
8:9:258:ALA:O	8:9:262:ILE:HG12	1.90	0.72
8:9:266:THR:OG1	8:9:268:LYS:HB2	1.89	0.72
8:9:316:ALA:O	8:9:317:GLU:C	2.33	0.72
21:M:26:VAL:HG21	21:M:66:ARG:HG3	1.72	0.72
21:M:77:PRO:HD3	21:M:86:LYS:HD3	1.71	0.72
2:1:7:LYS:HG2	2:1:26:LYS:HB3	1.71	0.72
4:3:33:THR:C	4:3:34:LYS:HD2	2.15	0.72
6:7:57:LEU:C	8:9:423:MET:HE1	2.14	0.72
7:8:88:C:HO3'	7:8:89:A:P	2.10	0.72
8:9:127:LYS:HG2	8:9:128:HIS:CD2	2.25	0.72
8:9:325:LYS:CA	8:9:326:GLY:N	2.53	0.72
10:B:1060:U:C4	10:B:1088:A:N6	2.58	0.72
17:I:5:GLN:O	17:I:6:ALA:HB3	1.89	0.72
25:Q:70:GLN:HG2	25:Q:71:ASN:N	2.05	0.72
8:9:75:VAL:O	8:9:78:VAL:N	2.23	0.71
8:9:115:THR:O	8:9:116:SER:C	2.33	0.71
8:9:313:ARG:O	8:9:316:ALA:HB2	1.89	0.71
9:A:17:C:H2'	9:A:18:G:O4'	1.88	0.71
10:B:2674:G:H4'	19:K:30:ARG:HD3	1.70	0.71
11:C:103:ILE:HG22	11:C:104:LEU:H	1.53	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C:205:GLY:C	11:C:206:LYS:HG2	2.15	0.71
22:N:86:ARG:HH22	22:N:116:VAL:HG12	1.53	0.71
3:2:13:ASN:HD21	10:B:125:A:H4'	1.54	0.71
8:9:21:ARG:O	32:X:20:ASN:O	2.09	0.71
8:9:353:LYS:CG	8:9:353:LYS:CA	2.67	0.71
10:B:1080:A:H4'	17:I:126:ARG:HD3	1.71	0.71
10:B:1099:G:O5'	17:I:3:LYS:N	2.23	0.71
10:B:2471:A:O2'	10:B:2472:G:H8	1.74	0.71
13:E:126:VAL:HG11	13:E:132:LYS:NZ	2.04	0.71
13:E:164:LEU:HD13	13:E:165:HIS:N	2.06	0.71
14:F:137:PHE:O	14:F:139:GLU:HG2	1.90	0.71
25:Q:91:ARG:HA	25:Q:94:LEU:HD21	1.71	0.71
32:X:1:MET:HB2	32:X:6:LEU:HA	1.73	0.71
5:4:15:LYS:NZ	5:4:22:VAL:HG12	2.05	0.71
8:9:293:ARG:HH21	8:9:300:VAL:CG1	0.80	0.71
10:B:1857:G:H2'	10:B:1884:G:H22	1.55	0.71
29:U:42:LYS:N	29:U:57:ILE:HD12	2.04	0.71
31:W:38:ARG:NH2	31:W:40:ARG:HD3	2.02	0.71
8:9:302:SER:C	8:9:350:LEU:HD11	2.14	0.71
10:B:1252:G:H21	25:Q:32:ARG:NE	1.88	0.71
10:B:2393:U:H4'	20:L:62:PRO:O	1.90	0.71
19:K:78:ARG:HH22	24:P:62:LYS:NZ	1.85	0.71
22:N:8:ARG:HD2	22:N:46:ARG:HE	1.54	0.71
26:R:64:VAL:HG22	26:R:65:ALA:H	1.56	0.71
8:9:66:LYS:C	28:T:92:ASN:CB	2.52	0.71
8:9:152:ALA:CB	8:9:159:PHE:CE2	2.73	0.71
8:9:337:GLN:O	8:9:341:MET:CG	2.38	0.71
8:9:366:SER:N	8:9:367:GLN:N	2.38	0.71
8:9:391:PRO:C	8:9:394:ILE:HD11	2.16	0.71
10:B:742:A:H2'	10:B:743:A:H8	1.56	0.71
12:D:122:VAL:HA	12:D:128:ARG:CG	2.21	0.71
17:I:41:PHE:O	17:I:45:THR:HG23	1.91	0.71
8:9:103:VAL:HG21	8:9:188:LEU:CD2	2.19	0.71
8:9:110:GLY:CA	8:9:113:LYS:HB2	2.20	0.71
8:9:143:ALA:O	8:9:144:ALA:O	2.08	0.71
19:K:104:THR:HG22	19:K:105:ARG:HD3	1.71	0.71
21:M:53:MET:HE3	21:M:63:ILE:HD12	1.72	0.71
24:P:46:VAL:C	24:P:47:ILE:HG12	2.15	0.71
28:T:66:LYS:HA	28:T:76:ARG:O	1.90	0.71
29:U:11:ILE:HG22	29:U:12:VAL:H	1.55	0.71
8:9:102:VAL:HG11	8:9:214:PRO:HA	1.71	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:413:VAL:C	8:9:416:LEU:HG	2.15	0.71
9:A:61:G:H2'	9:A:62:C:H6	1.55	0.71
10:B:1797:G:O3'	11:C:253:GLY:HA2	1.91	0.71
12:D:34:VAL:HG12	12:D:91:THR:HG23	1.73	0.71
14:F:107:VAL:N	14:F:108:PRO:HD2	2.05	0.71
20:L:34:GLY:HA3	26:R:85:LYS:HD3	1.73	0.71
24:P:111:GLU:HB2	24:P:112:ARG:HE	1.54	0.71
25:Q:47:ARG:O	25:Q:51:GLN:HG3	1.90	0.71
26:R:18:GLN:HB3	26:R:99:THR:HA	1.71	0.71
29:U:26:ASN:O	29:U:28:LEU:HD23	1.90	0.71
32:X:4:LYS:O	32:X:7:ARG:HG2	1.91	0.71
8:9:227:GLN:CA	8:9:262:ILE:HG12	1.97	0.71
8:9:413:VAL:O	8:9:414:ASN:C	2.34	0.71
10:B:1098:A:O2'	17:I:4:VAL:C	2.34	0.71
21:M:71:LYS:O	21:M:73:ILE:HG12	1.90	0.71
22:N:4:ARG:NE	22:N:4:ARG:H	1.89	0.71
24:P:13:LYS:HD2	24:P:77:SER:HB2	1.73	0.71
25:Q:48:ASP:HA	25:Q:51:GLN:NE2	2.05	0.71
28:T:47:VAL:HG22	28:T:53:VAL:HG21	1.73	0.71
8:9:318:LYS:C	8:9:321:SER:N	2.49	0.71
8:9:425:ARG:O	8:9:428:LYS:HG2	1.90	0.71
12:D:30:GLU:HG2	12:D:94:GLN:NE2	2.05	0.71
17:I:32:VAL:HG22	17:I:60:VAL:HG21	1.73	0.71
18:J:18:VAL:O	18:J:56:VAL:HA	1.91	0.71
3:2:43:THR:O	3:2:44:VAL:HG13	1.90	0.71
8:9:195:LEU:HB3	8:9:200:ALA:HB3	1.70	0.71
8:9:364:VAL:CG1	8:9:368:MET:CB	1.91	0.71
8:9:378:ALA:CB	8:9:408:MET:CE	2.64	0.71
13:E:147:LEU:HB3	13:E:167:VAL:HG13	1.71	0.71
16:H:2:GLN:HA	16:H:21:VAL:HG13	1.72	0.71
20:L:124:GLY:N	20:L:142:ILE:HA	2.05	0.71
23:O:10:ARG:HD2	23:O:94:ARG:HD2	1.72	0.71
3:2:28:ARG:NH1	10:B:179:C:H5"	2.04	0.70
6:7:65:HIS:CG	8:9:420:PHE:CD1	2.79	0.70
13:E:14:VAL:HG11	13:E:16:GLU:OE1	1.91	0.70
13:E:106:LYS:HG3	13:E:107:SER:N	2.05	0.70
30:V:70:ILE:HD12	30:V:71:LYS:H	1.55	0.70
2:1:8:ILE:HB	2:1:27:ARG:NH1	2.05	0.70
3:2:25:LYS:HD2	3:2:25:LYS:N	2.05	0.70
7:8:30:G:N1	7:8:78:G:C6	2.59	0.70
8:9:59:ALA:H	8:9:62:HIS:HE1	1.33	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:78:VAL:HG22	8:9:79:ARG:H	1.55	0.70
10:B:414:C:H2'	10:B:415:A:C8	2.25	0.70
10:B:1141:U:H4'	10:B:1142:A:O4'	1.91	0.70
10:B:2088:A:H2'	10:B:2089:C:H6	1.55	0.70
10:B:2305:U:H3	14:F:149:ARG:HB3	1.56	0.70
15:G:3:VAL:HG22	15:G:4:ALA:N	2.06	0.70
23:O:40:ILE:HD13	23:O:40:ILE:H	1.55	0.70
27:S:28:LYS:HB3	27:S:31:GLN:HB2	1.73	0.70
32:X:26:PHE:HA	32:X:29:ARG:HD2	1.73	0.70
8:9:293:ARG:NH2	8:9:300:VAL:HG22	1.75	0.70
10:B:1285:A:H2'	10:B:1286:A:H5"	1.73	0.70
11:C:137:GLY:C	11:C:139:THR:H	1.96	0.70
14:F:35:LEU:HB3	14:F:151:LEU:HD11	1.72	0.70
15:G:153:PRO:HA	15:G:159:LYS:O	1.91	0.70
19:K:110:GLU:HA	19:K:113:MET:HG2	1.73	0.70
29:U:71:ILE:HD12	29:U:102:ILE:HD12	1.74	0.70
3:2:7:PRO:HB2	10:B:1309:G:C4'	2.19	0.70
8:9:119:LYS:HE2	8:9:278:LYS:O	1.92	0.70
10:B:532:A:N1	10:B:2020:A:H1'	2.06	0.70
10:B:1825:U:H5'	11:C:244:VAL:HG22	1.73	0.70
11:C:179:GLU:CD	11:C:266:ILE:HA	2.15	0.70
11:C:210:ALA:HA	11:C:213:ARG:HD2	1.74	0.70
15:G:40:VAL:HG22	15:G:51:PHE:CE2	2.27	0.70
24:P:80:VAL:O	24:P:80:VAL:HG13	1.92	0.70
29:U:28:LEU:C	29:U:28:LEU:HD12	2.16	0.70
7:8:62:C:O2	8:9:382:SER:HA	1.91	0.70
8:9:2:PHE:HZ	8:9:295:LEU:CD2	2.05	0.70
8:9:6:THR:HG23	8:9:295:LEU:CD1	2.01	0.70
8:9:338:LEU:HD21	8:9:377:GLU:CG	2.21	0.70
8:9:338:LEU:C	8:9:341:MET:HG3	2.15	0.70
10:B:1099:G:C5'	17:I:4:VAL:H	2.02	0.70
10:B:2471:A:HO2'	10:B:2472:G:H8	1.40	0.70
12:D:31:ALA:HB3	12:D:95:SER:HB3	1.72	0.70
18:J:96:ARG:HD2	18:J:99:ARG:HH21	1.56	0.70
25:Q:29:ARG:HH11	25:Q:29:ARG:HA	1.56	0.70
33:Y:4:ILE:HG23	33:Y:5:LYS:HD3	1.74	0.70
8:9:67:SER:O	8:9:68:LEU:HB2	1.92	0.70
8:9:300:VAL:N	8:9:350:LEU:HD22	2.05	0.70
10:B:1225:G:OP1	26:R:90:ARG:HD2	1.91	0.70
10:B:2196:C:O2'	10:B:2197:U:H5'	1.91	0.70
10:B:2680:U:H5'	12:D:194:PRO:HA	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:G:156:TYR:HA	15:G:171:LYS:HG2	1.73	0.70
22:N:8:ARG:NH1	22:N:46:ARG:HG3	2.07	0.70
23:O:25:ARG:HH21	23:O:94:ARG:NH1	1.90	0.70
8:9:424:GLN:CA	8:9:427:MET:HB3	2.21	0.70
10:B:743:A:O2'	10:B:744:U:H5'	1.91	0.70
10:B:775:G:H4'	10:B:776:G:H5'	1.73	0.70
10:B:2144:G:O2'	10:B:2145:C:H5'	1.90	0.70
13:E:190:ALA:HB3	13:E:193:VAL:HG22	1.73	0.70
29:U:95:PHE:HD2	29:U:99:SER:HB3	1.56	0.70
8:9:142:PRO:O	8:9:144:ALA:N	2.23	0.70
13:E:138:LEU:O	13:E:143:LEU:HD21	1.91	0.70
3:2:45:SER:HB3	3:2:46:LYS:HE3	1.72	0.70
8:9:5:LEU:CD2	8:9:34:VAL:HA	2.22	0.70
10:B:1082:U:N3	10:B:1086:A:C6	2.59	0.70
10:B:1098:A:OP2	17:I:3:LYS:HG2	1.91	0.70
10:B:2012:G:OP1	27:S:98:LYS:HD3	1.91	0.70
11:C:127:ASN:HD22	11:C:128:THR:N	1.89	0.70
13:E:137:LYS:HA	13:E:137:LYS:NZ	2.07	0.70
13:E:148:ILE:O	13:E:148:ILE:HG13	1.92	0.70
22:N:32:GLU:HG3	22:N:33:ILE:H	1.54	0.70
25:Q:73:ILE:HG23	25:Q:74:SER:N	2.05	0.70
31:W:67:LYS:HG2	31:W:71:LYS:HB2	1.74	0.70
8:9:16:ILE:HD11	32:X:42:LEU:CD2	2.16	0.70
8:9:39:LEU:HD22	8:9:45:LEU:HD11	0.71	0.70
8:9:230:ALA:HB2	8:9:262:ILE:HG21	0.70	0.70
8:9:264:HIS:O	8:9:266:THR:N	2.24	0.70
10:B:1440:U:H2'	10:B:1441:G:H8	1.55	0.70
10:B:2311:A:N3	14:F:39:VAL:HG23	2.07	0.70
3:2:13:ASN:HA	3:2:16:HIS:O	1.92	0.69
5:4:3:VAL:HG12	5:4:4:ARG:N	2.06	0.69
5:4:26:ILE:CG1	5:4:35:GLN:H	2.00	0.69
8:9:400:ARG:HD3	10:B:486:C:H5"	1.74	0.69
10:B:922:C:H1'	31:W:22:VAL:HG21	1.74	0.69
25:Q:89:ILE:HD12	25:Q:89:ILE:H	1.56	0.69
26:R:42:ALA:HB1	26:R:53:PHE:CD1	2.27	0.69
33:Y:26:LEU:HD12	33:Y:28:LEU:HD22	1.74	0.69
1:0:3:GLN:HG3	10:B:2615:U:H1'	1.74	0.69
1:0:15:ARG:HB3	1:0:15:ARG:CZ	2.21	0.69
8:9:148:LEU:O	8:9:150:THR:N	2.26	0.69
12:D:33:ARG:HH11	12:D:33:ARG:HB2	1.56	0.69
26:R:47:VAL:CG1	26:R:49:ILE:HG12	2.22	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:289:ARG:O	8:9:291:ALA:O	2.10	0.69
8:9:424:GLN:O	8:9:428:LYS:N	2.25	0.69
10:B:1486:U:H2'	10:B:1487:U:C6	2.27	0.69
22:N:45:ARG:HH21	22:N:97:ILE:HG12	1.56	0.69
8:9:300:VAL:CG2	8:9:304:ILE:HG12	2.00	0.69
10:B:2574:G:H21	12:D:147:GLY:HA2	1.56	0.69
10:B:2684:U:H4'	19:K:76:VAL:HG21	1.73	0.69
12:D:189:VAL:HG12	12:D:190:LYS:H	1.58	0.69
19:K:71:ARG:CB	19:K:72:PRO:HD2	2.22	0.69
33:Y:26:LEU:HB2	33:Y:28:LEU:HD13	1.74	0.69
8:9:212:ILE:O	8:9:213:ASN:HB2	1.92	0.69
8:9:300:VAL:HG12	8:9:354:LEU:HD21	1.47	0.69
10:B:704:G:H1'	10:B:727:A:N6	2.07	0.69
10:B:936:A:H2'	10:B:937:C:C6	2.28	0.69
12:D:116:LYS:HB2	12:D:165:MET:HG3	1.73	0.69
21:M:53:MET:O	21:M:112:LEU:HD21	1.93	0.69
8:9:325:LYS:C	8:9:326:GLY:N	2.51	0.69
9:A:57:A:H4'	14:F:26:GLN:NE2	2.07	0.69
10:B:135:U:H2'	10:B:136:G:C8	2.27	0.69
10:B:365:U:H2'	10:B:366:C:H6	1.55	0.69
10:B:876:C:C2	10:B:877:A:H1'	2.27	0.69
10:B:1098:A:C4'	17:I:3:LYS:HB3	2.22	0.69
15:G:39:ALA:HB1	15:G:54:ARG:HB2	1.74	0.69
20:L:77:ILE:HD13	20:L:110:VAL:C	2.17	0.69
31:W:42:THR:H	31:W:65:LYS:HA	1.57	0.69
32:X:30:MET:H	32:X:30:MET:HE2	1.58	0.69
8:9:195:LEU:CG	8:9:200:ALA:HB1	2.21	0.69
8:9:202:MET:HA	8:9:205:ILE:HG22	1.74	0.69
8:9:272:PHE:HA	8:9:284:PRO:O	1.93	0.69
8:9:364:VAL:CG1	8:9:368:MET:CG	2.50	0.69
8:9:396:GLY:O	8:9:400:ARG:HG3	1.92	0.69
10:B:1654:A:H4'	22:N:1:MET:H1	1.57	0.69
10:B:2620:C:OP1	12:D:157:LYS:HB2	1.92	0.69
10:B:2898:U:O2'	18:J:137:PRO:HB3	1.91	0.69
13:E:103:GLY:O	13:E:106:LYS:HG2	1.92	0.69
17:I:27:LEU:HB2	17:I:32:VAL:HG21	1.74	0.69
23:O:73:ALA:HA	23:O:76:LYS:HZ2	1.56	0.69
27:S:25:ARG:HD2	27:S:26:GLY:N	2.08	0.69
1:0:6:LYS:HD2	10:B:1262:A:H2	1.57	0.69
8:9:2:PHE:CZ	8:9:295:LEU:HD22	2.25	0.69
8:9:272:PHE:HB3	8:9:282:LEU:CD1	2.20	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:274:GLY:HA2	8:9:281:ALA:O	1.93	0.69
8:9:299:ASP:HA	8:9:350:LEU:HD22	1.74	0.69
8:9:320:ALA:HB2	8:9:323:LEU:HD23	1.70	0.69
8:9:379:ILE:HG21	8:9:383:MET:SD	2.31	0.69
8:9:414:ASN:HA	8:9:417:LEU:HD12	1.75	0.69
10:B:590:A:H2'	10:B:591:U:C6	2.28	0.69
10:B:718:A:H2'	10:B:719:C:H5'	1.72	0.69
10:B:742:A:H2'	10:B:743:A:C8	2.28	0.69
11:C:174:ARG:HG3	11:C:180:MET:HG3	1.74	0.69
12:D:89:GLU:HB3	12:D:92:VAL:O	1.92	0.69
13:E:4:VAL:HA	13:E:14:VAL:HG22	1.73	0.69
21:M:15:GLY:C	21:M:16:ARG:HG3	2.18	0.69
23:O:15:ARG:NH1	31:W:76:ARG:HD2	2.07	0.69
8:9:2:PHE:HE2	8:9:295:LEU:HB3	1.11	0.69
8:9:135:VAL:HB	8:9:189:VAL:HG13	1.75	0.69
8:9:352:GLY:CA	8:9:353:LYS:HB3	2.20	0.69
10:B:1387:A:H2'	10:B:1388:G:H8	1.58	0.69
10:B:2291:U:H2'	10:B:2292:U:C6	2.26	0.69
15:G:53:PRO:HG2	15:G:61:TRP:CZ3	2.27	0.69
8:9:375:ARG:H	8:9:375:ARG:HG2	1.58	0.69
10:B:448:U:H6	13:E:79:ARG:HG3	1.58	0.69
16:H:8:LYS:HE2	16:H:9:VAL:H	1.58	0.69
18:J:135:GLN:HE22	18:J:137:PRO:HB2	1.57	0.69
20:L:78:ARG:O	20:L:81:ASP:HB2	1.92	0.69
20:L:109:LYS:HB2	20:L:109:LYS:NZ	2.08	0.69
30:V:9:ARG:HH12	30:V:12:GLN:HA	1.58	0.69
8:9:66:LYS:CD	28:T:92:ASN:OD1	2.36	0.68
8:9:66:LYS:HB2	28:T:92:ASN:C	2.19	0.68
8:9:289:ARG:C	8:9:291:ALA:O	2.35	0.68
8:9:315:GLN:O	8:9:319:LEU:N	2.26	0.68
8:9:379:ILE:O	8:9:381:ASN:N	2.26	0.68
10:B:946:C:H2'	10:B:947:A:H8	1.58	0.68
11:C:224:MET:O	11:C:225:ASN:HB2	1.92	0.68
13:E:152:GLU:HA	13:E:188:MET:HE2	1.75	0.68
19:K:24:VAL:HG13	19:K:33:ALA:HB2	1.75	0.68
4:3:12:ARG:CD	20:L:62:PRO:HB3	2.23	0.68
8:9:299:ASP:CG	8:9:350:LEU:HD22	2.15	0.68
8:9:384:THR:N	8:9:387:GLU:OE1	2.25	0.68
10:B:570:G:H2'	10:B:2030:A:N7	2.08	0.68
10:B:2025:C:H2'	10:B:2026:U:C6	2.28	0.68
16:H:122:LEU:HD13	16:H:146:VAL:HG22	1.74	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Q:102:LYS:O	25:Q:106:THR:HG22	1.92	0.68
31:W:44:PHE:HB3	31:W:77:LYS:CB	2.23	0.68
3:2:46:LYS:HE3	3:2:46:LYS:H	1.57	0.68
10:B:1118:C:H2'	10:B:1119:U:H6	1.58	0.68
10:B:1201:U:H2'	10:B:1202:G:H8	1.58	0.68
10:B:1485:U:H2'	10:B:1486:U:C6	2.28	0.68
10:B:2185:U:H2'	10:B:2186:G:O4'	1.93	0.68
10:B:2769:U:H2'	10:B:2770:G:H8	1.58	0.68
11:C:156:SER:O	11:C:195:GLY:HA3	1.93	0.68
12:D:3:GLY:C	12:D:4:LEU:HD13	2.19	0.68
12:D:140:HIS:O	12:D:141:ARG:HG2	1.92	0.68
13:E:6:LYS:HZ2	13:E:8:ALA:HB2	1.57	0.68
17:I:1:ALA:N	17:I:3:LYS:HE2	2.09	0.68
24:P:47:ILE:CG2	24:P:48:ALA:H	2.02	0.68
8:9:134:VAL:CG2	8:9:159:PHE:HB3	2.22	0.68
8:9:169:VAL:HG12	8:9:170:ASP:N	2.08	0.68
10:B:1099:G:OP1	17:I:4:VAL:HG12	1.94	0.68
10:B:1197:G:H2'	10:B:1198:U:H6	1.59	0.68
10:B:1799:G:H4'	10:B:1800:C:O5'	1.92	0.68
11:C:216:ARG:HB3	11:C:217:PRO:CD	2.23	0.68
16:H:129:GLU:HA	16:H:143:ILE:HA	1.75	0.68
17:I:9:LYS:HG2	17:I:57:VAL:HG22	1.74	0.68
18:J:15:TRP:CB	18:J:139:VAL:HA	2.19	0.68
18:J:41:LYS:HG2	25:Q:63:ARG:NH1	2.08	0.68
20:L:78:ARG:NE	20:L:113:ALA:HB1	2.08	0.68
20:L:79:LEU:HD11	20:L:112:LEU:HD23	1.73	0.68
22:N:86:ARG:NE	22:N:117:ASP:HA	2.08	0.68
1:0:27:LEU:HD22	1:0:27:LEU:N	2.09	0.68
3:2:25:LYS:HG2	10:B:1368:G:H5'	1.74	0.68
7:8:63:A:H4'	8:9:383:MET:C	2.19	0.68
8:9:2:PHE:CE2	8:9:295:LEU:HD12	2.24	0.68
8:9:35:ARG:HA	8:9:38:LEU:CD1	2.23	0.68
8:9:45:LEU:O	8:9:46:PRO:C	2.35	0.68
11:C:143:VAL:HG11	11:C:173:LEU:HD11	1.74	0.68
12:D:70:LYS:H	12:D:92:VAL:HG11	1.58	0.68
13:E:143:LEU:HD22	13:E:143:LEU:N	2.08	0.68
24:P:52:ARG:HG3	24:P:52:ARG:NH1	2.09	0.68
29:U:11:ILE:HB	29:U:69:VAL:HG23	1.74	0.68
31:W:39:GLN:HG2	31:W:66:VAL:O	1.93	0.68
31:W:66:VAL:HG22	31:W:67:LYS:N	2.08	0.68
5:4:26:ILE:HD13	5:4:27:CYS:C	2.18	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:145:ILE:O	8:9:148:LEU:HG	1.92	0.68
8:9:176:LEU:HG	8:9:177:LYS:N	2.09	0.68
8:9:375:ARG:CD	8:9:375:ARG:HA	2.24	0.68
10:B:483:A:H2'	10:B:484:C:H5'	1.76	0.68
10:B:2157:G:N3	10:B:2157:G:H2'	2.09	0.68
10:B:2395:C:H2'	10:B:2396:G:O4'	1.93	0.68
10:B:2511:U:H5"	12:D:129:THR:CG2	2.22	0.68
13:E:47:LYS:HA	13:E:49:ARG:HE	1.58	0.68
14:F:56:LEU:HD13	14:F:88:VAL:HG21	1.74	0.68
26:R:40:MET:HG3	26:R:54:VAL:HG13	1.75	0.68
31:W:44:PHE:HB3	31:W:77:LYS:HB3	1.75	0.68
4:3:51:LYS:HG2	20:L:58:TYR:HE1	1.59	0.68
8:9:77:ILE:O	8:9:80:ASN:HB3	1.93	0.68
8:9:195:LEU:CD1	8:9:200:ALA:CB	2.64	0.68
8:9:202:MET:C	8:9:205:ILE:HG22	2.19	0.68
8:9:375:ARG:HH21	8:9:375:ARG:HG3	1.56	0.68
8:9:382:SER:O	8:9:383:MET:HG3	1.94	0.68
10:B:1203:U:H3'	10:B:1204:A:H5"	1.76	0.68
15:G:71:LEU:HA	15:G:74:MET:SD	2.34	0.68
15:G:95:ALA:HB1	15:G:130:ILE:HD11	1.75	0.68
8:9:145:ILE:HD13	8:9:161:PRO:CG	1.95	0.68
8:9:227:GLN:O	8:9:262:ILE:CG1	2.40	0.68
8:9:272:PHE:HD1	8:9:284:PRO:HA	1.59	0.68
10:B:1178:C:H2'	10:B:1179:G:C8	2.29	0.68
10:B:1406:U:H2'	10:B:1407:G:H8	1.58	0.68
11:C:193:GLU:O	11:C:194:VAL:HG13	1.93	0.68
14:F:98:PHE:HA	14:F:101:ARG:HG2	1.75	0.68
18:J:97:PRO:O	18:J:100:VAL:HG12	1.93	0.68
26:R:73:LYS:HD2	26:R:73:LYS:N	2.08	0.68
33:Y:2:LYS:CB	33:Y:37:ARG:HB2	2.24	0.68
6:7:65:HIS:CB	8:9:420:PHE:CE1	2.77	0.68
10:B:1028:A:H2'	10:B:1029:A:C8	2.28	0.68
12:D:77:ARG:NH1	12:D:77:ARG:HB2	2.09	0.68
18:J:41:LYS:HZ2	25:Q:63:ARG:HD2	1.57	0.68
26:R:22:LEU:HD12	26:R:23:GLU:H	1.58	0.68
27:S:46:LEU:HD23	27:S:49:LYS:HD2	1.75	0.68
8:9:17:SER:HB3	8:9:23:THR:CG2	2.24	0.68
8:9:65:ASN:O	8:9:66:LYS:O	2.12	0.68
8:9:106:ALA:CB	8:9:219:PHE:CD1	2.64	0.68
8:9:174:ALA:O	8:9:175:ALA:O	2.11	0.68
8:9:236:PHE:C	8:9:238:GLU:N	2.43	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:321:SER:O	8:9:322:LYS:CG	2.41	0.68
10:B:65:U:H2'	10:B:66:C:H6	1.58	0.68
12:D:22:ILE:HG13	12:D:22:ILE:O	1.93	0.68
12:D:62:LYS:HG2	12:D:63:PRO:HD3	1.75	0.68
15:G:17:LYS:NZ	15:G:19:ASN:HB2	2.09	0.68
15:G:36:LEU:H	15:G:36:LEU:HD12	1.58	0.68
18:J:35:ARG:HB3	18:J:54:ILE:HD11	1.76	0.68
26:R:18:GLN:H	26:R:18:GLN:CD	2.02	0.68
29:U:13:LEU:H	29:U:13:LEU:HD12	1.59	0.68
32:X:25:GLN:O	32:X:29:ARG:HG3	1.93	0.68
8:9:6:THR:O	8:9:294:ILE:CD1	2.40	0.67
8:9:382:SER:C	8:9:383:MET:HG3	2.19	0.67
10:B:160:A:N6	10:B:167:A:H1'	2.09	0.67
10:B:1174:U:H1'	10:B:1176:U:C4	2.28	0.67
11:C:76:VAL:HG13	11:C:112:GLY:HA2	1.76	0.67
15:G:15:ASP:HB2	15:G:26:LYS:HE3	1.77	0.67
22:N:86:ARG:NH2	22:N:116:VAL:HG12	2.09	0.67
26:R:68:ARG:HB2	26:R:97:LYS:HG3	1.74	0.67
33:Y:2:LYS:HB3	33:Y:6:ILE:HD13	1.74	0.67
4:3:21:PHE:HB2	4:3:48:MET:HG2	1.77	0.67
5:4:19:ARG:NH2	10:B:2755:C:H2'	2.09	0.67
8:9:43:VAL:CA	8:9:258:ALA:HB2	2.24	0.67
8:9:414:ASN:HD21	10:B:486:C:P	2.17	0.67
10:B:992:C:H4'	25:Q:46:TYR:OH	1.95	0.67
11:C:179:GLU:OE2	11:C:266:ILE:HA	1.93	0.67
17:I:55:PRO:HD3	17:I:74:PRO:HD3	1.75	0.67
26:R:78:ARG:HD3	26:R:88:GLY:O	1.94	0.67
29:U:27:VAL:HA	29:U:33:VAL:HG22	1.75	0.67
31:W:47:GLY:HA2	31:W:71:LYS:O	1.94	0.67
2:1:24:LYS:HZ3	2:1:24:LYS:HB2	1.60	0.67
8:9:17:SER:HB3	8:9:23:THR:HG22	1.77	0.67
8:9:105:MET:CB	8:9:190:ASP:HA	2.22	0.67
8:9:171:ILE:HG23	8:9:172:VAL:N	2.09	0.67
8:9:250:VAL:CG2	8:9:273:LEU:HG	2.24	0.67
8:9:270:ILE:CG2	8:9:271:LYS:H	2.05	0.67
10:B:536:G:H5"	25:Q:52:ARG:HH22	1.58	0.67
10:B:1105:U:H2'	10:B:1106:G:H8	1.58	0.67
20:L:90:VAL:H	20:L:122:VAL:HG22	1.57	0.67
34:Z:49:ARG:C	34:Z:51:VAL:H	2.01	0.67
3:2:25:LYS:HE3	10:B:1368:G:H5"	1.75	0.67
7:8:48:G:N2	8:9:382:SER:HG	1.93	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:8:75:G:H5”	7:8:76:A:OP2	1.95	0.67
8:9:42:ASP:HB2	8:9:255:ARG:CB	2.23	0.67
8:9:299:ASP:CB	8:9:300:VAL:CA	2.70	0.67
8:9:300:VAL:CB	8:9:304:ILE:HG12	2.24	0.67
10:B:1373:A:H2’	10:B:1374:G:O4’	1.95	0.67
10:B:1508:A:H5”	10:B:1509:A:N7	2.10	0.67
24:P:76:HIS:CD2	24:P:76:HIS:N	2.55	0.67
10:B:165:A:H2’	10:B:166:U:H6	1.59	0.67
10:B:630:G:H1	20:L:69:ARG:NH1	1.92	0.67
10:B:1098:A:C4	17:I:3:LYS:O	2.48	0.67
12:D:8:LYS:HZ3	24:P:5:LYS:HG3	1.57	0.67
12:D:125:TRP:CB	12:D:160:LYS:HG2	2.24	0.67
13:E:136:GLN:O	13:E:139:LYS:HG2	1.94	0.67
18:J:40:HIS:HA	25:Q:69:ARG:NH1	2.09	0.67
21:M:38:ARG:HD2	21:M:39:GLY:N	2.09	0.67
26:R:42:ALA:HB1	26:R:53:PHE:CG	2.30	0.67
29:U:38:ILE:HD13	29:U:64:ILE:HG13	1.75	0.67
5:4:2:LYS:HG2	5:4:38:GLY:HA3	1.76	0.67
6:7:64:GLN:HG2	8:9:419:GLN:HG2	0.70	0.67
7:8:75:G:C5’	7:8:76:A:OP2	2.42	0.67
10:B:773:U:H5’	10:B:774:G:OP2	1.95	0.67
10:B:1856:U:H2’	10:B:1857:G:O4’	1.94	0.67
13:E:48:THR:HG23	13:E:85:PHE:H	1.60	0.67
20:L:79:LEU:HD23	20:L:110:VAL:HB	1.75	0.67
22:N:98:LEU:HD11	22:N:114:GLU:HG2	1.76	0.67
23:O:15:ARG:HD2	23:O:18:LEU:HD12	1.77	0.67
26:R:41:ILE:HG23	26:R:43:ASN:HB2	1.77	0.67
28:T:62:VAL:HG23	28:T:63:VAL:H	1.59	0.67
32:X:4:LYS:HD2	32:X:7:ARG:HH21	1.60	0.67
2:1:40:PRO:HD2	2:1:44:GLN:O	1.95	0.67
3:2:12:ARG:HG2	3:2:46:LYS:HA	1.75	0.67
5:4:22:VAL:HG13	5:4:37:GLN:HB3	1.77	0.67
8:9:9:LEU:HB2	8:9:294:ILE:HG21	1.76	0.67
8:9:64:VAL:O	8:9:65:ASN:C	2.36	0.67
8:9:112:GLY:HA2	8:9:115:THR:OG1	1.94	0.67
8:9:153:GLU:C	8:9:155:VAL:H	2.02	0.67
8:9:364:VAL:HG13	8:9:368:MET:SD	2.24	0.67
8:9:399:LYS:HZ2	8:9:417:LEU:CD1	2.06	0.67
10:B:143:C:O5’	10:B:143:C:H6	1.78	0.67
10:B:1190:G:OP1	20:L:39:LYS:N	2.28	0.67
10:B:2328:A:H2’	10:B:2329:U:C6	2.30	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2784:U:H2'	10:B:2785:C:H6	1.60	0.67
15:G:29:ASN:HB2	15:G:78:VAL:O	1.95	0.67
16:H:122:LEU:HA	16:H:146:VAL:HG21	1.76	0.67
19:K:51:LYS:O	19:K:52:VAL:HG23	1.95	0.67
20:L:109:LYS:CG	20:L:126:ARG:HD3	2.25	0.67
1:0:36:LYS:HB2	1:0:41:HIS:HA	1.75	0.67
10:B:304:U:H2'	10:B:305:C:C6	2.29	0.67
10:B:1820:U:H3	11:C:197:ALA:CB	2.07	0.67
11:C:63:ILE:HD12	11:C:83:ASP:OD1	1.95	0.67
19:K:8:LEU:HB3	19:K:83:ALA:O	1.95	0.67
19:K:15:GLY:HA3	19:K:52:VAL:HG12	1.77	0.67
24:P:90:ALA:HB3	24:P:112:ARG:N	2.08	0.67
31:W:13:ARG:H	31:W:13:ARG:NE	1.93	0.67
8:9:5:LEU:HD22	8:9:37:ALA:CB	2.23	0.67
8:9:299:ASP:OD1	8:9:350:LEU:CB	2.43	0.67
8:9:370:ASP:C	8:9:373:LEU:CD1	2.63	0.67
8:9:377:GLU:O	8:9:378:ALA:C	2.37	0.67
10:B:974:G:H1'	10:B:975:A:C8	2.30	0.67
10:B:1459:G:O2'	10:B:1460:U:H5'	1.95	0.67
10:B:2859:G:H2'	10:B:2860:A:C8	2.30	0.67
21:M:3:GLN:HG3	21:M:6:ARG:NH1	2.10	0.67
27:S:17:VAL:O	27:S:20:VAL:HG12	1.95	0.67
27:S:46:LEU:CA	27:S:49:LYS:HB2	2.13	0.67
32:X:28:LEU:HD22	32:X:42:LEU:HG	1.76	0.67
10:B:526:A:N6	10:B:2626:C:H4'	2.10	0.67
10:B:784:G:O2'	10:B:785:G:H5"	1.95	0.67
13:E:164:LEU:O	13:E:164:LEU:HD22	1.94	0.67
13:E:183:PHE:C	13:E:185:LYS:H	2.02	0.67
19:K:21:CYS:HA	19:K:41:ILE:HD12	1.77	0.67
27:S:3:THR:OG1	27:S:57:ASN:HB2	1.94	0.67
33:Y:2:LYS:H	33:Y:37:ARG:HB3	1.60	0.67
33:Y:2:LYS:HD2	33:Y:35:VAL:HB	1.77	0.67
34:Z:59:ARG:C	34:Z:61:ASN:H	2.03	0.67
7:8:39:A:N6	8:9:398:ARG:CD	2.58	0.66
8:9:109:GLN:CD	8:9:110:GLY:N	2.53	0.66
8:9:136:SER:CB	8:9:161:PRO:HB3	2.25	0.66
8:9:193:GLY:HA3	8:9:204:GLU:OE2	1.94	0.66
8:9:339:ARG:C	8:9:341:MET:CB	2.67	0.66
10:B:864:G:O2'	10:B:865:C:H5'	1.94	0.66
10:B:1060:U:O2	10:B:1088:A:N7	2.27	0.66
10:B:1354:A:H2'	10:B:1355:G:O4'	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1531:C:H2'	10:B:1532:A:C8	2.31	0.66
21:M:5:LYS:HG3	21:M:68:PHE:CE1	2.30	0.66
22:N:41:ALA:HB1	22:N:113:ILE:HD11	1.78	0.66
1:0:32:THR:HG21	1:0:41:HIS:CE1	2.30	0.66
1:0:41:HIS:CD2	1:0:46:GLY:HA2	2.29	0.66
8:9:145:ILE:CG2	8:9:159:PHE:HE1	2.08	0.66
8:9:205:ILE:HA	8:9:208:VAL:HB	1.78	0.66
8:9:401:ARG:NH1	8:9:401:ARG:HB3	2.11	0.66
10:B:1083:U:H1'	10:B:1086:A:N6	2.10	0.66
10:B:1866:A:H2'	10:B:1867:G:O4'	1.95	0.66
12:D:89:GLU:HG2	12:D:93:GLY:O	1.95	0.66
24:P:90:ALA:H	24:P:112:ARG:HH21	1.41	0.66
25:Q:48:ASP:HA	25:Q:51:GLN:HE21	1.60	0.66
28:T:15:HIS:O	28:T:16:VAL:HB	1.93	0.66
8:9:50:GLU:O	8:9:53:ASN:HB3	1.94	0.66
8:9:148:LEU:O	8:9:149:GLU:C	2.38	0.66
8:9:338:LEU:CD2	8:9:377:GLU:HG3	2.25	0.66
8:9:361:PRO:CG	8:9:365:LYS:HZ2	2.07	0.66
10:B:1727:C:H2'	10:B:1728:C:C6	2.30	0.66
11:C:178:GLY:C	11:C:179:GLU:HG2	2.19	0.66
12:D:32:ASN:HB3	12:D:91:THR:HA	1.77	0.66
13:E:149:ILE:HD11	13:E:188:MET:N	2.11	0.66
20:L:33:ARG:HB3	26:R:85:LYS:NZ	2.11	0.66
20:L:39:LYS:HZ2	20:L:39:LYS:CA	2.08	0.66
20:L:90:VAL:H	20:L:122:VAL:CG2	2.08	0.66
22:N:11:ASN:HB3	22:N:12:ARG:HD2	1.76	0.66
27:S:64:ALA:H	27:S:110:ARG:HH21	1.41	0.66
29:U:98:ASN:O	29:U:99:SER:HB2	1.95	0.66
34:Z:25:ARG:HG3	34:Z:26:SER:H	1.60	0.66
1:0:41:HIS:HB3	1:0:46:GLY:CA	2.26	0.66
8:9:15:ASN:HD22	32:X:27:ASN:CA	2.00	0.66
8:9:73:GLU:O	8:9:74:PHE:C	2.39	0.66
8:9:152:ALA:HB2	8:9:159:PHE:CD2	2.29	0.66
8:9:235:ALA:O	8:9:236:PHE:HB3	1.94	0.66
8:9:291:ALA:O	8:9:292:SER:N	2.27	0.66
8:9:355:PRO:O	8:9:357:MET:CG	2.43	0.66
10:B:704:G:O2'	10:B:726:G:N2	2.28	0.66
10:B:950:G:H2'	10:B:951:C:C6	2.30	0.66
10:B:1006:C:H5"	18:J:34:ARG:HE	1.61	0.66
10:B:1386:C:H2'	10:B:1387:A:C8	2.30	0.66
10:B:1813:G:N3	11:C:50:THR:HG21	2.10	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C:28:PRO:HG2	11:C:79:ARG:NH2	2.11	0.66
12:D:37:VAL:HG13	12:D:42:ASN:CB	2.25	0.66
20:L:58:TYR:HA	20:L:62:PRO:HG2	1.77	0.66
20:L:78:ARG:CZ	20:L:113:ALA:HB1	2.26	0.66
22:N:34:ILE:HG22	22:N:35:LYS:H	1.59	0.66
30:V:63:ILE:H	30:V:70:ILE:CD1	2.09	0.66
4:3:12:ARG:NE	20:L:62:PRO:HB3	2.10	0.66
8:9:288:ASP:O	8:9:289:ARG:C	2.38	0.66
8:9:316:ALA:O	8:9:318:LYS:N	2.29	0.66
10:B:643:A:N6	10:B:2370:G:H1'	2.10	0.66
10:B:1241:A:H2'	10:B:1242:U:H5'	1.77	0.66
10:B:2238:G:H2'	10:B:2238:G:N3	2.11	0.66
10:B:2393:U:H5'	20:L:61:LEU:O	1.95	0.66
11:C:225:ASN:O	11:C:227:VAL:N	2.28	0.66
17:I:45:THR:CA	17:I:48:ILE:HG22	2.26	0.66
18:J:98:GLU:HG3	18:J:126:ALA:HB2	1.77	0.66
22:N:97:ILE:HA	22:N:113:ILE:HD13	1.78	0.66
3:2:17:GLY:O	3:2:19:ARG:N	2.27	0.66
8:9:104:LEU:CD2	8:9:205:ILE:HD11	2.25	0.66
8:9:105:MET:O	8:9:191:THR:HG22	1.95	0.66
8:9:246:VAL:HG12	8:9:272:PHE:H	1.59	0.66
8:9:303:LEU:CA	8:9:350:LEU:HG	2.18	0.66
10:B:64:A:H2'	10:B:65:U:C6	2.30	0.66
10:B:594:U:H2'	10:B:595:C:C6	2.29	0.66
10:B:907:G:O2'	10:B:908:C:H5'	1.96	0.66
10:B:1447:C:H2'	10:B:1448:G:H8	1.61	0.66
10:B:1794:A:H2'	10:B:1795:C:C6	2.30	0.66
10:B:2243:U:H2'	10:B:2244:U:C6	2.31	0.66
10:B:2873:A:H1'	22:N:5:LYS:O	1.96	0.66
11:C:49:THR:O	11:C:50:THR:HB	1.96	0.66
12:D:175:LEU:HD21	12:D:192:ALA:HB3	1.77	0.66
26:R:40:MET:O	26:R:40:MET:HG2	1.95	0.66
8:9:5:LEU:C	8:9:7:ASP:N	2.51	0.66
8:9:75:VAL:O	8:9:78:VAL:HG22	1.95	0.66
8:9:384:THR:HG22	8:9:387:GLU:OE1	1.95	0.66
13:E:164:LEU:HD22	13:E:164:LEU:C	2.20	0.66
15:G:41:GLU:CG	15:G:54:ARG:HH21	2.09	0.66
18:J:131:ASN:C	18:J:133:ALA:H	2.02	0.66
20:L:109:LYS:HG2	20:L:126:ARG:HH11	1.61	0.66
25:Q:69:ARG:HB3	25:Q:69:ARG:NH1	2.10	0.66
6:7:67:LYS:CE	8:9:379:ILE:HD11	2.25	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:6:THR:CG2	8:9:295:LEU:HB2	2.26	0.66
8:9:39:LEU:HD12	8:9:43:VAL:O	1.96	0.66
8:9:109:GLN:O	8:9:110:GLY:O	2.14	0.66
8:9:353:LYS:HZ1	8:9:367:GLN:HB2	1.61	0.66
10:B:117:G:H5'	10:B:126:A:H8	1.60	0.66
10:B:1594:U:H2'	10:B:1595:C:C6	2.31	0.66
10:B:2039:U:H2'	10:B:2040:G:H8	1.60	0.66
17:I:41:PHE:CE2	17:I:45:THR:HG21	2.30	0.66
18:J:73:VAL:HG11	18:J:75:TYR:CZ	2.31	0.66
20:L:3:LEU:HD23	20:L:4:ASN:H	1.59	0.66
26:R:4:VAL:O	26:R:41:ILE:HG12	1.95	0.66
34:Z:48:GLN:NE2	34:Z:49:ARG:H	1.94	0.66
2:1:45:HIS:O	2:1:46:VAL:HG12	1.96	0.66
8:9:145:ILE:O	8:9:146:LYS:C	2.39	0.66
8:9:339:ARG:O	8:9:340:GLN:C	2.38	0.66
10:B:1440:U:H2'	10:B:1441:G:C8	2.30	0.66
10:B:2008:C:H2'	10:B:2009:A:H8	1.60	0.66
18:J:96:ARG:HG3	18:J:98:GLU:OE1	1.95	0.66
21:M:20:LEU:HD13	21:M:38:ARG:HG3	1.75	0.66
25:Q:97:ILE:HG23	26:R:13:ARG:NH2	2.11	0.66
28:T:45:ALA:HA	28:T:48:GLN:HG2	1.78	0.66
7:8:75:G:C3'	7:8:76:A:P	2.84	0.66
10:B:522:A:H2'	10:B:523:C:C6	2.31	0.66
10:B:794:A:H2'	10:B:795:C:C6	2.31	0.66
11:C:20:ASN:HB2	11:C:202:ARG:HD3	1.78	0.66
16:H:115:VAL:HG22	16:H:117:LEU:H	1.59	0.66
20:L:25:SER:C	20:L:27:LEU:H	2.02	0.66
20:L:82:LEU:HD21	20:L:110:VAL:HG12	1.77	0.66
24:P:18:SER:HB2	24:P:87:ARG:CZ	2.26	0.66
25:Q:111:LYS:NZ	26:R:52:PRO:HA	2.10	0.66
7:8:75:G:H3'	7:8:76:A:P	2.36	0.65
8:9:5:LEU:CD2	8:9:34:VAL:HG13	2.20	0.65
8:9:86:MET:O	8:9:88:GLU:N	2.29	0.65
8:9:195:LEU:HD12	8:9:200:ALA:O	1.96	0.65
8:9:220:VAL:HG12	8:9:246:VAL:HG22	1.77	0.65
8:9:221:VAL:O	8:9:248:THR:N	2.29	0.65
8:9:332:ASN:N	8:9:332:ASN:CG	2.54	0.65
8:9:378:ALA:HB3	8:9:408:MET:HE1	1.76	0.65
10:B:448:U:C5'	13:E:79:ARG:HH21	2.09	0.65
24:P:63:ILE:O	24:P:72:VAL:HA	1.96	0.65
28:T:77:ARG:HG2	28:T:78:SER:H	1.60	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1:22:THR:HG21	4:3:34:LYS:HZ1	1.60	0.65
7:8:76:A:C5'	7:8:77:C:P	2.84	0.65
8:9:74:PHE:O	8:9:77:ILE:HB	1.96	0.65
8:9:178:GLU:O	8:9:181:LEU:N	2.29	0.65
8:9:286:HIS:O	8:9:287:PRO:C	2.40	0.65
8:9:424:GLN:CA	8:9:427:MET:HE2	2.19	0.65
10:B:536:G:H5'	25:Q:52:ARG:HH22	1.61	0.65
10:B:1801:A:N6	11:C:259:ASN:HD21	1.93	0.65
11:C:19:VAL:HB	11:C:205:GLY:HA2	1.79	0.65
11:C:153:LEU:C	11:C:155:ARG:H	2.05	0.65
12:D:129:THR:HA	12:D:140:HIS:CE1	2.31	0.65
16:H:26:ALA:C	16:H:28:ASN:N	2.53	0.65
28:T:17:SER:H	28:T:20:ALA:CB	2.09	0.65
4:3:2:LYS:HB2	4:3:2:LYS:NZ	2.11	0.65
4:3:7:ARG:HH11	4:3:7:ARG:HA	1.61	0.65
7:8:39:A:N3	8:9:398:ARG:NH1	2.17	0.65
8:9:233:ALA:O	8:9:236:PHE:HB3	1.96	0.65
8:9:249:LYS:HB3	8:9:252:GLY:HA3	1.78	0.65
10:B:1224:U:O3'	26:R:90:ARG:HB2	1.97	0.65
12:D:56:LYS:HD3	12:D:59:ARG:HB2	1.79	0.65
15:G:9:VAL:HG23	15:G:11:PRO:HD3	1.79	0.65
20:L:103:ILE:HB	20:L:104:GLN:NE2	2.11	0.65
22:N:70:THR:OG1	22:N:75:ILE:HD11	1.96	0.65
24:P:89:GLY:HA2	24:P:112:ARG:HH22	1.60	0.65
32:X:31:GLN:O	32:X:32:ALA:HB3	1.97	0.65
8:9:106:ALA:O	8:9:219:PHE:HA	1.96	0.65
8:9:119:LYS:O	8:9:123:PHE:HB3	1.95	0.65
8:9:171:ILE:O	8:9:174:ALA:HB3	1.97	0.65
8:9:235:ALA:O	8:9:236:PHE:CB	2.43	0.65
8:9:415:ARG:NH1	10:B:484:C:OP1	2.28	0.65
10:B:320:A:H4'	10:B:322:A:N7	2.11	0.65
10:B:1098:A:H2'	17:I:4:VAL:CA	2.26	0.65
10:B:1381:G:C2'	10:B:1382:G:H5'	2.27	0.65
10:B:1838:C:N4	10:B:1898:U:H2'	2.11	0.65
16:H:4:ILE:HD13	16:H:4:ILE:H	1.62	0.65
18:J:135:GLN:HE21	18:J:138:GLN:H	1.41	0.65
20:L:118:THR:CG2	20:L:137:ALA:HB3	2.25	0.65
21:M:16:ARG:HH22	21:M:72:PRO:HG2	1.59	0.65
2:1:16:THR:HG22	2:1:47:ILE:HD12	1.77	0.65
8:9:134:VAL:CG2	8:9:159:PHE:CB	2.74	0.65
10:B:350:G:H2'	10:B:351:C:O4'	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:615:U:O4	13:E:36:ALA:HB2	1.96	0.65
10:B:2037:A:H2'	10:B:2038:G:C8	2.32	0.65
11:C:58:LYS:HG3	11:C:58:LYS:O	1.95	0.65
12:D:5:VAL:HB	12:D:27:ILE:O	1.96	0.65
19:K:119:ALA:O	19:K:120:PRO:C	2.37	0.65
28:T:38:ALA:HB1	28:T:43:ILE:HD11	1.79	0.65
8:9:200:ALA:O	8:9:203:ASP:HB3	1.97	0.65
10:B:589:U:H2'	10:B:590:A:C8	2.31	0.65
10:B:2642:G:OP1	18:J:84:ILE:HG12	1.96	0.65
8:9:202:MET:CA	8:9:205:ILE:HG22	2.27	0.65
8:9:292:SER:O	8:9:296:GLY:O	2.14	0.65
8:9:350:LEU:CG	8:9:350:LEU:CA	2.64	0.65
10:B:455:C:N3	10:B:472:A:H2'	2.12	0.65
10:B:1654:A:H4'	22:N:1:MET:N	2.12	0.65
10:B:2064:C:H2'	10:B:2065:C:C6	2.30	0.65
11:C:27:LYS:N	11:C:28:PRO:CD	2.60	0.65
14:F:107:VAL:HG12	14:F:108:PRO:HD3	1.79	0.65
17:I:27:LEU:H	17:I:27:LEU:CD2	2.09	0.65
5:4:26:ILE:O	5:4:27:CYS:HB2	1.96	0.65
7:8:77:C:C2	7:8:78:G:C8	2.83	0.65
8:9:9:LEU:O	8:9:12:THR:HB	1.97	0.65
8:9:75:VAL:HA	8:9:78:VAL:HG22	1.77	0.65
8:9:171:ILE:HG23	8:9:172:VAL:H	1.61	0.65
8:9:422:ASP:O	8:9:423:MET:C	2.40	0.65
10:B:279:A:H2'	10:B:280:U:O4'	1.96	0.65
10:B:1178:C:H2'	10:B:1179:G:H8	1.62	0.65
10:B:1654:A:C4'	22:N:1:MET:H1	2.09	0.65
12:D:31:ALA:HA	12:D:51:THR:CA	2.21	0.65
13:E:23:PHE:C	13:E:110:SER:HB2	2.21	0.65
17:I:11:GLN:HA	17:I:55:PRO:HA	1.79	0.65
6:7:66:LYS:HE2	29:U:48:VAL:HG11	1.78	0.65
10:B:813:U:H2'	10:B:814:C:C6	2.32	0.65
10:B:1484:U:H2'	10:B:1485:U:C6	2.32	0.65
10:B:1826:G:OP2	11:C:221:GLY:HA2	1.97	0.65
10:B:2102:G:H2'	10:B:2103:C:O4'	1.97	0.65
12:D:33:ARG:HB3	12:D:89:GLU:HB2	1.78	0.65
13:E:109:LEU:HG	13:E:117:ARG:HG3	1.78	0.65
15:G:17:LYS:HZ1	15:G:19:ASN:HB2	1.61	0.65
20:L:78:ARG:HH22	20:L:80:SER:HB2	1.61	0.65
29:U:69:VAL:HG11	29:U:77:GLY:HA2	1.79	0.65
7:8:30:G:C2	7:8:78:G:C2	2.85	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:39:LEU:HA	8:9:43:VAL:HB	1.77	0.65
8:9:45:LEU:N	8:9:46:PRO:CD	2.57	0.65
8:9:125:ARG:C	8:9:127:LYS:H	2.04	0.65
8:9:287:PRO:O	8:9:288:ASP:C	2.40	0.65
8:9:293:ARG:NE	8:9:300:VAL:HG12	2.11	0.65
8:9:332:ASN:HB2	8:9:388:ARG:NE	2.11	0.65
8:9:338:LEU:O	8:9:341:MET:HB3	1.97	0.65
8:9:375:ARG:CG	8:9:375:ARG:HA	2.26	0.65
8:9:416:LEU:O	8:9:420:PHE:HD1	1.79	0.65
10:B:993:G:H21	26:R:93:PHE:HZ	1.45	0.65
10:B:2645:G:H3'	10:B:2646:C:H5'	1.79	0.65
11:C:137:GLY:C	11:C:139:THR:N	2.55	0.65
21:M:16:ARG:HE	21:M:18:ARG:HH12	1.44	0.65
22:N:2:ARG:HH21	22:N:4:ARG:HD3	1.59	0.65
26:R:39:LEU:H	26:R:61:ALA:HB1	1.62	0.65
34:Z:53:THR:HA	34:Z:56:ARG:HG2	1.79	0.65
8:9:112:GLY:O	8:9:113:LYS:C	2.40	0.64
8:9:332:ASN:HB3	8:9:388:ARG:HB2	1.79	0.64
9:A:76:G:H2'	9:A:77:U:H6	1.60	0.64
10:B:235:U:H2'	10:B:236:C:C6	2.31	0.64
10:B:704:G:H1'	10:B:727:A:H61	1.62	0.64
10:B:796:C:H2'	10:B:797:G:H8	1.62	0.64
10:B:2199:A:O3'	34:Z:34:LEU:HD22	1.97	0.64
10:B:2339:C:H2'	10:B:2340:A:C8	2.32	0.64
12:D:60:VAL:O	12:D:63:PRO:HD2	1.97	0.64
13:E:153:LEU:HD13	13:E:154:ASP:N	2.11	0.64
25:Q:24:TYR:O	25:Q:27:ARG:HB2	1.97	0.64
2:1:4:ILE:HA	2:1:27:ARG:NH1	2.12	0.64
2:1:19:PHE:HD1	2:1:20:TYR:H	1.45	0.64
7:8:75:G:HO3'	7:8:76:A:P	2.16	0.64
8:9:67:SER:CB	28:T:92:ASN:CB	2.64	0.64
8:9:95:LEU:CD2	8:9:127:LYS:HZ1	1.91	0.64
8:9:144:ALA:O	8:9:145:ILE:O	2.14	0.64
8:9:151:LEU:HD23	8:9:151:LEU:N	2.06	0.64
8:9:320:ALA:C	8:9:322:LYS:N	2.55	0.64
8:9:335:LEU:HD23	8:9:388:ARG:NH2	2.13	0.64
8:9:375:ARG:HG2	8:9:375:ARG:N	2.13	0.64
8:9:398:ARG:O	8:9:399:LYS:HB2	1.95	0.64
9:A:61:G:H2'	9:A:62:C:C6	2.31	0.64
10:B:1022:G:H8	18:J:68:LYS:HE3	1.63	0.64
10:B:1450:G:N2	10:B:1452:G:H1	1.93	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C:61:TYR:CE1	11:C:63:ILE:HD11	2.33	0.64
13:E:120:VAL:HG12	13:E:121:VAL:H	1.60	0.64
15:G:91:VAL:H	15:G:159:LYS:HZ3	1.43	0.64
8:9:17:SER:CB	8:9:23:THR:CG2	2.75	0.64
8:9:194:ARG:O	8:9:195:LEU:CA	2.45	0.64
8:9:402:ILE:O	8:9:406:CYS:SG	2.56	0.64
10:B:138:U:H2'	10:B:140:C:O4'	1.97	0.64
10:B:2537:U:H2'	10:B:2538:C:C6	2.32	0.64
13:E:147:LEU:HB3	13:E:167:VAL:HG22	1.78	0.64
14:F:132:ARG:HD3	14:F:133:GLU:N	2.12	0.64
16:H:62:LEU:O	16:H:66:ASN:HB2	1.98	0.64
20:L:110:VAL:HG22	20:L:127:VAL:HA	1.78	0.64
23:O:25:ARG:HH21	23:O:94:ARG:HH12	1.43	0.64
4:3:7:ARG:NE	10:B:250:G:OP2	2.31	0.64
8:9:7:ASP:N	8:9:7:ASP:OD1	2.29	0.64
8:9:148:LEU:HD12	8:9:149:GLU:N	2.12	0.64
8:9:179:ALA:CB	8:9:184:TYR:CD1	2.77	0.64
8:9:245:VAL:N	8:9:269:PRO:O	2.29	0.64
10:B:242:G:N2	10:B:254:G:H2'	2.12	0.64
11:C:141:HIS:CB	11:C:190:THR:HB	2.28	0.64
20:L:90:VAL:HG22	20:L:92:LEU:HD22	1.79	0.64
23:O:15:ARG:HH12	31:W:74:LYS:HG2	1.62	0.64
24:P:52:ARG:O	24:P:60:VAL:HG21	1.96	0.64
33:Y:2:LYS:H	33:Y:37:ARG:CB	2.10	0.64
8:9:23:THR:N	8:9:24:GLU:H	1.92	0.64
8:9:66:LYS:HB2	28:T:92:ASN:CB	2.16	0.64
10:B:479:A:N3	10:B:481:G:H5"	2.12	0.64
10:B:616:A:H3'	10:B:617:G:H8	1.62	0.64
10:B:1118:C:H2'	10:B:1119:U:C6	2.32	0.64
10:B:1794:A:H2'	10:B:1795:C:H6	1.62	0.64
16:H:68:ARG:HD3	16:H:71:LYS:HE2	1.80	0.64
16:H:86:ASP:C	16:H:88:GLY:H	2.05	0.64
21:M:114:ARG:O	21:M:117:PHE:HD1	1.80	0.64
32:X:51:ALA:O	32:X:53:VAL:N	2.31	0.64
34:Z:55:GLY:HA2	34:Z:59:ARG:HD2	1.80	0.64
5:4:24:ARG:HB2	5:4:36:ARG:HA	1.80	0.64
8:9:5:LEU:N	8:9:7:ASP:OD1	2.31	0.64
8:9:16:ILE:HG23	32:X:24:GLU:HB3	1.77	0.64
8:9:169:VAL:O	8:9:170:ASP:C	2.40	0.64
8:9:231:ASN:O	8:9:234:LYS:HB3	1.97	0.64
8:9:272:PHE:HB3	8:9:283:GLU:O	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:353:LYS:HE3	8:9:366:SER:HG	1.62	0.64
10:B:2339:C:H2'	10:B:2340:A:H8	1.62	0.64
16:H:76:GLU:O	16:H:77:THR:HG23	1.98	0.64
20:L:109:LYS:HG3	20:L:126:ARG:HB3	1.78	0.64
20:L:132:ARG:HH22	20:L:140:GLY:HA3	1.63	0.64
23:O:73:ALA:HA	23:O:76:LYS:NZ	2.12	0.64
26:R:67:GLY:H	26:R:98:ILE:HA	1.61	0.64
28:T:68:LYS:HB2	28:T:68:LYS:NZ	2.12	0.64
1:0:31:LYS:HB2	1:0:31:LYS:NZ	2.11	0.64
7:8:48:G:N2	8:9:381:ASN:HD21	1.95	0.64
8:9:36:MET:O	8:9:38:LEU:N	2.30	0.64
8:9:74:PHE:O	8:9:78:VAL:HG13	1.98	0.64
8:9:174:ALA:O	8:9:175:ALA:C	2.39	0.64
8:9:353:LYS:NZ	8:9:367:GLN:HB2	2.11	0.64
10:B:163:C:H2'	10:B:164:C:O4'	1.98	0.64
10:B:283:G:H2'	10:B:284:U:C6	2.32	0.64
10:B:289:G:H2'	10:B:290:U:C6	2.33	0.64
10:B:608:A:H2'	10:B:609:A:C8	2.32	0.64
10:B:1590:A:H2'	10:B:1591:A:C8	2.33	0.64
10:B:2784:U:H2'	10:B:2785:C:C6	2.31	0.64
11:C:170:TYR:O	11:C:171:VAL:HG13	1.98	0.64
11:C:259:ASN:O	11:C:261:ARG:HG3	1.97	0.64
12:D:4:LEU:HD23	12:D:77:ARG:HD3	1.78	0.64
12:D:27:ILE:HG12	12:D:185:ASN:O	1.98	0.64
12:D:52:THR:OG1	12:D:75:ALA:HB1	1.98	0.64
12:D:60:VAL:HG23	12:D:63:PRO:HD2	1.80	0.64
24:P:49:ILE:C	24:P:50:ARG:HD3	2.22	0.64
6:7:58:THR:HG21	8:9:337:GLN:CD	2.23	0.64
8:9:320:ALA:CB	8:9:323:LEU:HD21	2.27	0.64
8:9:353:LYS:HE3	8:9:366:SER:CB	2.28	0.64
8:9:400:ARG:HD3	10:B:486:C:H5'	1.79	0.64
8:9:413:VAL:CA	8:9:416:LEU:HG	2.27	0.64
10:B:374:A:N6	10:B:400:G:H1'	2.12	0.64
10:B:1219:U:OP2	25:Q:18:LYS:HE2	1.98	0.64
11:C:32:LEU:HB3	11:C:61:TYR:CE1	2.27	0.64
11:C:226:PRO:HG3	11:C:232:GLY:C	2.23	0.64
15:G:102:ILE:HD11	15:G:130:ILE:HD12	1.79	0.64
16:H:115:VAL:HB	16:H:132:PHE:HD1	1.62	0.64
17:I:63:ASP:O	17:I:64:ARG:HB2	1.97	0.64
19:K:8:LEU:HD12	19:K:8:LEU:N	2.12	0.64
19:K:108:ARG:HH22	24:P:36:LYS:H	1.45	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:R:74:ILE:O	26:R:75:VAL:HG13	1.98	0.64
34:Z:47:LYS:HB2	34:Z:51:VAL:CG1	2.27	0.64
8:9:52:ILE:O	8:9:55:VAL:HB	1.97	0.64
8:9:87:GLY:O	8:9:287:PRO:HG3	1.96	0.64
8:9:399:LYS:HZ3	8:9:417:LEU:CD1	2.10	0.64
10:B:1179:G:H2'	10:B:1180:U:C6	2.33	0.64
10:B:2783:U:H2'	10:B:2784:U:C6	2.33	0.64
11:C:107:LYS:HG2	11:C:194:VAL:HG11	1.80	0.64
11:C:136:VAL:HA	11:C:165:ALA:HA	1.80	0.64
13:E:109:LEU:HB2	13:E:117:ARG:HE	1.62	0.64
17:I:54:ILE:HD11	17:I:71:LYS:O	1.98	0.64
29:U:4:ILE:HG21	29:U:25:LYS:HB3	1.79	0.64
29:U:25:LYS:HZ3	29:U:25:LYS:HA	1.61	0.64
33:Y:43:ILE:HA	33:Y:46:MET:HB2	1.79	0.64
8:9:139:VAL:HG11	8:9:165:GLY:O	1.98	0.64
8:9:202:MET:SD	8:9:239:ALA:HB2	2.38	0.64
10:B:1410:G:H2'	10:B:1411:U:C6	2.33	0.64
17:I:105:LEU:CD1	17:I:129:GLU:HG2	2.28	0.64
19:K:71:ARG:O	19:K:72:PRO:C	2.40	0.64
27:S:23:LEU:C	27:S:24:ILE:HD13	2.23	0.64
28:T:34:VAL:HG22	28:T:35:ALA:N	2.13	0.64
4:3:12:ARG:O	4:3:13:PHE:HB2	1.98	0.63
8:9:4:ASN:HA	8:9:7:ASP:OD1	1.98	0.63
8:9:79:ARG:HA	8:9:82:LEU:CD1	2.28	0.63
8:9:416:LEU:O	8:9:420:PHE:CD1	2.51	0.63
10:B:632:A:H2'	10:B:633:A:C8	2.33	0.63
10:B:856:G:C4'	31:W:23:LYS:HD2	2.28	0.63
10:B:966:G:H5'	10:B:2272:U:O2	1.98	0.63
10:B:990:A:N6	10:B:1186:G:H1'	2.13	0.63
10:B:1098:A:C3'	17:I:3:LYS:HB3	2.28	0.63
10:B:2039:U:H2'	10:B:2040:G:C8	2.32	0.63
10:B:2309:A:H5'	10:B:2310:C:OP2	1.98	0.63
16:H:124:THR:HG23	16:H:128:HIS:HE1	1.63	0.63
26:R:49:ILE:HG13	26:R:51:VAL:HG23	1.79	0.63
28:T:17:SER:H	28:T:20:ALA:HB3	1.61	0.63
8:9:111:ALA:C	8:9:113:LYS:N	2.56	0.63
10:B:352:A:H3'	10:B:353:C:H6	1.62	0.63
10:B:1098:A:H3'	17:I:3:LYS:HB3	1.80	0.63
10:B:1151:A:H2'	10:B:1152:C:C6	2.33	0.63
10:B:2574:G:H21	12:D:147:GLY:HA3	1.62	0.63
14:F:132:ARG:NH1	14:F:147:ARG:HD3	2.12	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:M:71:LYS:O	21:M:73:ILE:N	2.32	0.63
26:R:46:GLU:HG3	26:R:51:VAL:HG21	1.81	0.63
28:T:53:VAL:HG12	28:T:93:LEU:HD21	1.79	0.63
6:7:58:THR:HG23	8:9:337:GLN:CD	2.22	0.63
8:9:131:LYS:HB2	8:9:185:ASP:H	1.62	0.63
8:9:145:ILE:CG2	8:9:159:PHE:CE1	2.78	0.63
10:B:1098:A:O5'	17:I:3:LYS:HG2	1.98	0.63
10:B:1229:C:H2'	10:B:1230:A:C8	2.33	0.63
10:B:1695:G:O2'	11:C:15:VAL:HG23	1.98	0.63
13:E:142:ALA:H	13:E:185:LYS:NZ	1.93	0.63
15:G:171:LYS:HZ2	15:G:173:ALA:HA	1.62	0.63
30:V:4:ILE:O	30:V:63:ILE:HA	1.99	0.63
8:9:32:ARG:O	8:9:35:ARG:HB3	1.99	0.63
8:9:53:ASN:CG	8:9:57:GLU:OE2	2.41	0.63
8:9:149:GLU:O	8:9:152:ALA:HB3	1.98	0.63
10:B:974:G:H1'	10:B:975:A:H8	1.63	0.63
12:D:18:ASP:C	12:D:20:VAL:H	2.07	0.63
13:E:108:ILE:HG13	13:E:109:LEU:H	1.62	0.63
13:E:134:LEU:HD22	13:E:134:LEU:H	1.64	0.63
17:I:85:ILE:HD13	17:I:137:LEU:HD21	1.78	0.63
23:O:109:ALA:O	23:O:112:GLU:HB2	1.98	0.63
29:U:51:LEU:HG	29:U:53:GLN:H	1.63	0.63
3:2:8:SER:H	10:B:1309:G:H5'	1.63	0.63
8:9:29:ASP:O	8:9:30:THR:C	2.40	0.63
8:9:151:LEU:HA	8:9:154:GLN:OE1	1.99	0.63
8:9:195:LEU:CB	8:9:200:ALA:HB3	2.27	0.63
8:9:383:MET:HB3	8:9:387:GLU:OE2	1.98	0.63
10:B:1495:A:H2'	10:B:1496:A:C8	2.34	0.63
10:B:2405:G:H1'	10:B:2412:A:H61	1.64	0.63
13:E:126:VAL:HG11	13:E:132:LYS:HZ3	1.62	0.63
14:F:29:ARG:HD2	14:F:158:THR:HG21	1.80	0.63
20:L:75:ALA:HB3	20:L:108:ALA:HA	1.80	0.63
22:N:45:ARG:NH2	22:N:113:ILE:HG23	2.03	0.63
27:S:3:THR:CG2	27:S:4:ILE:N	2.62	0.63
29:U:24:VAL:HG12	29:U:26:ASN:OD1	1.99	0.63
1:0:27:LEU:HD21	10:B:2887:A:N9	2.13	0.63
8:9:220:VAL:HG12	8:9:246:VAL:CG2	2.28	0.63
10:B:1819:A:OP1	11:C:153:LEU:HB2	1.98	0.63
13:E:10:SER:C	13:E:12:LEU:H	2.05	0.63
18:J:25:LEU:HG	18:J:64:VAL:H	1.64	0.63
24:P:49:ILE:O	24:P:50:ARG:HD3	1.99	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:154:GLN:OE1	8:9:155:VAL:HG13	1.98	0.63
8:9:177:LYS:HA	8:9:180:LYS:HB3	1.81	0.63
8:9:333:ASP:HA	8:9:333:ASP:CG	2.24	0.63
10:B:2012:G:H4'	27:S:96:ILE:HD11	1.80	0.63
10:B:2295:C:O2'	10:B:2296:U:H5'	1.99	0.63
11:C:95:TYR:HE2	11:C:101:ARG:HG3	1.64	0.63
14:F:7:TYR:CA	14:F:11:VAL:HB	2.29	0.63
21:M:28:PHE:HB2	21:M:102:LEU:HG	1.81	0.63
24:P:91:VAL:HG12	24:P:93:LYS:H	1.64	0.63
4:3:26:ALA:CB	20:L:63:LYS:HB2	2.29	0.63
8:9:39:LEU:CB	8:9:45:LEU:HD21	2.21	0.63
8:9:70:PRO:O	8:9:71:GLY:C	2.41	0.63
8:9:146:LYS:O	8:9:147:GLN:C	2.42	0.63
8:9:330:ASP:O	8:9:330:ASP:OD1	2.17	0.63
8:9:375:ARG:CG	8:9:375:ARG:N	2.61	0.63
10:B:345:A:H1'	10:B:346:A:C2	2.33	0.63
10:B:2147:A:H2'	10:B:2147:A:N3	2.14	0.63
10:B:2636:C:P	12:D:80:TRP:HE1	2.22	0.63
11:C:16:VAL:O	11:C:16:VAL:HG12	1.99	0.63
11:C:225:ASN:H	11:C:226:PRO:HD3	1.64	0.63
13:E:149:ILE:HD11	13:E:188:MET:H	1.63	0.63
14:F:173:ASP:CG	14:F:174:PHE:H	2.05	0.63
16:H:4:ILE:HG12	16:H:37:VAL:HG22	1.81	0.63
22:N:87:PHE:HB2	22:N:94:TYR:CE2	2.33	0.63
23:O:27:VAL:HG13	23:O:40:ILE:HD11	1.81	0.63
24:P:8:GLU:HA	24:P:11:GLN:HG2	1.81	0.63
26:R:64:VAL:HG22	26:R:100:GLY:HA2	1.81	0.63
31:W:44:PHE:HD2	31:W:77:LYS:HB3	1.64	0.63
34:Z:30:HIS:CE1	34:Z:49:ARG:HH12	2.17	0.63
8:9:120:LEU:HG	8:9:121:GLY:N	2.13	0.63
8:9:121:GLY:O	8:9:122:LYS:C	2.41	0.63
8:9:152:ALA:HB3	8:9:159:PHE:CE2	2.33	0.63
10:B:307:G:N2	10:B:309:A:H3'	2.14	0.63
10:B:401:A:H2'	10:B:402:A:C8	2.34	0.63
10:B:443:A:H5"	10:B:444:C:OP1	1.98	0.63
10:B:1099:G:O5'	17:I:3:LYS:C	2.42	0.63
10:B:2405:G:H1'	10:B:2412:A:N6	2.14	0.63
10:B:2800:A:H2'	10:B:2801:G:O4'	1.99	0.63
14:F:173:ASP:CG	14:F:174:PHE:N	2.55	0.63
17:I:17:ALA:C	17:I:19:PRO:HD3	2.24	0.63
27:S:9:HIS:O	27:S:10:ALA:HB3	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Y:3:THR:HA	33:Y:37:ARG:O	1.99	0.63
8:9:68:LEU:HB3	28:T:94:ASP:OD1	1.99	0.62
8:9:207:GLN:O	8:9:208:VAL:C	2.41	0.62
8:9:219:PHE:HD2	8:9:236:PHE:CD2	2.14	0.62
8:9:375:ARG:HA	8:9:375:ARG:HD2	1.79	0.62
8:9:413:VAL:HA	8:9:416:LEU:CD2	2.27	0.62
10:B:69:C:H2'	10:B:70:G:H8	1.64	0.62
10:B:2500:U:H5'	10:B:2501:C:OP2	1.99	0.62
12:D:107:VAL:HA	12:D:205:PRO:O	1.98	0.62
13:E:161:ALA:O	13:E:169:VAL:HB	1.99	0.62
18:J:59:ALA:C	18:J:61:LYS:H	2.07	0.62
19:K:71:ARG:HB3	19:K:72:PRO:HD2	1.78	0.62
28:T:60:THR:HA	28:T:82:LYS:O	1.99	0.62
3:2:35:ARG:HH22	3:2:44:VAL:HG22	1.64	0.62
6:7:59:LEU:CD1	8:9:351:MET:SD	2.85	0.62
8:9:5:LEU:HD21	8:9:34:VAL:CA	2.30	0.62
8:9:176:LEU:O	8:9:178:GLU:N	2.32	0.62
10:B:321:U:OP2	13:E:130:LYS:HG3	1.98	0.62
10:B:972:A:C3'	10:B:973:A:H5"	2.27	0.62
10:B:1406:U:H2'	10:B:1407:G:C8	2.33	0.62
10:B:1515:A:H2'	10:B:1516:G:O4'	2.00	0.62
10:B:2376:A:H1'	23:O:111:ARG:HH22	1.63	0.62
10:B:2461:A:H2'	10:B:2462:C:C6	2.34	0.62
12:D:186:LEU:HD11	24:P:5:LYS:HD3	1.80	0.62
17:I:105:LEU:HD11	17:I:139:VAL:CG2	2.28	0.62
20:L:109:LYS:HG2	20:L:126:ARG:NH1	2.14	0.62
21:M:2:LEU:HD13	21:M:47:GLU:HB3	1.80	0.62
31:W:39:GLN:CD	31:W:66:VAL:HA	2.24	0.62
32:X:25:GLN:HG2	32:X:26:PHE:N	2.12	0.62
8:9:120:LEU:HD21	8:9:188:LEU:CD2	2.18	0.62
8:9:139:VAL:HG21	8:9:167:LYS:N	2.14	0.62
8:9:340:GLN:O	8:9:344:MET:CG	2.45	0.62
10:B:1791:A:C5'	11:C:211:ARG:HE	2.11	0.62
10:B:2722:G:H2'	10:B:2723:C:C6	2.35	0.62
23:O:39:VAL:HG12	23:O:50:ALA:HB2	1.80	0.62
33:Y:38:GLU:O	33:Y:43:ILE:HG21	1.99	0.62
5:4:30:GLU:CB	5:4:33:HIS:HB2	2.23	0.62
7:8:39:A:N6	8:9:398:ARG:NE	2.40	0.62
8:9:2:PHE:CZ	8:9:295:LEU:CD2	2.80	0.62
10:B:438:G:H2'	10:B:439:A:H8	1.65	0.62
10:B:564:C:O2'	10:B:565:C:H5'	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:E:133:LEU:HD22	13:E:136:GLN:HG3	1.81	0.62
14:F:16:MET:HE2	14:F:16:MET:HA	1.81	0.62
16:H:95:GLY:O	16:H:99:ILE:HG12	2.00	0.62
17:I:32:VAL:HG22	17:I:60:VAL:CG2	2.30	0.62
22:N:24:MET:HG2	22:N:44:LEU:HD13	1.81	0.62
26:R:3:ALA:HB1	26:R:12:HIS:HB3	1.81	0.62
1:0:4:GLN:HE22	10:B:2054:A:H2'	1.63	0.62
4:3:13:PHE:CE1	20:L:58:TYR:HB3	2.34	0.62
8:9:66:LYS:CG	28:T:92:ASN:HD22	2.00	0.62
8:9:422:ASP:HA	8:9:425:ARG:HB2	1.81	0.62
8:9:424:GLN:O	8:9:425:ARG:C	2.42	0.62
10:B:453:A:H4'	10:B:472:A:N6	2.14	0.62
10:B:717:C:H3'	10:B:718:A:H5"	1.80	0.62
10:B:962:G:N2	21:M:81:ARG:HD3	2.14	0.62
10:B:2271:G:O2'	10:B:2272:U:H5'	2.00	0.62
12:D:77:ARG:HH21	12:D:79:LEU:HB2	1.65	0.62
13:E:42:GLY:HA2	13:E:89:PRO:HB3	1.81	0.62
17:I:45:THR:HA	17:I:48:ILE:CG2	2.30	0.62
21:M:33:LEU:HB3	21:M:101:VAL:CG2	2.26	0.62
22:N:28:LEU:HA	22:N:34:ILE:HD11	1.80	0.62
27:S:84:ARG:HH21	27:S:98:LYS:HZ3	1.46	0.62
4:3:42:HIS:O	4:3:43:LEU:HD12	2.00	0.62
6:7:67:LYS:O	8:9:376:MET:C	2.41	0.62
8:9:45:LEU:H	8:9:46:PRO:HD3	1.64	0.62
8:9:300:VAL:CB	8:9:304:ILE:H	2.12	0.62
10:B:633:A:O5'	10:B:633:A:H8	1.82	0.62
10:B:1201:U:H2'	10:B:1202:G:C8	2.34	0.62
10:B:1454:C:H5'	22:N:63:ARG:HD2	1.82	0.62
10:B:1460:U:H5"	10:B:1461:C:C6	2.35	0.62
10:B:1484:U:H2'	10:B:1485:U:H6	1.64	0.62
10:B:1790:C:P	11:C:219:VAL:HB	2.40	0.62
10:B:2228:G:N2	34:Z:32:LEU:HD11	2.15	0.62
10:B:2250:G:C6	21:M:81:ARG:HG2	2.33	0.62
16:H:66:ASN:HA	16:H:138:VAL:HG22	1.81	0.62
18:J:7:LYS:NZ	18:J:45:THR:HG21	2.14	0.62
27:S:68:ASP:HB2	27:S:69:LEU:HD22	1.81	0.62
31:W:36:ILE:HD12	31:W:37:VAL:H	1.64	0.62
32:X:18:LEU:O	32:X:22:LEU:HB2	2.00	0.62
8:9:16:ILE:HG13	32:X:28:LEU:HD12	1.81	0.62
8:9:45:LEU:HD23	8:9:48:VAL:HG21	1.82	0.62
8:9:179:ALA:CA	8:9:184:TYR:CD1	2.78	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:299:ASP:HA	8:9:300:VAL:N	2.15	0.62
8:9:303:LEU:CA	8:9:350:LEU:CD1	2.69	0.62
10:B:1412:U:H2'	10:B:1413:A:C8	2.35	0.62
10:B:1818:U:H5"	11:C:155:ARG:CG	2.29	0.62
11:C:139:THR:HA	11:C:193:GLU:OE1	2.00	0.62
13:E:39:ALA:O	13:E:41:GLN:HG2	1.99	0.62
13:E:189:THR:C	13:E:191:ASP:H	2.06	0.62
16:H:11:ASN:HD22	16:H:20:ASN:ND2	1.97	0.62
19:K:94:PRO:HG3	19:K:114:LYS:HB3	1.80	0.62
27:S:3:THR:O	27:S:4:ILE:O	2.18	0.62
2:1:49:LYS:H	2:1:49:LYS:NZ	1.95	0.62
8:9:32:ARG:CA	8:9:35:ARG:HB3	2.30	0.62
8:9:125:ARG:NH2	8:9:130:LYS:O	2.30	0.62
8:9:137:ALA:CB	8:9:189:VAL:HG12	2.29	0.62
8:9:257:GLY:O	8:9:258:ALA:C	2.41	0.62
8:9:429:LYS:O	8:9:429:LYS:CG	2.43	0.62
9:A:5:U:H2'	9:A:6:G:C8	2.35	0.62
10:B:19:A:OP1	25:Q:22:GLY:HA2	1.99	0.62
10:B:139:U:P	10:B:139:U:H3'	2.40	0.62
10:B:396:G:H5'	34:Z:11:GLU:HG3	1.80	0.62
10:B:2071:A:H2'	10:B:2072:C:C6	2.34	0.62
10:B:2557:G:H2'	10:B:2558:C:C6	2.35	0.62
10:B:2789:C:H2'	10:B:2893:A:N7	2.14	0.62
12:D:11:MET:O	12:D:22:ILE:HD12	2.00	0.62
13:E:47:LYS:HD2	13:E:52:VAL:HG23	1.80	0.62
13:E:136:GLN:HA	13:E:139:LYS:HG2	1.82	0.62
16:H:89:LYS:HA	16:H:123:ARG:O	2.00	0.62
18:J:49:ASP:HA	18:J:114:LEU:HD11	1.81	0.62
25:Q:92:LYS:C	25:Q:93:ILE:HG23	2.24	0.62
27:S:7:HIS:HD2	27:S:10:ALA:HB2	1.63	0.62
29:U:43:LYS:HG2	29:U:57:ILE:HB	1.81	0.62
8:9:109:GLN:NE2	8:9:110:GLY:H	1.98	0.62
8:9:193:GLY:HA3	8:9:204:GLU:CD	2.24	0.62
8:9:231:ASN:O	8:9:232:THR:C	2.43	0.62
9:A:52:A:H2'	9:A:53:A:H8	1.65	0.62
10:B:401:A:H2'	10:B:402:A:H8	1.64	0.62
10:B:448:U:H5"	13:E:79:ARG:HH21	1.65	0.62
10:B:969:G:H2'	10:B:970:U:C6	2.35	0.62
10:B:2147:A:H4'	10:B:2148:G:H8	1.64	0.62
10:B:2562:U:H1'	19:K:23:LYS:HE2	1.82	0.62
11:C:127:ASN:ND2	11:C:128:THR:H	1.93	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:D:48:ILE:HA	12:D:79:LEU:O	1.99	0.62
17:I:71:LYS:HB3	17:I:115:ASP:OD2	2.00	0.62
17:I:121:ILE:HD13	17:I:121:ILE:H	1.65	0.62
21:M:131:VAL:HG22	21:M:133:LYS:H	1.64	0.62
29:U:10:VAL:HG11	29:U:25:LYS:HE3	1.80	0.62
1:0:27:LEU:H	1:0:27:LEU:CD2	2.13	0.62
4:3:11:LYS:O	4:3:12:ARG:HB2	1.98	0.62
8:9:307:ILE:O	8:9:311:VAL:N	2.33	0.62
10:B:181:A:H1'	10:B:435:C:H5'	1.80	0.62
10:B:383:C:N4	10:B:385:C:H2'	2.15	0.62
10:B:479:A:O2'	10:B:481:G:H5'	2.00	0.62
10:B:587:C:C3'	20:L:29:LYS:HD2	2.20	0.62
10:B:1381:G:H2'	10:B:1382:G:H5'	1.82	0.62
10:B:1442:U:H2'	10:B:1443:U:C6	2.35	0.62
10:B:1568:G:OP1	11:C:61:TYR:HB2	2.00	0.62
10:B:2415:G:H4'	20:L:66:PHE:HB2	1.81	0.62
11:C:20:ASN:HB2	11:C:202:ARG:CD	2.30	0.62
16:H:72:ILE:HG12	16:H:108:VAL:HG21	1.81	0.62
22:N:102:PHE:CZ	22:N:104:ALA:HB2	2.35	0.62
4:3:12:ARG:HE	4:3:23:HIS:HB2	1.60	0.61
8:9:119:LYS:CA	8:9:122:LYS:HB3	2.28	0.61
8:9:141:ARG:NH1	8:9:142:PRO:HG2	2.15	0.61
10:B:1117:C:H1'	21:M:136:MET:HE1	1.80	0.61
10:B:2704:C:H2'	10:B:2705:A:O4'	1.99	0.61
10:B:2814:A:H2'	10:B:2815:C:H6	1.64	0.61
14:F:9:ASP:O	14:F:10:GLU:HB2	2.00	0.61
18:J:64:VAL:HG12	18:J:65:THR:N	2.12	0.61
25:Q:63:ARG:HB2	25:Q:95:ALA:HB1	1.82	0.61
26:R:85:LYS:O	26:R:86:GLN:HG3	2.00	0.61
27:S:40:ASN:O	27:S:41:LYS:HB3	1.99	0.61
29:U:13:LEU:HD21	29:U:69:VAL:HG13	1.82	0.61
32:X:17:GLU:HA	32:X:21:LEU:HB2	1.82	0.61
34:Z:1:MET:HA	34:Z:9:TYR:CZ	2.34	0.61
4:3:18:LYS:HG2	10:B:651:G:OP1	1.99	0.61
8:9:2:PHE:O	8:9:3:ASP:C	2.42	0.61
8:9:359:GLN:O	8:9:361:PRO:HD3	1.99	0.61
10:B:289:G:H2'	10:B:290:U:H6	1.66	0.61
10:B:845:A:C2	10:B:847:U:H1'	2.35	0.61
10:B:1199:U:O2'	25:Q:2:ARG:HB2	2.00	0.61
10:B:2336:A:H1'	10:B:2337:G:OP1	2.00	0.61
10:B:2813:A:H2'	10:B:2814:A:C8	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C:10:PRO:HB2	11:C:202:ARG:NH1	2.08	0.61
12:D:69:ALA:HB2	12:D:90:PHE:HB2	1.82	0.61
12:D:153:GLY:C	12:D:155:VAL:H	2.08	0.61
14:F:167:ALA:HA	14:F:170:ALA:HB3	1.82	0.61
15:G:171:LYS:NZ	15:G:173:ALA:HA	2.14	0.61
20:L:79:LEU:H	20:L:113:ALA:CB	2.13	0.61
21:M:41:LEU:CB	21:M:93:VAL:HB	2.30	0.61
33:Y:50:VAL:HG12	33:Y:53:MET:HG2	1.83	0.61
8:9:179:ALA:HA	8:9:184:TYR:CE1	2.36	0.61
10:B:93:G:H2'	10:B:94:A:O4'	1.99	0.61
10:B:414:C:H2'	10:B:415:A:H8	1.65	0.61
10:B:2360:G:H1'	20:L:61:LEU:HD11	1.80	0.61
15:G:70:LEU:O	15:G:74:MET:HG3	2.01	0.61
20:L:58:TYR:HA	20:L:62:PRO:CG	2.31	0.61
30:V:9:ARG:HH22	30:V:16:ALA:HB1	1.65	0.61
4:3:46:LYS:HD2	4:3:47:ALA:H	1.66	0.61
8:9:7:ASP:C	8:9:9:LEU:N	2.53	0.61
8:9:150:THR:HB	8:9:151:LEU:CD2	2.27	0.61
8:9:195:LEU:N	8:9:195:LEU:C	2.56	0.61
8:9:339:ARG:C	8:9:341:MET:HB2	2.25	0.61
10:B:1590:A:H2'	10:B:1591:A:H8	1.64	0.61
11:C:20:ASN:C	11:C:202:ARG:HD2	2.23	0.61
26:R:5:PHE:HB3	26:R:12:HIS:CE1	2.35	0.61
34:Z:37:CYS:SG	34:Z:39:LYS:HB2	2.41	0.61
3:2:12:ARG:CG	3:2:46:LYS:HA	2.29	0.61
8:9:53:ASN:OD1	8:9:57:GLU:OE1	2.17	0.61
8:9:398:ARG:HB3	8:9:398:ARG:NH1	2.03	0.61
10:B:79:C:O2'	10:B:346:A:H1'	2.01	0.61
10:B:925:A:O2'	10:B:926:G:H5'	2.01	0.61
10:B:2502:G:H5'	10:B:2503:A:C5'	2.31	0.61
11:C:27:LYS:HG2	11:C:81:GLU:CA	2.31	0.61
11:C:48:ILE:CG2	11:C:49:THR:H	2.11	0.61
12:D:129:THR:HG23	12:D:130:GLN:H	1.65	0.61
20:L:108:ALA:C	20:L:109:LYS:HD3	2.25	0.61
20:L:125:LEU:O	20:L:127:VAL:HG13	2.00	0.61
21:M:41:LEU:HD22	21:M:95:LEU:HD13	1.83	0.61
27:S:82:MET:HG3	27:S:83:LYS:N	2.14	0.61
12:D:128:ARG:HD3	12:D:128:ARG:N	2.15	0.61
1:0:51:ARG:HG3	1:0:55:ALA:HB2	1.83	0.61
4:3:49:VAL:HG22	4:3:50:SER:N	2.13	0.61
7:8:30:G:N3	7:8:78:G:N3	2.49	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:23:THR:N	8:9:24:GLU:N	2.42	0.61
8:9:53:ASN:O	8:9:56:LYS:N	2.34	0.61
10:B:337:C:H2'	10:B:338:G:O4'	2.01	0.61
10:B:873:C:H2'	10:B:874:G:H8	1.65	0.61
10:B:2147:A:H4'	10:B:2148:G:C8	2.35	0.61
10:B:2774:C:H2'	10:B:2775:G:O4'	2.01	0.61
10:B:2834:G:H1'	10:B:2883:A:N6	2.15	0.61
12:D:146:ILE:HG12	12:D:155:VAL:HG13	1.83	0.61
15:G:125:PRO:HG2	15:G:129:GLU:HB3	1.83	0.61
20:L:109:LYS:HB2	20:L:109:LYS:HZ2	1.64	0.61
20:L:120:VAL:HG12	20:L:122:VAL:HG23	1.82	0.61
23:O:25:ARG:HE	23:O:94:ARG:HH12	1.47	0.61
26:R:81:LYS:O	26:R:83:TYR:N	2.33	0.61
30:V:16:ALA:N	30:V:19:ARG:HH21	1.98	0.61
5:4:2:LYS:HD2	10:B:2526:G:N2	2.13	0.61
8:9:6:THR:HG22	8:9:295:LEU:HB2	1.80	0.61
8:9:146:LYS:CG	8:9:147:GLN:H	2.04	0.61
8:9:313:ARG:C	8:9:315:GLN:N	2.52	0.61
10:B:65:U:H2'	10:B:66:C:C6	2.35	0.61
10:B:179:C:H2'	10:B:180:G:O4'	2.01	0.61
10:B:448:U:O4	10:B:583:G:H1'	2.01	0.61
10:B:1188:U:H4'	26:R:84:ARG:HD3	1.83	0.61
11:C:110:LYS:HA	11:C:110:LYS:HE3	1.83	0.61
11:C:128:THR:HA	11:C:189:ALA:O	2.00	0.61
19:K:93:GLN:HG2	19:K:94:PRO:HD2	1.83	0.61
23:O:66:GLY:N	23:O:70:ALA:HB2	2.13	0.61
34:Z:65:ASN:ND2	34:Z:65:ASN:H	1.99	0.61
8:9:378:ALA:HB3	8:9:408:MET:HE2	1.65	0.61
10:B:361:G:O2'	10:B:362:A:H5'	2.01	0.61
10:B:930:G:H1'	33:Y:24:LEU:HD12	1.83	0.61
14:F:132:ARG:HH12	14:F:147:ARG:HD3	1.66	0.61
16:H:108:VAL:HG12	16:H:110:VAL:HB	1.82	0.61
19:K:35:VAL:HG21	19:K:69:VAL:HG22	1.83	0.61
19:K:64:ARG:HD2	19:K:102:PRO:O	2.00	0.61
21:M:71:LYS:HA	21:M:71:LYS:HZ2	1.66	0.61
1:0:42:ILE:HG23	1:0:42:ILE:O	2.00	0.61
4:3:51:LYS:HG2	20:L:58:TYR:CE1	2.36	0.61
7:8:89:A:H2'	7:8:90:G:C8	2.36	0.61
8:9:53:ASN:ND2	8:9:57:GLU:OE2	2.33	0.61
8:9:58:LYS:CB	8:9:62:HIS:CE1	2.84	0.61
8:9:332:ASN:HB3	8:9:388:ARG:CB	2.31	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2204:G:O5'	11:C:149:LYS:HE3	2.01	0.61
12:D:50:VAL:HG11	12:D:75:ALA:HB3	1.82	0.61
14:F:21:TYR:HB3	14:F:26:GLN:OE1	2.01	0.61
21:M:119:LEU:HD22	21:M:119:LEU:H	1.64	0.61
23:O:51:ALA:O	23:O:52:SER:HB3	1.98	0.61
23:O:86:GLY:O	23:O:87:ILE:HD13	2.01	0.61
26:R:67:GLY:H	26:R:98:ILE:CA	2.14	0.61
29:U:33:VAL:HG23	29:U:65:GLN:HE21	1.66	0.61
1:0:27:LEU:HG	10:B:2886:A:C8	2.36	0.60
4:3:32:LEU:HD13	4:3:33:THR:H	1.65	0.60
8:9:15:ASN:O	32:X:24:GLU:HA	2.00	0.60
8:9:66:LYS:CE	28:T:92:ASN:ND2	2.61	0.60
8:9:68:LEU:HB3	28:T:94:ASP:CG	2.25	0.60
8:9:256:GLY:O	8:9:257:GLY:C	2.42	0.60
8:9:362:ASP:HB2	8:9:365:LYS:HE3	1.83	0.60
8:9:413:VAL:HA	8:9:416:LEU:HD21	1.83	0.60
10:B:664:G:H2'	10:B:665:U:H6	1.65	0.60
10:B:1082:U:O4	10:B:1086:A:C2	2.54	0.60
10:B:2591:C:H2'	10:B:2592:G:C8	2.35	0.60
11:C:226:PRO:HG3	11:C:232:GLY:O	2.00	0.60
12:D:11:MET:HG3	12:D:12:THR:H	1.65	0.60
14:F:55:ASP:O	14:F:59:ILE:HB	2.01	0.60
16:H:122:LEU:HD13	16:H:146:VAL:HG13	1.82	0.60
19:K:43:ILE:H	19:K:43:ILE:HD12	1.66	0.60
24:P:89:GLY:HA2	24:P:112:ARG:NH2	2.15	0.60
26:R:66:HIS:HA	26:R:98:ILE:HD13	1.83	0.60
27:S:31:GLN:O	27:S:35:ILE:HG13	2.01	0.60
29:U:17:ASP:OD2	29:U:20:LYS:HB2	2.01	0.60
29:U:28:LEU:HD21	29:U:32:LYS:N	2.16	0.60
33:Y:3:THR:O	33:Y:36:GLU:HA	2.01	0.60
2:1:47:ILE:HG22	2:1:48:TYR:N	2.06	0.60
6:7:61:VAL:HG23	8:9:423:MET:CE	2.31	0.60
8:9:131:LYS:HB2	8:9:185:ASP:N	2.16	0.60
8:9:236:PHE:O	8:9:237:ASN:C	2.44	0.60
10:B:380:G:O2'	34:Z:13:THR:HB	2.01	0.60
10:B:543:G:H2'	10:B:544:C:H4'	1.82	0.60
10:B:833:A:H2'	10:B:834:G:C8	2.36	0.60
10:B:1013:C:H2'	10:B:1014:A:H8	1.66	0.60
10:B:1099:G:P	17:I:4:VAL:N	2.71	0.60
10:B:1485:U:H2'	10:B:1486:U:H6	1.66	0.60
14:F:67:THR:OG1	14:F:85:GLY:HA3	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:F:140:ILE:HG22	14:F:142:TYR:H	1.65	0.60
16:H:90:LEU:HD22	16:H:122:LEU:HB3	1.83	0.60
24:P:23:ASP:O	24:P:25:VAL:N	2.34	0.60
31:W:42:THR:H	31:W:65:LYS:HG2	1.66	0.60
1:0:21:LEU:HD13	27:S:23:LEU:HB2	1.83	0.60
8:9:116:SER:O	8:9:117:VAL:C	2.44	0.60
8:9:320:ALA:HB2	8:9:323:LEU:HD21	1.82	0.60
8:9:364:VAL:CA	8:9:368:MET:HB3	2.30	0.60
10:B:594:U:H2'	10:B:595:C:H6	1.66	0.60
10:B:782:A:O2'	11:C:223:ALA:HB1	2.02	0.60
10:B:1405:U:H2'	10:B:1406:U:C6	2.36	0.60
10:B:2895:G:H2'	10:B:2896:C:H6	1.67	0.60
13:E:108:ILE:HG22	13:E:180:LEU:HD13	1.82	0.60
17:I:100:ILE:O	17:I:139:VAL:HA	2.01	0.60
24:P:7:LEU:HA	24:P:10:GLU:CD	2.27	0.60
24:P:32:VAL:HA	24:P:42:PHE:CB	2.29	0.60
31:W:19:ARG:HB3	31:W:35:ILE:HG13	1.82	0.60
4:3:7:ARG:NH1	4:3:10:ALA:HB3	2.16	0.60
8:9:21:ARG:HH21	32:X:16:THR:CG2	2.14	0.60
8:9:179:ALA:O	8:9:183:PHE:N	2.35	0.60
8:9:293:ARG:CG	8:9:298:GLY:HA2	2.17	0.60
10:B:388:G:N7	10:B:390:U:H2'	2.15	0.60
10:B:460:A:H2'	10:B:461:C:O4'	2.00	0.60
10:B:849:A:H2'	10:B:850:U:C6	2.35	0.60
10:B:850:U:H2'	10:B:851:C:C6	2.36	0.60
10:B:906:U:H4'	21:M:26:VAL:CG1	2.31	0.60
10:B:2639:A:H2'	10:B:2640:G:O4'	2.02	0.60
10:B:2722:G:O2'	22:N:4:ARG:CD	2.49	0.60
10:B:2820:A:C5	12:D:197:THR:HB	2.36	0.60
12:D:152:PRO:HB2	12:D:154:LYS:HE2	1.83	0.60
17:I:7:TYR:CZ	17:I:57:VAL:HG11	2.36	0.60
22:N:66:ALA:O	22:N:70:THR:HG22	2.01	0.60
24:P:27:VAL:HG22	24:P:28:LYS:C	2.26	0.60
24:P:64:SER:HB2	24:P:71:ARG:CD	2.30	0.60
27:S:46:LEU:HA	27:S:49:LYS:CB	2.15	0.60
4:3:4:LYS:HE3	4:3:61:LEU:H	1.65	0.60
6:7:67:LYS:HD3	8:9:413:VAL:H	1.64	0.60
8:9:17:SER:O	32:X:24:GLU:OE2	2.18	0.60
8:9:102:VAL:HG11	8:9:214:PRO:CA	2.30	0.60
8:9:260:LEU:HD12	8:9:261:SER:H	1.67	0.60
8:9:301:LEU:O	8:9:304:ILE:HB	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:379:ILE:HG21	8:9:402:ILE:HG21	1.80	0.60
10:B:287:G:H2'	10:B:288:U:C6	2.37	0.60
10:B:1098:A:N3	17:I:3:LYS:O	2.35	0.60
10:B:1779:U:H5	10:B:1784:A:N7	2.00	0.60
11:C:140:VAL:HA	11:C:191:LEU:HA	1.84	0.60
13:E:169:VAL:HG13	13:E:170:ARG:N	2.13	0.60
14:F:83:PRO:C	14:F:84:ILE:HG13	2.24	0.60
20:L:18:ARG:C	20:L:19:LEU:HD13	2.27	0.60
20:L:126:ARG:O	20:L:127:VAL:HG22	2.01	0.60
21:M:29:GLY:N	21:M:102:LEU:HD12	2.14	0.60
24:P:27:VAL:HG13	24:P:29:VAL:HG23	1.82	0.60
34:Z:59:ARG:O	34:Z:60:PHE:HB3	1.98	0.60
4:3:51:LYS:HA	4:3:51:LYS:NZ	2.16	0.60
8:9:81:GLU:OE1	8:9:81:GLU:HA	2.00	0.60
10:B:6:A:H4'	18:J:133:ALA:O	2.02	0.60
10:B:30:G:H2'	10:B:31:C:C6	2.36	0.60
10:B:184:C:H2'	10:B:185:G:H8	1.66	0.60
10:B:1259:G:H2'	10:B:1260:A:H8	1.65	0.60
14:F:40:GLY:H	14:F:84:ILE:CG2	2.15	0.60
16:H:114:GLU:HB3	16:H:133:GLN:NE2	2.10	0.60
17:I:85:ILE:CD1	17:I:137:LEU:HD21	2.32	0.60
24:P:59:THR:HG23	24:P:76:HIS:CD2	2.37	0.60
24:P:59:THR:HG23	24:P:76:HIS:NE2	2.16	0.60
24:P:69:VAL:HG13	24:P:70:GLU:H	1.67	0.60
25:Q:39:ILE:HA	25:Q:43:GLN:HB3	1.84	0.60
26:R:92:TRP:O	26:R:93:PHE:HB2	2.00	0.60
31:W:38:ARG:HE	31:W:40:ARG:HA	1.65	0.60
1:0:41:HIS:NE2	1:0:42:ILE:HG22	2.17	0.60
8:9:79:ARG:O	8:9:80:ASN:C	2.43	0.60
8:9:335:LEU:O	8:9:338:LEU:HB3	2.02	0.60
10:B:878:A:N3	10:B:878:A:H2'	2.15	0.60
10:B:899:A:H3'	10:B:900:A:C8	2.34	0.60
10:B:921:C:H2'	10:B:922:C:H6	1.67	0.60
10:B:1162:G:O2'	10:B:1163:G:H5'	2.01	0.60
10:B:1176:U:H2'	10:B:1177:G:C8	2.36	0.60
10:B:1181:U:H2'	10:B:1182:G:C8	2.35	0.60
10:B:1676:A:H2'	10:B:1677:A:O4'	2.01	0.60
12:D:116:LYS:CB	12:D:165:MET:HG3	2.31	0.60
13:E:50:ALA:C	13:E:74:LYS:HZ2	2.09	0.60
13:E:148:ILE:CA	13:E:185:LYS:HB3	2.27	0.60
14:F:151:LEU:HG	14:F:153:ILE:HG13	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:H:26:ALA:HB3	16:H:31:VAL:HG23	1.83	0.60
19:K:33:ALA:HB2	19:K:39:ILE:HD11	1.84	0.60
21:M:131:VAL:HG22	21:M:132:THR:H	1.66	0.60
26:R:85:LYS:C	26:R:86:GLN:HG3	2.27	0.60
26:R:89:HIS:O	26:R:90:ARG:HG3	2.02	0.60
27:S:64:ALA:HB1	27:S:69:LEU:HD21	1.83	0.60
32:X:7:ARG:HB3	32:X:7:ARG:NH1	2.16	0.60
5:4:10:LEU:HB2	5:4:25:VAL:CG2	2.31	0.60
8:9:323:LEU:C	8:9:324:LYS:CG	2.62	0.60
10:B:139:U:H3'	10:B:139:U:OP2	2.02	0.60
10:B:165:A:H2'	10:B:166:U:C6	2.35	0.60
10:B:374:A:H61	10:B:400:G:H1'	1.66	0.60
10:B:598:U:H2'	10:B:599:A:H8	1.66	0.60
10:B:898:C:O2'	10:B:899:A:H5"	2.01	0.60
10:B:1019:U:O2'	10:B:1020:A:H5'	2.02	0.60
10:B:2281:A:H62	31:W:3:LYS:HD2	1.66	0.60
17:I:23:VAL:HG12	17:I:27:LEU:HD21	1.84	0.60
27:S:22:ASP:C	27:S:24:ILE:H	2.10	0.60
28:T:21:SER:H	28:T:24:MET:CE	2.15	0.60
31:W:48:ALA:HA	31:W:54:ARG:H	1.67	0.60
31:W:56:HIS:CD2	31:W:57:THR:H	2.20	0.60
33:Y:6:ILE:CG1	33:Y:35:VAL:H	2.13	0.60
1:0:45:ASP:HA	1:0:55:ALA:HA	1.83	0.60
8:9:64:VAL:HG21	8:9:73:GLU:HB3	1.79	0.60
8:9:66:LYS:HD2	28:T:92:ASN:CA	2.25	0.60
10:B:90:U:H3'	10:B:91:A:H5"	1.84	0.60
10:B:224:U:O4	10:B:420:C:H5'	2.02	0.60
10:B:301:G:H3'	10:B:335:C:OP2	2.02	0.60
10:B:659:G:H21	13:E:30:GLN:NE2	2.00	0.60
10:B:920:A:H2'	10:B:921:C:C6	2.36	0.60
10:B:936:A:H2'	10:B:937:C:H6	1.66	0.60
10:B:947:A:H2'	10:B:948:C:C6	2.37	0.60
10:B:1099:G:C4'	17:I:3:LYS:C	2.75	0.60
10:B:1327:A:H2'	10:B:1328:A:O4'	2.02	0.60
10:B:1548:A:H2'	10:B:1549:A:H8	1.66	0.60
10:B:2741:A:H2'	10:B:2742:G:O4'	2.02	0.60
11:C:79:ARG:HD2	11:C:110:LYS:HE2	1.84	0.60
11:C:136:VAL:CA	11:C:165:ALA:HA	2.31	0.60
12:D:117:GLY:HA3	22:N:1:MET:HA	1.82	0.60
14:F:35:LEU:HD11	14:F:60:SER:HB3	1.83	0.60
22:N:26:GLY:HA2	22:N:75:ILE:HD13	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:P:47:ILE:HG23	24:P:63:ILE:CG2	2.30	0.60
24:P:51:ASN:C	24:P:60:VAL:HG11	2.27	0.60
25:Q:9:ALA:O	25:Q:12:ARG:HB3	2.01	0.60
27:S:46:LEU:O	27:S:50:VAL:HG13	2.01	0.60
6:7:54:ILE:CD1	8:9:311:VAL:HG11	2.27	0.60
8:9:104:LEU:HD11	8:9:208:VAL:HG12	1.83	0.60
8:9:131:LYS:CB	8:9:184:TYR:HD2	2.15	0.60
8:9:416:LEU:HD12	8:9:417:LEU:H	1.67	0.60
10:B:171:U:H2'	10:B:172:A:C8	2.37	0.60
10:B:352:A:H3'	10:B:353:C:C6	2.36	0.60
10:B:455:C:H42	10:B:472:A:H2'	1.67	0.60
10:B:639:U:H2'	10:B:640:C:C6	2.36	0.60
10:B:1203:U:H3'	10:B:1204:A:C5'	2.31	0.60
10:B:1429:G:H2'	10:B:1430:G:H8	1.66	0.60
10:B:1854:A:H62	10:B:1888:G:H8	1.50	0.60
10:B:1857:G:H1'	10:B:1885:A:N6	2.16	0.60
10:B:1874:C:H2'	10:B:1875:G:O4'	2.01	0.60
11:C:86:ARG:C	11:C:155:ARG:HH12	2.10	0.60
12:D:31:ALA:HB3	12:D:95:SER:CB	2.32	0.60
12:D:49:GLN:O	12:D:49:GLN:HG2	2.02	0.60
12:D:181:ASP:CG	12:D:184:ARG:HB3	2.27	0.60
13:E:14:VAL:HG12	13:E:15:SER:H	1.66	0.60
14:F:100:GLU:C	14:F:102:LEU:H	2.08	0.60
18:J:100:VAL:HG22	18:J:101:ILE:H	1.67	0.60
21:M:53:MET:HA	21:M:112:LEU:HD21	1.83	0.60
22:N:96:ARG:O	22:N:113:ILE:HA	2.02	0.60
26:R:63:VAL:HG13	26:R:64:VAL:N	2.17	0.60
32:X:50:VAL:O	32:X:54:LYS:HB2	2.02	0.60
33:Y:45:GLY:HA2	33:Y:48:ASN:ND2	2.17	0.60
34:Z:59:ARG:CB	34:Z:63:ARG:HB2	2.29	0.60
2:1:8:ILE:HG21	2:1:27:ARG:HD3	1.83	0.59
8:9:257:GLY:O	8:9:260:LEU:HG	2.02	0.59
10:B:189:G:H2'	10:B:205:G:N2	2.17	0.59
10:B:580:U:H2'	10:B:581:C:C6	2.36	0.59
10:B:1007:C:H5"	18:J:37:ARG:HH12	1.66	0.59
10:B:1229:C:H2'	10:B:1230:A:H8	1.67	0.59
10:B:2307:G:H2'	10:B:2307:G:N3	2.17	0.59
11:C:234:GLY:HA3	11:C:237:ARG:HH12	1.67	0.59
13:E:139:LYS:HA	13:E:143:LEU:CD2	2.32	0.59
18:J:74:TYR:O	18:J:75:TYR:HB2	2.00	0.59
19:K:11:ALA:HB1	19:K:100:PHE:O	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:K:15:GLY:HA3	19:K:52:VAL:CG1	2.32	0.59
19:K:24:VAL:HA	19:K:39:ILE:CD1	2.32	0.59
22:N:42:LYS:HE3	22:N:45:ARG:HG3	1.83	0.59
22:N:108:ALA:HB1	22:N:109:PRO:HD2	1.83	0.59
6:7:51:GLY:O	6:7:55:ASN:HB2	2.01	0.59
8:9:104:LEU:HD11	8:9:208:VAL:CG1	2.32	0.59
8:9:317:GLU:OE1	8:9:329:PHE:CB	2.50	0.59
10:B:358:U:H2'	10:B:359:G:C8	2.37	0.59
10:B:596:U:H2'	10:B:597:G:C8	2.37	0.59
10:B:1081:U:C5'	17:I:126:ARG:NH1	2.54	0.59
10:B:1082:U:C4	10:B:1086:A:N1	2.70	0.59
10:B:1548:A:H2'	10:B:1549:A:C8	2.37	0.59
10:B:1973:G:H2'	10:B:1974:C:C6	2.37	0.59
10:B:2074:U:H2'	10:B:2075:U:C6	2.38	0.59
10:B:2415:G:H2'	10:B:2416:C:C6	2.37	0.59
10:B:2722:G:H2'	10:B:2723:C:H6	1.67	0.59
14:F:35:LEU:HD23	14:F:153:ILE:HG12	1.83	0.59
16:H:6:LEU:HD12	16:H:36:ALA:H	1.66	0.59
19:K:24:VAL:HA	19:K:39:ILE:HD12	1.84	0.59
20:L:89:VAL:HA	20:L:122:VAL:HG22	1.84	0.59
24:P:13:LYS:HG3	24:P:78:PRO:HG3	1.83	0.59
26:R:60:LYS:O	26:R:60:LYS:HD3	2.02	0.59
29:U:41:VAL:HA	29:U:57:ILE:HD12	1.84	0.59
33:Y:18:LYS:O	33:Y:22:THR:HG23	2.02	0.59
1:0:41:HIS:CG	1:0:42:ILE:N	2.67	0.59
8:9:39:LEU:HD22	8:9:45:LEU:CG	2.28	0.59
8:9:56:LYS:O	8:9:57:GLU:C	2.44	0.59
8:9:288:ASP:O	8:9:291:ALA:CA	2.49	0.59
8:9:315:GLN:HG2	8:9:319:LEU:HD13	1.84	0.59
8:9:379:ILE:O	8:9:381:ASN:OD1	2.20	0.59
10:B:324:A:H2'	10:B:325:G:O4'	2.02	0.59
10:B:2309:A:H3'	10:B:2310:C:H5"	1.82	0.59
10:B:2804:U:H2'	10:B:2805:C:H6	1.66	0.59
11:C:245:THR:O	11:C:247:TRP:N	2.35	0.59
12:D:48:ILE:HG22	12:D:49:GLN:N	2.18	0.59
12:D:150:GLN:O	12:D:152:PRO:HD3	2.02	0.59
12:D:204:LYS:HB3	12:D:205:PRO:CD	2.32	0.59
13:E:149:ILE:CD1	13:E:187:VAL:H	2.15	0.59
15:G:40:VAL:HG22	15:G:51:PHE:HE2	1.64	0.59
19:K:35:VAL:HA	19:K:62:VAL:O	2.01	0.59
21:M:90:GLU:HG3	21:M:91:TYR:N	2.17	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1:27:ARG:NE	2:1:27:ARG:H	2.01	0.59
4:3:12:ARG:NH1	20:L:62:PRO:HA	2.17	0.59
4:3:32:LEU:HG	10:B:2391:G:OP2	2.03	0.59
8:9:144:ALA:O	8:9:145:ILE:C	2.44	0.59
8:9:145:ILE:CG1	8:9:161:PRO:CB	2.80	0.59
8:9:390:LYS:C	8:9:392:GLU:H	2.10	0.59
10:B:141:G:H5'	10:B:142:A:OP2	2.02	0.59
10:B:283:G:H2'	10:B:284:U:H6	1.66	0.59
10:B:1113:U:H5"	15:G:2:ARG:NE	2.16	0.59
10:B:1150:C:O2'	10:B:1151:A:H5'	2.02	0.59
10:B:1252:G:C2	25:Q:32:ARG:HG3	2.36	0.59
10:B:1535:A:H3'	10:B:1536:C:C6	2.38	0.59
10:B:1902:C:H4'	11:C:240:GLY:O	2.01	0.59
10:B:2198:A:H4'	10:B:2199:A:OP1	2.01	0.59
12:D:46:ARG:HA	12:D:82:PHE:HA	1.85	0.59
19:K:104:THR:HG22	19:K:105:ARG:H	1.68	0.59
24:P:54:LEU:HD13	24:P:55:HIS:H	1.67	0.59
26:R:6:GLN:HE21	26:R:41:ILE:HB	1.67	0.59
32:X:2:LYS:HB2	32:X:5:GLU:HG3	1.85	0.59
34:Z:33:ASN:O	34:Z:34:LEU:HD23	2.03	0.59
5:4:16:ILE:O	5:4:17:VAL:HG12	2.01	0.59
8:9:73:GLU:O	8:9:77:ILE:HG12	2.02	0.59
8:9:110:GLY:O	8:9:111:ALA:HB3	2.02	0.59
8:9:353:LYS:HG3	8:9:366:SER:HB3	1.83	0.59
10:B:297:G:H5"	29:U:92:VAL:HG11	1.83	0.59
10:B:2091:C:H1'	34:Z:32:LEU:HG	1.84	0.59
11:C:179:GLU:OE1	11:C:267:VAL:HG23	2.02	0.59
17:I:5:GLN:O	17:I:6:ALA:CB	2.49	0.59
23:O:56:LYS:CE	23:O:81:ARG:HE	2.08	0.59
27:S:81:SER:HB2	27:S:99:ARG:H	1.68	0.59
29:U:86:PHE:O	29:U:87:GLU:C	2.46	0.59
8:9:75:VAL:HA	8:9:78:VAL:HG13	1.84	0.59
8:9:95:LEU:HD21	8:9:127:LYS:HZ3	1.63	0.59
8:9:150:THR:HG22	8:9:151:LEU:N	2.18	0.59
8:9:286:HIS:O	8:9:289:ARG:N	2.35	0.59
10:B:1099:G:OP2	17:I:2:LYS:O	2.21	0.59
10:B:1387:A:H5'	10:B:1469:A:H1'	1.84	0.59
10:B:1470:A:H3'	10:B:1471:G:H8	1.65	0.59
10:B:1824:G:O2'	11:C:244:VAL:HG21	2.02	0.59
10:B:2256:G:O2'	31:W:5:ALA:HB1	2.03	0.59
10:B:2547:A:H2'	10:B:2548:U:C6	2.38	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:D:150:GLN:O	12:D:150:GLN:HG3	2.03	0.59
12:D:151:THR:O	12:D:153:GLY:N	2.36	0.59
24:P:28:LYS:HD3	24:P:44:GLY:H	1.67	0.59
2:1:16:THR:CG2	2:1:47:ILE:HD12	2.33	0.59
8:9:230:ALA:N	8:9:262:ILE:HG21	2.15	0.59
8:9:250:VAL:HG21	8:9:273:LEU:HG	1.84	0.59
8:9:253:ASP:O	8:9:254:ALA:HB2	2.03	0.59
8:9:404:ALA:O	8:9:407:GLY:N	2.32	0.59
8:9:416:LEU:HD12	8:9:417:LEU:HD23	1.83	0.59
9:A:35:C:H2'	9:A:36:C:O4'	2.02	0.59
10:B:155:A:H2'	10:B:156:A:H8	1.68	0.59
10:B:945:A:H3'	10:B:946:C:H5"	1.85	0.59
10:B:1486:U:H2'	10:B:1487:U:H6	1.68	0.59
10:B:1552:A:H2'	10:B:1553:A:H5'	1.85	0.59
10:B:2688:G:H1'	10:B:2721:A:N6	2.18	0.59
10:B:2852:G:H2'	10:B:2853:C:C6	2.38	0.59
11:C:243:PRO:CA	11:C:249:VAL:HG23	2.29	0.59
15:G:36:LEU:CB	15:G:40:VAL:HG21	2.33	0.59
18:J:40:HIS:HB2	25:Q:69:ARG:NH2	2.09	0.59
19:K:47:ILE:HG22	19:K:48:PRO:HD2	1.83	0.59
21:M:117:PHE:HB2	21:M:124:LEU:HD11	1.85	0.59
27:S:46:LEU:O	27:S:50:VAL:HG22	2.01	0.59
31:W:44:PHE:HB3	31:W:77:LYS:C	2.27	0.59
8:9:42:ASP:OD1	8:9:43:VAL:N	2.36	0.59
8:9:51:PHE:O	8:9:52:ILE:C	2.46	0.59
8:9:69:THR:CG2	28:T:96:VAL:HG12	1.75	0.59
9:A:26:C:OP1	9:A:26:C:H3'	2.03	0.59
9:A:57:A:H4'	14:F:26:GLN:HE21	1.67	0.59
10:B:660:C:H2'	10:B:661:A:C8	2.37	0.59
10:B:672:C:O2'	10:B:673:C:H5'	2.02	0.59
10:B:857:G:C2'	10:B:858:G:H5'	2.33	0.59
10:B:873:C:H2'	10:B:874:G:C8	2.38	0.59
10:B:1469:A:H2'	10:B:1470:A:H8	1.67	0.59
10:B:1818:U:H5"	11:C:155:ARG:HG2	1.85	0.59
10:B:1951:U:H2'	10:B:1953:A:OP2	2.01	0.59
10:B:1997:C:P	12:D:140:HIS:HE2	2.25	0.59
10:B:2032:G:N2	12:D:150:GLN:HB3	2.17	0.59
10:B:2286:G:H5'	10:B:2286:G:C8	2.37	0.59
10:B:2898:U:H2'	10:B:2899:A:H8	1.66	0.59
12:D:46:ARG:HH21	12:D:80:TRP:CD1	2.21	0.59
14:F:39:VAL:HG12	14:F:40:GLY:N	2.18	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:I:24:GLY:HA2	17:I:34:ILE:HD12	1.84	0.59
18:J:25:LEU:HB3	18:J:62:VAL:CG1	2.33	0.59
25:Q:92:LYS:C	25:Q:94:LEU:H	2.11	0.59
34:Z:39:LYS:HD3	34:Z:61:ASN:ND2	2.18	0.59
34:Z:54:GLY:N	34:Z:57:VAL:HG23	2.14	0.59
7:8:84:C:O2'	7:8:85:A:OP1	2.14	0.59
8:9:34:VAL:O	8:9:38:LEU:HD21	2.03	0.59
8:9:148:LEU:HD12	8:9:148:LEU:C	2.28	0.59
8:9:195:LEU:HD12	8:9:200:ALA:C	2.28	0.59
8:9:379:ILE:HA	8:9:382:SER:CB	2.33	0.59
11:C:33:LEU:HD22	11:C:34:GLU:HG3	1.83	0.59
11:C:168:GLY:C	11:C:170:TYR:H	2.11	0.59
11:C:172:THR:HG22	11:C:173:LEU:N	2.17	0.59
21:M:14:LYS:HB3	21:M:72:PRO:HG3	1.85	0.59
29:U:82:VAL:HG21	29:U:95:PHE:O	2.02	0.59
31:W:44:PHE:CD2	31:W:77:LYS:HB3	2.38	0.59
8:9:114:THR:OG1	8:9:115:THR:N	2.28	0.59
8:9:199:GLU:O	8:9:203:ASP:HB2	2.03	0.59
8:9:263:ARG:O	8:9:264:HIS:C	2.46	0.59
8:9:318:LYS:O	8:9:320:ALA:C	2.46	0.59
10:B:228:C:H4'	10:B:229:C:H5"	1.85	0.59
10:B:1932:A:H2'	10:B:1933:G:O4'	2.02	0.59
10:B:2103:C:H2'	10:B:2104:C:O4'	2.03	0.59
10:B:2600:A:O2'	10:B:2601:C:H5'	2.02	0.59
14:F:56:LEU:HA	14:F:59:ILE:CG2	2.30	0.59
17:I:53:PRO:CG	17:I:77:VAL:HG11	2.33	0.59
18:J:36:LEU:HA	18:J:51:GLY:O	2.03	0.59
18:J:124:VAL:HG23	18:J:125:TYR:N	2.07	0.59
21:M:60:GLN:HE21	21:M:61:GLY:H	1.49	0.59
32:X:1:MET:H3	32:X:6:LEU:HD23	1.68	0.59
5:4:1:MET:HE1	5:4:35:GLN:HA	1.85	0.58
8:9:47:VAL:O	8:9:50:GLU:N	2.35	0.58
8:9:54:ARG:O	8:9:57:GLU:HB2	2.02	0.58
8:9:168:PRO:O	8:9:171:ILE:HG22	2.03	0.58
10:B:588:U:H5'	20:L:29:LYS:NZ	2.17	0.58
10:B:1099:G:O4'	17:I:3:LYS:CA	2.50	0.58
10:B:1299:G:H4'	10:B:1301:A:H1'	1.83	0.58
10:B:1722:A:N6	10:B:1738:G:H1'	2.18	0.58
10:B:2230:G:H2'	10:B:2231:U:C6	2.38	0.58
10:B:2786:U:O2'	12:D:65:ALA:HB3	2.03	0.58
12:D:8:LYS:O	12:D:9:VAL:HG22	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:J:73:VAL:CG2	18:J:74:TYR:H	2.13	0.58
18:J:81:ILE:C	18:J:83:GLY:N	2.55	0.58
18:J:105:VAL:HG11	18:J:122:LEU:HD11	1.83	0.58
20:L:109:LYS:HA	20:L:127:VAL:H	1.68	0.58
20:L:132:ARG:NH2	20:L:140:GLY:HA3	2.17	0.58
24:P:52:ARG:HB3	24:P:60:VAL:HG11	1.85	0.58
26:R:69:GLY:H	26:R:97:LYS:HB2	1.69	0.58
28:T:56:GLU:O	28:T:57:VAL:HG22	2.03	0.58
4:3:54:LEU:HD21	20:L:53:GLY:HA3	1.86	0.58
10:B:811:U:OP2	20:L:31:GLY:HA2	2.04	0.58
10:B:1439:A:C6	10:B:1552:A:N7	2.70	0.58
10:B:2669:G:H2'	10:B:2670:A:H8	1.66	0.58
12:D:21:SER:C	12:D:23:PRO:HD3	2.27	0.58
13:E:21:ARG:NH1	13:E:21:ARG:HB3	2.18	0.58
13:E:115:GLN:NE2	13:E:184:ASP:HB2	2.17	0.58
13:E:149:ILE:HD13	13:E:186:VAL:HG13	1.83	0.58
16:H:131:SER:HB2	16:H:141:LYS:HG3	1.83	0.58
20:L:108:ALA:HB3	20:L:125:LEU:CB	2.32	0.58
23:O:25:ARG:CG	23:O:94:ARG:HH22	2.15	0.58
24:P:4:ILE:O	24:P:4:ILE:HG22	2.01	0.58
1:0:52:LYS:O	1:0:53:VAL:HG12	2.03	0.58
8:9:75:VAL:C	8:9:77:ILE:N	2.60	0.58
8:9:118:GLY:O	8:9:119:LYS:C	2.45	0.58
8:9:128:HIS:N	8:9:128:HIS:C	2.56	0.58
8:9:132:VAL:HG21	8:9:157:VAL:CG1	2.32	0.58
9:A:51:G:H2'	9:A:52:A:H5"	1.86	0.58
10:B:1151:A:H2'	10:B:1152:C:H6	1.67	0.58
10:B:1550:C:H2'	10:B:1551:A:H8	1.66	0.58
18:J:76:HIS:HB2	18:J:86:GLN:CG	2.33	0.58
18:J:124:VAL:CG2	18:J:125:TYR:H	2.09	0.58
20:L:19:LEU:HD22	20:L:19:LEU:N	2.14	0.58
26:R:3:ALA:HB2	26:R:14:VAL:O	2.04	0.58
28:T:55:VAL:HG23	28:T:87:LEU:N	2.17	0.58
8:9:262:ILE:O	8:9:263:ARG:C	2.47	0.58
8:9:363:ASN:HB3	8:9:367:GLN:HG2	1.84	0.58
10:B:136:G:C2	28:T:3:ARG:NH2	2.71	0.58
10:B:1082:U:C4	10:B:1086:A:C2	2.92	0.58
10:B:1820:U:H5	11:C:176:ARG:NH2	2.02	0.58
11:C:139:THR:HA	11:C:193:GLU:OE2	2.03	0.58
13:E:135:ALA:O	13:E:139:LYS:HB3	2.03	0.58
14:F:172:PHE:H	14:F:172:PHE:HD1	1.49	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:J:41:LYS:CD	18:J:44:TYR:HB3	2.31	0.58
20:L:81:ASP:HA	20:L:84:LYS:HD2	1.85	0.58
22:N:45:ARG:HH22	22:N:113:ILE:CG2	2.07	0.58
25:Q:90:ASP:OD1	26:R:10:LYS:HG2	2.03	0.58
30:V:44:HIS:C	30:V:46:LYS:H	2.11	0.58
1:0:6:LYS:HD2	10:B:1262:A:C2	2.38	0.58
8:9:5:LEU:O	8:9:8:ARG:N	2.37	0.58
8:9:145:ILE:CD1	8:9:161:PRO:CB	2.54	0.58
8:9:257:GLY:O	8:9:259:ALA:N	2.36	0.58
8:9:300:VAL:CB	8:9:304:ILE:N	2.66	0.58
8:9:344:MET:CG	8:9:344:MET:CB	2.81	0.58
10:B:541:A:H2'	10:B:542:C:H5"	1.84	0.58
10:B:2769:U:H2'	10:B:2770:G:C8	2.38	0.58
11:C:225:ASN:N	11:C:226:PRO:HD3	2.19	0.58
12:D:60:VAL:HB	12:D:62:LYS:HZ3	1.69	0.58
15:G:58:ALA:C	15:G:60:GLY:H	2.11	0.58
18:J:81:ILE:CG1	18:J:82:GLY:H	2.08	0.58
8:9:149:GLU:O	8:9:150:THR:O	2.22	0.58
10:B:19:A:H2'	10:B:20:C:C6	2.39	0.58
10:B:69:C:H2'	10:B:70:G:C8	2.38	0.58
10:B:1022:G:C8	18:J:68:LYS:HE3	2.38	0.58
10:B:1437:C:H2'	10:B:1438:U:H6	1.65	0.58
10:B:1700:A:H2'	10:B:1701:A:H5'	1.86	0.58
10:B:1802:A:H2'	10:B:1803:A:C8	2.39	0.58
10:B:2000:C:O2'	10:B:2001:C:H5'	2.04	0.58
10:B:2008:C:H2'	10:B:2009:A:C8	2.38	0.58
10:B:2386:A:H4'	31:W:38:ARG:HB2	1.86	0.58
10:B:2836:U:H2'	10:B:2837:A:H8	1.68	0.58
10:B:2900:A:H2'	10:B:2901:C:C6	2.38	0.58
12:D:33:ARG:O	12:D:34:VAL:HG22	2.03	0.58
12:D:125:TRP:CD1	12:D:127:PHE:HB2	2.34	0.58
15:G:85:LYS:HB3	15:G:131:VAL:HA	1.85	0.58
20:L:4:ASN:O	20:L:6:LEU:HD22	2.03	0.58
20:L:78:ARG:HA	20:L:113:ALA:HB2	1.86	0.58
30:V:77:VAL:HG13	30:V:89:ILE:HD11	1.85	0.58
31:W:67:LYS:HD2	31:W:70:VAL:N	2.17	0.58
5:4:11:CYS:SG	5:4:25:VAL:HG23	2.43	0.58
8:9:172:VAL:O	8:9:173:ASN:C	2.46	0.58
9:A:75:G:H5"	30:V:12:GLN:OE1	2.02	0.58
10:B:310:A:H5"	29:U:14:THR:CG2	2.33	0.58
10:B:657:U:H2'	10:B:658:U:C6	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:987:C:H2'	10:B:988:A:O4'	2.03	0.58
10:B:1064:C:O4'	17:I:90:GLY:HA2	2.04	0.58
10:B:1319:C:O2'	10:B:1320:C:H5'	2.03	0.58
10:B:1709:U:H2'	10:B:1710:G:H8	1.69	0.58
10:B:1853:A:N1	10:B:2087:G:H1'	2.18	0.58
10:B:2150:C:H2'	10:B:2151:U:C6	2.39	0.58
10:B:2292:U:H2'	10:B:2293:G:H8	1.67	0.58
10:B:2591:C:H2'	10:B:2592:G:H8	1.66	0.58
11:C:34:GLU:OE2	11:C:35:LYS:HG3	2.03	0.58
11:C:224:MET:CA	11:C:233:GLY:H	2.15	0.58
18:J:69:ARG:HH11	18:J:69:ARG:HG3	1.69	0.58
21:M:6:ARG:O	21:M:7:THR:C	2.43	0.58
23:O:53:THR:O	23:O:54:VAL:CB	2.47	0.58
26:R:4:VAL:HG12	26:R:43:ASN:CB	2.32	0.58
29:U:66:VAL:HG13	29:U:67:SER:N	2.19	0.58
4:3:32:LEU:CD1	4:3:33:THR:H	2.15	0.58
6:7:59:LEU:HD22	8:9:351:MET:SD	2.44	0.58
8:9:19:ARG:O	8:9:20:GLY:C	2.35	0.58
8:9:145:ILE:HA	8:9:148:LEU:CD2	2.34	0.58
10:B:438:G:H2'	10:B:439:A:C8	2.39	0.58
10:B:553:G:C2'	10:B:554:U:H5'	2.32	0.58
10:B:962:G:O2'	10:B:963:U:H5'	2.04	0.58
10:B:1175:A:H2'	10:B:1176:U:H5'	1.86	0.58
10:B:2213:U:H2'	10:B:2213:U:O2	2.04	0.58
12:D:14:ILE:HG23	12:D:19:GLY:CA	2.33	0.58
15:G:171:LYS:NZ	15:G:174:LYS:H	2.02	0.58
17:I:20:SER:O	17:I:25:PRO:HD2	2.03	0.58
18:J:13:ARG:HG2	18:J:53:TYR:HE1	1.67	0.58
18:J:84:ILE:HD12	18:J:85:LYS:N	2.15	0.58
18:J:105:VAL:HG11	18:J:122:LEU:CD1	2.33	0.58
22:N:45:ARG:HE	22:N:97:ILE:HD11	1.69	0.58
22:N:97:ILE:HG23	22:N:113:ILE:HD11	1.83	0.58
34:Z:1:MET:O	34:Z:2:LYS:HG3	2.03	0.58
1:0:21:LEU:HD22	27:S:23:LEU:HB3	1.86	0.58
2:1:14:ALA:HB1	2:1:48:TYR:CZ	2.39	0.58
8:9:66:LYS:CG	28:T:92:ASN:H	2.15	0.58
8:9:245:VAL:HG21	8:9:268:LYS:HE2	1.83	0.58
8:9:332:ASN:HB2	8:9:388:ARG:HD2	1.86	0.58
8:9:342:LYS:HZ1	8:9:374:VAL:CG2	2.13	0.58
8:9:383:MET:HG2	8:9:402:ILE:CD1	2.29	0.58
9:A:5:U:H2'	9:A:6:G:H8	1.68	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:A:50:A:OP1	23:O:68:LYS:HB2	2.02	0.58
10:B:64:A:H2'	10:B:65:U:H6	1.69	0.58
10:B:172:A:H2'	10:B:173:A:C8	2.38	0.58
10:B:322:A:H1'	10:B:339:U:O2	2.04	0.58
10:B:2814:A:H2'	10:B:2815:C:C6	2.38	0.58
12:D:35:THR:HB	12:D:48:ILE:HG13	1.84	0.58
12:D:172:VAL:HG21	12:D:192:ALA:HB1	1.85	0.58
13:E:2:GLU:HA	13:E:16:GLU:HB3	1.85	0.58
13:E:152:GLU:CA	13:E:188:MET:HE2	2.34	0.58
14:F:7:TYR:OH	14:F:29:ARG:HG2	2.04	0.58
16:H:108:VAL:C	16:H:110:VAL:H	2.11	0.58
18:J:98:GLU:HG3	18:J:126:ALA:CB	2.34	0.58
20:L:79:LEU:H	20:L:113:ALA:HB2	1.69	0.58
20:L:109:LYS:HG2	20:L:126:ARG:HD3	1.85	0.58
21:M:24:THR:O	21:M:98:PRO:HA	2.04	0.58
24:P:52:ARG:HH11	24:P:52:ARG:CG	2.15	0.58
29:U:44:HIS:O	29:U:46:LYS:HD2	2.04	0.58
3:2:22:MET:HE2	10:B:118:A:OP1	2.04	0.58
8:9:148:LEU:CD1	8:9:149:GLU:N	2.67	0.58
8:9:180:LYS:O	8:9:183:PHE:N	2.34	0.58
10:B:532:A:N3	10:B:532:A:H2'	2.18	0.58
10:B:910:A:N7	21:M:16:ARG:HG2	2.19	0.58
10:B:1098:A:O3'	17:I:4:VAL:N	2.37	0.58
10:B:1593:A:H2'	10:B:1594:U:C6	2.38	0.58
10:B:2902:C:O2'	10:B:2903:U:H4'	2.03	0.58
12:D:156:PHE:CB	18:J:81:ILE:HG21	2.33	0.58
15:G:42:VAL:HA	15:G:50:THR:O	2.04	0.58
16:H:26:ALA:HB2	16:H:30:LEU:HG	1.86	0.58
16:H:94:ILE:HG23	16:H:98:ASP:CB	2.34	0.58
18:J:93:ILE:HG22	18:J:93:ILE:O	2.04	0.58
21:M:4:PRO:HD3	21:M:47:GLU:OE2	2.04	0.58
27:S:4:ILE:HG12	27:S:106:VAL:HG12	1.85	0.58
29:U:46:LYS:HD3	29:U:53:GLN:HG3	1.85	0.58
31:W:19:ARG:CZ	31:W:19:ARG:HB2	2.33	0.58
8:9:16:ILE:CG1	32:X:28:LEU:HD12	2.34	0.57
8:9:290:ILE:N	8:9:291:ALA:O	2.36	0.57
8:9:394:ILE:HG22	8:9:399:LYS:HD3	1.84	0.57
10:B:6:A:H2'	10:B:7:G:C8	2.40	0.57
10:B:64:A:H5'	28:T:76:ARG:NH1	2.12	0.57
10:B:950:G:H2'	10:B:951:C:H6	1.66	0.57
10:B:955:U:H5'	10:B:956:G:OP2	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1105:U:H2'	10:B:1106:G:C8	2.38	0.57
10:B:1301:A:O2'	10:B:1302:A:H2'	2.04	0.57
10:B:1813:G:H1'	11:C:45:ASN:HB3	1.85	0.57
10:B:2204:G:H4'	11:C:149:LYS:HG3	1.85	0.57
10:B:2646:C:H2'	10:B:2647:U:O4'	2.04	0.57
10:B:2813:A:H2'	10:B:2814:A:H8	1.69	0.57
12:D:60:VAL:HG23	12:D:63:PRO:CD	2.34	0.57
15:G:10:VAL:HG13	15:G:14:VAL:CG1	2.33	0.57
17:I:108:ILE:CG2	17:I:128:ILE:HD13	2.34	0.57
18:J:100:VAL:HG13	18:J:101:ILE:HG12	1.84	0.57
21:M:73:ILE:HG21	21:M:90:GLU:OE2	2.03	0.57
31:W:31:LEU:O	31:W:66:VAL:HB	2.04	0.57
8:9:119:LYS:NZ	8:9:276:GLY:O	2.33	0.57
8:9:334:PHE:HE2	8:9:420:PHE:CE2	2.06	0.57
8:9:379:ILE:CG2	8:9:380:ILE:N	2.55	0.57
10:B:288:U:H2'	10:B:289:G:C8	2.39	0.57
10:B:1131:G:OP1	18:J:83:GLY:HA2	2.04	0.57
10:B:2089:C:H2'	10:B:2090:A:O4'	2.03	0.57
11:C:53:ILE:HD13	11:C:218:THR:CG2	2.35	0.57
11:C:179:GLU:HG3	11:C:266:ILE:HG22	1.85	0.57
13:E:99:LYS:C	13:E:99:LYS:HZ3	2.12	0.57
18:J:43:GLU:C	25:Q:63:ARG:HH12	2.12	0.57
19:K:64:ARG:N	19:K:83:ALA:HB3	2.13	0.57
23:O:30:ARG:NH1	23:O:97:PHE:HB2	2.19	0.57
1:0:27:LEU:HG	10:B:2886:A:C5	2.38	0.57
3:2:25:LYS:HG2	10:B:1368:G:C5'	2.34	0.57
4:3:4:LYS:HD2	4:3:60:CYS:H	1.69	0.57
8:9:25:ASP:O	8:9:26:ASN:C	2.47	0.57
8:9:92:THR:OG1	8:9:271:LYS:HG2	2.05	0.57
8:9:110:GLY:HA2	8:9:113:LYS:CB	2.32	0.57
8:9:200:ALA:O	8:9:204:GLU:HG3	2.05	0.57
8:9:236:PHE:O	8:9:239:ALA:N	2.37	0.57
8:9:340:GLN:C	8:9:344:MET:CG	2.77	0.57
9:A:25:U:O4	9:A:54:G:H3'	2.03	0.57
10:B:396:G:OP1	34:Z:8:LYS:HD2	2.04	0.57
10:B:871:U:H4'	21:M:68:PHE:CE1	2.39	0.57
10:B:1019:U:H2'	10:B:1020:A:C8	2.39	0.57
10:B:1570:A:H2'	10:B:1571:A:C8	2.39	0.57
10:B:1803:A:O2'	11:C:254:LYS:HD3	2.04	0.57
10:B:2292:U:H2'	10:B:2293:G:C8	2.39	0.57
10:B:2785:C:H2'	10:B:2786:U:H6	1.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:D:8:LYS:HG3	24:P:5:LYS:HZ2	1.69	0.57
12:D:14:ILE:HG23	12:D:19:GLY:HA3	1.86	0.57
12:D:46:ARG:H	12:D:82:PHE:HA	1.70	0.57
13:E:192:ALA:HB1	13:E:199:MET:HB2	1.86	0.57
14:F:40:GLY:H	14:F:84:ILE:HG21	1.69	0.57
16:H:19:VAL:HG22	16:H:20:ASN:N	2.19	0.57
18:J:132:HIS:HB3	18:J:136:GLN:OE1	2.04	0.57
25:Q:73:ILE:HG13	25:Q:74:SER:N	2.10	0.57
26:R:6:GLN:HG2	26:R:7:SER:N	2.19	0.57
26:R:38:VAL:HA	26:R:61:ALA:HB3	1.87	0.57
33:Y:2:LYS:HA	33:Y:43:ILE:HG13	1.86	0.57
2:1:29:LYS:HB2	2:1:30:PRO:CD	2.24	0.57
5:4:15:LYS:C	5:4:17:VAL:H	2.10	0.57
8:9:3:ASP:O	8:9:6:THR:OG1	2.17	0.57
8:9:380:ILE:N	8:9:383:MET:SD	2.77	0.57
10:B:1113:U:OP1	15:G:2:ARG:HG2	2.03	0.57
10:B:1164:C:H2'	10:B:1165:A:C8	2.40	0.57
10:B:1179:G:H2'	10:B:1180:U:H6	1.68	0.57
10:B:2037:A:H2'	10:B:2038:G:H8	1.68	0.57
10:B:2156:G:H2'	10:B:2157:G:H4'	1.84	0.57
10:B:2888:C:H2'	10:B:2889:C:C6	2.39	0.57
12:D:204:LYS:HE2	12:D:204:LYS:HA	1.85	0.57
16:H:127:GLU:HA	16:H:144:VAL:O	2.04	0.57
18:J:41:LYS:NZ	18:J:45:THR:HA	2.19	0.57
20:L:124:GLY:H	20:L:142:ILE:CA	2.17	0.57
21:M:2:LEU:HD12	21:M:2:LEU:H	1.68	0.57
21:M:72:PRO:O	21:M:73:ILE:HD13	2.03	0.57
25:Q:39:ILE:CG1	25:Q:40:LYS:N	2.67	0.57
26:R:82:HIS:O	26:R:84:ARG:N	2.38	0.57
31:W:67:LYS:HG2	31:W:71:LYS:CA	2.35	0.57
2:1:20:TYR:O	2:1:21:THR:HB	2.05	0.57
8:9:169:VAL:O	8:9:172:VAL:HB	2.05	0.57
8:9:375:ARG:CB	8:9:376:MET:N	2.66	0.57
10:B:1464:G:H2'	10:B:1465:G:H8	1.69	0.57
10:B:1690:A:H2'	10:B:1691:C:O4'	2.03	0.57
10:B:2785:C:H2'	10:B:2786:U:C6	2.38	0.57
10:B:2804:U:H2'	10:B:2805:C:C6	2.39	0.57
11:C:21:PRO:HD2	11:C:202:ARG:HH11	1.67	0.57
11:C:38:LYS:HG3	11:C:39:SER:N	2.19	0.57
11:C:124:LYS:CB	11:C:125:PRO:CD	2.75	0.57
11:C:227:VAL:HG13	11:C:228:ASP:OD1	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C:247:TRP:HZ2	11:C:254:LYS:HZ3	1.52	0.57
23:O:108:ASP:O	23:O:112:GLU:HG3	2.04	0.57
25:Q:50:ARG:NH1	25:Q:53:LYS:HE3	2.19	0.57
26:R:69:GLY:HA2	26:R:97:LYS:N	2.16	0.57
31:W:75:ASN:C	31:W:77:LYS:H	2.11	0.57
32:X:26:PHE:HA	32:X:29:ARG:CD	2.34	0.57
1:0:27:LEU:HD21	10:B:2887:A:C8	2.39	0.57
2:1:20:TYR:OH	10:B:2399:G:H1'	2.04	0.57
3:2:7:PRO:CB	10:B:1309:G:H4'	2.32	0.57
8:9:17:SER:CB	8:9:23:THR:HG22	2.35	0.57
8:9:292:SER:O	8:9:293:ARG:C	2.48	0.57
8:9:364:VAL:HA	8:9:368:MET:N	2.20	0.57
10:B:1176:U:O5'	10:B:1176:U:H6	1.87	0.57
10:B:1534:U:H2'	10:B:1536:C:C4	2.40	0.57
10:B:1857:G:H2'	10:B:1884:G:N2	2.19	0.57
10:B:2283:C:H5"	10:B:2389:G:O2'	2.05	0.57
10:B:2354:C:H4'	31:W:30:VAL:HG13	1.85	0.57
10:B:2556:C:H2'	10:B:2557:G:O4'	2.05	0.57
12:D:4:LEU:HD22	12:D:4:LEU:N	2.19	0.57
14:F:107:VAL:H	14:F:108:PRO:HD2	1.70	0.57
14:F:162:ASP:HB3	14:F:166:ARG:HH21	1.69	0.57
14:F:165:GLY:O	14:F:167:ALA:N	2.36	0.57
16:H:6:LEU:HD12	16:H:36:ALA:N	2.20	0.57
17:I:72:THR:CG2	17:I:112:LYS:HD2	2.34	0.57
20:L:51:GLU:HG2	20:L:52:GLY:N	2.19	0.57
24:P:26:GLU:HA	24:P:47:ILE:H	1.69	0.57
30:V:26:PHE:CE2	30:V:44:HIS:HA	2.39	0.57
5:4:6:SER:HA	5:4:23:ILE:HD13	1.86	0.57
8:9:110:GLY:O	8:9:111:ALA:CB	2.51	0.57
8:9:236:PHE:O	8:9:240:LEU:N	2.37	0.57
8:9:250:VAL:C	8:9:252:GLY:H	2.12	0.57
8:9:394:ILE:H	8:9:394:ILE:CD1	2.17	0.57
10:B:151:C:H2'	10:B:152:A:C8	2.40	0.57
10:B:997:G:H5'	25:Q:92:LYS:HG3	1.85	0.57
10:B:1042:G:H2'	10:B:1043:C:C6	2.40	0.57
10:B:2578:G:O2'	12:D:138:LEU:HD13	2.04	0.57
10:B:2849:U:H4'	10:B:2850:A:H5'	1.84	0.57
10:B:2898:U:H2'	10:B:2899:A:C8	2.40	0.57
11:C:42:ARG:NE	11:C:44:ASN:HB2	2.19	0.57
12:D:5:VAL:CG2	12:D:28:GLU:HA	2.34	0.57
15:G:66:THR:O	15:G:70:LEU:HD13	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:H:87:GLU:HB2	16:H:89:LYS:NZ	2.19	0.57
17:I:2:LYS:O	17:I:3:LYS:HG3	2.04	0.57
19:K:70:ARG:HB3	19:K:76:VAL:HG13	1.86	0.57
19:K:113:MET:SD	19:K:116:ILE:HD11	2.45	0.57
26:R:2:TYR:HB2	26:R:45:GLU:OE1	2.04	0.57
30:V:2:PHE:HB2	30:V:61:LEU:HD22	1.86	0.57
31:W:73:PRO:HB2	31:W:74:LYS:HD2	1.86	0.57
4:3:7:ARG:HG2	10:B:250:G:C5'	2.31	0.57
8:9:288:ASP:O	8:9:292:SER:N	2.38	0.57
8:9:311:VAL:O	8:9:312:ASP:HB2	2.05	0.57
8:9:413:VAL:HG13	8:9:416:LEU:HD11	1.87	0.57
10:B:6:A:H2'	10:B:7:G:H8	1.70	0.57
10:B:455:C:N4	10:B:472:A:H2'	2.20	0.57
10:B:1098:A:O4'	17:I:3:LYS:HB3	2.04	0.57
10:B:1553:A:O2'	10:B:1554:U:H2'	2.05	0.57
10:B:1714:U:H3'	10:B:1715:G:C5'	2.35	0.57
10:B:2679:A:O2'	10:B:2680:U:H5'	2.04	0.57
11:C:22:GLU:N	11:C:202:ARG:NE	2.52	0.57
11:C:163:ILE:HG12	11:C:173:LEU:HD23	1.86	0.57
11:C:172:THR:HG22	11:C:173:LEU:H	1.69	0.57
16:H:30:LEU:O	16:H:35:LYS:HD3	2.04	0.57
18:J:120:ARG:HB3	18:J:121:LYS:HZ1	1.70	0.57
21:M:40:ARG:HA	21:M:92:TRP:NE1	2.20	0.57
21:M:101:VAL:HG12	21:M:102:LEU:N	2.18	0.57
29:U:96:LYS:HD3	29:U:97:SER:N	2.20	0.57
30:V:26:PHE:HE2	30:V:44:HIS:HA	1.70	0.57
31:W:30:VAL:HG12	31:W:31:LEU:H	1.69	0.57
4:3:33:THR:HG23	4:3:36:ALA:HB3	1.86	0.57
8:9:69:THR:CG2	28:T:96:VAL:CG1	2.62	0.57
8:9:222:ASP:OD1	8:9:224:MET:HB2	2.04	0.57
8:9:233:ALA:O	8:9:234:LYS:C	2.47	0.57
10:B:1225:G:H5"	26:R:90:ARG:HG3	1.87	0.57
10:B:1387:A:H2'	10:B:1388:G:C8	2.39	0.57
10:B:2143:C:H3'	10:B:2144:G:H8	1.70	0.57
10:B:2469:A:H5'	21:M:55:ARG:NE	2.19	0.57
10:B:2872:A:O2'	10:B:2873:A:H5"	2.05	0.57
11:C:12:ARG:HH11	11:C:18:VAL:HB	1.69	0.57
12:D:114:LYS:NZ	12:D:114:LYS:HB2	2.20	0.57
12:D:122:VAL:HG21	12:D:141:ARG:HD3	1.85	0.57
13:E:31:VAL:HG21	13:E:104:ALA:CB	2.35	0.57
14:F:107:VAL:H	14:F:108:PRO:CD	2.16	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
17:I:102:ARG:HG3	17:I:141:ASP:CB	2.34	0.57
19:K:64:ARG:O	19:K:65:THR:HG23	2.04	0.57
24:P:28:LYS:NZ	24:P:44:GLY:N	2.52	0.57
25:Q:52:ARG:HH21	25:Q:56:PHE:HE2	1.52	0.57
25:Q:116:LEU:HD22	25:Q:116:LEU:H	1.70	0.57
31:W:19:ARG:HB2	31:W:19:ARG:NH1	2.19	0.57
31:W:24:ARG:HG3	31:W:57:THR:O	2.05	0.57
5:4:14:CYS:SG	5:4:27:CYS:N	2.77	0.57
8:9:108:LEU:HD21	8:9:232:THR:CG2	2.35	0.57
8:9:120:LEU:HG	8:9:188:LEU:HD11	1.87	0.57
10:B:324:A:N6	10:B:339:U:H5'	2.19	0.57
10:B:634:C:H2'	10:B:635:C:C6	2.39	0.57
10:B:1172:C:H2'	10:B:1173:U:O4'	2.04	0.57
10:B:1656:C:OP1	12:D:141:ARG:HD2	2.04	0.57
10:B:2220:U:H2'	10:B:2221:G:H8	1.70	0.57
10:B:2784:U:H4'	12:D:42:ASN:H	1.69	0.57
11:C:128:THR:HA	11:C:190:THR:HA	1.86	0.57
11:C:173:LEU:HD12	11:C:183:VAL:HG11	1.87	0.57
13:E:5:LEU:HA	13:E:11:ALA:O	2.05	0.57
14:F:41:GLU:OE1	14:F:49:LEU:HG	2.05	0.57
14:F:115:GLY:HA3	14:F:177:ARG:HB2	1.87	0.57
16:H:3:VAL:CG2	16:H:37:VAL:HG21	2.35	0.57
16:H:82:SER:C	16:H:83:LYS:HD2	2.30	0.57
22:N:42:LYS:HE3	22:N:42:LYS:O	2.05	0.57
23:O:18:LEU:HD22	31:W:76:ARG:HH21	1.70	0.57
29:U:51:LEU:C	29:U:53:GLN:H	2.12	0.57
31:W:55:ASP:CG	31:W:56:HIS:H	2.13	0.57
32:X:1:MET:HB2	32:X:6:LEU:HG	1.85	0.57
32:X:11:VAL:HG12	32:X:13:GLU:H	1.70	0.57
4:3:4:LYS:HE3	4:3:61:LEU:HB2	1.86	0.56
4:3:4:LYS:HG3	4:3:61:LEU:HB2	1.87	0.56
8:9:53:ASN:O	8:9:54:ARG:C	2.47	0.56
8:9:146:LYS:O	8:9:149:GLU:N	2.38	0.56
9:A:112:G:O2'	9:A:113:C:H5'	2.05	0.56
10:B:72:U:H1'	32:X:51:ALA:HB2	1.86	0.56
10:B:299:A:N6	10:B:322:A:H1'	2.21	0.56
10:B:1024:G:C3'	10:B:1025:G:H5"	2.30	0.56
10:B:1061:U:O4'	10:B:1070:A:H1'	2.05	0.56
10:B:1537:G:H3'	10:B:1537:G:N3	2.20	0.56
10:B:2484:G:O2'	10:B:2485:G:H5'	2.05	0.56
11:C:191:LEU:HG	11:C:191:LEU:O	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:E:53:THR:HB	13:E:74:LYS:HE2	1.85	0.56
14:F:40:GLY:C	14:F:41:GLU:HG3	2.30	0.56
16:H:82:SER:O	16:H:83:LYS:HD2	2.04	0.56
17:I:54:ILE:HD13	17:I:55:PRO:N	2.20	0.56
19:K:63:VAL:HG11	19:K:103:VAL:HG12	1.85	0.56
29:U:42:LYS:H	29:U:57:ILE:CD1	2.11	0.56
34:Z:20:ASN:O	34:Z:21:VAL:HB	2.04	0.56
3:2:43:THR:C	3:2:44:VAL:HG22	2.29	0.56
8:9:209:HIS:CD2	8:9:214:PRO:HG2	2.39	0.56
8:9:336:GLU:O	8:9:337:GLN:C	2.47	0.56
10:B:18:U:H2'	10:B:19:A:C8	2.40	0.56
10:B:286:U:H2'	10:B:287:G:H8	1.69	0.56
10:B:299:A:H2	10:B:319:G:N3	2.03	0.56
10:B:495:G:H4'	27:S:3:THR:O	2.04	0.56
10:B:634:C:H2'	10:B:635:C:H6	1.70	0.56
10:B:947:A:O2'	10:B:984:A:H2	1.87	0.56
10:B:1666:G:H4'	19:K:6:THR:HG23	1.85	0.56
10:B:2415:G:H2'	10:B:2416:C:H6	1.68	0.56
11:C:123:ILE:HG12	11:C:135:PRO:CD	2.36	0.56
13:E:115:GLN:HB3	13:E:117:ARG:HD3	1.86	0.56
16:H:65:ALA:HA	16:H:68:ARG:HB2	1.87	0.56
17:I:121:ILE:HD13	17:I:121:ILE:N	2.20	0.56
18:J:98:GLU:O	18:J:102:GLU:HG2	2.04	0.56
21:M:54:THR:O	21:M:55:ARG:C	2.48	0.56
28:T:48:GLN:CA	28:T:53:VAL:HG22	2.31	0.56
28:T:64:LYS:HA	28:T:79:ASP:HA	1.88	0.56
31:W:42:THR:N	31:W:65:LYS:HA	2.20	0.56
32:X:23:ARG:HA	32:X:26:PHE:CD1	2.40	0.56
34:Z:3:LYS:HZ3	34:Z:29:GLY:HA3	1.69	0.56
34:Z:47:LYS:HG2	34:Z:48:GLN:O	2.05	0.56
5:4:26:ILE:O	5:4:27:CYS:CB	2.53	0.56
8:9:14:ARG:HG2	8:9:16:ILE:HB	1.88	0.56
8:9:21:ARG:HH22	32:X:16:THR:HG22	1.65	0.56
8:9:337:GLN:O	8:9:338:LEU:C	2.48	0.56
8:9:375:ARG:CG	8:9:375:ARG:H	2.18	0.56
8:9:410:VAL:CG1	10:B:485:C:O3'	2.54	0.56
10:B:170:U:H2'	10:B:171:U:C6	2.41	0.56
10:B:213:A:O2'	10:B:214:G:H5'	2.05	0.56
10:B:278:A:O2'	10:B:279:A:H5'	2.04	0.56
10:B:631:A:O2'	20:L:66:PHE:HD1	1.89	0.56
10:B:796:C:H2'	10:B:797:G:C8	2.39	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:863:A:H2'	10:B:864:G:C8	2.40	0.56
10:B:1583:A:H4'	10:B:1585:C:C4	2.40	0.56
10:B:1709:U:H2'	10:B:1710:G:C8	2.40	0.56
10:B:2528:U:O2'	10:B:2529:G:H3'	2.05	0.56
10:B:2650:U:H2'	10:B:2651:C:C6	2.41	0.56
10:B:2686:G:H2'	10:B:2687:U:C6	2.40	0.56
10:B:2800:A:N3	10:B:2801:G:H1'	2.21	0.56
10:B:2867:G:N3	10:B:2867:G:C2'	2.67	0.56
11:C:208:GLY:HA2	11:C:212:TRP:CB	2.34	0.56
11:C:234:GLY:HA3	11:C:237:ARG:NH1	2.20	0.56
11:C:243:PRO:HA	11:C:249:VAL:CG2	2.33	0.56
12:D:89:GLU:HG2	12:D:93:GLY:HA3	1.87	0.56
13:E:4:VAL:HA	13:E:14:VAL:HG13	1.87	0.56
13:E:49:ARG:HG3	13:E:52:VAL:HG22	1.87	0.56
13:E:164:LEU:HD13	13:E:164:LEU:C	2.30	0.56
15:G:6:ALA:H	15:G:7:PRO:CD	2.18	0.56
16:H:6:LEU:HB2	16:H:35:LYS:HB3	1.86	0.56
18:J:37:ARG:NH1	18:J:110:PRO:HG3	2.21	0.56
18:J:94:ALA:HB1	18:J:95:ARG:HH21	1.70	0.56
20:L:90:VAL:HG13	20:L:122:VAL:HG11	1.87	0.56
21:M:36:VAL:HG12	21:M:125:PRO:HD3	1.86	0.56
21:M:71:LYS:HE3	21:M:91:TYR:HB3	1.87	0.56
23:O:27:VAL:HG22	23:O:38:GLN:O	2.05	0.56
23:O:109:ALA:HA	23:O:112:GLU:OE2	2.05	0.56
24:P:71:ARG:NH2	24:P:102:ARG:HA	2.20	0.56
25:Q:30:VAL:HG12	25:Q:31:TYR:N	2.19	0.56
25:Q:57:ARG:HH21	25:Q:92:LYS:NZ	2.03	0.56
25:Q:108:LEU:HA	25:Q:111:LYS:HD2	1.86	0.56
27:S:103:ILE:O	27:S:104:THR:HB	2.06	0.56
29:U:79:ALA:O	29:U:96:LYS:HB3	2.06	0.56
5:4:34:LYS:O	10:B:2527:C:H4'	2.05	0.56
8:9:28:LYS:O	8:9:29:ASP:C	2.47	0.56
8:9:66:LYS:NZ	28:T:89:GLU:O	2.39	0.56
8:9:201:MET:O	8:9:204:GLU:HB2	2.06	0.56
8:9:424:GLN:HE21	8:9:428:LYS:NZ	2.04	0.56
10:B:1197:G:H2'	10:B:1198:U:C6	2.39	0.56
10:B:1945:G:H2'	10:B:1946:U:C6	2.41	0.56
10:B:2097:A:H2'	10:B:2098:U:C6	2.41	0.56
10:B:2294:G:P	23:O:9:ARG:HH11	2.29	0.56
12:D:173:GLN:HG3	12:D:208:LYS:HB3	1.85	0.56
13:E:67:ARG:N	13:E:67:ARG:HD2	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:H:6:LEU:HB2	16:H:35:LYS:CB	2.35	0.56
23:O:27:VAL:HG23	23:O:28:VAL:H	1.70	0.56
24:P:38:ARG:HH11	24:P:39:LEU:H	1.54	0.56
29:U:10:VAL:O	29:U:21:ARG:HA	2.06	0.56
1:0:3:GLN:HG3	10:B:2615:U:C1'	2.35	0.56
8:9:35:ARG:O	8:9:38:LEU:HG	2.06	0.56
8:9:246:VAL:HG11	8:9:272:PHE:HD2	1.71	0.56
10:B:106:C:H2'	10:B:107:G:H8	1.71	0.56
10:B:544:C:H2'	10:B:545:U:C4	2.41	0.56
10:B:753:A:H2'	10:B:754:U:H6	1.70	0.56
10:B:770:G:O2'	10:B:771:G:H5'	2.05	0.56
10:B:828:U:H4'	10:B:831:G:N1	2.21	0.56
10:B:1100:C:OP2	17:I:2:LYS:HB3	2.05	0.56
10:B:1447:C:H2'	10:B:1448:G:C8	2.40	0.56
10:B:1789:A:OP1	11:C:219:VAL:HG12	2.05	0.56
10:B:2729:G:H2'	10:B:2730:C:C6	2.40	0.56
13:E:192:ALA:O	13:E:195:GLN:HG3	2.05	0.56
17:I:79:LEU:HD11	17:I:131:THR:OG1	2.04	0.56
18:J:61:LYS:HA	18:J:61:LYS:HE3	1.88	0.56
19:K:43:ILE:HD13	19:K:56:ASP:HB3	1.87	0.56
23:O:86:GLY:C	23:O:88:LYS:H	2.12	0.56
25:Q:97:ILE:HG23	26:R:13:ARG:CZ	2.36	0.56
28:T:53:VAL:HB	28:T:93:LEU:HD11	1.87	0.56
29:U:23:LYS:O	29:U:25:LYS:N	2.39	0.56
31:W:21:GLY:HA2	31:W:25:PHE:CE1	2.40	0.56
32:X:15:ASN:HA	32:X:17:GLU:OE2	2.05	0.56
1:0:14:MET:HE3	10:B:2045:C:H5"	1.87	0.56
8:9:66:LYS:HD2	28:T:92:ASN:H	0.74	0.56
8:9:66:LYS:HE3	28:T:92:ASN:ND2	2.19	0.56
8:9:241:PRO:C	8:9:243:THR:N	2.63	0.56
8:9:413:VAL:O	8:9:417:LEU:HG	2.05	0.56
10:B:259:G:O2'	10:B:260:G:H5'	2.05	0.56
10:B:264:C:H2'	10:B:265:A:H5"	1.86	0.56
10:B:319:G:H2'	10:B:320:A:O4'	2.06	0.56
10:B:417:C:H2'	10:B:418:C:C6	2.41	0.56
10:B:493:G:H2'	10:B:494:G:O4'	2.05	0.56
10:B:1847:A:H4'	10:B:1848:A:C8	2.41	0.56
10:B:2305:U:H1'	14:F:132:ARG:HG2	1.88	0.56
10:B:2386:A:H2'	10:B:2387:U:C6	2.40	0.56
15:G:91:VAL:N	15:G:159:LYS:HZ3	2.04	0.56
16:H:133:GLN:HB3	16:H:139:PHE:HB3	1.86	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:S:42:LYS:HG2	27:S:45:VAL:HG13	1.88	0.56
1:0:41:HIS:CE1	1:0:42:ILE:HG22	2.41	0.56
2:1:15:GLY:HA3	2:1:47:ILE:CG2	2.36	0.56
4:3:24:LYS:HB3	4:3:24:LYS:NZ	2.20	0.56
8:9:38:LEU:O	8:9:41:ALA:N	2.38	0.56
8:9:75:VAL:O	8:9:77:ILE:N	2.39	0.56
8:9:369:ASP:HB2	8:9:373:LEU:CD2	2.23	0.56
9:A:22:U:H2'	9:A:23:G:C8	2.40	0.56
10:B:4:U:H2'	10:B:5:A:C8	2.41	0.56
10:B:19:A:H2'	10:B:20:C:H6	1.71	0.56
10:B:1252:G:N3	25:Q:32:ARG:HG3	2.21	0.56
10:B:1346:G:O2'	10:B:1347:A:H5'	2.05	0.56
10:B:1656:C:H5"	12:D:141:ARG:HB3	1.88	0.56
10:B:2617:U:C2'	10:B:2618:G:H5'	2.36	0.56
12:D:34:VAL:HA	12:D:90:PHE:HA	1.86	0.56
13:E:126:VAL:HG22	13:E:128:ALA:H	1.70	0.56
15:G:34:ARG:NH1	15:G:70:LEU:HG	2.21	0.56
26:R:76:LYS:HB3	26:R:90:ARG:HG2	1.88	0.56
26:R:97:LYS:O	26:R:98:ILE:HB	2.06	0.56
34:Z:47:LYS:HB2	34:Z:51:VAL:HG12	1.88	0.56
3:2:46:LYS:H	3:2:46:LYS:CE	2.17	0.56
8:9:5:LEU:HD12	8:9:8:ARG:CG	2.32	0.56
8:9:7:ASP:HB2	8:9:11:ARG:NE	2.15	0.56
8:9:150:THR:O	8:9:151:LEU:C	2.47	0.56
8:9:424:GLN:HE21	8:9:428:LYS:HZ2	1.52	0.56
14:F:135:ILE:O	14:F:136:ILE:HB	2.05	0.56
20:L:126:ARG:O	20:L:127:VAL:O	2.23	0.56
24:P:55:HIS:C	24:P:57:ALA:N	2.58	0.56
26:R:26:ASP:O	26:R:27:ILE:HB	2.06	0.56
27:S:7:HIS:CD2	27:S:10:ALA:HB2	2.40	0.56
30:V:76:ASP:H	30:V:90:ASP:HB2	1.71	0.56
2:1:31:GLU:HG2	2:1:32:LYS:N	2.20	0.56
8:9:137:ALA:HB2	8:9:189:VAL:CG1	2.30	0.56
8:9:139:VAL:HG21	8:9:167:LYS:H	1.69	0.56
8:9:149:GLU:HA	8:9:159:PHE:CZ	2.41	0.56
8:9:271:LYS:O	8:9:285:PHE:HB3	2.06	0.56
8:9:280:GLU:O	8:9:282:LEU:N	2.39	0.56
8:9:287:PRO:O	8:9:290:ILE:N	2.38	0.56
8:9:311:VAL:O	8:9:312:ASP:CB	2.54	0.56
8:9:335:LEU:HB3	8:9:388:ARG:HH21	1.69	0.56
8:9:414:ASN:HA	8:9:417:LEU:CD1	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:424:GLN:O	8:9:427:MET:N	2.38	0.56
10:B:281:C:H2'	10:B:282:A:C8	2.41	0.56
10:B:663:G:OP1	20:L:27:LEU:HD22	2.06	0.56
10:B:723:C:H2'	10:B:724:U:C6	2.41	0.56
10:B:1100:C:H2'	10:B:1101:U:H6	1.70	0.56
10:B:1275:A:N7	22:N:16:HIS:ND1	2.53	0.56
10:B:2539:C:O2'	10:B:2540:C:H5'	2.06	0.56
10:B:2803:G:H2'	10:B:2804:U:C6	2.41	0.56
12:D:5:VAL:HG22	12:D:51:THR:O	2.06	0.56
13:E:134:LEU:HD22	13:E:134:LEU:N	2.20	0.56
19:K:71:ARG:CB	19:K:72:PRO:CD	2.82	0.56
21:M:16:ARG:HE	21:M:18:ARG:NH1	2.04	0.56
21:M:43:ALA:H	21:M:91:TYR:HB2	1.71	0.56
23:O:49:VAL:HG22	23:O:50:ALA:N	2.20	0.56
24:P:25:VAL:C	24:P:27:VAL:H	2.13	0.56
25:Q:57:ARG:HH21	25:Q:92:LYS:HZ3	1.54	0.56
27:S:8:ARG:O	27:S:9:HIS:HB2	2.06	0.56
31:W:76:ARG:C	31:W:78:PHE:H	2.14	0.56
5:4:26:ILE:HG23	5:4:27:CYS:N	2.19	0.56
8:9:48:VAL:O	8:9:49:ARG:C	2.49	0.56
8:9:411:GLN:HB2	10:B:484:C:O3'	2.06	0.56
10:B:378:C:O2'	10:B:379:G:H5'	2.06	0.56
10:B:1341:G:H5'	28:T:61:LEU:HD21	1.88	0.56
10:B:2369:A:O2'	10:B:2370:G:H5'	2.06	0.56
10:B:2526:G:H2'	10:B:2527:C:C6	2.41	0.56
10:B:2809:A:H2'	10:B:2810:A:C8	2.41	0.56
12:D:118:PHE:HA	12:D:164:GLN:HG2	1.87	0.56
13:E:129:PRO:O	13:E:130:LYS:HB2	2.04	0.56
15:G:39:ALA:HB1	15:G:54:ARG:H	1.71	0.56
17:I:102:ARG:HG3	17:I:141:ASP:HB2	1.87	0.56
21:M:127:LYS:HD3	21:M:128:THR:H	1.70	0.56
23:O:30:ARG:O	23:O:31:THR:HB	2.06	0.56
24:P:70:GLU:CD	24:P:71:ARG:HE	2.14	0.56
27:S:20:VAL:O	27:S:24:ILE:HG13	2.06	0.56
34:Z:49:ARG:C	34:Z:51:VAL:N	2.57	0.56
8:9:119:LYS:O	8:9:123:PHE:N	2.26	0.55
8:9:222:ASP:C	8:9:224:MET:H	2.12	0.55
8:9:332:ASN:HB2	8:9:388:ARG:CD	2.36	0.55
10:B:3:U:H2'	10:B:4:U:C6	2.41	0.55
10:B:620:G:H5'	10:B:620:G:N3	2.21	0.55
10:B:794:A:H2'	10:B:795:C:H6	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1316:U:O2'	10:B:1317:G:H5'	2.06	0.55
10:B:1505:A:H2'	10:B:1506:U:C6	2.41	0.55
10:B:1759:A:H4'	10:B:2715:C:O4'	2.05	0.55
10:B:2090:A:H2'	34:Z:49:ARG:CZ	2.35	0.55
10:B:2135:A:H61	10:B:2156:G:C2'	2.18	0.55
10:B:2688:G:H1'	10:B:2721:A:H61	1.70	0.55
11:C:167:ASP:HB3	11:C:172:THR:OG1	2.06	0.55
11:C:258:SER:N	11:C:261:ARG:NH1	2.54	0.55
15:G:17:LYS:HZ2	15:G:18:ILE:C	2.14	0.55
16:H:75:LEU:H	16:H:75:LEU:HD23	1.71	0.55
17:I:37:PHE:CE1	17:I:58:ILE:HD11	2.40	0.55
18:J:58:ASN:C	18:J:60:ASP:H	2.13	0.55
19:K:12:ASP:HA	19:K:99:ILE:HA	1.88	0.55
24:P:73:PHE:CD2	24:P:75:THR:HG23	2.41	0.55
25:Q:39:ILE:O	25:Q:43:GLN:HB3	2.06	0.55
26:R:3:ALA:O	26:R:4:VAL:HG13	2.06	0.55
31:W:81:ILE:HG12	31:W:82:GLU:H	1.71	0.55
34:Z:41:HIS:CG	34:Z:42:PRO:HD2	2.40	0.55
3:2:26:ASN:O	3:2:29:GLN:HB2	2.05	0.55
4:3:12:ARG:CZ	20:L:62:PRO:HB3	2.36	0.55
7:8:48:G:N2	8:9:381:ASN:ND2	2.53	0.55
8:9:79:ARG:CA	8:9:82:LEU:HG	2.36	0.55
8:9:380:ILE:HG23	8:9:388:ARG:NH2	2.21	0.55
8:9:426:MET:O	8:9:429:LYS:N	2.35	0.55
10:B:21:A:H2'	10:B:22:C:C6	2.42	0.55
10:B:545:U:H3'	10:B:546:U:C5'	2.35	0.55
10:B:667:U:H2'	10:B:668:A:O4'	2.07	0.55
10:B:962:G:H21	10:B:2250:G:H1	1.52	0.55
10:B:1534:U:H2'	10:B:1536:C:N3	2.22	0.55
10:B:2139:U:O2'	10:B:2140:G:H5'	2.05	0.55
10:B:2666:C:O2	10:B:2666:C:O4'	2.24	0.55
10:B:2839:G:H4'	22:N:49:GLU:HG2	1.87	0.55
11:C:28:PRO:HB2	11:C:79:ARG:NE	2.21	0.55
11:C:33:LEU:HD22	11:C:34:GLU:N	2.21	0.55
11:C:56:GLY:HA3	11:C:214:GLY:H	1.70	0.55
12:D:24:VAL:HG13	12:D:193:VAL:HG21	1.87	0.55
14:F:18:GLU:C	14:F:20:ASN:H	2.12	0.55
15:G:93:TYR:HD1	15:G:93:TYR:H	1.54	0.55
18:J:15:TRP:CE3	18:J:138:GLN:HB2	2.42	0.55
21:M:88:ASN:O	21:M:89:VAL:HG12	2.06	0.55
24:P:52:ARG:HB3	24:P:60:VAL:CG1	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:U:78:LYS:HD2	29:U:96:LYS:HG3	1.88	0.55
31:W:47:GLY:HA2	31:W:71:LYS:C	2.31	0.55
2:1:22:THR:O	2:1:23:THR:C	2.49	0.55
7:8:84:C:H2'	7:8:87:G:C8	2.41	0.55
8:9:7:ASP:CB	8:9:11:ARG:HE	2.16	0.55
8:9:10:SER:C	8:9:12:THR:N	2.58	0.55
8:9:68:LEU:C	28:T:94:ASP:OD1	2.37	0.55
8:9:260:LEU:O	8:9:263:ARG:HB2	2.06	0.55
10:B:144:A:H1'	28:T:3:ARG:HA	1.87	0.55
10:B:784:G:H5"	11:C:225:ASN:ND2	2.16	0.55
10:B:1083:U:C2	10:B:1086:A:N1	2.75	0.55
11:C:107:LYS:CB	11:C:194:VAL:HG21	2.32	0.55
14:F:4:HIS:O	14:F:7:TYR:HB3	2.06	0.55
15:G:124:CYS:HB3	15:G:130:ILE:HD13	1.89	0.55
16:H:125:THR:HA	16:H:146:VAL:CB	2.26	0.55
17:I:3:LYS:CD	17:I:3:LYS:HE2	2.18	0.55
18:J:41:LYS:HZ3	18:J:44:TYR:C	2.14	0.55
19:K:63:VAL:CG1	19:K:103:VAL:HG12	2.36	0.55
21:M:42:THR:HG22	21:M:45:GLN:NE2	2.22	0.55
24:P:25:VAL:O	24:P:27:VAL:N	2.40	0.55
24:P:61:ARG:NH2	24:P:63:ILE:HD11	2.21	0.55
25:Q:26:ALA:O	25:Q:30:VAL:HG23	2.06	0.55
27:S:3:THR:HG22	27:S:4:ILE:N	2.22	0.55
31:W:23:LYS:HG2	31:W:57:THR:HA	1.88	0.55
8:9:75:VAL:CA	8:9:78:VAL:HG22	2.36	0.55
8:9:113:LYS:HB2	8:9:113:LYS:HZ3	1.71	0.55
8:9:206:LYS:O	8:9:207:GLN:C	2.49	0.55
8:9:226:GLY:HA2	8:9:259:ALA:HB2	1.86	0.55
8:9:383:MET:HB3	8:9:387:GLU:OE1	2.05	0.55
8:9:409:GLN:O	8:9:410:VAL:C	2.49	0.55
9:A:76:G:H2'	9:A:77:U:C6	2.41	0.55
10:B:196:A:H2'	10:B:196:A:N3	2.20	0.55
10:B:225:C:H2'	10:B:226:A:O4'	2.06	0.55
10:B:813:U:H2'	10:B:814:C:H6	1.70	0.55
10:B:906:U:H4'	21:M:26:VAL:HG12	1.88	0.55
10:B:1441:G:H2'	10:B:1442:U:C6	2.42	0.55
10:B:1579:A:H2'	10:B:1580:A:C8	2.41	0.55
10:B:2466:C:O2	21:M:118:LYS:HD3	2.06	0.55
10:B:2899:A:H2'	10:B:2900:A:C8	2.42	0.55
11:C:171:VAL:HG23	11:C:182:LYS:NZ	2.21	0.55
12:D:89:GLU:CG	12:D:93:GLY:HA3	2.36	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:D:146:ILE:H	12:D:146:ILE:HD12	1.71	0.55
18:J:98:GLU:CD	18:J:98:GLU:H	2.14	0.55
18:J:102:GLU:CG	18:J:124:VAL:HG12	2.30	0.55
19:K:11:ALA:O	19:K:99:ILE:HG23	2.07	0.55
19:K:109:SER:C	19:K:113:MET:HE2	2.31	0.55
21:M:62:LYS:HB2	21:M:104:GLU:CD	2.31	0.55
22:N:10:LEU:HG	22:N:11:ASN:N	2.21	0.55
22:N:33:ILE:CG2	22:N:112:TYR:HB3	2.37	0.55
27:S:7:HIS:CD2	27:S:46:LEU:HD13	2.41	0.55
32:X:55:THR:O	32:X:56:LEU:HB2	2.05	0.55
33:Y:1:ALA:O	33:Y:43:ILE:HB	2.07	0.55
33:Y:6:ILE:HG12	33:Y:35:VAL:O	2.06	0.55
33:Y:7:THR:HG22	33:Y:34:THR:HB	1.89	0.55
4:3:25:HIS:HA	10:B:2361:G:OP1	2.07	0.55
5:4:5:ALA:HB3	10:B:2466:C:OP1	2.07	0.55
5:4:24:ARG:HE	5:4:37:GLN:N	2.04	0.55
8:9:107:GLY:O	8:9:108:LEU:O	2.23	0.55
9:A:49:C:H2’	9:A:50:A:C8	2.42	0.55
10:B:644:A:O2’	10:B:645:C:H2’	2.06	0.55
10:B:857:G:O2’	10:B:858:G:H5’	2.06	0.55
10:B:876:C:H3’	10:B:877:A:O4’	2.06	0.55
10:B:1515:A:H5’	10:B:1557:C:H5’	1.89	0.55
10:B:1771:C:H2’	10:B:1772:A:C8	2.41	0.55
10:B:2213:U:O2	10:B:2213:U:C2’	2.55	0.55
11:C:51:ARG:HH12	11:C:54:GLY:HA3	1.71	0.55
11:C:136:VAL:C	11:C:165:ALA:HA	2.32	0.55
12:D:27:ILE:HD13	12:D:28:GLU:N	2.20	0.55
15:G:3:VAL:CG2	15:G:4:ALA:N	2.69	0.55
16:H:126:GLY:O	16:H:145:ASN:HA	2.06	0.55
17:I:7:TYR:CE1	17:I:57:VAL:HG11	2.42	0.55
17:I:73:PRO:CG	17:I:78:LEU:HD21	2.34	0.55
18:J:131:ASN:C	18:J:133:ALA:N	2.65	0.55
19:K:66:LYS:HA	19:K:79:PHE:O	2.06	0.55
1:0:32:THR:HG21	1:0:41:HIS:CD2	2.41	0.55
6:7:66:LYS:NZ	8:9:368:MET:HE2	2.21	0.55
8:9:423:MET:O	8:9:427:MET:N	2.36	0.55
9:A:21:G:H2’	9:A:22:U:O4’	2.06	0.55
9:A:59:A:H2’	9:A:60:C:O4’	2.07	0.55
9:A:78:A:H4’	21:M:22:GLN:CD	2.32	0.55
10:B:155:A:H2’	10:B:156:A:C8	2.42	0.55
10:B:351:C:H2’	10:B:352:A:H8	1.72	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2072:C:O2'	10:B:2073:C:H5'	2.07	0.55
10:B:2229:U:H2'	10:B:2230:G:C8	2.42	0.55
12:D:153:GLY:C	12:D:155:VAL:N	2.65	0.55
13:E:42:GLY:O	13:E:43:THR:HG23	2.05	0.55
14:F:140:ILE:HG21	14:F:145:VAL:CG2	2.32	0.55
16:H:1:MET:HG3	16:H:21:VAL:CG2	2.36	0.55
16:H:8:LYS:HA	16:H:13:GLY:O	2.06	0.55
17:I:79:LEU:HD12	17:I:135:MET:SD	2.46	0.55
18:J:96:ARG:CD	18:J:99:ARG:HH21	2.19	0.55
22:N:45:ARG:HH21	22:N:113:ILE:HD12	1.69	0.55
23:O:106:LEU:O	23:O:109:ALA:HB3	2.07	0.55
26:R:4:VAL:HA	26:R:43:ASN:CG	2.32	0.55
28:T:54:GLU:HB3	28:T:91:GLN:OE1	2.06	0.55
8:9:58:LYS:O	8:9:59:ALA:C	2.49	0.55
8:9:75:VAL:HA	8:9:78:VAL:CG2	2.36	0.55
8:9:350:LEU:HD23	8:9:350:LEU:HB3	1.87	0.55
8:9:395:LYS:O	8:9:396:GLY:C	2.49	0.55
10:B:364:C:H2'	10:B:365:U:C6	2.42	0.55
10:B:753:A:H2'	10:B:754:U:C6	2.42	0.55
10:B:1550:C:H2'	10:B:1551:A:C8	2.41	0.55
10:B:1878:G:H2'	10:B:1879:C:C6	2.41	0.55
10:B:2091:C:H3'	10:B:2092:U:C5'	2.33	0.55
10:B:2246:G:H2'	10:B:2247:A:C8	2.42	0.55
11:C:77:VAL:HB	11:C:110:LYS:O	2.06	0.55
11:C:163:ILE:HG22	11:C:164:VAL:H	1.71	0.55
12:D:4:LEU:HB3	12:D:202:ILE:HA	1.88	0.55
13:E:45:ALA:O	13:E:46:GLN:HB3	2.06	0.55
14:F:175:PRO:O	14:F:176:PHE:HB2	2.07	0.55
16:H:3:VAL:HB	16:H:37:VAL:CG1	2.36	0.55
18:J:40:HIS:CA	25:Q:69:ARG:HH12	2.14	0.55
19:K:107:LEU:HG	19:K:115:ILE:HG21	1.89	0.55
20:L:99:ASN:C	20:L:100:ILE:HG13	2.31	0.55
25:Q:50:ARG:HH12	25:Q:53:LYS:HE3	1.72	0.55
4:3:39:ARG:HD2	10:B:2363:G:OP2	2.07	0.55
5:4:26:ILE:CG1	5:4:35:GLN:HG2	2.36	0.55
6:7:59:LEU:CB	8:9:351:MET:HE1	2.36	0.55
8:9:177:LYS:O	8:9:181:LEU:N	2.31	0.55
10:B:527:C:O2	10:B:527:C:O4'	2.23	0.55
10:B:1098:A:HO2'	17:I:4:VAL:C	2.15	0.55
10:B:1429:G:O2'	10:B:1430:G:H5'	2.07	0.55
10:B:1820:U:O2	11:C:200:MET:HB2	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2197:U:O2'	10:B:2198:A:H2'	2.07	0.55
10:B:2233:U:H2'	10:B:2234:G:C8	2.42	0.55
10:B:2820:A:C6	12:D:197:THR:HB	2.42	0.55
10:B:2836:U:H2'	10:B:2837:A:C8	2.42	0.55
10:B:2840:C:H2'	10:B:2841:C:H6	1.72	0.55
10:B:2849:U:N3	10:B:2867:G:H1'	2.22	0.55
11:C:75:ALA:HA	11:C:94:LEU:O	2.06	0.55
11:C:235:GLU:HG3	11:C:236:GLY:H	1.72	0.55
14:F:172:PHE:CD1	14:F:172:PHE:N	2.75	0.55
15:G:10:VAL:HG23	15:G:47:ASN:O	2.07	0.55
22:N:1:MET:HE2	22:N:3:HIS:NE2	2.22	0.55
27:S:33:LEU:HD22	27:S:51:LEU:HD23	1.87	0.55
30:V:2:PHE:HD1	30:V:50:MET:HE2	1.71	0.55
32:X:27:ASN:C	32:X:29:ARG:H	2.14	0.55
32:X:51:ALA:O	32:X:53:VAL:HG12	2.07	0.55
8:9:42:ASP:O	8:9:43:VAL:O	2.25	0.55
8:9:379:ILE:CG2	8:9:380:ILE:H	1.98	0.55
10:B:64:A:O3'	28:T:76:ARG:HG3	2.07	0.55
10:B:359:G:H2'	10:B:360:U:H5'	1.89	0.55
10:B:981:A:N1	10:B:2027:G:O2'	2.39	0.55
10:B:2771:C:H2'	10:B:2772:C:C6	2.41	0.55
10:B:2873:A:N3	22:N:6:SER:HA	2.21	0.55
12:D:37:VAL:HG11	12:D:46:ARG:HD3	1.89	0.55
13:E:47:LYS:C	13:E:49:ARG:HG2	2.32	0.55
16:H:122:LEU:HA	16:H:146:VAL:CG2	2.36	0.55
17:I:99:LYS:HD3	17:I:99:LYS:H	1.72	0.55
20:L:37:GLY:O	20:L:38:GLN:HG3	2.06	0.55
20:L:77:ILE:HG12	20:L:109:LYS:C	2.31	0.55
26:R:76:LYS:HB3	26:R:90:ARG:CB	2.37	0.55
27:S:72:THR:HG23	27:S:106:VAL:HG23	1.89	0.55
30:V:30:ILE:HG12	30:V:91:PHE:CB	2.36	0.55
6:7:67:LYS:N	8:9:416:LEU:HB3	2.19	0.55
8:9:17:SER:HB2	32:X:24:GLU:HG3	1.85	0.55
8:9:141:ARG:HG2	8:9:142:PRO:HD2	1.89	0.55
8:9:236:PHE:C	8:9:238:GLU:H	2.15	0.55
8:9:236:PHE:HA	8:9:239:ALA:CB	2.37	0.55
8:9:338:LEU:HD21	8:9:377:GLU:HG3	1.88	0.55
9:A:66:A:O2'	9:A:67:G:H5"	2.07	0.55
10:B:1188:U:H4'	26:R:84:ARG:CD	2.36	0.55
10:B:1429:G:H2'	10:B:1430:G:C8	2.42	0.55
10:B:2533:U:H2'	10:B:2534:A:O4'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C:12:ARG:HB2	11:C:20:ASN:CA	2.33	0.55
18:J:118:MET:HE3	18:J:121:LYS:HD3	1.89	0.55
20:L:123:ARG:HB3	20:L:141:LYS:HB2	1.89	0.55
24:P:93:LYS:HD3	24:P:96:LEU:HA	1.88	0.55
30:V:21:ARG:HH21	30:V:88:HIS:N	2.05	0.55
31:W:67:LYS:HG2	31:W:71:LYS:CB	2.37	0.55
1:0:21:LEU:HD22	27:S:23:LEU:CB	2.37	0.54
5:4:24:ARG:CB	5:4:36:ARG:HA	2.36	0.54
8:9:153:GLU:C	8:9:155:VAL:N	2.65	0.54
8:9:173:ASN:O	8:9:174:ALA:C	2.50	0.54
8:9:370:ASP:O	8:9:373:LEU:HB2	2.07	0.54
9:A:10:G:H2'	9:A:11:C:O4'	2.06	0.54
10:B:90:U:H3'	10:B:91:A:C5'	2.35	0.54
10:B:143:C:N3	28:T:3:ARG:NH1	2.55	0.54
10:B:170:U:H2'	10:B:171:U:H6	1.72	0.54
10:B:1506:U:H2'	10:B:1507:C:C6	2.42	0.54
10:B:2365:G:H4'	31:W:65:LYS:HD2	1.89	0.54
10:B:2789:C:H3'	10:B:2893:A:H62	1.71	0.54
12:D:35:THR:HB	12:D:48:ILE:HB	1.89	0.54
12:D:146:ILE:HD12	12:D:146:ILE:N	2.22	0.54
14:F:50:ASP:C	14:F:52:ALA:N	2.65	0.54
15:G:142:GLN:HG3	15:G:143:VAL:N	2.23	0.54
16:H:121:VAL:O	16:H:122:LEU:HB2	2.07	0.54
17:I:63:ASP:OD1	17:I:65:SER:HB2	2.06	0.54
19:K:78:ARG:HG2	24:P:72:VAL:HG21	1.89	0.54
24:P:67:GLU:O	24:P:69:VAL:N	2.40	0.54
24:P:86:LYS:CE	24:P:88:ARG:HB2	2.37	0.54
25:Q:4:LYS:O	25:Q:5:ARG:C	2.50	0.54
28:T:15:HIS:HB3	28:T:31:VAL:HG11	1.88	0.54
29:U:23:LYS:O	29:U:25:LYS:HD2	2.07	0.54
30:V:9:ARG:NH1	30:V:12:GLN:HA	2.21	0.54
31:W:20:LEU:CD1	31:W:31:LEU:HB2	2.32	0.54
31:W:69:GLU:HG3	31:W:70:VAL:H	1.72	0.54
2:1:8:ILE:HD13	2:1:9:LYS:N	2.22	0.54
8:9:78:VAL:O	8:9:79:ARG:C	2.49	0.54
8:9:102:VAL:HG11	8:9:214:PRO:HB3	1.89	0.54
8:9:140:TYR:CE1	8:9:193:GLY:HA2	2.43	0.54
8:9:338:LEU:O	8:9:339:ARG:C	2.50	0.54
10:B:346:A:C8	10:B:347:A:H1'	2.42	0.54
10:B:431:U:O2'	10:B:432:A:H5'	2.06	0.54
10:B:818:G:H3'	10:B:1187:G:H22	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:823:C:O2'	10:B:824:U:H5'	2.07	0.54
10:B:1153:C:O2'	10:B:1154:G:H5'	2.08	0.54
10:B:1716:U:H2'	10:B:1717:A:C8	2.42	0.54
12:D:62:LYS:HZ2	12:D:62:LYS:H	1.54	0.54
13:E:134:LEU:H	13:E:134:LEU:HD13	1.71	0.54
13:E:188:MET:SD	13:E:190:ALA:HB2	2.48	0.54
14:F:108:PRO:HB3	14:F:113:PHE:CE2	2.42	0.54
18:J:15:TRP:HB2	18:J:139:VAL:CA	2.27	0.54
18:J:37:ARG:CZ	18:J:110:PRO:HG3	2.37	0.54
20:L:119:PRO:HD3	20:L:137:ALA:O	2.08	0.54
23:O:25:ARG:NH2	23:O:94:ARG:HH12	2.05	0.54
26:R:4:VAL:C	26:R:41:ILE:HG21	2.32	0.54
29:U:8:ASP:O	29:U:10:VAL:HG13	2.07	0.54
30:V:6:ALA:O	30:V:65:VAL:HA	2.08	0.54
32:X:17:GLU:H	32:X:17:GLU:CD	2.15	0.54
1:0:31:LYS:HB2	1:0:31:LYS:HZ2	1.70	0.54
1:0:36:LYS:HE3	1:0:48:TYR:HE1	1.71	0.54
2:1:7:LYS:HB3	2:1:24:LYS:NZ	2.22	0.54
4:3:12:ARG:HD3	20:L:63:LYS:H	1.71	0.54
7:8:22:U:O4	7:8:23:G:O6	2.25	0.54
8:9:10:SER:C	8:9:12:THR:H	2.15	0.54
8:9:39:LEU:O	8:9:42:ASP:O	2.24	0.54
8:9:86:MET:HE3	8:9:260:LEU:HD13	1.89	0.54
8:9:119:LYS:O	8:9:123:PHE:CB	2.55	0.54
8:9:163:ASP:O	8:9:164:VAL:C	2.50	0.54
8:9:227:GLN:CB	8:9:262:ILE:HG12	2.33	0.54
9:A:54:G:H21	14:F:25:MET:HG2	1.70	0.54
10:B:189:G:H1	10:B:205:G:HO2'	1.55	0.54
10:B:326:G:O2'	10:B:327:G:H5'	2.07	0.54
10:B:453:A:H4'	10:B:472:A:H61	1.72	0.54
10:B:458:G:H22	10:B:469:G:H2'	1.73	0.54
10:B:878:A:H1'	10:B:899:A:H62	1.72	0.54
10:B:1152:C:O2'	10:B:1153:C:H5'	2.08	0.54
10:B:1742:U:H2'	10:B:1743:G:C8	2.41	0.54
10:B:2734:A:H2'	10:B:2735:G:H5'	1.90	0.54
12:D:69:ALA:CB	12:D:90:PHE:HB2	2.38	0.54
13:E:109:LEU:HD21	13:E:113:VAL:O	2.07	0.54
24:P:61:ARG:O	24:P:63:ILE:HG13	2.07	0.54
29:U:82:VAL:HB	29:U:94:PHE:HB3	1.89	0.54
29:U:95:PHE:CD2	29:U:99:SER:HB3	2.40	0.54
32:X:55:THR:C	32:X:57:LEU:H	2.14	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:Z:41:HIS:ND1	34:Z:42:PRO:HD2	2.21	0.54
8:9:22:LEU:O	8:9:23:THR:C	2.50	0.54
8:9:88:GLU:N	8:9:264:HIS:CE1	2.70	0.54
8:9:222:ASP:C	8:9:224:MET:N	2.63	0.54
8:9:299:ASP:CB	8:9:302:SER:H	2.20	0.54
8:9:306:ASP:O	8:9:309:SER:N	2.40	0.54
8:9:317:GLU:OE1	8:9:329:PHE:HB3	2.07	0.54
9:A:25:U:H4'	9:A:27:C:OP1	2.08	0.54
10:B:285:G:H2'	10:B:286:U:O4'	2.07	0.54
10:B:543:G:C5	10:B:544:C:H1'	2.42	0.54
10:B:1025:G:H1'	10:B:1135:C:C5'	2.28	0.54
10:B:1060:U:OP1	17:I:75:ALA:HB3	2.07	0.54
10:B:1098:A:C5'	17:I:3:LYS:HB3	2.38	0.54
10:B:1250:G:H4'	25:Q:5:ARG:HD3	1.88	0.54
10:B:2103:C:H3'	10:B:2104:C:O2	2.08	0.54
10:B:2153:C:H2'	10:B:2154:A:H8	1.72	0.54
10:B:2484:G:N2	21:M:118:LYS:HG2	2.23	0.54
13:E:163:ASN:HB2	13:E:167:VAL:O	2.07	0.54
14:F:157:THR:HG22	14:F:159:ALA:H	1.73	0.54
14:F:172:PHE:O	14:F:173:ASP:C	2.49	0.54
17:I:18:ASN:HB2	17:I:38:CYS:SG	2.47	0.54
20:L:63:LYS:HG3	20:L:64:PHE:H	1.72	0.54
21:M:5:LYS:HE3	21:M:6:ARG:H	1.72	0.54
24:P:86:LYS:HZ2	24:P:88:ARG:HD3	1.73	0.54
26:R:22:LEU:HD12	26:R:24:LYS:N	2.15	0.54
26:R:92:TRP:H	26:R:92:TRP:CD1	2.23	0.54
27:S:29:VAL:O	27:S:33:LEU:HD23	2.08	0.54
28:T:49:LYS:O	28:T:50:LEU:HG	2.07	0.54
2:1:22:THR:HG21	4:3:34:LYS:NZ	2.23	0.54
4:3:21:PHE:H	4:3:48:MET:HB2	1.72	0.54
7:8:30:G:C4	7:8:78:G:N1	2.76	0.54
7:8:75:G:O3'	7:8:77:C:OP1	2.26	0.54
8:9:103:VAL:CB	8:9:188:LEU:HD23	2.38	0.54
8:9:146:LYS:O	8:9:148:LEU:N	2.40	0.54
8:9:195:LEU:N	8:9:195:LEU:CB	2.64	0.54
8:9:371:LYS:HB2	8:9:372:VAL:HG22	1.89	0.54
9:A:63:C:H2'	9:A:64:G:H8	1.73	0.54
10:B:288:U:O2'	10:B:289:G:H5'	2.07	0.54
10:B:499:U:H2'	10:B:500:G:O4'	2.07	0.54
10:B:1197:G:O2'	10:B:1198:U:H5'	2.08	0.54
10:B:1198:U:H2'	10:B:1199:U:C6	2.43	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1332:G:H2'	10:B:1332:G:N3	2.21	0.54
10:B:1688:U:O2	10:B:1700:A:H5'	2.07	0.54
10:B:1771:C:H2'	10:B:1772:A:H8	1.73	0.54
10:B:1802:A:H4'	11:C:255:LYS:HE2	1.90	0.54
10:B:2294:G:OP1	23:O:9:ARG:HD3	2.07	0.54
12:D:7:LYS:HB3	12:D:201:LEU:HD22	1.89	0.54
12:D:50:VAL:CG1	12:D:75:ALA:HB3	2.37	0.54
13:E:189:THR:HG23	13:E:194:LYS:CG	2.38	0.54
16:H:2:GLN:CB	16:H:19:VAL:HA	2.34	0.54
18:J:7:LYS:HE3	18:J:47:HIS:HD2	1.72	0.54
18:J:118:MET:O	18:J:121:LYS:HD2	2.07	0.54
24:P:51:ASN:OD1	24:P:52:ARG:N	2.41	0.54
33:Y:37:ARG:NE	33:Y:37:ARG:HA	2.23	0.54
1:0:12:ARG:HH21	1:0:16:ARG:CG	2.14	0.54
8:9:43:VAL:C	8:9:227:GLN:OE1	2.51	0.54
8:9:83:VAL:O	8:9:86:MET:N	2.40	0.54
8:9:240:LEU:O	8:9:243:THR:CB	2.55	0.54
8:9:299:ASP:CB	8:9:302:SER:HB3	2.35	0.54
8:9:340:GLN:O	8:9:344:MET:N	2.39	0.54
10:B:25:U:H5"	27:S:80:PRO:HD3	1.89	0.54
10:B:479:A:OP1	10:B:479:A:H4'	2.08	0.54
10:B:660:C:H2'	10:B:661:A:H8	1.71	0.54
10:B:1164:C:H2'	10:B:1165:A:H8	1.72	0.54
10:B:1551:A:H3'	10:B:1552:A:H5"	1.89	0.54
10:B:2078:C:O2'	10:B:2079:U:H5'	2.06	0.54
10:B:2386:A:C4'	31:W:38:ARG:HB2	2.37	0.54
13:E:116:ASP:CG	13:E:185:LYS:HE2	2.33	0.54
13:E:130:LYS:HB2	13:E:130:LYS:NZ	2.21	0.54
20:L:90:VAL:HG12	20:L:122:VAL:CG2	2.23	0.54
21:M:133:LYS:HD2	21:M:134:THR:N	2.18	0.54
22:N:73:ASN:O	22:N:76:VAL:HG12	2.07	0.54
27:S:27:LYS:HA	27:S:70:LYS:HG2	1.90	0.54
29:U:33:VAL:CB	29:U:65:GLN:HA	2.31	0.54
29:U:96:LYS:O	29:U:97:SER:HB3	2.08	0.54
8:9:78:VAL:O	8:9:82:LEU:HG	2.08	0.54
8:9:83:VAL:CG1	8:9:88:GLU:O	2.56	0.54
8:9:105:MET:HB3	8:9:190:ASP:CA	2.30	0.54
8:9:227:GLN:CG	8:9:258:ALA:HB1	2.37	0.54
8:9:306:ASP:O	8:9:309:SER:CB	2.52	0.54
8:9:380:ILE:CG2	8:9:388:ARG:NH2	2.71	0.54
8:9:426:MET:O	8:9:427:MET:C	2.51	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:E:109:LEU:HD23	13:E:117:ARG:NE	2.23	0.54
15:G:163:TYR:HB2	15:G:166:GLU:HG3	1.88	0.54
15:G:171:LYS:HZ3	15:G:174:LYS:N	2.01	0.54
19:K:17:ARG:HB2	19:K:45:GLU:CB	2.38	0.54
21:M:62:LYS:H	21:M:104:GLU:HB2	1.73	0.54
24:P:49:ILE:HA	24:P:62:LYS:O	2.07	0.54
31:W:38:ARG:HG3	31:W:39:GLN:N	2.21	0.54
34:Z:3:LYS:NZ	34:Z:29:GLY:HA3	2.22	0.54
1:0:41:HIS:HB3	1:0:46:GLY:HA3	1.90	0.54
2:1:9:LYS:HG3	2:1:24:LYS:HG2	1.89	0.54
4:3:2:LYS:HB2	4:3:2:LYS:HZ2	1.69	0.54
8:9:137:ALA:CB	8:9:190:ASP:O	2.45	0.54
8:9:304:ILE:H	8:9:350:LEU:CD1	2.20	0.54
10:B:836:G:H2'	10:B:837:C:C6	2.43	0.54
10:B:935:C:O2'	10:B:936:A:H5'	2.07	0.54
10:B:1911:U:H2'	10:B:1918:A:N1	2.22	0.54
10:B:1935:G:H1'	10:B:1964:G:N2	2.21	0.54
10:B:1939:U:H5'	10:B:1939:U:H6	1.72	0.54
10:B:2893:A:H5"	10:B:2894:G:H5'	1.90	0.54
11:C:63:ILE:O	11:C:64:VAL:HG13	2.08	0.54
11:C:65:ASP:OD2	11:C:101:ARG:HD3	2.07	0.54
11:C:216:ARG:HB3	11:C:217:PRO:HD2	1.88	0.54
12:D:77:ARG:HB2	12:D:77:ARG:CZ	2.38	0.54
13:E:105:LEU:O	13:E:108:ILE:HG23	2.08	0.54
13:E:152:GLU:O	13:E:153:LEU:HB2	2.08	0.54
15:G:36:LEU:HB2	15:G:40:VAL:HG11	1.89	0.54
15:G:125:PRO:CG	15:G:129:GLU:HB3	2.37	0.54
16:H:1:MET:C	16:H:21:VAL:HG22	2.33	0.54
16:H:125:THR:CA	16:H:146:VAL:HB	2.30	0.54
27:S:25:ARG:HD2	27:S:26:GLY:H	1.73	0.54
8:9:33:GLU:O	8:9:34:VAL:C	2.50	0.54
8:9:300:VAL:CB	8:9:350:LEU:N	2.71	0.54
8:9:380:ILE:C	8:9:382:SER:N	2.65	0.54
10:B:7:G:H2'	10:B:8:C:C6	2.43	0.54
10:B:70:G:H3'	10:B:113:U:H4'	1.89	0.54
10:B:144:A:C6	28:T:3:ARG:NH1	2.75	0.54
10:B:175:G:H2'	10:B:176:A:C8	2.42	0.54
10:B:336:C:H5"	29:U:3:LYS:NZ	2.23	0.54
10:B:1517:G:O2'	10:B:1518:C:H5'	2.08	0.54
10:B:1821:A:H5'	11:C:155:ARG:HH21	1.72	0.54
10:B:2085:U:O2'	10:B:2086:U:H5'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2239:G:OP1	11:C:246:PRO:HG3	2.08	0.54
10:B:2278:A:H62	31:W:10:ARG:C	2.16	0.54
10:B:2786:U:O2	12:D:62:LYS:HB3	2.07	0.54
11:C:50:THR:C	11:C:51:ARG:HG3	2.32	0.54
11:C:137:GLY:O	11:C:140:VAL:HG13	2.07	0.54
12:D:1:MET:HB2	12:D:81:GLU:CD	2.33	0.54
13:E:151:GLY:HA2	13:E:169:VAL:O	2.08	0.54
14:F:41:GLU:O	14:F:42:ALA:C	2.51	0.54
14:F:103:ILE:CG2	14:F:173:ASP:HA	2.38	0.54
18:J:73:VAL:HG11	18:J:75:TYR:CE1	2.43	0.54
20:L:25:SER:C	20:L:27:LEU:N	2.63	0.54
20:L:55:MET:CB	20:L:56:PRO:HD3	2.38	0.54
20:L:115:GLU:C	20:L:116:VAL:HG13	2.32	0.54
23:O:18:LEU:HD13	31:W:76:ARG:HE	1.73	0.54
24:P:26:GLU:O	24:P:27:VAL:C	2.51	0.54
24:P:108:ARG:HD3	24:P:108:ARG:H	1.73	0.54
26:R:3:ALA:HB1	26:R:12:HIS:CB	2.36	0.54
31:W:60:ALA:HB3	31:W:80:SER:CA	2.34	0.54
32:X:22:LEU:HD11	32:X:47:ARG:CZ	2.37	0.54
2:1:23:THR:HG22	10:B:2286:G:O6	2.07	0.54
8:9:102:VAL:CG1	8:9:214:PRO:HA	2.38	0.54
8:9:202:MET:O	8:9:205:ILE:CG2	2.50	0.54
10:B:18:U:H2'	10:B:19:A:H8	1.73	0.54
10:B:38:A:N3	13:E:43:THR:HG22	2.23	0.54
10:B:168:G:H2'	10:B:169:G:H8	1.72	0.54
10:B:664:G:H2'	10:B:665:U:C6	2.42	0.54
10:B:899:A:H2'	10:B:900:A:O4'	2.08	0.54
10:B:963:U:H2'	10:B:964:C:C6	2.42	0.54
10:B:2590:A:H2'	10:B:2591:C:C6	2.43	0.54
10:B:2617:U:H2'	10:B:2618:G:H5'	1.90	0.54
10:B:2839:G:H2'	10:B:2840:C:C6	2.43	0.54
11:C:27:LYS:HG2	11:C:81:GLU:HA	1.90	0.54
11:C:72:GLY:C	11:C:73:ILE:HG13	2.33	0.54
11:C:84:PRO:C	11:C:86:ARG:H	2.15	0.54
12:D:157:LYS:HZ2	18:J:80:HIS:HA	1.73	0.54
15:G:36:LEU:HB2	15:G:40:VAL:HG21	1.90	0.54
16:H:4:ILE:HD13	16:H:37:VAL:HG13	1.90	0.54
16:H:50:ARG:HG3	16:H:51:ARG:N	2.22	0.54
18:J:76:HIS:HB2	18:J:86:GLN:HG3	1.90	0.54
19:K:7:MET:HA	19:K:7:MET:HE3	1.90	0.54
21:M:16:ARG:NH2	21:M:72:PRO:HG2	2.22	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:P:27:VAL:HG21	24:P:84:SER:O	2.08	0.54
26:R:40:MET:O	26:R:54:VAL:HG22	2.08	0.54
28:T:14:PRO:CA	28:T:32:LEU:HD23	2.38	0.54
28:T:76:ARG:HD3	28:T:76:ARG:N	2.23	0.54
29:U:25:LYS:HA	29:U:25:LYS:NZ	2.22	0.54
3:2:5:PHE:O	10:B:686:U:H1'	2.08	0.53
3:2:11:LYS:HE3	10:B:686:U:H5"	1.90	0.53
5:4:2:LYS:HE3	10:B:2538:C:O2	2.07	0.53
5:4:9:LYS:O	5:4:25:VAL:HA	2.08	0.53
8:9:299:ASP:CG	8:9:350:LEU:CD2	2.79	0.53
8:9:380:ILE:C	8:9:382:SER:H	2.16	0.53
9:A:47:C:H5'	23:O:97:PHE:CZ	2.44	0.53
10:B:125:A:H4'	10:B:126:A:OP2	2.08	0.53
10:B:521:U:H2'	10:B:522:A:C8	2.43	0.53
10:B:1551:A:C3'	10:B:1552:A:H5"	2.38	0.53
10:B:1681:G:H2'	10:B:1757:A:N1	2.23	0.53
10:B:2516:A:O2'	10:B:2517:C:H5'	2.07	0.53
10:B:2678:C:H2'	10:B:2679:A:C8	2.43	0.53
11:C:61:TYR:CZ	11:C:63:ILE:HD11	2.43	0.53
11:C:144:GLU:HB2	11:C:187:CYS:HB2	1.89	0.53
12:D:23:PRO:HA	12:D:189:VAL:O	2.08	0.53
12:D:153:GLY:O	12:D:155:VAL:HG23	2.08	0.53
13:E:46:GLN:NE2	13:E:87:ALA:N	2.56	0.53
18:J:100:VAL:O	18:J:101:ILE:HB	2.08	0.53
28:T:34:VAL:HG22	28:T:35:ALA:H	1.73	0.53
32:X:22:LEU:HD22	32:X:25:GLN:OE1	2.08	0.53
3:2:18:PHE:CE2	3:2:44:VAL:HB	2.42	0.53
8:9:110:GLY:HA2	8:9:113:LYS:CE	2.39	0.53
8:9:114:THR:O	8:9:115:THR:O	2.26	0.53
8:9:198:ASP:O	8:9:199:GLU:C	2.44	0.53
8:9:364:VAL:HG12	8:9:364:VAL:O	2.08	0.53
8:9:413:VAL:O	8:9:416:LEU:CD1	2.56	0.53
10:B:845:A:N1	10:B:847:U:H1'	2.23	0.53
10:B:871:U:H2'	10:B:872:U:H6	1.72	0.53
10:B:988:A:OP1	33:Y:10:ARG:HB3	2.09	0.53
10:B:1060:U:O2	10:B:1088:A:C8	2.61	0.53
11:C:244:VAL:HG23	11:C:249:VAL:CG2	2.38	0.53
12:D:37:VAL:HG12	12:D:44:GLY:O	2.07	0.53
18:J:40:HIS:O	25:Q:66:ALA:HB1	2.08	0.53
18:J:90:GLU:HG3	18:J:93:ILE:HD12	1.88	0.53
18:J:106:LYS:C	18:J:108:MET:H	2.16	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:K:84:CYS:O	19:K:85:VAL:HB	2.08	0.53
19:K:87:LEU:HD22	19:K:92:GLU:O	2.07	0.53
20:L:110:VAL:HG13	20:L:127:VAL:HG12	1.90	0.53
24:P:18:SER:HB2	24:P:87:ARG:NH2	2.22	0.53
8:9:332:ASN:N	8:9:332:ASN:OD1	2.41	0.53
8:9:338:LEU:CD2	8:9:377:GLU:CG	2.85	0.53
9:A:33:G:O2'	9:A:34:A:H5'	2.09	0.53
10:B:264:C:C2'	10:B:265:A:H5"	2.38	0.53
10:B:565:C:O2'	10:B:566:U:H5'	2.08	0.53
10:B:598:U:H2'	10:B:599:A:C8	2.43	0.53
10:B:1099:G:H5'	17:I:4:VAL:CA	2.39	0.53
10:B:1219:U:H2'	10:B:1220:G:C8	2.43	0.53
10:B:1395:A:H4'	10:B:1397:U:C5	2.44	0.53
10:B:2064:C:H2'	10:B:2065:C:H6	1.70	0.53
10:B:2093:G:O2'	10:B:2094:A:H5'	2.07	0.53
10:B:2234:G:O2'	10:B:2235:G:H5'	2.09	0.53
10:B:2869:G:H2'	10:B:2870:C:C6	2.44	0.53
11:C:32:LEU:HD13	11:C:36:ASN:ND2	2.23	0.53
11:C:122:ALA:O	11:C:124:LYS:HG2	2.08	0.53
15:G:72:ASN:O	15:G:76:ILE:HG13	2.09	0.53
16:H:147:VAL:HG12	16:H:148:ALA:N	2.23	0.53
19:K:98:ARG:HB3	19:K:98:ARG:NH1	2.23	0.53
22:N:45:ARG:HH21	22:N:97:ILE:CG1	2.20	0.53
26:R:32:THR:CB	26:R:66:HIS:HB3	2.39	0.53
34:Z:47:LYS:HB2	34:Z:51:VAL:HG11	1.90	0.53
8:9:17:SER:C	32:X:24:GLU:HG2	2.33	0.53
8:9:65:ASN:C	8:9:66:LYS:O	2.48	0.53
8:9:69:THR:N	28:T:95:PHE:C	2.57	0.53
8:9:102:VAL:CG1	8:9:214:PRO:HB3	2.37	0.53
8:9:139:VAL:HB	8:9:166:GLN:HA	1.89	0.53
8:9:321:SER:O	8:9:322:LYS:CB	2.56	0.53
10:B:104:A:H2'	10:B:105:C:H6	1.72	0.53
10:B:566:U:O2'	10:B:567:U:H5'	2.07	0.53
10:B:1168:G:O2'	10:B:1169:A:H5'	2.09	0.53
10:B:1804:C:O2'	10:B:1805:A:H5'	2.07	0.53
10:B:1915:U:H2'	10:B:1916:A:O4'	2.08	0.53
10:B:2027:G:O2'	10:B:2028:U:H5'	2.08	0.53
11:C:53:ILE:HG12	11:C:218:THR:HA	1.90	0.53
11:C:68:ARG:HB2	11:C:128:THR:OG1	2.08	0.53
11:C:169:ALA:O	11:C:170:TYR:HB2	2.08	0.53
11:C:237:ARG:HD2	11:C:239:PHE:CE1	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:F:116:LEU:HD13	14:F:129:MET:HE1	1.90	0.53
16:H:3:VAL:CB	16:H:37:VAL:HG11	2.38	0.53
17:I:1:ALA:C	17:I:2:LYS:HD2	2.33	0.53
18:J:13:ARG:HG2	18:J:53:TYR:CE1	2.43	0.53
18:J:64:VAL:HG21	18:J:90:GLU:OE1	2.08	0.53
19:K:77:ILE:HD11	19:K:105:ARG:NH1	2.23	0.53
21:M:81:ARG:HG3	21:M:82:MET:N	2.23	0.53
26:R:65:ALA:CB	26:R:99:THR:HG23	2.36	0.53
26:R:78:ARG:HH21	26:R:90:ARG:HH21	1.57	0.53
29:U:60:LYS:HE3	29:U:61:GLU:N	2.22	0.53
1:0:10:SER:HA	10:B:16:C:O3'	2.09	0.53
2:1:26:LYS:HE2	2:1:28:THR:HB	1.89	0.53
4:3:4:LYS:CE	4:3:61:LEU:H	2.21	0.53
8:9:145:ILE:HA	8:9:148:LEU:HG	1.90	0.53
8:9:351:MET:O	8:9:351:MET:CG	2.29	0.53
8:9:362:ASP:CB	8:9:365:LYS:HE3	2.39	0.53
10:B:340:A:H2'	10:B:341:C:O4'	2.09	0.53
10:B:488:G:H1'	10:B:492:A:N6	2.24	0.53
10:B:721:A:H2'	10:B:722:A:H8	1.73	0.53
10:B:1099:G:C5'	17:I:3:LYS:C	2.82	0.53
10:B:1439:A:C5	10:B:1552:A:N6	2.76	0.53
10:B:1515:A:H4'	10:B:1556:C:O2'	2.09	0.53
10:B:2215:C:O2'	10:B:2216:G:H5'	2.09	0.53
10:B:2465:C:O2'	10:B:2466:C:H5'	2.09	0.53
11:C:171:VAL:HG23	11:C:182:LYS:HZ3	1.73	0.53
12:D:34:VAL:HG11	12:D:50:VAL:HG23	1.90	0.53
13:E:53:THR:HG21	13:E:74:LYS:HB3	1.90	0.53
13:E:149:ILE:HD12	13:E:152:GLU:OE2	2.08	0.53
13:E:169:VAL:HG22	13:E:170:ARG:N	2.24	0.53
22:N:67:PHE:O	22:N:71:ARG:HA	2.09	0.53
26:R:11:GLN:C	26:R:21:ARG:HH22	2.15	0.53
27:S:71:VAL:HA	27:S:107:VAL:HG12	1.90	0.53
31:W:42:THR:HG21	31:W:66:VAL:HG13	1.89	0.53
31:W:82:GLU:HG3	31:W:83:ALA:N	2.23	0.53
1:0:26:SER:HB2	1:0:38:LEU:CD2	2.35	0.53
1:0:29:VAL:HG21	1:0:34:GLY:H	1.73	0.53
2:1:42:VAL:O	2:1:43:ARG:HB2	2.08	0.53
8:9:253:ASP:O	8:9:254:ALA:CB	2.57	0.53
8:9:398:ARG:HH11	8:9:398:ARG:CG	2.21	0.53
10:B:534:U:H5'	25:Q:41:ALA:CA	2.35	0.53
10:B:596:U:H2'	10:B:597:G:H8	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1244:A:O2'	10:B:1245:G:H5'	2.07	0.53
10:B:1684:G:H2'	10:B:1685:C:C6	2.44	0.53
10:B:2080:A:H2'	10:B:2081:U:C6	2.44	0.53
10:B:2852:G:H2'	10:B:2853:C:H6	1.74	0.53
11:C:56:GLY:HA3	11:C:214:GLY:N	2.23	0.53
11:C:142:ASN:HA	11:C:153:LEU:CD2	2.39	0.53
11:C:251:THR:O	11:C:252:LYS:CB	2.56	0.53
12:D:7:LYS:HA	12:D:26:VAL:HA	1.91	0.53
13:E:21:ARG:HB3	13:E:21:ARG:HH11	1.74	0.53
14:F:98:PHE:HA	14:F:101:ARG:HE	1.74	0.53
15:G:148:ARG:HH21	15:G:153:PRO:HD2	1.74	0.53
21:M:40:ARG:HG2	21:M:92:TRP:CZ2	2.43	0.53
21:M:60:GLN:NE2	21:M:61:GLY:H	2.06	0.53
21:M:127:LYS:CD	21:M:128:THR:H	2.21	0.53
22:N:2:ARG:HH21	22:N:4:ARG:HB3	1.73	0.53
25:Q:111:LYS:HZ2	26:R:52:PRO:HA	1.72	0.53
26:R:76:LYS:HB3	26:R:90:ARG:CG	2.38	0.53
29:U:57:ILE:HD13	29:U:58:VAL:N	2.24	0.53
32:X:52:ARG:O	32:X:56:LEU:HD12	2.09	0.53
8:9:79:ARG:HA	8:9:82:LEU:HD12	1.90	0.53
8:9:128:HIS:N	8:9:128:HIS:CB	2.67	0.53
8:9:140:TYR:CZ	8:9:193:GLY:HA2	2.44	0.53
8:9:331:LEU:HD12	8:9:391:PRO:HG2	1.91	0.53
8:9:341:MET:HA	8:9:346:GLY:HA3	0.55	0.53
10:B:51:G:O2'	10:B:118:A:N6	2.41	0.53
10:B:1412:U:H2'	10:B:1413:A:H8	1.73	0.53
10:B:1528:A:H2'	10:B:1529:G:O4'	2.09	0.53
10:B:2052:A:H5'	12:D:146:ILE:O	2.08	0.53
10:B:2250:G:H21	10:B:2496:C:H4'	1.73	0.53
10:B:2680:U:C5'	12:D:194:PRO:HA	2.38	0.53
11:C:94:LEU:HD12	11:C:95:TYR:N	2.24	0.53
13:E:49:ARG:C	13:E:51:GLU:H	2.16	0.53
13:E:141:MET:HG3	13:E:185:LYS:HE3	1.90	0.53
16:H:94:ILE:HG23	16:H:98:ASP:HB2	1.90	0.53
18:J:120:ARG:N	18:J:121:LYS:HZ2	2.06	0.53
20:L:90:VAL:N	20:L:122:VAL:HG22	2.23	0.53
22:N:33:ILE:HG12	22:N:114:GLU:HB3	1.91	0.53
23:O:25:ARG:HG2	23:O:94:ARG:HH22	1.72	0.53
24:P:25:VAL:HG11	24:P:87:ARG:CA	2.33	0.53
30:V:9:ARG:HE	30:V:20:LEU:HD11	1.74	0.53
8:9:20:GLY:O	8:9:21:ARG:C	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:153:GLU:O	8:9:155:VAL:N	2.42	0.53
8:9:413:VAL:HG12	8:9:417:LEU:HD21	1.90	0.53
10:B:250:G:H4'	20:L:60:ARG:HE	1.74	0.53
10:B:589:U:H2'	10:B:590:A:H8	1.74	0.53
10:B:726:G:H5"	10:B:1432:G:O2'	2.08	0.53
10:B:862:G:H2'	10:B:863:A:O4'	2.08	0.53
10:B:1225:G:P	26:R:90:ARG:HB2	2.48	0.53
10:B:1488:C:O2'	10:B:1489:C:H5'	2.09	0.53
10:B:2103:C:H3'	10:B:2104:C:C2	2.43	0.53
10:B:2669:G:H2'	10:B:2670:A:C8	2.44	0.53
11:C:155:ARG:HG2	11:C:155:ARG:NH2	2.23	0.53
11:C:163:ILE:HG12	11:C:173:LEU:CD2	2.38	0.53
12:D:6:GLY:HA2	12:D:199:SER:O	2.09	0.53
12:D:154:LYS:C	12:D:156:PHE:H	2.16	0.53
13:E:48:THR:OG1	13:E:86:ALA:HB3	2.08	0.53
13:E:112:LEU:O	13:E:114:ARG:N	2.42	0.53
15:G:18:ILE:O	15:G:18:ILE:HG13	2.08	0.53
18:J:4:PHE:HB2	18:J:5:THR:O	2.08	0.53
20:L:8:PRO:O	20:L:9:ALA:HB2	2.07	0.53
20:L:18:ARG:NH2	20:L:21:ARG:HD3	2.23	0.53
28:T:53:VAL:CG1	28:T:93:LEU:HD21	2.39	0.53
1:0:36:LYS:HB2	1:0:41:HIS:ND1	2.24	0.53
8:9:87:GLY:HA2	8:9:264:HIS:ND1	2.24	0.53
8:9:119:LYS:HD3	8:9:282:LEU:H	1.73	0.53
8:9:173:ASN:O	8:9:176:LEU:HB3	2.09	0.53
8:9:286:HIS:O	8:9:288:ASP:N	2.42	0.53
8:9:299:ASP:HB3	8:9:302:SER:H	1.73	0.53
8:9:321:SER:C	8:9:322:LYS:HG3	2.33	0.53
8:9:366:SER:HG	8:9:367:GLN:CA	2.09	0.53
9:A:7:G:H4'	23:O:29:HIS:NE2	2.24	0.53
10:B:90:U:H2'	10:B:91:A:C2	2.44	0.53
10:B:110:G:O2'	10:B:111:A:H5'	2.09	0.53
10:B:575:A:O2'	10:B:576:U:H5'	2.09	0.53
10:B:2443:C:O2'	10:B:2444:G:H5'	2.09	0.53
11:C:107:LYS:HD2	11:C:196:ASN:ND2	2.24	0.53
11:C:145:MET:HG2	11:C:152:GLN:HG2	1.91	0.53
11:C:160:TYR:CE2	11:C:193:GLU:HG2	2.43	0.53
12:D:17:GLU:HG3	24:P:80:VAL:CG1	2.37	0.53
12:D:33:ARG:HG2	12:D:36:GLN:HG3	1.91	0.53
12:D:37:VAL:HG21	12:D:46:ARG:NH1	2.23	0.53
12:D:50:VAL:HG13	12:D:77:ARG:O	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:E:132:LYS:H	13:E:134:LEU:HD11	1.74	0.53
16:H:99:ILE:HG13	16:H:100:ALA:N	2.24	0.53
18:J:19:ASP:CB	18:J:21:THR:HG23	2.39	0.53
20:L:107:PHE:CE2	20:L:126:ARG:HB2	2.44	0.53
20:L:109:LYS:HE2	20:L:126:ARG:NH1	2.24	0.53
21:M:71:LYS:HZ1	21:M:91:TYR:HB3	1.73	0.53
23:O:7:ARG:O	23:O:11:ALA:HB2	2.08	0.53
27:S:41:LYS:O	27:S:41:LYS:HG3	2.07	0.53
28:T:86:THR:O	28:T:87:LEU:HB2	2.06	0.53
32:X:1:MET:HB2	32:X:6:LEU:CA	2.38	0.53
2:1:27:ARG:H	2:1:27:ARG:HE	1.56	0.53
6:7:57:LEU:CD2	8:9:427:MET:SD	2.84	0.53
8:9:39:LEU:CD1	8:9:45:LEU:HG	2.28	0.53
8:9:67:SER:HG	28:T:92:ASN:HB3	1.62	0.53
8:9:227:GLN:O	8:9:262:ILE:HG21	2.09	0.53
8:9:236:PHE:C	8:9:236:PHE:CD1	2.86	0.53
10:B:20:C:H2'	10:B:21:A:H8	1.73	0.53
10:B:26:G:OP2	27:S:80:PRO:HG3	2.09	0.53
10:B:345:A:H1'	10:B:346:A:H2	1.74	0.53
10:B:1099:G:N7	17:I:3:LYS:HD3	2.24	0.53
10:B:1270:C:H5"	10:B:1271:G:O5'	2.09	0.53
10:B:1474:U:H2'	10:B:1475:G:H5'	1.91	0.53
10:B:1592:C:H2'	10:B:1593:A:H8	1.74	0.53
10:B:2063:C:O2	10:B:2450:A:N1	2.42	0.53
10:B:2849:U:H4'	10:B:2850:A:C5'	2.39	0.53
11:C:27:LYS:HG2	11:C:81:GLU:N	2.24	0.53
11:C:38:LYS:HG3	11:C:39:SER:H	1.74	0.53
11:C:78:GLU:CD	11:C:100:ARG:HH21	2.17	0.53
11:C:103:ILE:HG22	11:C:104:LEU:N	2.21	0.53
13:E:139:LYS:HA	13:E:143:LEU:HD23	1.90	0.53
14:F:133:GLU:HG2	14:F:149:ARG:O	2.08	0.53
18:J:130:HIS:O	18:J:131:ASN:C	2.52	0.53
21:M:51:ARG:HG2	21:M:51:ARG:HH11	1.73	0.53
23:O:30:ARG:HG2	23:O:31:THR:H	1.73	0.53
26:R:74:ILE:HG13	26:R:76:LYS:HG2	1.90	0.53
28:T:34:VAL:HG21	28:T:43:ILE:CD1	2.36	0.53
32:X:16:THR:HG23	32:X:21:LEU:HD12	1.89	0.53
34:Z:11:GLU:O	34:Z:27:THR:HG22	2.08	0.53
2:1:47:ILE:O	2:1:48:TYR:HB2	2.10	0.52
4:3:7:ARG:NE	10:B:249:C:O2'	2.42	0.52
8:9:6:THR:CG2	8:9:295:LEU:HG	2.15	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:49:ARG:O	8:9:53:ASN:HB2	2.09	0.52
8:9:119:LYS:HG2	8:9:279:THR:C	2.34	0.52
8:9:313:ARG:C	8:9:316:ALA:HA	2.17	0.52
8:9:375:ARG:N	8:9:376:MET:N	2.57	0.52
10:B:96:C:H4'	32:X:41:HIS:CE1	2.44	0.52
10:B:204:A:H4'	10:B:205:G:OP1	2.08	0.52
10:B:586:A:H5'	13:E:84:THR:HG21	1.90	0.52
10:B:587:C:H4'	10:B:588:U:C6	2.44	0.52
10:B:1013:C:H2'	10:B:1014:A:C8	2.44	0.52
10:B:1113:U:H5"	15:G:2:ARG:CD	2.38	0.52
10:B:1736:U:H2'	10:B:1737:G:O4'	2.08	0.52
10:B:1923:U:H2'	10:B:1924:C:C6	2.44	0.52
12:D:116:LYS:HB2	12:D:165:MET:HB2	1.90	0.52
13:E:46:GLN:HG3	13:E:49:ARG:NH2	2.24	0.52
14:F:37:MET:HB2	14:F:86:CYS:SG	2.49	0.52
14:F:56:LEU:HD11	14:F:86:CYS:HB3	1.90	0.52
17:I:83:ALA:HB3	17:I:85:ILE:HG12	1.91	0.52
17:I:89:SER:HA	17:I:97:VAL:HG11	1.91	0.52
21:M:9:PHE:CD2	21:M:11:LYS:HG2	2.44	0.52
21:M:52:ALA:O	21:M:55:ARG:HB2	2.09	0.52
21:M:71:LYS:HA	21:M:71:LYS:NZ	2.23	0.52
23:O:25:ARG:HE	23:O:94:ARG:HH22	1.58	0.52
23:O:104:GLN:O	23:O:107:ALA:HB3	2.09	0.52
24:P:26:GLU:HA	24:P:47:ILE:N	2.23	0.52
26:R:6:GLN:O	26:R:7:SER:HB3	2.07	0.52
27:S:20:VAL:HB	27:S:43:ALA:HB1	1.90	0.52
27:S:76:VAL:HG12	27:S:103:ILE:HA	1.91	0.52
29:U:60:LYS:HE3	29:U:61:GLU:H	1.74	0.52
32:X:44:LYS:HE3	32:X:47:ARG:HB2	1.91	0.52
2:1:7:LYS:HE3	10:B:2285:C:C5	2.44	0.52
5:4:19:ARG:HB3	5:4:19:ARG:HH11	1.74	0.52
8:9:87:GLY:O	8:9:88:GLU:C	2.51	0.52
8:9:114:THR:HG23	8:9:115:THR:H	1.74	0.52
8:9:177:LYS:O	8:9:180:LYS:HB3	2.09	0.52
9:A:14:U:H4'	9:A:70:C:O2	2.09	0.52
10:B:64:A:H5"	28:T:76:ARG:HG3	1.92	0.52
10:B:162:U:H5	10:B:165:A:N1	2.07	0.52
10:B:587:C:H5"	20:L:29:LYS:HZ2	1.74	0.52
10:B:851:C:H2'	10:B:852:U:H6	1.75	0.52
10:B:1175:A:C2'	10:B:1176:U:H5'	2.39	0.52
10:B:1292:G:H2'	10:B:1293:C:C6	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1545:A:H2'	10:B:1546:G:O4'	2.10	0.52
10:B:2306:C:H3'	10:B:2307:G:H5"	1.91	0.52
11:C:258:SER:H	11:C:261:ARG:NH1	2.06	0.52
12:D:172:VAL:HB	12:D:175:LEU:HD11	1.91	0.52
14:F:45:ASP:O	14:F:46:LYS:HG3	2.10	0.52
14:F:147:ARG:HD2	14:F:147:ARG:O	2.09	0.52
16:H:3:VAL:HB	16:H:37:VAL:HG21	1.91	0.52
18:J:44:TYR:HD1	18:J:45:THR:H	1.50	0.52
18:J:81:ILE:CG2	18:J:82:GLY:H	2.11	0.52
21:M:97:GLN:N	21:M:98:PRO:CD	2.71	0.52
24:P:23:ASP:O	24:P:25:VAL:HG23	2.09	0.52
24:P:25:VAL:O	24:P:47:ILE:HG13	2.09	0.52
24:P:45:VAL:HG12	24:P:46:VAL:O	2.08	0.52
31:W:9:THR:OG1	31:W:10:ARG:N	2.41	0.52
32:X:43:LEU:CB	32:X:45:GLN:HE22	2.20	0.52
3:2:13:ASN:C	3:2:15:SER:H	2.16	0.52
7:8:76:A:C3'	7:8:77:C:P	2.97	0.52
8:9:5:LEU:HD11	8:9:34:VAL:N	2.25	0.52
8:9:82:LEU:O	8:9:85:ALA:HB3	2.08	0.52
8:9:115:THR:O	8:9:117:VAL:N	2.41	0.52
8:9:205:ILE:HD12	8:9:208:VAL:HG11	1.90	0.52
8:9:310:LYS:O	8:9:313:ARG:N	2.42	0.52
8:9:390:LYS:HB2	8:9:393:ILE:CD1	2.40	0.52
8:9:398:ARG:HA	8:9:401:ARG:HH12	1.73	0.52
10:B:441:U:H2'	10:B:442:G:C8	2.44	0.52
10:B:533:G:H2'	10:B:534:U:C6	2.44	0.52
10:B:553:G:O2'	10:B:554:U:H5'	2.09	0.52
10:B:611:C:H2'	10:B:612:G:O4'	2.10	0.52
10:B:920:A:H2'	10:B:921:C:H6	1.74	0.52
10:B:1000:A:H2'	10:B:1001:A:C8	2.45	0.52
10:B:1082:U:H2'	10:B:1083:U:O4'	2.10	0.52
10:B:1444:G:H2'	10:B:1445:G:H8	1.75	0.52
10:B:1487:U:H2'	10:B:1488:C:H6	1.75	0.52
10:B:1509:A:H5'	10:B:1510:G:H5'	1.91	0.52
10:B:1599:U:H2'	10:B:1600:C:C6	2.45	0.52
10:B:1737:G:H5'	10:B:1738:G:OP2	2.09	0.52
10:B:1791:A:H5'	11:C:207:ALA:HA	1.91	0.52
10:B:1801:A:H5'	10:B:2203:U:O2'	2.08	0.52
10:B:1816:C:C5	11:C:62:ARG:HD2	2.45	0.52
10:B:2787:C:O2'	10:B:2788:C:H5'	2.09	0.52
12:D:138:LEU:CD1	12:D:142:VAL:HB	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:D:174:SER:C	12:D:175:LEU:HD12	2.35	0.52
15:G:124:CYS:HA	15:G:129:GLU:O	2.09	0.52
16:H:114:GLU:CB	16:H:133:GLN:HG3	2.39	0.52
17:I:10:LEU:HD12	17:I:10:LEU:O	2.09	0.52
17:I:76:ALA:HA	17:I:135:MET:SD	2.48	0.52
18:J:41:LYS:HG2	25:Q:63:ARG:CZ	2.39	0.52
26:R:6:GLN:HE21	26:R:6:GLN:N	2.07	0.52
26:R:27:ILE:HG12	26:R:33:VAL:HG11	1.90	0.52
29:U:41:VAL:HG23	29:U:57:ILE:HG23	1.91	0.52
33:Y:40:THR:HG23	33:Y:43:ILE:HG22	1.91	0.52
34:Z:48:GLN:NE2	34:Z:49:ARG:HB3	2.24	0.52
2:1:7:LYS:HB3	2:1:24:LYS:HZ1	1.75	0.52
2:1:46:VAL:HG22	2:1:47:ILE:N	2.22	0.52
3:2:39:ARG:HB2	10:B:458:G:C5'	2.29	0.52
8:9:75:VAL:HA	8:9:78:VAL:CG1	2.40	0.52
10:B:364:C:H2'	10:B:365:U:C5	2.44	0.52
10:B:2191:A:H2'	10:B:2192:U:C6	2.43	0.52
10:B:2331:G:H2'	10:B:2332:C:C6	2.45	0.52
10:B:2740:A:H2'	10:B:2741:A:C8	2.45	0.52
11:C:92:LEU:O	11:C:93:VAL:HB	2.07	0.52
11:C:136:VAL:HA	11:C:165:ALA:CB	2.40	0.52
11:C:224:MET:CB	11:C:233:GLY:H	2.22	0.52
13:E:47:LYS:HD2	13:E:52:VAL:CG2	2.39	0.52
14:F:39:VAL:HG13	14:F:84:ILE:HG12	1.91	0.52
14:F:162:ASP:O	14:F:166:ARG:HG3	2.10	0.52
16:H:54:LEU:HA	16:H:57:LYS:HD2	1.91	0.52
20:L:61:LEU:N	20:L:62:PRO:CD	2.73	0.52
20:L:90:VAL:CG1	20:L:122:VAL:HG11	2.39	0.52
23:O:26:LEU:O	23:O:27:VAL:HG13	2.09	0.52
23:O:72:ALA:HA	23:O:109:ALA:HB2	1.91	0.52
28:T:31:VAL:O	28:T:32:LEU:HB2	2.09	0.52
31:W:38:ARG:HE	31:W:40:ARG:CA	2.22	0.52
32:X:18:LEU:HA	32:X:22:LEU:HD12	1.91	0.52
8:9:16:ILE:O	8:9:17:SER:HB2	2.09	0.52
10:B:396:G:H2'	10:B:397:U:H6	1.75	0.52
10:B:1464:G:H2'	10:B:1465:G:C8	2.44	0.52
10:B:2259:U:O2'	10:B:2260:C:H5'	2.10	0.52
10:B:2440:C:H5'	36:B:5437:HOH:O	2.10	0.52
10:B:2794:C:H2'	10:B:2795:C:C6	2.44	0.52
11:C:140:VAL:HG11	11:C:163:ILE:CD1	2.39	0.52
11:C:171:VAL:HA	11:C:183:VAL:O	2.08	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C:201:LEU:O	11:C:201:LEU:HD23	2.10	0.52
11:C:212:TRP:CZ3	11:C:217:PRO:HD3	2.38	0.52
12:D:11:MET:O	12:D:23:PRO:HD2	2.10	0.52
12:D:99:GLU:HA	12:D:99:GLU:OE1	2.10	0.52
15:G:67:ALA:O	15:G:71:LEU:HG	2.09	0.52
16:H:3:VAL:O	16:H:18:GLN:HA	2.10	0.52
19:K:34:GLY:O	19:K:37:ASP:HB2	2.10	0.52
19:K:53:LYS:O	19:K:56:ASP:HB2	2.09	0.52
20:L:44:GLY:HA2	20:L:47:ARG:HH21	1.75	0.52
21:M:5:LYS:HZ1	21:M:8:LYS:CG	2.22	0.52
23:O:18:LEU:HD13	31:W:76:ARG:NE	2.25	0.52
27:S:48:LYS:O	27:S:52:GLU:HG3	2.08	0.52
31:W:33:GLY:C	31:W:66:VAL:HG23	2.35	0.52
32:X:25:GLN:NE2	32:X:29:ARG:HH21	2.08	0.52
7:8:47:A:N6	8:9:381:ASN:HD22	2.08	0.52
10:B:1163:G:HO2’	26:R:92:TRP:HH2	1.57	0.52
10:B:1400:U:H2’	10:B:1401:G:C8	2.45	0.52
10:B:1450:G:N2	10:B:1452:G:N1	2.56	0.52
10:B:1681:G:N3	10:B:1762:A:H2’	2.24	0.52
10:B:1810:A:H2’	10:B:1811:G:O4’	2.08	0.52
10:B:2377:A:C2	23:O:92:PHE:HE1	2.27	0.52
10:B:2379:G:H2’	10:B:2380:C:C6	2.45	0.52
12:D:148:GLN:N	12:D:148:GLN:CD	2.65	0.52
13:E:116:ASP:CB	13:E:185:LYS:HA	2.37	0.52
13:E:144:GLU:HA	13:E:166:LYS:HE2	1.90	0.52
18:J:44:TYR:OH	18:J:49:ASP:O	2.28	0.52
23:O:35:ILE:O	23:O:35:ILE:HG13	2.10	0.52
26:R:18:GLN:CD	26:R:18:GLN:N	2.68	0.52
5:4:34:LYS:HE3	5:4:36:ARG:HH12	1.74	0.52
8:9:288:ASP:O	8:9:290:ILE:N	2.43	0.52
8:9:393:ILE:H	8:9:394:ILE:CD1	2.12	0.52
8:9:423:MET:HG3	8:9:424:GLN:N	2.24	0.52
9:A:43:C:H4’	14:F:62:GLN:HE21	1.75	0.52
10:B:299:A:H2’	10:B:300:A:C8	2.45	0.52
10:B:300:A:H2’	10:B:334:C:O2’	2.09	0.52
10:B:721:A:H2’	10:B:722:A:C8	2.45	0.52
10:B:1547:C:H2’	10:B:1548:A:H8	1.75	0.52
10:B:1641:A:H2’	10:B:1642:G:O4’	2.09	0.52
10:B:1657:U:OP1	12:D:141:ARG:HB2	2.09	0.52
10:B:1657:U:OP2	12:D:141:ARG:HG3	2.09	0.52
10:B:1819:A:OP1	11:C:155:ARG:HB3	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1821:A:H2'	10:B:1822:C:C6	2.45	0.52
10:B:1904:G:H1'	10:B:1927:A:N1	2.25	0.52
10:B:2216:G:H2'	10:B:2217:G:C8	2.45	0.52
10:B:2412:A:H2'	10:B:2413:G:O4'	2.10	0.52
11:C:237:ARG:HD2	11:C:239:PHE:HE1	1.75	0.52
12:D:79:LEU:CG	12:D:80:TRP:H	2.23	0.52
13:E:115:GLN:HG2	13:E:184:ASP:O	2.09	0.52
14:F:59:ILE:HD13	14:F:59:ILE:O	2.10	0.52
14:F:78:ILE:HG23	14:F:82:TYR:HD1	1.75	0.52
16:H:124:THR:HG23	16:H:128:HIS:CE1	2.43	0.52
18:J:7:LYS:HD2	18:J:45:THR:OG1	2.09	0.52
18:J:49:ASP:O	18:J:50:THR:CB	2.58	0.52
18:J:80:HIS:O	18:J:81:ILE:C	2.51	0.52
21:M:5:LYS:O	21:M:6:ARG:HB2	2.08	0.52
22:N:54:LEU:HD22	22:N:66:ALA:HB2	1.90	0.52
1:0:12:ARG:HH12	27:S:15:GLN:HE22	1.56	0.52
1:0:36:LYS:CB	1:0:41:HIS:HA	2.40	0.52
6:7:67:LYS:CE	8:9:379:ILE:CD1	2.88	0.52
8:9:34:VAL:O	8:9:38:LEU:CD2	2.58	0.52
8:9:250:VAL:C	8:9:252:GLY:N	2.66	0.52
8:9:260:LEU:HA	8:9:263:ARG:CD	2.33	0.52
8:9:290:ILE:CG2	8:9:296:GLY:HA3	2.39	0.52
9:A:51:G:C2'	9:A:52:A:H5"	2.39	0.52
10:B:4:U:H2'	10:B:5:A:H8	1.73	0.52
10:B:20:C:O2'	10:B:21:A:H5'	2.10	0.52
10:B:131:A:H2'	10:B:132:G:H8	1.75	0.52
10:B:197:A:H4'	10:B:2069:G:OP2	2.10	0.52
10:B:1061:U:H4'	10:B:1070:A:O3'	2.09	0.52
10:B:1259:G:H2'	10:B:1260:A:C8	2.44	0.52
10:B:1374:G:H2'	10:B:1375:U:C6	2.45	0.52
10:B:1854:A:N6	10:B:1888:G:H1'	2.25	0.52
10:B:1948:G:O2'	10:B:1949:G:H5'	2.10	0.52
10:B:2086:U:H2'	10:B:2087:G:C8	2.44	0.52
10:B:2281:A:N6	31:W:3:LYS:HE3	2.25	0.52
11:C:50:THR:O	11:C:51:ARG:C	2.52	0.52
11:C:87:SER:O	11:C:157:ALA:HB2	2.10	0.52
13:E:138:LEU:HD22	13:E:187:VAL:HG11	1.92	0.52
15:G:36:LEU:HD21	15:G:71:LEU:HD21	1.92	0.52
17:I:23:VAL:HG12	17:I:24:GLY:N	2.24	0.52
19:K:70:ARG:O	19:K:71:ARG:HG2	2.09	0.52
20:L:63:LYS:HG3	20:L:64:PHE:N	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:M:37:GLY:H	21:M:97:GLN:HG3	1.74	0.52
22:N:29:VAL:HG21	22:N:75:ILE:HB	1.91	0.52
23:O:13:ARG:O	23:O:17:LYS:HB2	2.10	0.52
25:Q:50:ARG:CZ	25:Q:50:ARG:HA	2.39	0.52
34:Z:24:ILE:HD13	34:Z:24:ILE:N	2.18	0.52
5:4:15:LYS:C	5:4:17:VAL:N	2.68	0.52
5:4:23:ILE:CD1	5:4:24:ARG:H	2.16	0.52
6:7:66:LYS:N	8:9:416:LEU:HB3	2.25	0.52
8:9:72:GLN:O	8:9:73:GLU:C	2.52	0.52
8:9:182:LYS:HD2	8:9:184:TYR:HE1	1.75	0.52
8:9:309:SER:O	8:9:313:ARG:HB2	2.10	0.52
8:9:332:ASN:CB	8:9:388:ARG:HD2	2.39	0.52
8:9:416:LEU:CD1	8:9:417:LEU:HD23	2.39	0.52
10:B:416:U:H2'	10:B:417:C:C6	2.45	0.52
10:B:417:C:H2'	10:B:418:C:H6	1.74	0.52
10:B:860:U:O2'	10:B:2267:A:H4'	2.09	0.52
10:B:968:C:O2'	10:B:969:G:H5'	2.10	0.52
10:B:1082:U:C2	10:B:1086:A:C6	2.97	0.52
10:B:1645:G:H5"	10:B:1646:C:H5'	1.91	0.52
10:B:2032:G:H21	12:D:150:GLN:HB3	1.74	0.52
10:B:2678:C:H2'	10:B:2679:A:H8	1.75	0.52
11:C:29:PHE:CE1	11:C:81:GLU:HG3	2.45	0.52
11:C:155:ARG:O	11:C:157:ALA:N	2.43	0.52
11:C:257:ARG:C	11:C:261:ARG:HD2	2.35	0.52
13:E:76:PRO:HA	13:E:82:GLY:O	2.10	0.52
18:J:45:THR:O	18:J:47:HIS:N	2.42	0.52
19:K:86:LEU:HB2	19:K:95:ILE:HG23	1.91	0.52
24:P:52:ARG:N	24:P:60:VAL:HG11	2.25	0.52
25:Q:63:ARG:O	25:Q:66:ALA:HB3	2.10	0.52
28:T:61:LEU:HB2	28:T:82:LYS:HB3	1.92	0.52
32:X:16:THR:OG1	32:X:19:LEU:HB3	2.09	0.52
1:0:41:HIS:CD2	1:0:42:ILE:HG22	2.44	0.52
5:4:15:LYS:HZ3	5:4:22:VAL:HG12	1.74	0.52
6:7:58:THR:HG22	8:9:337:GLN:NE2	1.91	0.52
10:B:877:A:N6	10:B:898:C:H2'	2.24	0.52
10:B:1724:G:H2'	10:B:1725:U:H6	1.75	0.52
10:B:2862:G:H2'	10:B:2863:C:C6	2.45	0.52
12:D:79:LEU:HG	12:D:80:TRP:H	1.74	0.52
14:F:120:SER:HB3	14:F:127:TYR:CE1	2.45	0.52
17:I:12:VAL:HG13	17:I:41:PHE:CE2	2.44	0.52
18:J:69:ARG:HA	18:J:90:GLU:OE1	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:J:123:LYS:N	18:J:123:LYS:HD2	2.25	0.52
19:K:43:ILE:HD12	19:K:43:ILE:N	2.25	0.52
20:L:17:LYS:HG3	20:L:18:ARG:N	2.24	0.52
20:L:19:LEU:O	20:L:21:ARG:HG2	2.09	0.52
23:O:38:GLN:HG3	23:O:40:ILE:HD13	1.92	0.52
26:R:18:GLN:CB	26:R:99:THR:HA	2.40	0.52
27:S:2:GLU:HB2	27:S:108:SER:CA	2.40	0.52
31:W:54:ARG:N	31:W:54:ARG:HD2	2.25	0.52
8:9:120:LEU:O	8:9:123:PHE:HB3	2.10	0.51
8:9:140:TYR:CD2	8:9:194:ARG:HB3	2.45	0.51
8:9:401:ARG:HH21	8:9:402:ILE:HD11	1.75	0.51
10:B:448:U:H5	10:B:583:G:N2	2.08	0.51
10:B:1442:U:H2'	10:B:1443:U:H6	1.73	0.51
10:B:1751:U:H2'	10:B:1752:C:C6	2.45	0.51
10:B:2266:A:H4'	10:B:2267:A:C2	2.45	0.51
10:B:2860:A:O5'	10:B:2860:A:H8	1.92	0.51
11:C:51:ARG:O	11:C:51:ARG:HD3	2.10	0.51
11:C:163:ILE:HG22	11:C:164:VAL:N	2.25	0.51
12:D:14:ILE:HD12	24:P:78:PRO:HG2	1.91	0.51
13:E:115:GLN:HG3	13:E:184:ASP:OD2	2.10	0.51
18:J:21:THR:HG22	18:J:58:ASN:OD1	2.10	0.51
21:M:50:ARG:HH21	21:M:101:VAL:HG22	1.74	0.51
21:M:127:LYS:HD3	21:M:128:THR:N	2.25	0.51
24:P:7:LEU:C	24:P:7:LEU:HD23	2.35	0.51
1:0:7:PRO:HG3	10:B:1264:A:H5'	1.92	0.51
4:3:12:ARG:CG	4:3:24:LYS:H	2.04	0.51
4:3:48:MET:HE3	4:3:49:VAL:N	2.22	0.51
5:4:25:VAL:O	5:4:35:GLN:HB2	2.10	0.51
8:9:102:VAL:HG11	8:9:214:PRO:CB	2.40	0.51
8:9:411:GLN:O	8:9:412:ASP:C	2.52	0.51
9:A:115:A:H2'	9:A:116:G:O4'	2.10	0.51
10:B:588:U:H5'	20:L:29:LYS:HZ2	1.75	0.51
10:B:1219:U:H2'	10:B:1220:G:H8	1.74	0.51
10:B:1444:G:H2'	10:B:1445:G:C8	2.45	0.51
10:B:1979:U:O2'	10:B:1980:G:H5'	2.11	0.51
10:B:2471:A:O2'	10:B:2472:G:O5'	2.28	0.51
10:B:2537:U:H2'	10:B:2538:C:H6	1.76	0.51
11:C:268:ARG:O	11:C:269:ARG:HB2	2.09	0.51
13:E:51:GLU:N	13:E:74:LYS:HZ2	2.08	0.51
18:J:118:MET:HE3	18:J:118:MET:HA	1.92	0.51
19:K:80:ASP:OD1	24:P:70:GLU:HB3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:M:2:LEU:HB2	21:M:47:GLU:HG2	1.91	0.51
21:M:5:LYS:HE3	21:M:6:ARG:N	2.25	0.51
21:M:5:LYS:C	21:M:6:ARG:O	2.48	0.51
22:N:63:ARG:HA	22:N:80:PHE:CZ	2.45	0.51
23:O:62:LEU:H	23:O:62:LEU:HD12	1.73	0.51
31:W:28:GLU:N	31:W:61:LYS:HB2	2.25	0.51
32:X:22:LEU:HD22	32:X:25:GLN:CD	2.35	0.51
6:7:59:LEU:CD1	8:9:351:MET:HE1	2.34	0.51
8:9:43:VAL:HA	8:9:258:ALA:CA	2.41	0.51
8:9:88:GLU:HG2	8:9:89:GLU:N	2.24	0.51
8:9:172:VAL:HG11	8:9:212:ILE:HD11	1.92	0.51
10:B:17:G:H2'	10:B:18:U:C6	2.46	0.51
10:B:27:G:H1'	10:B:513:A:N6	2.25	0.51
10:B:41:C:O2'	10:B:42:A:H5'	2.10	0.51
10:B:64:A:H4'	28:T:76:ARG:HD2	1.92	0.51
10:B:310:A:H5"	29:U:14:THR:HG21	1.91	0.51
10:B:458:G:O2'	10:B:469:G:N1	2.44	0.51
10:B:997:G:H2'	10:B:997:G:N3	2.24	0.51
10:B:1274:A:N3	10:B:1297:C:H1'	2.26	0.51
10:B:1571:A:H2'	10:B:1572:A:C8	2.45	0.51
10:B:1844:C:H5'	11:C:251:THR:HB	1.93	0.51
10:B:2645:G:H4'	10:B:2732:G:H2'	1.92	0.51
10:B:2821:A:H2'	10:B:2822:G:C8	2.45	0.51
11:C:155:ARG:O	11:C:155:ARG:HD3	2.11	0.51
13:E:148:ILE:HA	13:E:185:LYS:O	2.11	0.51
16:H:86:ASP:OD2	16:H:89:LYS:HB2	2.11	0.51
18:J:7:LYS:HG3	18:J:48:VAL:CG2	2.41	0.51
18:J:77:HIS:N	18:J:85:LYS:HE3	2.25	0.51
20:L:74:THR:O	20:L:75:ALA:C	2.52	0.51
22:N:103:ARG:O	22:N:104:ALA:HB3	2.09	0.51
25:Q:47:ARG:C	25:Q:51:GLN:HE21	2.18	0.51
27:S:43:ALA:C	27:S:45:VAL:H	2.19	0.51
28:T:47:VAL:HG13	28:T:48:GLN:N	2.26	0.51
30:V:9:ARG:NE	30:V:20:LEU:HD11	2.25	0.51
30:V:43:ASP:O	30:V:47:VAL:HG23	2.10	0.51
31:W:72:GLY:C	31:W:74:LYS:H	2.17	0.51
32:X:30:MET:H	32:X:30:MET:CE	2.22	0.51
32:X:31:GLN:HA	32:X:31:GLN:HE21	1.74	0.51
5:4:13:ASN:N	5:4:13:ASN:ND2	2.58	0.51
8:9:22:LEU:C	8:9:23:THR:C	2.74	0.51
8:9:32:ARG:C	8:9:35:ARG:HB3	2.36	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:68:LEU:CB	28:T:94:ASP:OD1	2.59	0.51
8:9:68:LEU:HA	28:T:95:PHE:O	2.01	0.51
8:9:299:ASP:OD1	8:9:350:LEU:HB2	2.10	0.51
8:9:396:GLY:HA3	10:B:486:C:C3'	2.29	0.51
10:B:363:G:H2'	10:B:364:C:C6	2.45	0.51
10:B:488:G:H1'	10:B:492:A:H62	1.76	0.51
10:B:1441:G:H2'	10:B:1442:U:H6	1.74	0.51
10:B:2090:A:H2'	34:Z:49:ARG:NH2	2.25	0.51
10:B:2101:A:O2'	10:B:2102:G:H5'	2.09	0.51
10:B:2654:A:N1	10:B:2665:A:H5"	2.26	0.51
10:B:2751:G:H5'	15:G:3:VAL:CG2	2.38	0.51
11:C:29:PHE:HE1	11:C:81:GLU:HG3	1.75	0.51
11:C:32:LEU:HD13	11:C:36:ASN:HD21	1.75	0.51
11:C:257:ARG:N	11:C:261:ARG:CZ	2.74	0.51
12:D:13:ARG:HG3	24:P:12:MET:HE1	1.93	0.51
12:D:56:LYS:HD3	12:D:59:ARG:HD3	1.92	0.51
12:D:116:LYS:HB2	12:D:165:MET:CG	2.39	0.51
15:G:102:ILE:O	15:G:102:ILE:HG23	2.11	0.51
16:H:19:VAL:HG22	16:H:20:ASN:H	1.75	0.51
19:K:76:VAL:HB	24:P:74:GLN:HE21	1.75	0.51
19:K:107:LEU:C	19:K:109:SER:H	2.19	0.51
20:L:41:ARG:CZ	20:L:41:ARG:HA	2.41	0.51
22:N:30:ARG:HH12	22:N:74:GLU:HG2	1.72	0.51
24:P:18:SER:HA	24:P:87:ARG:HH22	1.74	0.51
29:U:49:PRO:HG2	29:U:50:ALA:H	1.75	0.51
30:V:82:TYR:HE1	30:V:83:LYS:HE3	1.75	0.51
32:X:4:LYS:CG	32:X:7:ARG:HE	2.20	0.51
33:Y:10:ARG:O	33:Y:11:SER:HB3	2.11	0.51
8:9:8:ARG:CA	8:9:11:ARG:HB2	2.40	0.51
8:9:79:ARG:HA	8:9:82:LEU:HG	1.92	0.51
8:9:145:ILE:C	8:9:148:LEU:HG	2.36	0.51
8:9:195:LEU:HD12	8:9:204:GLU:HG3	1.92	0.51
8:9:247:LEU:HD11	8:9:260:LEU:HA	1.93	0.51
8:9:340:GLN:O	8:9:343:ASN:HB3	2.11	0.51
8:9:424:GLN:NE2	8:9:428:LYS:NZ	2.59	0.51
10:B:11:C:H2'	10:B:12:U:C5'	2.39	0.51
10:B:230:G:H2'	10:B:231:A:C8	2.45	0.51
10:B:1083:U:H2'	10:B:1085:A:OP2	2.11	0.51
10:B:1275:A:H2	10:B:1645:G:H21	1.59	0.51
10:B:1573:G:H2'	10:B:1574:C:H5'	1.92	0.51
10:B:1692:U:H2'	10:B:1694:C:C5	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1754:A:OP1	24:P:95:LYS:HB2	2.11	0.51
11:C:27:LYS:HB3	11:C:81:GLU:HA	1.93	0.51
11:C:193:GLU:C	11:C:194:VAL:HG22	2.34	0.51
13:E:2:GLU:O	13:E:3:LEU:HB2	2.09	0.51
14:F:23:SER:C	14:F:25:MET:H	2.17	0.51
14:F:65:LEU:O	14:F:66:ILE:HB	2.10	0.51
15:G:17:LYS:O	15:G:23:ILE:HA	2.09	0.51
15:G:148:ARG:HA	15:G:161:VAL:CG1	2.41	0.51
16:H:115:VAL:HB	16:H:132:PHE:CD1	2.44	0.51
20:L:35:HIS:CE1	26:R:84:ARG:HB3	2.45	0.51
23:O:4:LYS:O	23:O:7:ARG:HG2	2.11	0.51
23:O:25:ARG:O	23:O:26:LEU:HD12	2.10	0.51
24:P:80:VAL:O	24:P:80:VAL:CG1	2.58	0.51
25:Q:116:LEU:HD22	25:Q:116:LEU:N	2.25	0.51
31:W:42:THR:HG22	31:W:67:LYS:O	2.10	0.51
32:X:7:ARG:C	32:X:8:GLU:HG3	2.35	0.51
3:2:33:ARG:NE	3:2:33:ARG:HA	2.26	0.51
4:3:37:THR:HA	4:3:40:LYS:HD3	1.91	0.51
6:7:51:GLY:O	8:9:307:ILE:CD1	2.53	0.51
7:8:30:G:N2	7:8:78:G:C1’	2.74	0.51
8:9:151:LEU:O	8:9:152:ALA:C	2.53	0.51
8:9:219:PHE:CE2	8:9:236:PHE:CE2	2.96	0.51
8:9:390:LYS:HB2	8:9:393:ILE:HD13	1.92	0.51
10:B:55:G:H2’	10:B:56:A:H8	1.74	0.51
10:B:222:A:N6	10:B:232:G:H1’	2.25	0.51
10:B:437:U:O2’	10:B:438:G:H5’	2.11	0.51
10:B:967:U:H2’	10:B:968:C:C6	2.45	0.51
10:B:1139:G:O2’	10:B:1140:C:H5’	2.10	0.51
10:B:1287:A:O2’	10:B:1288:G:H5’	2.10	0.51
10:B:1633:G:O2’	10:B:1634:A:H5”	2.09	0.51
10:B:1790:C:O2’	11:C:207:ALA:HB2	2.11	0.51
11:C:231:HIS:ND1	11:C:242:HIS:HA	2.24	0.51
13:E:192:ALA:HB1	13:E:199:MET:CG	2.40	0.51
14:F:100:GLU:C	14:F:102:LEU:N	2.69	0.51
15:G:10:VAL:HG21	15:G:44:HIS:NE2	2.26	0.51
15:G:29:ASN:CB	15:G:78:VAL:HA	2.41	0.51
18:J:94:ALA:CB	18:J:95:ARG:HH21	2.24	0.51
19:K:18:ARG:HB2	19:K:45:GLU:CG	2.40	0.51
20:L:77:ILE:HD13	20:L:110:VAL:CA	2.41	0.51
21:M:83:GLY:O	21:M:84:LYS:HB2	2.11	0.51
24:P:36:LYS:HG2	24:P:37:LYS:N	2.14	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:P:83:ILE:HG12	24:P:85:VAL:HG23	1.92	0.51
26:R:86:GLN:HE21	26:R:87:GLN:NE2	2.09	0.51
27:S:81:SER:HB3	27:S:99:ARG:HA	1.93	0.51
29:U:59:GLU:HG2	29:U:60:LYS:N	2.24	0.51
30:V:2:PHE:CD1	30:V:50:MET:HE2	2.45	0.51
32:X:47:ARG:HA	32:X:50:VAL:HG23	1.91	0.51
34:Z:1:MET:HA	34:Z:9:TYR:CD1	2.46	0.51
34:Z:21:VAL:O	34:Z:22:MET:HG2	2.10	0.51
3:2:3:ARG:HE	3:2:4:THR:H	1.56	0.51
8:9:31:LEU:O	8:9:35:ARG:N	2.31	0.51
8:9:104:LEU:HD21	8:9:205:ILE:CD1	2.35	0.51
8:9:202:MET:HA	8:9:205:ILE:CG2	2.39	0.51
9:A:65:U:O2'	9:A:66:A:H5'	2.10	0.51
10:B:91:A:H1'	10:B:92:U:C6	2.45	0.51
10:B:466:A:H2'	10:B:467:G:H5'	1.93	0.51
10:B:547:A:H62	10:B:548:G:H21	1.59	0.51
10:B:737:C:O2'	10:B:738:G:H5'	2.11	0.51
10:B:765:C:H2'	10:B:766:U:C6	2.46	0.51
10:B:1022:G:N2	10:B:1142:A:N1	2.59	0.51
10:B:1213:A:N6	10:B:1236:G:H1'	2.26	0.51
10:B:1227:G:OP2	25:Q:15:LYS:HE2	2.11	0.51
10:B:1317:G:H2'	10:B:1318:U:O4'	2.11	0.51
10:B:1939:U:O2	10:B:1967:C:H4'	2.11	0.51
10:B:2360:G:O2'	20:L:61:LEU:HD11	2.10	0.51
10:B:2512:C:H2'	10:B:2513:A:O4'	2.11	0.51
10:B:2641:G:OP1	18:J:78:THR:HG22	2.10	0.51
11:C:53:ILE:HD13	11:C:218:THR:HG23	1.92	0.51
12:D:157:LYS:NZ	18:J:80:HIS:HA	2.26	0.51
13:E:189:THR:CG2	13:E:194:LYS:HD3	2.41	0.51
17:I:125:THR:O	17:I:129:GLU:HG3	2.10	0.51
18:J:7:LYS:HD2	18:J:45:THR:CB	2.40	0.51
18:J:100:VAL:HG22	18:J:101:ILE:N	2.26	0.51
18:J:136:GLN:N	18:J:137:PRO:CD	2.74	0.51
19:K:20:MET:HG2	19:K:21:CYS:O	2.11	0.51
20:L:124:GLY:H	20:L:142:ILE:HB	1.76	0.51
21:M:35:ALA:HA	21:M:124:LEU:HB3	1.93	0.51
21:M:81:ARG:HG3	21:M:82:MET:HG2	1.92	0.51
21:M:100:LYS:O	21:M:101:VAL:HG23	2.11	0.51
24:P:28:LYS:HZ3	24:P:44:GLY:N	2.09	0.51
25:Q:86:SER:C	25:Q:88:GLU:H	2.18	0.51
26:R:64:VAL:CG2	26:R:100:GLY:HA2	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:3:40:LYS:O	4:3:43:LEU:HD13	2.11	0.51
8:9:51:PHE:O	8:9:53:ASN:N	2.44	0.51
8:9:102:VAL:HB	8:9:215:VAL:H	1.75	0.51
8:9:402:ILE:O	8:9:406:CYS:N	2.41	0.51
10:B:27:G:H22	10:B:512:G:C2'	2.14	0.51
10:B:521:U:H2'	10:B:522:A:H8	1.75	0.51
10:B:729:G:H2'	10:B:1775:U:H1'	1.91	0.51
10:B:866:A:H61	10:B:913:U:C1'	2.24	0.51
10:B:1817:G:H5"	11:C:86:ARG:NH1	2.25	0.51
10:B:2140:G:H2'	10:B:2141:G:O4'	2.11	0.51
10:B:2153:C:H2'	10:B:2154:A:C8	2.45	0.51
10:B:2184:A:H2'	10:B:2185:U:C5	2.45	0.51
10:B:2250:G:N7	21:M:82:MET:SD	2.83	0.51
10:B:2563:U:H5"	19:K:27:GLY:H	1.76	0.51
11:C:123:ILE:HG12	11:C:135:PRO:HD2	1.93	0.51
13:E:176:ASP:HB3	13:E:179:SER:OG	2.11	0.51
15:G:14:VAL:HG12	15:G:16:VAL:HG23	1.92	0.51
21:M:18:ARG:H	21:M:18:ARG:HD3	1.75	0.51
22:N:97:ILE:HG23	22:N:113:ILE:CD1	2.41	0.51
23:O:35:ILE:CG1	23:O:106:LEU:HD12	2.40	0.51
29:U:28:LEU:HD13	29:U:31:GLY:N	2.25	0.51
30:V:21:ARG:NH2	30:V:87:GLN:HB3	2.26	0.51
33:Y:37:ARG:HA	33:Y:37:ARG:CZ	2.41	0.51
4:3:33:THR:HG23	4:3:36:ALA:CB	2.41	0.51
8:9:21:ARG:C	32:X:20:ASN:O	2.54	0.51
8:9:219:PHE:N	8:9:245:VAL:HG12	2.19	0.51
8:9:241:PRO:C	8:9:243:THR:H	2.18	0.51
8:9:375:ARG:C	8:9:378:ALA:H	2.18	0.51
8:9:416:LEU:HD12	8:9:417:LEU:CD2	2.40	0.51
9:A:13:G:H2'	9:A:14:U:H5"	1.92	0.51
10:B:212:G:H2'	10:B:213:A:C8	2.45	0.51
10:B:286:U:H2'	10:B:287:G:C8	2.46	0.51
10:B:359:G:C2'	10:B:360:U:H5'	2.41	0.51
10:B:455:C:C4	10:B:472:A:H2'	2.45	0.51
10:B:636:G:OP2	20:L:126:ARG:NH2	2.44	0.51
10:B:811:U:H3'	20:L:32:GLY:O	2.11	0.51
10:B:1583:A:H4'	10:B:1585:C:N3	2.26	0.51
10:B:2665:A:C2'	10:B:2666:C:H5'	2.40	0.51
10:B:2730:C:H4'	12:D:174:SER:O	2.11	0.51
11:C:156:SER:O	11:C:158:GLY:N	2.43	0.51
12:D:29:VAL:HG22	12:D:30:GLU:N	2.21	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:G:37:ASN:N	15:G:40:VAL:HG21	2.26	0.51
15:G:145:ALA:HA	15:G:148:ARG:HG2	1.92	0.51
17:I:19:PRO:HB2	17:I:22:PRO:HD2	1.93	0.51
17:I:72:THR:HG23	17:I:112:LYS:HD2	1.93	0.51
20:L:18:ARG:HG3	20:L:18:ARG:HH11	1.76	0.51
20:L:108:ALA:O	20:L:109:LYS:HB2	2.11	0.51
20:L:108:ALA:O	20:L:109:LYS:HD3	2.11	0.51
23:O:36:TYR:O	23:O:37:ALA:HB2	2.11	0.51
33:Y:6:ILE:O	33:Y:34:THR:HA	2.11	0.51
8:9:23:THR:N	8:9:23:THR:CB	2.66	0.51
8:9:118:GLY:O	8:9:122:LYS:N	2.44	0.51
8:9:212:ILE:O	8:9:213:ASN:CB	2.58	0.51
8:9:375:ARG:HB2	8:9:376:MET:N	2.26	0.51
10:B:99:U:O2	10:B:99:U:O4'	2.27	0.51
10:B:331:C:O2'	10:B:332:A:H5'	2.11	0.51
10:B:871:U:H2'	10:B:872:U:C6	2.46	0.51
10:B:1060:U:H5	17:I:131:THR:CG2	2.19	0.51
10:B:1099:G:C5'	17:I:4:VAL:HB	2.29	0.51
10:B:2386:A:H4'	31:W:38:ARG:HD3	1.93	0.51
10:B:2729:G:H2'	10:B:2730:C:H6	1.75	0.51
11:C:22:GLU:CD	11:C:202:ARG:HE	2.19	0.51
18:J:36:LEU:HD13	18:J:54:ILE:HD12	1.92	0.51
19:K:99:ILE:CD1	19:K:115:ILE:HG13	2.41	0.51
20:L:142:ILE:O	20:L:142:ILE:HD13	2.11	0.51
30:V:53:LYS:NZ	30:V:53:LYS:HB3	2.26	0.51
31:W:45:HIS:HB2	31:W:66:VAL:HG11	1.93	0.51
32:X:46:VAL:O	32:X:49:ASP:HB3	2.11	0.51
1:0:50:GLY:O	1:0:51:ARG:C	2.53	0.50
8:9:30:THR:O	8:9:34:VAL:N	2.36	0.50
8:9:84:ALA:HA	8:9:88:GLU:HA	1.91	0.50
8:9:314:ALA:O	8:9:315:GLN:C	2.54	0.50
10:B:943:A:P	20:L:40:SER:HA	2.52	0.50
10:B:1300:G:H4'	10:B:1301:A:O5'	2.11	0.50
10:B:1591:A:H2'	10:B:1592:C:C6	2.45	0.50
10:B:1599:U:H2'	10:B:1600:C:H6	1.76	0.50
10:B:2207:C:H2'	10:B:2208:C:C6	2.46	0.50
10:B:2313:C:H2'	10:B:2314:A:H8	1.75	0.50
10:B:2683:C:OP1	24:P:55:HIS:CG	2.64	0.50
10:B:2834:G:H1'	10:B:2883:A:H61	1.76	0.50
12:D:96:ILE:HG22	12:D:97:SER:H	1.76	0.50
15:G:29:ASN:HB2	15:G:78:VAL:HA	1.93	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
16:H:135:HIS:HB3	16:H:138:VAL:HB	1.92	0.50
17:I:54:ILE:HD11	17:I:71:LYS:C	2.36	0.50
22:N:2:ARG:HG2	22:N:3:HIS:N	2.24	0.50
25:Q:69:ARG:HH11	25:Q:69:ARG:CB	2.22	0.50
7:8:30:G:H21	7:8:78:G:H1'	1.75	0.50
8:9:22:LEU:O	8:9:23:THR:CA	2.59	0.50
8:9:116:SER:O	8:9:118:GLY:N	2.44	0.50
8:9:318:LYS:C	8:9:321:SER:H	2.19	0.50
10:B:30:G:H2'	10:B:31:C:H6	1.76	0.50
10:B:152:A:H2'	10:B:153:U:C6	2.46	0.50
10:B:153:U:H2'	10:B:154:U:C6	2.46	0.50
10:B:215:G:H4'	10:B:216:A:OP1	2.10	0.50
10:B:532:A:H5'	25:Q:27:ARG:NH2	2.26	0.50
10:B:1098:A:C2'	17:I:3:LYS:O	2.53	0.50
10:B:2247:A:H2'	10:B:2248:C:H6	1.75	0.50
10:B:2511:U:H2'	10:B:2512:C:O4'	2.11	0.50
11:C:28:PRO:HB2	11:C:79:ARG:HE	1.76	0.50
12:D:5:VAL:HG21	12:D:28:GLU:HA	1.92	0.50
20:L:118:THR:HG23	20:L:137:ALA:O	2.12	0.50
21:M:95:LEU:HD23	21:M:95:LEU:H	1.76	0.50
22:N:72:ASP:OD1	22:N:74:GLU:HB3	2.11	0.50
24:P:7:LEU:HA	24:P:10:GLU:CG	2.40	0.50
24:P:92:ARG:HD3	24:P:110:LYS:O	2.12	0.50
28:T:53:VAL:HB	28:T:87:LEU:HD21	1.93	0.50
29:U:38:ILE:HG13	29:U:62:ALA:HB1	1.93	0.50
31:W:24:ARG:HB3	31:W:59:PHE:CD2	2.46	0.50
1:0:30:ASP:HB3	10:B:2885:G:O6	2.12	0.50
2:1:27:ARG:HB2	2:1:31:GLU:HB3	1.93	0.50
6:7:67:LYS:O	8:9:375:ARG:O	2.28	0.50
7:8:63:A:C1'	8:9:381:ASN:O	2.52	0.50
8:9:53:ASN:O	8:9:55:VAL:N	2.45	0.50
8:9:80:ASN:O	8:9:83:VAL:HB	2.11	0.50
8:9:132:VAL:CG2	8:9:157:VAL:HG13	2.41	0.50
8:9:379:ILE:HG23	8:9:402:ILE:HG22	1.81	0.50
9:A:52:A:H2'	9:A:53:A:C8	2.45	0.50
9:A:94:A:OP1	30:V:19:ARG:HD3	2.11	0.50
10:B:277:G:N3	10:B:277:G:H2'	2.26	0.50
10:B:419:U:H2'	10:B:420:C:C6	2.46	0.50
10:B:832:U:H2'	10:B:833:A:C8	2.46	0.50
10:B:1785:A:H2'	10:B:1787:A:N7	2.26	0.50
10:B:2393:U:O2'	10:B:2394:C:H5'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2626:C:O2'	10:B:2627:G:H5'	2.10	0.50
10:B:2657:A:H2'	10:B:2658:C:O4'	2.11	0.50
10:B:2879:A:H4'	10:B:2880:C:OP1	2.11	0.50
12:D:174:SER:HB2	12:D:208:LYS:HD3	1.92	0.50
12:D:202:ILE:CG2	12:D:204:LYS:HE3	2.41	0.50
13:E:188:MET:CE	13:E:190:ALA:HB2	2.41	0.50
15:G:53:PRO:HG2	15:G:61:TRP:HZ3	1.72	0.50
15:G:175:LYS:HG2	15:G:176:LYS:N	2.23	0.50
16:H:135:HIS:CG	16:H:136:SER:N	2.79	0.50
18:J:25:LEU:HD11	18:J:63:ALA:H	1.77	0.50
19:K:13:ASN:HD21	19:K:98:ARG:HG2	1.76	0.50
19:K:63:VAL:HG22	19:K:107:LEU:HD21	1.93	0.50
20:L:123:ARG:HB2	20:L:142:ILE:HA	1.92	0.50
20:L:141:LYS:O	20:L:142:ILE:HD13	2.11	0.50
21:M:54:THR:O	21:M:57:VAL:N	2.44	0.50
29:U:29:SER:O	29:U:30:SER:CB	2.58	0.50
4:3:7:ARG:NH2	20:L:64:PHE:CZ	2.80	0.50
5:4:14:CYS:HA	5:4:27:CYS:HA	1.93	0.50
5:4:32:LYS:O	5:4:34:LYS:HG2	2.10	0.50
8:9:415:ARG:CZ	10:B:484:C:OP1	2.60	0.50
10:B:138:U:H2'	10:B:140:C:C6	2.46	0.50
10:B:383:C:H41	10:B:385:C:H2'	1.76	0.50
10:B:1021:A:H61	10:B:1142:A:H61	1.59	0.50
10:B:1560:G:H2'	10:B:1561:C:C6	2.47	0.50
10:B:2649:C:H2'	10:B:2650:U:H6	1.76	0.50
10:B:2820:A:OP1	22:N:5:LYS:N	2.33	0.50
11:C:182:LYS:HG3	11:C:264:LYS:NZ	2.27	0.50
18:J:121:LYS:HE3	18:J:121:LYS:N	2.26	0.50
19:K:16:ALA:H	19:K:47:ILE:CG1	2.24	0.50
22:N:87:PHE:CD1	22:N:90:ARG:HB2	2.46	0.50
31:W:57:THR:HG22	31:W:77:LYS:HG2	1.93	0.50
34:Z:36:VAL:HG12	34:Z:42:PRO:HB3	1.93	0.50
34:Z:61:ASN:C	34:Z:63:ARG:H	2.20	0.50
2:1:24:LYS:HZ3	2:1:24:LYS:C	2.19	0.50
8:9:370:ASP:O	8:9:373:LEU:CB	2.60	0.50
9:A:75:G:N1	9:A:102:G:N2	2.60	0.50
10:B:533:G:N3	25:Q:40:LYS:HG2	2.27	0.50
10:B:582:A:H2'	10:B:583:G:H8	1.75	0.50
10:B:1143:A:N6	18:J:27:ARG:HA	2.26	0.50
10:B:1405:U:H2'	10:B:1406:U:H6	1.75	0.50
10:B:1656:C:H2'	10:B:1657:U:H6	1.76	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1878:G:H2'	10:B:1879:C:H6	1.77	0.50
10:B:2257:U:H5'	31:W:5:ALA:CB	2.40	0.50
10:B:2336:A:HO2'	10:B:2337:G:P	2.35	0.50
10:B:2439:A:C8	10:B:2586:U:H4'	2.46	0.50
10:B:2732:G:H3'	10:B:2733:A:H5'	1.94	0.50
11:C:43:ASN:OD1	11:C:51:ARG:HD3	2.12	0.50
11:C:115:ILE:O	11:C:116:GLN:HG3	2.12	0.50
15:G:102:ILE:HG22	15:G:114:HIS:O	2.12	0.50
16:H:4:ILE:CD1	16:H:37:VAL:HG13	2.42	0.50
16:H:75:LEU:HD23	16:H:75:LEU:N	2.25	0.50
18:J:23:LYS:O	18:J:25:LEU:HD13	2.10	0.50
22:N:10:LEU:HG	22:N:11:ASN:H	1.76	0.50
24:P:25:VAL:HG12	24:P:25:VAL:O	2.07	0.50
28:T:31:VAL:HG23	28:T:83:ALA:O	2.11	0.50
28:T:92:ASN:O	28:T:93:LEU:HD12	2.11	0.50
34:Z:54:GLY:O	34:Z:57:VAL:HB	2.12	0.50
5:4:34:LYS:HE2	5:4:36:ARG:NH2	2.21	0.50
7:8:30:G:C5	7:8:78:G:N1	2.79	0.50
8:9:205:ILE:O	8:9:206:LYS:O	2.30	0.50
8:9:265:ILE:O	8:9:265:ILE:CG2	2.47	0.50
9:A:48:U:H2'	9:A:49:C:H6	1.74	0.50
10:B:528:A:C2	10:B:2042:A:H2'	2.47	0.50
10:B:1251:C:O2'	10:B:1252:G:H3'	2.11	0.50
10:B:1889:A:H2'	10:B:1890:A:C8	2.47	0.50
10:B:2461:A:H2'	10:B:2462:C:H6	1.76	0.50
10:B:2698:U:H2'	10:B:2699:C:C6	2.47	0.50
16:H:3:VAL:CG1	16:H:37:VAL:HG11	2.42	0.50
18:J:25:LEU:HD13	18:J:25:LEU:N	2.26	0.50
18:J:78:THR:OG1	18:J:79:GLY:N	2.44	0.50
19:K:16:ALA:H	19:K:47:ILE:HG13	1.76	0.50
19:K:35:VAL:HG21	19:K:69:VAL:CG2	2.42	0.50
21:M:40:ARG:NH1	21:M:40:ARG:HG3	2.26	0.50
24:P:52:ARG:HA	24:P:98:TYR:OH	2.11	0.50
25:Q:3:VAL:O	25:Q:4:LYS:HG2	2.11	0.50
27:S:24:ILE:HG23	27:S:35:ILE:HG21	1.92	0.50
27:S:42:LYS:O	27:S:45:VAL:HG13	2.12	0.50
32:X:12:GLU:O	32:X:12:GLU:HG2	2.11	0.50
32:X:18:LEU:H	32:X:18:LEU:CD2	2.21	0.50
33:Y:7:THR:HA	33:Y:34:THR:HB	1.92	0.50
5:4:26:ILE:HB	5:4:35:GLN:HB2	1.92	0.50
8:9:105:MET:O	8:9:191:THR:N	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:303:LEU:HB2	8:9:350:LEU:HG	0.74	0.50
8:9:421:ASP:O	10:B:490:C:N4	2.44	0.50
10:B:171:U:H2'	10:B:172:A:H8	1.75	0.50
10:B:274:C:H2'	10:B:275:C:O4'	2.12	0.50
10:B:311:A:H1'	10:B:332:A:O4'	2.12	0.50
10:B:585:G:H2'	10:B:1251:C:H42	1.76	0.50
10:B:1057:A:C8	10:B:1086:A:C8	3.00	0.50
10:B:1081:U:C4'	17:I:126:ARG:HH12	2.25	0.50
10:B:1196:C:H2'	10:B:1197:G:H8	1.75	0.50
10:B:1313:U:H4'	10:B:1332:G:H4'	1.94	0.50
10:B:2531:A:OP1	15:G:176:LYS:HA	2.11	0.50
10:B:2683:C:H2'	10:B:2684:U:C6	2.46	0.50
10:B:2888:C:H2'	10:B:2889:C:H6	1.76	0.50
12:D:14:ILE:HD12	24:P:78:PRO:CG	2.41	0.50
15:G:168:VAL:O	15:G:168:VAL:HG13	2.12	0.50
18:J:102:GLU:O	18:J:105:VAL:HG12	2.12	0.50
20:L:107:PHE:HE2	20:L:126:ARG:HB2	1.76	0.50
22:N:3:HIS:HB3	22:N:4:ARG:NH1	2.26	0.50
24:P:52:ARG:CB	24:P:60:VAL:HG11	2.42	0.50
28:T:62:VAL:O	28:T:63:VAL:HB	2.11	0.50
29:U:69:VAL:CG1	29:U:77:GLY:HA2	2.41	0.50
34:Z:11:GLU:H	34:Z:27:THR:CG2	2.25	0.50
34:Z:33:ASN:C	34:Z:34:LEU:HD23	2.36	0.50
3:2:34:ARG:HD2	3:2:43:THR:OG1	2.11	0.50
10:B:765:C:H2'	10:B:766:U:H6	1.77	0.50
10:B:851:C:H2'	10:B:852:U:C6	2.46	0.50
10:B:1138:G:H2'	10:B:1139:G:O4'	2.12	0.50
10:B:1439:A:N7	10:B:1440:U:N1	2.60	0.50
10:B:1750:G:H2'	10:B:1751:U:C6	2.47	0.50
10:B:2491:U:H5"	10:B:2570:G:C5'	2.42	0.50
10:B:2491:U:H5"	10:B:2570:G:H5"	1.94	0.50
11:C:208:GLY:HA2	11:C:212:TRP:HB2	1.91	0.50
12:D:15:PHE:O	12:D:16:THR:HG22	2.12	0.50
13:E:176:ASP:OD1	13:E:177:PRO:HD2	2.12	0.50
13:E:187:VAL:HG23	13:E:188:MET:H	1.75	0.50
19:K:112:PHE:O	19:K:114:LYS:N	2.45	0.50
21:M:5:LYS:HG3	21:M:68:PHE:HE1	1.74	0.50
21:M:93:VAL:O	21:M:94:ALA:HB3	2.12	0.50
23:O:90:VAL:HG22	23:O:116:GLN:OE1	2.11	0.50
24:P:93:LYS:HB3	24:P:96:LEU:HG	1.94	0.50
29:U:8:ASP:O	29:U:10:VAL:N	2.44	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:W:56:HIS:CD2	31:W:58:LEU:H	2.30	0.50
31:W:67:LYS:HE3	31:W:71:LYS:H	1.76	0.50
31:W:73:PRO:C	31:W:74:LYS:HD2	2.36	0.50
1:0:42:ILE:O	1:0:46:GLY:N	2.45	0.50
4:3:15:LYS:HD3	4:3:19:GLY:HA2	1.93	0.50
8:9:76:LYS:O	8:9:80:ASN:N	2.37	0.50
8:9:104:LEU:HD22	8:9:214:PRO:HG3	1.93	0.50
8:9:180:LYS:C	8:9:183:PHE:H	2.17	0.50
8:9:364:VAL:HA	8:9:367:GLN:HB3	1.94	0.50
8:9:401:ARG:HB3	8:9:401:ARG:HH11	1.77	0.50
10:B:506:G:H4'	10:B:509:C:O2	2.12	0.50
10:B:919:U:O5'	10:B:919:U:H6	1.95	0.50
10:B:1334:G:O2'	10:B:1335:C:H5'	2.12	0.50
10:B:1547:C:H2'	10:B:1548:A:C8	2.47	0.50
10:B:1654:A:C4'	22:N:1:MET:N	2.73	0.50
10:B:1739:A:H2'	10:B:1740:G:C8	2.47	0.50
10:B:1820:U:H5	11:C:176:ARG:HH21	1.58	0.50
10:B:2025:C:H2'	10:B:2026:U:H6	1.74	0.50
10:B:2032:G:N3	12:D:150:GLN:HG2	2.27	0.50
10:B:2250:G:N2	10:B:2496:C:H4'	2.27	0.50
10:B:2256:G:H2'	10:B:2257:U:H6	1.77	0.50
10:B:2299:U:H2'	10:B:2300:C:H6	1.76	0.50
10:B:2360:G:O2'	20:L:61:LEU:HD21	2.12	0.50
12:D:15:PHE:HA	24:P:79:VAL:CG1	2.38	0.50
12:D:96:ILE:HG22	12:D:97:SER:N	2.27	0.50
14:F:50:ASP:C	14:F:52:ALA:H	2.19	0.50
14:F:116:LEU:CD2	14:F:129:MET:HE1	2.37	0.50
17:I:45:THR:C	17:I:48:ILE:HG22	2.37	0.50
20:L:54:GLN:HB2	20:L:57:LEU:HD23	1.94	0.50
20:L:110:VAL:HG23	20:L:131:ALA:CB	2.42	0.50
22:N:73:ASN:HA	22:N:76:VAL:CG1	2.42	0.50
26:R:92:TRP:CE3	26:R:93:PHE:N	2.80	0.50
28:T:47:VAL:HG22	28:T:53:VAL:HG11	1.94	0.50
6:7:67:LYS:CG	8:9:412:ASP:O	2.48	0.49
8:9:234:LYS:O	8:9:236:PHE:N	2.45	0.49
8:9:284:PRO:HD2	8:9:289:ARG:NH2	2.26	0.49
8:9:300:VAL:HG22	8:9:354:LEU:CD1	2.06	0.49
8:9:379:ILE:HG23	8:9:402:ILE:HG23	1.79	0.49
10:B:181:A:H2'	10:B:182:A:C8	2.47	0.49
10:B:581:C:H2'	10:B:582:A:H8	1.77	0.49
10:B:968:C:H2'	10:B:969:G:H8	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1287:A:H3'	10:B:1288:G:N2	2.26	0.49
10:B:1400:U:H2'	10:B:1401:G:H8	1.77	0.49
10:B:2241:A:O2'	10:B:2242:G:H5'	2.12	0.49
10:B:2518:A:H2'	10:B:2518:A:N3	2.27	0.49
10:B:2756:U:H4'	10:B:2757:A:OP1	2.12	0.49
10:B:2800:A:H2'	10:B:2801:G:C1'	2.41	0.49
11:C:164:VAL:O	11:C:165:ALA:HB3	2.12	0.49
12:D:48:ILE:CA	12:D:80:TRP:HB3	2.39	0.49
12:D:173:GLN:HG3	12:D:208:LYS:CB	2.42	0.49
13:E:30:GLN:O	13:E:31:VAL:C	2.54	0.49
13:E:68:ALA:O	13:E:69:ARG:C	2.55	0.49
13:E:183:PHE:C	13:E:185:LYS:N	2.68	0.49
15:G:103:ASN:HA	15:G:112:VAL:O	2.12	0.49
17:I:37:PHE:CZ	17:I:58:ILE:HD11	2.47	0.49
17:I:45:THR:O	17:I:48:ILE:HG22	2.12	0.49
18:J:49:ASP:O	18:J:50:THR:HB	2.12	0.49
18:J:99:ARG:O	18:J:103:ILE:HG12	2.12	0.49
20:L:90:VAL:HG13	20:L:90:VAL:O	2.10	0.49
21:M:71:LYS:O	21:M:72:PRO:C	2.55	0.49
22:N:86:ARG:CZ	22:N:117:ASP:HA	2.41	0.49
22:N:110:MET:O	22:N:111:ALA:HB3	2.12	0.49
26:R:80:ARG:HB3	26:R:86:GLN:O	2.11	0.49
29:U:51:LEU:CG	29:U:53:GLN:HB3	2.42	0.49
2:1:24:LYS:HZ3	2:1:24:LYS:CB	2.23	0.49
8:9:36:MET:C	8:9:38:LEU:H	2.21	0.49
8:9:301:LEU:C	8:9:304:ILE:HB	2.37	0.49
8:9:417:LEU:O	8:9:420:PHE:HB2	2.12	0.49
10:B:291:G:O2'	10:B:292:U:H5'	2.12	0.49
10:B:302:C:H2'	10:B:303:G:H8	1.77	0.49
10:B:729:G:H4'	10:B:763:G:H5'	1.92	0.49
10:B:1006:C:H4'	18:J:34:ARG:HG3	1.93	0.49
10:B:1328:A:H2'	10:B:1330:C:C4	2.46	0.49
10:B:1480:C:H2'	10:B:1481:U:C6	2.47	0.49
10:B:2636:C:H2'	10:B:2637:U:C6	2.46	0.49
11:C:156:SER:O	11:C:194:VAL:O	2.30	0.49
12:D:173:GLN:HE21	12:D:208:LYS:HB2	1.77	0.49
13:E:123:LYS:NZ	13:E:158:PHE:HA	2.27	0.49
16:H:35:LYS:HB2	16:H:35:LYS:NZ	2.27	0.49
16:H:104:THR:HA	16:H:108:VAL:H	1.77	0.49
17:I:4:VAL:HG22	17:I:5:GLN:N	2.27	0.49
17:I:52:LEU:HD22	17:I:81:LYS:HD3	1.93	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:K:61:VAL:CG1	19:K:87:LEU:HD11	2.41	0.49
20:L:33:ARG:HB3	26:R:85:LYS:HZ3	1.78	0.49
20:L:118:THR:O	20:L:120:VAL:HG23	2.11	0.49
27:S:29:VAL:HG21	27:S:69:LEU:C	2.37	0.49
27:S:74:ILE:CG2	27:S:105:VAL:HG23	2.42	0.49
28:T:2:ILE:HG12	28:T:3:ARG:N	2.26	0.49
29:U:94:PHE:CD2	29:U:100:GLU:HG2	2.47	0.49
30:V:30:ILE:HB	30:V:38:LEU:HB3	1.94	0.49
30:V:73:LYS:HB2	30:V:92:VAL:HG13	1.94	0.49
8:9:128:HIS:HB3	8:9:130:LYS:HG3	1.94	0.49
8:9:205:ILE:HD12	8:9:208:VAL:CG1	2.42	0.49
8:9:240:LEU:CG	8:9:243:THR:HG23	2.41	0.49
8:9:256:GLY:O	8:9:259:ALA:N	2.45	0.49
10:B:95:A:O2'	32:X:43:LEU:HD23	2.12	0.49
10:B:197:A:N6	10:B:2430:A:H2'	2.26	0.49
10:B:458:G:H2'	10:B:469:G:O6	2.11	0.49
10:B:1909:C:H2'	10:B:1910:G:H8	1.76	0.49
10:B:2472:G:H2'	10:B:2475:C:H42	1.76	0.49
10:B:2526:G:H2'	10:B:2527:C:H6	1.76	0.49
10:B:2734:A:C2'	10:B:2735:G:H5'	2.42	0.49
10:B:2900:A:H2'	10:B:2901:C:H6	1.77	0.49
12:D:59:ARG:HE	12:D:63:PRO:CB	2.25	0.49
13:E:99:LYS:HD2	13:E:99:LYS:O	2.12	0.49
14:F:98:PHE:HB2	14:F:101:ARG:HE	1.77	0.49
14:F:110:ILE:HG22	14:F:111:ARG:N	2.27	0.49
14:F:113:PHE:O	14:F:114:ARG:HD3	2.12	0.49
15:G:119:GLY:C	15:G:120:ILE:HG13	2.37	0.49
17:I:59:THR:O	17:I:59:THR:HG23	2.12	0.49
24:P:38:ARG:HD2	24:P:39:LEU:N	2.27	0.49
25:Q:25:GLY:O	25:Q:29:ARG:HG2	2.11	0.49
26:R:63:VAL:CG2	26:R:64:VAL:H	2.04	0.49
27:S:27:LYS:N	27:S:70:LYS:O	2.45	0.49
29:U:34:ILE:HG21	29:U:61:GLU:HA	1.94	0.49
3:2:13:ASN:OD1	3:2:17:GLY:HA3	2.12	0.49
8:9:226:GLY:HA2	8:9:259:ALA:CA	2.42	0.49
8:9:300:VAL:HA	8:9:304:ILE:HG12	1.91	0.49
8:9:379:ILE:C	8:9:382:SER:H	2.20	0.49
8:9:411:GLN:CD	10:B:484:C:H5"	2.37	0.49
8:9:425:ARG:HH11	8:9:425:ARG:HG2	1.77	0.49
10:B:335:C:O2'	10:B:336:C:H5'	2.13	0.49
10:B:526:A:N6	10:B:2626:C:C4'	2.75	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:679:C:O2'	10:B:680:C:H5'	2.13	0.49
10:B:943:A:OP1	20:L:41:ARG:HG2	2.12	0.49
10:B:973:A:H1'	10:B:1188:U:C6	2.47	0.49
10:B:1221:C:O2'	10:B:1222:U:H5'	2.12	0.49
10:B:1477:A:H2'	10:B:1478:G:O4'	2.13	0.49
10:B:1722:A:H61	10:B:1738:G:H1'	1.77	0.49
10:B:2839:G:H2'	10:B:2840:C:H6	1.76	0.49
11:C:82:TYR:CD2	11:C:84:PRO:HD3	2.47	0.49
11:C:104:LEU:HD13	11:C:156:SER:HB3	1.94	0.49
11:C:205:GLY:O	11:C:206:LYS:HG2	2.12	0.49
12:D:17:GLU:OE1	19:K:73:ASP:HB3	2.12	0.49
13:E:15:SER:O	13:E:17:THR:HG22	2.12	0.49
13:E:154:ASP:OD2	13:E:156:ASN:HB3	2.12	0.49
13:E:187:VAL:HG23	13:E:188:MET:N	2.28	0.49
16:H:46:PHE:O	16:H:49:ALA:HB3	2.11	0.49
21:M:62:LYS:H	21:M:104:GLU:CB	2.25	0.49
23:O:55:GLU:O	23:O:56:LYS:C	2.54	0.49
24:P:54:LEU:HD22	24:P:55:HIS:N	2.28	0.49
24:P:59:THR:HA	24:P:76:HIS:HA	1.94	0.49
24:P:86:LYS:NZ	24:P:88:ARG:HD3	2.26	0.49
25:Q:68:ALA:CB	25:Q:73:ILE:HG21	2.43	0.49
25:Q:109:VAL:O	25:Q:113:LYS:HB2	2.12	0.49
33:Y:15:ARG:HD2	33:Y:53:MET:SD	2.53	0.49
7:8:77:C:N3	7:8:78:G:N7	2.60	0.49
8:9:7:ASP:O	8:9:11:ARG:HG3	2.12	0.49
8:9:47:VAL:O	8:9:48:VAL:C	2.56	0.49
9:A:114:C:O2'	23:O:49:VAL:HG23	2.12	0.49
10:B:288:U:H2'	10:B:289:G:H8	1.77	0.49
10:B:483:A:H2'	10:B:484:C:C5'	2.42	0.49
10:B:633:A:H2'	10:B:634:C:H5'	1.95	0.49
10:B:946:C:H2'	10:B:947:A:C8	2.41	0.49
10:B:1107:G:O2'	10:B:1108:U:H5'	2.13	0.49
10:B:1184:U:O2'	10:B:1185:G:H5'	2.12	0.49
10:B:1211:C:H4'	10:B:1212:G:OP2	2.12	0.49
10:B:2077:A:O2'	10:B:2078:C:H5'	2.12	0.49
10:B:2240:U:O2'	10:B:2241:A:H5'	2.12	0.49
10:B:2314:A:H2'	10:B:2315:G:H8	1.77	0.49
10:B:2364:C:H2'	10:B:2365:G:O4'	2.12	0.49
14:F:66:ILE:HG22	14:F:66:ILE:O	2.12	0.49
15:G:12:ALA:C	15:G:14:VAL:H	2.19	0.49
21:M:71:LYS:NZ	21:M:91:TYR:HB3	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:M:71:LYS:CE	21:M:91:TYR:HB3	2.42	0.49
23:O:41:ALA:HB3	23:O:46:GLU:HA	1.93	0.49
26:R:4:VAL:HG11	26:R:46:GLU:OE2	2.12	0.49
26:R:10:LYS:HD3	26:R:41:ILE:HD11	1.94	0.49
29:U:39:ASN:CB	29:U:59:GLU:HB2	2.42	0.49
1:0:30:ASP:O	1:0:31:LYS:HB2	2.12	0.49
8:9:75:VAL:C	8:9:78:VAL:HG22	2.37	0.49
8:9:108:LEU:C	8:9:109:GLN:O	2.50	0.49
8:9:178:GLU:O	8:9:179:ALA:C	2.54	0.49
8:9:247:LEU:HD11	8:9:263:ARG:CD	2.38	0.49
8:9:292:SER:O	8:9:293:ARG:O	2.30	0.49
8:9:364:VAL:CA	8:9:367:GLN:HB3	2.42	0.49
10:B:241:A:O3'	10:B:242:G:H4'	2.12	0.49
10:B:581:C:H2'	10:B:582:A:C8	2.47	0.49
10:B:848:C:H2'	10:B:849:A:H8	1.78	0.49
10:B:918:A:H2'	10:B:919:U:C5'	2.40	0.49
10:B:1682:G:H2'	10:B:1683:U:C6	2.47	0.49
10:B:2241:A:H2'	10:B:2242:G:C8	2.48	0.49
10:B:2261:C:H3'	31:W:13:ARG:HD3	1.94	0.49
10:B:2758:A:C2'	10:B:2759:G:H5'	2.43	0.49
11:C:76:VAL:O	11:C:93:VAL:HA	2.11	0.49
11:C:162:GLN:HE22	11:C:174:ARG:NH1	2.10	0.49
11:C:244:VAL:HG23	11:C:249:VAL:HG21	1.93	0.49
12:D:81:GLU:O	12:D:82:PHE:HB2	2.13	0.49
13:E:146:VAL:HG11	13:E:184:ASP:OD1	2.13	0.49
14:F:69:ALA:HB3	14:F:81:GLY:N	2.26	0.49
16:H:81:ALA:HA	16:H:147:VAL:O	2.13	0.49
20:L:91:ASP:O	20:L:93:ASN:N	2.46	0.49
22:N:112:TYR:O	22:N:113:ILE:HB	2.12	0.49
23:O:25:ARG:HE	23:O:94:ARG:NH1	2.11	0.49
23:O:26:LEU:O	23:O:40:ILE:HD11	2.13	0.49
24:P:1:SER:O	24:P:2:ASN:C	2.54	0.49
24:P:25:VAL:HG22	24:P:89:GLY:O	2.12	0.49
24:P:29:VAL:HG22	24:P:84:SER:HB2	1.95	0.49
27:S:64:ALA:HA	27:S:110:ARG:HE	1.77	0.49
29:U:46:LYS:HD3	29:U:53:GLN:HA	1.94	0.49
29:U:66:VAL:HG22	29:U:67:SER:N	2.17	0.49
33:Y:1:ALA:CB	33:Y:37:ARG:HB3	2.42	0.49
8:9:118:GLY:C	8:9:120:LEU:N	2.71	0.49
8:9:384:THR:O	8:9:387:GLU:HB2	2.13	0.49
10:B:351:C:H2'	10:B:352:A:C8	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:547:A:N3	10:B:547:A:C2'	2.72	0.49
10:B:609:A:H2'	10:B:610:C:O4'	2.13	0.49
10:B:685:A:H1'	10:B:688:U:O4	2.12	0.49
10:B:1986:C:O2'	10:B:1987:A:H5'	2.13	0.49
10:B:2771:C:H2'	10:B:2772:C:H6	1.78	0.49
10:B:2776:A:H4'	10:B:2777:G:C5'	2.43	0.49
11:C:30:ALA:N	11:C:31:PRO:HD3	2.27	0.49
13:E:153:LEU:HG	13:E:173:THR:HB	1.94	0.49
14:F:39:VAL:HG13	14:F:84:ILE:CG1	2.43	0.49
14:F:98:PHE:CB	14:F:101:ARG:HE	2.26	0.49
17:I:89:SER:OG	17:I:92:PRO:HA	2.12	0.49
19:K:10:VAL:HG21	19:K:16:ALA:HB1	1.93	0.49
20:L:77:ILE:HD12	20:L:77:ILE:H	1.76	0.49
21:M:34:LYS:HG3	21:M:98:PRO:O	2.12	0.49
21:M:107:GLY:O	21:M:109:PRO:HD2	2.12	0.49
21:M:117:PHE:HB2	21:M:124:LEU:CD1	2.42	0.49
23:O:26:LEU:HD22	23:O:93:ASP:HA	1.95	0.49
25:Q:83:LYS:C	25:Q:85:ALA:H	2.21	0.49
30:V:7:GLU:C	30:V:40:ILE:HG22	2.37	0.49
5:4:3:VAL:CG1	5:4:4:ARG:N	2.76	0.49
5:4:30:GLU:O	5:4:32:LYS:N	2.45	0.49
6:7:57:LEU:HD11	8:9:427:MET:HB2	1.95	0.49
8:9:27:VAL:O	8:9:28:LYS:C	2.55	0.49
8:9:29:ASP:O	8:9:33:GLU:N	2.37	0.49
8:9:51:PHE:C	8:9:53:ASN:N	2.70	0.49
8:9:302:SER:C	8:9:304:ILE:N	2.68	0.49
8:9:370:ASP:O	8:9:373:LEU:HG	2.10	0.49
8:9:424:GLN:NE2	8:9:428:LYS:HZ2	2.10	0.49
10:B:96:C:OP1	32:X:41:HIS:HB2	2.12	0.49
10:B:136:G:C2	28:T:3:ARG:CZ	2.96	0.49
10:B:144:A:N9	28:T:3:ARG:HD3	2.28	0.49
10:B:1215:G:O2'	10:B:1216:G:H5'	2.13	0.49
10:B:1424:G:H2'	10:B:1425:G:O4'	2.13	0.49
10:B:1439:A:N7	10:B:1440:U:C6	2.80	0.49
10:B:1541:C:H2'	10:B:1542:U:C6	2.47	0.49
10:B:1564:C:O2'	10:B:1565:C:H5'	2.12	0.49
10:B:1825:U:H5'	11:C:244:VAL:HG21	1.89	0.49
10:B:2586:U:H2'	10:B:2587:A:C8	2.48	0.49
10:B:2783:U:H2'	10:B:2784:U:H6	1.76	0.49
10:B:2840:C:H2'	10:B:2841:C:C6	2.47	0.49
13:E:137:LYS:HA	13:E:137:LYS:HZ2	1.76	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:F:103:ILE:HG21	14:F:173:ASP:HA	1.93	0.49
19:K:41:ILE:HG23	19:K:42:THR:N	2.27	0.49
21:M:24:THR:HG22	21:M:25:ASP:N	2.27	0.49
23:O:25:ARG:HB3	23:O:94:ARG:HH22	1.78	0.49
24:P:25:VAL:O	24:P:47:ILE:HB	2.13	0.49
28:T:92:ASN:C	28:T:93:LEU:HD12	2.37	0.49
33:Y:2:LYS:CE	33:Y:27:GLY:H	2.25	0.49
34:Z:66:ILE:HB	34:Z:67:PRO:HD3	1.94	0.49
3:2:33:ARG:HB3	10:B:467:G:OP1	2.13	0.49
4:3:26:ALA:HB2	20:L:63:LYS:CB	2.40	0.49
5:4:3:VAL:CG1	5:4:4:ARG:H	2.18	0.49
8:9:29:ASP:O	8:9:32:ARG:N	2.46	0.49
8:9:120:LEU:O	8:9:121:GLY:C	2.55	0.49
8:9:340:GLN:N	8:9:341:MET:HB2	2.27	0.49
10:B:144:A:C2	28:T:3:ARG:CZ	2.96	0.49
10:B:208:C:H2'	10:B:209:C:H6	1.78	0.49
10:B:346:A:N7	10:B:347:A:H1'	2.27	0.49
10:B:354:A:H2'	10:B:355:U:C6	2.48	0.49
10:B:491:G:H2'	10:B:492:A:O4'	2.13	0.49
10:B:801:G:N7	13:E:51:GLU:OE1	2.46	0.49
10:B:853:C:H2'	10:B:854:C:H6	1.78	0.49
10:B:1047:G:H1'	10:B:1110:G:N2	2.28	0.49
10:B:1099:G:OP2	17:I:3:LYS:HA	2.11	0.49
10:B:1359:A:H2'	10:B:1360:G:O4'	2.13	0.49
10:B:1438:U:N3	10:B:1552:A:N6	2.61	0.49
10:B:2344:U:H4'	10:B:2345:G:OP1	2.13	0.49
10:B:2455:G:H2'	10:B:2456:C:C6	2.47	0.49
10:B:2530:A:H5'	15:G:176:LYS:O	2.13	0.49
11:C:20:ASN:CB	11:C:202:ARG:HD3	2.43	0.49
12:D:15:PHE:C	12:D:17:GLU:H	2.19	0.49
12:D:32:ASN:HD22	12:D:94:GLN:HA	1.77	0.49
13:E:4:VAL:HA	13:E:14:VAL:CG2	2.40	0.49
13:E:28:VAL:O	13:E:32:VAL:HG23	2.12	0.49
13:E:137:LYS:HA	13:E:137:LYS:HZ3	1.78	0.49
14:F:71:LYS:HE2	14:F:72:SER:O	2.13	0.49
18:J:4:PHE:CD1	18:J:5:THR:N	2.81	0.49
18:J:25:LEU:HD12	18:J:62:VAL:CA	2.43	0.49
19:K:2:ILE:N	19:K:33:ALA:HB3	2.27	0.49
19:K:105:ARG:O	19:K:108:ARG:HB3	2.12	0.49
25:Q:32:ARG:NH1	25:Q:33:VAL:HG22	2.27	0.49
29:U:15:GLY:C	29:U:17:ASP:H	2.20	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:Y:4:ILE:HG12	33:Y:5:LYS:CG	2.40	0.49
34:Z:24:ILE:H	34:Z:24:ILE:CD1	2.08	0.49
34:Z:59:ARG:C	34:Z:61:ASN:N	2.69	0.49
2:1:49:LYS:NZ	2:1:50:GLU:N	2.61	0.49
8:9:118:GLY:O	8:9:120:LEU:N	2.46	0.49
8:9:148:LEU:O	8:9:151:LEU:CG	2.57	0.49
10:B:845:A:C6	10:B:847:U:H1'	2.47	0.49
10:B:1957:C:H2'	10:B:1958:C:C6	2.48	0.49
10:B:1957:C:H2'	10:B:1958:C:H6	1.78	0.49
10:B:2250:G:C5	21:M:81:ARG:HG2	2.48	0.49
10:B:2665:A:O2'	10:B:2666:C:H5'	2.13	0.49
10:B:2787:C:H4'	12:D:61:THR:OG1	2.12	0.49
11:C:71:ASP:HA	11:C:117:SER:OG	2.13	0.49
11:C:90:ILE:O	11:C:91:ALA:HB3	2.13	0.49
11:C:107:LYS:HB3	11:C:108:GLY:H	1.48	0.49
11:C:136:VAL:HA	11:C:165:ALA:CA	2.43	0.49
11:C:207:ALA:HA	11:C:211:ARG:HB3	1.95	0.49
12:D:8:LYS:NZ	24:P:5:LYS:HG3	2.26	0.49
12:D:156:PHE:CA	18:J:81:ILE:HG21	2.43	0.49
13:E:49:ARG:HG3	13:E:52:VAL:CG2	2.43	0.49
14:F:33:ILE:HG22	14:F:34:THR:O	2.12	0.49
17:I:10:LEU:HD12	17:I:10:LEU:C	2.38	0.49
18:J:61:LYS:O	18:J:62:VAL:HG13	2.13	0.49
20:L:2:ARG:NH1	20:L:6:LEU:HD13	2.28	0.49
20:L:120:VAL:HG12	20:L:122:VAL:CG2	2.42	0.49
21:M:33:LEU:CD1	21:M:124:LEU:HD22	2.34	0.49
23:O:15:ARG:NH1	31:W:74:LYS:HE3	2.28	0.49
26:R:77:PHE:O	26:R:78:ARG:HG2	2.13	0.49
27:S:49:LYS:O	27:S:52:GLU:HB2	2.13	0.49
27:S:68:ASP:C	27:S:69:LEU:HD22	2.37	0.49
27:S:71:VAL:HG22	27:S:107:VAL:HG12	1.94	0.49
31:W:33:GLY:O	31:W:66:VAL:HG23	2.11	0.49
32:X:41:HIS:CE1	32:X:43:LEU:HB2	2.48	0.49
34:Z:31:ASP:HB3	34:Z:32:LEU:H	1.48	0.49
2:1:19:PHE:CD2	2:1:41:VAL:HG22	2.48	0.48
3:2:9:VAL:HG13	10:B:1309:G:H5"	1.95	0.48
6:7:57:LEU:O	6:7:61:VAL:HG23	2.13	0.48
8:9:145:ILE:O	8:9:146:LYS:O	2.30	0.48
8:9:272:PHE:CD1	8:9:284:PRO:HA	2.44	0.48
10:B:372:G:N7	34:Z:57:VAL:HG21	2.27	0.48
10:B:441:U:H2'	10:B:442:G:H8	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:722:A:H2'	10:B:723:C:O4'	2.13	0.48
10:B:938:G:O2'	10:B:939:G:H5'	2.13	0.48
10:B:1098:A:C2'	17:I:4:VAL:CA	2.91	0.48
10:B:1098:A:O5'	17:I:3:LYS:CG	2.61	0.48
10:B:1791:A:H5"	11:C:211:ARG:HE	1.78	0.48
10:B:1824:G:OP1	11:C:52:HIS:CE1	2.66	0.48
11:C:222:THR:HG21	11:C:238:ASN:ND2	2.27	0.48
12:D:117:GLY:O	12:D:164:GLN:HA	2.13	0.48
12:D:154:LYS:O	12:D:156:PHE:N	2.45	0.48
13:E:14:VAL:HG11	13:E:16:GLU:CD	2.38	0.48
14:F:41:GLU:O	14:F:45:ASP:OD2	2.31	0.48
15:G:51:PHE:CE1	15:G:53:PRO:HG3	2.48	0.48
17:I:116:MET:HE1	17:I:128:ILE:HG12	1.95	0.48
18:J:59:ALA:C	18:J:61:LYS:N	2.71	0.48
19:K:9:ASN:O	19:K:10:VAL:HG13	2.13	0.48
22:N:106:ASP:C	22:N:106:ASP:OD1	2.56	0.48
24:P:47:ILE:HD13	24:P:63:ILE:HG21	1.95	0.48
32:X:12:GLU:O	32:X:15:ASN:HB3	2.13	0.48
4:3:7:ARG:HH12	4:3:10:ALA:HB3	1.76	0.48
8:9:35:ARG:C	8:9:38:LEU:HG	2.38	0.48
8:9:43:VAL:HG12	8:9:44:ALA:O	2.12	0.48
8:9:45:LEU:H	8:9:46:PRO:HD2	1.77	0.48
8:9:107:GLY:C	8:9:108:LEU:O	2.56	0.48
8:9:277:GLU:O	8:9:278:LYS:O	2.31	0.48
8:9:355:PRO:C	8:9:357:MET:N	2.70	0.48
8:9:398:ARG:O	8:9:399:LYS:CB	2.62	0.48
10:B:372:G:C8	34:Z:57:VAL:HG21	2.48	0.48
10:B:699:A:H2'	10:B:700:G:O4'	2.13	0.48
10:B:827:U:H5'	10:B:828:U:O5'	2.13	0.48
10:B:969:G:H2'	10:B:970:U:H6	1.78	0.48
10:B:972:A:OP1	10:B:974:G:H5'	2.12	0.48
10:B:2425:A:H5'	10:B:2427:C:O4'	2.13	0.48
12:D:139:SER:O	12:D:141:ARG:N	2.46	0.48
14:F:7:TYR:O	14:F:12:VAL:HG23	2.13	0.48
14:F:23:SER:C	14:F:25:MET:N	2.71	0.48
14:F:133:GLU:O	14:F:134:GLN:HB2	2.13	0.48
16:H:50:ARG:HD3	16:H:54:LEU:HD12	1.95	0.48
20:L:3:LEU:HD23	20:L:4:ASN:N	2.27	0.48
21:M:90:GLU:CG	21:M:91:TYR:N	2.76	0.48
23:O:67:ASN:HD22	23:O:68:LYS:N	2.11	0.48
24:P:54:LEU:HD22	24:P:55:HIS:H	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:P:112:ARG:H	24:P:112:ARG:HE	1.60	0.48
25:Q:87:VAL:CB	26:R:54:VAL:HG11	2.39	0.48
26:R:6:GLN:OE1	26:R:38:VAL:HG22	2.13	0.48
28:T:38:ALA:O	28:T:42:GLU:HB3	2.13	0.48
2:1:8:ILE:HD13	2:1:9:LYS:C	2.38	0.48
8:9:120:LEU:CG	8:9:188:LEU:HD13	2.39	0.48
8:9:141:ARG:HG2	8:9:141:ARG:HH11	1.78	0.48
8:9:282:LEU:CD1	8:9:283:GLU:N	2.74	0.48
10:B:15:G:O2'	10:B:16:C:H5'	2.14	0.48
10:B:175:G:H2'	10:B:176:A:H8	1.78	0.48
10:B:297:G:H5"	29:U:92:VAL:CG1	2.44	0.48
10:B:396:G:H2'	10:B:397:U:C6	2.48	0.48
10:B:615:U:C4	13:E:36:ALA:HB2	2.48	0.48
10:B:718:A:H3'	10:B:719:C:H6	1.76	0.48
10:B:741:U:H2'	10:B:742:A:C8	2.48	0.48
10:B:910:A:H62	21:M:15:GLY:HA3	1.78	0.48
10:B:1312:U:H5'	36:B:6006:HOH:O	2.13	0.48
10:B:1722:A:H2'	10:B:1723:G:C8	2.48	0.48
10:B:1812:U:H2'	10:B:1813:G:H8	1.77	0.48
11:C:155:ARG:HG2	11:C:155:ARG:HH21	1.79	0.48
13:E:85:PHE:O	13:E:86:ALA:HB2	2.12	0.48
13:E:116:ASP:O	13:E:117:ARG:HD2	2.13	0.48
14:F:108:PRO:HB3	14:F:113:PHE:CZ	2.48	0.48
16:H:72:ILE:O	16:H:72:ILE:HG22	2.12	0.48
17:I:121:ILE:HD11	17:I:122:GLU:OE2	2.13	0.48
18:J:5:THR:HG21	18:J:7:LYS:NZ	2.28	0.48
23:O:15:ARG:CD	23:O:18:LEU:HD12	2.42	0.48
23:O:25:ARG:NE	23:O:94:ARG:HH12	2.11	0.48
24:P:5:LYS:C	24:P:7:LEU:H	2.21	0.48
25:Q:49:ARG:NH1	25:Q:52:ARG:NH1	2.62	0.48
27:S:39:THR:HG23	27:S:39:THR:O	2.13	0.48
28:T:14:PRO:HA	28:T:32:LEU:HD23	1.94	0.48
28:T:55:VAL:HG22	28:T:56:GLU:N	2.23	0.48
29:U:34:ILE:HG22	29:U:62:ALA:O	2.13	0.48
34:Z:17:SER:C	34:Z:19:GLY:H	2.21	0.48
1:0:32:THR:OG1	1:0:33:SER:N	2.43	0.48
8:9:68:LEU:CG	28:T:95:PHE:O	2.38	0.48
8:9:74:PHE:C	8:9:78:VAL:HG13	2.39	0.48
8:9:132:VAL:HG21	8:9:157:VAL:HG13	1.95	0.48
8:9:171:ILE:CG2	8:9:172:VAL:N	2.77	0.48
8:9:222:ASP:HB2	8:9:248:THR:OG1	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:246:VAL:HG11	8:9:272:PHE:CD2	2.48	0.48
9:A:35:C:O2'	9:A:36:C:H5'	2.13	0.48
10:B:582:A:H2'	10:B:583:G:C8	2.48	0.48
10:B:921:C:H2'	10:B:922:C:C6	2.47	0.48
10:B:1027:A:H2	10:B:2488:G:H4'	1.78	0.48
10:B:1549:A:H2'	10:B:1550:C:C6	2.48	0.48
10:B:1971:U:O2	11:C:237:ARG:HB2	2.14	0.48
10:B:2207:C:H2'	10:B:2208:C:H6	1.77	0.48
12:D:32:ASN:O	12:D:34:VAL:HG13	2.13	0.48
14:F:7:TYR:HA	14:F:11:VAL:CB	2.34	0.48
15:G:61:TRP:HA	15:G:61:TRP:CE3	2.49	0.48
15:G:100:ASN:HA	15:G:116:LEU:HD11	1.95	0.48
16:H:24:GLY:O	16:H:26:ALA:N	2.47	0.48
17:I:79:LEU:HB3	17:I:137:LEU:HD12	1.96	0.48
17:I:108:ILE:HG22	17:I:128:ILE:CD1	2.41	0.48
18:J:41:LYS:O	25:Q:63:ARG:NH2	2.46	0.48
18:J:125:TYR:OH	18:J:134:ALA:HB2	2.13	0.48
19:K:105:ARG:HD3	19:K:105:ARG:H	1.77	0.48
20:L:34:GLY:HA3	26:R:85:LYS:CD	2.41	0.48
20:L:122:VAL:HG12	20:L:123:ARG:N	2.27	0.48
21:M:108:VAL:HB	21:M:111:GLU:HB2	1.95	0.48
22:N:57:THR:O	22:N:59:SER:N	2.46	0.48
23:O:18:LEU:HD22	31:W:76:ARG:NH2	2.27	0.48
29:U:27:VAL:CB	29:U:33:VAL:HG22	2.42	0.48
8:9:67:SER:HA	28:T:93:LEU:N	2.23	0.48
8:9:228:ASP:O	8:9:229:ALA:C	2.55	0.48
10:B:870:U:O2'	10:B:871:U:H5'	2.14	0.48
10:B:1719:G:O2'	10:B:1720:U:H5'	2.14	0.48
10:B:1818:U:C3'	11:C:155:ARG:HB2	2.44	0.48
10:B:1983:G:H4'	10:B:2606:C:H4'	1.95	0.48
10:B:2005:A:H5"	36:B:5379:HOH:O	2.13	0.48
10:B:2328:A:H2'	10:B:2329:U:H6	1.77	0.48
10:B:2712:C:H3'	10:B:2714:G:H5"	1.94	0.48
10:B:2748:A:H1'	15:G:66:THR:OG1	2.13	0.48
10:B:2751:G:O2'	10:B:2752:C:H5'	2.14	0.48
11:C:16:VAL:O	11:C:17:LYS:HD2	2.14	0.48
11:C:216:ARG:O	11:C:218:THR:N	2.46	0.48
12:D:90:PHE:H	12:D:92:VAL:HG22	1.78	0.48
16:H:109:GLU:O	16:H:109:GLU:HG3	2.12	0.48
17:I:92:PRO:O	17:I:93:ASN:HB2	2.12	0.48
18:J:4:PHE:HB2	18:J:5:THR:H	1.18	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:L:90:VAL:O	20:L:122:VAL:HG11	2.14	0.48
20:L:140:GLY:O	20:L:142:ILE:N	2.46	0.48
24:P:23:ASP:HB3	24:P:24:THR:H	1.33	0.48
24:P:52:ARG:HG2	24:P:53:GLY:N	2.27	0.48
30:V:44:HIS:O	30:V:46:LYS:N	2.46	0.48
32:X:17:GLU:HA	32:X:21:LEU:CB	2.42	0.48
5:4:26:ILE:HB	5:4:35:GLN:CB	2.43	0.48
8:9:66:LYS:HB2	28:T:92:ASN:N	2.28	0.48
8:9:118:GLY:O	8:9:121:GLY:N	2.47	0.48
8:9:127:LYS:HG2	8:9:128:HIS:HD2	1.73	0.48
8:9:307:ILE:HG22	8:9:311:VAL:HB	1.95	0.48
10:B:160:A:H2'	10:B:161:A:C8	2.48	0.48
10:B:322:A:H5'	10:B:340:A:O4'	2.14	0.48
10:B:561:G:H1'	25:Q:40:LYS:HE2	1.96	0.48
10:B:572:A:H5"	10:B:573:U:OP2	2.13	0.48
10:B:969:G:OP1	33:Y:17:PRO:HG3	2.12	0.48
10:B:1278:C:O2'	10:B:1279:G:H5'	2.14	0.48
10:B:1311:G:H21	10:B:1603:A:H62	1.60	0.48
10:B:1661:G:O2'	10:B:1662:U:H5'	2.13	0.48
10:B:1747:U:H2'	10:B:1748:C:C6	2.49	0.48
10:B:2181:U:H2'	10:B:2182:U:C6	2.48	0.48
10:B:2250:G:H21	10:B:2496:C:C4'	2.25	0.48
10:B:2327:A:H2'	10:B:2328:A:C8	2.49	0.48
10:B:2803:G:H2'	10:B:2804:U:H6	1.78	0.48
12:D:4:LEU:HD22	12:D:4:LEU:H	1.78	0.48
12:D:41:ALA:C	12:D:43:ASP:H	2.22	0.48
12:D:172:VAL:O	12:D:173:GLN:HB3	2.12	0.48
14:F:34:THR:HG22	14:F:35:LEU:N	2.29	0.48
17:I:7:TYR:HA	17:I:59:THR:HA	1.96	0.48
17:I:85:ILE:HD12	17:I:87:SER:O	2.14	0.48
18:J:38:GLY:O	18:J:41:LYS:HD3	2.13	0.48
18:J:47:HIS:ND1	18:J:47:HIS:O	2.46	0.48
18:J:81:ILE:HG13	18:J:83:GLY:H	1.78	0.48
22:N:101:GLY:O	22:N:102:PHE:HB3	2.12	0.48
24:P:111:GLU:C	24:P:113:LEU:H	2.21	0.48
26:R:47:VAL:HG13	26:R:48:LYS:N	2.28	0.48
26:R:69:GLY:H	26:R:97:LYS:CG	2.27	0.48
26:R:86:GLN:O	26:R:87:GLN:HB2	2.12	0.48
28:T:55:VAL:CG2	28:T:86:THR:H	2.27	0.48
30:V:29:ILE:O	30:V:91:PHE:HB2	2.14	0.48
1:0:41:HIS:HB3	1:0:47:TYR:H	1.77	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:2:26:ASN:ND2	10:B:682:G:H5'	2.28	0.48
6:7:66:LYS:HZ2	8:9:368:MET:HE2	1.77	0.48
8:9:7:ASP:O	8:9:8:ARG:C	2.57	0.48
8:9:149:GLU:O	8:9:150:THR:C	2.56	0.48
8:9:177:LYS:C	8:9:180:LYS:HB3	2.39	0.48
8:9:205:ILE:O	8:9:206:LYS:C	2.57	0.48
8:9:366:SER:H	8:9:367:GLN:N	2.10	0.48
8:9:394:ILE:HG21	8:9:399:LYS:HD3	1.95	0.48
8:9:427:MET:C	8:9:429:LYS:H	2.20	0.48
10:B:32:C:O2'	10:B:33:C:H5'	2.13	0.48
10:B:247:G:H4'	10:B:386:G:C4	2.48	0.48
10:B:632:A:H5"	20:L:69:ARG:HD3	1.95	0.48
10:B:723:C:H2'	10:B:724:U:H6	1.77	0.48
10:B:869:G:H2'	10:B:870:U:O4'	2.13	0.48
10:B:1091:G:O2'	10:B:1092:C:H5'	2.14	0.48
10:B:1269:A:H2'	10:B:1270:C:C6	2.48	0.48
10:B:1426:G:H8	10:B:1426:G:OP2	1.95	0.48
10:B:1729:U:C5	10:B:1730:C:H1'	2.49	0.48
10:B:1999:C:O2'	10:B:2000:C:H5'	2.14	0.48
10:B:2597:G:C5'	11:C:239:PHE:HB2	2.37	0.48
10:B:2708:G:O2'	10:B:2709:G:H5'	2.13	0.48
10:B:2752:C:H2'	10:B:2753:A:O4'	2.13	0.48
11:C:103:ILE:CG2	11:C:104:LEU:H	2.19	0.48
11:C:155:ARG:C	11:C:157:ALA:H	2.22	0.48
11:C:171:VAL:HB	11:C:182:LYS:CB	2.39	0.48
12:D:83:ARG:O	12:D:84:LEU:HB2	2.12	0.48
15:G:123:GLU:HG2	15:G:131:VAL:HG13	1.96	0.48
17:I:5:GLN:CB	17:I:30:GLN:OE1	2.57	0.48
18:J:77:HIS:HA	18:J:85:LYS:HA	1.96	0.48
18:J:133:ALA:C	18:J:135:GLN:N	2.69	0.48
21:M:40:ARG:HG3	21:M:40:ARG:HH11	1.77	0.48
22:N:24:MET:HE1	22:N:36:THR:HG21	1.96	0.48
22:N:86:ARG:HD3	22:N:94:TYR:OH	2.14	0.48
24:P:29:VAL:HG13	24:P:84:SER:HB2	1.96	0.48
24:P:47:ILE:HG23	24:P:63:ILE:HG12	1.95	0.48
27:S:107:VAL:C	27:S:109:ASP:H	2.21	0.48
28:T:30:ILE:O	28:T:85:VAL:HG22	2.14	0.48
32:X:44:LYS:HG3	32:X:47:ARG:CB	2.40	0.48
33:Y:18:LYS:O	33:Y:21:ALA:HB3	2.14	0.48
8:9:119:LYS:HD2	8:9:282:LEU:HB2	1.96	0.48
8:9:176:LEU:C	8:9:178:GLU:N	2.71	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:247:LEU:HA	8:9:263:ARG:NH1	2.28	0.48
8:9:302:SER:O	8:9:305:GLU:N	2.47	0.48
8:9:335:LEU:HB3	8:9:388:ARG:NH2	2.28	0.48
10:B:1529:G:H2'	10:B:1530:G:C8	2.49	0.48
10:B:2052:A:OP1	12:D:145:SER:HB3	2.13	0.48
10:B:2712:C:H2'	10:B:2714:G:O3'	2.13	0.48
10:B:2728:U:H5'	19:K:70:ARG:NH2	2.27	0.48
11:C:116:GLN:C	11:C:127:ASN:HB3	2.38	0.48
11:C:209:ALA:O	11:C:213:ARG:NH1	2.47	0.48
11:C:231:HIS:ND1	11:C:242:HIS:ND1	2.61	0.48
13:E:189:THR:C	13:E:191:ASP:N	2.72	0.48
13:E:190:ALA:HB3	13:E:193:VAL:CG2	2.44	0.48
14:F:56:LEU:HD13	14:F:88:VAL:CG2	2.40	0.48
14:F:141:ASP:O	14:F:142:TYR:HB3	2.14	0.48
15:G:18:ILE:HA	15:G:22:VAL:O	2.14	0.48
17:I:99:LYS:HD3	17:I:99:LYS:N	2.28	0.48
19:K:18:ARG:HB2	19:K:45:GLU:HG3	1.95	0.48
23:O:40:ILE:HD13	23:O:40:ILE:N	2.25	0.48
23:O:105:ALA:HA	23:O:108:ASP:OD1	2.13	0.48
24:P:7:LEU:O	24:P:11:GLN:HG2	2.13	0.48
25:Q:36:GLN:O	25:Q:39:ILE:HG23	2.13	0.48
25:Q:45:ALA:O	25:Q:46:TYR:C	2.55	0.48
28:T:76:ARG:C	28:T:76:ARG:CD	2.87	0.48
32:X:1:MET:CB	32:X:6:LEU:HA	2.43	0.48
33:Y:30:ARG:HD2	33:Y:30:ARG:N	2.28	0.48
4:3:18:LYS:HE3	10:B:651:G:H5'	1.95	0.48
5:4:24:ARG:HE	5:4:37:GLN:CB	2.27	0.48
8:9:38:LEU:N	8:9:38:LEU:HD23	2.29	0.48
8:9:64:VAL:HG22	8:9:73:GLU:CD	2.34	0.48
8:9:145:ILE:O	8:9:148:LEU:N	2.47	0.48
8:9:219:PHE:O	8:9:245:VAL:HG12	2.14	0.48
8:9:334:PHE:CE2	8:9:420:PHE:CZ	2.85	0.48
8:9:397:SER:N	10:B:487:C:OP1	2.39	0.48
9:A:43:C:C4'	14:F:62:GLN:HE21	2.25	0.48
9:A:66:A:HO2'	9:A:67:G:H8	1.59	0.48
10:B:905:A:O2'	10:B:906:U:H5'	2.14	0.48
10:B:1351:C:O2'	10:B:1571:A:H1'	2.14	0.48
10:B:1561:C:H2'	10:B:1562:U:C6	2.48	0.48
10:B:1864:U:OP1	10:B:2410:G:O2'	2.32	0.48
10:B:2293:G:OP1	23:O:13:ARG:NH2	2.46	0.48
10:B:2398:U:H2'	10:B:2399:G:C8	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C:15:VAL:O	11:C:15:VAL:HG22	2.13	0.48
11:C:68:ARG:HD2	11:C:127:ASN:HD21	1.79	0.48
12:D:1:MET:HB2	12:D:81:GLU:OE1	2.12	0.48
12:D:116:LYS:O	22:N:2:ARG:HB3	2.12	0.48
14:F:98:PHE:HA	14:F:101:ARG:NE	2.29	0.48
16:H:37:VAL:HG12	16:H:38:PRO:N	2.28	0.48
16:H:69:ALA:O	16:H:73:ASN:N	2.47	0.48
16:H:70:GLU:C	16:H:72:ILE:H	2.20	0.48
18:J:41:LYS:HE2	18:J:46:PRO:HD3	1.95	0.48
22:N:17:ARG:C	22:N:19:ALA:H	2.21	0.48
23:O:35:ILE:HG12	23:O:106:LEU:HD12	1.95	0.48
23:O:86:GLY:C	23:O:88:LYS:N	2.72	0.48
24:P:25:VAL:HG12	24:P:27:VAL:N	2.23	0.48
26:R:11:GLN:N	26:R:21:ARG:NH2	2.61	0.48
27:S:7:HIS:NE2	27:S:46:LEU:HD13	2.28	0.48
28:T:12:ARG:HG2	28:T:13:ALA:H	1.78	0.48
4:3:38:LYS:NZ	10:B:2382:G:H1'	2.28	0.48
7:8:39:A:H2	8:9:401:ARG:NH1	2.12	0.48
8:9:230:ALA:HA	8:9:262:ILE:CG2	2.18	0.48
10:B:863:A:H2'	10:B:864:G:H8	1.76	0.48
10:B:930:G:H5'	10:B:931:U:P	2.54	0.48
10:B:1050:A:H2'	10:B:1051:G:O4'	2.14	0.48
10:B:1289:C:H2'	10:B:1290:C:C6	2.49	0.48
10:B:1637:A:H2'	10:B:1638:C:C6	2.49	0.48
10:B:1745:A:H2'	10:B:1746:A:C8	2.49	0.48
10:B:1919:A:H2'	10:B:1920:C:H5'	1.95	0.48
10:B:2076:U:O2	10:B:2076:U:O4'	2.29	0.48
10:B:2776:A:H4'	10:B:2777:G:O5'	2.13	0.48
12:D:180:VAL:HA	12:D:187:LEU:HA	1.95	0.48
14:F:96:TRP:O	14:F:100:GLU:HG3	2.14	0.48
14:F:121:PHE:CE1	14:F:166:ARG:HG2	2.49	0.48
18:J:15:TRP:CD2	18:J:138:GLN:HB2	2.49	0.48
20:L:33:ARG:O	20:L:34:GLY:C	2.57	0.48
21:M:41:LEU:CD2	21:M:46:ILE:HD11	2.44	0.48
22:N:7:GLY:O	22:N:8:ARG:HB2	2.14	0.48
23:O:86:GLY:O	23:O:88:LYS:N	2.46	0.48
26:R:37:GLU:CD	26:R:62:GLU:CD	2.81	0.48
28:T:15:HIS:O	28:T:16:VAL:CB	2.61	0.48
3:2:18:PHE:N	3:2:18:PHE:CD2	2.82	0.47
4:3:36:ALA:O	4:3:38:LYS:N	2.47	0.47
8:9:103:VAL:HG11	8:9:188:LEU:CD2	2.44	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:119:LYS:HZ1	8:9:281:ALA:HB3	1.75	0.47
8:9:120:LEU:HD12	8:9:120:LEU:C	2.38	0.47
8:9:306:ASP:O	8:9:307:ILE:C	2.57	0.47
8:9:410:VAL:HG12	8:9:411:GLN:N	2.29	0.47
9:A:75:G:H1	9:A:102:G:N2	2.12	0.47
10:B:1708:C:H2'	10:B:1709:U:H6	1.79	0.47
10:B:1813:G:N3	11:C:50:THR:CG2	2.77	0.47
10:B:1817:G:H5"	11:C:86:ARG:HH11	1.79	0.47
10:B:1916:A:H2'	10:B:1917:U:O4'	2.14	0.47
10:B:2400:G:O2'	10:B:2401:U:H5'	2.13	0.47
10:B:2543:G:H2'	10:B:2544:G:O4'	2.14	0.47
10:B:2773:C:H5"	12:D:169:ARG:HB2	1.95	0.47
11:C:107:LYS:HE3	11:C:108:GLY:H	1.79	0.47
11:C:230:PRO:HG2	11:C:245:THR:N	2.08	0.47
14:F:7:TYR:O	14:F:11:VAL:HB	2.14	0.47
16:H:110:VAL:HG23	16:H:132:PHE:CE2	2.49	0.47
18:J:82:GLY:O	18:J:83:GLY:C	2.56	0.47
19:K:11:ALA:O	19:K:100:PHE:N	2.46	0.47
21:M:20:LEU:HD13	21:M:38:ARG:CG	2.44	0.47
22:N:4:ARG:CD	22:N:4:ARG:N	2.77	0.47
23:O:45:SER:O	23:O:47:VAL:N	2.47	0.47
26:R:4:VAL:HB	26:R:41:ILE:HG21	1.96	0.47
26:R:69:GLY:H	26:R:97:LYS:CB	2.25	0.47
27:S:10:ALA:O	27:S:11:ARG:HB3	2.14	0.47
31:W:56:HIS:HA	31:W:77:LYS:CE	2.39	0.47
31:W:67:LYS:HG2	31:W:71:LYS:C	2.39	0.47
2:1:4:ILE:C	2:1:5:ARG:HG3	2.39	0.47
6:7:52:PHE:CB	6:7:53:PRO:HD3	2.40	0.47
8:9:131:LYS:HB3	8:9:184:TYR:HB3	1.96	0.47
8:9:151:LEU:O	8:9:154:GLN:N	2.47	0.47
8:9:271:LYS:C	8:9:285:PHE:HB3	2.38	0.47
8:9:383:MET:CG	8:9:402:ILE:HD13	2.34	0.47
8:9:410:VAL:O	8:9:411:GLN:C	2.56	0.47
10:B:123:G:H2'	10:B:124:G:C8	2.49	0.47
10:B:327:G:H2'	10:B:328:U:O4'	2.14	0.47
10:B:898:C:C2'	10:B:899:A:H5"	2.43	0.47
10:B:908:C:O2'	10:B:909:A:H5'	2.14	0.47
10:B:1196:C:H2'	10:B:1197:G:C8	2.48	0.47
10:B:1313:U:H2'	10:B:1313:U:O2	2.14	0.47
10:B:1360:G:H2'	10:B:1361:G:H5'	1.94	0.47
10:B:1729:U:H2'	10:B:1730:C:H4'	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1789:A:H5'	11:C:220:ARG:NH2	2.29	0.47
10:B:2082:A:N6	10:B:2237:G:H1'	2.28	0.47
10:B:2634:A:H2'	10:B:2635:A:C8	2.50	0.47
10:B:2636:C:O5'	12:D:80:TRP:NE1	2.39	0.47
10:B:2821:A:H5"	12:D:167:ASN:HD21	1.79	0.47
10:B:2896:C:H2'	10:B:2897:U:C6	2.49	0.47
11:C:67:LYS:HG2	11:C:149:LYS:O	2.14	0.47
15:G:36:LEU:HD22	15:G:40:VAL:HG11	1.96	0.47
16:H:90:LEU:HD22	16:H:122:LEU:O	2.14	0.47
17:I:72:THR:HG23	17:I:112:LYS:NZ	2.28	0.47
20:L:81:ASP:HA	20:L:84:LYS:CD	2.45	0.47
22:N:42:LYS:HZ2	22:N:45:ARG:HD2	1.79	0.47
22:N:44:LEU:HD12	22:N:47:VAL:CG2	2.44	0.47
26:R:32:THR:HG22	26:R:66:HIS:HB3	1.96	0.47
26:R:76:LYS:O	26:R:77:PHE:HB2	2.14	0.47
32:X:31:GLN:O	32:X:32:ALA:CB	2.62	0.47
33:Y:23:LEU:HD21	33:Y:50:VAL:HG11	1.96	0.47
1:0:28:SER:HB3	1:0:34:GLY:O	2.14	0.47
3:2:38:GLY:C	3:2:39:ARG:HD2	2.40	0.47
4:3:33:THR:CG2	4:3:40:LYS:HD2	2.45	0.47
8:9:5:LEU:CG	8:9:34:VAL:HA	2.44	0.47
8:9:30:THR:O	8:9:31:LEU:C	2.56	0.47
8:9:54:ARG:O	8:9:55:VAL:C	2.57	0.47
8:9:105:MET:CE	8:9:218:LEU:CD1	2.76	0.47
8:9:331:LEU:O	8:9:331:LEU:HG	2.13	0.47
8:9:383:MET:HG2	8:9:387:GLU:OE2	2.14	0.47
9:A:63:C:H2'	9:A:64:G:C8	2.48	0.47
10:B:184:C:H2'	10:B:185:G:C8	2.47	0.47
10:B:230:G:H2'	10:B:231:A:H8	1.79	0.47
10:B:279:A:H3'	10:B:280:U:H6	1.79	0.47
10:B:587:C:O5'	10:B:587:C:H6	1.97	0.47
10:B:812:C:H2'	10:B:813:U:H6	1.79	0.47
10:B:1176:U:H2'	10:B:1177:G:O4'	2.14	0.47
10:B:1842:G:H2'	10:B:1843:C:C6	2.49	0.47
10:B:2019:A:O3'	25:Q:26:ALA:HB3	2.14	0.47
10:B:2229:U:H2'	10:B:2230:G:H8	1.79	0.47
10:B:2352:A:H2'	10:B:2353:G:O4'	2.13	0.47
10:B:2443:C:H2'	10:B:2444:G:C8	2.49	0.47
10:B:2553:G:H2'	10:B:2554:U:C4'	2.45	0.47
11:C:155:ARG:HE	11:C:157:ALA:CB	2.28	0.47
11:C:171:VAL:HG12	11:C:183:VAL:C	2.38	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C:177:SER:C	11:C:179:GLU:H	2.23	0.47
12:D:46:ARG:N	12:D:82:PHE:HA	2.28	0.47
13:E:4:VAL:HG13	13:E:5:LEU:N	2.25	0.47
13:E:15:SER:HB3	13:E:196:VAL:HG22	1.94	0.47
13:E:120:VAL:O	13:E:189:THR:HG21	2.14	0.47
15:G:36:LEU:HB3	15:G:40:VAL:HG21	1.97	0.47
16:H:42:LYS:HE2	16:H:42:LYS:C	2.39	0.47
17:I:121:ILE:H	17:I:121:ILE:CD1	2.25	0.47
19:K:12:ASP:CG	19:K:13:ASN:N	2.71	0.47
21:M:133:LYS:CD	21:M:134:THR:H	2.21	0.47
23:O:9:ARG:O	23:O:12:THR:HG22	2.15	0.47
23:O:56:LYS:HE2	23:O:81:ARG:NE	2.07	0.47
24:P:64:SER:HB2	24:P:71:ARG:HH11	1.78	0.47
26:R:69:GLY:CA	26:R:97:LYS:H	2.19	0.47
27:S:9:HIS:HA	27:S:100:THR:OG1	2.13	0.47
29:U:27:VAL:CA	29:U:33:VAL:HG22	2.44	0.47
29:U:46:LYS:HG2	29:U:52:ASN:O	2.14	0.47
31:W:18:LYS:HE3	31:W:20:LEU:HD23	1.95	0.47
3:2:7:PRO:O	3:2:8:SER:HB3	2.13	0.47
7:8:77:C:H3'	7:8:78:G:P	2.53	0.47
8:9:151:LEU:N	8:9:151:LEU:CD2	2.68	0.47
8:9:290:ILE:HG22	8:9:291:ALA:HB1	1.94	0.47
9:A:13:G:H4'	9:A:15:A:H2'	1.96	0.47
10:B:28:A:O2'	10:B:29:U:H5'	2.13	0.47
10:B:46:G:H2'	10:B:47:C:C6	2.49	0.47
10:B:62:U:H3'	10:B:63:A:C8	2.50	0.47
10:B:151:C:H2'	10:B:152:A:H8	1.78	0.47
10:B:518:G:H2'	10:B:519:U:C6	2.50	0.47
10:B:1130:U:HO2'	10:B:1131:G:H8	1.61	0.47
10:B:1205:A:N7	13:E:164:LEU:HD21	2.29	0.47
10:B:2243:U:O2	10:B:2434:A:C2	2.67	0.47
10:B:2728:U:H2'	10:B:2729:G:H8	1.78	0.47
10:B:2811:G:O2'	10:B:2812:G:H5'	2.14	0.47
11:C:208:GLY:HA2	11:C:212:TRP:HB3	1.95	0.47
13:E:14:VAL:HG12	13:E:15:SER:N	2.28	0.47
14:F:103:ILE:HD12	14:F:104:THR:N	2.29	0.47
16:H:87:GLU:HB2	16:H:89:LYS:HZ3	1.78	0.47
18:J:10:THR:O	18:J:11:VAL:HB	2.14	0.47
20:L:14:LYS:HE2	20:L:15:ALA:N	2.29	0.47
21:M:38:ARG:HD2	21:M:38:ARG:C	2.39	0.47
21:M:64:TRP:HB2	21:M:102:LEU:HB2	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:N:47:VAL:O	22:N:51:LEU:HG	2.15	0.47
24:P:29:VAL:HG23	24:P:47:ILE:HD11	1.96	0.47
24:P:108:ARG:HD3	24:P:108:ARG:N	2.29	0.47
25:Q:47:ARG:NH1	25:Q:47:ARG:HA	2.29	0.47
25:Q:78:PHE:CD1	25:Q:78:PHE:C	2.93	0.47
26:R:5:PHE:HB3	26:R:12:HIS:NE2	2.29	0.47
26:R:67:GLY:H	26:R:98:ILE:N	2.12	0.47
28:T:55:VAL:HG23	28:T:87:LEU:H	1.79	0.47
34:Z:55:GLY:HA2	34:Z:59:ARG:HB2	1.96	0.47
3:2:16:HIS:CE1	3:2:44:VAL:HA	2.49	0.47
5:4:36:ARG:HD2	5:4:37:GLN:O	2.14	0.47
7:8:77:C:O2	7:8:78:G:C8	2.66	0.47
8:9:30:THR:HA	8:9:33:GLU:HB2	1.97	0.47
8:9:171:ILE:CG2	8:9:172:VAL:H	2.27	0.47
8:9:225:THR:HG22	8:9:229:ALA:H	1.79	0.47
8:9:253:ASP:OD2	8:9:255:ARG:HB2	2.15	0.47
8:9:318:LYS:O	8:9:321:SER:N	2.47	0.47
10:B:51:G:H1'	10:B:118:A:H61	1.79	0.47
10:B:263:G:H2'	10:B:264:C:O4'	2.15	0.47
10:B:321:U:OP2	13:E:130:LYS:HA	2.14	0.47
10:B:448:U:H5	10:B:583:G:C2	2.33	0.47
10:B:543:G:C6	10:B:544:C:H1'	2.49	0.47
10:B:1560:G:H2'	10:B:1561:C:H6	1.78	0.47
10:B:1745:A:H2'	10:B:1746:A:H8	1.80	0.47
10:B:1791:A:C4'	11:C:207:ALA:H	2.28	0.47
10:B:1958:C:O2'	10:B:1959:G:H5'	2.15	0.47
10:B:2270:A:H4'	31:W:18:LYS:HD2	1.96	0.47
10:B:2305:U:N3	14:F:149:ARG:HB3	2.26	0.47
10:B:2441:U:O2'	10:B:2442:C:H5'	2.14	0.47
10:B:2899:A:H2'	10:B:2900:A:H8	1.79	0.47
11:C:142:ASN:HA	11:C:153:LEU:HD21	1.96	0.47
14:F:34:THR:O	14:F:35:LEU:HD23	2.14	0.47
14:F:177:ARG:O	14:F:178:LYS:HB2	2.15	0.47
15:G:10:VAL:HG13	15:G:14:VAL:HG12	1.95	0.47
17:I:49:GLU:CB	17:I:52:LEU:HD12	2.44	0.47
21:M:118:LYS:HB2	21:M:118:LYS:NZ	2.30	0.47
23:O:31:THR:C	23:O:33:ARG:H	2.21	0.47
25:Q:87:VAL:HB	26:R:54:VAL:HG21	1.96	0.47
26:R:6:GLN:NE2	26:R:6:GLN:N	2.62	0.47
26:R:67:GLY:H	26:R:98:ILE:H	1.62	0.47
30:V:3:THR:H	30:V:50:MET:HE1	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:V:21:ARG:CZ	30:V:87:GLN:HB3	2.44	0.47
4:3:11:LYS:HB2	20:L:63:LYS:O	2.15	0.47
4:3:58:ILE:HG22	20:L:51:GLU:HG3	1.96	0.47
6:7:67:LYS:HG2	8:9:412:ASP:C	2.32	0.47
8:9:99:PRO:HA	8:9:100:PRO:C	2.39	0.47
8:9:222:ASP:HA	8:9:248:THR:O	2.15	0.47
8:9:226:GLY:HA2	8:9:259:ALA:CB	2.44	0.47
8:9:418:LYS:CE	10:B:490:C:H1'	2.20	0.47
10:B:37:C:O2'	10:B:38:A:H5'	2.15	0.47
10:B:876:C:H5'	10:B:877:A:OP2	2.15	0.47
10:B:1018:U:O2'	10:B:1019:U:H5'	2.15	0.47
10:B:1028:A:N6	10:B:1125:G:H2'	2.30	0.47
10:B:1438:U:H5'	10:B:1516:G:O2'	2.14	0.47
10:B:2087:G:H2'	10:B:2088:A:C8	2.49	0.47
10:B:2271:G:C2'	10:B:2272:U:H5'	2.44	0.47
12:D:116:LYS:N	12:D:116:LYS:HD2	2.30	0.47
13:E:123:LYS:HZ1	13:E:158:PHE:HA	1.80	0.47
13:E:199:MET:HG3	13:E:200:LEU:H	1.77	0.47
17:I:4:VAL:O	17:I:4:VAL:HG13	2.14	0.47
18:J:25:LEU:HD12	18:J:62:VAL:CB	2.45	0.47
18:J:90:GLU:C	18:J:92:MET:N	2.72	0.47
20:L:19:LEU:C	20:L:21:ARG:H	2.22	0.47
24:P:96:LEU:HD12	24:P:96:LEU:N	2.29	0.47
25:Q:40:LYS:O	25:Q:44:TYR:HB3	2.15	0.47
26:R:64:VAL:HG13	26:R:65:ALA:N	2.29	0.47
28:T:11:LEU:HB2	28:T:12:ARG:H	1.55	0.47
32:X:22:LEU:HD11	32:X:47:ARG:NH2	2.30	0.47
1:0:25:THR:HG23	1:0:25:THR:O	2.15	0.47
2:1:23:THR:HG21	10:B:2286:G:H1	1.80	0.47
4:3:48:MET:HE3	4:3:48:MET:HA	1.96	0.47
4:3:51:LYS:HA	4:3:51:LYS:HZ2	1.78	0.47
4:3:54:LEU:HD22	20:L:57:LEU:HB3	1.97	0.47
5:4:1:MET:HE1	5:4:36:ARG:H	1.79	0.47
8:9:2:PHE:HZ	8:9:295:LEU:CG	2.18	0.47
8:9:86:MET:O	8:9:264:HIS:ND1	2.47	0.47
8:9:135:VAL:HB	8:9:189:VAL:CG1	2.44	0.47
8:9:197:VAL:O	8:9:200:ALA:HB3	2.13	0.47
8:9:205:ILE:CA	8:9:208:VAL:HB	2.44	0.47
8:9:236:PHE:HA	8:9:239:ALA:HB3	1.97	0.47
8:9:375:ARG:HG3	8:9:375:ARG:NH2	2.27	0.47
8:9:384:THR:HG23	8:9:387:GLU:H	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:136:G:H2'	10:B:137:U:H6	1.76	0.47
10:B:244:A:H2'	10:B:245:G:O4'	2.14	0.47
10:B:493:G:O2'	10:B:494:G:H5'	2.14	0.47
10:B:511:U:H4'	10:B:1235:G:H4'	1.97	0.47
10:B:581:C:O2'	10:B:582:A:H5'	2.14	0.47
10:B:643:A:H61	10:B:2370:G:H1'	1.77	0.47
10:B:659:G:C5'	13:E:95:LYS:HD3	2.44	0.47
10:B:1098:A:O5'	17:I:3:LYS:HB3	2.14	0.47
10:B:1149:G:H2'	10:B:1150:C:H6	1.73	0.47
10:B:1352:U:O2'	10:B:1353:A:H5'	2.15	0.47
10:B:1365:A:OP2	34:Z:9:TYR:HE2	1.97	0.47
10:B:1771:C:O2'	10:B:1772:A:H5'	2.14	0.47
10:B:1938:A:O2'	10:B:1939:U:H5"	2.14	0.47
10:B:1946:U:H2'	10:B:1947:C:C6	2.50	0.47
10:B:2188:U:H2'	10:B:2189:U:O4'	2.14	0.47
10:B:2199:A:H5"	10:B:2200:C:OP2	2.14	0.47
10:B:2220:U:H2'	10:B:2221:G:C8	2.50	0.47
10:B:2299:U:H2'	10:B:2300:C:C6	2.49	0.47
10:B:2543:G:H5'	10:B:2543:G:H8	1.79	0.47
10:B:2574:G:N2	12:D:147:GLY:HA3	2.30	0.47
10:B:2628:C:O2'	10:B:2781:A:H2'	2.14	0.47
10:B:2636:C:H5'	12:D:80:TRP:HZ2	1.79	0.47
10:B:2641:G:O2'	10:B:2642:G:H5'	2.14	0.47
10:B:2874:C:H2'	10:B:2875:C:C6	2.50	0.47
11:C:30:ALA:N	11:C:31:PRO:CD	2.77	0.47
11:C:33:LEU:HD22	11:C:34:GLU:H	1.80	0.47
11:C:53:ILE:HG21	11:C:218:THR:CA	2.44	0.47
11:C:54:GLY:H	11:C:216:ARG:HG3	1.80	0.47
11:C:84:PRO:O	11:C:86:ARG:N	2.44	0.47
12:D:35:THR:HB	12:D:48:ILE:CG1	2.45	0.47
12:D:90:PHE:H	12:D:92:VAL:CG2	2.28	0.47
12:D:110:THR:HB	12:D:202:ILE:HB	1.97	0.47
12:D:122:VAL:CA	12:D:128:ARG:HG3	2.38	0.47
14:F:28:PRO:HB2	14:F:168:LEU:CD1	2.41	0.47
15:G:10:VAL:O	15:G:10:VAL:HG12	2.13	0.47
15:G:90:GLY:HA3	15:G:159:LYS:HG2	1.97	0.47
15:G:172:GLU:O	15:G:173:ALA:C	2.57	0.47
16:H:36:ALA:O	16:H:37:VAL:HG23	2.15	0.47
18:J:67:ASN:C	18:J:69:ARG:H	2.22	0.47
22:N:48:VAL:HA	22:N:51:LEU:HD12	1.97	0.47
24:P:47:ILE:CG2	24:P:63:ILE:HG23	2.34	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Q:59:LEU:O	25:Q:62:ALA:HB3	2.15	0.47
25:Q:88:GLU:HA	26:R:53:PHE:HB3	1.96	0.47
26:R:5:PHE:HB2	26:R:37:GLU:OE1	2.14	0.47
26:R:6:GLN:CG	26:R:7:SER:N	2.77	0.47
26:R:39:LEU:H	26:R:61:ALA:CB	2.26	0.47
26:R:74:ILE:C	26:R:75:VAL:HG22	2.40	0.47
27:S:84:ARG:HH21	27:S:98:LYS:HZ1	1.63	0.47
28:T:48:GLN:HG3	28:T:49:LYS:N	2.30	0.47
29:U:4:ILE:HG13	29:U:25:LYS:HG2	1.97	0.47
30:V:48:MET:SD	30:V:86:LEU:HD12	2.54	0.47
30:V:77:VAL:HG13	30:V:89:ILE:CD1	2.44	0.47
32:X:28:LEU:HB3	32:X:42:LEU:HG	1.96	0.47
33:Y:25:GLY:HA3	33:Y:46:MET:HE3	1.97	0.47
34:Z:36:VAL:HG23	34:Z:36:VAL:O	2.14	0.47
4:3:32:LEU:HG	10:B:2391:G:P	2.55	0.47
5:4:2:LYS:HA	5:4:36:ARG:O	2.15	0.47
8:9:21:ARG:CZ	32:X:16:THR:HG22	2.40	0.47
8:9:223:ALA:HB1	8:9:256:GLY:HA2	1.95	0.47
8:9:283:GLU:CD	8:9:297:MET:HE1	2.40	0.47
10:B:448:U:H2'	13:E:79:ARG:CG	2.45	0.47
10:B:506:G:H1'	10:B:507:A:C8	2.50	0.47
10:B:579:G:H4'	10:B:2017:U:H2'	1.97	0.47
10:B:689:A:H2'	10:B:690:G:C8	2.50	0.47
10:B:705:A:N6	10:B:726:G:O2'	2.48	0.47
10:B:877:A:H2	10:B:900:A:N7	2.13	0.47
10:B:976:G:H4'	10:B:1156:A:N7	2.30	0.47
10:B:1430:G:H2'	10:B:1431:A:C8	2.50	0.47
10:B:1432:G:O2'	10:B:1433:A:H5'	2.14	0.47
10:B:1561:C:H2'	10:B:1562:U:H6	1.80	0.47
11:C:50:THR:HG22	11:C:51:ARG:CG	2.42	0.47
11:C:53:ILE:CG1	11:C:218:THR:HA	2.45	0.47
11:C:229:HIS:CE1	11:C:231:HIS:NE2	2.83	0.47
12:D:6:GLY:C	12:D:26:VAL:HG23	2.39	0.47
12:D:24:VAL:CG1	12:D:193:VAL:HG21	2.44	0.47
13:E:10:SER:C	13:E:12:LEU:N	2.70	0.47
14:F:146:ASP:O	14:F:147:ARG:C	2.57	0.47
15:G:6:ALA:HB3	15:G:7:PRO:HD3	1.96	0.47
15:G:8:VAL:HG21	15:G:49:LEU:HB2	1.97	0.47
15:G:163:TYR:C	15:G:165:ASP:H	2.22	0.47
20:L:3:LEU:HD22	20:L:4:ASN:OD1	2.15	0.47
20:L:17:LYS:HG3	20:L:18:ARG:H	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:P:70:GLU:C	24:P:71:ARG:HG2	2.40	0.47
24:P:90:ALA:N	24:P:112:ARG:NH2	2.58	0.47
25:Q:87:VAL:HB	26:R:54:VAL:CG1	2.43	0.47
28:T:31:VAL:HG22	28:T:32:LEU:N	2.30	0.47
4:3:21:PHE:HE1	4:3:56:LEU:HB3	1.80	0.47
8:9:39:LEU:HD22	8:9:45:LEU:CD2	2.45	0.47
8:9:42:ASP:CB	8:9:255:ARG:HB3	2.32	0.47
8:9:157:VAL:O	8:9:157:VAL:HG12	2.15	0.47
8:9:213:ASN:N	8:9:214:PRO:CD	2.78	0.47
8:9:247:LEU:HD11	8:9:260:LEU:CA	2.44	0.47
8:9:374:VAL:O	8:9:376:MET:N	2.46	0.47
9:A:92:C:O2’	9:A:93:C:H5’	2.15	0.47
10:B:817:C:O2’	10:B:839:U:H5”	2.15	0.47
10:B:934:U:H2’	10:B:935:C:C6	2.49	0.47
10:B:1295:C:H2’	10:B:1296:G:C8	2.50	0.47
10:B:1563:U:H2’	10:B:1564:C:C6	2.50	0.47
10:B:1692:U:H2’	10:B:1694:C:C4	2.50	0.47
10:B:1739:A:H2’	10:B:1740:G:O4’	2.14	0.47
10:B:1773:A:N6	11:C:206:LYS:HE2	2.29	0.47
10:B:2034:U:H5”	36:B:5752:HOH:O	2.15	0.47
10:B:2751:G:OP2	15:G:3:VAL:HB	2.14	0.47
10:B:2860:A:H2’	10:B:2861:U:O4’	2.14	0.47
11:C:160:TYR:CD2	11:C:193:GLU:HG2	2.50	0.47
11:C:164:VAL:HB	11:C:167:ASP:OD1	2.15	0.47
12:D:15:PHE:CA	24:P:79:VAL:HG11	2.40	0.47
13:E:17:THR:OG1	13:E:18:THR:N	2.48	0.47
13:E:48:THR:C	13:E:49:ARG:CG	2.82	0.47
13:E:85:PHE:O	13:E:86:ALA:CB	2.63	0.47
15:G:88:LEU:HG	15:G:161:VAL:HB	1.96	0.47
16:H:94:ILE:CG2	16:H:122:LEU:HG	2.40	0.47
24:P:5:LYS:C	24:P:7:LEU:N	2.70	0.47
24:P:47:ILE:CG2	24:P:49:ILE:HG13	2.45	0.47
25:Q:20:ALA:O	25:Q:21:LYS:C	2.58	0.47
25:Q:30:VAL:O	25:Q:31:TYR:HB2	2.14	0.47
25:Q:50:ARG:NH2	25:Q:53:LYS:HE3	2.29	0.47
25:Q:68:ALA:HB1	25:Q:73:ILE:HG21	1.97	0.47
26:R:80:ARG:HD2	26:R:85:LYS:CB	2.45	0.47
27:S:29:VAL:CG2	27:S:71:VAL:HG23	2.33	0.47
28:T:34:VAL:O	28:T:81:LYS:HB3	2.14	0.47
29:U:11:ILE:HG22	29:U:19:GLY:HA2	1.96	0.47
31:W:42:THR:HB	31:W:75:ASN:ND2	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:3:4:LYS:CG	4:3:61:LEU:HB2	2.45	0.47
8:9:5:LEU:HG	8:9:34:VAL:HG22	1.97	0.47
8:9:36:MET:C	8:9:38:LEU:N	2.73	0.47
8:9:51:PHE:HE1	8:9:81:GLU:C	2.23	0.47
8:9:79:ARG:O	8:9:82:LEU:N	2.47	0.47
8:9:121:GLY:O	8:9:124:LEU:N	2.48	0.47
8:9:362:ASP:HB2	8:9:365:LYS:HG3	1.97	0.47
9:A:12:C:H4'	9:A:15:A:N6	2.29	0.47
10:B:106:C:H2'	10:B:107:G:C8	2.49	0.47
10:B:143:C:O2	28:T:3:ARG:HD2	2.14	0.47
10:B:361:G:H2'	10:B:362:A:H8	1.80	0.47
10:B:802:A:H4'	36:B:5723:HOH:O	2.14	0.47
10:B:822:G:H2'	10:B:823:C:H6	1.80	0.47
10:B:852:U:O2'	10:B:853:C:H5'	2.14	0.47
10:B:1433:A:H2'	10:B:1434:A:O4'	2.15	0.47
10:B:1531:C:H2'	10:B:1532:A:H8	1.78	0.47
10:B:2306:C:H3'	10:B:2307:G:C5'	2.44	0.47
10:B:2671:G:H2'	10:B:2672:U:C6	2.49	0.47
10:B:2673:G:H2'	10:B:2674:G:C8	2.50	0.47
11:C:20:ASN:CG	11:C:202:ARG:HD3	2.40	0.47
12:D:7:LYS:O	12:D:198:GLY:HA2	2.14	0.47
15:G:39:ALA:HA	15:G:54:ARG:HD2	1.97	0.47
15:G:40:VAL:HG13	15:G:51:PHE:CE2	2.50	0.47
15:G:71:LEU:O	15:G:74:MET:HB2	2.14	0.47
15:G:174:LYS:O	15:G:175:LYS:HB2	2.14	0.47
21:M:32:GLY:O	21:M:127:LYS:HB3	2.15	0.47
23:O:17:LYS:O	23:O:20:GLU:HG2	2.15	0.47
23:O:102:ARG:O	23:O:105:ALA:HB3	2.15	0.47
23:O:115:LEU:HD12	23:O:115:LEU:N	2.29	0.47
25:Q:3:VAL:O	25:Q:4:LYS:C	2.58	0.47
25:Q:34:ALA:O	25:Q:37:ALA:HB3	2.15	0.47
29:U:28:LEU:HD12	29:U:29:SER:N	2.30	0.47
30:V:70:ILE:HD12	30:V:71:LYS:N	2.28	0.47
30:V:78:GLN:NE2	30:V:88:HIS:HB3	2.30	0.47
30:V:93:ARG:HG2	30:V:94:ALA:H	1.80	0.47
31:W:58:LEU:HD11	31:W:82:GLU:HB3	1.96	0.47
33:Y:1:ALA:HB1	33:Y:37:ARG:HB3	1.97	0.47
2:1:26:LYS:HD3	2:1:28:THR:H	1.80	0.46
3:2:39:ARG:HH11	3:2:39:ARG:HG3	1.79	0.46
4:3:38:LYS:CE	10:B:2382:G:H1'	2.46	0.46
8:9:7:ASP:C	8:9:9:LEU:H	2.22	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:132:VAL:HG23	8:9:133:LEU:N	2.30	0.46
9:A:23:G:N2	9:A:24:G:H1	2.13	0.46
10:B:153:U:O5'	10:B:153:U:H6	1.98	0.46
10:B:622:G:H2'	10:B:623:C:C6	2.50	0.46
10:B:1133:A:H2	10:B:2038:G:H21	1.61	0.46
10:B:1300:G:H5'	10:B:1301:A:N3	2.30	0.46
10:B:1409:U:O2'	10:B:1410:G:H5'	2.14	0.46
10:B:1821:A:C5'	11:C:155:ARG:HH21	2.28	0.46
10:B:2061:G:H5"	10:B:2503:A:N1	2.31	0.46
10:B:2281:A:H62	31:W:3:LYS:CD	2.28	0.46
10:B:2563:U:H4'	19:K:27:GLY:HA2	1.97	0.46
10:B:2648:G:H2'	10:B:2649:C:C6	2.49	0.46
10:B:2659:G:N2	10:B:2661:G:H5"	2.30	0.46
10:B:2742:G:O2'	10:B:2743:U:H5'	2.15	0.46
11:C:64:VAL:HB	11:C:65:ASP:H	1.31	0.46
11:C:161:VAL:HG12	11:C:161:VAL:O	2.15	0.46
11:C:192:GLY:O	11:C:194:VAL:HG22	2.15	0.46
11:C:222:THR:C	11:C:224:MET:N	2.72	0.46
13:E:24:ASN:N	13:E:110:SER:HB2	2.30	0.46
13:E:39:ALA:O	13:E:40:ARG:C	2.58	0.46
17:I:72:THR:OG1	17:I:73:PRO:HD2	2.15	0.46
17:I:79:LEU:HD23	17:I:108:ILE:CD1	2.46	0.46
18:J:128:ASN:O	18:J:130:HIS:N	2.48	0.46
19:K:6:THR:O	19:K:20:MET:HG3	2.15	0.46
21:M:107:GLY:C	21:M:109:PRO:HD2	2.40	0.46
25:Q:78:PHE:HE1	25:Q:82:LEU:HD13	1.79	0.46
29:U:78:LYS:HA	29:U:96:LYS:HG2	1.98	0.46
30:V:26:PHE:CE1	30:V:42:LEU:HD12	2.51	0.46
31:W:56:HIS:CG	31:W:57:THR:H	2.33	0.46
33:Y:43:ILE:HD11	33:Y:47:ILE:HD11	1.97	0.46
4:3:12:ARG:HH11	20:L:62:PRO:HA	1.78	0.46
4:3:38:LYS:HG3	4:3:41:ARG:HH21	1.80	0.46
4:3:58:ILE:CG2	20:L:51:GLU:HG3	2.45	0.46
6:7:54:ILE:CG2	8:9:311:VAL:CG2	2.67	0.46
7:8:47:A:N1	8:9:381:ASN:CB	2.69	0.46
8:9:117:VAL:HA	8:9:120:LEU:HD23	1.97	0.46
8:9:332:ASN:CB	8:9:388:ARG:NE	2.77	0.46
9:A:102:G:H2'	9:A:103:U:C6	2.49	0.46
10:B:37:C:H1'	13:E:45:ALA:HB2	1.97	0.46
10:B:562:U:C4	10:B:2036:C:O4'	2.68	0.46
10:B:850:U:H2'	10:B:851:C:H6	1.78	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:866:A:N1	10:B:913:U:H4'	2.29	0.46
10:B:1315:C:H2'	10:B:1316:U:C6	2.50	0.46
10:B:1537:G:H2'	10:B:1538:G:C4'	2.45	0.46
10:B:1714:U:H3'	10:B:1715:G:H5'	1.96	0.46
10:B:2262:U:O4	31:W:12:GLY:HA2	2.15	0.46
10:B:2567:G:H2'	10:B:2568:U:C6	2.50	0.46
10:B:2617:U:O2'	10:B:2618:G:H5'	2.15	0.46
13:E:192:ALA:HB1	13:E:199:MET:CB	2.45	0.46
14:F:36:ASN:HD22	14:F:87:LYS:H	1.63	0.46
16:H:54:LEU:O	16:H:58:LEU:HD23	2.15	0.46
18:J:130:HIS:O	18:J:132:HIS:N	2.49	0.46
20:L:90:VAL:HG22	20:L:92:LEU:HD13	1.97	0.46
23:O:25:ARG:CB	23:O:94:ARG:HH22	2.28	0.46
24:P:38:ARG:HH11	24:P:39:LEU:N	2.13	0.46
28:T:19:LYS:O	28:T:22:THR:HG22	2.14	0.46
28:T:36:LYS:O	28:T:38:ALA:N	2.49	0.46
32:X:27:ASN:O	32:X:29:ARG:N	2.47	0.46
33:Y:26:LEU:CB	33:Y:28:LEU:HD13	2.45	0.46
34:Z:31:ASP:C	34:Z:32:LEU:HD22	2.40	0.46
8:9:2:PHE:CE2	8:9:295:LEU:HB2	2.22	0.46
8:9:292:SER:HB2	8:9:298:GLY:HA3	1.96	0.46
8:9:423:MET:O	8:9:424:GLN:C	2.58	0.46
10:B:570:G:O2'	10:B:571:U:H5'	2.15	0.46
10:B:2443:C:H2'	10:B:2444:G:H8	1.80	0.46
10:B:2599:G:N7	11:C:234:GLY:HA2	2.31	0.46
10:B:2643:G:H2'	10:B:2644:G:O4'	2.15	0.46
10:B:2673:G:H2'	10:B:2674:G:H8	1.80	0.46
10:B:2896:C:H2'	10:B:2897:U:H6	1.80	0.46
16:H:2:GLN:HB2	16:H:19:VAL:CA	2.40	0.46
16:H:122:LEU:HD22	16:H:146:VAL:HG22	1.97	0.46
17:I:23:VAL:HG12	17:I:24:GLY:H	1.79	0.46
17:I:109:ALA:HA	17:I:128:ILE:CD1	2.45	0.46
18:J:120:ARG:C	18:J:122:LEU:H	2.23	0.46
19:K:87:LEU:O	19:K:88:ASN:C	2.58	0.46
21:M:15:GLY:O	21:M:16:ARG:O	2.33	0.46
27:S:42:LYS:HE2	27:S:45:VAL:HG11	1.98	0.46
28:T:68:LYS:HG3	28:T:74:ILE:O	2.15	0.46
31:W:3:LYS:HA	31:W:3:LYS:NZ	2.30	0.46
31:W:74:LYS:HB3	31:W:75:ASN:H	1.34	0.46
32:X:31:GLN:HE21	32:X:31:GLN:CA	2.28	0.46
3:2:17:GLY:C	3:2:18:PHE:CG	2.93	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:3:54:LEU:HA	4:3:57:VAL:HG12	1.96	0.46
5:4:24:ARG:HH21	5:4:37:GLN:HB2	1.81	0.46
8:9:27:VAL:HG13	8:9:74:PHE:CZ	2.50	0.46
8:9:102:VAL:CG1	8:9:214:PRO:CB	2.93	0.46
8:9:109:GLN:C	8:9:110:GLY:O	2.58	0.46
8:9:110:GLY:HA2	8:9:113:LYS:CG	2.45	0.46
10:B:780:G:H21	10:B:783:A:H62	1.63	0.46
10:B:1076:C:O2'	10:B:1077:A:H5'	2.15	0.46
10:B:1163:G:O2'	10:B:1164:C:H5'	2.15	0.46
10:B:1165:A:H2'	10:B:1166:G:H8	1.81	0.46
10:B:1210:G:H4'	10:B:1211:C:OP2	2.14	0.46
10:B:1684:G:H2'	10:B:1685:C:H6	1.80	0.46
10:B:2597:G:OP1	11:C:239:PHE:CG	2.69	0.46
10:B:2718:G:OP1	24:P:100:ARG:HG3	2.15	0.46
11:C:89:ASN:HB2	11:C:105:ALA:HB3	1.97	0.46
11:C:95:TYR:CE2	11:C:101:ARG:HG3	2.48	0.46
11:C:161:VAL:O	11:C:162:GLN:C	2.58	0.46
11:C:172:THR:O	11:C:173:LEU:HB2	2.16	0.46
12:D:4:LEU:CD1	12:D:79:LEU:HD22	2.45	0.46
13:E:116:ASP:C	13:E:117:ARG:HD2	2.40	0.46
13:E:143:LEU:HD22	13:E:143:LEU:H	1.77	0.46
14:F:39:VAL:HG12	14:F:84:ILE:HG21	1.96	0.46
15:G:96:ALA:O	15:G:102:ILE:HG13	2.15	0.46
16:H:99:ILE:O	16:H:103:VAL:HG12	2.16	0.46
17:I:63:ASP:C	17:I:65:SER:H	2.23	0.46
17:I:90:GLY:C	17:I:92:PRO:HD3	2.40	0.46
17:I:100:ILE:CG2	17:I:104:GLN:HB2	2.45	0.46
19:K:70:ARG:HA	19:K:75:SER:O	2.15	0.46
20:L:4:ASN:O	20:L:5:THR:HG22	2.15	0.46
20:L:47:ARG:HE	20:L:47:ARG:HB3	1.56	0.46
20:L:90:VAL:C	20:L:92:LEU:H	2.22	0.46
23:O:9:ARG:C	23:O:11:ALA:N	2.73	0.46
24:P:6:GLN:OE1	24:P:6:GLN:N	2.35	0.46
24:P:92:ARG:HB2	24:P:110:LYS:O	2.15	0.46
25:Q:88:GLU:HB3	26:R:53:PHE:HD1	1.81	0.46
27:S:45:VAL:O	27:S:47:VAL:HG23	2.15	0.46
30:V:57:TYR:HE2	30:V:77:VAL:HG21	1.79	0.46
34:Z:59:ARG:O	34:Z:61:ASN:N	2.44	0.46
1:0:24:VAL:O	1:0:24:VAL:HG12	2.14	0.46
1:0:27:LEU:O	1:0:38:LEU:HD22	2.16	0.46
4:3:7:ARG:HH11	4:3:7:ARG:CA	2.26	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:3:7:ARG:NH1	4:3:7:ARG:O	2.49	0.46
7:8:76:A:OP1	7:8:77:C:O5'	2.34	0.46
8:9:43:VAL:HA	8:9:258:ALA:N	2.30	0.46
8:9:227:GLN:H	8:9:258:ALA:CB	2.29	0.46
8:9:270:ILE:N	8:9:270:ILE:CD1	2.71	0.46
8:9:424:GLN:HG2	8:9:428:LYS:CD	2.30	0.46
10:B:18:U:H5"	25:Q:23:TYR:O	2.14	0.46
10:B:811:U:HO2'	10:B:1250:G:H2'	1.81	0.46
10:B:853:C:H2'	10:B:854:C:C6	2.50	0.46
10:B:1513:U:O2'	10:B:1514:G:H5'	2.15	0.46
10:B:1651:G:H4'	22:N:39:PRO:HG2	1.97	0.46
10:B:1936:A:H2	10:B:1943:U:C5	2.33	0.46
10:B:1973:G:H2'	10:B:1974:C:H6	1.79	0.46
10:B:2561:U:O2'	19:K:23:LYS:HG2	2.15	0.46
10:B:2839:G:O2'	22:N:49:GLU:HG2	2.14	0.46
11:C:10:PRO:O	11:C:202:ARG:NH1	2.47	0.46
11:C:42:ARG:CZ	11:C:44:ASN:HB2	2.46	0.46
12:D:46:ARG:CA	12:D:82:PHE:HA	2.45	0.46
12:D:81:GLU:HG3	12:D:82:PHE:N	2.30	0.46
16:H:86:ASP:C	16:H:88:GLY:N	2.71	0.46
16:H:135:HIS:HD2	16:H:138:VAL:HG23	1.80	0.46
18:J:44:TYR:CD1	18:J:45:THR:N	2.77	0.46
20:L:89:VAL:HG21	20:L:123:ARG:CZ	2.46	0.46
23:O:58:ILE:C	23:O:60:GLU:H	2.23	0.46
24:P:111:GLU:HB2	24:P:112:ARG:NE	2.28	0.46
25:Q:13:HIS:HB2	25:Q:31:TYR:CE2	2.50	0.46
26:R:3:ALA:HB1	26:R:12:HIS:CD2	2.50	0.46
26:R:11:GLN:CA	26:R:21:ARG:HH22	2.29	0.46
28:T:1:MET:O	28:T:2:ILE:C	2.57	0.46
28:T:6:ARG:O	28:T:7:LEU:C	2.56	0.46
30:V:28:ALA:HB1	30:V:89:ILE:O	2.16	0.46
31:W:28:GLU:H	31:W:61:LYS:HB2	1.81	0.46
3:2:18:PHE:HE1	10:B:126:A:O5'	1.99	0.46
4:3:28:LEU:HD13	4:3:33:THR:HG21	1.98	0.46
8:9:110:GLY:HA2	8:9:113:LYS:HE2	1.97	0.46
8:9:120:LEU:CD2	8:9:188:LEU:HD22	2.24	0.46
8:9:261:SER:O	8:9:262:ILE:C	2.58	0.46
8:9:380:ILE:O	8:9:383:MET:N	2.49	0.46
8:9:424:GLN:O	8:9:427:MET:HB3	2.15	0.46
8:9:427:MET:O	8:9:429:LYS:N	2.49	0.46
9:A:66:A:O2'	9:A:67:G:H8	1.99	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:A:67:G:O2'	9:A:68:C:H5'	2.16	0.46
10:B:144:A:C2	28:T:3:ARG:NH2	2.84	0.46
10:B:532:A:H4'	10:B:533:G:C8	2.50	0.46
10:B:825:A:H2'	10:B:826:U:O4'	2.15	0.46
10:B:856:G:H21	31:W:22:VAL:HG11	1.80	0.46
10:B:1108:U:H2'	10:B:1109:C:H6	1.81	0.46
10:B:1191:G:O2'	10:B:1192:G:H5'	2.14	0.46
10:B:1205:A:N7	13:E:164:LEU:HD11	2.31	0.46
10:B:1764:C:H2'	10:B:1765:U:C6	2.51	0.46
10:B:1842:G:H2'	10:B:1843:C:H6	1.80	0.46
10:B:1947:C:O2'	10:B:1948:G:H5'	2.16	0.46
10:B:2024:G:H5"	12:D:154:LYS:HZ2	1.81	0.46
10:B:2090:A:N3	34:Z:49:ARG:NH2	2.64	0.46
10:B:2773:C:O2'	10:B:2774:C:H5'	2.14	0.46
10:B:2799:A:H4'	10:B:2800:A:C8	2.51	0.46
17:I:17:ALA:O	17:I:18:ASN:CB	2.64	0.46
17:I:54:ILE:HD13	17:I:54:ILE:C	2.40	0.46
18:J:15:TRP:O	18:J:16:TYR:C	2.58	0.46
18:J:95:ARG:N	18:J:95:ARG:NE	2.64	0.46
20:L:79:LEU:HG	20:L:111:ILE:O	2.16	0.46
20:L:101:ILE:O	20:L:101:ILE:HG22	2.15	0.46
21:M:5:LYS:HD2	21:M:8:LYS:NZ	2.31	0.46
21:M:15:GLY:C	21:M:16:ARG:CG	2.89	0.46
22:N:8:ARG:HA	22:N:43:GLU:OE2	2.16	0.46
24:P:23:ASP:H	24:P:93:LYS:HE2	1.79	0.46
25:Q:94:LEU:HA	25:Q:97:ILE:HG12	1.98	0.46
26:R:2:TYR:HD2	26:R:46:GLU:O	1.98	0.46
26:R:6:GLN:NE2	26:R:6:GLN:H	2.14	0.46
29:U:9:GLU:OE1	29:U:71:ILE:HG13	2.16	0.46
29:U:24:VAL:HB	29:U:34:ILE:O	2.16	0.46
31:W:42:THR:HB	31:W:75:ASN:CG	2.41	0.46
31:W:44:PHE:HB3	31:W:77:LYS:O	2.16	0.46
32:X:1:MET:HG3	32:X:6:LEU:HA	1.98	0.46
1:0:15:ARG:NH2	10:B:1266:G:OP1	2.45	0.46
3:2:12:ARG:HH21	3:2:16:HIS:HB2	1.79	0.46
4:3:7:ARG:HH12	4:3:11:LYS:HG2	1.81	0.46
8:9:45:LEU:N	8:9:46:PRO:HD2	2.28	0.46
8:9:145:ILE:CA	8:9:148:LEU:HG	2.46	0.46
8:9:291:ALA:CB	8:9:296:GLY:N	2.30	0.46
10:B:65:U:OP1	28:T:76:ARG:HB3	2.16	0.46
10:B:235:U:H2'	10:B:236:C:H6	1.78	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:409:G:O2'	10:B:410:G:H5'	2.14	0.46
10:B:621:A:H2'	10:B:622:G:O4'	2.16	0.46
10:B:779:U:P	11:C:49:THR:HG1	2.38	0.46
10:B:957:C:O2'	10:B:958:U:H5"	2.16	0.46
10:B:1128:G:N7	10:B:2490:G:H5'	2.31	0.46
10:B:1526:C:H2'	10:B:1527:G:O4'	2.15	0.46
10:B:1818:U:OP1	11:C:155:ARG:HG2	2.16	0.46
10:B:2249:U:H4'	10:B:2275:C:C5	2.50	0.46
11:C:83:ASP:OD2	11:C:86:ARG:NE	2.49	0.46
11:C:104:LEU:HD23	11:C:104:LEU:HA	1.79	0.46
13:E:188:MET:HE1	13:E:190:ALA:HB2	1.98	0.46
13:E:193:VAL:HA	13:E:198:GLU:C	2.40	0.46
16:H:8:LYS:HE2	16:H:9:VAL:N	2.29	0.46
21:M:71:LYS:HZ1	21:M:92:TRP:H	1.62	0.46
22:N:96:ARG:CZ	22:N:98:LEU:HD21	2.46	0.46
22:N:117:ASP:CG	22:N:118:ARG:N	2.72	0.46
24:P:61:ARG:HH22	24:P:63:ILE:HD11	1.80	0.46
25:Q:52:ARG:O	25:Q:53:LYS:C	2.59	0.46
26:R:5:PHE:HD2	26:R:12:HIS:CE1	2.33	0.46
27:S:21:ALA:O	27:S:74:ILE:HD11	2.16	0.46
34:Z:30:HIS:HB2	34:Z:48:GLN:HE21	1.81	0.46
5:4:1:MET:HG2	10:B:2526:G:H21	1.80	0.46
8:9:14:ARG:HE	8:9:16:ILE:HD12	1.81	0.46
8:9:103:VAL:HG23	8:9:187:LEU:O	2.15	0.46
8:9:125:ARG:C	8:9:127:LYS:N	2.73	0.46
8:9:170:ASP:O	8:9:171:ILE:C	2.58	0.46
8:9:291:ALA:HB3	8:9:295:LEU:CA	2.36	0.46
10:B:149:A:H2'	10:B:150:U:C6	2.51	0.46
10:B:439:A:O2'	10:B:440:C:H5'	2.16	0.46
10:B:1100:C:H2'	10:B:1101:U:C6	2.49	0.46
10:B:1820:U:H4'	10:B:1821:A:OP2	2.16	0.46
10:B:2284:A:O2'	10:B:2288:A:N6	2.48	0.46
10:B:2329:U:H2'	10:B:2330:G:C8	2.51	0.46
12:D:159:LYS:HB3	12:D:160:LYS:H	1.62	0.46
12:D:193:VAL:HG23	12:D:193:VAL:O	2.15	0.46
13:E:147:LEU:HB2	13:E:183:PHE:CD1	2.51	0.46
14:F:39:VAL:HG12	14:F:40:GLY:H	1.81	0.46
15:G:39:ALA:O	15:G:40:VAL:C	2.59	0.46
16:H:84:ALA:HA	16:H:89:LYS:O	2.15	0.46
18:J:122:LEU:O	18:J:123:LYS:HB2	2.16	0.46
19:K:84:CYS:HB3	19:K:85:VAL:H	1.40	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:K:99:ILE:HD13	19:K:115:ILE:HG13	1.97	0.46
20:L:118:THR:O	20:L:119:PRO:C	2.57	0.46
21:M:81:ARG:CG	21:M:82:MET:HG2	2.45	0.46
22:N:56:LYS:HD3	22:N:57:THR:OG1	2.15	0.46
25:Q:60:TRP:CZ3	25:Q:93:ILE:HG22	2.51	0.46
31:W:35:ILE:HB	31:W:67:LYS:NZ	2.31	0.46
31:W:67:LYS:HG2	31:W:71:LYS:N	2.30	0.46
2:1:50:GLU:HG2	2:1:51:ALA:N	2.31	0.46
4:3:12:ARG:O	4:3:13:PHE:CB	2.63	0.46
8:9:173:ASN:O	8:9:174:ALA:O	2.34	0.46
8:9:315:GLN:O	8:9:319:LEU:CB	2.49	0.46
8:9:322:LYS:O	8:9:324:LYS:HG3	2.15	0.46
9:A:32:U:H4'	9:A:52:A:N6	2.31	0.46
9:A:64:G:H2'	9:A:65:U:C6	2.51	0.46
10:B:90:U:OP2	10:B:91:A:H3'	2.16	0.46
10:B:312:G:H2'	10:B:313:G:H8	1.81	0.46
10:B:573:U:N3	10:B:2031:A:OP1	2.45	0.46
10:B:580:U:O2'	10:B:581:C:H5'	2.16	0.46
10:B:587:C:H5"	20:L:29:LYS:NZ	2.30	0.46
10:B:844:A:C2	10:B:845:A:N1	2.84	0.46
10:B:948:C:H2'	10:B:949:G:H8	1.81	0.46
10:B:1322:A:C2'	10:B:1323:C:H5'	2.46	0.46
10:B:1413:A:H2'	10:B:1414:C:C6	2.51	0.46
10:B:1494:A:H2'	10:B:1495:A:C8	2.50	0.46
10:B:1533:C:O2'	10:B:1534:U:H5'	2.15	0.46
10:B:1846:G:H2'	10:B:1847:A:O4'	2.15	0.46
10:B:2092:U:H5	10:B:2226:C:OP2	1.99	0.46
10:B:2208:C:H2'	10:B:2209:G:C8	2.51	0.46
10:B:2233:U:H2'	10:B:2234:G:H8	1.81	0.46
10:B:2259:U:O4'	10:B:2427:C:H2'	2.15	0.46
10:B:2477:U:H4'	10:B:2479:U:O4	2.16	0.46
10:B:2623:G:O2'	10:B:2624:G:H5'	2.16	0.46
11:C:107:LYS:HG2	11:C:194:VAL:CG1	2.46	0.46
14:F:135:ILE:HD11	14:F:139:GLU:H	1.81	0.46
15:G:11:PRO:CD	15:G:14:VAL:HG21	2.44	0.46
15:G:55:ASP:CG	15:G:56:GLY:N	2.74	0.46
16:H:4:ILE:O	16:H:5:LEU:HD22	2.16	0.46
16:H:5:LEU:HD11	16:H:9:VAL:HG22	1.98	0.46
18:J:62:VAL:HG11	18:J:101:ILE:HD11	1.98	0.46
20:L:77:ILE:HD12	20:L:77:ILE:N	2.31	0.46
22:N:29:VAL:HG11	22:N:79:LEU:HD21	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:P:60:VAL:HB	24:P:61:ARG:H	1.30	0.46
25:Q:29:ARG:HH11	25:Q:29:ARG:CA	2.25	0.46
26:R:4:VAL:N	26:R:12:HIS:HB3	2.30	0.46
29:U:51:LEU:HG	29:U:53:GLN:HB3	1.98	0.46
31:W:81:ILE:HG23	31:W:83:ALA:N	2.28	0.46
32:X:15:ASN:CG	32:X:15:ASN:O	2.59	0.46
32:X:55:THR:O	32:X:57:LEU:N	2.44	0.46
1:0:16:ARG:C	1:0:18:HIS:H	2.24	0.46
4:3:35:LYS:HD3	10:B:2383:G:N7	2.31	0.46
6:7:65:HIS:CE1	8:9:416:LEU:O	2.54	0.46
6:7:67:LYS:HG2	8:9:412:ASP:CB	2.41	0.46
8:9:222:ASP:CA	8:9:248:THR:OG1	2.64	0.46
8:9:299:ASP:HB3	8:9:350:LEU:CD1	2.32	0.46
8:9:349:SER:C	8:9:350:LEU:C	2.83	0.46
10:B:491:G:C2	10:B:492:A:H1'	2.51	0.46
10:B:962:G:H21	21:M:81:ARG:HD3	1.81	0.46
10:B:1042:G:H2'	10:B:1043:C:H6	1.80	0.46
10:B:1351:C:H4'	10:B:1572:A:O4'	2.16	0.46
10:B:1666:G:O2'	10:B:1667:G:H5'	2.15	0.46
10:B:1727:C:H2'	10:B:1728:C:H6	1.81	0.46
10:B:2022:U:O2'	10:B:2617:U:H5'	2.15	0.46
10:B:2090:A:C2'	34:Z:49:ARG:CZ	2.94	0.46
10:B:2717:C:O2'	24:P:95:LYS:HE3	2.16	0.46
12:D:197:THR:HG23	12:D:198:GLY:N	2.21	0.46
13:E:21:ARG:NH1	13:E:25:GLU:HB2	2.29	0.46
13:E:158:PHE:HE2	13:E:161:ALA:HB3	1.80	0.46
13:E:172:ALA:O	13:E:173:THR:HB	2.14	0.46
13:E:193:VAL:C	13:E:195:GLN:N	2.73	0.46
15:G:75:VAL:O	15:G:79:THR:HG22	2.16	0.46
16:H:3:VAL:HG22	16:H:21:VAL:CG1	2.26	0.46
19:K:4:GLU:OE2	19:K:23:LYS:HD2	2.16	0.46
22:N:38:LEU:O	22:N:41:ALA:HB3	2.16	0.46
24:P:32:VAL:N	24:P:81:ASP:HA	2.31	0.46
25:Q:69:ARG:HA	25:Q:73:ILE:HG22	1.98	0.46
26:R:81:LYS:O	26:R:82:HIS:C	2.59	0.46
27:S:11:ARG:HG3	27:S:11:ARG:HH11	1.81	0.46
29:U:91:LYS:HD3	29:U:93:ARG:HE	1.80	0.46
5:4:10:LEU:HB2	5:4:25:VAL:HG21	1.98	0.45
8:9:5:LEU:O	8:9:7:ASP:N	2.49	0.45
8:9:28:LYS:O	8:9:29:ASP:O	2.33	0.45
8:9:121:GLY:HA2	8:9:188:LEU:HD11	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:202:MET:O	8:9:203:ASP:C	2.58	0.45
8:9:209:HIS:CD2	8:9:214:PRO:CG	2.98	0.45
8:9:236:PHE:O	8:9:238:GLU:N	2.48	0.45
8:9:247:LEU:HD11	8:9:263:ARG:HD2	1.98	0.45
8:9:274:GLY:HA2	8:9:282:LEU:HA	1.97	0.45
8:9:293:ARG:HH21	8:9:354:LEU:HD21	1.40	0.45
8:9:332:ASN:CB	8:9:388:ARG:CD	2.94	0.45
10:B:24:G:H1'	27:S:77:ASP:HB3	1.98	0.45
10:B:84:A:OP2	29:U:91:LYS:HD2	2.16	0.45
10:B:279:A:C2	10:B:280:U:H1'	2.51	0.45
10:B:302:C:H2'	10:B:303:G:C8	2.50	0.45
10:B:1241:A:N3	10:B:1241:A:O4'	2.48	0.45
10:B:1341:G:H1'	28:T:59:ASN:HB3	1.97	0.45
10:B:1616:A:H4'	10:B:1617:C:OP2	2.17	0.45
10:B:1902:C:H2'	10:B:1903:G:H5'	1.99	0.45
10:B:2348:U:O2'	10:B:2349:G:H5'	2.16	0.45
10:B:2467:C:O4'	21:M:118:LYS:HD2	2.17	0.45
10:B:2683:C:H2'	10:B:2684:U:H6	1.80	0.45
16:H:68:ARG:HB3	16:H:68:ARG:HH11	1.81	0.45
17:I:78:LEU:HD23	17:I:81:LYS:HE2	1.98	0.45
18:J:28:LEU:HD13	18:J:28:LEU:C	2.41	0.45
18:J:76:HIS:O	18:J:77:HIS:O	2.33	0.45
20:L:21:ARG:HG2	20:L:21:ARG:H	1.62	0.45
20:L:59:ARG:O	20:L:60:ARG:HD2	2.16	0.45
20:L:122:VAL:CG1	20:L:123:ARG:N	2.79	0.45
21:M:19:GLY:C	21:M:20:LEU:HD12	2.41	0.45
21:M:92:TRP:HD1	21:M:93:VAL:N	2.14	0.45
22:N:35:LYS:HD2	22:N:110:MET:HB3	1.97	0.45
22:N:41:ALA:HB1	22:N:113:ILE:CD1	2.44	0.45
24:P:4:ILE:HA	24:P:7:LEU:HD13	1.98	0.45
27:S:9:HIS:O	27:S:10:ALA:CB	2.63	0.45
28:T:84:TYR:O	28:T:85:VAL:C	2.59	0.45
29:U:9:GLU:HB2	29:U:71:ILE:CB	2.33	0.45
29:U:48:VAL:O	29:U:49:PRO:C	2.50	0.45
31:W:48:ALA:HA	31:W:54:ARG:N	2.30	0.45
33:Y:2:LYS:HB2	33:Y:36:GLU:O	2.16	0.45
3:2:12:ARG:NH2	3:2:16:HIS:HB2	2.31	0.45
4:3:4:LYS:HD3	4:3:59:ALA:HA	1.97	0.45
8:9:115:THR:HG1	8:9:116:SER:N	2.11	0.45
8:9:320:ALA:O	8:9:322:LYS:CA	2.60	0.45
8:9:399:LYS:HA	8:9:402:ILE:HD12	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:346:A:H2'	10:B:347:A:O4'	2.16	0.45
10:B:622:G:H2'	10:B:623:C:H6	1.81	0.45
10:B:630:G:N1	20:L:69:ARG:NH1	2.62	0.45
10:B:764:A:H5"	11:C:208:GLY:HA3	1.98	0.45
10:B:771:G:O2'	10:B:772:C:H5'	2.16	0.45
10:B:1131:G:N7	10:B:2025:C:H4'	2.31	0.45
10:B:1203:U:O5'	10:B:1203:U:H6	2.00	0.45
10:B:1525:A:H2'	10:B:1526:C:C6	2.51	0.45
10:B:1666:G:C2'	10:B:1667:G:H5'	2.46	0.45
10:B:2051:A:H4'	12:D:145:SER:HB2	1.98	0.45
10:B:2207:C:O2'	10:B:2208:C:H5'	2.15	0.45
10:B:2839:G:H4'	22:N:49:GLU:CG	2.46	0.45
11:C:4:LYS:HG3	11:C:5:CYS:SG	2.56	0.45
11:C:131:MET:HE1	11:C:173:LEU:HD21	1.98	0.45
12:D:116:LYS:O	22:N:1:MET:C	2.59	0.45
12:D:124:ARG:HB3	12:D:124:ARG:HH11	1.80	0.45
14:F:92:GLY:O	14:F:95:MET:HG2	2.16	0.45
15:G:7:PRO:C	15:G:8:VAL:HG22	2.40	0.45
15:G:16:VAL:HG12	15:G:17:LYS:N	2.31	0.45
15:G:19:ASN:HB3	15:G:22:VAL:HB	1.97	0.45
15:G:117:PRO:HB2	15:G:139:VAL:HG11	1.98	0.45
15:G:137:LYS:O	15:G:140:ILE:HB	2.16	0.45
16:H:80:ILE:N	16:H:80:ILE:HD12	2.30	0.45
17:I:129:GLU:O	17:I:133:ARG:HG3	2.16	0.45
18:J:62:VAL:O	18:J:69:ARG:NH2	2.49	0.45
19:K:13:ASN:ND2	19:K:98:ARG:HG2	2.30	0.45
20:L:18:ARG:HH22	20:L:21:ARG:HD3	1.81	0.45
20:L:110:VAL:HG23	20:L:131:ALA:HB1	1.97	0.45
20:L:140:GLY:O	20:L:141:LYS:HB2	2.16	0.45
21:M:57:VAL:O	21:M:58:LYS:HG2	2.16	0.45
21:M:86:LYS:HE3	21:M:87:GLY:N	2.31	0.45
22:N:2:ARG:C	22:N:3:HIS:HD2	2.23	0.45
22:N:42:LYS:NZ	22:N:45:ARG:HD2	2.30	0.45
26:R:14:VAL:HG21	26:R:19:THR:HG23	1.99	0.45
30:V:32:GLY:O	30:V:93:ARG:HB3	2.16	0.45
1:0:14:MET:SD	10:B:2045:C:H5"	2.57	0.45
8:9:176:LEU:HG	8:9:177:LYS:H	1.81	0.45
8:9:263:ARG:HB3	8:9:268:LYS:HG2	1.97	0.45
8:9:283:GLU:CD	8:9:297:MET:CE	2.89	0.45
9:A:113:C:O2'	23:O:47:VAL:HA	2.16	0.45
10:B:82:U:H5"	10:B:296:U:H5"	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:910:A:C8	21:M:16:ARG:HB3	2.52	0.45
10:B:999:U:O2'	10:B:1000:A:H5'	2.15	0.45
10:B:1029:A:H3'	10:B:1030:C:H6	1.82	0.45
10:B:1062:G:H2'	10:B:1063:G:H8	1.81	0.45
10:B:1917:U:C2'	10:B:1918:A:H5'	2.46	0.45
10:B:2018:G:H1'	25:Q:32:ARG:NH2	2.31	0.45
10:B:2028:U:H2'	10:B:2029:G:C8	2.52	0.45
10:B:2108:A:N3	10:B:2108:A:H2'	2.31	0.45
10:B:2216:G:H2'	10:B:2217:G:H8	1.80	0.45
10:B:2260:C:O2'	10:B:2261:C:H5'	2.17	0.45
10:B:2720:U:H2'	10:B:2721:A:C8	2.52	0.45
10:B:2751:G:N2	15:G:2:ARG:HD2	2.31	0.45
11:C:172:THR:O	11:C:182:LYS:HA	2.15	0.45
11:C:235:GLU:CG	11:C:236:GLY:H	2.29	0.45
12:D:8:LYS:HG3	24:P:5:LYS:HZ1	1.81	0.45
14:F:148:VAL:HG12	14:F:148:VAL:O	2.15	0.45
14:F:177:ARG:NH2	14:F:178:LYS:HA	2.32	0.45
15:G:4:ALA:O	15:G:5:LYS:HB2	2.15	0.45
15:G:120:ILE:HG23	15:G:133:LYS:C	2.41	0.45
16:H:121:VAL:C	16:H:123:ARG:H	2.25	0.45
17:I:109:ALA:CA	17:I:128:ILE:HD12	2.46	0.45
18:J:35:ARG:CZ	18:J:40:HIS:H	2.28	0.45
24:P:87:ARG:HG2	24:P:87:ARG:HH11	1.80	0.45
26:R:11:GLN:HB3	26:R:21:ARG:NH1	2.32	0.45
31:W:28:GLU:OE1	31:W:28:GLU:HA	2.16	0.45
34:Z:32:LEU:HD22	34:Z:32:LEU:N	2.31	0.45
4:3:13:PHE:HE1	20:L:58:TYR:HB3	1.80	0.45
8:9:132:VAL:C	8:9:186:VAL:O	2.59	0.45
8:9:302:SER:O	8:9:303:LEU:C	2.60	0.45
10:B:131:A:H2'	10:B:132:G:C8	2.50	0.45
10:B:515:A:H2	10:B:1260:A:N3	2.15	0.45
10:B:728:G:O3'	11:C:16:VAL:HG11	2.17	0.45
10:B:743:A:C2'	10:B:744:U:H5'	2.46	0.45
10:B:960:A:C4'	10:B:2457:U:H4'	2.47	0.45
10:B:1005:C:H2'	10:B:1006:C:H6	1.81	0.45
10:B:1272:A:N7	10:B:1618:A:H1'	2.31	0.45
10:B:1585:C:H2'	10:B:1586:A:O4'	2.16	0.45
10:B:2291:U:H2'	10:B:2292:U:H6	1.77	0.45
10:B:2617:U:H2'	10:B:2618:G:C5'	2.47	0.45
10:B:2722:G:O2'	22:N:4:ARG:CZ	2.64	0.45
11:C:104:LEU:O	11:C:106:PRO:HD3	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C:136:VAL:C	11:C:138:SER:N	2.72	0.45
13:E:17:THR:HG23	13:E:18:THR:N	2.31	0.45
13:E:143:LEU:HD13	13:E:185:LYS:HZ2	1.82	0.45
14:F:100:GLU:O	14:F:102:LEU:N	2.49	0.45
18:J:53:TYR:HA	18:J:121:LYS:HB3	1.99	0.45
18:J:58:ASN:O	18:J:60:ASP:N	2.42	0.45
18:J:81:ILE:C	18:J:83:GLY:H	2.25	0.45
18:J:85:LYS:HE2	18:J:85:LYS:C	2.40	0.45
20:L:45:GLY:C	20:L:47:ARG:N	2.73	0.45
21:M:57:VAL:HG12	21:M:58:LYS:N	2.32	0.45
23:O:26:LEU:HD13	23:O:92:PHE:O	2.16	0.45
23:O:83:LEU:CA	23:O:87:ILE:HD12	2.47	0.45
23:O:92:PHE:CG	23:O:93:ASP:N	2.84	0.45
25:Q:44:TYR:O	25:Q:48:ASP:N	2.44	0.45
26:R:37:GLU:HG2	26:R:63:VAL:N	2.32	0.45
26:R:92:TRP:CD1	26:R:92:TRP:N	2.84	0.45
28:T:21:SER:H	28:T:24:MET:HE1	1.80	0.45
30:V:48:MET:HA	30:V:51:GLN:HG3	1.99	0.45
31:W:72:GLY:C	31:W:74:LYS:N	2.70	0.45
34:Z:36:VAL:HA	34:Z:42:PRO:HA	1.98	0.45
1:0:43:THR:HG21	22:N:100:CYS:SG	2.56	0.45
4:3:12:ARG:HD3	20:L:62:PRO:CB	2.42	0.45
4:3:12:ARG:CD	20:L:63:LYS:H	2.29	0.45
8:9:244:GLY:HA2	8:9:269:PRO:CG	2.40	0.45
8:9:352:GLY:N	8:9:353:LYS:HB3	2.32	0.45
8:9:431:LYS:O	8:9:431:LYS:HG2	2.17	0.45
9:A:6:G:O2'	9:A:7:G:H5'	2.17	0.45
10:B:452:G:OP1	13:E:53:THR:O	2.33	0.45
10:B:757:G:H2'	10:B:758:C:H5'	1.97	0.45
10:B:810:U:C2	20:L:37:GLY:HA2	2.51	0.45
10:B:850:U:O2'	33:Y:22:THR:HG22	2.15	0.45
10:B:1027:A:N3	10:B:2488:G:H5"	2.32	0.45
10:B:1100:C:H41	17:I:1:ALA:H1	1.65	0.45
10:B:1735:A:H2'	10:B:1736:U:C6	2.52	0.45
10:B:1774:C:O2	10:B:1774:C:H2'	2.16	0.45
10:B:1824:G:H2'	10:B:1825:U:H6	1.82	0.45
10:B:1828:G:O6	11:C:219:VAL:HG11	2.17	0.45
10:B:2157:G:N3	10:B:2157:G:C2'	2.78	0.45
10:B:2186:G:H2'	10:B:2187:U:O4'	2.16	0.45
10:B:2261:C:N4	31:W:10:ARG:NH2	2.64	0.45
10:B:2675:A:N1	10:B:2732:G:O6	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2700:A:H2'	10:B:2701:U:H6	1.80	0.45
10:B:2722:G:C2'	22:N:4:ARG:HD2	2.47	0.45
10:B:2800:A:C4	10:B:2801:G:H1'	2.51	0.45
10:B:2877:G:H2'	10:B:2878:U:C6	2.52	0.45
11:C:32:LEU:HD12	11:C:33:LEU:O	2.15	0.45
13:E:115:GLN:HG2	13:E:116:ASP:H	1.81	0.45
17:I:116:MET:HE1	17:I:128:ILE:CG1	2.46	0.45
18:J:34:ARG:CD	18:J:39:LYS:HD3	2.26	0.45
19:K:69:VAL:HG11	19:K:106:GLU:CD	2.41	0.45
21:M:2:LEU:O	21:M:3:GLN:HG2	2.16	0.45
21:M:80:VAL:HG12	21:M:81:ARG:H	1.82	0.45
26:R:39:LEU:O	26:R:41:ILE:N	2.50	0.45
29:U:3:LYS:H	29:U:27:VAL:HG21	1.81	0.45
29:U:43:LYS:HG2	29:U:57:ILE:CG2	2.47	0.45
29:U:43:LYS:HZ2	29:U:43:LYS:CB	2.28	0.45
30:V:2:PHE:HB3	30:V:50:MET:SD	2.57	0.45
8:9:291:ALA:HB2	8:9:295:LEU:O	2.14	0.45
8:9:322:LYS:O	8:9:323:LEU:C	2.60	0.45
8:9:361:PRO:HG2	8:9:365:LYS:HD2	1.98	0.45
10:B:814:C:OP1	26:R:87:GLN:C	2.60	0.45
10:B:1005:C:H2'	10:B:1006:C:C6	2.52	0.45
10:B:1315:C:H2'	10:B:1316:U:H6	1.81	0.45
10:B:2425:A:H5"	10:B:2426:A:H3'	1.98	0.45
10:B:2468:A:H2'	10:B:2476:A:C6	2.52	0.45
11:C:87:SER:N	11:C:155:ARG:HH12	2.14	0.45
11:C:260:LYS:C	11:C:261:ARG:HG3	2.40	0.45
14:F:37:MET:N	14:F:86:CYS:SG	2.90	0.45
15:G:10:VAL:HA	15:G:14:VAL:HG11	1.99	0.45
15:G:39:ALA:CB	15:G:54:ARG:HB2	2.44	0.45
15:G:93:TYR:N	15:G:93:TYR:CD1	2.83	0.45
15:G:148:ARG:HA	15:G:161:VAL:HG13	1.98	0.45
16:H:135:HIS:HB3	16:H:138:VAL:CG2	2.46	0.45
17:I:23:VAL:CG1	17:I:27:LEU:HD21	2.46	0.45
18:J:76:HIS:HB2	18:J:86:GLN:CD	2.42	0.45
21:M:53:MET:HA	21:M:112:LEU:CD2	2.46	0.45
23:O:72:ALA:O	23:O:76:LYS:HG3	2.17	0.45
24:P:58:PHE:CD2	24:P:58:PHE:N	2.85	0.45
26:R:78:ARG:O	26:R:79:ARG:HB2	2.17	0.45
27:S:84:ARG:HB3	27:S:96:ILE:CG2	2.46	0.45
28:T:87:LEU:HD13	28:T:93:LEU:HD13	1.99	0.45
30:V:29:ILE:HG13	30:V:30:ILE:N	2.32	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:12:ARG:HG3	1:0:13:GLY:N	2.24	0.45
1:0:36:LYS:HG2	1:0:37:HIS:O	2.16	0.45
3:2:18:PHE:CD2	3:2:44:VAL:HB	2.52	0.45
3:2:37:LYS:HD3	3:2:37:LYS:C	2.42	0.45
8:9:5:LEU:HA	8:9:8:ARG:HG2	1.99	0.45
8:9:59:ALA:C	8:9:61:GLY:H	2.24	0.45
8:9:143:ALA:CB	8:9:146:LYS:HD3	2.47	0.45
8:9:364:VAL:CA	8:9:368:MET:H	2.29	0.45
10:B:314:C:H2'	10:B:315:G:H8	1.80	0.45
10:B:409:G:H2'	10:B:410:G:C8	2.51	0.45
10:B:919:U:H2'	10:B:920:A:H8	1.77	0.45
10:B:1022:G:N2	10:B:1142:A:C2	2.84	0.45
10:B:1097:U:C5	10:B:1098:A:C8	3.05	0.45
10:B:1410:G:H2'	10:B:1411:U:H6	1.82	0.45
10:B:1541:C:H2'	10:B:1542:U:O4'	2.16	0.45
10:B:1903:G:H5"	11:C:239:PHE:CD2	2.51	0.45
10:B:1922:G:H2'	10:B:1923:U:O4'	2.17	0.45
10:B:2228:G:OP1	11:C:257:ARG:HB2	2.16	0.45
10:B:2520:C:C6	10:B:2567:G:H1'	2.52	0.45
10:B:2733:A:C8	10:B:2733:A:H3'	2.52	0.45
10:B:2828:G:O2'	10:B:2829:A:H5'	2.16	0.45
10:B:2862:G:H2'	10:B:2863:C:H6	1.80	0.45
10:B:2874:C:P	22:N:5:LYS:HD3	2.57	0.45
12:D:33:ARG:CZ	12:D:86:GLU:HG2	2.46	0.45
12:D:42:ASN:O	12:D:43:ASP:CB	2.58	0.45
12:D:129:THR:O	12:D:140:HIS:HA	2.16	0.45
12:D:141:ARG:HD3	12:D:141:ARG:HA	1.78	0.45
13:E:153:LEU:HG	13:E:172:ALA:O	2.16	0.45
15:G:90:GLY:CA	15:G:159:LYS:HG2	2.46	0.45
15:G:171:LYS:HD3	15:G:174:LYS:CD	2.38	0.45
17:I:54:ILE:HG23	17:I:54:ILE:O	2.16	0.45
18:J:25:LEU:HD12	18:J:62:VAL:HA	1.98	0.45
18:J:45:THR:HG22	18:J:47:HIS:H	1.80	0.45
19:K:7:MET:HA	19:K:7:MET:CE	2.46	0.45
19:K:17:ARG:HB2	19:K:45:GLU:HB2	1.97	0.45
19:K:47:ILE:O	19:K:48:PRO:C	2.59	0.45
20:L:19:LEU:N	20:L:19:LEU:CD1	2.72	0.45
21:M:43:ALA:HB3	21:M:91:TYR:CG	2.51	0.45
23:O:30:ARG:CZ	23:O:97:PHE:HD2	2.30	0.45
29:U:35:VAL:HG13	29:U:37:GLY:H	1.81	0.45
1:0:47:TYR:HB3	1:0:52:LYS:N	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:2:12:ARG:HH21	3:2:16:HIS:CB	2.30	0.45
4:3:16:THR:HG23	4:3:20:GLY:C	2.42	0.45
6:7:61:VAL:CB	8:9:423:MET:HE2	2.46	0.45
6:7:67:LYS:C	8:9:376:MET:HG2	2.42	0.45
7:8:30:G:H1'	7:8:78:G:N2	2.32	0.45
8:9:21:ARG:CZ	32:X:16:THR:CG2	2.92	0.45
8:9:75:VAL:O	8:9:79:ARG:N	2.50	0.45
8:9:230:ALA:O	8:9:231:ASN:C	2.59	0.45
8:9:415:ARG:NE	10:B:484:C:OP1	2.50	0.45
9:A:2:G:H2'	9:A:3:C:C6	2.52	0.45
10:B:105:C:H2'	10:B:106:C:C6	2.52	0.45
10:B:552:U:O2'	10:B:553:G:H5'	2.16	0.45
10:B:663:G:OP1	20:L:27:LEU:HD13	2.16	0.45
10:B:669:G:O2'	10:B:670:A:H5'	2.17	0.45
10:B:931:U:H3	10:B:1166:G:N2	2.14	0.45
10:B:1252:G:N2	25:Q:32:ARG:NE	2.62	0.45
10:B:1541:C:O2'	10:B:1542:U:H5'	2.17	0.45
10:B:1789:A:H5'	11:C:220:ARG:HH21	1.82	0.45
10:B:2270:A:H4'	31:W:18:LYS:CB	2.47	0.45
10:B:2387:U:O2'	31:W:37:VAL:HG11	2.17	0.45
10:B:2559:C:O2'	10:B:2560:A:H5'	2.17	0.45
10:B:2819:G:H2'	10:B:2821:A:N7	2.31	0.45
11:C:38:LYS:O	11:C:60:ALA:HA	2.16	0.45
11:C:104:LEU:HD13	11:C:156:SER:CB	2.47	0.45
11:C:201:LEU:HD23	11:C:201:LEU:C	2.42	0.45
12:D:33:ARG:HB2	12:D:33:ARG:NH1	2.29	0.45
12:D:34:VAL:CG1	12:D:91:THR:HG23	2.44	0.45
12:D:59:ARG:HD2	12:D:60:VAL:H	1.82	0.45
12:D:95:SER:C	12:D:96:ILE:HG13	2.41	0.45
12:D:118:PHE:CA	12:D:164:GLN:HG2	2.46	0.45
12:D:196:ALA:O	12:D:197:THR:C	2.60	0.45
13:E:46:GLN:NE2	13:E:48:THR:HB	2.32	0.45
13:E:46:GLN:HB2	13:E:87:ALA:O	2.17	0.45
13:E:116:ASP:OD1	13:E:118:LEU:HD21	2.16	0.45
13:E:147:LEU:HB3	13:E:167:VAL:CG1	2.44	0.45
14:F:150:GLY:O	14:F:151:LEU:HB2	2.17	0.45
15:G:23:ILE:HG13	15:G:23:ILE:O	2.17	0.45
17:I:27:LEU:HD23	17:I:27:LEU:N	2.17	0.45
20:L:37:GLY:C	20:L:38:GLN:HG3	2.42	0.45
21:M:9:PHE:N	21:M:9:PHE:HD1	2.15	0.45
21:M:71:LYS:HZ2	21:M:91:TYR:HA	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Q:10:ARG:O	25:Q:14:LYS:HB2	2.17	0.45
26:R:11:GLN:HB3	26:R:21:ARG:NH2	2.32	0.45
27:S:2:GLU:CB	27:S:108:SER:HA	2.44	0.45
27:S:87:PRO:O	27:S:88:ARG:CB	2.65	0.45
28:T:11:LEU:HA	28:T:34:VAL:HA	1.98	0.45
30:V:80:HIS:HD2	30:V:83:LYS:H	1.65	0.45
32:X:16:THR:C	32:X:18:LEU:N	2.74	0.45
33:Y:26:LEU:C	33:Y:28:LEU:H	2.24	0.45
1:0:23:ALA:C	1:0:25:THR:H	2.24	0.45
1:0:40:HIS:ND1	1:0:41:HIS:O	2.44	0.45
4:3:22:LYS:HA	4:3:46:LYS:O	2.17	0.45
5:4:18:LYS:O	5:4:19:ARG:CB	2.65	0.45
8:9:16:ILE:HG23	32:X:24:GLU:CB	2.46	0.45
8:9:72:GLN:O	8:9:75:VAL:N	2.47	0.45
8:9:121:GLY:CA	8:9:188:LEU:CD1	2.95	0.45
8:9:135:VAL:CG2	8:9:175:ALA:CB	2.79	0.45
8:9:205:ILE:O	8:9:208:VAL:HB	2.17	0.45
8:9:262:ILE:O	8:9:263:ARG:O	2.34	0.45
8:9:335:LEU:HD11	8:9:338:LEU:HD22	1.99	0.45
10:B:40:U:H2'	10:B:41:C:C6	2.51	0.45
10:B:207:A:H2'	10:B:208:C:O4'	2.17	0.45
10:B:400:G:H8	10:B:400:G:O5'	2.00	0.45
10:B:534:U:H5'	25:Q:41:ALA:CB	2.47	0.45
10:B:656:G:H2'	10:B:657:U:C6	2.51	0.45
10:B:776:G:H4'	10:B:777:G:C5'	2.47	0.45
10:B:848:C:H2'	10:B:849:A:C8	2.51	0.45
10:B:922:C:O2	31:W:22:VAL:HG21	2.17	0.45
10:B:973:A:H1'	10:B:1188:U:C5	2.52	0.45
10:B:1347:A:H2'	10:B:1348:C:O4'	2.17	0.45
10:B:1683:U:O2'	10:B:1684:G:H5'	2.16	0.45
10:B:1685:C:H2'	10:B:1686:C:H6	1.82	0.45
10:B:1820:U:O2'	11:C:157:ALA:HB3	2.16	0.45
10:B:1851:U:H2'	10:B:1852:U:C6	2.52	0.45
10:B:2246:G:H2'	10:B:2247:A:H8	1.81	0.45
10:B:2247:A:H2'	10:B:2248:C:C6	2.50	0.45
10:B:2266:A:O4'	10:B:2272:U:O4	2.35	0.45
10:B:2398:U:H2'	10:B:2399:G:H8	1.80	0.45
10:B:2568:U:H2'	10:B:2569:G:O4'	2.16	0.45
10:B:2597:G:OP1	11:C:239:PHE:CD2	2.70	0.45
10:B:2677:G:H2'	10:B:2678:C:C6	2.52	0.45
10:B:2776:A:H4'	10:B:2777:G:H5"	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:D:100:LEU:C	12:D:100:LEU:HD13	2.42	0.45
13:E:136:GLN:HA	13:E:139:LYS:CG	2.46	0.45
14:F:135:ILE:O	14:F:137:PHE:N	2.45	0.45
17:I:138:VAL:HG12	17:I:139:VAL:N	2.31	0.45
18:J:102:GLU:HB3	18:J:119:PHE:CZ	2.52	0.45
19:K:101:GLY:O	19:K:119:ALA:HB1	2.17	0.45
20:L:120:VAL:O	20:L:122:VAL:N	2.50	0.45
22:N:78:LYS:HG3	22:N:82:GLU:HG3	1.99	0.45
23:O:26:LEU:HB3	23:O:27:VAL:H	1.71	0.45
30:V:72:VAL:CG1	30:V:93:ARG:HA	2.40	0.45
31:W:77:LYS:C	31:W:79:ILE:N	2.71	0.45
32:X:18:LEU:HD12	32:X:47:ARG:HH22	1.82	0.45
32:X:51:ALA:HA	32:X:54:LYS:HB3	1.99	0.45
34:Z:27:THR:C	34:Z:28:VAL:HG22	2.42	0.45
4:3:33:THR:O	4:3:34:LYS:HD2	2.17	0.45
6:7:51:GLY:O	8:9:307:ILE:HD13	2.17	0.45
8:9:9:LEU:HD13	8:9:294:ILE:HG21	1.95	0.45
8:9:48:VAL:O	8:9:51:PHE:N	2.50	0.45
8:9:74:PHE:O	8:9:77:ILE:CB	2.64	0.45
8:9:84:ALA:O	8:9:85:ALA:C	2.59	0.45
8:9:145:ILE:HA	8:9:148:LEU:CG	2.46	0.45
8:9:302:SER:O	8:9:304:ILE:N	2.50	0.45
8:9:369:ASP:CB	8:9:373:LEU:CD2	2.87	0.45
9:A:14:U:O2'	9:A:107:G:H1'	2.16	0.45
10:B:912:C:O2'	10:B:913:U:H5'	2.17	0.45
10:B:1025:G:H8	10:B:1025:G:OP1	2.00	0.45
10:B:1117:C:C1'	21:M:136:MET:HE1	2.46	0.45
10:B:1248:G:P	13:E:44:ARG:HH22	2.40	0.45
10:B:2663:G:H2'	10:B:2664:G:C8	2.52	0.45
11:C:91:ALA:O	11:C:102:TYR:HD2	1.99	0.45
11:C:96:LYS:H	11:C:96:LYS:HG2	1.37	0.45
12:D:60:VAL:HG23	12:D:63:PRO:HG2	1.99	0.45
12:D:62:LYS:H	12:D:62:LYS:HD3	1.82	0.45
12:D:146:ILE:CD1	12:D:155:VAL:HG13	2.47	0.45
16:H:70:GLU:O	16:H:74:ALA:N	2.45	0.45
16:H:114:GLU:HB2	16:H:133:GLN:O	2.17	0.45
17:I:96:LYS:HG3	17:I:96:LYS:O	2.17	0.45
19:K:2:ILE:HA	19:K:33:ALA:H	1.81	0.45
19:K:120:PRO:O	19:K:121:GLU:HB2	2.16	0.45
20:L:50:PHE:O	20:L:51:GLU:C	2.59	0.45
21:M:127:LYS:CG	21:M:128:THR:H	2.30	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:N:58:ASP:O	22:N:62:ASN:HB2	2.17	0.45
23:O:71:ALA:O	23:O:74:VAL:HG22	2.17	0.45
25:Q:88:GLU:CD	26:R:53:PHE:HB2	2.41	0.45
29:U:28:LEU:HB2	29:U:29:SER:H	1.47	0.45
29:U:72:PHE:CE2	29:U:74:ALA:HB3	2.52	0.45
1:0:42:ILE:HG21	1:0:45:ASP:OD2	2.17	0.44
7:8:30:G:N2	7:8:78:G:H1'	2.32	0.44
8:9:280:GLU:C	8:9:282:LEU:N	2.75	0.44
8:9:299:ASP:HB3	8:9:302:SER:N	2.32	0.44
10:B:198:C:H5'	10:B:2244:U:OP1	2.17	0.44
10:B:208:C:H2'	10:B:209:C:C6	2.52	0.44
10:B:448:U:H2'	13:E:79:ARG:HG3	1.98	0.44
10:B:492:A:H2	27:S:46:LEU:HD22	1.82	0.44
10:B:662:G:H4'	20:L:25:SER:OG	2.17	0.44
10:B:1092:C:O2'	10:B:1093:G:H5'	2.18	0.44
10:B:1381:G:O2'	10:B:1382:G:H5'	2.16	0.44
10:B:1637:A:H2'	10:B:1638:C:H6	1.82	0.44
10:B:2581:G:H2'	10:B:2581:G:N3	2.32	0.44
11:C:245:THR:O	11:C:246:PRO:C	2.59	0.44
12:D:61:THR:HG23	12:D:62:LYS:HD3	1.99	0.44
12:D:138:LEU:HD11	12:D:142:VAL:HB	1.99	0.44
13:E:163:ASN:H	13:E:168:ASP:HA	1.80	0.44
14:F:36:ASN:O	14:F:151:LEU:HA	2.17	0.44
15:G:75:VAL:O	15:G:78:VAL:HG12	2.17	0.44
20:L:2:ARG:HH12	20:L:6:LEU:HD13	1.82	0.44
24:P:25:VAL:CG1	24:P:88:ARG:N	2.66	0.44
25:Q:73:ILE:CG1	25:Q:74:SER:H	2.09	0.44
25:Q:87:VAL:O	26:R:54:VAL:HG21	2.17	0.44
29:U:48:VAL:HG13	29:U:51:LEU:HA	1.98	0.44
29:U:82:VAL:HB	29:U:94:PHE:CD1	2.52	0.44
30:V:29:ILE:HG13	30:V:30:ILE:H	1.81	0.44
31:W:24:ARG:HE	31:W:58:LEU:HB2	1.82	0.44
31:W:38:ARG:HB3	31:W:68:PHE:CZ	2.52	0.44
34:Z:36:VAL:HG12	34:Z:42:PRO:CB	2.47	0.44
6:7:65:HIS:HB3	8:9:420:PHE:HE1	1.72	0.44
8:9:17:SER:HB3	8:9:23:THR:CB	2.48	0.44
8:9:117:VAL:O	8:9:118:GLY:C	2.58	0.44
8:9:117:VAL:O	8:9:118:GLY:O	2.35	0.44
8:9:204:GLU:C	8:9:206:LYS:N	2.72	0.44
8:9:258:ALA:O	8:9:259:ALA:O	2.36	0.44
8:9:263:ARG:C	8:9:268:LYS:HB3	2.42	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:284:PRO:O	8:9:285:PHE:HB2	2.17	0.44
9:A:13:G:C2'	9:A:14:U:H5"	2.46	0.44
9:A:55:U:H2'	9:A:56:G:C8	2.53	0.44
10:B:136:G:N1	28:T:3:ARG:NH2	2.65	0.44
10:B:443:A:H3'	13:E:40:ARG:HG2	2.00	0.44
10:B:538:A:N6	10:B:555:G:O2'	2.49	0.44
10:B:900:A:H2'	10:B:901:C:H6	1.82	0.44
10:B:1010:A:H4'	25:Q:75:TYR:CD2	2.53	0.44
10:B:1051:G:H2'	10:B:1052:C:H6	1.82	0.44
10:B:1064:C:H2'	10:B:1065:U:O4'	2.17	0.44
10:B:1188:U:O2'	10:B:1189:A:H5'	2.16	0.44
10:B:1399:C:H2'	10:B:1400:U:C6	2.52	0.44
10:B:1459:G:C2'	10:B:1460:U:H5'	2.47	0.44
10:B:2340:A:H2'	10:B:2341:G:H8	1.82	0.44
10:B:2489:U:O2'	10:B:2490:G:H5'	2.18	0.44
10:B:2570:G:O2'	10:B:2571:U:H5'	2.17	0.44
10:B:2599:G:C8	11:C:234:GLY:HA2	2.53	0.44
10:B:2619:C:H2'	10:B:2620:C:C6	2.53	0.44
10:B:2633:G:H2'	10:B:2634:A:O4'	2.16	0.44
10:B:2801:G:H2'	10:B:2802:G:C8	2.51	0.44
12:D:1:MET:O	12:D:2:ILE:HB	2.18	0.44
12:D:33:ARG:C	12:D:35:THR:H	2.26	0.44
12:D:160:LYS:O	12:D:161:MET:C	2.60	0.44
13:E:46:GLN:CD	13:E:48:THR:H	2.25	0.44
13:E:48:THR:CG2	13:E:85:PHE:N	2.77	0.44
14:F:71:LYS:O	14:F:71:LYS:HD3	2.18	0.44
14:F:157:THR:C	14:F:159:ALA:H	2.25	0.44
14:F:166:ARG:O	14:F:169:LEU:N	2.50	0.44
16:H:12:LEU:HD23	16:H:12:LEU:C	2.42	0.44
17:I:16:MET:N	17:I:42:ASN:OD1	2.51	0.44
18:J:7:LYS:CE	18:J:45:THR:HG21	2.47	0.44
18:J:32:LEU:O	18:J:36:LEU:HD13	2.17	0.44
18:J:58:ASN:C	18:J:60:ASP:N	2.75	0.44
19:K:2:ILE:N	19:K:2:ILE:HD12	2.33	0.44
21:M:9:PHE:CE2	21:M:11:LYS:HG2	2.52	0.44
24:P:7:LEU:HA	24:P:10:GLU:HG2	2.00	0.44
24:P:33:GLU:OE1	24:P:35:SER:N	2.49	0.44
24:P:61:ARG:O	24:P:62:LYS:C	2.56	0.44
24:P:96:LEU:O	24:P:97:TYR:C	2.60	0.44
25:Q:35:PHE:O	25:Q:38:VAL:HG22	2.17	0.44
26:R:35:PHE:O	26:R:63:VAL:HG23	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:S:42:LYS:O	27:S:43:ALA:C	2.60	0.44
27:S:72:THR:HG23	27:S:73:LYS:H	1.81	0.44
33:Y:1:ALA:C	33:Y:43:ILE:HB	2.42	0.44
34:Z:39:LYS:NZ	34:Z:61:ASN:HD21	2.16	0.44
34:Z:59:ARG:HB2	34:Z:60:PHE:H	1.59	0.44
1:0:27:LEU:N	1:0:27:LEU:CD2	2.77	0.44
4:3:16:THR:HG23	4:3:20:GLY:O	2.17	0.44
4:3:49:VAL:HG13	4:3:50:SER:N	2.32	0.44
5:4:1:MET:HG2	10:B:2526:G:N2	2.33	0.44
6:7:57:LEU:O	8:9:423:MET:CE	2.64	0.44
8:9:45:LEU:HA	8:9:48:VAL:HG21	1.96	0.44
8:9:64:VAL:HG21	8:9:70:PRO:HA	1.99	0.44
8:9:77:ILE:O	8:9:78:VAL:C	2.60	0.44
8:9:103:VAL:HB	8:9:187:LEU:O	2.17	0.44
8:9:119:LYS:HD2	8:9:282:LEU:CB	2.47	0.44
8:9:131:LYS:CB	8:9:184:TYR:HB3	2.48	0.44
9:A:14:U:H3'	9:A:15:A:C5'	2.47	0.44
10:B:217:A:H3'	10:B:218:A:H8	1.82	0.44
10:B:279:A:H3'	10:B:280:U:C6	2.52	0.44
10:B:309:A:N3	10:B:329:G:O2'	2.47	0.44
10:B:438:G:O2'	10:B:439:A:H5'	2.17	0.44
10:B:554:U:H2'	10:B:555:G:O4'	2.17	0.44
10:B:834:G:O2'	10:B:835:C:H5'	2.17	0.44
10:B:929:U:O2	33:Y:25:GLY:HA2	2.17	0.44
10:B:1430:G:H2'	10:B:1431:A:H8	1.80	0.44
10:B:2093:G:OP2	16:H:23:ALA:HB3	2.17	0.44
10:B:2230:G:N3	34:Z:30:HIS:NE2	2.65	0.44
10:B:2278:A:H62	31:W:10:ARG:HB2	1.82	0.44
13:E:122:GLU:HG3	13:E:123:LYS:H	1.82	0.44
15:G:155:PRO:O	15:G:171:LYS:N	2.51	0.44
17:I:21:PRO:CB	17:I:22:PRO:HD3	2.42	0.44
18:J:19:ASP:HB3	18:J:21:THR:CG2	2.43	0.44
18:J:23:LYS:HE3	18:J:63:ALA:CB	2.47	0.44
18:J:58:ASN:OD1	18:J:128:ASN:HA	2.17	0.44
18:J:135:GLN:OE1	18:J:135:GLN:HA	2.16	0.44
21:M:123:LYS:NZ	21:M:123:LYS:HB3	2.32	0.44
23:O:18:LEU:HD13	31:W:76:ARG:NH2	2.32	0.44
24:P:79:VAL:HB	24:P:80:VAL:H	1.57	0.44
25:Q:50:ARG:CZ	25:Q:53:LYS:HE3	2.48	0.44
25:Q:111:LYS:HE2	26:R:52:PRO:HG3	2.00	0.44
26:R:37:GLU:HB3	26:R:63:VAL:HA	1.99	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:R:52:PRO:O	26:R:53:PHE:C	2.59	0.44
27:S:68:ASP:HB3	27:S:110:ARG:HD2	1.99	0.44
27:S:72:THR:HG23	27:S:73:LYS:N	2.33	0.44
27:S:84:ARG:C	27:S:96:ILE:HG22	2.41	0.44
2:1:40:PRO:O	2:1:41:VAL:C	2.59	0.44
4:3:41:ARG:HD3	10:B:2349:G:OP2	2.18	0.44
4:3:56:LEU:C	4:3:56:LEU:HD12	2.42	0.44
8:9:145:ILE:HA	8:9:148:LEU:HD21	1.99	0.44
8:9:258:ALA:O	8:9:259:ALA:C	2.58	0.44
10:B:1173:U:H2'	10:B:1174:U:C6	2.51	0.44
10:B:1511:G:H2'	10:B:1512:C:H6	1.82	0.44
10:B:1813:G:H21	11:C:50:THR:HG23	1.83	0.44
10:B:2313:C:H2'	10:B:2314:A:C8	2.52	0.44
10:B:2373:G:H2'	10:B:2374:C:C6	2.53	0.44
11:C:220:ARG:HA	11:C:220:ARG:NH1	2.32	0.44
12:D:33:ARG:CB	12:D:89:GLU:HB2	2.44	0.44
14:F:86:CYS:O	14:F:88:VAL:HG23	2.17	0.44
14:F:135:ILE:HD12	14:F:140:ILE:O	2.17	0.44
16:H:12:LEU:HD22	16:H:19:VAL:CG1	2.47	0.44
16:H:94:ILE:HG23	16:H:98:ASP:CG	2.42	0.44
16:H:108:VAL:CG1	16:H:110:VAL:HB	2.47	0.44
21:M:9:PHE:N	21:M:9:PHE:CD1	2.85	0.44
21:M:53:MET:CA	21:M:112:LEU:HD21	2.48	0.44
22:N:18:GLN:HE21	22:N:18:GLN:HB2	1.50	0.44
25:Q:82:LEU:O	25:Q:88:GLU:HB2	2.17	0.44
26:R:35:PHE:HB3	26:R:64:VAL:HG12	2.00	0.44
27:S:5:ALA:HB3	27:S:105:VAL:HG13	1.99	0.44
28:T:34:VAL:CG2	28:T:35:ALA:N	2.79	0.44
31:W:31:LEU:O	31:W:32:ALA:HB3	2.17	0.44
1:0:27:LEU:HD11	10:B:2887:A:O4'	2.18	0.44
3:2:35:ARG:NH2	3:2:44:VAL:HG22	2.31	0.44
5:4:11:CYS:HB2	5:4:14:CYS:SG	2.58	0.44
8:9:78:VAL:HG23	8:9:79:ARG:H	1.61	0.44
8:9:113:LYS:CB	8:9:113:LYS:HZ3	2.30	0.44
9:A:94:A:O2'	9:A:95:U:H5'	2.17	0.44
10:B:21:A:H2'	10:B:22:C:H6	1.81	0.44
10:B:35:G:H2'	10:B:36:G:O4'	2.18	0.44
10:B:90:U:O5'	10:B:91:A:H5"	2.18	0.44
10:B:480:A:H4'	29:U:40:LEU:HD13	1.99	0.44
10:B:841:G:O2'	10:B:842:U:H5'	2.18	0.44
10:B:1189:A:H2'	10:B:1190:G:O4'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1240:U:O2'	10:B:1241:A:H5"	2.17	0.44
10:B:1396:U:O2	10:B:1396:U:O4'	2.34	0.44
10:B:1515:A:H5'	10:B:1557:C:C5'	2.47	0.44
10:B:1562:U:H2'	10:B:1563:U:C6	2.52	0.44
10:B:1623:G:O2'	10:B:1624:U:H5'	2.18	0.44
10:B:1864:U:O2'	10:B:1865:U:H5'	2.17	0.44
10:B:2256:G:H2'	10:B:2257:U:C6	2.52	0.44
10:B:2454:G:O2'	10:B:2455:G:H5'	2.17	0.44
10:B:2645:G:H3'	10:B:2646:C:C5'	2.44	0.44
10:B:2659:G:C2	10:B:2661:G:H5"	2.53	0.44
10:B:2849:U:O4	24:P:96:LEU:HD21	2.17	0.44
11:C:20:ASN:OD1	11:C:202:ARG:HB3	2.17	0.44
11:C:56:GLY:CA	11:C:214:GLY:H	2.29	0.44
11:C:153:LEU:C	11:C:155:ARG:N	2.71	0.44
11:C:168:GLY:O	11:C:169:ALA:HB3	2.17	0.44
12:D:127:PHE:C	12:D:128:ARG:HD3	2.42	0.44
13:E:14:VAL:HG12	13:E:16:GLU:H	1.82	0.44
15:G:91:VAL:HG12	15:G:159:LYS:NZ	2.32	0.44
16:H:116:ARG:O	16:H:117:LEU:C	2.61	0.44
18:J:9:GLU:O	18:J:9:GLU:HG2	2.17	0.44
20:L:59:ARG:HA	20:L:59:ARG:HD2	1.86	0.44
23:O:98:GLN:NE2	23:O:99:TYR:H	2.16	0.44
25:Q:100:PHE:HD2	26:R:13:ARG:HH22	1.65	0.44
31:W:64:GLY:O	31:W:65:LYS:HB2	2.17	0.44
1:0:29:VAL:HG22	1:0:32:THR:HG23	2.00	0.44
1:0:47:TYR:CD2	1:0:51:ARG:HA	2.53	0.44
5:4:32:LYS:HE3	5:4:33:HIS:ND1	2.32	0.44
8:9:99:PRO:HA	8:9:100:PRO:O	2.18	0.44
8:9:410:VAL:CG1	10:B:485:C:C4'	2.70	0.44
10:B:327:G:O2'	10:B:328:U:H5'	2.17	0.44
10:B:480:A:H2	10:B:499:U:O2	2.01	0.44
10:B:483:A:OP2	10:B:484:C:H5	2.01	0.44
10:B:758:C:O2	10:B:1981:A:H2	2.00	0.44
10:B:873:C:H4'	21:M:64:TRP:CZ3	2.52	0.44
10:B:952:G:C6	10:B:966:G:C6	3.06	0.44
10:B:956:G:N2	10:B:959:A:H3'	2.32	0.44
10:B:1113:U:H5"	15:G:2:ARG:HD3	1.98	0.44
10:B:1188:U:H5"	26:R:84:ARG:HG2	1.99	0.44
10:B:1439:A:N7	10:B:1440:U:C2	2.86	0.44
10:B:1441:G:O2'	10:B:1442:U:H5'	2.17	0.44
10:B:1824:G:O2'	11:C:244:VAL:CG2	2.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2191:A:H2'	10:B:2192:U:H6	1.82	0.44
10:B:2259:U:C1'	10:B:2427:C:H2'	2.47	0.44
10:B:2270:A:H3'	10:B:2271:G:H8	1.83	0.44
10:B:2788:C:H2'	10:B:2789:C:C6	2.53	0.44
11:C:153:LEU:O	11:C:153:LEU:HG	2.17	0.44
11:C:243:PRO:CB	11:C:248:GLY:HA2	2.44	0.44
13:E:139:LYS:HA	13:E:143:LEU:HD21	1.98	0.44
13:E:199:MET:HG3	13:E:200:LEU:N	2.32	0.44
14:F:130:GLY:HA2	14:F:152:ASP:O	2.17	0.44
15:G:10:VAL:N	15:G:11:PRO:HD3	2.33	0.44
15:G:36:LEU:HD23	15:G:67:ALA:HB1	1.99	0.44
18:J:109:LEU:HD22	18:J:115:GLY:O	2.17	0.44
20:L:77:ILE:HG12	20:L:108:ALA:O	2.17	0.44
20:L:118:THR:C	20:L:120:VAL:N	2.76	0.44
21:M:40:ARG:HA	21:M:92:TRP:HE1	1.83	0.44
22:N:24:MET:HE1	22:N:40:LYS:HB3	2.00	0.44
26:R:67:GLY:N	26:R:98:ILE:HA	2.32	0.44
26:R:80:ARG:HG3	26:R:80:ARG:O	2.18	0.44
29:U:48:VAL:HG13	29:U:51:LEU:CA	2.48	0.44
30:V:24:ASN:HB3	30:V:45:ASP:OD1	2.17	0.44
31:W:13:ARG:H	31:W:13:ARG:CZ	2.31	0.44
33:Y:2:LYS:CA	33:Y:43:ILE:HG13	2.47	0.44
1:0:53:VAL:CG1	1:0:54:ILE:N	2.81	0.44
3:2:18:PHE:CE1	10:B:126:A:O5'	2.71	0.44
3:2:21:ARG:HG3	3:2:31:LEU:HD11	1.98	0.44
4:3:60:CYS:O	4:3:61:LEU:C	2.59	0.44
8:9:105:MET:CG	8:9:190:ASP:HA	2.47	0.44
8:9:361:PRO:C	8:9:362:ASP:OD1	2.60	0.44
8:9:375:ARG:C	8:9:378:ALA:N	2.76	0.44
8:9:406:CYS:SG	8:9:408:MET:HE3	2.58	0.44
10:B:353:C:H3'	10:B:354:A:H8	1.82	0.44
10:B:401:A:O2'	10:B:402:A:H5'	2.18	0.44
10:B:418:C:H2'	10:B:419:U:C6	2.53	0.44
10:B:546:U:H5'	10:B:546:U:O2	2.18	0.44
10:B:1278:C:H2'	10:B:1279:G:H8	1.81	0.44
10:B:1854:A:H2'	10:B:1855:U:O4'	2.18	0.44
10:B:2080:A:O2'	34:Z:21:VAL:HG21	2.17	0.44
10:B:2091:C:C5'	34:Z:49:ARG:HE	2.31	0.44
10:B:2633:G:H1'	12:D:62:LYS:CG	2.45	0.44
10:B:2893:A:H4'	10:B:2894:G:O5'	2.18	0.44
11:C:258:SER:OG	11:C:261:ARG:NH1	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:E:1:MET:HE2	13:E:1:MET:N	2.33	0.44
13:E:172:ALA:O	13:E:173:THR:CB	2.64	0.44
14:F:133:GLU:HB3	14:F:134:GLN:H	1.44	0.44
19:K:43:ILE:HG12	19:K:52:VAL:CG1	2.36	0.44
20:L:133:ALA:HA	20:L:136:GLU:OE2	2.18	0.44
21:M:33:LEU:HD21	21:M:124:LEU:HB2	1.98	0.44
21:M:134:THR:OG1	30:V:52:ALA:HA	2.18	0.44
23:O:58:ILE:C	23:O:60:GLU:N	2.75	0.44
24:P:25:VAL:O	24:P:27:VAL:HG12	2.17	0.44
24:P:27:VAL:HG22	24:P:28:LYS:O	2.18	0.44
25:Q:71:ASN:O	25:Q:71:ASN:CG	2.60	0.44
26:R:46:GLU:HB3	26:R:47:VAL:H	1.58	0.44
28:T:85:VAL:HG23	28:T:86:THR:N	2.33	0.44
31:W:5:ALA:C	31:W:7:GLY:H	2.25	0.44
31:W:81:ILE:HG12	31:W:82:GLU:N	2.33	0.44
33:Y:21:ALA:O	33:Y:24:LEU:HB2	2.16	0.44
1:0:42:ILE:O	1:0:43:THR:C	2.61	0.44
4:3:7:ARG:CZ	10:B:250:G:OP2	2.66	0.44
8:9:119:LYS:HA	8:9:122:LYS:CB	2.43	0.44
8:9:169:VAL:O	8:9:172:VAL:N	2.51	0.44
8:9:182:LYS:HB2	8:9:184:TYR:CE1	2.52	0.44
8:9:236:PHE:HD1	8:9:239:ALA:HB3	1.83	0.44
8:9:270:ILE:CG2	8:9:271:LYS:N	2.64	0.44
8:9:290:ILE:HG23	8:9:296:GLY:HA3	1.99	0.44
8:9:300:VAL:HB	8:9:304:ILE:N	2.33	0.44
9:A:70:C:H2'	9:A:71:C:H6	1.83	0.44
10:B:324:A:H61	10:B:338:G:C2'	2.31	0.44
10:B:420:C:H2'	10:B:421:C:H6	1.82	0.44
10:B:452:G:N2	10:B:458:G:H1'	2.33	0.44
10:B:819:A:OP2	10:B:1187:G:N2	2.51	0.44
10:B:1120:G:H2'	10:B:1121:C:C6	2.52	0.44
10:B:1588:G:H2'	10:B:1589:U:C6	2.53	0.44
10:B:1606:C:H5"	10:B:1607:C:OP1	2.17	0.44
10:B:1716:U:H2'	10:B:1717:A:H8	1.82	0.44
10:B:1826:G:H2'	10:B:1827:U:C6	2.53	0.44
10:B:1870:C:H3'	10:B:1871:A:C8	2.53	0.44
10:B:2070:A:H2'	10:B:2071:A:C8	2.53	0.44
10:B:2228:G:H2'	10:B:2229:U:C6	2.53	0.44
10:B:2591:C:O2'	10:B:2592:G:H5'	2.17	0.44
10:B:2806:C:H2'	10:B:2807:U:O4'	2.17	0.44
11:C:6:LYS:HA	11:C:7:PRO:HA	1.78	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C:59:GLN:HB2	11:C:60:ALA:H	1.43	0.44
11:C:71:ASP:O	11:C:72:GLY:C	2.61	0.44
11:C:124:LYS:HE2	11:C:125:PRO:HD2	1.99	0.44
11:C:220:ARG:HA	11:C:220:ARG:NE	2.29	0.44
11:C:224:MET:HA	11:C:233:GLY:N	2.29	0.44
12:D:172:VAL:CG1	12:D:175:LEU:HD11	2.47	0.44
13:E:188:MET:SD	13:E:188:MET:C	3.01	0.44
13:E:192:ALA:O	13:E:194:LYS:N	2.51	0.44
14:F:163:GLU:HG2	14:F:166:ARG:CZ	2.48	0.44
15:G:93:TYR:HD1	15:G:93:TYR:N	2.16	0.44
16:H:114:GLU:HB3	16:H:133:GLN:HG3	2.00	0.44
23:O:89:ASP:O	23:O:90:VAL:HB	2.18	0.44
25:Q:13:HIS:O	25:Q:16:ILE:HG12	2.17	0.44
28:T:38:ALA:O	28:T:39:THR:OG1	2.33	0.44
28:T:53:VAL:HA	28:T:93:LEU:HG	1.99	0.44
31:W:30:VAL:HG12	31:W:31:LEU:N	2.31	0.44
31:W:42:THR:N	31:W:65:LYS:HG2	2.31	0.44
31:W:57:THR:O	31:W:59:PHE:N	2.50	0.44
31:W:65:LYS:HB2	31:W:65:LYS:NZ	2.33	0.44
34:Z:48:GLN:HB3	34:Z:51:VAL:HB	2.00	0.44
4:3:4:LYS:CD	4:3:59:ALA:HA	2.48	0.44
4:3:48:MET:HA	4:3:48:MET:CE	2.47	0.44
5:4:26:ILE:CD1	5:4:34:LYS:HA	2.48	0.44
8:9:79:ARG:HA	8:9:82:LEU:CG	2.47	0.44
8:9:201:MET:HA	8:9:204:GLU:OE1	2.18	0.44
8:9:366:SER:O	8:9:370:ASP:OD1	2.36	0.44
9:A:41:G:H5'	9:A:42:C:H5'	2.00	0.44
10:B:323:C:O2'	13:E:163:ASN:C	2.61	0.44
10:B:398:C:OP1	34:Z:49:ARG:NH1	2.48	0.44
10:B:420:C:H2'	10:B:421:C:C6	2.53	0.44
10:B:523:C:H4'	10:B:540:C:O2	2.18	0.44
10:B:588:U:O4	10:B:670:A:H1'	2.18	0.44
10:B:850:U:H6	10:B:850:U:O5'	2.01	0.44
10:B:994:C:OP2	25:Q:50:ARG:NE	2.45	0.44
10:B:1295:C:H2'	10:B:1296:G:H8	1.83	0.44
10:B:1322:A:H2'	10:B:1323:C:H5'	2.00	0.44
10:B:1394:U:O2'	10:B:1395:A:H5'	2.17	0.44
10:B:1487:U:H2'	10:B:1488:C:C6	2.51	0.44
10:B:1534:U:O2'	10:B:1535:A:H8	2.01	0.44
10:B:1819:A:OP1	11:C:159:THR:HG21	2.18	0.44
10:B:1821:A:C5'	11:C:155:ARG:NH2	2.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2038:G:H2'	10:B:2039:U:O4'	2.17	0.44
11:C:12:ARG:HG3	11:C:21:PRO:HD3	2.00	0.44
12:D:34:VAL:HA	12:D:90:PHE:CA	2.48	0.44
12:D:35:THR:HB	12:D:48:ILE:CB	2.48	0.44
13:E:195:GLN:HE21	13:E:199:MET:HA	1.82	0.44
15:G:58:ALA:C	15:G:60:GLY:N	2.76	0.44
19:K:39:ILE:N	19:K:60:ALA:O	2.51	0.44
20:L:19:LEU:O	20:L:21:ARG:N	2.45	0.44
20:L:51:GLU:CG	20:L:52:GLY:N	2.81	0.44
22:N:101:GLY:HA2	22:N:109:PRO:HA	2.00	0.44
26:R:49:ILE:HG13	26:R:49:ILE:O	2.17	0.44
28:T:31:VAL:HG13	28:T:32:LEU:N	2.25	0.44
28:T:58:VAL:HG12	28:T:59:ASN:H	1.83	0.44
30:V:65:VAL:C	30:V:67:GLY:H	2.26	0.44
34:Z:28:VAL:HG23	34:Z:29:GLY:N	2.25	0.44
34:Z:48:GLN:HE21	34:Z:49:ARG:H	1.63	0.44
4:3:24:LYS:HB3	4:3:24:LYS:HZ2	1.81	0.43
5:4:24:ARG:HE	5:4:37:GLN:HA	1.82	0.43
9:A:75:G:H2'	9:A:76:G:O4'	2.18	0.43
10:B:182:A:H2'	10:B:183:C:C6	2.53	0.43
10:B:390:U:H1'	10:B:391:A:C8	2.53	0.43
10:B:544:C:O2'	10:B:545:U:O4'	2.35	0.43
10:B:545:U:H3'	10:B:546:U:H5"	2.00	0.43
10:B:903:C:H2'	10:B:904:G:C8	2.53	0.43
10:B:1198:U:H2'	10:B:1199:U:H6	1.82	0.43
10:B:1454:C:H1'	22:N:60:VAL:HG13	2.00	0.43
10:B:1552:A:C2'	10:B:1553:A:H5'	2.48	0.43
10:B:1666:G:O3'	19:K:6:THR:HG23	2.18	0.43
10:B:1864:U:OP1	10:B:2411:A:H5'	2.17	0.43
10:B:2065:C:H2'	10:B:2066:C:H6	1.83	0.43
10:B:2468:A:H4'	21:M:55:ARG:HH21	1.83	0.43
11:C:20:ASN:CB	11:C:202:ARG:CD	2.96	0.43
11:C:49:THR:HB	11:C:50:THR:H	1.45	0.43
11:C:159:THR:O	11:C:160:TYR:HD2	2.00	0.43
12:D:125:TRP:C	12:D:127:PHE:H	2.27	0.43
14:F:96:TRP:C	14:F:98:PHE:N	2.74	0.43
16:H:114:GLU:HB2	16:H:133:GLN:HG3	2.00	0.43
18:J:44:TYR:HE2	18:J:50:THR:HB	1.82	0.43
18:J:69:ARG:HG3	18:J:69:ARG:NH1	2.31	0.43
18:J:73:VAL:CG2	18:J:74:TYR:N	2.72	0.43
24:P:55:HIS:O	24:P:57:ALA:N	2.50	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:P:71:ARG:HB3	24:P:72:VAL:HG13	1.99	0.43
25:Q:3:VAL:C	25:Q:4:LYS:HZ2	2.26	0.43
26:R:55:ASP:HB3	26:R:56:GLY:H	1.69	0.43
26:R:69:GLY:HA2	26:R:96:VAL:HA	1.99	0.43
27:S:72:THR:HG21	27:S:108:SER:OG	2.18	0.43
28:T:40:LYS:HB3	28:T:58:VAL:CG2	2.48	0.43
30:V:43:ASP:OD2	30:V:46:LYS:HB2	2.18	0.43
31:W:43:LYS:O	31:W:78:PHE:HA	2.18	0.43
32:X:3:ALA:O	32:X:6:LEU:HD12	2.18	0.43
32:X:4:LYS:HG3	32:X:7:ARG:NE	2.27	0.43
32:X:59:GLU:HA	32:X:63:ALA:OXT	2.18	0.43
34:Z:11:GLU:N	34:Z:27:THR:HG22	2.33	0.43
3:2:13:ASN:ND2	10:B:125:A:C4'	2.78	0.43
7:8:75:G:O5'	7:8:76:A:OP2	2.35	0.43
8:9:147:GLN:O	8:9:151:LEU:HD21	2.18	0.43
8:9:177:LYS:CA	8:9:180:LYS:HB3	2.46	0.43
8:9:188:LEU:C	8:9:189:VAL:CG2	2.91	0.43
8:9:227:GLN:O	8:9:228:ASP:C	2.62	0.43
8:9:425:ARG:HA	8:9:428:LYS:CD	2.41	0.43
10:B:72:U:O2'	10:B:73:A:H5'	2.17	0.43
10:B:267:C:H2'	10:B:268:C:H6	1.83	0.43
10:B:852:U:H2'	10:B:853:C:C6	2.53	0.43
10:B:1068:G:C6	10:B:1069:A:N6	2.87	0.43
10:B:1275:A:N3	10:B:1275:A:C3'	2.75	0.43
10:B:1636:U:O2'	10:B:1637:A:H5'	2.18	0.43
10:B:1796:U:O3'	11:C:251:THR:HA	2.18	0.43
10:B:1821:A:H5'	11:C:155:ARG:NH2	2.32	0.43
10:B:1843:C:H2'	10:B:1844:C:H6	1.83	0.43
10:B:1999:C:H5"	10:B:2723:C:O2'	2.17	0.43
10:B:2038:G:H2'	10:B:2039:U:C6	2.53	0.43
10:B:2221:G:H2'	10:B:2222:C:C6	2.52	0.43
10:B:2385:C:H2'	10:B:2386:A:C8	2.53	0.43
10:B:2508:G:O3'	10:B:2555:U:H5'	2.18	0.43
10:B:2650:U:H2'	10:B:2651:C:H6	1.83	0.43
13:E:58:LYS:HA	13:E:59:PRO:HD3	1.63	0.43
13:E:151:GLY:O	13:E:171:ASP:HA	2.18	0.43
14:F:135:ILE:C	14:F:137:PHE:N	2.77	0.43
16:H:5:LEU:HG	16:H:13:GLY:C	2.42	0.43
16:H:103:VAL:HG22	16:H:108:VAL:HB	2.00	0.43
18:J:28:LEU:O	18:J:28:LEU:HD22	2.17	0.43
18:J:72:LYS:O	18:J:72:LYS:HG3	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:L:2:ARG:NH2	20:L:6:LEU:HD13	2.33	0.43
20:L:89:VAL:HG21	20:L:123:ARG:NH1	2.33	0.43
20:L:109:LYS:HG3	20:L:126:ARG:HD3	1.99	0.43
21:M:17:ASN:N	21:M:17:ASN:HD22	2.17	0.43
22:N:103:ARG:HG2	22:N:106:ASP:CG	2.43	0.43
24:P:18:SER:C	24:P:20:ARG:H	2.26	0.43
24:P:29:VAL:HA	24:P:84:SER:HA	2.00	0.43
25:Q:79:ILE:HD12	25:Q:91:ARG:HG3	2.00	0.43
26:R:31:GLU:C	26:R:66:HIS:HD2	2.26	0.43
26:R:78:ARG:HD3	26:R:88:GLY:C	2.42	0.43
29:U:40:LEU:O	29:U:58:VAL:HA	2.18	0.43
30:V:87:GLN:O	30:V:88:HIS:C	2.61	0.43
32:X:28:LEU:HD22	32:X:42:LEU:CG	2.47	0.43
34:Z:17:SER:C	34:Z:19:GLY:N	2.75	0.43
34:Z:48:GLN:NE2	34:Z:49:ARG:N	2.65	0.43
1:0:36:LYS:HE3	1:0:48:TYR:CE1	2.51	0.43
3:2:35:ARG:HH22	3:2:43:THR:H	1.58	0.43
4:3:4:LYS:HZ1	4:3:60:CYS:HB3	1.83	0.43
4:3:12:ARG:CG	4:3:23:HIS:HB2	2.48	0.43
4:3:13:PHE:CZ	20:L:58:TYR:HB3	2.53	0.43
5:4:15:LYS:H	5:4:15:LYS:HG3	1.59	0.43
8:9:51:PHE:CZ	8:9:82:LEU:HD23	2.53	0.43
8:9:68:LEU:HD23	8:9:69:THR:O	2.18	0.43
8:9:193:GLY:HA3	8:9:204:GLU:OE1	2.19	0.43
9:A:40:U:O2	9:A:43:C:H5"	2.18	0.43
9:A:116:G:H4'	23:O:54:VAL:CG1	2.49	0.43
10:B:2:G:H2'	10:B:3:U:C6	2.54	0.43
10:B:314:C:H2'	10:B:315:G:C8	2.53	0.43
10:B:453:A:N3	10:B:457:A:O2'	2.49	0.43
10:B:538:A:H2'	10:B:539:G:O4'	2.18	0.43
10:B:822:G:H2'	10:B:823:C:C6	2.53	0.43
10:B:1007:C:H5"	18:J:37:ARG:NH1	2.30	0.43
10:B:1348:C:H2'	10:B:1349:C:H5'	1.99	0.43
10:B:1463:C:H2'	10:B:1464:G:C8	2.53	0.43
10:B:1914:C:H3'	10:B:1914:C:OP2	2.17	0.43
10:B:1936:A:N6	10:B:1963:U:N3	2.63	0.43
10:B:2324:U:H3'	10:B:2325:G:C5'	2.49	0.43
10:B:2693:G:O2'	10:B:2694:G:H5'	2.18	0.43
10:B:2772:C:H2'	10:B:2773:C:H6	1.82	0.43
11:C:143:VAL:O	11:C:152:GLN:HB2	2.19	0.43
11:C:152:GLN:HB3	11:C:153:LEU:H	1.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C:172:THR:CG2	11:C:173:LEU:H	2.29	0.43
12:D:22:ILE:HG23	12:D:191:GLY:N	2.33	0.43
13:E:46:GLN:OE1	13:E:86:ALA:HB3	2.18	0.43
13:E:53:THR:H	13:E:74:LYS:CE	2.31	0.43
13:E:112:LEU:HD11	20:L:13:LYS:NZ	2.33	0.43
13:E:149:ILE:O	13:E:149:ILE:HG13	2.18	0.43
15:G:24:THR:HG23	15:G:33:THR:HG23	2.00	0.43
18:J:25:LEU:HD11	18:J:63:ALA:N	2.33	0.43
20:L:33:ARG:HB3	26:R:85:LYS:HZ1	1.83	0.43
20:L:35:HIS:CG	20:L:35:HIS:O	2.71	0.43
21:M:9:PHE:CD1	21:M:9:PHE:C	2.94	0.43
24:P:31:VAL:HG13	24:P:81:ASP:CB	2.37	0.43
24:P:109:ILE:O	24:P:111:GLU:N	2.51	0.43
25:Q:70:GLN:HG2	25:Q:71:ASN:H	1.80	0.43
27:S:28:LYS:O	27:S:29:VAL:HB	2.19	0.43
28:T:23:ALA:HA	28:T:26:LYS:HD2	2.00	0.43
28:T:61:LEU:HB3	28:T:62:VAL:H	1.52	0.43
29:U:2:ALA:HA	29:U:27:VAL:HG23	1.99	0.43
29:U:72:PHE:CD2	29:U:74:ALA:HB3	2.53	0.43
31:W:67:LYS:HD3	31:W:68:PHE:H	1.84	0.43
33:Y:47:ILE:O	33:Y:51:SER:N	2.52	0.43
7:8:77:C:O2'	7:8:78:G:H5'	2.17	0.43
8:9:64:VAL:HG12	8:9:65:ASN:O	2.18	0.43
8:9:200:ALA:O	8:9:201:MET:C	2.61	0.43
8:9:226:GLY:HA2	8:9:259:ALA:HA	1.99	0.43
8:9:292:SER:O	8:9:296:GLY:N	2.51	0.43
8:9:413:VAL:C	8:9:415:ARG:N	2.70	0.43
8:9:418:LYS:CB	10:B:490:C:N3	2.81	0.43
9:A:87:U:N3	9:A:89:U:OP1	2.52	0.43
10:B:226:A:H1'	10:B:230:G:N2	2.33	0.43
10:B:454:A:C3'	10:B:455:C:H5'	2.48	0.43
10:B:633:A:H2'	10:B:634:C:C5'	2.47	0.43
10:B:828:U:H2'	10:B:829:A:C8	2.53	0.43
10:B:1082:U:N3	10:B:1086:A:C2	2.87	0.43
10:B:1099:G:O5'	17:I:2:LYS:C	2.61	0.43
10:B:1133:A:N6	10:B:2025:C:O2'	2.52	0.43
10:B:2025:C:P	12:D:154:LYS:NZ	2.92	0.43
10:B:2221:G:H2'	10:B:2222:C:H6	1.84	0.43
10:B:2331:G:H21	10:B:2336:A:H8	1.67	0.43
10:B:2373:G:O2'	10:B:2374:C:H5'	2.19	0.43
10:B:2417:C:O2'	10:B:2418:A:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C:74:PRO:HD2	11:C:96:LYS:HG3	2.01	0.43
11:C:209:ALA:O	11:C:210:ALA:HB2	2.18	0.43
12:D:156:PHE:HA	18:J:81:ILE:HG21	2.00	0.43
13:E:126:VAL:HG11	13:E:132:LYS:HZ2	1.78	0.43
14:F:106:ALA:O	14:F:136:ILE:HG23	2.19	0.43
15:G:36:LEU:HD13	15:G:40:VAL:HG11	1.99	0.43
20:L:6:LEU:HB2	20:L:7:SER:H	1.61	0.43
21:M:4:PRO:HD3	21:M:47:GLU:CG	2.48	0.43
22:N:45:ARG:CZ	22:N:95:THR:HB	2.48	0.43
23:O:31:THR:C	23:O:33:ARG:N	2.77	0.43
27:S:34:ASP:HA	27:S:37:THR:HG22	2.00	0.43
29:U:51:LEU:C	29:U:53:GLN:N	2.76	0.43
29:U:54:PRO:HD2	29:U:55:GLY:H	1.83	0.43
32:X:18:LEU:HD12	32:X:47:ARG:NH2	2.33	0.43
2:1:29:LYS:CB	2:1:30:PRO:HD3	2.25	0.43
2:1:34:GLU:HB3	2:1:50:GLU:HB3	2.00	0.43
4:3:61:LEU:HD12	4:3:61:LEU:HA	1.74	0.43
8:9:5:LEU:HD11	8:9:34:VAL:CG2	2.48	0.43
8:9:226:GLY:O	8:9:227:GLN:C	2.61	0.43
8:9:313:ARG:O	8:9:314:ALA:C	2.62	0.43
10:B:188:G:OP1	34:Z:12:ILE:HG12	2.18	0.43
10:B:358:U:H2'	10:B:359:G:H8	1.78	0.43
10:B:384:A:H2'	10:B:385:C:H5'	1.99	0.43
10:B:631:A:HO2'	20:L:66:PHE:HB3	1.84	0.43
10:B:929:U:H1'	33:Y:24:LEU:O	2.18	0.43
10:B:1050:A:O2'	10:B:2752:C:H1'	2.18	0.43
10:B:1112:G:H4'	15:G:1:SER:O	2.18	0.43
10:B:1710:G:H2'	10:B:1711:A:C8	2.54	0.43
10:B:2090:A:O2'	34:Z:49:ARG:CZ	2.66	0.43
10:B:2222:C:O2'	10:B:2223:G:H5'	2.19	0.43
10:B:2812:G:H2'	10:B:2813:A:O4'	2.18	0.43
11:C:181:ARG:HG3	11:C:181:ARG:O	2.18	0.43
11:C:256:THR:C	11:C:258:SER:H	2.27	0.43
12:D:110:THR:HG21	12:D:169:ARG:HH21	1.83	0.43
12:D:140:HIS:O	12:D:141:ARG:CG	2.62	0.43
12:D:149:ASN:HB3	12:D:150:GLN:H	1.55	0.43
13:E:53:THR:CB	13:E:74:LYS:HE2	2.47	0.43
14:F:65:LEU:CD2	14:F:87:LYS:HD2	2.49	0.43
15:G:125:PRO:HD2	15:G:129:GLU:O	2.19	0.43
16:H:135:HIS:CD2	16:H:138:VAL:HG23	2.54	0.43
19:K:39:ILE:O	19:K:60:ALA:N	2.50	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:K:103:VAL:HG23	19:K:104:THR:N	2.33	0.43
21:M:108:VAL:O	21:M:109:PRO:C	2.61	0.43
22:N:33:ILE:C	22:N:34:ILE:HD13	2.43	0.43
23:O:26:LEU:HB2	23:O:94:ARG:H	1.83	0.43
26:R:47:VAL:HG22	26:R:48:LYS:N	2.25	0.43
27:S:1:MET:HE2	27:S:4:ILE:HD12	2.01	0.43
27:S:11:ARG:HG3	27:S:11:ARG:NH1	2.33	0.43
27:S:77:ASP:O	27:S:101:SER:HB2	2.18	0.43
29:U:11:ILE:HB	29:U:69:VAL:CG2	2.44	0.43
30:V:69:GLU:O	30:V:70:ILE:HG23	2.18	0.43
33:Y:2:LYS:HB3	33:Y:6:ILE:CD1	2.46	0.43
34:Z:33:ASN:HB3	34:Z:46:GLY:CA	2.33	0.43
2:1:19:PHE:HE2	2:1:41:VAL:H	1.67	0.43
4:3:49:VAL:CG1	4:3:51:LYS:HB2	2.49	0.43
8:9:14:ARG:HE	8:9:16:ILE:CD1	2.32	0.43
8:9:17:SER:HB3	8:9:23:THR:HB	1.99	0.43
8:9:32:ARG:HA	8:9:35:ARG:CB	2.44	0.43
8:9:53:ASN:C	8:9:55:VAL:N	2.75	0.43
8:9:400:ARG:HH12	27:S:60:HIS:CG	2.33	0.43
10:B:231:A:H3'	10:B:232:G:H8	1.84	0.43
10:B:534:U:C5'	25:Q:41:ALA:HA	2.42	0.43
10:B:934:U:H2'	10:B:935:C:H6	1.84	0.43
10:B:1245:G:H4'	13:E:33:VAL:CG2	2.49	0.43
10:B:1372:U:O2'	10:B:2212:A:C8	2.70	0.43
10:B:1511:G:H2'	10:B:1512:C:C6	2.54	0.43
10:B:1750:G:O2'	10:B:1751:U:H5'	2.19	0.43
10:B:1773:A:H62	11:C:206:LYS:HE2	1.83	0.43
10:B:1847:A:H4'	10:B:1848:A:H8	1.82	0.43
10:B:1881:C:H2'	10:B:1882:U:O4'	2.18	0.43
10:B:2228:G:H21	34:Z:32:LEU:HD11	1.84	0.43
10:B:2320:U:O2	10:B:2320:U:O4'	2.35	0.43
11:C:91:ALA:HB3	11:C:103:ILE:HB	2.00	0.43
12:D:32:ASN:HB2	12:D:91:THR:HG22	2.00	0.43
13:E:156:ASN:OD1	13:E:157:LEU:HD23	2.18	0.43
14:F:140:ILE:C	14:F:142:TYR:H	2.25	0.43
16:H:129:GLU:H	16:H:129:GLU:HG3	1.49	0.43
18:J:5:THR:HG23	18:J:7:LYS:HD3	2.00	0.43
18:J:58:ASN:O	18:J:59:ALA:HB3	2.18	0.43
19:K:109:SER:C	19:K:111:LYS:H	2.26	0.43
22:N:11:ASN:HB3	22:N:12:ARG:CD	2.46	0.43
24:P:29:VAL:HG21	24:P:61:ARG:NH2	2.24	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Q:64:ILE:HG13	25:Q:95:ALA:HB2	2.01	0.43
28:T:8:LEU:HD21	32:X:26:PHE:CZ	2.54	0.43
28:T:82:LYS:HG3	28:T:83:ALA:H	1.83	0.43
29:U:48:VAL:HG13	29:U:51:LEU:N	2.32	0.43
33:Y:45:GLY:HA2	33:Y:48:ASN:HD22	1.81	0.43
34:Z:5:ILE:O	34:Z:51:VAL:HG13	2.18	0.43
1:0:4:GLN:NE2	10:B:2054:A:H2'	2.33	0.43
8:9:8:ARG:HD2	8:9:33:GLU:OE1	2.18	0.43
8:9:82:LEU:O	8:9:83:VAL:C	2.61	0.43
8:9:268:LYS:HD2	8:9:269:PRO:HD2	2.01	0.43
8:9:299:ASP:CB	8:9:350:LEU:CD2	2.88	0.43
8:9:299:ASP:C	8:9:350:LEU:HD21	2.43	0.43
8:9:340:GLN:C	8:9:341:MET:N	2.76	0.43
8:9:390:LYS:C	8:9:392:GLU:N	2.74	0.43
9:A:107:G:O2'	9:A:108:A:H5'	2.18	0.43
10:B:118:A:OP2	10:B:119:A:H2'	2.19	0.43
10:B:818:G:N1	10:B:1187:G:H2'	2.32	0.43
10:B:852:U:H2'	10:B:853:C:H6	1.83	0.43
10:B:1106:G:H2'	10:B:1107:G:H8	1.83	0.43
10:B:1310:G:H1'	10:B:1611:C:H5'	2.01	0.43
10:B:1446:C:O2'	10:B:1447:C:H5'	2.19	0.43
10:B:1456:G:O2'	10:B:1457:U:H5'	2.18	0.43
10:B:1789:A:H2'	10:B:1790:C:C6	2.53	0.43
10:B:1824:G:H2'	10:B:1825:U:C6	2.53	0.43
10:B:2523:G:O2'	10:B:2524:G:H5'	2.19	0.43
10:B:2821:A:H2'	10:B:2822:G:H8	1.83	0.43
12:D:5:VAL:HG12	12:D:6:GLY:N	2.34	0.43
12:D:60:VAL:HB	12:D:62:LYS:NZ	2.34	0.43
12:D:118:PHE:HD2	12:D:119:ALA:N	2.17	0.43
13:E:6:LYS:HG2	13:E:119:ILE:O	2.19	0.43
13:E:6:LYS:CB	13:E:11:ALA:HA	2.48	0.43
13:E:61:ARG:O	13:E:62:GLN:C	2.62	0.43
15:G:55:ASP:CG	15:G:56:GLY:H	2.26	0.43
16:H:67:ALA:C	16:H:69:ALA:H	2.26	0.43
16:H:90:LEU:O	16:H:91:PHE:C	2.62	0.43
18:J:7:LYS:N	18:J:8:PRO:CD	2.81	0.43
21:M:5:LYS:O	21:M:6:ARG:C	2.57	0.43
21:M:62:LYS:HB2	21:M:104:GLU:OE1	2.19	0.43
21:M:119:LEU:HD22	21:M:119:LEU:N	2.32	0.43
23:O:75:GLY:HA3	23:O:109:ALA:HB3	2.00	0.43
27:S:21:ALA:HB1	27:S:74:ILE:CD1	2.37	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:U:27:VAL:HB	29:U:33:VAL:HG22	1.99	0.43
32:X:55:THR:HG22	32:X:56:LEU:H	1.84	0.43
34:Z:3:LYS:O	34:Z:7:PRO:HA	2.19	0.43
2:1:35:LEU:HA	2:1:48:TYR:O	2.18	0.43
5:4:16:ILE:HD11	10:B:1033:U:C4	2.54	0.43
8:9:20:GLY:C	8:9:22:LEU:N	2.51	0.43
8:9:45:LEU:CD2	8:9:48:VAL:HG21	2.47	0.43
8:9:152:ALA:O	8:9:157:VAL:O	2.36	0.43
8:9:240:LEU:HG	8:9:243:THR:HG23	2.00	0.43
8:9:299:ASP:CA	8:9:350:LEU:CD2	2.61	0.43
8:9:324:LYS:HD3	8:9:326:GLY:N	2.34	0.43
8:9:375:ARG:CG	8:9:375:ARG:NH2	2.80	0.43
10:B:275:C:H2'	10:B:276:U:O4'	2.18	0.43
10:B:576:U:H2'	10:B:577:G:C8	2.52	0.43
10:B:743:A:OP1	12:D:134:HIS:NE2	2.51	0.43
10:B:1029:A:H2'	10:B:1030:C:O4'	2.19	0.43
10:B:1205:A:H1'	10:B:1206:G:P	2.59	0.43
10:B:1278:C:H2'	10:B:1279:G:C8	2.54	0.43
10:B:1544:A:H2'	10:B:1545:A:C8	2.54	0.43
10:B:1710:G:H2'	10:B:1711:A:H8	1.84	0.43
10:B:1814:G:H5'	11:C:51:ARG:HG2	2.00	0.43
10:B:2386:A:H2'	10:B:2387:U:H6	1.83	0.43
10:B:2395:C:O5'	10:B:2395:C:H6	2.02	0.43
10:B:2647:U:O2'	10:B:2648:G:H5'	2.19	0.43
10:B:2889:C:H2'	10:B:2890:G:C8	2.53	0.43
12:D:62:LYS:H	12:D:62:LYS:CD	2.32	0.43
12:D:145:SER:OG	12:D:146:ILE:N	2.52	0.43
13:E:6:LYS:CG	13:E:7:ASP:H	2.32	0.43
13:E:76:PRO:HB3	13:E:84:THR:HB	2.01	0.43
13:E:120:VAL:HG12	13:E:121:VAL:N	2.29	0.43
13:E:142:ALA:O	13:E:185:LYS:HG2	2.19	0.43
14:F:57:ALA:HA	14:F:62:GLN:O	2.19	0.43
17:I:32:VAL:HG12	17:I:33:ASN:N	2.34	0.43
17:I:35:MET:HE3	17:I:39:LYS:HG3	2.01	0.43
19:K:61:VAL:HG13	19:K:87:LEU:HD11	2.01	0.43
20:L:24:GLY:O	20:L:25:SER:C	2.60	0.43
20:L:135:ILE:H	20:L:135:ILE:HG12	1.57	0.43
21:M:69:PRO:N	21:M:93:VAL:HG22	2.34	0.43
21:M:75:GLU:O	21:M:86:LYS:HB3	2.19	0.43
21:M:133:LYS:HD2	21:M:134:THR:O	2.18	0.43
24:P:32:VAL:H	24:P:81:ASP:HA	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Q:2:ARG:NE	25:Q:4:LYS:HE3	2.34	0.43
25:Q:68:ALA:C	25:Q:70:GLN:H	2.27	0.43
26:R:6:GLN:CG	26:R:7:SER:H	2.30	0.43
32:X:7:ARG:HB3	32:X:7:ARG:HH11	1.82	0.43
34:Z:2:LYS:O	34:Z:7:PRO:HA	2.19	0.43
3:2:25:LYS:HG3	10:B:1368:G:OP1	2.18	0.43
6:7:65:HIS:CG	8:9:420:PHE:CE1	3.07	0.43
8:9:39:LEU:HD22	8:9:45:LEU:HD21	2.00	0.43
8:9:65:ASN:O	8:9:66:LYS:C	2.59	0.43
8:9:201:MET:O	8:9:204:GLU:N	2.50	0.43
8:9:226:GLY:O	8:9:229:ALA:N	2.52	0.43
8:9:283:GLU:O	8:9:284:PRO:O	2.37	0.43
8:9:364:VAL:CG1	8:9:364:VAL:O	2.67	0.43
8:9:400:ARG:C	8:9:403:ALA:HB3	2.44	0.43
8:9:401:ARG:NH2	8:9:402:ILE:HG13	2.33	0.43
10:B:324:A:C6	10:B:339:U:H5'	2.54	0.43
10:B:510:C:O2'	10:B:1236:G:H5'	2.19	0.43
10:B:713:G:O2'	10:B:714:U:H5'	2.19	0.43
10:B:729:G:H4'	10:B:763:G:C5'	2.49	0.43
10:B:999:U:H5"	10:B:1154:G:O6	2.19	0.43
10:B:1079:C:C4	10:B:1080:A:N7	2.87	0.43
10:B:1099:G:O4'	17:I:3:LYS:N	2.52	0.43
10:B:1291:C:O2'	10:B:1292:G:H5'	2.17	0.43
10:B:1862:G:O2'	10:B:1863:G:H5'	2.18	0.43
10:B:1946:U:H2'	10:B:1947:C:H6	1.83	0.43
10:B:2259:U:C2'	10:B:2260:C:H5'	2.48	0.43
10:B:2438:U:O2'	10:B:2439:A:H5"	2.19	0.43
10:B:2728:U:H2'	10:B:2729:G:C8	2.54	0.43
11:C:258:SER:N	11:C:261:ARG:HH11	2.16	0.43
12:D:48:ILE:CG2	12:D:49:GLN:N	2.82	0.43
14:F:60:SER:OG	14:F:88:VAL:HG11	2.19	0.43
16:H:103:VAL:O	16:H:106:ALA:HB3	2.19	0.43
18:J:44:TYR:HH	18:J:49:ASP:C	2.27	0.43
18:J:50:THR:N	18:J:118:MET:HE2	2.33	0.43
18:J:57:LEU:HG	18:J:128:ASN:HA	2.01	0.43
21:M:5:LYS:O	21:M:6:ARG:CB	2.62	0.43
26:R:87:GLN:O	26:R:89:HIS:N	2.52	0.43
27:S:22:ASP:O	27:S:25:ARG:HG3	2.19	0.43
28:T:6:ARG:HG2	28:T:9:LYS:O	2.19	0.43
28:T:19:LYS:HD2	28:T:19:LYS:HA	1.53	0.43
28:T:58:VAL:HG13	28:T:85:VAL:H	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:U:57:ILE:HD13	29:U:58:VAL:O	2.19	0.43
29:U:90:LYS:O	29:U:91:LYS:HB2	2.18	0.43
31:W:76:ARG:C	31:W:78:PHE:N	2.77	0.43
32:X:18:LEU:HA	32:X:22:LEU:HB2	2.01	0.43
32:X:58:ASN:O	32:X:59:GLU:C	2.62	0.43
34:Z:21:VAL:HG22	34:Z:22:MET:N	2.34	0.43
6:7:63:VAL:HG21	8:9:365:LYS:O	2.18	0.43
8:9:21:ARG:O	32:X:20:ASN:HB3	2.19	0.43
8:9:58:LYS:O	8:9:61:GLY:N	2.52	0.43
8:9:66:LYS:CB	28:T:92:ASN:H	2.31	0.43
8:9:151:LEU:H	8:9:151:LEU:CD2	2.06	0.43
8:9:304:ILE:H	8:9:350:LEU:HD11	1.81	0.43
10:B:4:U:O2'	10:B:5:A:H5'	2.19	0.43
10:B:231:A:H3'	10:B:232:G:C8	2.54	0.43
10:B:753:A:O2'	10:B:754:U:H5'	2.19	0.43
10:B:948:C:O2'	10:B:949:G:H5'	2.18	0.43
10:B:963:U:H2'	10:B:964:C:H6	1.83	0.43
10:B:1051:G:H2'	10:B:1052:C:C6	2.54	0.43
10:B:1204:A:N1	10:B:1241:A:N1	2.67	0.43
10:B:1259:G:O2'	10:B:1260:A:H5'	2.19	0.43
10:B:1281:G:H2'	10:B:1282:U:O4'	2.19	0.43
10:B:1304:A:O2'	10:B:1305:C:H5'	2.19	0.43
10:B:1313:U:O2	10:B:1313:U:C2'	2.66	0.43
10:B:1439:A:N1	10:B:1552:A:N7	2.66	0.43
10:B:2065:C:H1'	10:B:2449:U:O2	2.19	0.43
10:B:2384:U:H5"	10:B:2386:A:OP1	2.19	0.43
11:C:45:ASN:ND2	11:C:50:THR:OG1	2.52	0.43
11:C:168:GLY:C	11:C:170:TYR:N	2.76	0.43
11:C:224:MET:HG3	11:C:233:GLY:N	2.33	0.43
11:C:252:LYS:HB3	11:C:253:GLY:H	1.64	0.43
12:D:25:THR:HA	12:D:188:LEU:HD12	2.01	0.43
12:D:94:GLN:HG2	12:D:95:SER:O	2.19	0.43
12:D:187:LEU:HD23	12:D:187:LEU:C	2.42	0.43
13:E:46:GLN:HG3	13:E:49:ARG:CZ	2.48	0.43
13:E:75:SER:OG	13:E:77:ILE:HG22	2.18	0.43
13:E:99:LYS:O	13:E:103:GLY:N	2.44	0.43
13:E:147:LEU:HD22	13:E:167:VAL:HG22	2.00	0.43
14:F:56:LEU:CA	14:F:59:ILE:HG22	2.40	0.43
18:J:25:LEU:HG	18:J:64:VAL:N	2.31	0.43
18:J:110:PRO:O	18:J:111:LYS:HB2	2.18	0.43
20:L:2:ARG:HH22	20:L:6:LEU:CD1	2.32	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
20:L:54:GLN:HG2	20:L:57:LEU:HD23	2.00	0.43
23:O:1:MET:O	23:O:1:MET:HE3	2.19	0.43
24:P:51:ASN:HB2	24:P:60:VAL:HB	2.01	0.43
25:Q:91:ARG:H	25:Q:91:ARG:HD2	1.82	0.43
27:S:8:ARG:HA	27:S:102:HIS:ND1	2.34	0.43
29:U:13:LEU:HD11	29:U:68:ASN:HA	2.00	0.43
29:U:39:ASN:HB3	29:U:59:GLU:HB2	2.01	0.43
1:0:2:VAL:HG11	10:B:2016:U:H1'	2.01	0.42
5:4:22:VAL:CG1	5:4:37:GLN:HB3	2.48	0.42
8:9:10:SER:O	8:9:13:LEU:N	2.52	0.42
8:9:166:GLN:O	8:9:167:LYS:HB2	2.18	0.42
8:9:234:LYS:O	8:9:235:ALA:C	2.62	0.42
8:9:260:LEU:HD12	8:9:260:LEU:C	2.42	0.42
10:B:185:G:H4'	10:B:218:A:H4'	2.00	0.42
10:B:687:C:H2'	10:B:688:U:O4'	2.19	0.42
10:B:902:C:O2'	10:B:903:C:H5'	2.19	0.42
10:B:1008:A:N6	10:B:1136:G:C6	2.87	0.42
10:B:1099:G:H5'	17:I:4:VAL:CG1	2.47	0.42
10:B:1147:A:O2'	10:B:1148:U:H5'	2.19	0.42
10:B:1341:G:H2'	10:B:1397:U:O2'	2.19	0.42
10:B:1408:G:O2'	10:B:1409:U:H5'	2.19	0.42
10:B:1724:G:H2'	10:B:1725:U:C6	2.52	0.42
10:B:1915:U:H2'	10:B:1916:A:C8	2.54	0.42
10:B:1987:A:H2'	10:B:1988:G:H8	1.84	0.42
10:B:2107:G:H2'	10:B:2108:A:H8	1.84	0.42
10:B:2270:A:H5"	10:B:2271:G:OP2	2.19	0.42
10:B:2683:C:O2'	10:B:2684:U:H5'	2.19	0.42
10:B:2732:G:H5'	10:B:2733:A:O4'	2.18	0.42
10:B:2751:G:OP2	15:G:2:ARG:HG3	2.18	0.42
10:B:2795:C:O5'	10:B:2795:C:H6	2.02	0.42
10:B:2885:G:H2'	10:B:2886:A:O4'	2.18	0.42
11:C:19:VAL:HG12	11:C:20:ASN:N	2.33	0.42
11:C:140:VAL:O	11:C:193:GLU:HG3	2.19	0.42
13:E:122:GLU:CG	13:E:123:LYS:H	2.32	0.42
17:I:17:ALA:O	17:I:18:ASN:HB3	2.19	0.42
18:J:25:LEU:HB3	18:J:62:VAL:HG12	2.00	0.42
21:M:1:MET:HE2	21:M:1:MET:HA	2.00	0.42
21:M:50:ARG:O	21:M:53:MET:HG3	2.18	0.42
21:M:62:LYS:HD2	21:M:62:LYS:HA	1.68	0.42
21:M:73:ILE:CG2	21:M:90:GLU:HG2	2.49	0.42
21:M:108:VAL:HG12	21:M:111:GLU:OE1	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:P:111:GLU:O	24:P:113:LEU:N	2.51	0.42
25:Q:102:LYS:HD2	25:Q:102:LYS:HA	1.88	0.42
26:R:39:LEU:C	26:R:41:ILE:H	2.26	0.42
26:R:65:ALA:H	26:R:100:GLY:HA2	1.84	0.42
28:T:53:VAL:HG12	28:T:93:LEU:CD2	2.48	0.42
28:T:68:LYS:HB2	28:T:68:LYS:HZ2	1.83	0.42
29:U:43:LYS:HZ2	29:U:43:LYS:HB2	1.84	0.42
31:W:58:LEU:HB3	31:W:59:PHE:H	1.74	0.42
2:1:4:ILE:HG23	2:1:4:ILE:O	2.19	0.42
4:3:29:ARG:CZ	10:B:2419:U:O4	2.67	0.42
7:8:88:C:O3'	7:8:89:A:OP2	2.25	0.42
8:9:14:ARG:HE	8:9:16:ILE:HB	1.84	0.42
8:9:282:LEU:C	8:9:283:GLU:HG3	2.44	0.42
8:9:401:ARG:O	8:9:405:GLY:CA	2.67	0.42
8:9:425:ARG:HG2	8:9:425:ARG:NH1	2.33	0.42
9:A:76:G:O2'	9:A:77:U:H5'	2.18	0.42
9:A:92:C:H2'	9:A:93:C:H6	1.83	0.42
10:B:55:G:H2'	10:B:56:A:C8	2.54	0.42
10:B:138:U:O2'	10:B:140:C:H5'	2.18	0.42
10:B:268:C:O2	10:B:268:C:H2'	2.19	0.42
10:B:545:U:C6	10:B:546:U:H4'	2.54	0.42
10:B:673:C:O2'	10:B:674:G:H5'	2.19	0.42
10:B:858:G:H21	10:B:2268:A:H3'	1.84	0.42
10:B:1694:C:OP1	11:C:13:ARG:NH2	2.52	0.42
10:B:1911:U:H2'	10:B:1918:A:C2	2.54	0.42
10:B:2267:A:H3'	10:B:2267:A:N3	2.34	0.42
10:B:2370:G:H2'	10:B:2371:G:O4'	2.18	0.42
11:C:22:GLU:HA	11:C:202:ARG:HH21	1.83	0.42
11:C:222:THR:OG1	11:C:223:ALA:N	2.51	0.42
12:D:1:MET:N	12:D:81:GLU:HB2	2.34	0.42
12:D:117:GLY:HA3	22:N:1:MET:CA	2.46	0.42
13:E:132:LYS:HG3	13:E:134:LEU:CD1	2.49	0.42
13:E:137:LYS:C	13:E:138:LEU:HD23	2.43	0.42
15:G:25:ILE:CD1	15:G:75:VAL:HG22	2.49	0.42
15:G:65:GLY:HA2	15:G:68:ARG:HH21	1.84	0.42
17:I:109:ALA:HB2	17:I:125:THR:HA	2.00	0.42
21:M:13:HIS:C	21:M:14:LYS:HD3	2.44	0.42
21:M:88:ASN:C	21:M:90:GLU:H	2.27	0.42
24:P:46:VAL:HB	24:P:65:ASN:OD1	2.18	0.42
29:U:28:LEU:HD13	29:U:30:SER:C	2.43	0.42
30:V:75:GLN:HB3	30:V:90:ASP:HB3	2.01	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:W:68:PHE:CE1	31:W:69:GLU:HG2	2.55	0.42
32:X:19:LEU:C	32:X:21:LEU:H	2.27	0.42
32:X:44:LYS:CE	32:X:47:ARG:HB2	2.47	0.42
33:Y:2:LYS:HG3	33:Y:37:ARG:HG3	2.01	0.42
1:0:3:GLN:CD	1:0:3:GLN:N	2.77	0.42
2:1:11:VAL:O	2:1:12:SER:C	2.62	0.42
2:1:49:LYS:HZ2	2:1:49:LYS:CA	2.32	0.42
2:1:49:LYS:HZ3	2:1:50:GLU:N	2.18	0.42
8:9:219:PHE:CE2	8:9:236:PHE:CD1	3.07	0.42
8:9:296:GLY:O	8:9:297:MET:O	2.37	0.42
8:9:299:ASP:HB2	8:9:301:LEU:N	2.34	0.42
8:9:413:VAL:CG1	8:9:416:LEU:HD11	2.50	0.42
9:A:60:C:H2'	9:A:61:G:H8	1.84	0.42
10:B:20:C:H2'	10:B:21:A:C8	2.53	0.42
10:B:1671:U:H2'	10:B:1673:G:OP2	2.19	0.42
10:B:1708:C:H2'	10:B:1709:U:C6	2.53	0.42
10:B:1739:A:H2'	10:B:1740:G:H8	1.84	0.42
10:B:2056:G:N3	10:B:2056:G:H2'	2.34	0.42
10:B:2082:A:H61	10:B:2237:G:H1'	1.84	0.42
10:B:2141:G:H2'	10:B:2142:A:C8	2.55	0.42
10:B:2226:C:H2'	10:B:2227:A:O4'	2.19	0.42
10:B:2379:G:H2'	10:B:2380:C:H6	1.84	0.42
10:B:2385:C:H2'	10:B:2386:A:H8	1.85	0.42
10:B:2756:U:C1'	10:B:2757:A:H5"	2.42	0.42
11:C:63:ILE:C	11:C:64:VAL:HG22	2.43	0.42
11:C:196:ASN:HB2	11:C:199:HIS:CE1	2.54	0.42
11:C:225:ASN:N	11:C:226:PRO:CD	2.82	0.42
12:D:81:GLU:CG	12:D:82:PHE:N	2.81	0.42
12:D:148:GLN:HB3	12:D:151:THR:HG23	2.01	0.42
13:E:189:THR:HG23	13:E:194:LYS:HB2	2.02	0.42
15:G:131:VAL:HG13	15:G:131:VAL:O	2.19	0.42
16:H:66:ASN:HA	16:H:138:VAL:CG2	2.47	0.42
17:I:63:ASP:O	17:I:63:ASP:OD1	2.37	0.42
20:L:15:ALA:O	20:L:17:LYS:N	2.48	0.42
20:L:54:GLN:HB3	20:L:55:MET:H	1.51	0.42
20:L:61:LEU:HD23	20:L:61:LEU:C	2.43	0.42
20:L:111:ILE:HA	20:L:128:THR:HG21	2.01	0.42
20:L:124:GLY:H	20:L:142:ILE:CB	2.32	0.42
21:M:5:LYS:HE2	21:M:8:LYS:HD2	2.00	0.42
21:M:106:ASP:O	21:M:109:PRO:HD3	2.19	0.42
23:O:105:ALA:O	23:O:106:LEU:C	2.63	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Q:26:ALA:CA	25:Q:30:VAL:HG23	2.49	0.42
26:R:83:TYR:O	26:R:84:ARG:C	2.62	0.42
28:T:32:LEU:O	28:T:83:ALA:HB3	2.19	0.42
28:T:49:LYS:O	28:T:51:PHE:N	2.44	0.42
30:V:16:ALA:CA	30:V:19:ARG:HH21	2.31	0.42
32:X:8:GLU:HB2	32:X:9:LYS:H	1.58	0.42
33:Y:26:LEU:C	33:Y:28:LEU:N	2.77	0.42
34:Z:27:THR:O	34:Z:28:VAL:HG13	2.20	0.42
5:4:1:MET:CG	10:B:2526:G:H21	2.33	0.42
5:4:14:CYS:CA	5:4:27:CYS:HA	2.49	0.42
8:9:110:GLY:C	8:9:113:LYS:HB2	2.43	0.42
8:9:240:LEU:CB	8:9:243:THR:CG2	2.73	0.42
8:9:268:LYS:HG3	8:9:269:PRO:N	2.35	0.42
8:9:427:MET:C	8:9:429:LYS:N	2.77	0.42
10:B:38:A:C2	13:E:43:THR:HG22	2.54	0.42
10:B:164:C:H2'	10:B:165:A:H5'	2.00	0.42
10:B:490:C:H3'	10:B:491:G:H5"	2.01	0.42
10:B:544:C:O5'	10:B:545:U:OP1	2.37	0.42
10:B:756:A:H2'	10:B:757:G:O4'	2.18	0.42
10:B:1198:U:C2	10:B:1199:U:C5	3.07	0.42
10:B:1213:A:H62	10:B:1236:G:H1'	1.83	0.42
10:B:1386:C:H2'	10:B:1387:A:H8	1.81	0.42
10:B:1789:A:H2'	10:B:1790:C:H6	1.85	0.42
10:B:1826:G:H2'	10:B:1827:U:H6	1.82	0.42
10:B:1987:A:H2'	10:B:1988:G:C8	2.54	0.42
10:B:2547:A:H2'	10:B:2548:U:H6	1.85	0.42
11:C:140:VAL:HG11	11:C:163:ILE:HG13	2.01	0.42
11:C:160:TYR:C	11:C:161:VAL:HG23	2.44	0.42
11:C:257:ARG:HA	11:C:261:ARG:NE	2.34	0.42
12:D:176:ASP:OD2	12:D:190:LYS:HD2	2.18	0.42
13:E:59:PRO:HB2	13:E:60:TRP:CD1	2.54	0.42
13:E:105:LEU:O	13:E:108:ILE:HG12	2.19	0.42
14:F:39:VAL:CA	14:F:84:ILE:HB	2.38	0.42
14:F:163:GLU:HA	14:F:166:ARG:CD	2.49	0.42
15:G:53:PRO:O	15:G:54:ARG:C	2.61	0.42
16:H:23:ALA:O	16:H:24:GLY:C	2.62	0.42
16:H:104:THR:HA	16:H:108:VAL:C	2.45	0.42
16:H:104:THR:HA	16:H:108:VAL:O	2.20	0.42
19:K:70:ARG:HD3	19:K:76:VAL:HG22	2.00	0.42
20:L:90:VAL:C	20:L:92:LEU:N	2.74	0.42
23:O:35:ILE:O	23:O:36:TYR:HB2	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:P:1:SER:O	24:P:6:GLN:OE1	2.38	0.42
24:P:47:ILE:HD13	24:P:63:ILE:CG2	2.49	0.42
24:P:50:ARG:HG3	24:P:99:LEU:H	1.84	0.42
26:R:18:GLN:HA	26:R:99:THR:HA	2.01	0.42
26:R:39:LEU:C	26:R:41:ILE:N	2.78	0.42
29:U:45:GLN:NE2	29:U:47:PRO:HG3	2.34	0.42
29:U:85:ARG:O	29:U:87:GLU:HG3	2.19	0.42
30:V:21:ARG:NH2	30:V:88:HIS:H	2.17	0.42
30:V:63:ILE:N	30:V:63:ILE:HD12	2.33	0.42
31:W:24:ARG:NE	31:W:58:LEU:HB2	2.35	0.42
31:W:76:ARG:NH1	31:W:76:ARG:HB3	2.33	0.42
32:X:23:ARG:O	32:X:26:PHE:HB2	2.19	0.42
1:0:6:LYS:HG3	10:B:2017:U:O2	2.20	0.42
3:2:6:GLN:HB3	3:2:7:PRO:HD2	2.01	0.42
6:7:63:VAL:HG22	8:9:369:ASP:CG	2.37	0.42
8:9:138:ASP:CG	8:9:191:THR:HA	2.45	0.42
8:9:335:LEU:HB2	8:9:380:ILE:HD12	2.00	0.42
10:B:6:A:H4'	18:J:133:ALA:C	2.44	0.42
10:B:88:G:O2'	10:B:89:A:H5'	2.20	0.42
10:B:97:C:H2'	10:B:98:G:O4'	2.19	0.42
10:B:557:C:O3'	18:J:113:PRO:HB2	2.19	0.42
10:B:570:G:C2'	10:B:571:U:H5'	2.50	0.42
10:B:942:G:H2'	10:B:943:A:H8	1.85	0.42
10:B:962:G:O2'	10:B:2250:G:N2	2.52	0.42
10:B:1099:G:H5'	17:I:4:VAL:H	1.74	0.42
10:B:1607:C:N4	10:B:1622:G:OP2	2.51	0.42
10:B:1733:G:H2'	10:B:1734:G:C8	2.54	0.42
10:B:1832:C:H2'	10:B:1833:C:O5'	2.19	0.42
10:B:2199:A:OP2	10:B:2200:C:H5	2.02	0.42
10:B:2244:U:H2'	10:B:2245:U:C6	2.54	0.42
10:B:2606:C:O2'	10:B:2607:G:H5'	2.19	0.42
10:B:2682:A:O2'	10:B:2683:C:H5'	2.20	0.42
10:B:2813:A:O2'	10:B:2814:A:H5'	2.19	0.42
12:D:21:SER:O	12:D:23:PRO:HD3	2.19	0.42
12:D:38:LYS:H	12:D:42:ASN:HB2	1.84	0.42
12:D:116:LYS:O	22:N:2:ARG:N	2.52	0.42
13:E:189:THR:HG23	13:E:194:LYS:HG3	2.02	0.42
13:E:189:THR:HG23	13:E:194:LYS:HD3	2.00	0.42
14:F:18:GLU:C	14:F:20:ASN:N	2.77	0.42
14:F:177:ARG:C	14:F:177:ARG:HE	2.28	0.42
15:G:5:LYS:O	15:G:68:ARG:HD2	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
15:G:29:ASN:OD1	15:G:81:GLY:HA2	2.19	0.42
15:G:88:LEU:HD21	15:G:104:LEU:HD11	2.02	0.42
15:G:171:LYS:CE	15:G:173:ALA:HA	2.50	0.42
16:H:82:SER:HB3	16:H:83:LYS:H	1.48	0.42
25:Q:40:LYS:HD3	25:Q:40:LYS:HA	1.83	0.42
26:R:5:PHE:HD1	26:R:37:GLU:OE2	2.02	0.42
28:T:58:VAL:CG1	28:T:59:ASN:H	2.32	0.42
29:U:95:PHE:HB2	29:U:99:SER:O	2.18	0.42
30:V:44:HIS:C	30:V:46:LYS:N	2.76	0.42
31:W:10:ARG:CZ	31:W:10:ARG:HB3	2.49	0.42
31:W:42:THR:H	31:W:65:LYS:CG	2.30	0.42
1:0:10:SER:O	1:0:14:MET:HB2	2.19	0.42
1:0:39:ARG:HD3	1:0:39:ARG:HA	1.72	0.42
5:4:6:SER:OG	5:4:23:ILE:HG21	2.19	0.42
8:9:141:ARG:HH11	8:9:142:PRO:HG2	1.83	0.42
10:B:78:U:OP1	32:X:7:ARG:NH2	2.52	0.42
10:B:512:G:OP1	10:B:512:G:H4'	2.18	0.42
10:B:964:C:O2'	10:B:2273:A:H1'	2.19	0.42
10:B:1014:A:O2'	10:B:1015:U:H5'	2.20	0.42
10:B:1021:A:O2'	10:B:1123:C:H5"	2.20	0.42
10:B:1276:A:O2'	10:B:1277:G:H5'	2.19	0.42
10:B:1779:U:C5	10:B:1784:A:N7	2.86	0.42
10:B:2294:G:OP2	23:O:9:ARG:HD2	2.19	0.42
10:B:2529:G:H5'	15:G:175:LYS:HB3	2.01	0.42
10:B:2597:G:H5"	11:C:239:PHE:CB	2.38	0.42
10:B:2653:U:H2'	10:B:2654:A:C8	2.55	0.42
10:B:2745:C:O2'	15:G:141:GLY:HA3	2.19	0.42
10:B:2768:U:H2'	10:B:2769:U:O4'	2.20	0.42
11:C:16:VAL:O	11:C:17:LYS:HB2	2.19	0.42
11:C:130:PRO:HA	11:C:187:CYS:O	2.20	0.42
11:C:265:PHE:O	11:C:266:ILE:HG12	2.20	0.42
12:D:16:THR:HG22	12:D:18:ASP:OD2	2.19	0.42
12:D:40:LEU:O	12:D:41:ALA:HB3	2.18	0.42
13:E:53:THR:HB	13:E:74:LYS:CE	2.49	0.42
14:F:35:LEU:O	14:F:152:ASP:HB2	2.20	0.42
15:G:23:ILE:O	15:G:33:THR:HA	2.18	0.42
15:G:50:THR:HG22	15:G:51:PHE:O	2.20	0.42
16:H:70:GLU:C	16:H:72:ILE:N	2.77	0.42
16:H:125:THR:HG22	16:H:146:VAL:HG12	2.02	0.42
17:I:99:LYS:HB2	17:I:140:GLU:OE1	2.19	0.42
18:J:17:VAL:CG2	18:J:139:VAL:HB	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:K:9:ASN:HB3	19:K:10:VAL:H	1.43	0.42
19:K:52:VAL:HG21	19:K:86:LEU:HD13	2.01	0.42
20:L:30:THR:HG21	20:L:38:GLN:NE2	2.35	0.42
20:L:77:ILE:HD11	20:L:111:ILE:HG23	2.01	0.42
23:O:8:ILE:O	23:O:11:ALA:HB3	2.19	0.42
23:O:29:HIS:HB2	23:O:36:TYR:CB	2.44	0.42
23:O:39:VAL:O	23:O:39:VAL:HG13	2.19	0.42
26:R:78:ARG:HA	26:R:88:GLY:O	2.20	0.42
29:U:10:VAL:O	29:U:11:ILE:HD13	2.20	0.42
29:U:42:LYS:O	29:U:57:ILE:HG13	2.18	0.42
30:V:45:ASP:O	30:V:46:LYS:HD2	2.19	0.42
31:W:38:ARG:HB3	31:W:68:PHE:CE1	2.54	0.42
31:W:57:THR:O	31:W:58:LEU:C	2.61	0.42
2:1:25:ASN:CG	10:B:2286:G:N7	2.77	0.42
2:1:27:ARG:HE	2:1:27:ARG:N	2.18	0.42
5:4:26:ILE:HD13	5:4:27:CYS:N	2.34	0.42
6:7:62:THR:CG2	8:9:373:LEU:HD13	2.49	0.42
8:9:119:LYS:CD	8:9:282:LEU:H	2.32	0.42
8:9:148:LEU:C	8:9:150:THR:N	2.77	0.42
8:9:226:GLY:C	8:9:259:ALA:HA	2.44	0.42
8:9:276:GLY:O	8:9:277:GLU:O	2.38	0.42
8:9:305:GLU:O	8:9:308:GLU:HB3	2.19	0.42
8:9:416:LEU:CD1	8:9:417:LEU:CD2	2.98	0.42
9:A:15:A:H1'	9:A:109:A:C5	2.54	0.42
9:A:23:G:C2	9:A:24:G:N1	2.87	0.42
9:A:114:C:H2'	9:A:115:A:C8	2.54	0.42
10:B:153:U:H2'	10:B:154:U:O4'	2.20	0.42
10:B:459:U:O2'	10:B:460:A:H5'	2.19	0.42
10:B:709:U:H2'	10:B:710:U:C6	2.54	0.42
10:B:957:C:H5	21:M:76:LYS:NZ	2.18	0.42
10:B:996:A:H2'	10:B:997:G:H8	1.84	0.42
10:B:1261:C:C2'	10:B:1262:A:O5'	2.68	0.42
10:B:1461:C:H2'	10:B:1462:C:C6	2.55	0.42
10:B:1717:A:H2'	10:B:1718:G:O4'	2.19	0.42
10:B:1736:U:H2'	10:B:1737:G:C8	2.55	0.42
11:C:53:ILE:CD1	11:C:218:THR:HA	2.50	0.42
12:D:4:LEU:HD23	12:D:77:ARG:CD	2.48	0.42
12:D:37:VAL:CB	12:D:46:ARG:HB2	2.41	0.42
12:D:181:ASP:OD1	12:D:184:ARG:HB3	2.19	0.42
13:E:147:LEU:C	13:E:148:ILE:HG23	2.45	0.42
17:I:102:ARG:HG3	17:I:141:ASP:HA	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:J:14:ASP:HB3	18:J:16:TYR:HD1	1.84	0.42
19:K:10:VAL:HG21	19:K:17:ARG:N	2.34	0.42
20:L:58:TYR:HD2	20:L:62:PRO:HG3	1.84	0.42
21:M:42:THR:OG1	21:M:91:TYR:HB2	2.20	0.42
21:M:54:THR:O	21:M:57:VAL:HG23	2.19	0.42
22:N:8:ARG:HD3	22:N:43:GLU:OE2	2.20	0.42
24:P:54:LEU:CD1	24:P:55:HIS:H	2.33	0.42
24:P:98:TYR:CD1	24:P:98:TYR:N	2.88	0.42
25:Q:94:LEU:HA	25:Q:97:ILE:CG1	2.50	0.42
27:S:57:ASN:C	27:S:59:GLU:H	2.27	0.42
28:T:59:ASN:OD1	28:T:84:TYR:HB2	2.19	0.42
28:T:62:VAL:HG23	28:T:63:VAL:N	2.32	0.42
30:V:57:TYR:CE2	30:V:77:VAL:HG21	2.54	0.42
31:W:41:GLY:HA2	31:W:65:LYS:HB3	2.02	0.42
31:W:43:LYS:H	31:W:75:ASN:CG	2.28	0.42
32:X:17:GLU:O	32:X:21:LEU:C	2.62	0.42
1:0:29:VAL:HB	1:0:34:GLY:HA2	2.02	0.42
2:1:14:ALA:HB1	2:1:48:TYR:CE2	2.55	0.42
8:9:121:GLY:O	8:9:123:PHE:N	2.52	0.42
8:9:138:ASP:OD1	8:9:192:ALA:N	2.53	0.42
8:9:141:ARG:HA	8:9:142:PRO:HD2	1.65	0.42
8:9:213:ASN:H	8:9:214:PRO:CD	2.33	0.42
8:9:375:ARG:O	8:9:377:GLU:N	2.38	0.42
8:9:411:GLN:H	10:B:485:C:H5”	1.85	0.42
8:9:418:LYS:HB3	10:B:490:C:N3	2.34	0.42
9:A:75:G:H21	30:V:88:HIS:CD2	2.38	0.42
9:A:102:G:H2’	9:A:103:U:H6	1.85	0.42
10:B:105:C:H2’	10:B:106:C:H6	1.84	0.42
10:B:161:A:C3’	10:B:162:U:H5”	2.36	0.42
10:B:242:G:O2’	10:B:243:U:P	2.78	0.42
10:B:285:G:H2’	10:B:286:U:C6	2.54	0.42
10:B:367:G:H2’	10:B:368:A:O4’	2.19	0.42
10:B:669:G:HO2’	10:B:670:A:H5’	1.85	0.42
10:B:727:A:O2’	10:B:728:G:H5’	2.19	0.42
10:B:1427:A:H4’	10:B:1428:C:O4’	2.20	0.42
10:B:1485:U:O2’	10:B:1486:U:H5’	2.20	0.42
10:B:1979:U:C2’	10:B:1980:G:H5’	2.50	0.42
10:B:2007:U:H2’	10:B:2008:C:C6	2.55	0.42
10:B:2520:C:O2’	10:B:2521:C:H5’	2.20	0.42
10:B:2692:G:O2’	10:B:2693:G:H5’	2.19	0.42
10:B:2849:U:O4	10:B:2867:G:C8	2.73	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C:63:ILE:HG21	11:C:90:ILE:CD1	2.50	0.42
11:C:125:PRO:HA	11:C:192:GLY:HA2	2.02	0.42
11:C:130:PRO:HA	11:C:188:ARG:HA	2.01	0.42
11:C:175:LEU:HD12	11:C:178:GLY:O	2.18	0.42
12:D:184:ARG:HD2	24:P:4:ILE:CG2	2.49	0.42
13:E:3:LEU:C	13:E:14:VAL:HG13	2.45	0.42
16:H:135:HIS:H	16:H:138:VAL:HB	1.85	0.42
18:J:10:THR:HB	18:J:43:GLU:OE2	2.20	0.42
18:J:11:VAL:O	18:J:11:VAL:HG22	2.19	0.42
18:J:32:LEU:O	18:J:36:LEU:HD22	2.19	0.42
20:L:69:ARG:H	20:L:69:ARG:HG2	1.35	0.42
20:L:123:ARG:CB	20:L:142:ILE:H	2.33	0.42
21:M:14:LYS:CB	21:M:72:PRO:HG3	2.50	0.42
21:M:71:LYS:NZ	21:M:92:TRP:H	2.17	0.42
24:P:25:VAL:C	24:P:27:VAL:N	2.77	0.42
24:P:111:GLU:CD	24:P:112:ARG:NH2	2.78	0.42
26:R:15:SER:HB2	26:R:16:GLU:H	1.68	0.42
28:T:68:LYS:HB2	28:T:68:LYS:HZ3	1.83	0.42
29:U:64:ILE:O	29:U:64:ILE:HG22	2.18	0.42
32:X:39:GLN:H	32:X:39:GLN:HG2	1.64	0.42
33:Y:36:GLU:O	33:Y:37:ARG:CB	2.67	0.42
4:3:28:LEU:CD1	4:3:33:THR:HG21	2.50	0.42
8:9:22:LEU:HB3	8:9:24:GLU:HB3	2.02	0.42
8:9:131:LYS:CG	8:9:184:TYR:HD2	2.33	0.42
8:9:222:ASP:OD2	8:9:223:ALA:N	2.53	0.42
8:9:308:GLU:O	8:9:309:SER:C	2.61	0.42
8:9:315:GLN:HB3	8:9:319:LEU:HD21	1.43	0.42
8:9:364:VAL:CA	8:9:368:MET:N	2.82	0.42
8:9:411:GLN:O	8:9:413:VAL:N	2.53	0.42
8:9:411:GLN:H	10:B:485:C:C5'	2.33	0.42
9:A:116:G:H4'	23:O:54:VAL:HG13	2.01	0.42
10:B:51:G:O2'	10:B:119:A:N6	2.53	0.42
10:B:242:G:H22	10:B:254:G:H2'	1.84	0.42
10:B:252:G:H2'	10:B:253:C:H6	1.84	0.42
10:B:557:C:H2'	10:B:558:U:H6	1.84	0.42
10:B:688:U:O2'	10:B:689:A:H5'	2.20	0.42
10:B:836:G:H2'	10:B:837:C:H6	1.84	0.42
10:B:1012:U:O4	18:J:30:THR:HG21	2.20	0.42
10:B:1704:C:H2'	10:B:1705:A:C8	2.55	0.42
10:B:1880:U:H2'	10:B:1881:C:C6	2.55	0.42
10:B:2007:U:H2'	10:B:2008:C:H6	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2105:U:H2'	10:B:2106:U:H6	1.85	0.42
10:B:2683:C:OP1	24:P:55:HIS:CD2	2.73	0.42
10:B:2716:C:O2'	10:B:2717:C:H5'	2.20	0.42
11:C:94:LEU:HD11	11:C:98:GLY:HA2	2.02	0.42
12:D:4:LEU:HD12	12:D:79:LEU:HD22	2.02	0.42
12:D:47:ALA:H	12:D:80:TRP:HB2	1.84	0.42
13:E:169:VAL:HG22	13:E:171:ASP:H	1.85	0.42
14:F:172:PHE:HB2	14:F:173:ASP:H	1.59	0.42
15:G:139:VAL:O	15:G:143:VAL:HG12	2.20	0.42
15:G:171:LYS:CD	15:G:174:LYS:HD3	2.37	0.42
20:L:2:ARG:NH1	20:L:2:ARG:HG3	2.35	0.42
20:L:111:ILE:HA	20:L:128:THR:CG2	2.50	0.42
24:P:34:GLY:O	24:P:35:SER:HB3	2.20	0.42
25:Q:82:LEU:HD21	25:Q:91:ARG:HB3	2.02	0.42
26:R:22:LEU:CD1	26:R:23:GLU:H	2.29	0.42
26:R:65:ALA:N	26:R:100:GLY:HA2	2.35	0.42
2:1:5:ARG:C	2:1:27:ARG:HH22	2.28	0.42
4:3:25:HIS:CE1	4:3:46:LYS:HB2	2.55	0.42
5:4:28:SER:O	5:4:29:ALA:HB3	2.19	0.42
8:9:223:ALA:O	8:9:253:ASP:OD2	2.38	0.42
8:9:257:GLY:C	8:9:259:ALA:N	2.78	0.42
8:9:386:LYS:O	8:9:387:GLU:C	2.62	0.42
10:B:27:G:H1'	10:B:513:A:H61	1.85	0.42
10:B:307:G:N1	10:B:310:A:OP2	2.52	0.42
10:B:606:U:H4'	10:B:658:U:H4'	2.02	0.42
10:B:1275:A:N7	22:N:16:HIS:CG	2.88	0.42
10:B:2016:U:H2'	10:B:2017:U:C6	2.54	0.42
10:B:2026:U:C2	10:B:2027:G:C8	3.08	0.42
10:B:2323:G:C2'	10:B:2324:U:H5'	2.49	0.42
10:B:2581:G:OP1	12:D:134:HIS:CD2	2.73	0.42
10:B:2660:A:H2'	10:B:2661:G:O4'	2.19	0.42
10:B:2893:A:H4'	10:B:2894:G:C5'	2.50	0.42
11:C:163:ILE:C	11:C:164:VAL:CG2	2.93	0.42
11:C:259:ASN:HB3	11:C:260:LYS:H	1.55	0.42
18:J:33:ALA:O	18:J:36:LEU:HB2	2.20	0.42
18:J:107:GLY:C	18:J:109:LEU:H	2.26	0.42
19:K:70:ARG:CB	19:K:76:VAL:HG22	2.49	0.42
20:L:126:ARG:O	20:L:127:VAL:CG2	2.67	0.42
21:M:67:VAL:HG23	21:M:100:LYS:HG2	2.02	0.42
22:N:54:LEU:HD11	22:N:65:LEU:HB3	2.01	0.42
23:O:29:HIS:C	23:O:30:ARG:HD3	2.45	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:Q:98:ALA:HA	25:Q:105:PHE:CG	2.55	0.42
28:T:19:LYS:NZ	28:T:22:THR:HG23	2.34	0.42
28:T:61:LEU:HB2	28:T:82:LYS:CB	2.49	0.42
29:U:78:LYS:HD2	29:U:96:LYS:CG	2.49	0.42
31:W:42:THR:H	31:W:65:LYS:CA	2.29	0.42
1:0:48:TYR:CD2	1:0:48:TYR:C	2.98	0.41
5:4:1:MET:HE3	5:4:2:LYS:HG3	2.02	0.41
8:9:29:ASP:CB	8:9:33:GLU:OE2	2.58	0.41
8:9:130:LYS:HB3	8:9:185:ASP:HB2	2.02	0.41
8:9:139:VAL:CB	8:9:166:GLN:HA	2.50	0.41
8:9:353:LYS:O	8:9:354:LEU:C	2.63	0.41
10:B:476:G:H22	10:B:479:A:C5'	2.33	0.41
10:B:1143:A:H61	18:J:27:ARG:HA	1.84	0.41
10:B:1250:G:C5'	25:Q:5:ARG:HD3	2.50	0.41
10:B:1537:G:H2'	10:B:1538:G:O4'	2.20	0.41
10:B:1601:G:OP1	28:T:62:VAL:HG21	2.20	0.41
10:B:2223:G:O2'	10:B:2224:G:H5'	2.19	0.41
10:B:2553:G:H2'	10:B:2554:U:H4'	2.01	0.41
10:B:2868:A:H2'	10:B:2869:G:C8	2.55	0.41
11:C:52:HIS:O	11:C:53:ILE:HB	2.19	0.41
11:C:86:ARG:C	11:C:155:ARG:NH1	2.77	0.41
11:C:267:VAL:HG11	11:C:269:ARG:NH2	2.35	0.41
12:D:22:ILE:O	12:D:22:ILE:CG1	2.63	0.41
12:D:116:LYS:HB2	12:D:165:MET:CB	2.49	0.41
13:E:4:VAL:HA	13:E:14:VAL:CG1	2.50	0.41
13:E:149:ILE:HD11	13:E:187:VAL:N	2.21	0.41
13:E:169:VAL:O	13:E:170:ARG:HB2	2.20	0.41
15:G:155:PRO:C	15:G:171:LYS:HB3	2.44	0.41
16:H:97:ARG:H	16:H:97:ARG:HG2	1.39	0.41
16:H:127:GLU:HB2	16:H:143:ILE:CG2	2.49	0.41
18:J:120:ARG:HB3	18:J:121:LYS:NZ	2.34	0.41
19:K:99:ILE:O	19:K:119:ALA:HB2	2.20	0.41
20:L:79:LEU:H	20:L:113:ALA:HB3	1.83	0.41
21:M:17:ASN:O	21:M:17:ASN:CG	2.62	0.41
22:N:10:LEU:O	22:N:11:ASN:ND2	2.53	0.41
25:Q:26:ALA:HA	25:Q:30:VAL:HG23	2.02	0.41
25:Q:48:ASP:O	25:Q:51:GLN:HB2	2.19	0.41
25:Q:77:LYS:O	25:Q:80:ASN:HB3	2.20	0.41
25:Q:81:GLY:O	25:Q:85:ALA:HB2	2.20	0.41
25:Q:101:ASP:HB3	25:Q:104:ALA:HB3	2.02	0.41
28:T:19:LYS:HE3	28:T:23:ALA:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:U:59:GLU:HG3	29:U:62:ALA:CB	2.43	0.41
34:Z:34:LEU:H	34:Z:47:LYS:HZ2	1.67	0.41
2:1:40:PRO:HD2	2:1:45:HIS:HA	2.02	0.41
3:2:17:GLY:C	3:2:19:ARG:H	2.24	0.41
8:9:64:VAL:HG23	8:9:73:GLU:HG2	1.98	0.41
8:9:145:ILE:CD1	8:9:161:PRO:HG3	1.78	0.41
8:9:152:ALA:O	8:9:157:VAL:N	2.43	0.41
8:9:200:ALA:HA	8:9:203:ASP:HB3	2.02	0.41
8:9:219:PHE:O	8:9:220:VAL:HG13	2.19	0.41
8:9:373:LEU:HD22	8:9:376:MET:HE2	2.02	0.41
8:9:404:ALA:C	8:9:407:GLY:H	2.27	0.41
9:A:103:U:O2'	9:A:104:A:H5'	2.20	0.41
10:B:39:G:H2'	10:B:40:U:C6	2.55	0.41
10:B:144:A:O2'	28:T:4:GLU:HB2	2.20	0.41
10:B:222:A:H61	10:B:232:G:H1'	1.86	0.41
10:B:593:U:H2'	10:B:594:U:C6	2.55	0.41
10:B:1407:G:H2'	10:B:1408:G:H8	1.85	0.41
10:B:1668:A:N3	10:B:1670:C:C4	2.88	0.41
10:B:1704:C:O2'	10:B:1705:A:H5'	2.20	0.41
10:B:1764:C:H2'	10:B:1765:U:H6	1.85	0.41
10:B:2012:G:C5'	27:S:96:ILE:HD11	2.50	0.41
10:B:2028:U:H2'	10:B:2029:G:O4'	2.19	0.41
10:B:2389:G:H5"	10:B:2390:U:O4'	2.20	0.41
10:B:2648:G:H2'	10:B:2649:C:H6	1.85	0.41
10:B:2651:C:O2'	10:B:2652:C:H5'	2.20	0.41
10:B:2787:C:H2'	10:B:2788:C:C6	2.55	0.41
10:B:2869:G:H2'	10:B:2870:C:H6	1.83	0.41
13:E:83:VAL:HG23	13:E:84:THR:N	2.35	0.41
13:E:198:GLU:HB3	13:E:199:MET:H	1.55	0.41
14:F:26:GLN:HG2	14:F:26:GLN:O	2.21	0.41
14:F:36:ASN:ND2	14:F:87:LYS:H	2.19	0.41
15:G:126:THR:HG23	15:G:129:GLU:H	1.84	0.41
16:H:4:ILE:HA	16:H:17:ASP:O	2.19	0.41
17:I:60:VAL:HG22	17:I:66:PHE:HB3	2.02	0.41
17:I:109:ALA:HA	17:I:128:ILE:HD12	2.02	0.41
18:J:14:ASP:H	18:J:53:TYR:HD1	1.68	0.41
21:M:74:THR:HA	21:M:88:ASN:HA	2.01	0.41
21:M:77:PRO:HD3	21:M:86:LYS:CD	2.47	0.41
23:O:9:ARG:C	23:O:11:ALA:H	2.28	0.41
27:S:82:MET:H	27:S:98:LYS:HB3	1.85	0.41
28:T:33:LYS:O	28:T:33:LYS:HD2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:U:46:LYS:HE2	29:U:52:ASN:O	2.20	0.41
29:U:82:VAL:HB	29:U:94:PHE:CB	2.50	0.41
32:X:8:GLU:OE2	32:X:9:LYS:N	2.53	0.41
1:0:19:ASP:CG	1:0:20:ALA:N	2.77	0.41
3:2:13:ASN:ND2	10:B:126:A:OP2	2.52	0.41
6:7:63:VAL:HA	8:9:369:ASP:CG	2.45	0.41
6:7:67:LYS:O	8:9:376:MET:O	2.38	0.41
8:9:12:THR:O	8:9:14:ARG:N	2.45	0.41
8:9:42:ASP:HB3	8:9:255:ARG:O	2.20	0.41
8:9:103:VAL:CG2	8:9:187:LEU:O	2.68	0.41
8:9:103:VAL:HG11	8:9:188:LEU:HD23	2.02	0.41
8:9:106:ALA:HB2	8:9:205:ILE:HD13	2.02	0.41
8:9:143:ALA:O	8:9:144:ALA:C	2.64	0.41
8:9:145:ILE:O	8:9:148:LEU:CG	2.65	0.41
8:9:246:VAL:HA	8:9:270:ILE:HG23	2.02	0.41
8:9:303:LEU:HD21	8:9:349:SER:CA	2.08	0.41
8:9:364:VAL:CB	8:9:368:MET:CB	2.74	0.41
9:A:46:A:H4'	23:O:1:MET:HB2	2.01	0.41
9:A:115:A:H4'	23:O:55:GLU:OE2	2.21	0.41
10:B:27:G:H8	10:B:27:G:O5'	2.04	0.41
10:B:104:A:H2'	10:B:105:C:C6	2.53	0.41
10:B:136:G:N1	28:T:3:ARG:CZ	2.84	0.41
10:B:311:A:HO2'	10:B:312:G:P	2.43	0.41
10:B:360:U:H2'	10:B:361:G:C1'	2.51	0.41
10:B:545:U:H2'	10:B:547:A:OP1	2.20	0.41
10:B:567:U:H2'	10:B:568:U:O4'	2.20	0.41
10:B:598:U:H5'	20:L:21:ARG:HB2	2.03	0.41
10:B:900:A:H2'	10:B:901:C:C6	2.55	0.41
10:B:915:C:H3'	10:B:916:G:H8	1.85	0.41
10:B:998:C:H2'	10:B:999:U:O4'	2.20	0.41
10:B:1142:A:C4	10:B:1144:A:C8	3.08	0.41
10:B:1278:C:OP1	22:N:36:THR:HG23	2.21	0.41
10:B:1446:C:H2'	10:B:1447:C:C6	2.56	0.41
10:B:1791:A:N6	10:B:1828:G:H1'	2.35	0.41
10:B:2072:C:H2'	10:B:2073:C:H6	1.84	0.41
10:B:2261:C:OP2	31:W:13:ARG:HB2	2.20	0.41
10:B:2514:U:H2'	10:B:2515:C:C6	2.55	0.41
10:B:2686:G:H2'	10:B:2687:U:H6	1.82	0.41
10:B:2714:G:O2'	10:B:2715:C:H5'	2.20	0.41
11:C:135:PRO:O	11:C:136:VAL:C	2.64	0.41
12:D:14:ILE:HD12	24:P:78:PRO:HB2	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:D:67:HIS:O	12:D:68:PHE:HB2	2.20	0.41
12:D:157:LYS:HD2	18:J:80:HIS:HA	2.01	0.41
13:E:154:ASP:OD1	13:E:158:PHE:HB2	2.20	0.41
17:I:2:LYS:C	17:I:3:LYS:HD2	2.45	0.41
17:I:70:THR:O	17:I:70:THR:CG2	2.68	0.41
17:I:79:LEU:HD23	17:I:108:ILE:HD12	2.03	0.41
20:L:76:GLU:HA	20:L:76:GLU:OE1	2.20	0.41
23:O:35:ILE:HG21	23:O:71:ALA:HA	2.03	0.41
25:Q:49:ARG:HE	25:Q:49:ARG:HB3	1.52	0.41
27:S:6:LYS:HA	27:S:104:THR:CA	2.43	0.41
29:U:4:ILE:C	29:U:4:ILE:HD13	2.46	0.41
34:Z:39:LYS:HD3	34:Z:61:ASN:CG	2.45	0.41
4:3:28:LEU:HD21	4:3:33:THR:OG1	2.20	0.41
4:3:38:LYS:H	4:3:38:LYS:HD2	1.85	0.41
5:4:1:MET:HG3	5:4:2:LYS:HD2	2.02	0.41
7:8:48:G:H21	8:9:381:ASN:HD21	1.64	0.41
8:9:43:VAL:N	8:9:258:ALA:CB	2.76	0.41
8:9:43:VAL:HA	8:9:258:ALA:H	1.84	0.41
8:9:51:PHE:O	8:9:55:VAL:HG23	2.21	0.41
8:9:83:VAL:O	8:9:84:ALA:C	2.63	0.41
8:9:265:ILE:O	8:9:266:THR:HG23	2.21	0.41
8:9:280:GLU:C	8:9:282:LEU:H	2.28	0.41
8:9:300:VAL:HB	8:9:303:LEU:C	2.45	0.41
8:9:335:LEU:CD1	8:9:338:LEU:HD22	2.50	0.41
8:9:398:ARG:CG	8:9:398:ARG:NH1	2.80	0.41
9:A:45:A:O4'	14:F:91:ARG:CZ	2.68	0.41
10:B:19:A:O2'	10:B:20:C:H5'	2.21	0.41
10:B:153:U:H2'	10:B:154:U:H6	1.84	0.41
10:B:559:G:H2'	10:B:560:C:O4'	2.20	0.41
10:B:600:G:H1'	13:E:100:MET:SD	2.60	0.41
10:B:997:G:OP1	25:Q:92:LYS:HB3	2.20	0.41
10:B:1064:C:O2'	10:B:1065:U:H5'	2.20	0.41
10:B:1064:C:C1'	17:I:90:GLY:HA2	2.50	0.41
10:B:1330:C:H2'	10:B:1331:G:H8	1.85	0.41
10:B:1556:C:H2'	10:B:1557:C:C6	2.56	0.41
10:B:1668:A:O2'	10:B:1674:G:N7	2.48	0.41
10:B:1710:G:O2'	10:B:1711:A:H5'	2.20	0.41
10:B:1909:C:H2'	10:B:1910:G:C8	2.55	0.41
10:B:2182:U:H2'	10:B:2183:A:C8	2.54	0.41
10:B:2723:C:H2'	10:B:2724:U:O4'	2.19	0.41
10:B:2755:C:H6	10:B:2755:C:O5'	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:2798:U:H1'	10:B:2800:A:N6	2.35	0.41
11:C:110:LYS:HB3	11:C:111:ALA:H	1.40	0.41
11:C:194:VAL:HB	11:C:195:GLY:H	1.59	0.41
12:D:159:LYS:O	12:D:160:LYS:HB2	2.19	0.41
13:E:61:ARG:NH1	13:E:65:THR:HG23	2.34	0.41
13:E:161:ALA:HB1	13:E:168:ASP:O	2.21	0.41
14:F:166:ARG:HB2	14:F:167:ALA:H	1.75	0.41
15:G:57:TYR:O	15:G:58:ALA:C	2.64	0.41
16:H:30:LEU:O	16:H:30:LEU:HD12	2.21	0.41
16:H:50:ARG:HD3	16:H:54:LEU:CD1	2.50	0.41
16:H:108:VAL:C	16:H:110:VAL:N	2.77	0.41
17:I:3:LYS:CD	17:I:3:LYS:HE3	2.18	0.41
18:J:5:THR:HG21	18:J:7:LYS:HZ2	1.86	0.41
24:P:28:LYS:HD3	24:P:44:GLY:N	2.34	0.41
24:P:38:ARG:NH1	24:P:39:LEU:HA	2.35	0.41
25:Q:82:LEU:HB2	25:Q:112:ALA:HB2	2.03	0.41
27:S:26:GLY:C	27:S:27:LYS:HD2	2.46	0.41
28:T:38:ALA:O	28:T:39:THR:O	2.38	0.41
29:U:13:LEU:HD11	29:U:69:VAL:H	1.85	0.41
7:8:30:G:C6	7:8:78:G:O6	2.73	0.41
8:9:76:LYS:O	8:9:80:ASN:CB	2.63	0.41
8:9:232:THR:O	8:9:233:ALA:C	2.63	0.41
8:9:288:ASP:O	8:9:291:ALA:HA	2.19	0.41
8:9:318:LYS:HD3	8:9:321:SER:HB2	1.26	0.41
8:9:370:ASP:N	8:9:373:LEU:HG	2.36	0.41
8:9:399:LYS:O	8:9:402:ILE:N	2.53	0.41
10:B:140:C:H4'	10:B:141:G:C2	2.55	0.41
10:B:324:A:N6	10:B:338:G:H2'	2.36	0.41
10:B:453:A:H5"	36:B:5491:HOH:O	2.20	0.41
10:B:639:U:H2'	10:B:640:C:H6	1.80	0.41
10:B:909:A:H5"	21:M:18:ARG:NH2	2.35	0.41
10:B:1534:U:HO2'	10:B:1535:A:H8	1.67	0.41
10:B:1561:C:O2'	10:B:1562:U:H5'	2.21	0.41
10:B:1733:G:H2'	10:B:1734:G:H8	1.86	0.41
10:B:1904:G:O2'	10:B:1905:C:H5'	2.21	0.41
10:B:2086:U:H2'	10:B:2087:G:H8	1.86	0.41
10:B:2144:G:C2	10:B:2146:C:H5'	2.56	0.41
10:B:2251:G:OP2	10:B:2251:G:H8	2.03	0.41
10:B:2787:C:H5'	12:D:65:ALA:CB	2.50	0.41
11:C:143:VAL:HG12	11:C:144:GLU:H	1.84	0.41
12:D:59:ARG:CZ	12:D:63:PRO:HG2	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:D:146:ILE:H	12:D:146:ILE:CD1	2.34	0.41
15:G:3:VAL:O	15:G:4:ALA:HB2	2.20	0.41
16:H:29:PHE:O	16:H:31:VAL:N	2.53	0.41
17:I:89:SER:HA	17:I:97:VAL:CG1	2.50	0.41
17:I:131:THR:O	17:I:135:MET:HG3	2.20	0.41
18:J:72:LYS:HE3	18:J:74:TYR:CE1	2.55	0.41
18:J:135:GLN:C	18:J:137:PRO:HD2	2.46	0.41
21:M:33:LEU:H	21:M:101:VAL:HB	1.85	0.41
22:N:63:ARG:HA	22:N:80:PHE:CE1	2.54	0.41
24:P:65:ASN:H	24:P:71:ARG:HA	1.85	0.41
25:Q:93:ILE:C	25:Q:95:ALA:H	2.28	0.41
28:T:87:LEU:HD22	28:T:93:LEU:HD11	2.02	0.41
29:U:46:LYS:HA	29:U:47:PRO:HD3	1.63	0.41
30:V:42:LEU:H	30:V:42:LEU:HG	1.66	0.41
30:V:65:VAL:O	30:V:66:ASP:HB3	2.19	0.41
31:W:16:GLU:O	31:W:17:ALA:C	2.64	0.41
31:W:53:GLY:O	31:W:54:ARG:C	2.64	0.41
2:1:9:LYS:HA	2:1:24:LYS:CG	2.44	0.41
4:3:29:ARG:O	4:3:31:ILE:N	2.53	0.41
4:3:39:ARG:HD3	4:3:39:ARG:HA	1.76	0.41
5:4:26:ILE:CB	5:4:35:GLN:HG2	2.50	0.41
8:9:283:GLU:OE2	8:9:297:MET:HE1	2.17	0.41
8:9:378:ALA:O	8:9:379:ILE:O	2.39	0.41
8:9:414:ASN:O	8:9:416:LEU:N	2.47	0.41
10:B:5:A:H2'	10:B:6:A:C8	2.56	0.41
10:B:26:G:H2'	10:B:27:G:C1'	2.51	0.41
10:B:144:A:C5	28:T:3:ARG:NH1	2.89	0.41
10:B:212:G:H2'	10:B:213:A:H8	1.84	0.41
10:B:265:A:O2'	10:B:266:G:H4'	2.20	0.41
10:B:336:C:H5"	29:U:3:LYS:HZ1	1.84	0.41
10:B:393:C:O2'	10:B:394:C:H5'	2.21	0.41
10:B:419:U:H2'	10:B:420:C:H6	1.84	0.41
10:B:494:G:O2'	10:B:495:G:H5'	2.21	0.41
10:B:523:C:O2'	10:B:524:G:H5'	2.20	0.41
10:B:635:C:O2'	10:B:639:U:H5"	2.20	0.41
10:B:678:C:O2'	10:B:679:C:H5'	2.20	0.41
10:B:742:A:O2'	10:B:743:A:H5'	2.21	0.41
10:B:937:C:H2'	10:B:938:G:H8	1.85	0.41
10:B:1079:C:C2	10:B:1080:A:C8	3.08	0.41
10:B:1114:C:H2'	10:B:1115:G:O4'	2.21	0.41
10:B:1213:A:C6	10:B:1237:A:H1'	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:1292:G:H2'	10:B:1293:C:H6	1.84	0.41
10:B:1529:G:H2'	10:B:1530:G:H8	1.84	0.41
10:B:2184:A:H2'	10:B:2185:U:C6	2.56	0.41
10:B:2194:U:O2'	10:B:2195:U:H5'	2.20	0.41
10:B:2313:C:O2'	14:F:34:THR:HG21	2.21	0.41
10:B:2331:G:H2'	10:B:2332:C:H6	1.86	0.41
10:B:2443:C:OP1	13:E:63:LYS:HG3	2.20	0.41
10:B:2445:G:O2'	10:B:2446:G:H5'	2.20	0.41
10:B:2492:U:O2'	10:B:2493:U:H5'	2.20	0.41
10:B:2758:A:H2'	10:B:2759:G:H5'	2.03	0.41
11:C:55:GLY:O	11:C:56:GLY:C	2.63	0.41
11:C:61:TYR:CD2	11:C:84:PRO:HD2	2.55	0.41
11:C:115:ILE:C	11:C:116:GLN:HG3	2.46	0.41
11:C:224:MET:HG3	11:C:233:GLY:H	1.84	0.41
11:C:225:ASN:O	11:C:227:VAL:HG12	2.21	0.41
12:D:29:VAL:CG2	12:D:30:GLU:H	2.24	0.41
12:D:59:ARG:NH2	12:D:63:PRO:HG2	2.35	0.41
12:D:146:ILE:HG21	12:D:155:VAL:HA	2.02	0.41
12:D:177:VAL:HG23	12:D:188:LEU:O	2.21	0.41
14:F:29:ARG:HB2	14:F:158:THR:CG2	2.50	0.41
14:F:62:GLN:HB3	14:F:63:LYS:H	1.68	0.41
15:G:36:LEU:HD22	15:G:40:VAL:CG1	2.50	0.41
16:H:55:GLU:O	16:H:59:ALA:HB2	2.20	0.41
18:J:135:GLN:HE21	18:J:138:GLN:N	2.13	0.41
19:K:35:VAL:O	19:K:35:VAL:HG23	2.21	0.41
20:L:103:ILE:HG13	20:L:106:GLU:OE2	2.20	0.41
21:M:68:PHE:HA	21:M:69:PRO:HD2	1.79	0.41
22:N:3:HIS:HB2	36:N:6618:HOH:O	2.20	0.41
23:O:18:LEU:HD13	31:W:76:ARG:HH21	1.85	0.41
24:P:40:GLN:HB2	24:P:41:ALA:H	1.52	0.41
24:P:42:PHE:O	24:P:43:GLU:HG2	2.21	0.41
25:Q:92:LYS:O	25:Q:93:ILE:HG23	2.20	0.41
28:T:19:LYS:C	28:T:22:THR:HG22	2.46	0.41
29:U:41:VAL:O	29:U:41:VAL:HG13	2.21	0.41
29:U:48:VAL:HG13	29:U:50:ALA:C	2.45	0.41
33:Y:6:ILE:HG22	33:Y:56:VAL:HG11	2.03	0.41
34:Z:6:HIS:HB3	34:Z:51:VAL:HG22	2.02	0.41
1:0:45:ASP:O	1:0:45:ASP:CG	2.64	0.41
3:2:3:ARG:HH21	3:2:4:THR:HG23	1.86	0.41
4:3:12:ARG:HB3	4:3:23:HIS:CB	2.51	0.41
5:4:7:VAL:O	5:4:8:LYS:HB2	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:47:VAL:O	8:9:49:ARG:N	2.54	0.41
9:A:53:A:O2'	9:A:54:G:H5'	2.20	0.41
10:B:299:A:N7	10:B:322:A:C2	2.88	0.41
10:B:381:G:O2'	10:B:382:A:H5'	2.20	0.41
10:B:1001:A:H2'	10:B:1002:G:O4'	2.21	0.41
10:B:1541:C:H2'	10:B:1542:U:H6	1.85	0.41
10:B:1784:A:H4'	10:B:1785:A:O5'	2.19	0.41
10:B:1799:G:N2	10:B:1818:U:O2'	2.54	0.41
10:B:1812:U:H2'	10:B:1813:G:C8	2.55	0.41
10:B:1917:U:O2'	10:B:1918:A:H5'	2.21	0.41
10:B:1921:G:O2'	10:B:1922:G:H5'	2.20	0.41
10:B:2033:A:H1'	10:B:2035:G:OP2	2.21	0.41
10:B:2199:A:H3'	10:B:2200:C:H6	1.85	0.41
10:B:2314:A:H2'	10:B:2315:G:C8	2.56	0.41
10:B:2316:G:O2'	10:B:2317:A:H5'	2.20	0.41
10:B:2347:C:OP1	10:B:2347:C:H4'	2.20	0.41
10:B:2539:C:C2'	10:B:2540:C:H5'	2.50	0.41
12:D:34:VAL:HG11	12:D:50:VAL:CG2	2.49	0.41
12:D:128:ARG:C	12:D:129:THR:HG22	2.45	0.41
13:E:7:ASP:OD2	13:E:118:LEU:HB3	2.21	0.41
13:E:36:ALA:C	13:E:38:GLY:N	2.78	0.41
14:F:96:TRP:C	14:F:98:PHE:H	2.26	0.41
14:F:102:LEU:O	14:F:107:VAL:HB	2.20	0.41
14:F:130:GLY:HA2	14:F:152:ASP:HA	2.03	0.41
15:G:12:ALA:O	15:G:14:VAL:N	2.49	0.41
18:J:18:VAL:HG23	18:J:54:ILE:HG23	2.01	0.41
19:K:68:GLY:HA2	19:K:78:ARG:HA	2.02	0.41
21:M:9:PHE:HD1	21:M:9:PHE:H	1.68	0.41
22:N:14:SER:HA	22:N:17:ARG:HH22	1.85	0.41
22:N:20:MET:HA	22:N:23:ASN:HD22	1.86	0.41
24:P:18:SER:C	24:P:20:ARG:N	2.79	0.41
24:P:50:ARG:HH11	24:P:50:ARG:CB	2.23	0.41
25:Q:50:ARG:HH22	25:Q:53:LYS:HE3	1.85	0.41
26:R:41:ILE:O	26:R:43:ASN:N	2.53	0.41
28:T:21:SER:HA	28:T:24:MET:SD	2.61	0.41
28:T:40:LYS:H	28:T:40:LYS:HG3	1.66	0.41
29:U:49:PRO:CG	29:U:50:ALA:H	2.34	0.41
31:W:36:ILE:HG22	31:W:67:LYS:HZ3	1.86	0.41
32:X:44:LYS:HG3	32:X:47:ARG:CG	2.51	0.41
2:1:6:GLU:O	2:1:27:ARG:NH2	2.54	0.41
3:2:19:ARG:NE	10:B:125:A:OP2	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:110:GLY:HA2	8:9:113:LYS:NZ	2.35	0.41
8:9:114:THR:CG2	8:9:115:THR:H	2.33	0.41
8:9:200:ALA:HA	8:9:203:ASP:CB	2.51	0.41
8:9:338:LEU:HG	8:9:339:ARG:N	2.35	0.41
8:9:379:ILE:HD11	8:9:413:VAL:HG22	2.01	0.41
8:9:380:ILE:HD12	8:9:388:ARG:HD3	2.03	0.41
10:B:162:U:O2'	10:B:163:C:H5'	2.20	0.41
10:B:418:C:H2'	10:B:419:U:H6	1.86	0.41
10:B:877:A:C6	10:B:898:C:H2'	2.56	0.41
10:B:1014:A:H2'	10:B:1015:U:C6	2.56	0.41
10:B:1126:A:H4'	10:B:1127:A:O5'	2.21	0.41
10:B:1145:C:O2'	10:B:1146:C:H5'	2.21	0.41
10:B:1238:G:O2'	10:B:1239:G:H5'	2.21	0.41
10:B:1268:A:H2'	10:B:1269:A:O4'	2.20	0.41
10:B:1434:A:H4'	10:B:1434:A:OP1	2.21	0.41
10:B:1790:C:OP2	11:C:219:VAL:HB	2.21	0.41
10:B:1797:G:H2'	10:B:1798:U:H6	1.85	0.41
10:B:2091:C:H5'	34:Z:49:ARG:CD	2.51	0.41
10:B:2376:A:N3	23:O:111:ARG:NH2	2.68	0.41
10:B:2700:A:H2	22:N:71:ARG:NH2	2.18	0.41
10:B:2784:U:O2'	10:B:2785:C:H5'	2.20	0.41
10:B:2850:A:H2'	10:B:2851:A:H8	1.85	0.41
11:C:162:GLN:NE2	11:C:174:ARG:NH1	2.69	0.41
12:D:146:ILE:CG1	12:D:155:VAL:HG13	2.50	0.41
12:D:180:VAL:HG23	12:D:181:ASP:H	1.85	0.41
14:F:121:PHE:HB2	14:F:162:ASP:OD2	2.19	0.41
14:F:140:ILE:C	14:F:142:TYR:N	2.78	0.41
15:G:44:HIS:HB2	15:G:49:LEU:HD23	2.03	0.41
17:I:49:GLU:HG3	17:I:52:LEU:HD12	2.02	0.41
23:O:79:ALA:O	23:O:82:ALA:HB3	2.20	0.41
28:T:95:PHE:HD1	28:T:97:GLY:N	2.19	0.41
30:V:30:ILE:HD12	30:V:38:LEU:HD23	2.03	0.41
31:W:59:PHE:N	31:W:59:PHE:CD1	2.88	0.41
2:1:47:ILE:CG2	2:1:48:TYR:H	2.12	0.41
4:3:49:VAL:HG13	4:3:51:LYS:N	2.28	0.41
8:9:17:SER:C	32:X:24:GLU:OE2	2.64	0.41
8:9:67:SER:CA	28:T:93:LEU:N	2.53	0.41
8:9:168:PRO:C	8:9:171:ILE:HG22	2.46	0.41
8:9:221:VAL:HG22	8:9:222:ASP:N	2.36	0.41
8:9:229:ALA:O	8:9:230:ALA:O	2.39	0.41
8:9:243:THR:O	8:9:269:PRO:HG3	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:257:GLY:O	8:9:260:LEU:CD1	2.69	0.41
8:9:265:ILE:C	8:9:266:THR:HG23	2.46	0.41
8:9:338:LEU:C	8:9:341:MET:SD	2.97	0.41
8:9:375:ARG:C	8:9:378:ALA:CB	2.94	0.41
8:9:399:LYS:HD2	8:9:413:VAL:CG1	2.51	0.41
8:9:399:LYS:HD2	8:9:413:VAL:HG11	2.02	0.41
9:A:82:U:O3'	33:Y:16:LEU:HD11	2.20	0.41
10:B:79:C:O2'	10:B:346:A:C8	2.74	0.41
10:B:136:G:P	10:B:136:G:H8	2.43	0.41
10:B:143:C:C2	28:T:3:ARG:NH1	2.89	0.41
10:B:251:A:H2'	10:B:252:G:O4'	2.21	0.41
10:B:301:G:H1'	10:B:302:C:O5'	2.20	0.41
10:B:444:C:H2'	10:B:445:C:C6	2.56	0.41
10:B:448:U:C5'	13:E:79:ARG:NH2	2.82	0.41
10:B:565:C:H4'	10:B:1253:A:C6	2.56	0.41
10:B:631:A:O2'	20:L:66:PHE:HB3	2.21	0.41
10:B:678:C:H2'	10:B:679:C:H6	1.86	0.41
10:B:764:A:H5"	11:C:208:GLY:CA	2.50	0.41
10:B:834:G:H2'	10:B:835:C:H6	1.86	0.41
10:B:899:A:C2	10:B:900:A:H1'	2.56	0.41
10:B:1439:A:N6	10:B:1440:U:O2	2.48	0.41
10:B:1516:G:O2'	10:B:1517:G:H5'	2.20	0.41
10:B:1682:G:C4	10:B:1757:A:H1'	2.56	0.41
10:B:1820:U:N3	11:C:197:ALA:HB1	2.27	0.41
10:B:1914:C:H6	10:B:1914:C:H2'	1.70	0.41
10:B:1945:G:C4	10:B:1946:U:C5	3.09	0.41
10:B:1989:G:H2'	10:B:1990:C:O4'	2.21	0.41
10:B:2025:C:P	12:D:154:LYS:HZ1	2.43	0.41
10:B:2025:C:OP2	12:D:154:LYS:NZ	2.53	0.41
10:B:2076:U:OP2	10:B:2238:G:N2	2.51	0.41
10:B:2300:C:H2'	10:B:2301:C:C6	2.56	0.41
10:B:2323:G:O2'	10:B:2324:U:H5'	2.21	0.41
10:B:2377:A:H2'	10:B:2378:A:C8	2.56	0.41
10:B:2479:U:O5'	10:B:2479:U:H6	2.03	0.41
10:B:2674:G:H4'	19:K:30:ARG:CD	2.47	0.41
10:B:2691:C:H2'	10:B:2692:G:H8	1.86	0.41
10:B:2700:A:H2'	10:B:2701:U:C6	2.56	0.41
10:B:2705:A:H2'	10:B:2706:A:O4'	2.21	0.41
10:B:2886:A:C2	10:B:2887:A:N7	2.89	0.41
11:C:53:ILE:HD13	11:C:218:THR:HA	2.03	0.41
11:C:131:MET:HE1	11:C:173:LEU:CG	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:C:173:LEU:HD12	11:C:183:VAL:CG1	2.51	0.41
11:C:203:VAL:O	11:C:204:LEU:C	2.63	0.41
11:C:250:GLN:C	11:C:251:THR:OG1	2.64	0.41
12:D:15:PHE:C	12:D:17:GLU:N	2.79	0.41
12:D:18:ASP:C	12:D:20:VAL:N	2.69	0.41
12:D:81:GLU:O	12:D:82:PHE:CB	2.68	0.41
12:D:107:VAL:HG23	12:D:175:LEU:O	2.20	0.41
12:D:129:THR:OG1	12:D:130:GLN:N	2.54	0.41
13:E:118:LEU:O	13:E:119:ILE:HD13	2.21	0.41
14:F:121:PHE:CE2	14:F:127:TYR:HB2	2.56	0.41
15:G:124:CYS:C	15:G:126:THR:H	2.29	0.41
16:H:60:GLU:HA	16:H:63:ALA:HB3	2.03	0.41
17:I:18:ASN:N	17:I:19:PRO:CD	2.84	0.41
17:I:140:GLU:O	17:I:140:GLU:HG2	2.21	0.41
18:J:64:VAL:HG21	18:J:69:ARG:HG2	2.03	0.41
18:J:73:VAL:HG11	18:J:75:TYR:CE2	2.56	0.41
19:K:13:ASN:HB2	19:K:14:SER:H	1.56	0.41
19:K:70:ARG:CD	19:K:76:VAL:HG22	2.51	0.41
19:K:107:LEU:C	19:K:109:SER:N	2.79	0.41
20:L:19:LEU:N	20:L:19:LEU:CD2	2.81	0.41
21:M:41:LEU:HG	21:M:46:ILE:HD11	2.03	0.41
25:Q:97:ILE:CD1	26:R:13:ARG:HH21	2.34	0.41
26:R:80:ARG:O	26:R:81:LYS:C	2.62	0.41
27:S:86:MET:HG3	27:S:87:PRO:HD2	2.02	0.41
28:T:40:LYS:HE3	28:T:59:ASN:O	2.20	0.41
29:U:95:PHE:HB2	29:U:99:SER:C	2.46	0.41
31:W:30:VAL:CG1	31:W:31:LEU:H	2.31	0.41
31:W:44:PHE:CG	31:W:44:PHE:O	2.72	0.41
34:Z:8:LYS:O	34:Z:9:TYR:HB2	2.20	0.41
34:Z:24:ILE:N	34:Z:24:ILE:CD1	2.82	0.41
34:Z:27:THR:HG23	34:Z:28:VAL:N	2.36	0.41
4:3:5:THR:HG23	4:3:5:THR:O	2.21	0.41
5:4:19:ARG:HB3	5:4:20:ASP:H	1.57	0.41
8:9:176:LEU:C	8:9:178:GLU:H	2.28	0.41
8:9:333:ASP:HB2	8:9:334:PHE:CA	2.38	0.41
8:9:379:ILE:CA	8:9:382:SER:HB2	2.47	0.41
10:B:205:G:O2'	10:B:206:U:P	2.79	0.41
10:B:304:U:H2'	10:B:305:C:H6	1.83	0.41
10:B:426:C:H2'	10:B:427:U:C6	2.56	0.41
10:B:600:G:O2'	13:E:99:LYS:NZ	2.54	0.41
10:B:601:C:H2'	10:B:602:A:H8	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:654:A:H2'	10:B:655:A:C5'	2.41	0.41
10:B:1205:A:C1'	10:B:1206:G:P	3.09	0.41
10:B:1353:A:H2'	10:B:1354:A:C8	2.56	0.41
10:B:1797:G:H5'	11:C:251:THR:O	2.21	0.41
10:B:2230:G:H2'	10:B:2231:U:H6	1.82	0.41
10:B:2350:C:O2'	10:B:2351:G:H5'	2.21	0.41
10:B:2529:G:C4'	15:G:175:LYS:HD3	2.51	0.41
10:B:2653:U:H3'	10:B:2654:A:H2'	2.03	0.41
10:B:2737:G:H2'	10:B:2738:A:O4'	2.21	0.41
11:C:28:PRO:CB	11:C:79:ARG:HE	2.34	0.41
11:C:155:ARG:C	11:C:157:ALA:N	2.79	0.41
12:D:4:LEU:HD22	12:D:51:THR:HB	2.02	0.41
12:D:122:VAL:HA	12:D:128:ARG:CD	2.51	0.41
13:E:6:LYS:HB3	13:E:11:ALA:HA	2.01	0.41
13:E:21:ARG:HH12	13:E:23:PHE:HB3	1.86	0.41
14:F:41:GLU:H	14:F:45:ASP:HB3	1.86	0.41
18:J:64:VAL:CG1	18:J:65:THR:H	2.17	0.41
21:M:74:THR:HG23	21:M:86:LYS:O	2.21	0.41
21:M:112:LEU:O	21:M:113:ALA:C	2.64	0.41
21:M:133:LYS:HG2	30:V:52:ALA:O	2.21	0.41
23:O:43:ASN:OD1	23:O:44:GLY:N	2.54	0.41
23:O:49:VAL:HG22	23:O:50:ALA:H	1.86	0.41
24:P:56:SER:HA	24:P:58:PHE:HE2	1.86	0.41
27:S:24:ILE:HD12	27:S:35:ILE:HG21	2.03	0.41
29:U:72:PHE:CZ	29:U:78:LYS:HE2	2.55	0.41
30:V:92:VAL:HG13	30:V:92:VAL:O	2.21	0.41
32:X:28:LEU:HD13	32:X:42:LEU:CD2	2.43	0.41
32:X:28:LEU:CB	32:X:42:LEU:HG	2.51	0.41
2:1:15:GLY:HA3	2:1:47:ILE:HG22	2.01	0.40
2:1:40:PRO:HB2	2:1:42:VAL:O	2.21	0.40
4:3:34:LYS:HE3	4:3:34:LYS:HB3	1.80	0.40
4:3:46:LYS:HD2	4:3:47:ALA:N	2.35	0.40
5:4:11:CYS:HB3	5:4:27:CYS:SG	2.61	0.40
5:4:18:LYS:O	5:4:19:ARG:HB2	2.21	0.40
8:9:16:ILE:HD13	32:X:42:LEU:CD2	2.43	0.40
8:9:202:MET:C	8:9:204:GLU:N	2.75	0.40
8:9:204:GLU:O	8:9:206:LYS:N	2.54	0.40
8:9:249:LYS:HB3	8:9:252:GLY:CA	2.49	0.40
8:9:401:ARG:NH2	8:9:402:ILE:HD11	2.36	0.40
8:9:403:ALA:O	8:9:406:CYS:SG	2.76	0.40
10:B:264:C:H2'	10:B:265:A:C5'	2.50	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:B:452:G:C2	10:B:458:G:C4	3.09	0.40
10:B:616:A:H4'	13:E:101:TYR:CE2	2.56	0.40
10:B:691:C:O2'	10:B:692:C:H5'	2.21	0.40
10:B:699:A:H4'	10:B:1634:A:N7	2.35	0.40
10:B:812:C:H5"	10:B:1250:G:O2'	2.21	0.40
10:B:857:G:H4'	31:W:71:LYS:NZ	2.36	0.40
10:B:1594:U:H2'	10:B:1595:C:H6	1.79	0.40
10:B:1658:C:OP1	12:D:136:ASN:ND2	2.54	0.40
10:B:1666:G:OP1	19:K:66:LYS:HD2	2.21	0.40
10:B:1726:C:H2'	10:B:1727:C:C6	2.56	0.40
10:B:1789:A:C5'	11:C:220:ARG:HH21	2.35	0.40
10:B:1817:G:OP1	11:C:62:ARG:NH2	2.54	0.40
10:B:2257:U:C5'	31:W:5:ALA:HB2	2.46	0.40
10:B:2341:G:H2'	10:B:2342:C:C6	2.56	0.40
10:B:2563:U:H2'	10:B:2565:A:OP2	2.21	0.40
10:B:2649:C:H2'	10:B:2650:U:C6	2.55	0.40
11:C:15:VAL:C	11:C:16:VAL:HG23	2.46	0.40
11:C:208:GLY:C	11:C:210:ALA:H	2.29	0.40
12:D:11:MET:HG2	24:P:9:GLN:HG3	2.03	0.40
12:D:150:GLN:O	12:D:152:PRO:CD	2.68	0.40
13:E:19:PHE:C	13:E:106:LYS:HD2	2.46	0.40
13:E:134:LEU:N	13:E:134:LEU:HD13	2.36	0.40
13:E:151:GLY:C	13:E:152:GLU:HG2	2.46	0.40
14:F:134:GLN:O	14:F:135:ILE:C	2.64	0.40
14:F:177:ARG:CZ	14:F:178:LYS:HA	2.51	0.40
17:I:52:LEU:CD2	17:I:81:LYS:HD3	2.51	0.40
17:I:102:ARG:HG3	17:I:141:ASP:CA	2.52	0.40
19:K:16:ALA:O	19:K:17:ARG:O	2.38	0.40
19:K:39:ILE:CG2	19:K:40:LYS:N	2.84	0.40
19:K:113:MET:O	19:K:114:LYS:C	2.62	0.40
22:N:11:ASN:C	22:N:12:ARG:HD2	2.46	0.40
23:O:25:ARG:HE	23:O:94:ARG:NH2	2.18	0.40
24:P:8:GLU:H	24:P:8:GLU:HG2	1.52	0.40
24:P:33:GLU:HB3	24:P:34:GLY:H	1.64	0.40
25:Q:77:LYS:O	25:Q:78:PHE:C	2.64	0.40
27:S:84:ARG:NH2	27:S:96:ILE:HD13	2.36	0.40
28:T:79:ASP:O	28:T:80:TRP:HB2	2.21	0.40
29:U:24:VAL:O	29:U:25:LYS:HB2	2.21	0.40
32:X:55:THR:C	32:X:57:LEU:N	2.75	0.40
33:Y:10:ARG:HA	33:Y:31:ILE:HD12	2.02	0.40
33:Y:10:ARG:HG2	33:Y:31:ILE:HG21	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:1:19:PHE:CE2	2:1:41:VAL:HG13	2.57	0.40
2:1:24:LYS:O	2:1:24:LYS:HD3	2.22	0.40
3:2:7:PRO:HB2	10:B:1309:G:C5'	2.50	0.40
8:9:77:ILE:N	8:9:77:ILE:HD13	2.37	0.40
8:9:139:VAL:HG23	8:9:139:VAL:O	2.21	0.40
8:9:198:ASP:C	8:9:200:ALA:N	2.70	0.40
8:9:382:SER:O	8:9:402:ILE:HG23	2.21	0.40
10:B:240:C:N4	10:B:241:A:C6	2.90	0.40
10:B:520:G:H2'	10:B:521:U:C6	2.56	0.40
10:B:664:G:H4'	10:B:941:A:OP1	2.21	0.40
10:B:1220:G:H2'	10:B:1221:C:C6	2.56	0.40
10:B:1315:C:O2'	10:B:1316:U:H5'	2.22	0.40
10:B:1396:U:O2	10:B:1396:U:H5'	2.22	0.40
10:B:1439:A:C6	10:B:1552:A:C5	3.09	0.40
10:B:1506:U:H2'	10:B:1507:C:H6	1.85	0.40
10:B:1524:G:O2'	10:B:1525:A:H5'	2.22	0.40
10:B:1792:G:O2'	10:B:1793:C:H5'	2.21	0.40
10:B:2135:A:C2	10:B:2136:G:C8	3.09	0.40
10:B:2278:A:N6	31:W:10:ARG:HB2	2.35	0.40
10:B:2306:C:OP2	10:B:2307:G:H8	2.05	0.40
10:B:2722:G:H4'	22:N:4:ARG:CG	2.52	0.40
10:B:2877:G:OP1	24:P:2:ASN:ND2	2.55	0.40
12:D:24:VAL:HG21	12:D:193:VAL:CG1	2.51	0.40
14:F:51:ASN:C	14:F:53:ALA:N	2.77	0.40
14:F:110:ILE:O	14:F:111:ARG:C	2.64	0.40
15:G:5:LYS:HB3	15:G:68:ARG:CD	2.52	0.40
20:L:132:ARG:HH22	20:L:140:GLY:CA	2.34	0.40
21:M:14:LYS:HB2	21:M:72:PRO:HA	2.02	0.40
21:M:97:GLN:N	21:M:98:PRO:HD3	2.36	0.40
22:N:12:ARG:CD	22:N:16:HIS:HD2	2.34	0.40
22:N:97:ILE:HG12	22:N:113:ILE:HD12	2.02	0.40
26:R:2:TYR:HD1	26:R:15:SER:OG	2.04	0.40
26:R:20:VAL:HA	26:R:96:VAL:O	2.20	0.40
27:S:42:LYS:HG2	27:S:45:VAL:CG1	2.51	0.40
29:U:71:ILE:HG12	29:U:72:PHE:N	2.36	0.40
31:W:66:VAL:HG13	31:W:67:LYS:N	2.28	0.40
33:Y:7:THR:CA	33:Y:34:THR:HB	2.51	0.40
1:0:2:VAL:HG11	10:B:2016:U:C1'	2.51	0.40
1:0:42:ILE:HG23	1:0:45:ASP:C	2.46	0.40
5:4:24:ARG:HE	5:4:37:GLN:HB3	1.86	0.40
6:7:59:LEU:CD2	8:9:351:MET:SD	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:9:43:VAL:H	8:9:258:ALA:H	1.70	0.40
8:9:87:GLY:O	8:9:88:GLU:O	2.40	0.40
8:9:110:GLY:HA2	8:9:113:LYS:HZ3	1.85	0.40
8:9:257:GLY:C	8:9:261:SER:OG	2.64	0.40
9:A:37:C:N3	9:A:48:U:O2'	2.53	0.40
10:B:127:A:H5"	10:B:128:C:O4'	2.21	0.40
10:B:222:A:N1	10:B:233:A:H5"	2.37	0.40
10:B:265:A:H2'	10:B:266:G:H1'	2.03	0.40
10:B:396:G:O2'	10:B:397:U:H5'	2.21	0.40
10:B:617:G:H2'	10:B:618:G:O4'	2.21	0.40
10:B:927:A:H2'	10:B:928:A:C8	2.56	0.40
10:B:951:C:O2'	10:B:952:G:H5'	2.21	0.40
10:B:1539:U:H2'	10:B:1540:G:C8	2.56	0.40
10:B:1592:C:H2'	10:B:1593:A:C8	2.55	0.40
10:B:2590:A:H2'	10:B:2591:C:H6	1.83	0.40
10:B:2715:C:H6	10:B:2715:C:O5'	2.04	0.40
10:B:2733:A:C8	10:B:2733:A:C3'	3.04	0.40
12:D:82:PHE:HB3	12:D:83:ARG:H	1.45	0.40
12:D:100:LEU:HD13	12:D:100:LEU:O	2.21	0.40
13:E:19:PHE:HD1	13:E:19:PHE:O	2.03	0.40
13:E:47:LYS:HG3	13:E:47:LYS:O	2.21	0.40
13:E:109:LEU:N	13:E:117:ARG:HH21	2.19	0.40
13:E:159:LEU:HD13	13:E:159:LEU:HA	1.87	0.40
15:G:17:LYS:HD3	15:G:17:LYS:C	2.46	0.40
16:H:88:GLY:O	16:H:124:THR:HA	2.22	0.40
19:K:20:MET:HB2	19:K:44:LYS:HE2	2.02	0.40
20:L:38:GLN:O	20:L:39:LYS:HB2	2.22	0.40
21:M:33:LEU:HD12	21:M:101:VAL:HG21	2.03	0.40
21:M:50:ARG:HG2	21:M:50:ARG:NH1	2.37	0.40
21:M:51:ARG:HG2	21:M:51:ARG:NH1	2.35	0.40
21:M:81:ARG:HB2	21:M:81:ARG:HH11	1.87	0.40
21:M:96:ILE:N	21:M:96:ILE:HD12	2.36	0.40
21:M:119:LEU:H	21:M:119:LEU:CD2	2.32	0.40
23:O:100:HIS:HB3	23:O:101:GLY:H	1.64	0.40
26:R:37:GLU:HG2	26:R:63:VAL:CA	2.51	0.40
26:R:63:VAL:CG2	26:R:64:VAL:N	2.71	0.40
29:U:99:SER:O	29:U:100:GLU:HG2	2.21	0.40
31:W:47:GLY:HA2	31:W:71:LYS:HB3	2.03	0.40
31:W:67:LYS:CD	31:W:71:LYS:H	2.35	0.40
32:X:44:LYS:HG3	32:X:47:ARG:HG3	2.02	0.40
34:Z:59:ARG:HD3	34:Z:63:ARG:HD3	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:4:30:GLU:CG	5:4:33:HIS:HB2	2.52	0.40
7:8:22:U:C4	7:8:23:G:C6	3.09	0.40
8:9:335:LEU:O	8:9:336:GLU:C	2.62	0.40
8:9:364:VAL:O	8:9:368:MET:CA	2.69	0.40
9:A:7:G:H5"	23:O:29:HIS:CE1	2.56	0.40
10:B:28:A:N6	10:B:512:G:O2'	2.55	0.40
10:B:274:C:H2'	10:B:275:C:C6	2.57	0.40
10:B:659:G:H4'	13:E:95:LYS:HD3	2.03	0.40
10:B:1120:G:H2'	10:B:1121:C:H6	1.86	0.40
10:B:1226:A:P	26:R:78:ARG:HH22	2.44	0.40
10:B:1428:C:H2'	10:B:1569:A:OP2	2.20	0.40
10:B:1802:A:O3'	11:C:255:LYS:HD2	2.21	0.40
10:B:2053:G:H5'	12:D:149:ASN:O	2.21	0.40
10:B:2415:G:H4'	20:L:66:PHE:CB	2.47	0.40
10:B:2743:U:H2'	10:B:2744:G:H5"	2.03	0.40
36:B:6508:HOH:O	18:J:111:LYS:HE3	2.20	0.40
11:C:94:LEU:HD12	11:C:95:TYR:H	1.86	0.40
11:C:135:PRO:O	11:C:165:ALA:HA	2.21	0.40
13:E:38:GLY:CA	13:E:93:SER:HB3	2.51	0.40
13:E:72:SER:OG	13:E:74:LYS:HG3	2.21	0.40
13:E:101:TYR:O	13:E:105:LEU:HD22	2.21	0.40
14:F:107:VAL:HG12	14:F:108:PRO:CD	2.48	0.40
14:F:136:ILE:HG22	14:F:137:PHE:N	2.37	0.40
14:F:151:LEU:HG	14:F:153:ILE:CD1	2.52	0.40
16:H:133:GLN:HB3	16:H:139:PHE:CB	2.50	0.40
17:I:8:VAL:CG1	17:I:30:GLN:HG3	2.50	0.40
17:I:8:VAL:HG11	17:I:30:GLN:HG3	2.02	0.40
17:I:69:VAL:O	17:I:69:VAL:HG23	2.22	0.40
21:M:2:LEU:HD11	21:M:51:ARG:HD2	2.04	0.40
22:N:33:ILE:HG12	22:N:114:GLU:CB	2.51	0.40
24:P:5:LYS:HD2	24:P:5:LYS:HA	1.65	0.40
24:P:23:ASP:OD2	24:P:93:LYS:HG2	2.22	0.40
24:P:47:ILE:HA	24:P:63:ILE:HG23	2.04	0.40
24:P:92:ARG:HG2	24:P:110:LYS:N	2.35	0.40
24:P:97:TYR:CD1	24:P:97:TYR:N	2.83	0.40
24:P:111:GLU:C	24:P:113:LEU:N	2.79	0.40
26:R:96:VAL:HG13	26:R:98:ILE:HG12	2.03	0.40
27:S:9:HIS:O	27:S:101:SER:O	2.40	0.40
27:S:31:GLN:O	27:S:34:ASP:HB2	2.22	0.40
27:S:87:PRO:O	27:S:93:ALA:HA	2.21	0.40
29:U:46:LYS:CB	29:U:53:GLN:HB2	2.51	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:U:65:GLN:O	29:U:66:VAL:O	2.39	0.40
32:X:56:LEU:O	32:X:59:GLU:HB2	2.21	0.40
1:0:35:GLU:HB2	1:0:41:HIS:HE1	1.87	0.40
5:4:1:MET:HG3	5:4:2:LYS:CD	2.51	0.40
8:9:55:VAL:O	8:9:56:LYS:C	2.65	0.40
8:9:204:GLU:O	8:9:205:ILE:C	2.64	0.40
8:9:410:VAL:O	8:9:412:ASP:N	2.55	0.40
10:B:199:A:N6	10:B:2433:A:H2'	2.36	0.40
10:B:265:A:H2'	10:B:266:G:C1'	2.52	0.40
10:B:443:A:H1'	10:B:1201:U:O4'	2.21	0.40
10:B:448:U:H3'	13:E:79:ARG:NE	2.22	0.40
10:B:516:C:O2'	10:B:517:C:H5'	2.21	0.40
10:B:585:G:N7	25:Q:5:ARG:NH2	2.70	0.40
10:B:1460:U:H3'	10:B:1461:C:C5'	2.51	0.40
10:B:1747:U:H2'	10:B:1748:C:H6	1.87	0.40
10:B:1766:G:O2'	10:B:1767:G:H5'	2.22	0.40
10:B:1844:C:OP1	11:C:252:LYS:HA	2.22	0.40
10:B:1953:A:H2	10:B:2549:G:N3	2.19	0.40
10:B:2024:G:H5"	12:D:154:LYS:HD2	2.03	0.40
10:B:2484:G:H21	21:M:118:LYS:HG2	1.86	0.40
11:C:162:GLN:HE22	11:C:174:ARG:HH12	1.69	0.40
11:C:179:GLU:HB3	11:C:266:ILE:HA	2.04	0.40
12:D:33:ARG:C	12:D:34:VAL:HG13	2.46	0.40
12:D:91:THR:O	12:D:92:VAL:HG13	2.21	0.40
13:E:17:THR:HG23	13:E:18:THR:HG23	2.04	0.40
13:E:36:ALA:O	13:E:37:ALA:C	2.65	0.40
13:E:99:LYS:C	13:E:99:LYS:HD2	2.46	0.40
13:E:166:LYS:HB3	13:E:167:VAL:H	1.39	0.40
15:G:154:GLU:OE2	15:G:159:LYS:HB2	2.22	0.40
15:G:157:LYS:HA	15:G:157:LYS:HD2	1.84	0.40
17:I:59:THR:O	17:I:59:THR:CG2	2.69	0.40
17:I:70:THR:O	17:I:70:THR:HG23	2.22	0.40
20:L:27:LEU:HG	20:L:28:GLY:O	2.21	0.40
20:L:84:LYS:O	20:L:84:LYS:HG2	2.22	0.40
22:N:12:ARG:HH12	22:N:20:MET:HE1	1.87	0.40
22:N:107:ASN:ND2	27:S:40:ASN:HD22	2.20	0.40
23:O:90:VAL:HG12	23:O:91:SER:N	2.35	0.40
28:T:34:VAL:CG2	28:T:35:ALA:H	2.35	0.40
28:T:55:VAL:HA	28:T:87:LEU:HD23	2.03	0.40
30:V:4:ILE:HD12	30:V:4:ILE:N	2.37	0.40
32:X:2:LYS:N	32:X:2:LYS:HD3	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:X:44:LYS:CG	32:X:47:ARG:HB2	2.47	0.40
34:Z:49:ARG:O	34:Z:51:VAL:N	2.54	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

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

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

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
1	0	54/56 (96%)	30 (56%)	15 (28%)	9 (17%)	0 2
2	1	52/54 (96%)	21 (40%)	22 (42%)	9 (17%)	0 2
3	2	44/46 (96%)	24 (54%)	12 (27%)	8 (18%)	0 2
4	3	62/64 (97%)	35 (56%)	17 (27%)	10 (16%)	0 2
5	4	36/38 (95%)	13 (36%)	11 (31%)	12 (33%)	0 0
6	7	16/18 (89%)	14 (88%)	2 (12%)	0	100 100
8	9	403/430 (94%)	154 (38%)	100 (25%)	149 (37%)	0 0
11	C	265/267 (99%)	97 (37%)	93 (35%)	75 (28%)	0 0
12	D	207/209 (99%)	96 (46%)	67 (32%)	44 (21%)	0 2
13	E	199/201 (99%)	87 (44%)	63 (32%)	49 (25%)	0 1
14	F	176/178 (99%)	92 (52%)	52 (30%)	32 (18%)	0 2
15	G	174/176 (99%)	117 (67%)	39 (22%)	18 (10%)	0 6
16	H	147/149 (99%)	84 (57%)	44 (30%)	19 (13%)	0 4
17	I	139/141 (99%)	123 (88%)	11 (8%)	5 (4%)	2 20
18	J	138/140 (99%)	70 (51%)	36 (26%)	32 (23%)	0 1
19	K	119/121 (98%)	72 (60%)	25 (21%)	22 (18%)	0 2
20	L	142/144 (99%)	66 (46%)	37 (26%)	39 (28%)	0 0
21	M	134/136 (98%)	79 (59%)	31 (23%)	24 (18%)	0 2

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
22	N	125/127 (98%)	82 (66%)	32 (26%)	11 (9%)	0 8
23	O	115/117 (98%)	64 (56%)	33 (29%)	18 (16%)	0 3
24	P	112/114 (98%)	42 (38%)	38 (34%)	32 (29%)	0 0
25	Q	115/117 (98%)	79 (69%)	22 (19%)	14 (12%)	0 4
26	R	101/103 (98%)	43 (43%)	30 (30%)	28 (28%)	0 0
27	S	108/110 (98%)	67 (62%)	20 (18%)	21 (19%)	0 2
28	T	97/99 (98%)	42 (43%)	33 (34%)	22 (23%)	0 1
29	U	100/102 (98%)	46 (46%)	41 (41%)	13 (13%)	0 4
30	V	92/94 (98%)	59 (64%)	27 (29%)	6 (6%)	1 12
31	W	82/84 (98%)	31 (38%)	29 (35%)	22 (27%)	0 0
32	X	61/63 (97%)	38 (62%)	15 (25%)	8 (13%)	0 4
33	Y	56/58 (97%)	35 (62%)	18 (32%)	3 (5%)	1 15
34	Z	68/70 (97%)	37 (54%)	22 (32%)	9 (13%)	0 4
All	All	3739/3826 (98%)	1939 (52%)	1037 (28%)	763 (20%)	0 2

All (763) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
1	0	31	LYS
1	0	35	GLU
1	0	45	ASP
2	1	12	SER
2	1	23	THR
2	1	46	VAL
3	2	18	PHE
3	2	44	VAL
5	4	3	VAL
5	4	19	ARG
5	4	24	ARG
5	4	26	ILE
8	9	27	VAL
8	9	37	ALA
8	9	43	VAL
8	9	47	VAL
8	9	48	VAL
8	9	66	LYS
8	9	83	VAL

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Mol	Chain	Res	Type
8	9	88	GLU
8	9	99	PRO
8	9	108	LEU
8	9	113	LYS
8	9	115	THR
8	9	116	SER
8	9	117	VAL
8	9	132	VAL
8	9	133	LEU
8	9	142	PRO
8	9	143	ALA
8	9	144	ALA
8	9	145	ILE
8	9	146	LYS
8	9	149	GLU
8	9	150	THR
8	9	161	PRO
8	9	168	PRO
8	9	170	ASP
8	9	175	ALA
8	9	176	LEU
8	9	177	LYS
8	9	178	GLU
8	9	206	LYS
8	9	208	VAL
8	9	230	ALA
8	9	249	LYS
8	9	254	ALA
8	9	259	ALA
8	9	263	ARG
8	9	265	ILE
8	9	269	PRO
8	9	277	GLU
8	9	278	LYS
8	9	281	ALA
8	9	284	PRO
8	9	287	PRO
8	9	302	SER
8	9	312	ASP
8	9	317	GLU
8	9	321	SER
8	9	322	LYS

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Mol	Chain	Res	Type
8	9	324	LYS
8	9	338	LEU
8	9	339	ARG
8	9	355	PRO
8	9	361	PRO
8	9	372	VAL
8	9	378	ALA
8	9	379	ILE
8	9	397	SER
8	9	410	VAL
8	9	411	GLN
11	C	21	PRO
11	C	22	GLU
11	C	28	PRO
11	C	29	PHE
11	C	31	PRO
11	C	47	ARG
11	C	49	THR
11	C	63	ILE
11	C	64	VAL
11	C	67	LYS
11	C	97	ASP
11	C	106	PRO
11	C	113	ASP
11	C	124	LYS
11	C	125	PRO
11	C	135	PRO
11	C	149	LYS
11	C	157	ALA
11	C	163	ILE
11	C	176	ARG
11	C	194	VAL
11	C	226	PRO
11	C	227	VAL
11	C	246	PRO
11	C	266	ILE
12	D	2	ILE
12	D	9	VAL
12	D	34	VAL
12	D	39	ASP
12	D	43	ASP
12	D	73	VAL

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Mol	Chain	Res	Type
12	D	82	PHE
12	D	84	LEU
12	D	85	ALA
12	D	89	GLU
12	D	129	THR
12	D	145	SER
12	D	152	PRO
12	D	155	VAL
12	D	157	LYS
12	D	160	LYS
12	D	168	GLU
12	D	193	VAL
12	D	197	THR
12	D	205	PRO
13	E	17	THR
13	E	35	TYR
13	E	59	PRO
13	E	86	ALA
13	E	90	GLN
13	E	147	LEU
14	F	20	ASN
14	F	46	LYS
14	F	66	ILE
14	F	73	VAL
14	F	83	PRO
14	F	104	THR
14	F	132	ARG
14	F	172	PHE
14	F	173	ASP
14	F	174	PHE
14	F	176	PHE
15	G	4	ALA
15	G	8	VAL
15	G	101	VAL
15	G	175	LYS
16	H	11	ASN
16	H	38	PRO
16	H	91	PHE
17	I	18	ASN
18	J	4	PHE
18	J	8	PRO
18	J	11	VAL

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Mol	Chain	Res	Type
18	J	44	TYR
18	J	64	VAL
18	J	124	VAL
18	J	129	GLU
18	J	131	ASN
19	K	17	ARG
19	K	29	HIS
19	K	71	ARG
19	K	72	PRO
19	K	120	PRO
20	L	7	SER
20	L	8	PRO
20	L	9	ALA
20	L	14	LYS
20	L	15	ALA
20	L	17	LYS
20	L	40	SER
20	L	54	GLN
20	L	72	ALA
20	L	77	ILE
20	L	78	ARG
20	L	82	LEU
20	L	92	LEU
20	L	103	ILE
20	L	111	ILE
20	L	119	PRO
20	L	121	THR
20	L	126	ARG
20	L	138	ALA
21	M	16	ARG
21	M	65	ILE
21	M	72	PRO
21	M	80	VAL
21	M	84	LYS
21	M	86	LYS
21	M	101	VAL
21	M	106	ASP
21	M	109	PRO
22	N	5	LYS
22	N	58	ASP
22	N	91	ALA
23	O	27	VAL

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Mol	Chain	Res	Type
23	O	54	VAL
23	O	90	VAL
24	P	23	ASP
24	P	24	THR
24	P	39	LEU
24	P	55	HIS
24	P	60	VAL
24	P	72	VAL
24	P	75	THR
24	P	76	HIS
24	P	77	SER
24	P	90	ALA
24	P	110	LYS
24	P	111	GLU
25	Q	30	VAL
25	Q	73	ILE
25	Q	89	ILE
25	Q	93	ILE
26	R	5	PHE
26	R	22	LEU
26	R	27	ILE
26	R	33	VAL
26	R	64	VAL
26	R	73	LYS
26	R	75	VAL
26	R	82	HIS
26	R	83	TYR
26	R	89	HIS
26	R	93	PHE
26	R	97	LYS
27	S	4	ILE
27	S	12	SER
27	S	41	LYS
27	S	103	ILE
28	T	57	VAL
28	T	62	VAL
28	T	95	PHE
29	U	63	ALA
29	U	66	VAL
29	U	75	ALA
29	U	99	SER
31	W	5	ALA

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Mol	Chain	Res	Type
31	W	10	ARG
31	W	17	ALA
31	W	30	VAL
31	W	34	SER
31	W	44	PHE
31	W	45	HIS
31	W	57	THR
31	W	66	VAL
33	Y	37	ARG
34	Z	3	LYS
34	Z	10	GLU
34	Z	21	VAL
34	Z	28	VAL
1	0	20	ALA
1	0	36	LYS
2	1	4	ILE
2	1	16	THR
2	1	30	PRO
2	1	38	PHE
2	1	47	ILE
3	2	5	PHE
3	2	7	PRO
3	2	17	GLY
4	3	29	ARG
5	4	10	LEU
5	4	27	CYS
5	4	31	PRO
8	9	23	THR
8	9	29	ASP
8	9	55	VAL
8	9	60	VAL
8	9	68	LEU
8	9	71	GLY
8	9	72	GLN
8	9	87	GLY
8	9	110	GLY
8	9	111	ALA
8	9	118	GLY
8	9	122	LYS
8	9	151	LEU
8	9	154	GLN
8	9	165	GLY

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Mol	Chain	Res	Type
8	9	169	VAL
8	9	174	ALA
8	9	211	SER
8	9	213	ASN
8	9	231	ASN
8	9	232	THR
8	9	236	PHE
8	9	253	ASP
8	9	257	GLY
8	9	258	ALA
8	9	274	GLY
8	9	279	THR
8	9	348	ALA
8	9	380	ILE
8	9	385	MET
8	9	386	LYS
8	9	398	ARG
8	9	399	LYS
8	9	416	LEU
8	9	425	ARG
8	9	428	LYS
11	C	12	ARG
11	C	39	SER
11	C	53	ILE
11	C	58	LYS
11	C	65	ASP
11	C	72	GLY
11	C	88	ALA
11	C	90	ILE
11	C	93	VAL
11	C	103	ILE
11	C	115	ILE
11	C	156	SER
11	C	172	THR
11	C	208	GLY
11	C	210	ALA
11	C	252	LYS
11	C	257	ARG
11	C	259	ASN
12	D	45	TYR
12	D	69	ALA
12	D	77	ARG

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Mol	Chain	Res	Type
12	D	140	HIS
12	D	141	ARG
12	D	147	GLY
13	E	5	LEU
13	E	13	THR
13	E	41	GLN
13	E	42	GLY
13	E	43	THR
13	E	56	GLY
13	E	66	GLY
13	E	67	ARG
13	E	72	SER
13	E	84	THR
13	E	85	PHE
13	E	135	ALA
13	E	148	ILE
13	E	156	ASN
13	E	162	ARG
13	E	192	ALA
14	F	10	GLU
14	F	22	ASN
14	F	101	ARG
14	F	122	ASP
14	F	166	ARG
15	G	2	ARG
15	G	5	LYS
15	G	59	ASP
15	G	168	VAL
15	G	174	LYS
16	H	25	TYR
16	H	29	PHE
16	H	30	LEU
16	H	121	VAL
18	J	43	GLU
18	J	65	THR
18	J	77	HIS
18	J	78	THR
18	J	81	ILE
18	J	128	ASN
18	J	135	GLN
19	K	3	GLN
19	K	52	VAL

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Mol	Chain	Res	Type
19	K	84	CYS
19	K	85	VAL
19	K	86	LEU
19	K	97	THR
19	K	110	GLU
20	L	16	GLY
20	L	27	LEU
20	L	34	GLY
20	L	38	GLN
20	L	51	GLU
20	L	108	ALA
20	L	116	VAL
20	L	127	VAL
20	L	142	ILE
21	M	55	ARG
21	M	89	VAL
21	M	102	LEU
21	M	132	THR
22	N	7	GLY
23	O	22	GLY
23	O	84	GLU
23	O	87	ILE
24	P	19	PHE
24	P	26	GLU
24	P	41	ALA
24	P	49	ILE
24	P	68	GLY
24	P	82	SER
24	P	97	TYR
24	P	105	LYS
25	Q	6	GLY
25	Q	21	LYS
25	Q	31	TYR
25	Q	87	VAL
25	Q	88	GLU
26	R	3	ALA
26	R	4	VAL
26	R	11	GLN
26	R	87	GLN
26	R	98	ILE
27	S	2	GLU
27	S	9	HIS

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Mol	Chain	Res	Type
27	S	26	GLY
27	S	44	ALA
27	S	64	ALA
27	S	69	LEU
27	S	108	SER
28	T	63	VAL
28	T	71	GLY
28	T	78	SER
28	T	85	VAL
29	U	24	VAL
29	U	58	VAL
29	U	64	ILE
30	V	14	LYS
30	V	45	ASP
30	V	70	ILE
31	W	4	LYS
31	W	58	LEU
31	W	62	ALA
31	W	63	ASP
31	W	75	ASN
31	W	77	LYS
31	W	80	SER
32	X	33	ALA
32	X	61	ALA
34	Z	31	ASP
34	Z	40	CYS
1	0	17	SER
1	0	51	ARG
4	3	10	ALA
4	3	30	HIS
4	3	47	ALA
5	4	8	LYS
5	4	28	SER
8	9	3	ASP
8	9	31	LEU
8	9	51	PHE
8	9	52	ILE
8	9	53	ASN
8	9	57	GLU
8	9	59	ALA
8	9	80	ASN
8	9	147	GLN

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Mol	Chain	Res	Type
8	9	172	VAL
8	9	234	LYS
8	9	264	HIS
8	9	273	LEU
8	9	285	PHE
8	9	289	ARG
8	9	297	MET
8	9	305	GLU
8	9	412	ASP
11	C	4	LYS
11	C	109	LEU
11	C	112	GLY
11	C	121	ALA
11	C	152	GLN
11	C	165	ALA
11	C	175	LEU
11	C	209	ALA
11	C	224	MET
11	C	239	PHE
11	C	243	PRO
12	D	25	THR
12	D	29	VAL
12	D	47	ALA
12	D	174	SER
12	D	182	ALA
12	D	187	LEU
13	E	26	ALA
13	E	36	ALA
13	E	48	THR
13	E	65	THR
13	E	110	SER
13	E	139	LYS
13	E	154	ASP
13	E	157	LEU
13	E	168	ASP
13	E	188	MET
13	E	195	GLN
14	F	43	ILE
14	F	49	LEU
14	F	108	PRO
14	F	109	ARG
14	F	114	ARG

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Mol	Chain	Res	Type
14	F	151	LEU
15	G	6	ALA
15	G	34	ARG
15	G	45	ALA
15	G	58	ALA
16	H	32	PRO
16	H	37	VAL
16	H	66	ASN
16	H	82	SER
17	I	23	VAL
18	J	46	PRO
18	J	53	TYR
18	J	58	ASN
18	J	60	ASP
18	J	125	TYR
18	J	127	GLY
19	K	54	LYS
19	K	83	ALA
19	K	89	ASN
20	L	5	THR
20	L	13	LYS
20	L	55	MET
20	L	57	LEU
20	L	107	PHE
21	M	12	MET
21	M	104	GLU
23	O	18	LEU
23	O	23	ALA
23	O	34	HIS
23	O	52	SER
23	O	63	LYS
23	O	100	HIS
24	P	17	PRO
24	P	91	VAL
24	P	112	ARG
26	R	10	LYS
26	R	29	THR
26	R	40	MET
27	S	8	ARG
27	S	92	ARG
28	T	15	HIS
28	T	16	VAL

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Mol	Chain	Res	Type
28	T	32	LEU
28	T	36	LYS
28	T	37	ASP
28	T	39	THR
28	T	52	GLU
28	T	60	THR
29	U	30	SER
29	U	93	ARG
31	W	23	LYS
32	X	8	GLU
32	X	28	LEU
32	X	31	GLN
33	Y	5	LYS
33	Y	12	ALA
34	Z	2	LYS
34	Z	35	ASP
1	0	39	ARG
2	1	50	GLU
3	2	25	LYS
4	3	32	LEU
4	3	33	THR
4	3	37	THR
8	9	5	LEU
8	9	54	ARG
8	9	73	GLU
8	9	76	LYS
8	9	98	GLN
8	9	152	ALA
8	9	164	VAL
8	9	229	ALA
8	9	266	THR
8	9	288	ASP
8	9	310	LYS
8	9	311	VAL
8	9	329	PHE
8	9	415	ARG
8	9	427	MET
11	C	25	LYS
11	C	32	LEU
11	C	33	LEU
11	C	56	GLY
11	C	60	ALA

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Mol	Chain	Res	Type
11	C	68	ARG
11	C	85	ASN
11	C	161	VAL
11	C	184	GLU
11	C	199	HIS
11	C	225	ASN
11	C	235	GLU
11	C	258	SER
11	C	260	LYS
11	C	265	PHE
12	D	3	GLY
12	D	32	ASN
12	D	52	THR
12	D	126	ASN
12	D	173	GLN
13	E	18	THR
13	E	30	GLN
13	E	45	ALA
13	E	50	ALA
13	E	160	ALA
14	F	138	PRO
15	G	11	PRO
15	G	107	GLY
16	H	86	ASP
16	H	87	GLU
16	H	92	GLY
17	I	6	ALA
17	I	14	ALA
18	J	50	THR
18	J	67	ASN
18	J	75	TYR
18	J	85	LYS
18	J	123	LYS
18	J	137	PRO
19	K	113	MET
19	K	121	GLU
20	L	109	LYS
21	M	85	GLY
22	N	100	CYS
22	N	113	ILE
23	O	2	ASP
23	O	28	VAL

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Mol	Chain	Res	Type
23	O	38	GLN
23	O	42	PRO
24	P	79	VAL
24	P	96	LEU
25	Q	85	ALA
25	Q	86	SER
25	Q	101	ASP
26	R	81	LYS
26	R	88	GLY
27	S	46	LEU
27	S	80	PRO
27	S	87	PRO
27	S	99	ARG
28	T	79	ASP
28	T	80	TRP
28	T	86	THR
29	U	9	GLU
29	U	25	LYS
29	U	48	VAL
30	V	16	ALA
30	V	71	LYS
31	W	55	ASP
34	Z	19	GLY
3	2	15	SER
4	3	13	PHE
4	3	60	CYS
5	4	11	CYS
5	4	17	VAL
8	9	9	LEU
8	9	16	ILE
8	9	45	LEU
8	9	114	THR
8	9	417	LEU
8	9	423	MET
11	C	114	GLN
12	D	48	ILE
12	D	95	SER
12	D	149	ASN
12	D	203	VAL
13	E	6	LYS
13	E	11	ALA
13	E	57	LYS

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Mol	Chain	Res	Type
13	E	58	LYS
13	E	113	VAL
13	E	130	LYS
13	E	172	ALA
13	E	190	ALA
13	E	193	VAL
14	F	8	LYS
14	F	88	VAL
14	F	134	GLN
14	F	149	ARG
14	F	153	ILE
14	F	177	ARG
15	G	40	VAL
16	H	35	LYS
16	H	68	ARG
18	J	41	LYS
18	J	79	GLY
18	J	111	LYS
19	K	14	SER
20	L	23	ILE
20	L	118	THR
21	M	17	ASN
21	M	71	LYS
21	M	77	PRO
22	N	11	ASN
22	N	111	ALA
23	O	107	ALA
24	P	18	SER
24	P	71	ARG
24	P	85	VAL
25	Q	78	PHE
26	R	59	ILE
26	R	71	LYS
26	R	79	ARG
27	S	22	ASP
27	S	23	LEU
29	U	28	LEU
30	V	52	ALA
31	W	61	LYS
31	W	65	LYS
32	X	20	ASN
32	X	38	GLN

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Mol	Chain	Res	Type
32	X	52	ARG
4	3	49	VAL
8	9	74	PHE
8	9	171	ILE
8	9	261	SER
8	9	393	ILE
12	D	76	GLY
12	D	87	GLY
12	D	207	VAL
14	F	84	ILE
14	F	120	SER
15	G	166	GLU
16	H	31	VAL
16	H	114	GLU
19	K	10	VAL
19	K	108	ARG
21	M	13	HIS
21	M	111	GLU
22	N	8	ARG
22	N	41	ALA
22	N	102	PHE
24	P	54	LEU
24	P	80	VAL
27	S	13	SER
28	T	66	LYS
28	T	67	VAL
31	W	53	GLY
31	W	76	ARG
3	2	6	GLN
8	9	61	GLY
8	9	70	PRO
8	9	275	VAL
11	C	55	GLY
11	C	83	ASP
11	C	164	VAL
19	K	103	VAL
23	O	103	VAL
26	R	63	VAL
28	T	58	VAL
8	9	46	PRO
8	9	167	LYS
8	9	256	GLY

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Mol	Chain	Res	Type
8	9	262	ILE
13	E	120	VAL
15	G	14	VAL
18	J	139	VAL
24	P	21	PRO
25	Q	3	VAL
27	S	71	VAL
8	9	78	VAL
11	C	195	GLY
13	E	167	VAL
14	F	81	GLY
17	I	118	GLY
18	J	100	VAL
19	K	26	GLY
20	L	31	GLY
20	L	110	VAL
20	L	135	ILE
21	M	57	VAL
21	M	87	GLY
26	R	47	VAL
26	R	54	VAL
28	T	96	VAL
1	0	53	VAL
5	4	23	ILE
8	9	304	ILE
11	C	217	PRO
16	H	4	ILE
21	M	97	GLN
24	P	69	VAL
8	9	75	VAL

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	0	47/47 (100%)	30 (64%)	17 (36%)	0 1

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
2	1	48/48 (100%)	34 (71%)	14 (29%)	0 2
3	2	38/38 (100%)	29 (76%)	9 (24%)	1 4
4	3	51/51 (100%)	41 (80%)	10 (20%)	1 7
5	4	34/34 (100%)	21 (62%)	13 (38%)	0 1
6	7	16/17 (94%)	15 (94%)	1 (6%)	16 37
8	9	357/357 (100%)	325 (91%)	32 (9%)	9 27
11	C	213/213 (100%)	145 (68%)	68 (32%)	0 2
12	D	164/164 (100%)	112 (68%)	52 (32%)	0 2
13	E	165/165 (100%)	120 (73%)	45 (27%)	0 3
14	F	149/149 (100%)	116 (78%)	33 (22%)	1 6
15	G	137/137 (100%)	110 (80%)	27 (20%)	1 7
16	H	114/114 (100%)	86 (75%)	28 (25%)	1 4
17	I	109/109 (100%)	104 (95%)	5 (5%)	24 45
18	J	114/114 (100%)	85 (75%)	29 (25%)	0 3
19	K	102/102 (100%)	74 (72%)	28 (28%)	0 3
20	L	103/103 (100%)	63 (61%)	40 (39%)	0 1
21	M	109/109 (100%)	67 (62%)	42 (38%)	0 1
22	N	103/103 (100%)	78 (76%)	25 (24%)	1 4
23	O	87/87 (100%)	70 (80%)	17 (20%)	1 7
24	P	99/99 (100%)	65 (66%)	34 (34%)	0 1
25	Q	89/89 (100%)	69 (78%)	20 (22%)	1 6
26	R	84/84 (100%)	56 (67%)	28 (33%)	0 2
27	S	93/93 (100%)	77 (83%)	16 (17%)	2 9
28	T	83/83 (100%)	60 (72%)	23 (28%)	0 3
29	U	83/83 (100%)	57 (69%)	26 (31%)	0 2
30	V	78/78 (100%)	68 (87%)	10 (13%)	4 15
31	W	62/62 (100%)	44 (71%)	18 (29%)	0 2
32	X	55/55 (100%)	40 (73%)	15 (27%)	0 3
33	Y	48/48 (100%)	33 (69%)	15 (31%)	0 2
34	Z	62/62 (100%)	46 (74%)	16 (26%)	0 3
All	All	3096/3097 (100%)	2340 (76%)	756 (24%)	2 4

All (756) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
1	0	2	VAL
1	0	4	GLN
1	0	5	ASN
1	0	8	THR
1	0	12	ARG
1	0	15	ARG
1	0	19	ASP
1	0	21	LEU
1	0	22	THR
1	0	29	VAL
1	0	31	LYS
1	0	32	THR
1	0	33	SER
1	0	37	HIS
1	0	51	ARG
1	0	52	LYS
1	0	53	VAL
2	1	8	ILE
2	1	12	SER
2	1	18	HIS
2	1	22	THR
2	1	24	LYS
2	1	25	ASN
2	1	26	LYS
2	1	27	ARG
2	1	31	GLU
2	1	33	LEU
2	1	35	LEU
2	1	41	VAL
2	1	44	GLN
2	1	49	LYS
3	2	10	LEU
3	2	15	SER
3	2	18	PHE
3	2	19	ARG
3	2	25	LYS
3	2	28	ARG
3	2	34	ARG
3	2	44	VAL
3	2	46	LYS
4	3	2	LYS
4	3	7	ARG

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Mol	Chain	Res	Type
4	3	24	LYS
4	3	29	ARG
4	3	32	LEU
4	3	34	LYS
4	3	48	MET
4	3	51	LYS
4	3	54	LEU
4	3	61	LEU
5	4	2	LYS
5	4	11	CYS
5	4	13	ASN
5	4	17	VAL
5	4	19	ARG
5	4	23	ILE
5	4	24	ARG
5	4	25	VAL
5	4	26	ILE
5	4	27	CYS
5	4	30	GLU
5	4	35	GLN
5	4	36	ARG
6	7	59	LEU
8	9	7	ASP
8	9	38	LEU
8	9	57	GLU
8	9	68	LEU
8	9	78	VAL
8	9	81	GLU
8	9	113	LYS
8	9	114	THR
8	9	120	LEU
8	9	147	GLN
8	9	148	LEU
8	9	151	LEU
8	9	154	GLN
8	9	189	VAL
8	9	236	PHE
8	9	260	LEU
8	9	270	ILE
8	9	305	GLU
8	9	330	ASP
8	9	331	LEU

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Mol	Chain	Res	Type
8	9	344	MET
8	9	350	LEU
8	9	353	LYS
8	9	369	ASP
8	9	370	ASP
8	9	383	MET
8	9	394	ILE
8	9	398	ARG
8	9	401	ARG
8	9	423	MET
8	9	425	ARG
8	9	428	LYS
11	C	5	CYS
11	C	10	PRO
11	C	12	ARG
11	C	22	GLU
11	C	27	LYS
11	C	28	PRO
11	C	29	PHE
11	C	32	LEU
11	C	33	LEU
11	C	38	LYS
11	C	42	ARG
11	C	44	ASN
11	C	47	ARG
11	C	48	ILE
11	C	49	THR
11	C	51	ARG
11	C	57	HIS
11	C	58	LYS
11	C	62	ARG
11	C	64	VAL
11	C	67	LYS
11	C	68	ARG
11	C	69	ASN
11	C	77	VAL
11	C	78	GLU
11	C	81	GLU
11	C	84	PRO
11	C	85	ASN
11	C	86	ARG
11	C	93	VAL

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Mol	Chain	Res	Type
11	C	96	LYS
11	C	102	TYR
11	C	104	LEU
11	C	107	LYS
11	C	110	LYS
11	C	119	VAL
11	C	120	ASP
11	C	124	LYS
11	C	127	ASN
11	C	128	THR
11	C	129	LEU
11	C	133	ASN
11	C	141	HIS
11	C	143	VAL
11	C	145	MET
11	C	155	ARG
11	C	162	GLN
11	C	167	ASP
11	C	171	VAL
11	C	175	LEU
11	C	179	GLU
11	C	188	ARG
11	C	194	VAL
11	C	203	VAL
11	C	206	LYS
11	C	211	ARG
11	C	218	THR
11	C	220	ARG
11	C	231	HIS
11	C	235	GLU
11	C	237	ARG
11	C	246	PRO
11	C	250	GLN
11	C	251	THR
11	C	254	LYS
11	C	256	THR
11	C	267	VAL
11	C	268	ARG
12	D	4	LEU
12	D	7	LYS
12	D	8	LYS
12	D	9	VAL

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Mol	Chain	Res	Type
12	D	12	THR
12	D	14	ILE
12	D	15	PHE
12	D	16	THR
12	D	22	ILE
12	D	25	THR
12	D	26	VAL
12	D	27	ILE
12	D	32	ASN
12	D	33	ARG
12	D	34	VAL
12	D	36	GLN
12	D	40	LEU
12	D	45	TYR
12	D	49	GLN
12	D	52	THR
12	D	62	LYS
12	D	67	HIS
12	D	70	LYS
12	D	79	LEU
12	D	82	PHE
12	D	91	THR
12	D	101	PHE
12	D	104	VAL
12	D	106	LYS
12	D	107	VAL
12	D	114	LYS
12	D	116	LYS
12	D	121	THR
12	D	124	ARG
12	D	126	ASN
12	D	127	PHE
12	D	133	THR
12	D	137	SER
12	D	138	LEU
12	D	139	SER
12	D	142	VAL
12	D	151	THR
12	D	152	PRO
12	D	159	LYS
12	D	176	ASP
12	D	177	VAL

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Mol	Chain	Res	Type
12	D	185	ASN
12	D	186	LEU
12	D	188	LEU
12	D	189	VAL
12	D	197	THR
12	D	201	LEU
13	E	1	MET
13	E	4	VAL
13	E	5	LEU
13	E	16	GLU
13	E	21	ARG
13	E	24	ASN
13	E	40	ARG
13	E	43	THR
13	E	49	ARG
13	E	53	THR
13	E	57	LYS
13	E	74	LYS
13	E	84	THR
13	E	94	GLN
13	E	97	ASN
13	E	99	LYS
13	E	100	MET
13	E	107	SER
13	E	108	ILE
13	E	109	LEU
13	E	117	ARG
13	E	118	LEU
13	E	130	LYS
13	E	132	LYS
13	E	134	LEU
13	E	137	LYS
13	E	138	LEU
13	E	143	LEU
13	E	148	ILE
13	E	152	GLU
13	E	154	ASP
13	E	155	GLU
13	E	157	LEU
13	E	158	PHE
13	E	159	LEU
13	E	164	LEU

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Mol	Chain	Res	Type
13	E	166	LYS
13	E	167	VAL
13	E	171	ASP
13	E	173	THR
13	E	184	ASP
13	E	185	LYS
13	E	188	MET
13	E	191	ASP
13	E	196	VAL
14	F	14	LYS
14	F	16	MET
14	F	23	SER
14	F	37	MET
14	F	41	GLU
14	F	45	ASP
14	F	46	LYS
14	F	48	LEU
14	F	59	ILE
14	F	78	ILE
14	F	84	ILE
14	F	86	CYS
14	F	90	LEU
14	F	93	GLU
14	F	103	ILE
14	F	107	VAL
14	F	108	PRO
14	F	112	ASP
14	F	114	ARG
14	F	126	ASN
14	F	132	ARG
14	F	133	GLU
14	F	135	ILE
14	F	136	ILE
14	F	143	ASP
14	F	151	LEU
14	F	161	SER
14	F	162	ASP
14	F	164	GLU
14	F	168	LEU
14	F	172	PHE
14	F	174	PHE
14	F	177	ARG

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Mol	Chain	Res	Type
15	G	5	LYS
15	G	8	VAL
15	G	15	ASP
15	G	24	THR
15	G	29	ASN
15	G	33	THR
15	G	35	THR
15	G	43	LYS
15	G	48	THR
15	G	54	ARG
15	G	63	GLN
15	G	71	LEU
15	G	80	GLU
15	G	84	LYS
15	G	85	LYS
15	G	86	LEU
15	G	93	TYR
15	G	100	ASN
15	G	101	VAL
15	G	104	LEU
15	G	116	LEU
15	G	121	THR
15	G	123	GLU
15	G	126	THR
15	G	132	LEU
15	G	154	GLU
15	G	161	VAL
16	H	4	ILE
16	H	7	ASP
16	H	8	LYS
16	H	11	ASN
16	H	21	VAL
16	H	30	LEU
16	H	35	LYS
16	H	38	PRO
16	H	42	LYS
16	H	43	ASN
16	H	44	ILE
16	H	45	GLU
16	H	53	GLU
16	H	57	LYS
16	H	68	ARG

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Mol	Chain	Res	Type
16	H	70	GLU
16	H	75	LEU
16	H	77	THR
16	H	96	THR
16	H	97	ARG
16	H	101	ASP
16	H	112	LYS
16	H	119	ASN
16	H	122	LEU
16	H	124	THR
16	H	128	HIS
16	H	129	GLU
16	H	141	LYS
17	I	2	LYS
17	I	5	GLN
17	I	36	GLU
17	I	54	ILE
17	I	121	ILE
18	J	1	MET
18	J	3	THR
18	J	4	PHE
18	J	5	THR
18	J	7	LYS
18	J	15	TRP
18	J	25	LEU
18	J	27	ARG
18	J	31	GLU
18	J	36	LEU
18	J	41	LYS
18	J	45	THR
18	J	47	HIS
18	J	49	ASP
18	J	57	LEU
18	J	61	LYS
18	J	69	ARG
18	J	84	ILE
18	J	85	LYS
18	J	91	GLU
18	J	92	MET
18	J	95	ARG
18	J	106	LYS
18	J	109	LEU

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Mol	Chain	Res	Type
18	J	118	MET
18	J	121	LYS
18	J	132	HIS
18	J	135	GLN
18	J	140	LEU
19	K	2	ILE
19	K	6	THR
19	K	7	MET
19	K	10	VAL
19	K	32	TYR
19	K	41	ILE
19	K	42	THR
19	K	47	ILE
19	K	52	VAL
19	K	54	LYS
19	K	56	ASP
19	K	58	LEU
19	K	59	LYS
19	K	62	VAL
19	K	65	THR
19	K	75	SER
19	K	84	CYS
19	K	90	ASN
19	K	92	GLU
19	K	95	ILE
19	K	98	ARG
19	K	99	ILE
19	K	104	THR
19	K	105	ARG
19	K	110	GLU
19	K	117	SER
19	K	120	PRO
19	K	121	GLU
20	L	2	ARG
20	L	3	LEU
20	L	14	LYS
20	L	19	LEU
20	L	21	ARG
20	L	27	LEU
20	L	29	LYS
20	L	30	THR
20	L	38	GLN

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Mol	Chain	Res	Type
20	L	39	LYS
20	L	46	VAL
20	L	47	ARG
20	L	48	ARG
20	L	50	PHE
20	L	51	GLU
20	L	55	MET
20	L	60	ARG
20	L	69	ARG
20	L	73	ILE
20	L	77	ILE
20	L	78	ARG
20	L	89	VAL
20	L	92	LEU
20	L	96	LYS
20	L	103	ILE
20	L	104	GLN
20	L	106	GLU
20	L	107	PHE
20	L	109	LYS
20	L	116	VAL
20	L	117	THR
20	L	119	PRO
20	L	121	THR
20	L	125	LEU
20	L	128	THR
20	L	129	LYS
20	L	135	ILE
20	L	136	GLU
20	L	142	ILE
20	L	144	GLU
21	M	1	MET
21	M	2	LEU
21	M	5	LYS
21	M	6	ARG
21	M	8	LYS
21	M	9	PHE
21	M	11	LYS
21	M	12	MET
21	M	14	LYS
21	M	16	ARG
21	M	17	ASN

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Mol	Chain	Res	Type
21	M	22	GLN
21	M	26	VAL
21	M	33	LEU
21	M	34	LYS
21	M	36	VAL
21	M	41	LEU
21	M	42	THR
21	M	58	LYS
21	M	62	LYS
21	M	65	ILE
21	M	67	VAL
21	M	71	LYS
21	M	72	PRO
21	M	80	VAL
21	M	81	ARG
21	M	84	LYS
21	M	89	VAL
21	M	90	GLU
21	M	91	TYR
21	M	93	VAL
21	M	96	ILE
21	M	100	LYS
21	M	104	GLU
21	M	105	MET
21	M	112	LEU
21	M	115	GLU
21	M	118	LYS
21	M	124	LEU
21	M	131	VAL
21	M	133	LYS
21	M	134	THR
22	N	1	MET
22	N	2	ARG
22	N	4	ARG
22	N	5	LYS
22	N	6	SER
22	N	14	SER
22	N	18	GLN
22	N	36	THR
22	N	42	LYS
22	N	45	ARG
22	N	46	ARG

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Mol	Chain	Res	Type
22	N	49	GLU
22	N	56	LYS
22	N	57	THR
22	N	58	ASP
22	N	65	LEU
22	N	71	ARG
22	N	76	VAL
22	N	81	ASN
22	N	87	PHE
22	N	95	THR
22	N	96	ARG
22	N	98	LEU
22	N	121	LYS
22	N	127	GLU
23	O	2	ASP
23	O	4	LYS
23	O	18	LEU
23	O	27	VAL
23	O	29	HIS
23	O	30	ARG
23	O	35	ILE
23	O	38	GLN
23	O	40	ILE
23	O	60	GLU
23	O	65	THR
23	O	68	LYS
23	O	87	ILE
23	O	97	PHE
23	O	98	GLN
23	O	103	VAL
23	O	108	ASP
24	P	1	SER
24	P	5	LYS
24	P	8	GLU
24	P	18	SER
24	P	24	THR
24	P	27	VAL
24	P	28	LYS
24	P	31	VAL
24	P	38	ARG
24	P	46	VAL
24	P	47	ILE

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Mol	Chain	Res	Type
24	P	50	ARG
24	P	52	ARG
24	P	54	LEU
24	P	58	PHE
24	P	60	VAL
24	P	70	GLU
24	P	74	GLN
24	P	75	THR
24	P	76	HIS
24	P	79	VAL
24	P	80	VAL
24	P	81	ASP
24	P	83	ILE
24	P	84	SER
24	P	87	ARG
24	P	91	VAL
24	P	97	TYR
24	P	101	GLU
24	P	108	ARG
24	P	109	ILE
24	P	111	GLU
24	P	112	ARG
24	P	113	LEU
25	Q	2	ARG
25	Q	4	LYS
25	Q	8	ILE
25	Q	13	HIS
25	Q	16	ILE
25	Q	27	ARG
25	Q	36	GLN
25	Q	39	ILE
25	Q	40	LYS
25	Q	50	ARG
25	Q	53	LYS
25	Q	58	GLN
25	Q	70	GLN
25	Q	84	LYS
25	Q	87	VAL
25	Q	90	ASP
25	Q	91	ARG
25	Q	93	ILE
25	Q	101	ASP

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Mol	Chain	Res	Type
25	Q	116	LEU
26	R	4	VAL
26	R	6	GLN
26	R	7	SER
26	R	10	LYS
26	R	12	HIS
26	R	18	GLN
26	R	22	LEU
26	R	23	GLU
26	R	26	ASP
26	R	32	THR
26	R	37	GLU
26	R	41	ILE
26	R	43	ASN
26	R	45	GLU
26	R	62	GLU
26	R	70	GLU
26	R	73	LYS
26	R	75	VAL
26	R	76	LYS
26	R	79	ARG
26	R	84	ARG
26	R	85	LYS
26	R	86	GLN
26	R	87	GLN
26	R	91	GLN
26	R	94	THR
26	R	96	VAL
26	R	99	THR
27	S	3	THR
27	S	19	LEU
27	S	23	LEU
27	S	24	ILE
27	S	25	ARG
27	S	30	SER
27	S	42	LYS
27	S	55	ILE
27	S	62	ASP
27	S	69	LEU
27	S	76	VAL
27	S	77	ASP
27	S	82	MET

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Mol	Chain	Res	Type
27	S	83	LYS
27	S	85	ILE
27	S	86	MET
28	T	3	ARG
28	T	5	GLU
28	T	6	ARG
28	T	11	LEU
28	T	19	LYS
28	T	24	MET
28	T	25	GLU
28	T	29	THR
28	T	33	LYS
28	T	50	LEU
28	T	51	PHE
28	T	53	VAL
28	T	57	VAL
28	T	58	VAL
28	T	61	LEU
28	T	62	VAL
28	T	64	LYS
28	T	68	LYS
28	T	69	ARG
28	T	73	ARG
28	T	76	ARG
28	T	78	SER
28	T	88	LYS
29	U	4	ILE
29	U	8	ASP
29	U	13	LEU
29	U	24	VAL
29	U	25	LYS
29	U	26	ASN
29	U	27	VAL
29	U	28	LEU
29	U	29	SER
29	U	40	LEU
29	U	42	LYS
29	U	43	LYS
29	U	57	ILE
29	U	58	VAL
29	U	60	LYS
29	U	61	GLU

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Mol	Chain	Res	Type
29	U	65	GLN
29	U	69	VAL
29	U	71	ILE
29	U	80	ASP
29	U	85	ARG
29	U	90	LYS
29	U	95	PHE
29	U	96	LYS
29	U	98	ASN
29	U	99	SER
30	V	18	ARG
30	V	35	GLU
30	V	41	GLU
30	V	42	LEU
30	V	51	GLN
30	V	53	LYS
30	V	62	THR
30	V	69	GLU
30	V	70	ILE
30	V	86	LEU
31	W	2	HIS
31	W	3	LYS
31	W	13	ARG
31	W	14	ASP
31	W	15	SER
31	W	16	GLU
31	W	18	LYS
31	W	19	ARG
31	W	20	LEU
31	W	37	VAL
31	W	39	GLN
31	W	40	ARG
31	W	50	VAL
31	W	61	LYS
31	W	65	LYS
31	W	66	VAL
31	W	75	ASN
31	W	82	GLU
32	X	5	GLU
32	X	8	GLU
32	X	9	LYS
32	X	14	LEU

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Mol	Chain	Res	Type
32	X	17	GLU
32	X	18	LEU
32	X	20	ASN
32	X	25	GLN
32	X	28	LEU
32	X	30	MET
32	X	31	GLN
32	X	36	GLN
32	X	39	GLN
32	X	44	LYS
32	X	47	ARG
33	Y	5	LYS
33	Y	10	ARG
33	Y	13	ILE
33	Y	26	LEU
33	Y	29	ARG
33	Y	34	THR
33	Y	35	VAL
33	Y	40	THR
33	Y	43	ILE
33	Y	44	ARG
33	Y	46	MET
33	Y	50	VAL
33	Y	53	MET
33	Y	57	GLU
33	Y	58	GLU
34	Z	9	TYR
34	Z	12	ILE
34	Z	20	ASN
34	Z	24	ILE
34	Z	28	VAL
34	Z	31	ASP
34	Z	33	ASN
34	Z	40	CYS
34	Z	47	LYS
34	Z	48	GLN
34	Z	50	ASP
34	Z	56	ARG
34	Z	65	ASN
34	Z	66	ILE
34	Z	67	PRO
34	Z	69	SER

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (97) such sidechains are listed below:

Mol	Chain	Res	Type
1	0	4	GLN
2	1	44	GLN
2	1	45	HIS
3	2	29	GLN
5	4	13	ASN
6	7	64	GLN
8	9	15	ASN
8	9	62	HIS
8	9	109	GLN
8	9	128	HIS
8	9	166	GLN
8	9	209	HIS
8	9	264	HIS
8	9	424	GLN
11	C	45	ASN
11	C	52	HIS
11	C	127	ASN
11	C	133	ASN
11	C	162	GLN
11	C	196	ASN
11	C	199	HIS
11	C	225	ASN
11	C	238	ASN
11	C	259	ASN
12	D	32	ASN
12	D	36	GLN
12	D	164	GLN
12	D	173	GLN
13	E	24	ASN
13	E	30	GLN
13	E	90	GLN
13	E	94	GLN
13	E	195	GLN
14	F	4	HIS
14	F	36	ASN
14	F	62	GLN
15	G	72	ASN
15	G	87	GLN
16	H	20	ASN
16	H	133	GLN
17	I	33	ASN

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Mol	Chain	Res	Type
17	I	106	GLN
18	J	135	GLN
18	J	138	GLN
19	K	3	GLN
19	K	13	ASN
19	K	82	ASN
20	L	104	GLN
21	M	17	ASN
21	M	45	GLN
21	M	60	GLN
21	M	97	GLN
22	N	9	GLN
22	N	11	ASN
22	N	18	GLN
22	N	23	ASN
22	N	73	ASN
22	N	81	ASN
22	N	107	ASN
23	O	67	ASN
23	O	98	GLN
23	O	100	HIS
23	O	104	GLN
24	P	9	GLN
24	P	11	GLN
24	P	55	HIS
25	Q	19	GLN
25	Q	43	GLN
25	Q	51	GLN
25	Q	58	GLN
25	Q	80	ASN
26	R	6	GLN
26	R	11	GLN
26	R	12	HIS
26	R	86	GLN
27	S	7	HIS
27	S	15	GLN
27	S	40	ASN
27	S	57	ASN
27	S	60	HIS
28	T	48	GLN
29	U	52	ASN
29	U	53	GLN

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Mol	Chain	Res	Type
29	U	65	GLN
29	U	68	ASN
30	V	51	GLN
30	V	75	GLN
30	V	78	GLN
30	V	87	GLN
31	W	39	GLN
31	W	56	HIS
32	X	31	GLN
32	X	45	GLN
32	X	58	ASN
33	Y	48	ASN
34	Z	48	GLN
34	Z	65	ASN

5.3.3 RNA

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
10	B	2837/2904 (97%)	482 (16%)	22 (0%)
7	8	71/74 (95%)	4 (5%)	1 (1%)
9	A	116/117 (99%)	20 (17%)	1 (0%)
All	All	3024/3095 (97%)	506 (16%)	24 (0%)

All (506) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
7	8	39	A
7	8	77	C
7	8	85	A
7	8	89	A
9	A	13	G
9	A	15	A
9	A	16	G
9	A	18	G
9	A	25	U
9	A	26	C
9	A	27	C
9	A	28	C
9	A	29	A
9	A	42	C
9	A	52	A

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Mol	Chain	Res	Type
9	A	56	G
9	A	57	A
9	A	66	A
9	A	67	G
9	A	89	U
9	A	90	C
9	A	96	G
9	A	99	A
9	A	109	A
10	B	2	G
10	B	12	U
10	B	27	G
10	B	35	G
10	B	46	G
10	B	49	A
10	B	51	G
10	B	52	A
10	B	63	A
10	B	64	A
10	B	71	A
10	B	74	A
10	B	75	G
10	B	91	A
10	B	98	G
10	B	99	U
10	B	100	U
10	B	101	A
10	B	102	U
10	B	103	A
10	B	118	A
10	B	119	A
10	B	120	U
10	B	124	G
10	B	125	A
10	B	126	A
10	B	128	C
10	B	139	U
10	B	141	G
10	B	143	C
10	B	144	A
10	B	160	A
10	B	162	U

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Mol	Chain	Res	Type
10	B	163	C
10	B	180	G
10	B	181	A
10	B	196	A
10	B	206	U
10	B	216	A
10	B	221	A
10	B	222	A
10	B	227	A
10	B	230	G
10	B	243	U
10	B	248	G
10	B	250	G
10	B	252	G
10	B	255	A
10	B	265	A
10	B	266	G
10	B	267	C
10	B	271	G
10	B	277	G
10	B	278	A
10	B	281	C
10	B	288	U
10	B	289	G
10	B	299	A
10	B	301	G
10	B	302	C
10	B	311	A
10	B	312	G
10	B	322	A
10	B	323	C
10	B	329	G
10	B	330	A
10	B	333	G
10	B	346	A
10	B	353	C
10	B	354	A
10	B	355	U
10	B	361	G
10	B	362	A
10	B	363	G
10	B	365	U

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Mol	Chain	Res	Type
10	B	371	A
10	B	372	G
10	B	376	G
10	B	386	G
10	B	387	U
10	B	396	G
10	B	403	U
10	B	404	A
10	B	405	U
10	B	406	G
10	B	411	G
10	B	412	A
10	B	424	G
10	B	444	C
10	B	448	U
10	B	449	A
10	B	450	G
10	B	451	U
10	B	455	C
10	B	456	C
10	B	457	A
10	B	458	G
10	B	475	C
10	B	479	A
10	B	480	A
10	B	481	G
10	B	491	G
10	B	492	A
10	B	504	A
10	B	505	A
10	B	506	G
10	B	508	A
10	B	509	C
10	B	512	G
10	B	515	A
10	B	527	C
10	B	529	A
10	B	530	G
10	B	531	C
10	B	532	A
10	B	533	G
10	B	542	C

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Mol	Chain	Res	Type
10	B	544	C
10	B	545	U
10	B	546	U
10	B	547	A
10	B	548	G
10	B	549	G
10	B	550	C
10	B	554	U
10	B	563	A
10	B	572	A
10	B	573	U
10	B	575	A
10	B	588	U
10	B	603	A
10	B	613	A
10	B	614	A
10	B	615	U
10	B	616	A
10	B	627	A
10	B	632	A
10	B	637	A
10	B	640	C
10	B	645	C
10	B	646	U
10	B	654	A
10	B	655	A
10	B	671	C
10	B	686	U
10	B	704	G
10	B	718	A
10	B	719	C
10	B	727	A
10	B	730	A
10	B	747	U
10	B	757	G
10	B	765	C
10	B	775	G
10	B	782	A
10	B	784	G
10	B	785	G
10	B	805	G
10	B	806	C

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Mol	Chain	Res	Type
10	B	812	C
10	B	819	A
10	B	827	U
10	B	828	U
10	B	844	A
10	B	846	U
10	B	847	U
10	B	859	G
10	B	869	G
10	B	873	C
10	B	877	A
10	B	899	A
10	B	910	A
10	B	912	C
10	B	919	U
10	B	931	U
10	B	932	U
10	B	933	A
10	B	941	A
10	B	946	C
10	B	955	U
10	B	961	C
10	B	973	A
10	B	974	G
10	B	982	C
10	B	983	A
10	B	989	G
10	B	990	A
10	B	991	C
10	B	995	C
10	B	996	A
10	B	1012	U
10	B	1013	C
10	B	1022	G
10	B	1025	G
10	B	1033	U
10	B	1034	G
10	B	1046	A
10	B	1047	G
10	B	1070	A
10	B	1088	A
10	B	1090	A

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Mol	Chain	Res	Type
10	B	1098	A
10	B	1099	G
10	B	1111	A
10	B	1112	G
10	B	1116	G
10	B	1130	U
10	B	1132	U
10	B	1133	A
10	B	1134	A
10	B	1136	G
10	B	1171	G
10	B	1174	U
10	B	1176	U
10	B	1179	G
10	B	1195	G
10	B	1205	A
10	B	1206	G
10	B	1211	C
10	B	1212	G
10	B	1225	G
10	B	1237	A
10	B	1238	G
10	B	1241	A
10	B	1242	U
10	B	1247	A
10	B	1248	G
10	B	1249	U
10	B	1251	C
10	B	1252	G
10	B	1253	A
10	B	1256	G
10	B	1258	U
10	B	1266	G
10	B	1271	G
10	B	1272	A
10	B	1273	U
10	B	1275	A
10	B	1276	A
10	B	1301	A
10	B	1302	A
10	B	1312	U
10	B	1325	U

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Mol	Chain	Res	Type
10	B	1330	C
10	B	1337	G
10	B	1341	G
10	B	1342	A
10	B	1345	C
10	B	1352	U
10	B	1365	A
10	B	1368	G
10	B	1379	U
10	B	1383	A
10	B	1384	A
10	B	1396	U
10	B	1397	U
10	B	1416	G
10	B	1419	A
10	B	1420	A
10	B	1427	A
10	B	1428	C
10	B	1434	A
10	B	1450	G
10	B	1451	C
10	B	1453	A
10	B	1454	C
10	B	1455	G
10	B	1459	G
10	B	1460	U
10	B	1461	C
10	B	1476	U
10	B	1477	A
10	B	1478	G
10	B	1482	G
10	B	1490	A
10	B	1493	C
10	B	1494	A
10	B	1504	A
10	B	1508	A
10	B	1509	A
10	B	1510	G
10	B	1524	G
10	B	1532	A
10	B	1535	A
10	B	1537	G

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Mol	Chain	Res	Type
10	B	1538	G
10	B	1540	G
10	B	1552	A
10	B	1558	C
10	B	1559	U
10	B	1567	G
10	B	1569	A
10	B	1578	U
10	B	1583	A
10	B	1585	C
10	B	1608	A
10	B	1610	A
10	B	1613	G
10	B	1634	A
10	B	1635	A
10	B	1640	A
10	B	1647	U
10	B	1648	U
10	B	1649	G
10	B	1674	G
10	B	1700	A
10	B	1701	A
10	B	1703	G
10	B	1706	C
10	B	1707	G
10	B	1713	A
10	B	1715	G
10	B	1716	U
10	B	1723	G
10	B	1729	U
10	B	1730	C
10	B	1731	G
10	B	1733	G
10	B	1738	G
10	B	1756	G
10	B	1758	U
10	B	1764	C
10	B	1773	A
10	B	1776	G
10	B	1781	U
10	B	1786	A
10	B	1791	A

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Mol	Chain	Res	Type
10	B	1800	C
10	B	1801	A
10	B	1816	C
10	B	1829	A
10	B	1833	C
10	B	1870	C
10	B	1873	G
10	B	1876	A
10	B	1884	G
10	B	1906	G
10	B	1913	A
10	B	1914	C
10	B	1927	A
10	B	1929	G
10	B	1930	G
10	B	1937	A
10	B	1938	A
10	B	1939	U
10	B	1940	U
10	B	1955	U
10	B	1967	C
10	B	1970	A
10	B	1971	U
10	B	1972	G
10	B	1991	U
10	B	1993	U
10	B	1997	C
10	B	2022	U
10	B	2023	C
10	B	2031	A
10	B	2032	G
10	B	2033	A
10	B	2043	C
10	B	2055	C
10	B	2056	G
10	B	2060	A
10	B	2061	G
10	B	2062	A
10	B	2069	G
10	B	2076	U
10	B	2077	A
10	B	2094	A

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Mol	Chain	Res	Type
10	B	2096	C
10	B	2100	G
10	B	2104	C
10	B	2106	U
10	B	2107	G
10	B	2108	A
10	B	2109	U
10	B	2110	G
10	B	2134	A
10	B	2135	A
10	B	2138	G
10	B	2145	C
10	B	2146	C
10	B	2147	A
10	B	2149	U
10	B	2156	G
10	B	2157	G
10	B	2181	U
10	B	2183	A
10	B	2190	G
10	B	2199	A
10	B	2204	G
10	B	2210	U
10	B	2211	A
10	B	2212	A
10	B	2225	A
10	B	2239	G
10	B	2250	G
10	B	2253	G
10	B	2268	A
10	B	2270	A
10	B	2283	C
10	B	2287	A
10	B	2288	A
10	B	2289	G
10	B	2297	A
10	B	2305	U
10	B	2307	G
10	B	2308	G
10	B	2309	A
10	B	2310	C
10	B	2311	A

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Mol	Chain	Res	Type
10	B	2319	G
10	B	2321	U
10	B	2322	A
10	B	2325	G
10	B	2333	A
10	B	2334	U
10	B	2336	A
10	B	2337	G
10	B	2347	C
10	B	2361	G
10	B	2383	G
10	B	2385	C
10	B	2402	U
10	B	2406	A
10	B	2423	U
10	B	2424	C
10	B	2426	A
10	B	2429	G
10	B	2430	A
10	B	2434	A
10	B	2441	U
10	B	2448	A
10	B	2472	G
10	B	2476	A
10	B	2491	U
10	B	2502	G
10	B	2505	G
10	B	2506	U
10	B	2518	A
10	B	2529	G
10	B	2535	G
10	B	2554	U
10	B	2566	A
10	B	2567	G
10	B	2573	C
10	B	2585	U
10	B	2586	U
10	B	2597	G
10	B	2602	A
10	B	2609	U
10	B	2610	C
10	B	2613	U

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Mol	Chain	Res	Type
10	B	2621	G
10	B	2629	U
10	B	2654	A
10	B	2682	A
10	B	2689	U
10	B	2690	U
10	B	2714	G
10	B	2726	A
10	B	2739	U
10	B	2744	G
10	B	2751	G
10	B	2757	A
10	B	2765	A
10	B	2778	A
10	B	2791	G
10	B	2797	U
10	B	2800	A
10	B	2801	G
10	B	2808	G
10	B	2820	A
10	B	2821	A
10	B	2836	U
10	B	2850	A
10	B	2866	U
10	B	2867	G
10	B	2872	A
10	B	2873	A
10	B	2883	A
10	B	2903	U

All (24) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
7	8	84	C
9	A	25	U
10	B	63	A
10	B	125	A
10	B	143	C
10	B	162	U
10	B	199	A
10	B	301	G
10	B	544	C

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Mol	Chain	Res	Type
10	B	670	A
10	B	982	C
10	B	1133	A
10	B	1205	A
10	B	1210	G
10	B	1211	C
10	B	1301	A
10	B	2076	U
10	B	2198	A
10	B	2282	G
10	B	2286	G
10	B	2324	U
10	B	2336	A
10	B	2425	A
10	B	2756	U

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

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

5.5 Carbohydrates (i)

There are no oligosaccharides in this entry.

5.6 Ligand geometry (i)

Of 111 ligands modelled in this entry, 111 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
8	9	34
7	8	7

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	8	86:G	O3'	87:G	P	10.90
1	9	315:GLN	C	316:ALA	N	5.35
1	8	22:U	O3'	23:G	P	4.45
1	9	352:GLY	C	353:LYS	N	4.18
1	9	370:ASP	C	371:LYS	N	3.83
1	9	299:ASP	C	300:VAL	N	3.68
1	9	292:SER	C	293:ARG	N	3.49
1	9	290:ILE	C	291:ALA	N	3.47
1	9	333:ASP	C	334:PHE	N	3.22
1	9	340:GLN	C	341:MET	N	2.76
1	9	325:LYS	C	326:GLY	N	2.51
1	9	300:VAL	C	301:LEU	N	2.45
1	8	75:G	O3'	76:A	P	2.35
1	8	76:A	O3'	77:C	P	2.23
1	8	88:C	O3'	89:A	P	2.22
1	9	375:ARG	C	376:MET	N	2.19
1	9	349:SER	C	350:LEU	N	2.13
1	9	366:SER	C	367:GLN	N	2.10
1	8	77:C	O3'	78:G	P	2.07
1	8	84:C	O3'	85:A	P	1.92
1	9	291:ALA	C	292:SER	N	1.91
1	9	331:LEU	C	332:ASN	N	1.72
1	9	362:ASP	C	363:ASN	N	1.69
1	9	296:GLY	C	297:MET	N	1.16
1	9	368:MET	C	369:ASP	N	1.02
1	9	17:SER	C	18:GLY	N	1.00
1	9	19:ARG	C	20:GLY	N	1.00
1	9	20:GLY	C	21:ARG	N	1.00
1	9	21:ARG	C	22:LEU	N	1.00
1	9	22:LEU	C	23:THR	N	1.00
1	9	24:GLU	C	25:ASP	N	1.00
1	9	127:LYS	C	128:HIS	N	1.00
1	9	129:LYS	C	130:LYS	N	1.00
1	9	130:LYS	C	131:LYS	N	1.00

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Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	9	194:ARG	C	195:LEU	N	1.00
1	9	196:HIS	C	197:VAL	N	1.00
1	9	198:ASP	C	199:GLU	N	1.00
1	9	347:MET	C	348:ALA	N	0.89
1	9	371:LYS	C	372:VAL	N	0.66
1	9	344:MET	C	345:GLY	N	0.47
1	9	319:LEU	C	320:ALA	N	0.43

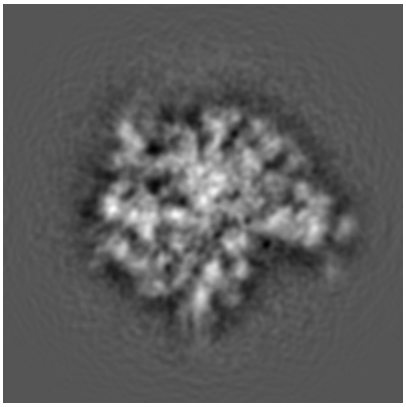
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-1261. These allow visual inspection of the internal detail of the map and identification of artifacts.

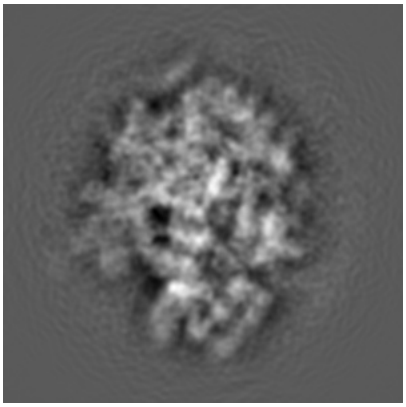
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

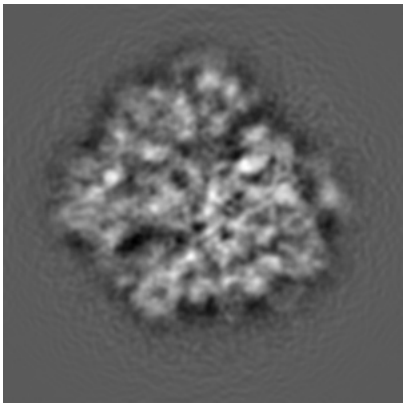
6.1.1 Primary map



X



Y

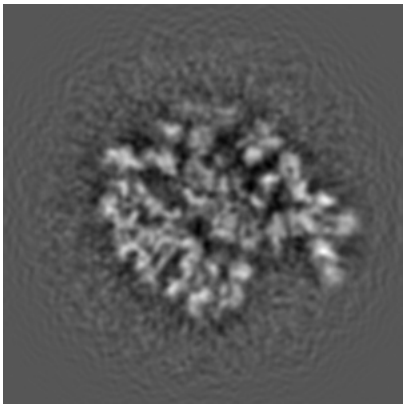


Z

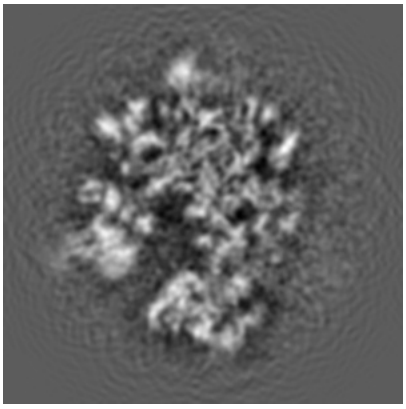
The images above show the map projected in three orthogonal directions.

6.2 Central slices

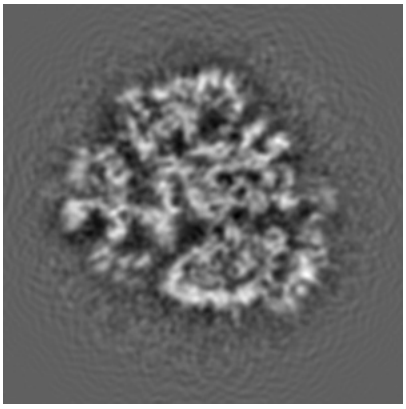
6.2.1 Primary map



X Index: 147



Y Index: 147

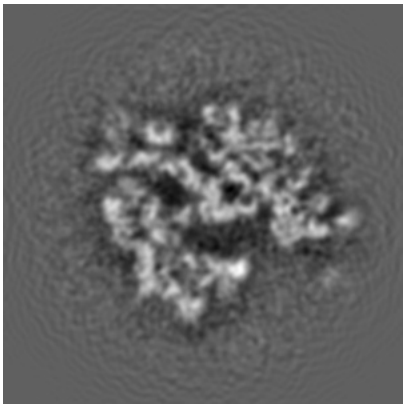


Z Index: 147

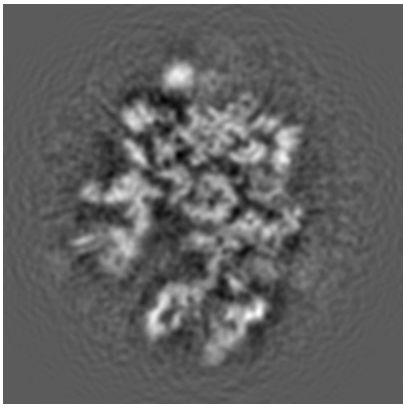
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

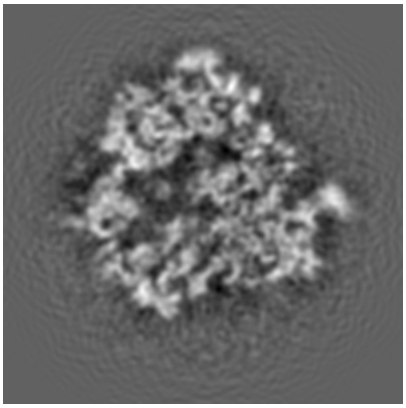
6.3.1 Primary map



X Index: 139



Y Index: 153

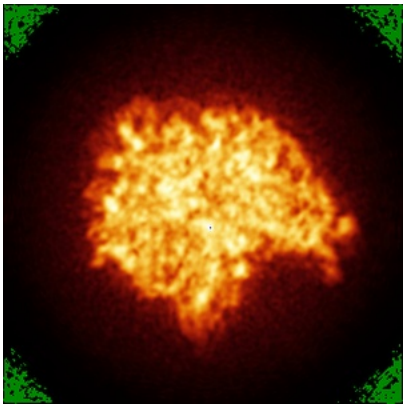


Z Index: 133

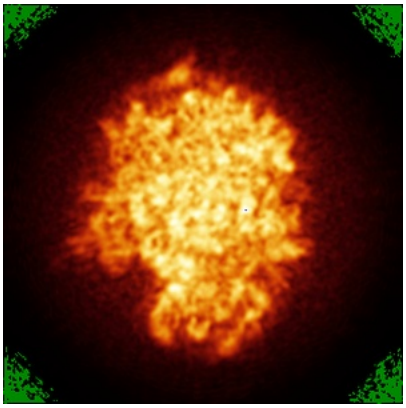
The images above show the largest variance slices of the map in three orthogonal directions.

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

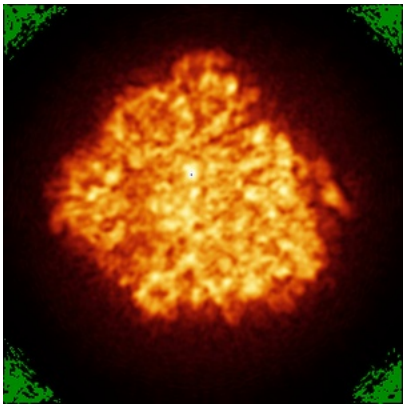
6.4.1 Primary map



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

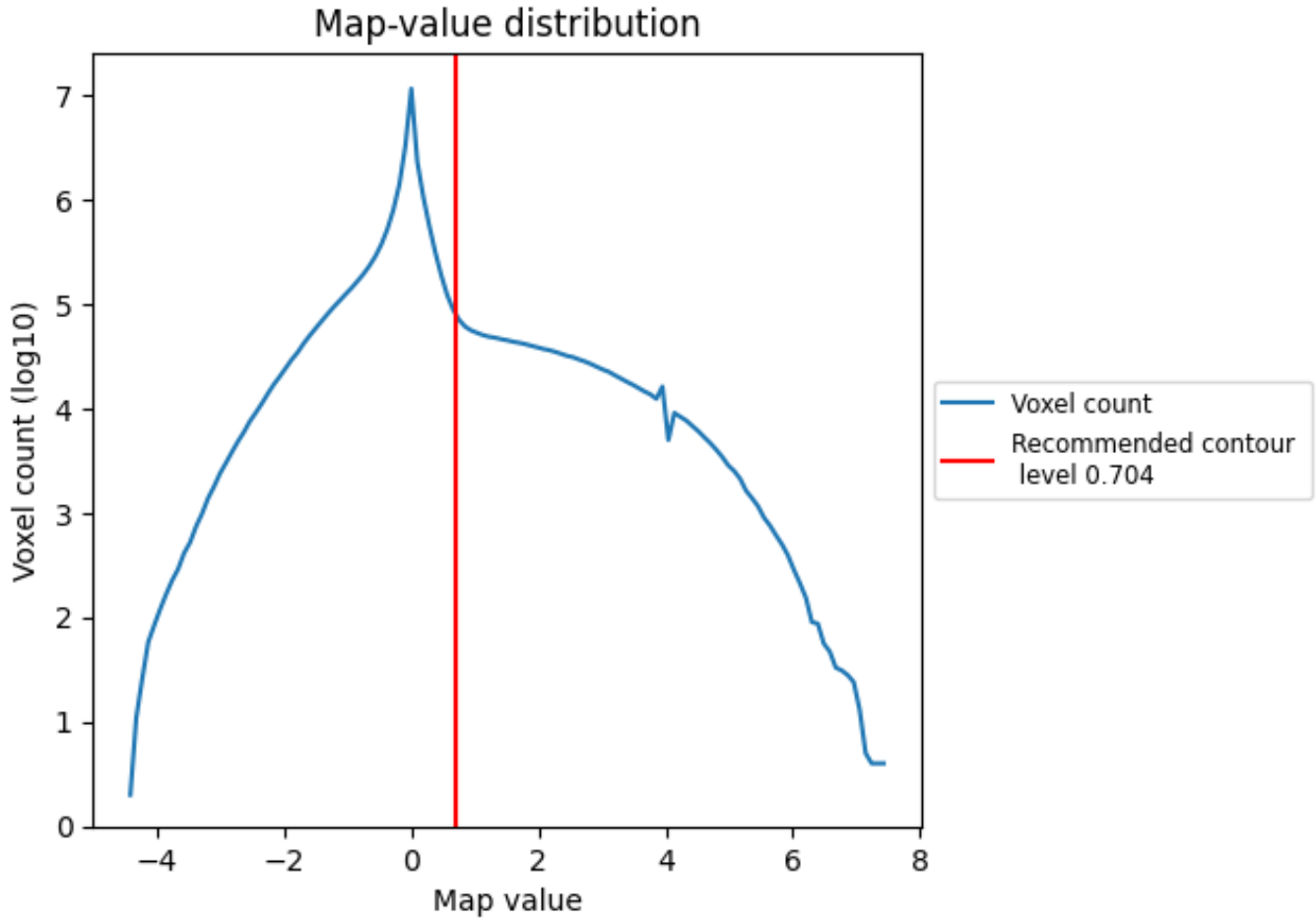
6.6 Mask visualisation (i)

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

7 Map analysis

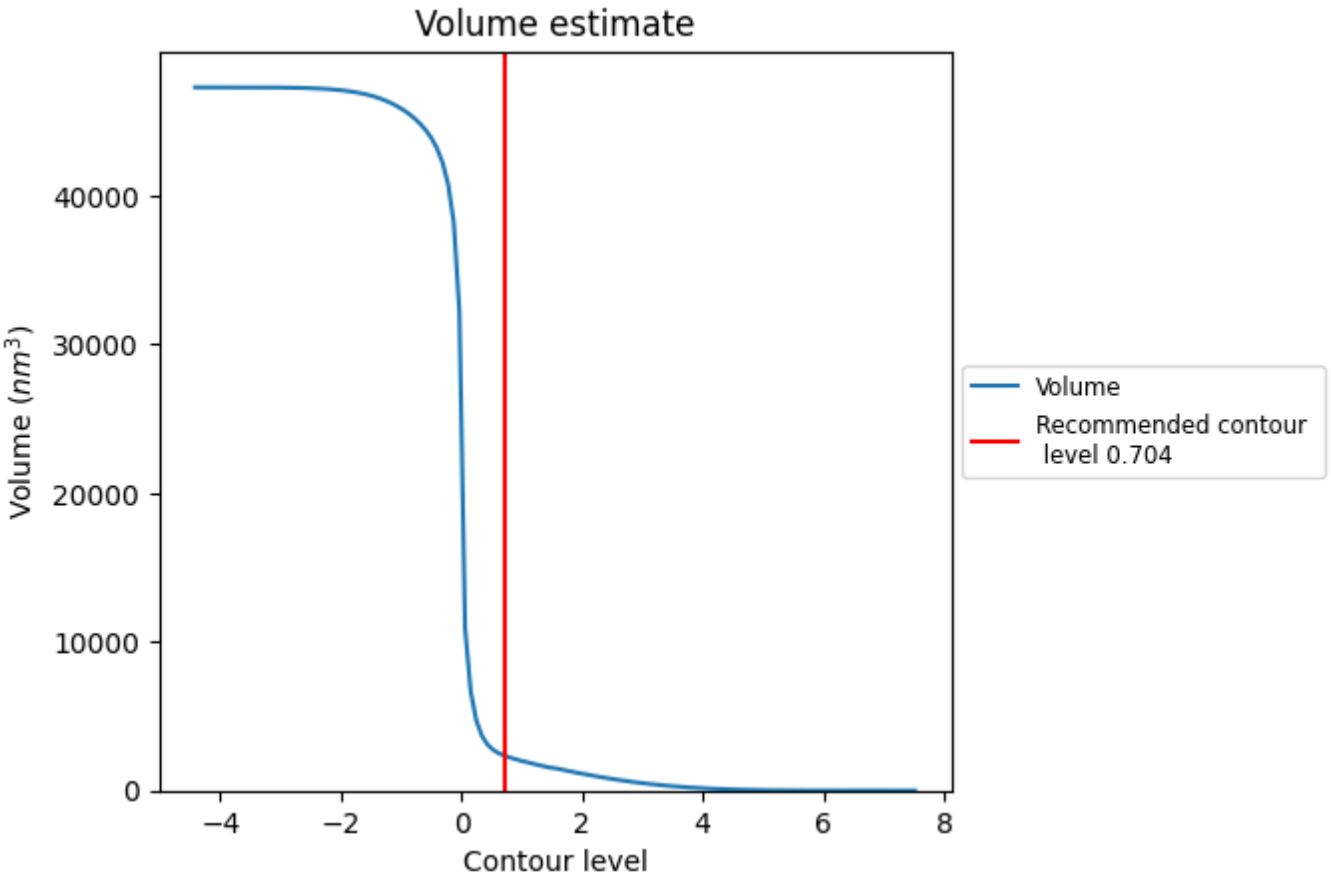
This section contains the results of statistical analysis of the map.

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.

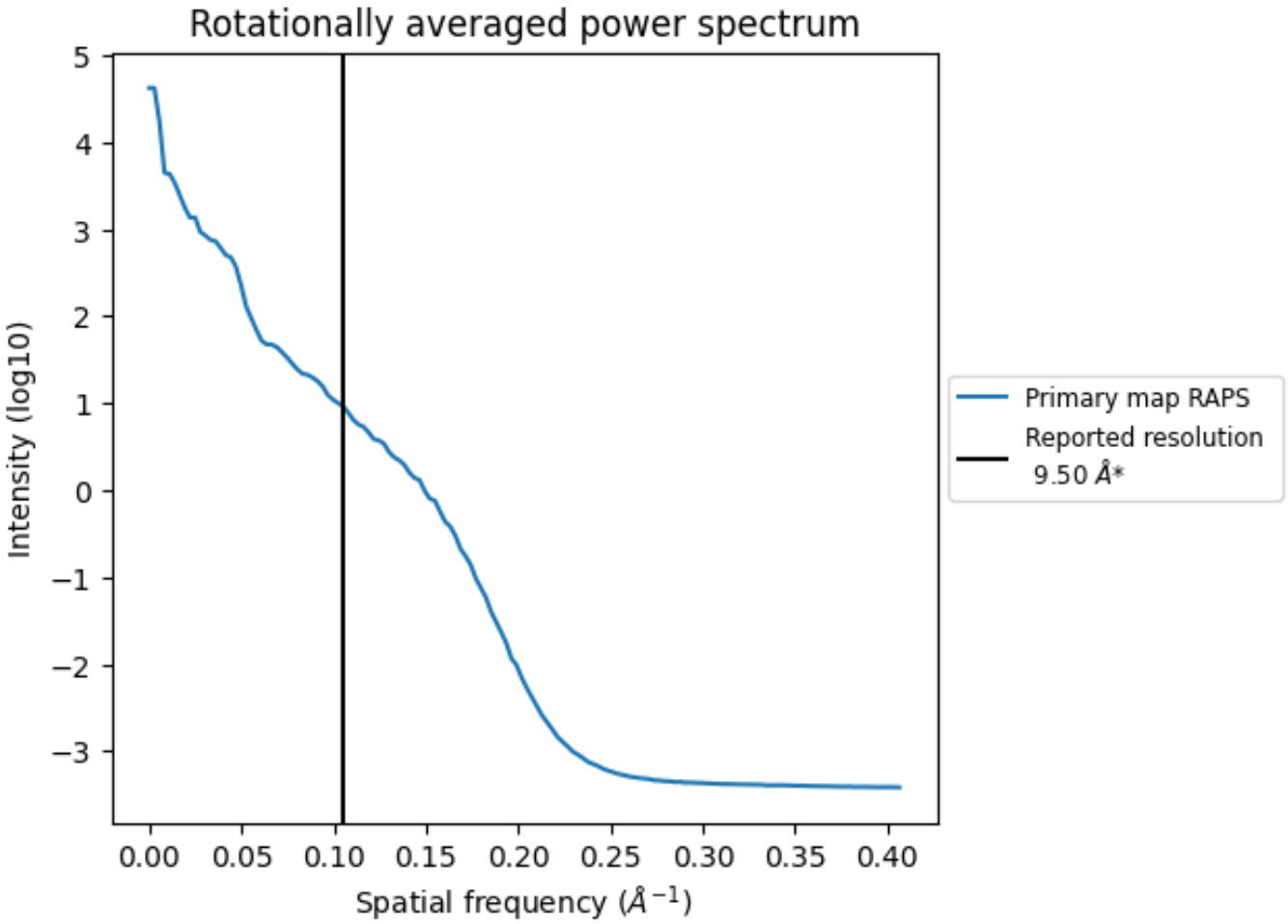
7.2 Volume estimate



The volume at the recommended contour level is 2362 nm^3; this corresponds to an approximate mass of 2133 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 0.105 Å^{-1}

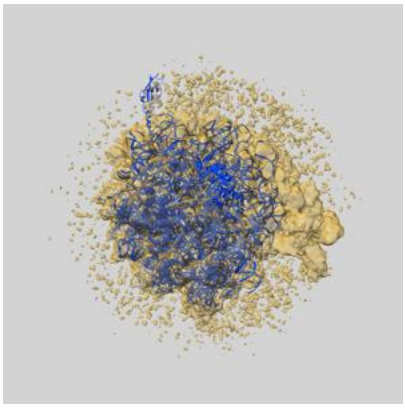
8 Fourier-Shell correlation (i)

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

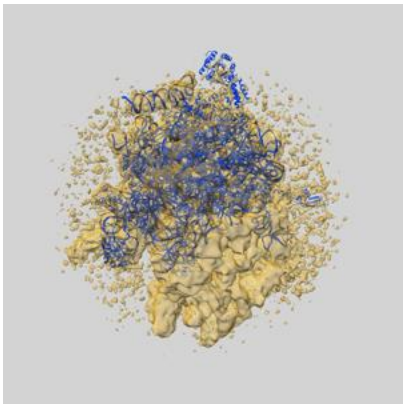
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-1261 and PDB model 2J28. Per-residue inclusion information can be found in section 3 on page 11.

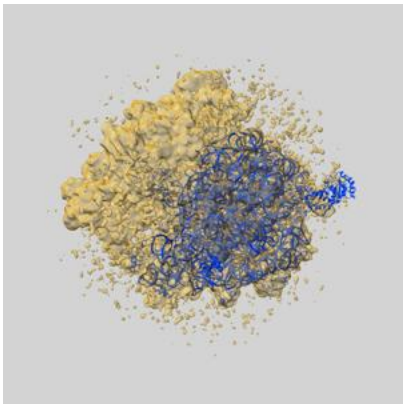
9.1 Map-model overlay



X



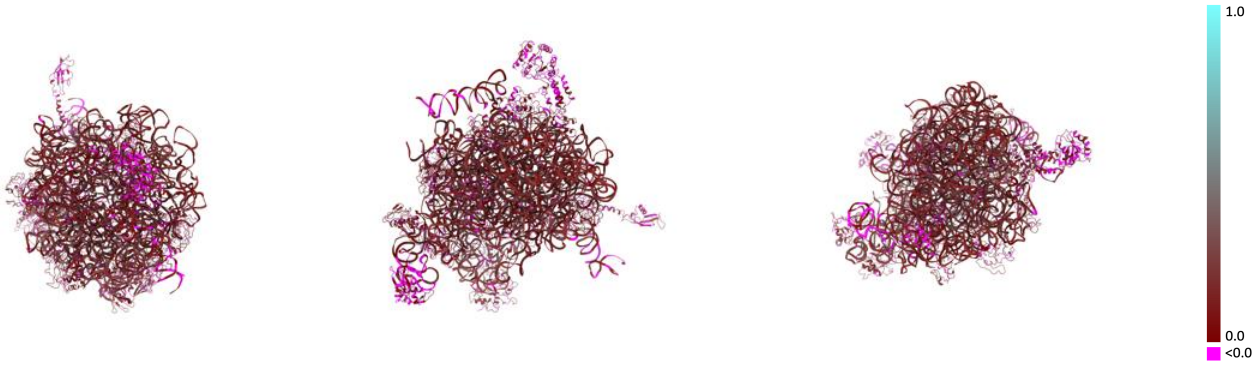
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 0.704 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

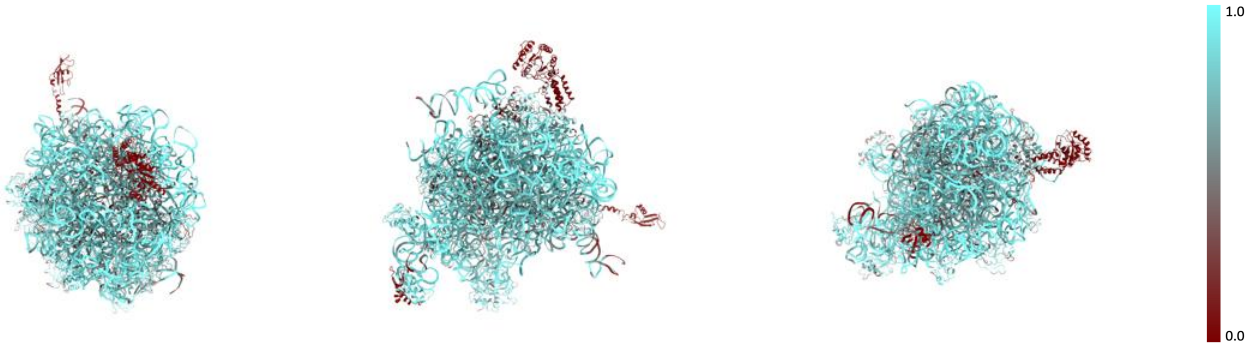
9.2 Q-score mapped to coordinate model



X Y Z

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

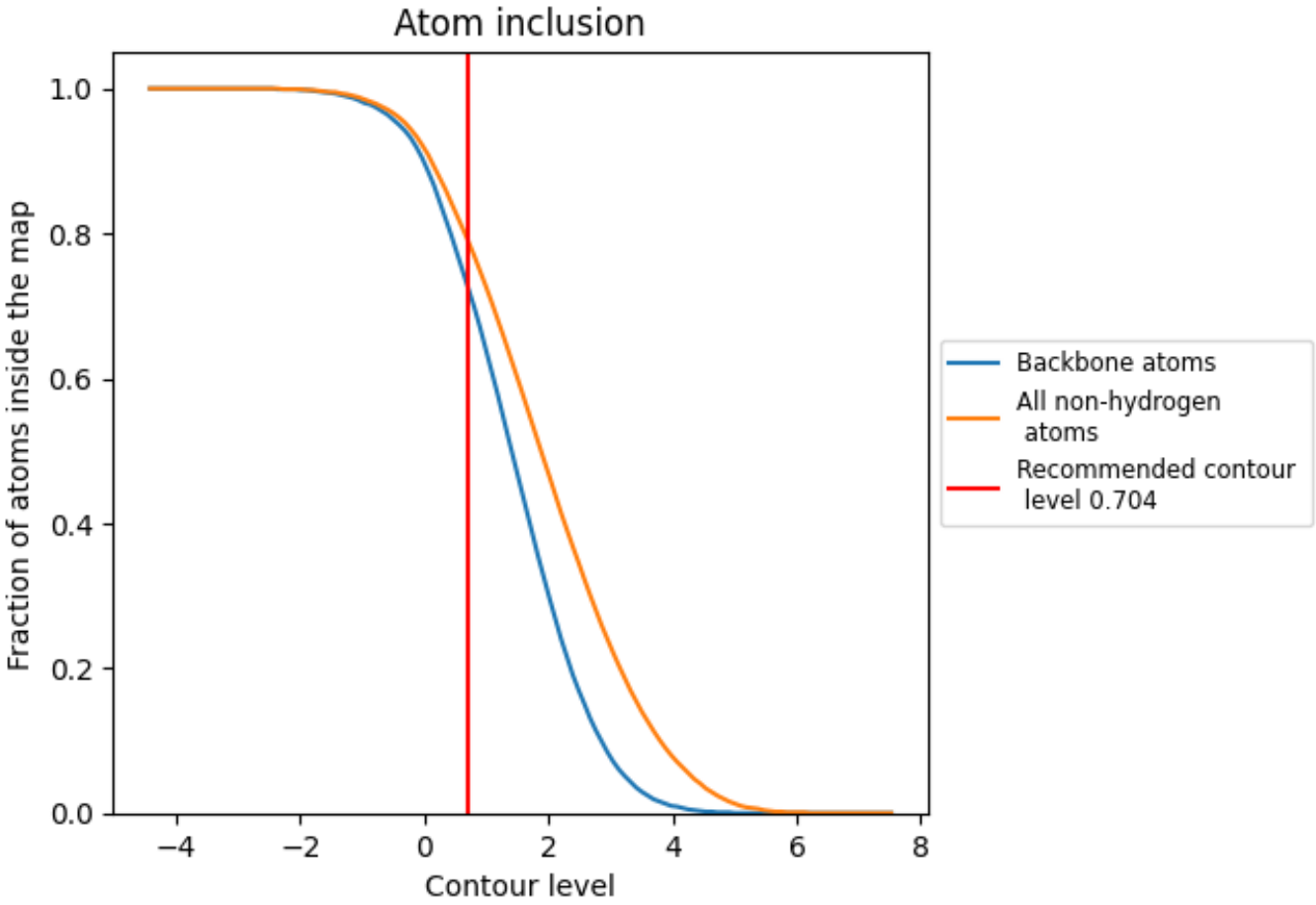
9.3 Atom inclusion mapped to coordinate model



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (0.704).

9.4 Atom inclusion (i)



At the recommended contour level, 73% of all backbone atoms, 79% 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 (0.704) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.7900	0.1360
0	0.5650	0.1120
1	0.5960	0.0850
2	0.4000	0.0530
3	0.4480	0.0630
4	0.4970	0.0260
7	0.5950	0.0850
8	0.8180	0.0720
9	0.2180	0.0320
A	0.9270	0.1450
B	0.8850	0.1620
C	0.5080	0.0890
D	0.6620	0.1090
E	0.6370	0.0940
F	0.8210	0.0830
G	0.8440	0.1180
H	0.2560	0.0760
I	0.5790	0.0280
J	0.6090	0.1000
K	0.6120	0.1300
L	0.5820	0.0790
M	0.5830	0.0830
N	0.6360	0.1020
O	0.7940	0.0830
P	0.6000	0.1020
Q	0.6560	0.0990
R	0.6910	0.1060
S	0.5800	0.1180
T	0.5930	0.1040
U	0.7260	0.0880
V	0.8860	0.1160
W	0.5240	0.0560
X	0.7280	0.1110
Y	0.7620	0.1380
Z	0.5910	0.0890