Full wwPDB EM Validation Report ⓘ

Nov 19, 2022 – 11:33 PM EST

PDB ID	:	4V4V
EMDB ID	:	EMD-1056
Title	:	Structure of a pre-translocational E. coli ribosome obtained by fitting atomic models for RNA and protein components into cryo-EM map EMD-1056
Authors	:	Mitra, K.; Frank, J.
Deposited on	:	2006-05-09
Resolution	:	15.00 Å(reported)

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

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

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

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

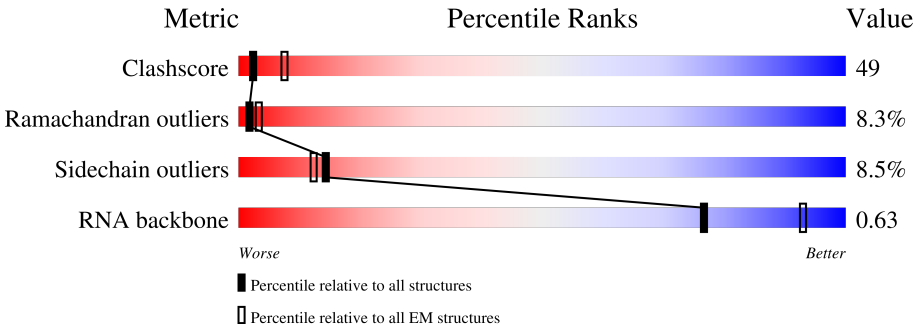
EMDB validation analysis	:	0.0.1.dev43
MolProbity	:	4.02b-467
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
MapQ	:	1.9.9
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.31.3

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 15.00 Å.

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



Metric	Whole archive (#Entries)	EM structures (#Entries)
Clashscore	158937	4297
Ramachandran outliers	154571	4023
Sidechain outliers	154315	3826
RNA backbone	4643	859

The table below summarises the geometric issues observed across the polymeric chains and their fit to the map. The red, orange, yellow and green segments of the bar indicate the fraction of residues that contain outliers for >=3, 2, 1 and 0 types of geometric quality criteria respectively. A grey segment represents the fraction of residues that are not modelled. The numeric value for each fraction is indicated below the corresponding segment, with a dot representing fractions <=5% The upper red bar (where present) indicates the fraction of residues that have poor fit to the EM map (all-atom inclusion < 40%). The numeric value is given above the bar.

Mol	Chain	Length	Quality of chain
1	AA	1488	41% 38% 43% 18% ·
2	AU	76	53% 41% 36% 24%
2	AV	76	63% 36% 45% 20%
2	AW	76	59% 37% 43% 20%
3	AB	236	63% 45% 51% ·
4	AC	206	67% 42% 49% 9%
5	AD	204	68% 38% 59% ·

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Mol	Chain	Length	Quality of chain
6	AE	148	67% 41% 55%
7	AF	95	51% 28% 65% 6%
8	AG	137	47% 62% 34%
9	AH	127	52% 39% 58%
10	AI	126	44% 31% 60% 10%
11	AJ	96	59% 31% 60% 7%
12	AK	116	69% 43% 50% 7%
13	AL	101	38% 40% 55% 5%
14	AM	115	63% 51% 43% 5%
15	AN	61	92% 43% 49% 8%
16	AO	86	35% 44% 56%
17	AP	78	36% 32% 64%
18	AQ	79	47% 41% 54% 5%
19	AR	69	70% 35% 64%
20	AS	87	57% 45% 47% 7%
21	AT	83	28% 37% 52% 10%
22	B0	2740	43% 27% 50% 22%
23	B9	108	50% 44% 38% 18%
24	B2	222	55% 41% 51% 7%
25	B3	119	81% 23% 63% 12%
25	B5	119	96% 30% 59% 11%
26	BA	227	53% 29% 44% 20% 7%
27	BB	209	53% 31% 62% 7%
28	BC	198	36% 23% 61% 15%
29	BD	177	52% 30% 47% 21%

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Mol	Chain	Length	Quality of chain
30	BE	167	56% 52% 44%
31	BF	149	74% 68% 30%
32	BG	139	76% 20% 60% 19%
33	BH	142	57% 20% 52% 25%
34	BI	122	82% 50% 41% 9%
35	BJ	140	41% 21% 45% 31%
36	BK	131	65% 49% 40% 10%
37	BL	114	45% 25% 53% 18%
38	BM	113	31% 53% 42% 5%
39	BN	114	53% 11% 48% 38%
40	BO	115	43% 8% 57% 30% 5%
41	BQ	106	59% 14% 70% 16%
42	BR	92	42% 21% 58% 17%
43	BS	99	38% 45% 43% 11%
44	BT	94	61% 52% 43% 5%
45	BU	84	62% 20% 52% 24%
46	BW	60	53% 33% 63%
47	BX	56	66% 36% 59% 5%
48	BZ	29	21% 28% 48% 21%
49	B1	52	79% 35% 38% 27%

2 Entry composition (i)

There are 49 unique types of molecules in this entry. The entry contains 141668 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 RNA chain called 16S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
1	AA	1488	31924	14238	5854	10345	1487	0	0

- Molecule 2 is a RNA chain called tRNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	P		
2	AU	76	1622	725	293	529	75	0	0
2	AV	76	1622	725	293	529	75	0	0
2	AW	76	1622	725	293	529	75	0	0

- Molecule 3 is a protein called 30S ribosomal subunit protein S2.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
3	AB	236	1847	1165	328	346	8	0	0

- Molecule 4 is a protein called 30S ribosomal subunit protein S3.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
4	AC	206	1625	1028	305	289	3	0	0

- Molecule 5 is a protein called 30S ribosomal subunit protein S4.

Mol	Chain	Residues	Atoms					AltConf	Trace
			Total	C	N	O	S		
5	AD	204	1638	1023	314	297	4	0	0

- Molecule 6 is a protein called 30S ribosomal subunit protein S5.

Mol	Chain	Residues	Atoms					AltConf	Trace
6	AE	148	Total	C	N	O	S	0	0
			1093	679	208	200	6		

- Molecule 7 is a protein called 30S ribosomal subunit protein S6.

Mol	Chain	Residues	Atoms					AltConf	Trace
7	AF	95	Total	C	N	O	S	0	0
			784	495	143	140	6		

- Molecule 8 is a protein called 30S ribosomal subunit protein S7.

Mol	Chain	Residues	Atoms					AltConf	Trace
8	AG	137	Total	C	N	O	S	0	0
			1079	671	204	200	4		

- Molecule 9 is a protein called 30S ribosomal subunit protein S8.

Mol	Chain	Residues	Atoms					AltConf	Trace
9	AH	127	Total	C	N	O	S	0	0
			968	610	171	181	6		

- Molecule 10 is a protein called 30S ribosomal subunit protein S9.

Mol	Chain	Residues	Atoms					AltConf	Trace
10	AI	126	Total	C	N	O	S	0	0
			1014	630	204	177	3		

- Molecule 11 is a protein called 30S ribosomal subunit protein S10.

Mol	Chain	Residues	Atoms					AltConf	Trace
11	AJ	96	Total	C	N	O	S	0	0
			773	484	148	140	1		

- Molecule 12 is a protein called 30S ribosomal subunit protein S11.

Mol	Chain	Residues	Atoms					AltConf	Trace
12	AK	116	Total	C	N	O	S	0	0
			870	535	173	159	3		

- Molecule 13 is a protein called 30S ribosomal subunit protein S12.

Mol	Chain	Residues	Atoms					AltConf	Trace
13	AL	101	Total	C	N	O	S	0	0
			787	486	159	138	4		

- Molecule 14 is a protein called 30S ribosomal subunit protein S13.

Mol	Chain	Residues	Atoms					AltConf	Trace
14	AM	115	Total	C	N	O	S	0	0
			892	552	179	158	3		

- Molecule 15 is a protein called 30S ribosomal subunit protein S14.

Mol	Chain	Residues	Atoms					AltConf	Trace
15	AN	61	Total	C	N	O	S	0	0
			500	310	108	80	2		

- Molecule 16 is a protein called 30S ribosomal subunit protein S15.

Mol	Chain	Residues	Atoms					AltConf	Trace
16	AO	86	Total	C	N	O	S	0	0
			697	430	139	127	1		

- Molecule 17 is a protein called 30S ribosomal subunit protein S16.

Mol	Chain	Residues	Atoms					AltConf	Trace
17	AP	78	Total	C	N	O	S	0	0
			622	390	122	109	1		

- Molecule 18 is a protein called 30S ribosomal subunit protein S17.

Mol	Chain	Residues	Atoms					AltConf	Trace
18	AQ	79	Total	C	N	O	S	0	0
			640	405	119	113	3		

- Molecule 19 is a protein called 30S ribosomal subunit protein S18.

Mol	Chain	Residues	Atoms					AltConf	Trace
19	AR	69	Total	C	N	O	S	0	0
			576	362	112	101	1		

- Molecule 20 is a protein called 30S ribosomal subunit protein S19.

Mol	Chain	Residues	Atoms					AltConf	Trace
20	AS	87	Total	C	N	O	S	0	0
			695	443	132	118	2		

- Molecule 21 is a protein called 30S ribosomal subunit protein S20.

Mol	Chain	Residues	Atoms					AltConf	Trace
21	AT	83	Total	C	N	O	S	0	0
			649	401	134	111	3		

- Molecule 22 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
22	B0	2740	Total	C	N	O	P	0	0
			58824	26239	10826	19019	2740		

- Molecule 23 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					AltConf	Trace
23	B9	108	Total	C	N	O	P	0	0
			2310	1030	423	750	107		

- Molecule 24 is a protein called 50S ribosomal protein L1.

Mol	Chain	Residues	Atoms					AltConf	Trace
24	B2	222	Total	C	N	O	S	0	0
			1652	1031	301	314	6		

- Molecule 25 is a protein called 50S ribosomal protein L7/L12.

Mol	Chain	Residues	Atoms					AltConf	Trace
25	B3	119	Total	C	N	O	S	0	0
			845	531	137	174	3		
25	B5	119	Total	C	N	O	S	0	0
			845	531	137	174	3		

- Molecule 26 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms					AltConf	Trace
26	BA	227	Total	C	N	O	S	0	0
			1733	1064	352	311	6		

- Molecule 27 is a protein called 50S ribosomal protein L3.

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

- Molecule 28 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms					AltConf	Trace
28	BC	198	Total	C	N	O	S	0	0
			1531	960	280	287	4		

- Molecule 29 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms					AltConf	Trace
29	BD	177	Total	C	N	O	S	0	0
			1415	902	250	257	6		

- Molecule 30 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms					AltConf	Trace
30	BE	167	Total	C	N	O	S	0	0
			1253	789	228	234	2		

- Molecule 31 is a protein called 50S ribosomal protein L9.

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

- Molecule 32 is a protein called 50S ribosomal protein L11.

Mol	Chain	Residues	Atoms					AltConf	Trace
32	BG	139	Total	C	N	O	S	0	0
			1019	644	177	192	6		

- Molecule 33 is a protein called 50S ribosomal protein L13.

Mol	Chain	Residues	Atoms					AltConf	Trace
33	BH	142	Total	C	N	O	S	0	0
			1129	714	212	199	4		

- Molecule 34 is a protein called 50S ribosomal protein L14.

Mol	Chain	Residues	Atoms					AltConf	Trace
34	BI	122	Total	C	N	O	S	0	0
			939	588	180	166	5		

- Molecule 35 is a protein called 50S ribosomal protein L15.

Mol	Chain	Residues	Atoms					AltConf	Trace
35	BJ	140	Total	C	N	O	S	0	0
			1017	632	200	184	1		

- Molecule 36 is a protein called 50S ribosomal protein L16.

Mol	Chain	Residues	Atoms					AltConf	Trace
36	BK	131	Total	C	N	O	S	0	0
			1036	661	200	171	4		

- Molecule 37 is a protein called 50S ribosomal protein L17.

Mol	Chain	Residues	Atoms					AltConf	Trace
37	BL	114	Total	C	N	O	S	0	0
			908	564	184	156	4		

- Molecule 38 is a protein called 50S ribosomal protein L18.

Mol	Chain	Residues	Atoms				AltConf	Trace
38	BM	113	Total	C	N	O	0	0
			864	534	174	156		

- Molecule 39 is a protein called 50S ribosomal protein L19.

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

- Molecule 40 is a protein called 50S RIBOSOMAL PROTEIN L20.

Mol	Chain	Residues	Atoms				AltConf	Trace
40	BO	115	Total	C	N	O	0	0
			937	598	190	149		

- Molecule 41 is a protein called 50S ribosomal protein L22.

Mol	Chain	Residues	Atoms					AltConf	Trace
41	BQ	106	Total	C	N	O	S	0	0
			825	512	162	149	2		

- Molecule 42 is a protein called 50S ribosomal protein L23.

Mol	Chain	Residues	Atoms					AltConf	Trace
42	BR	92	Total	C	N	O	S	0	0
			717	455	132	129	1		

- Molecule 43 is a protein called 50S ribosomal protein L24.

Mol	Chain	Residues	Atoms				AltConf	Trace
43	BS	99	Total	C	N	O	0	0
			762	480	143	139		

- Molecule 44 is a protein called 50S ribosomal protein L25.

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

- Molecule 45 is a protein called 50S ribosomal protein L27.

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

- Molecule 46 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms					AltConf	Trace
46	BW	60	Total	C	N	O	S	0	0
			495	305	96	92	2		

- Molecule 47 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms					AltConf	Trace
47	BX	56	Total	C	N	O	S	0	0
			435	272	84	77	2		

- Molecule 48 is a protein called 50S ribosomal protein L32.

Mol	Chain	Residues	Atoms				AltConf	Trace
48	BZ	29	Total 234	C 145	N 47	O 42	0	0

- Molecule 49 is a protein called 50S ribosomal protein L33.

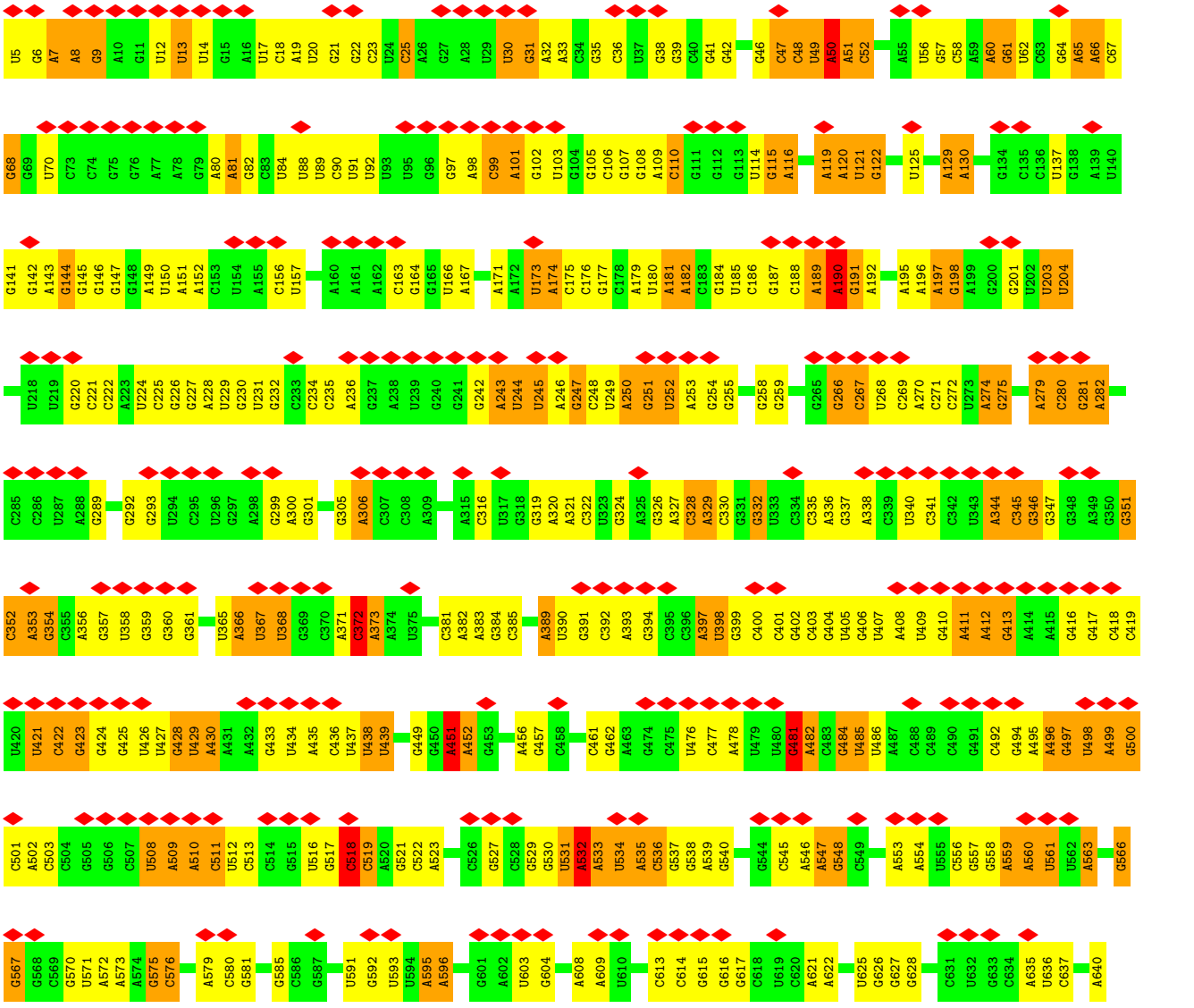
Mol	Chain	Residues	Atoms				AltConf	Trace
49	B1	52	Total 424	C 272	N 78	O 74	0	0

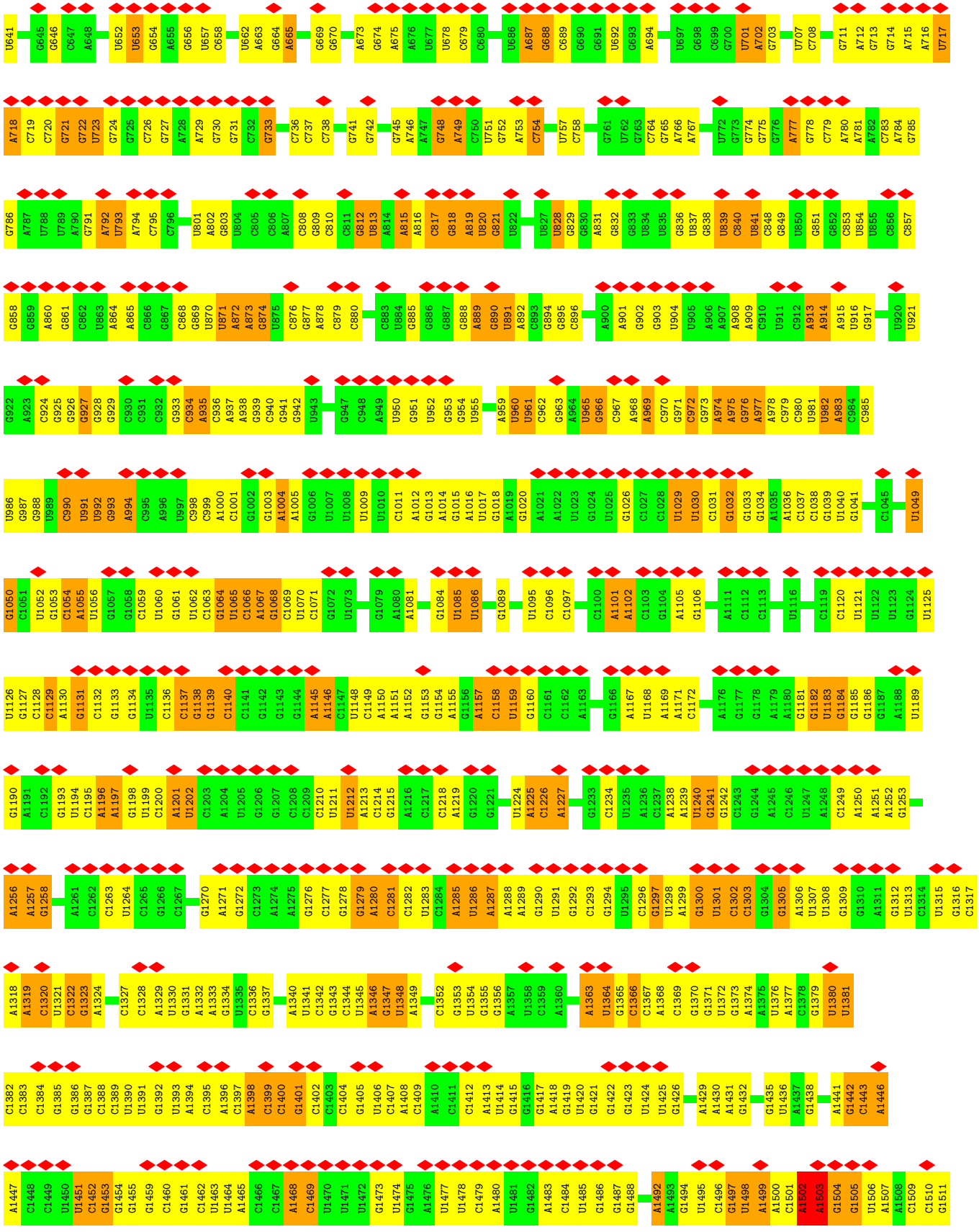
3 Residue-property plots (i)

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and 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: 16S ribosomal RNA

Chain AA:

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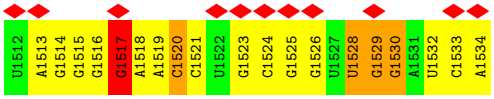
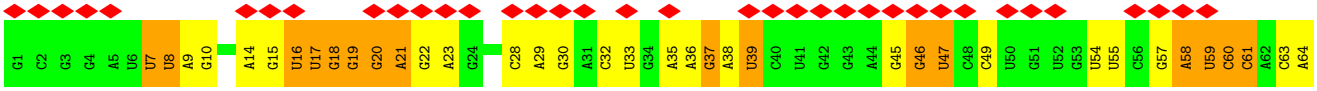
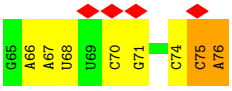
A718 C719 C720 G721 G722 U723 G724 G725 C726 G727 A728 A729 G730 G731 C732 G733 C736 C737 C738 G741 G742 G745 A746 A747 G748 A749 C750 U751 G752 A753 C754 U757 C758 G761 U762 G763 C764 G765 A766 A767 U772 G773 G774 G775 G776 A777 G778 C779 A780 A781 A782 C783 A784 G785
G786 A787 U788 U789 A790 G791 A792 U793 A794 C795 C796 U801 A802 G803 U804 C805 C806 A807 C808 G809 C810 C811 G812 U813 A814 A815 A816 C817 G818 A819 U820 G821 U822 U827 U828 G829 G830 A831 G832 G833 U834 U835 G836 U837 G838 U839 C840 U841 C848 G849 U850 G851 G852 C853 U854 U855 C856 C857
G858 G859 A860 G861 C862 U863 A864 A865 C866 G867 C868 G869 U870 U871 A872 A873 G874 U875 C876 G877 A878 C879 C880 C883 U884 G885 G886 G887 G888 A889 G890 U891 A892 C893 G894 G895 C896 A900 A901 G902 G903 U904 U905 A906 A907 A908 A909 C910 U911 C912 A913 A914 A915 U916 G917 U920 U921
G922 A923 C924 G925 G926 G927 G928 G929 C930 C931 C932 G933 C934 A935 C936 A937 A938 G939 C940 G941 G942 U943 G947 C948 A949 U950 G951 U952 G953 G954 U955 A959 U960 U961 C962 G963 A964 U965 G966 C967 A968 A969 C970 G971 C972 G973 A974 A975 G976 A977 A978 C979 C980 U981 U982 A983 C984 C985
U986 G987 G988 U989 C990 U991 U992 G993 A994 C995 A996 U997 C998 C999 A1000 C1001 G1002 G1003 A1004 A1005 G1006 U1007 U1008 U1009 U1010 C1011 A1012 G1013 A1014 G1015 A1016 U1017 G1018 A1019 G1020 A1021 A1022 U1023 G1024 U1025 G1026 C1027 C1028 U1029 U1030 C1031 G1032 G1033 G1034 A1035 A1036 C1037 C1038 G1039 U1040 G1041 C1045 U1049
G1050 C1051 U1052 G1053 C1054 A1055 A1056 G1057 G1058 C1059 U1060 G1061 U1062 C1063 G1064 U1065 C1066 A1067 G1068 C1069 U1070 C1071 G1072 U1073 G1079 A1080 A1081 G1084 U1085 U1086 G1089 U1095 C1096 C1097 C1100 A1101 A1102 C1103 G1104 A1105 G1106 A1111 C1112 C1113 U1116 C1119 C1120 U1121 U1122 U1123 G1124 U1125
U1126 G1127 C1128 C1129 A1130 G1131 C1132 G1133 G1134 U1135 C1136 C1137 G1138 G1139 C1140 C1141 G1142 G1143 G1144 A1145 A1146 C1147 U1148 C1149 A1150 A1151 A1152 G1153 G1154 A1155 G1156 A1157 C1158 U1159 G1160 C1161 C1162 A1163 G1166 A1167 U1168 A1169 A1171 C1172 A1176 G1177 G1178 A1179 A1180 G1181 G1182 U1183 G1184 G1185 G1186 G1187 A1188 U1189
G1190 A1191 C1192 G1193 U1194 C1195 A1196 A1197 G1198 U1199 C1200 A1201 U1202 C1203 A1204 U1205 G1206 G1207 C1208 C1209 C1210 U1211 U1212 A1213 C1214 G1215 A1216 C1217 C1218 A1219 G1220 G1221 U1224 A1225 C1226 A1227 G1233 C1234 U1235 A1236 C1237 A1238 A1239 U1240 G1241 G1242 C1243 G1244 A1245 C1246 U1247 A1248 C1249 A1250 A1251 A1252 G1253
A1256 A1257 G1258 A1261 C1262 C1263 U1264 C1265 G1266 C1267 G1270 A1271 G1272 C1273 A1274 A1275 G1276 C1277 G1278 G1279 A1280 C1281 C1282 U1283 C1284 A1285 U1286 A1287 A1288 A1289 G1290 U1291 G1292 C1293 G1294 U1295 C1296 G1297 U1298 A1299 G1300 U1301 C1302 C1303 G1304 G1305 A1306 U1307 U1308 G1309 G1310 A1311 G1312 U1313 C1314 U1315 G1316 C1317
A1318 A1319 C1320 U1321 C1322 G1323 A1324 C1327 C1328 A1329 U1330 G1331 A1332 A1333 G1334 U1335 C1336 G1337 A1340 U1341 C1342 G1343 C1344 U1345 A1346 G1347 U1348 A1349 C1352 G1353 U1354 G1355 G1356 A1357 U1358 C1359 A1360 A1363 U1364 G1365 C1366 C1367 A1368 C1369 G1370 G1371 U1372 G1373 A1374 A1375 U1376 A1377 C1378 G1379 U1380 U1381
C1382 C1383 C1384 G1385 G1386 G1387 C1388 C1389 U1390 U1391 G1392 U1393 A1394 C1395 A1396 C1397 A1398 C1399 C1400 G1401 C1402 C1403 C1404 G1405 U1406 C1407 A1408 C1409 A1410 C1411 C1412 A1413 U1414 G1415 G1416 G1417 A1418 G1419 U1420 G1421 G1422 G1423 U1424 U1425 G1426 A1429 A1430 A1431 G1432 G1435 U1436 A1437 G1438 A1441 G1442 C1443 A1446
A1447 C1448 C1449 U1450 U1451 C1452 G1453 G1454 G1455 G1459 C1460 G1461 C1462 U1463 U1464 A1465 C1466 C1467 A1468 C1469 U1470 U1471 U1472 G1473 U1474 G1475 A1476 U1477 U1478 C1479 A1480 U1481 G1482 A1483 C1484 U1485 G1486 G1487 G1488 A1492 A1493 G1494 U1495 C1496 G1497 U1498 A1499 A1500 C1501 A1502 A1503 G1504 G1505 U1506 A1507 A1508 C1509 C1510 G1511



• Molecule 2: tRNA

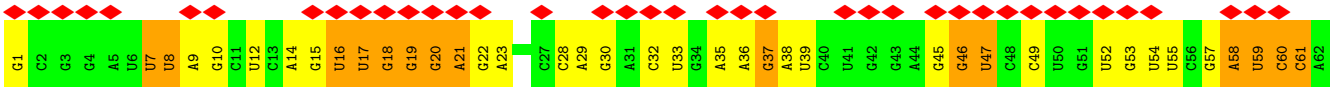
Chain AU:

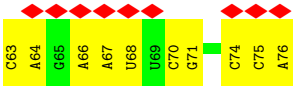




• Molecule 2: tRNA

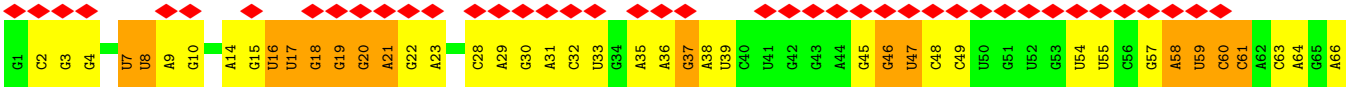
Chain AV:

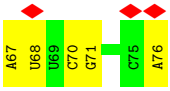




• Molecule 2: tRNA

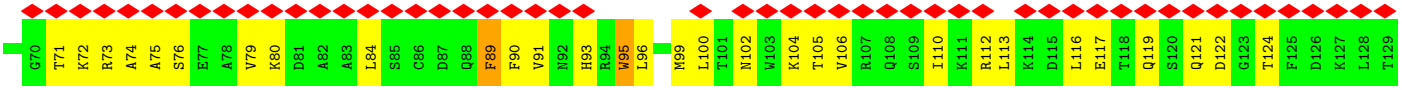
Chain AW:

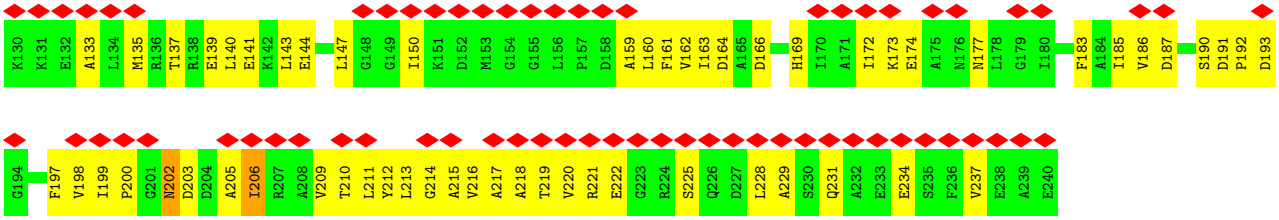




• Molecule 3: 30S ribosomal subunit protein S2

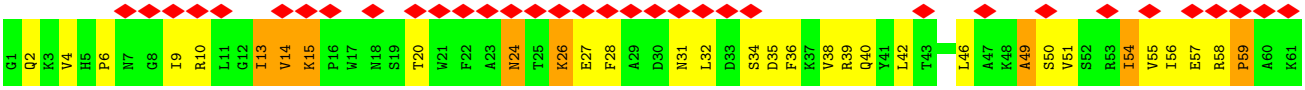
Chain AB:

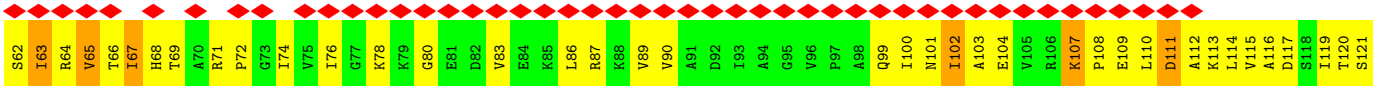


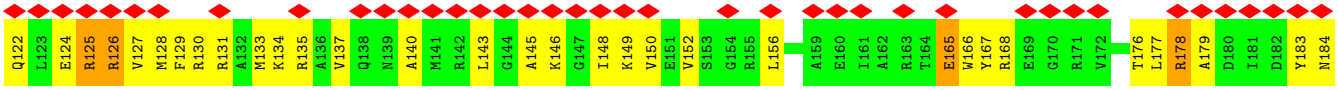


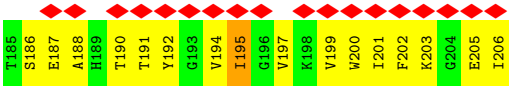
• Molecule 4: 30S ribosomal subunit protein S3

Chain AC:



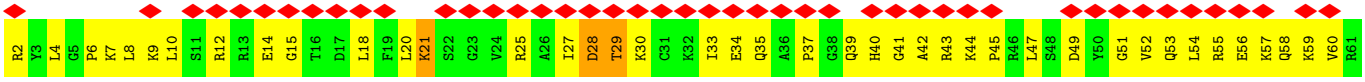


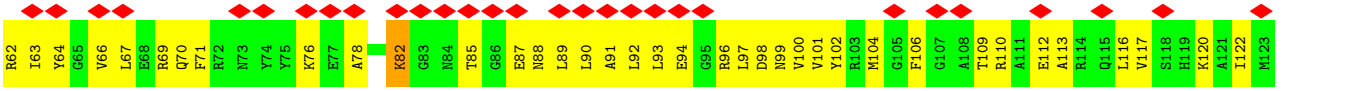


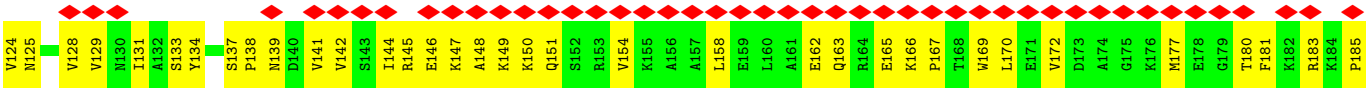


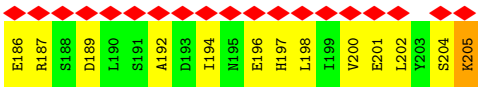
• Molecule 5: 30S ribosomal subunit protein S4

Chain AD:



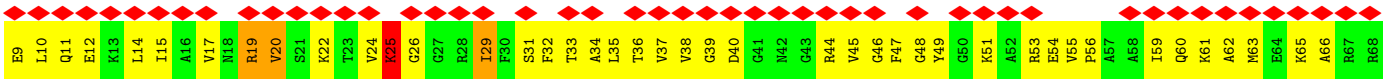


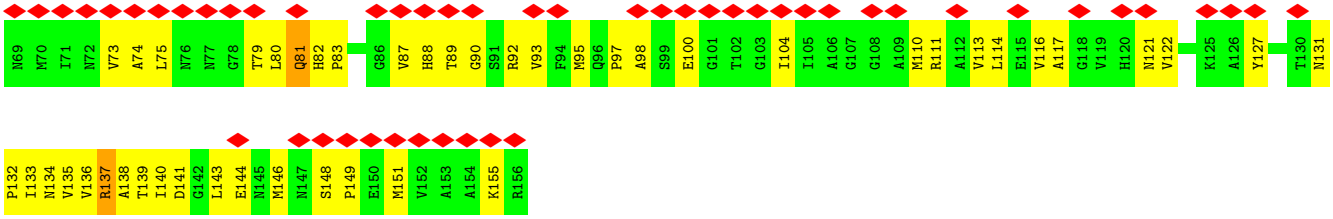




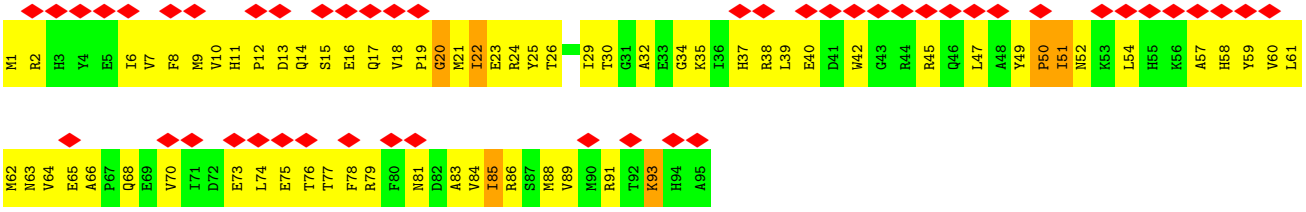
• Molecule 6: 30S ribosomal subunit protein S5

Chain AE:

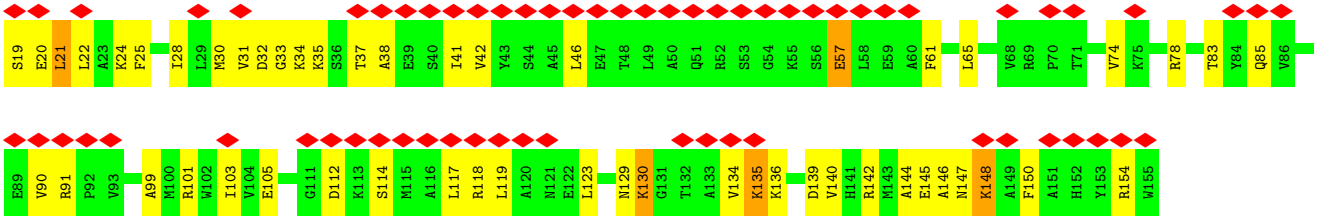




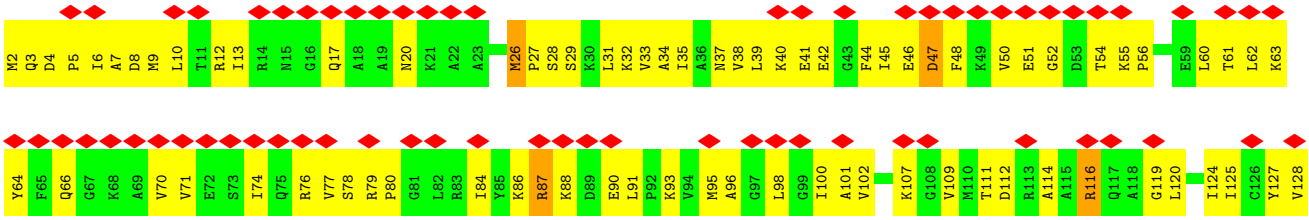
• Molecule 7: 30S ribosomal subunit protein S6



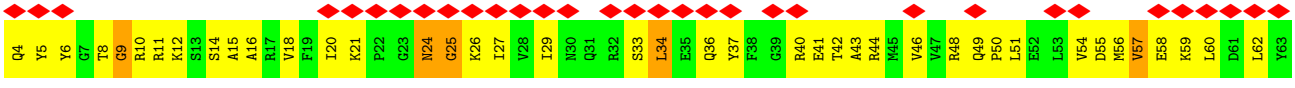
• Molecule 8: 30S ribosomal subunit protein S7

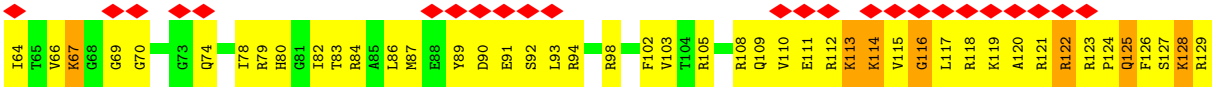


• Molecule 9: 30S ribosomal subunit protein S8



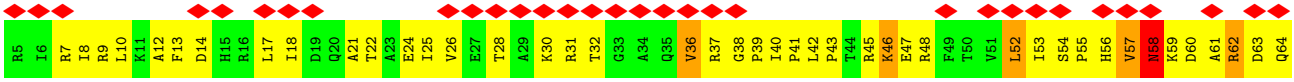
• Molecule 10: 30S ribosomal subunit protein S9





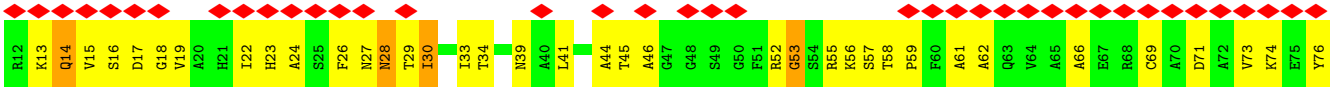
• Molecule 11: 30S ribosomal subunit protein S10

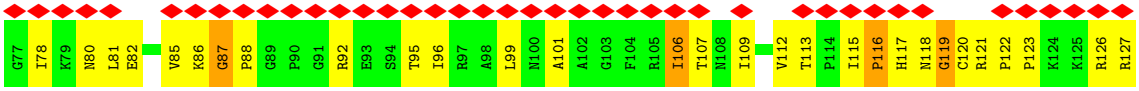
Chain AJ:



• Molecule 12: 30S ribosomal subunit protein S11

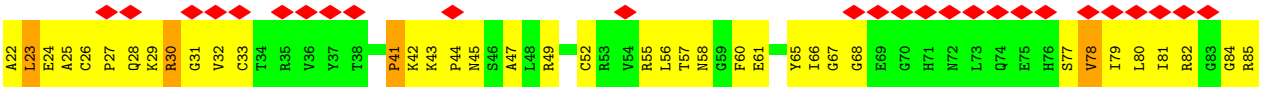
Chain AK:

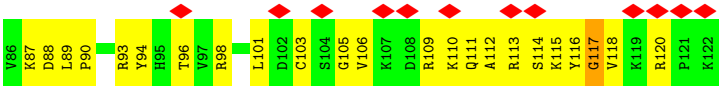




• Molecule 13: 30S ribosomal subunit protein S12

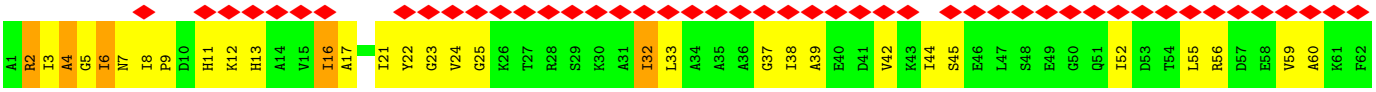
Chain AL:

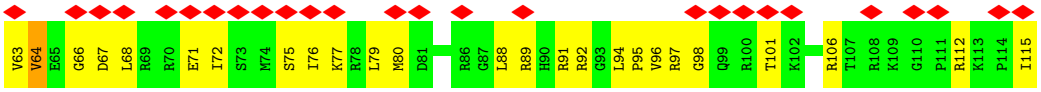




• Molecule 14: 30S ribosomal subunit protein S13

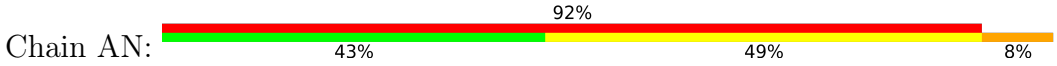
Chain AM:

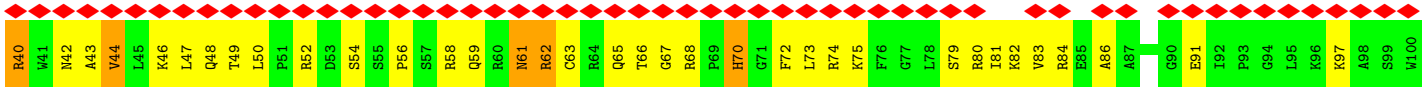




• Molecule 15: 30S ribosomal subunit protein S14

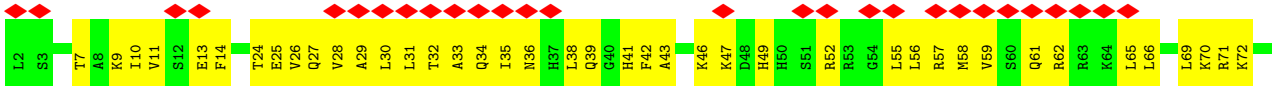
Chain AN:

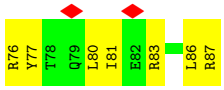




• Molecule 16: 30S ribosomal subunit protein S15

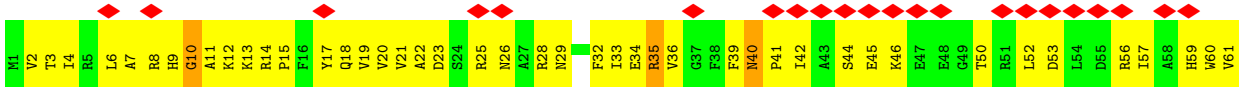
Chain AO:

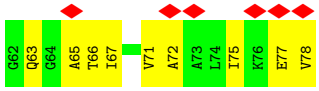




• Molecule 17: 30S ribosomal subunit protein S16

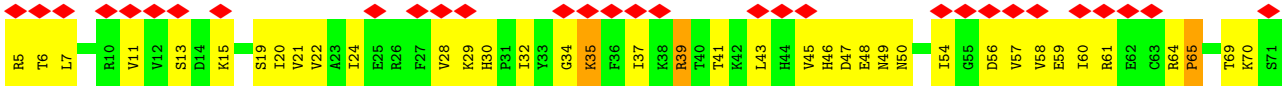
Chain AP:

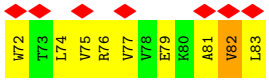




• Molecule 18: 30S ribosomal subunit protein S17

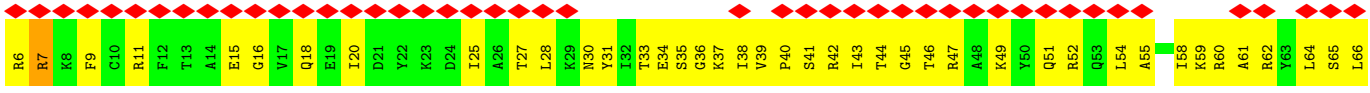
Chain AQ:

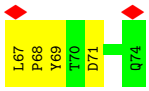




• Molecule 19: 30S ribosomal subunit protein S18

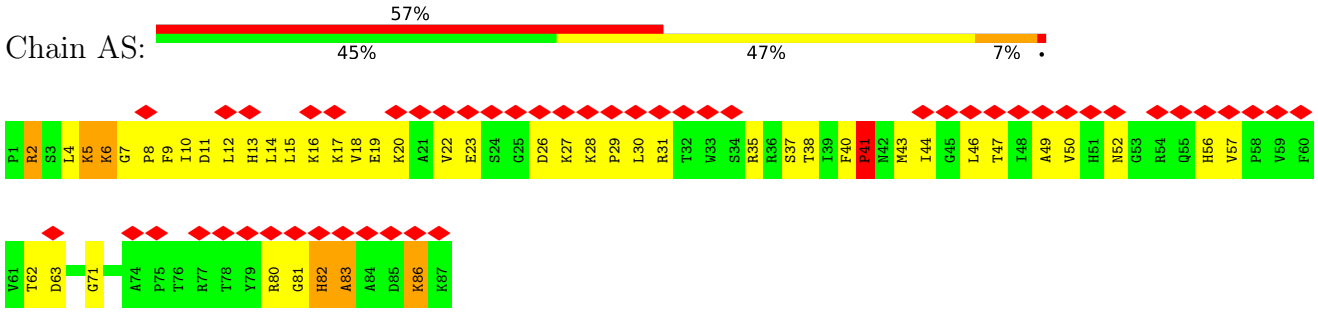
Chain AR:





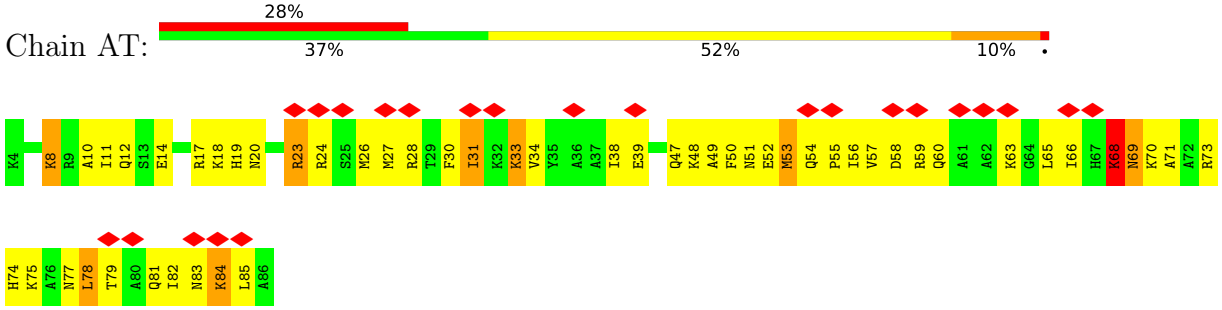
• Molecule 20: 30S ribosomal subunit protein S19

Chain AS:



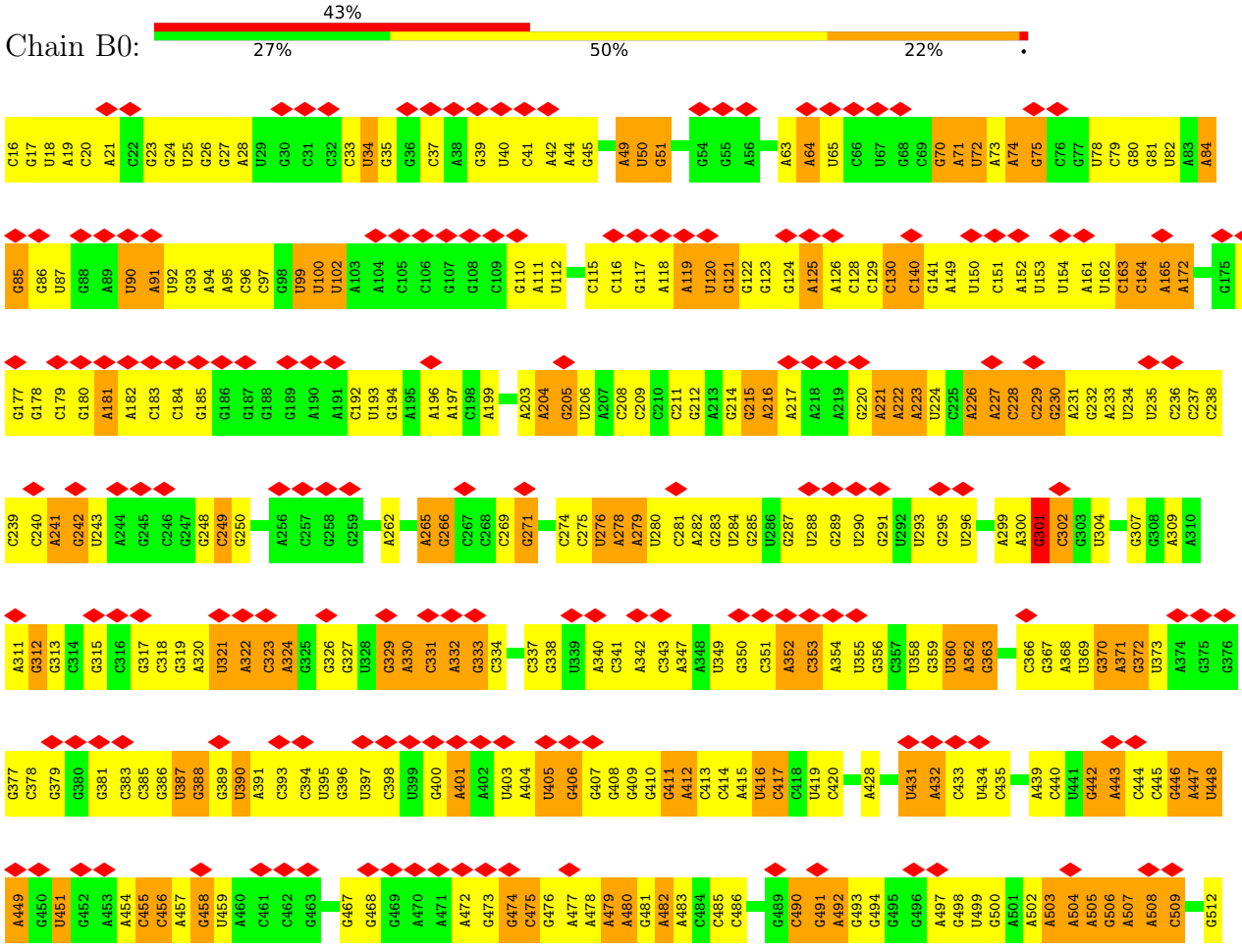
• Molecule 21: 30S ribosomal subunit protein S20

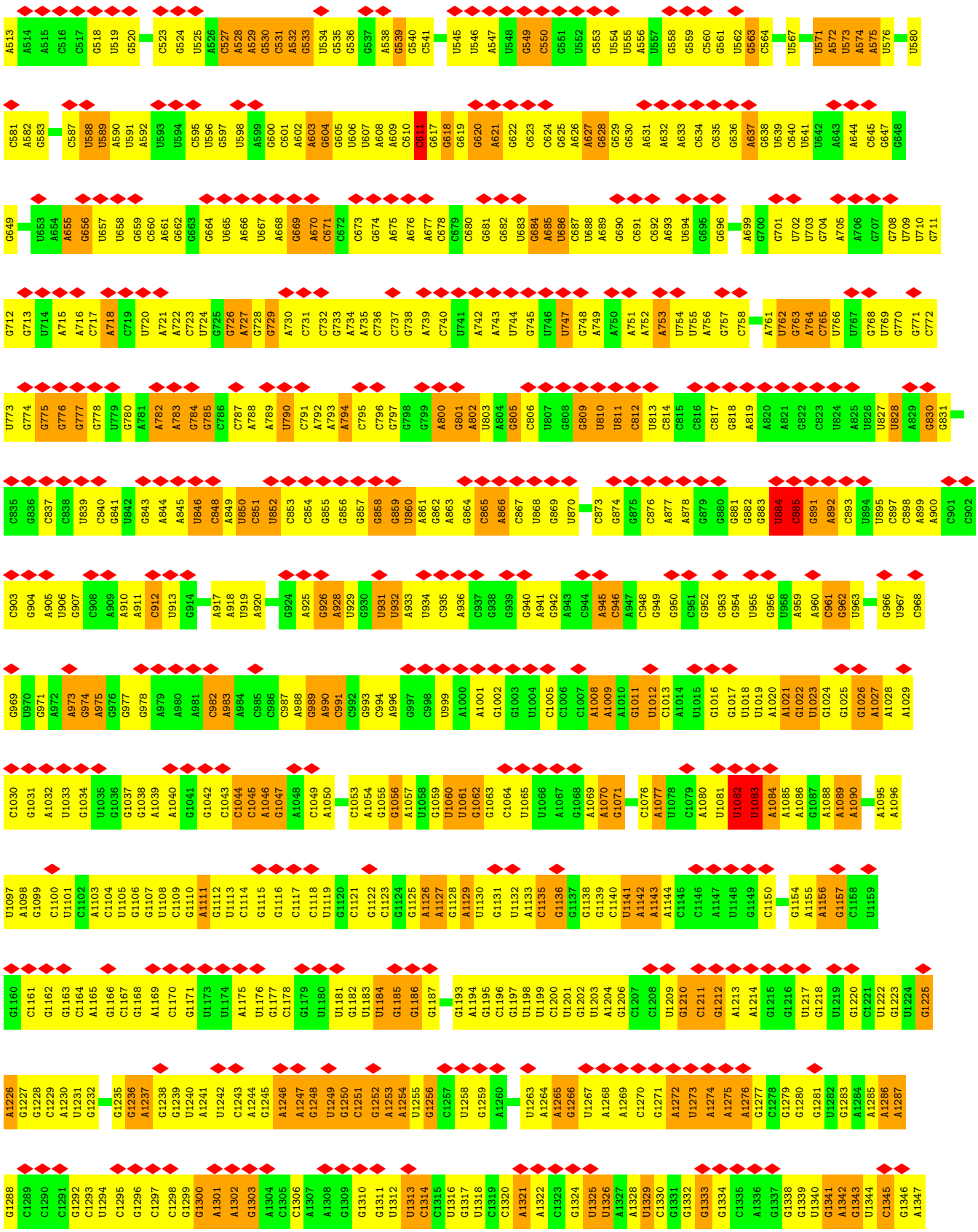
Chain AT:

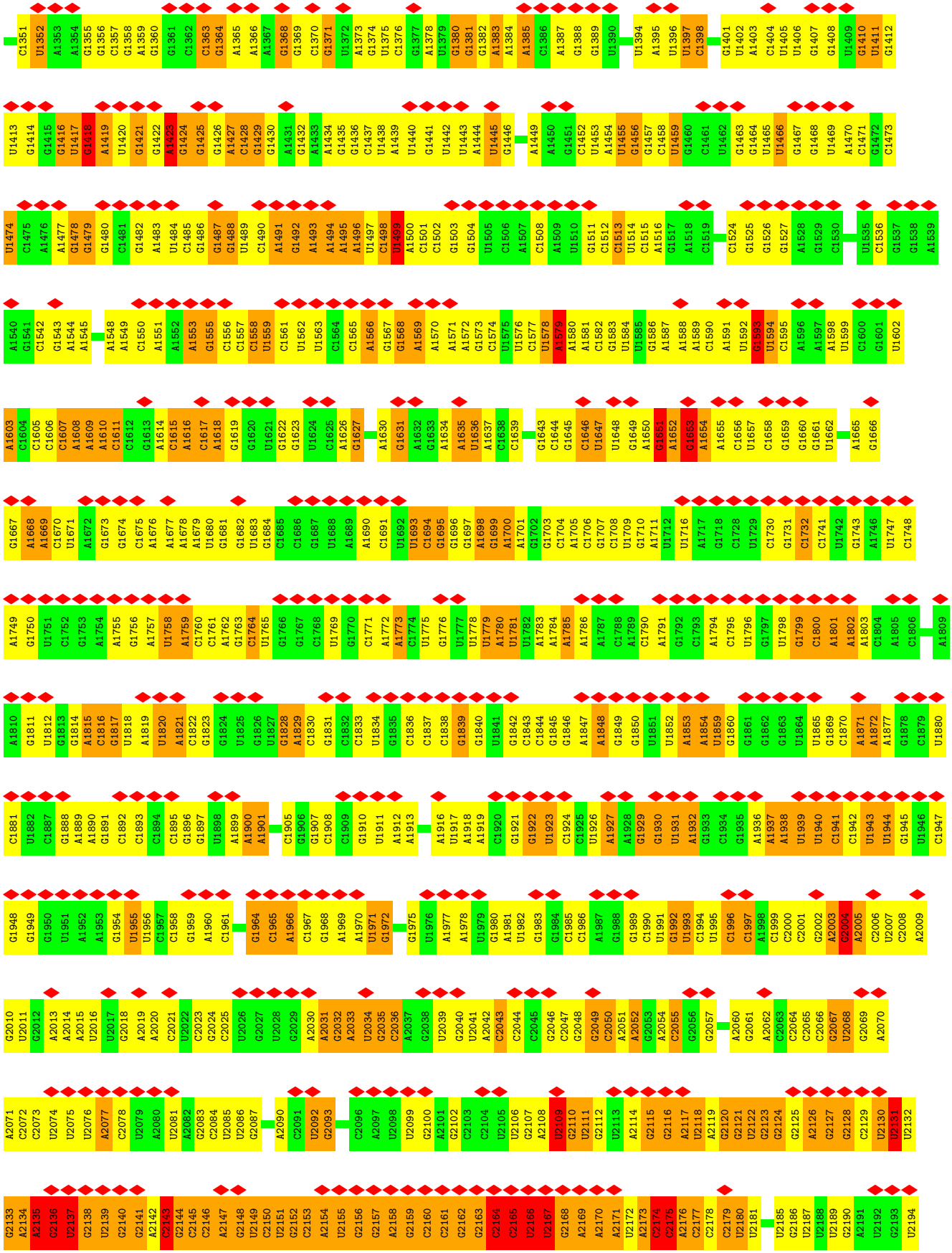


• Molecule 22: 23S ribosomal RNA

Chain B0:



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U1413 G1414 G1415 G1416 U1417 G1418 A1419 U1420 G1421 G1422 A1423 G1424 G1425 G1426 A1427 C1428 G1429 G1430 A1431 G1432 A1433 A1434 G1435 G1436 C1437 U1438 A1439 U1440 G1441 U1442 U1443 A1444 U1445 G1446 A1449 A1450 G1451 C1452 U1453 A1454 U1455 G1456 G1457 C1458 U1459 G1460 C1461 U1462 G1463 G1464 U1465 U1466 G1467 G1468 U1469 A1470 C1471 G1472 C1473
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A1540 G1541 C1542 G1543 A1544 A1545 A1548 A1549 C1550 A1551 A1552 A1553 G1555 C1556 C1557 C1558 U1559 C1561 U1562 U1563 C1564 C1565 A1566 G1567 G1568 A1569 A1570 A1571 A1572 G1573 C1574 U1575 U1576 C1577 U1578 A1579 A1580 A1581 C1582 G1583 U1584 U1585 G1586 A1587 A1588 A1589 C1590 A1591 U1592 G1593 U1594 C1595 A1596 A1597 A1598 U1599 C1600 G1601 U1602
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C1881 U1882 C1887 G1888 A1889 A1890 A1891 C1892 C1893 C1894 C1895 G1896 G1897 U1898 A1899 A1900 A1901 C1905 G1906 G1907 C1908 C1909 G1910 U1911 A1912 A1913 A1916 U1917 A1918 A1919 C1920 G1921 G1922 U1923 C1924 C1925 U1926 A1927 A1928 G1929 G1930 U1931 A1932 G1933 C1934 G1935 A1936 A1937 A1938 U1939 U1940 C1941 C1942 U1943 U1944 G1945 U1946 C1947
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A2071 C2072 C2073 U2074 U2075 U2076 A2077 C2078 U2079 A2080 U2081 A2082 G2083 C2084 U2085 U2086 G2087 A2090 C2091 U2092 G2093 C2096 A2097 U2098 U2099 G2100 A2101 G2102 C2103 C2104 U2105 U2106 G2107 A2108 U2109 G2110 U2111 G2112 U2113 A2114 G2115 G2116 A2117 U2118 A2119 G2120 G2121 U2122 G2123 G2124 G2125 A2126 G2127 G2128 C2129 U2130 U2131 U2132
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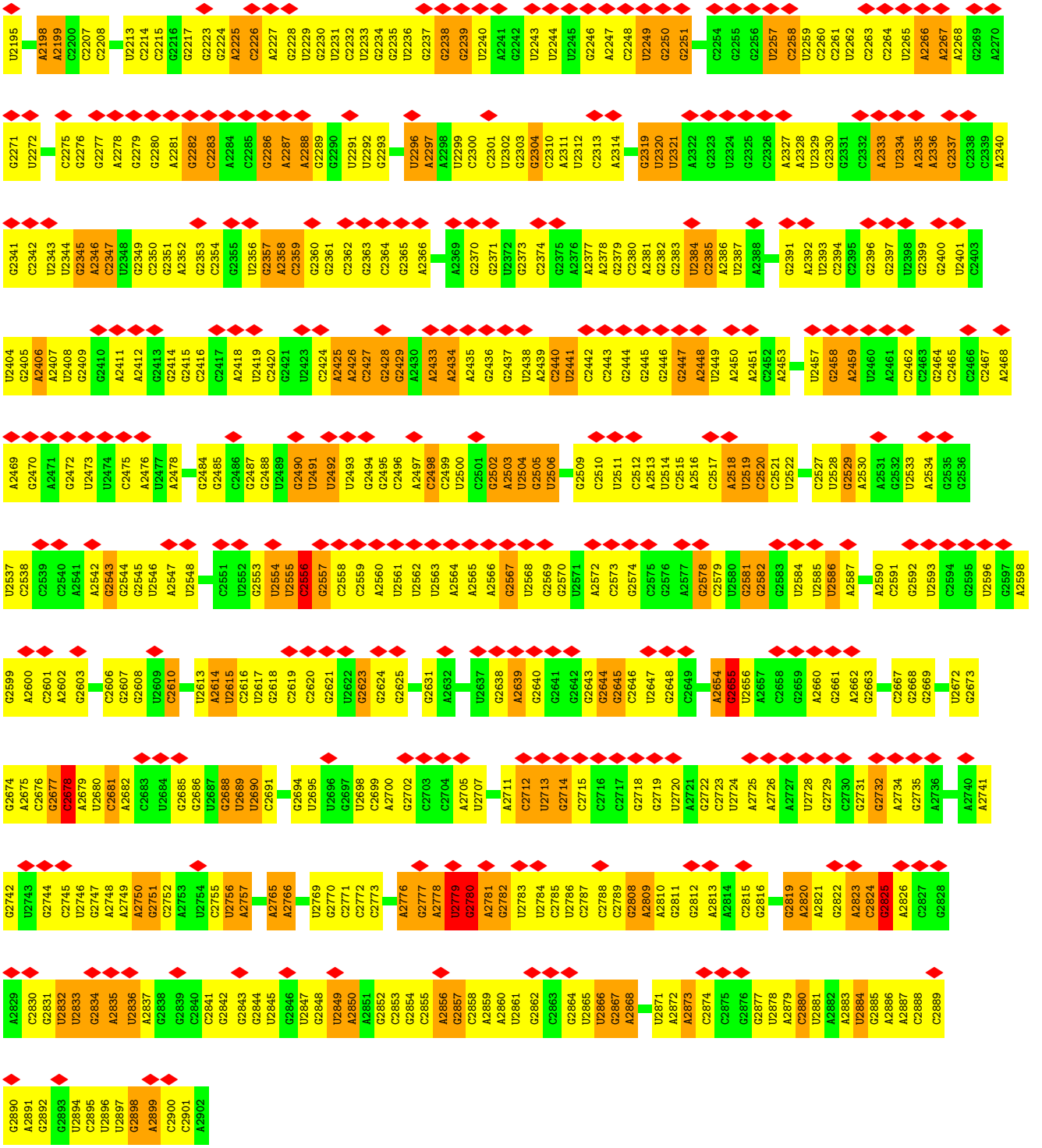
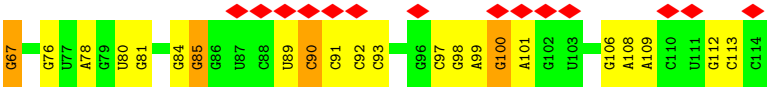
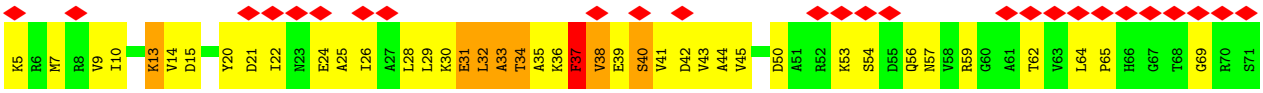


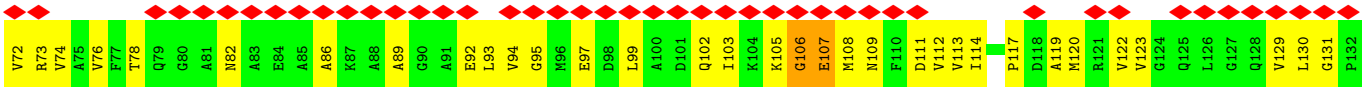
• Molecule 23: 5S ribosomal RNA

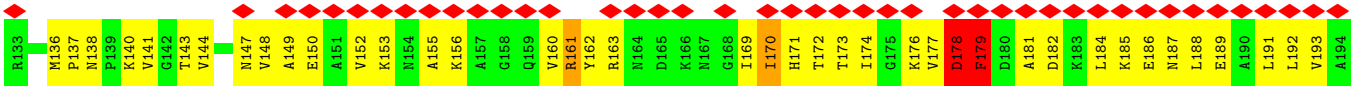
Chain B9:



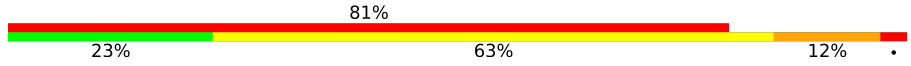
• Molecule 24: 50S ribosomal protein L1

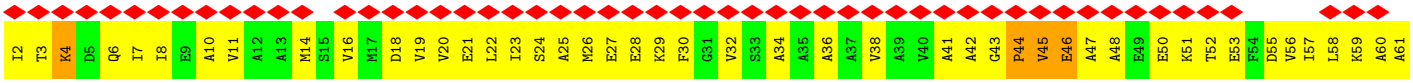


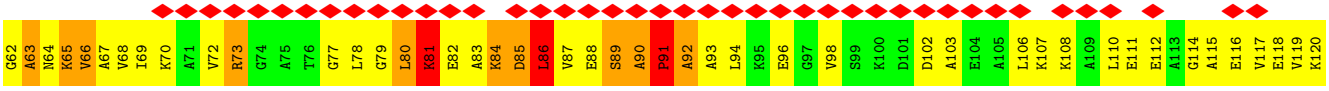




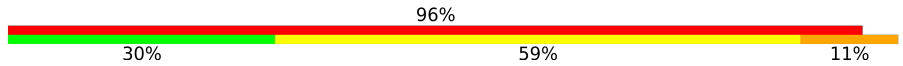
• Molecule 25: 50S ribosomal protein L7/L12

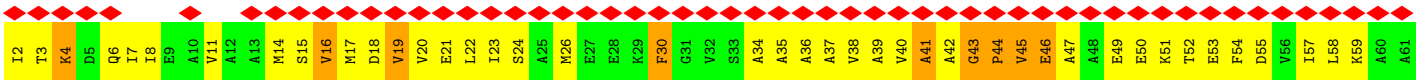


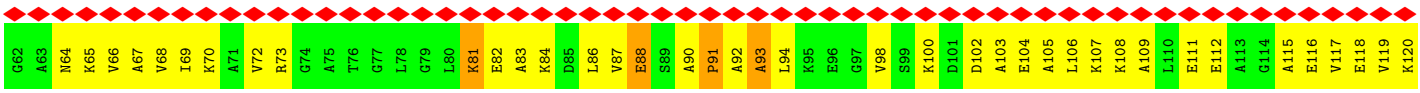




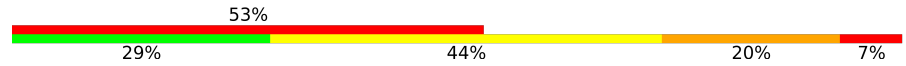
• Molecule 25: 50S ribosomal protein L7/L12

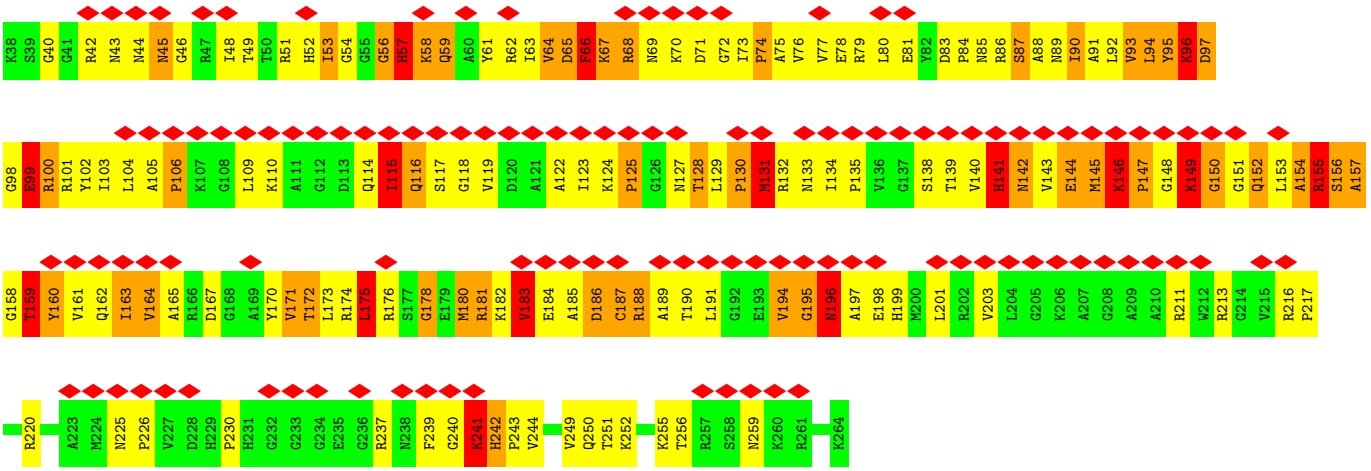






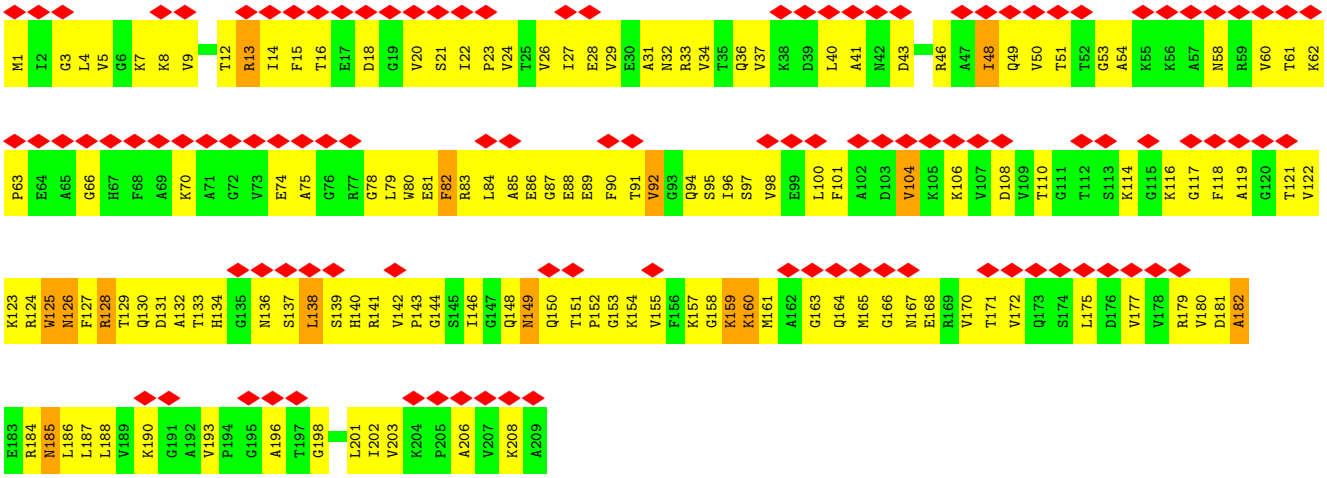
• Molecule 26: 50S ribosomal protein L2





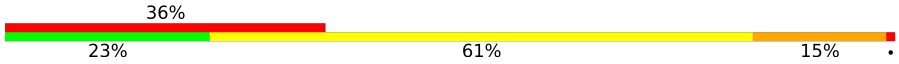
• Molecule 27: 50S ribosomal protein L3

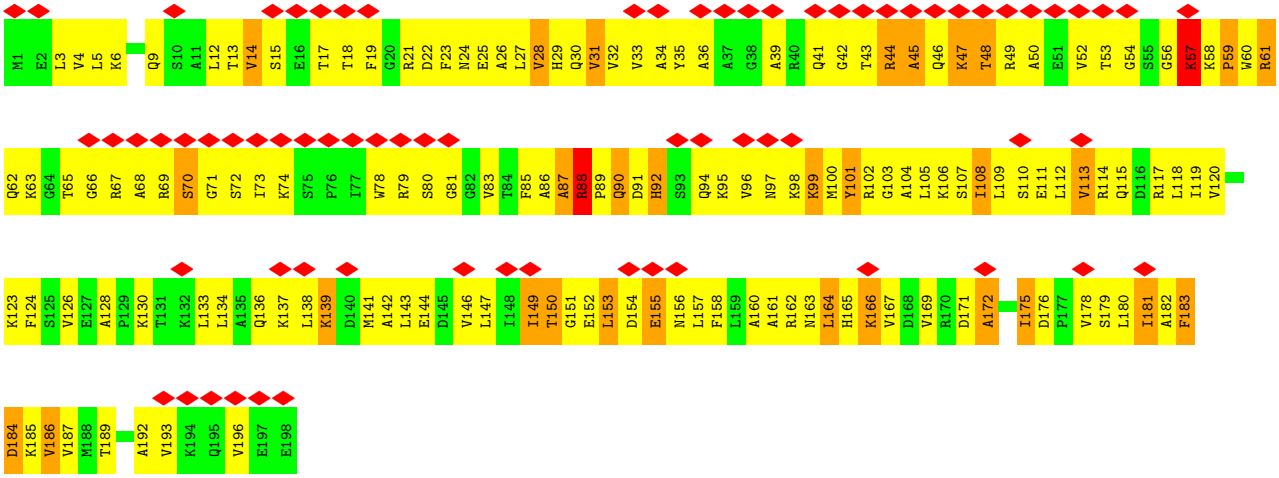
Chain BB:



• Molecule 28: 50S ribosomal protein L4

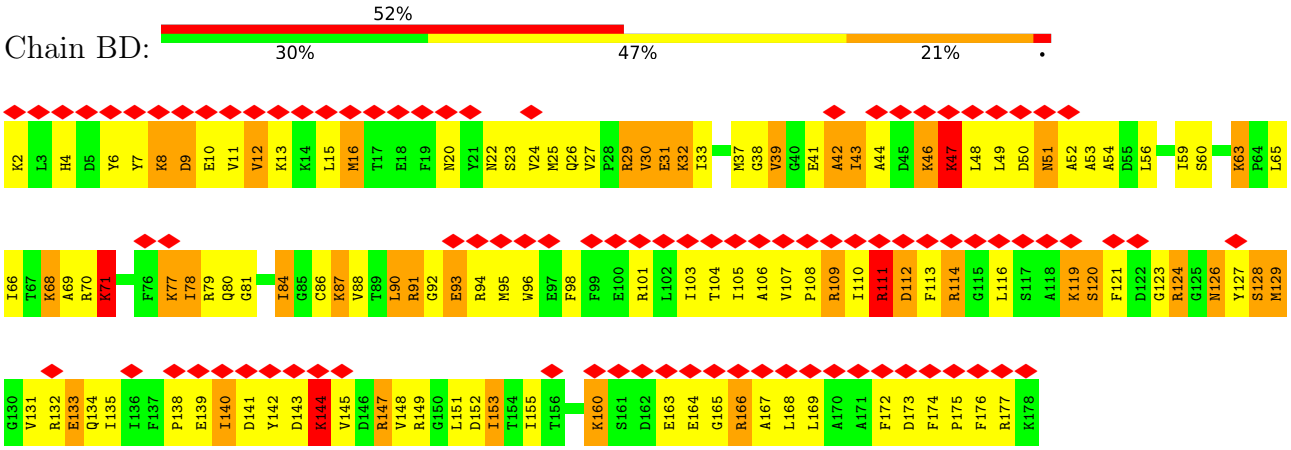
Chain BC:





• Molecule 29: 50S ribosomal protein L5

Chain BD:

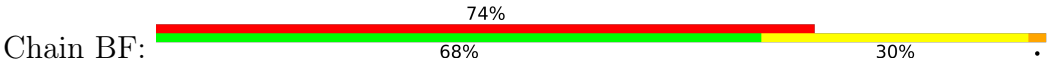


• Molecule 30: 50S ribosomal protein L6

Chain BE:

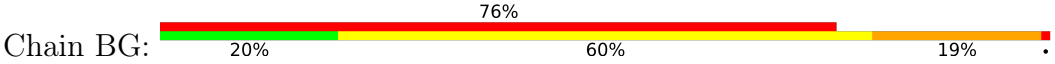
• Molecule 31: 50S ribosomal protein L9

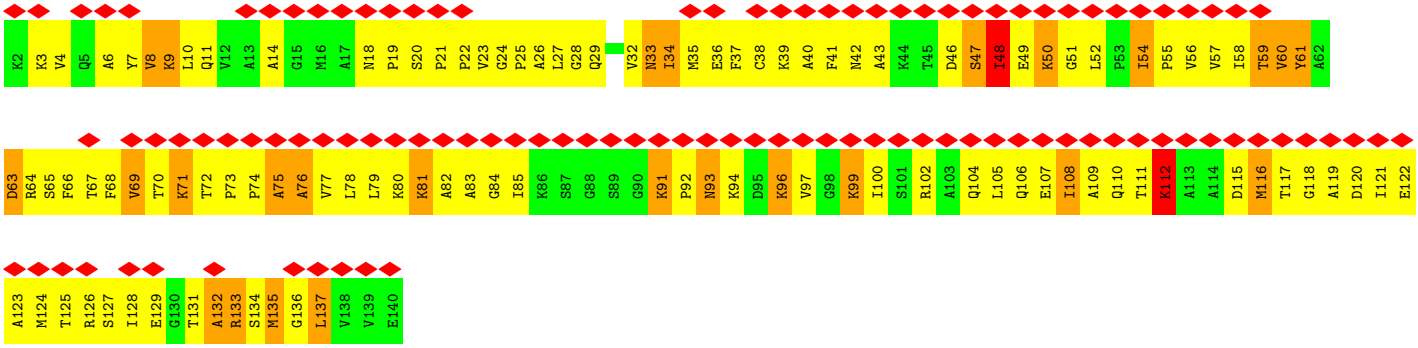
Chain BF:



• Molecule 32: 50S ribosomal protein L11

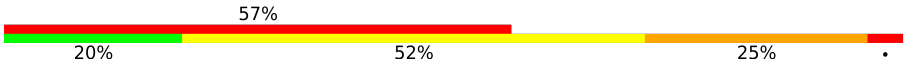
Chain BG:

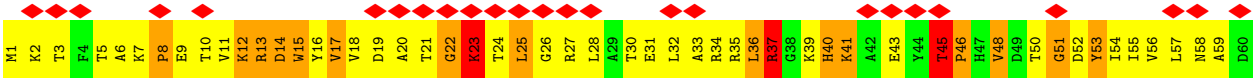


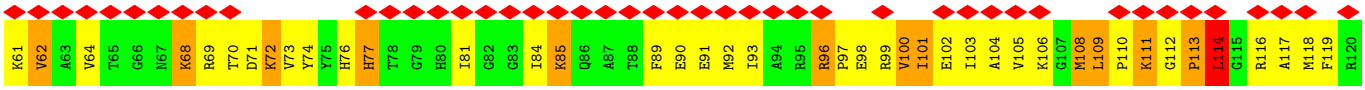


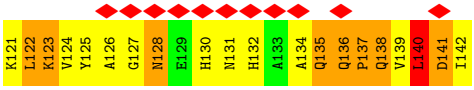
• Molecule 33: 50S ribosomal protein L13

Chain BH:



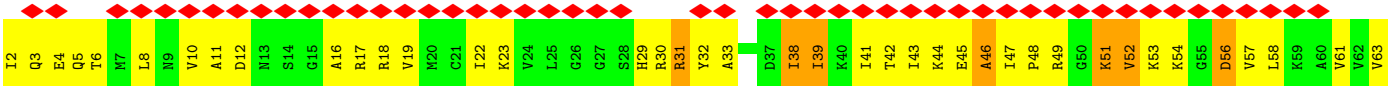


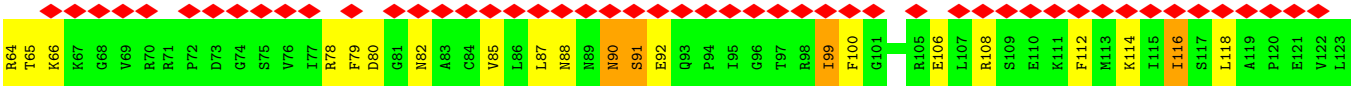




• Molecule 34: 50S ribosomal protein L14

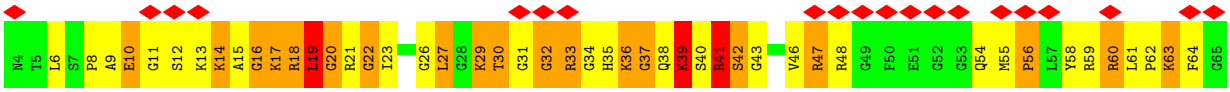
Chain BI:

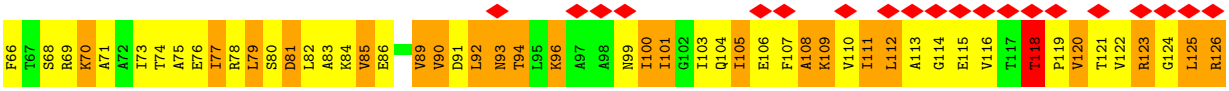


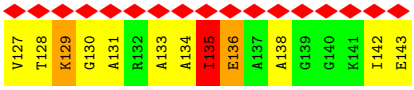


• Molecule 35: 50S ribosomal protein L15

Chain BJ:

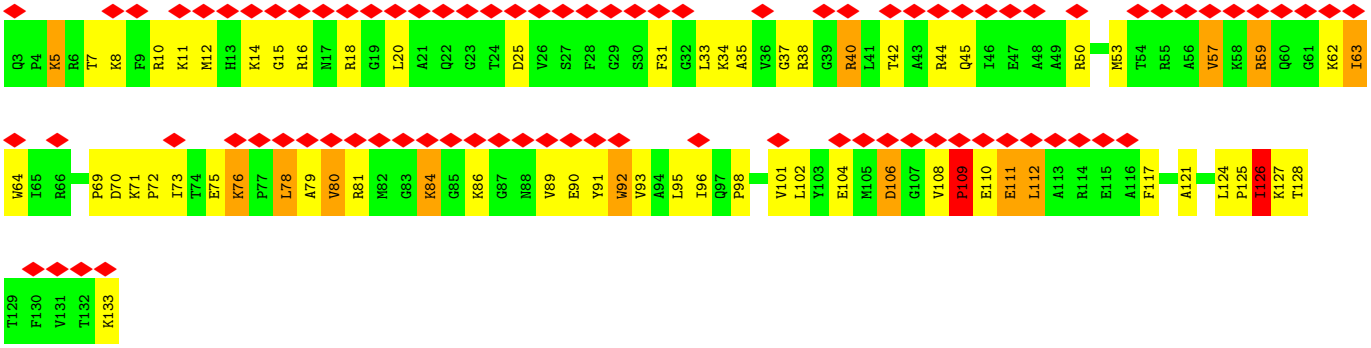






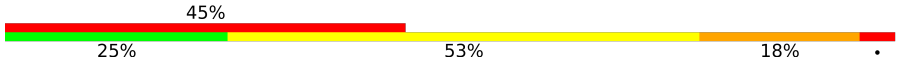
• Molecule 36: 50S ribosomal protein L16

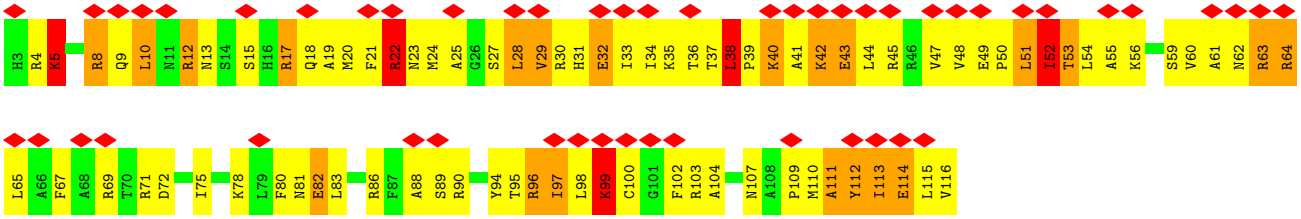
Chain BK:



• Molecule 37: 50S ribosomal protein L17

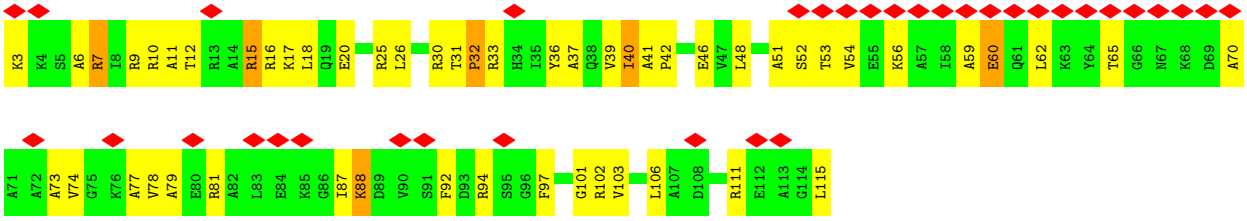
Chain BL:





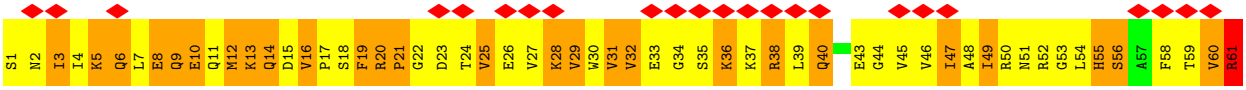
• Molecule 38: 50S ribosomal protein L18

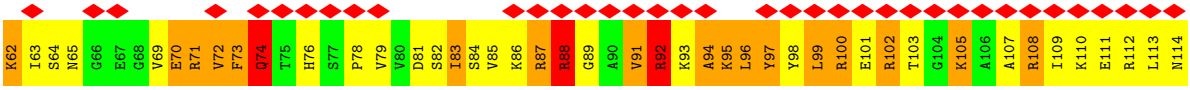
Chain BM:



• Molecule 39: 50S ribosomal protein L19

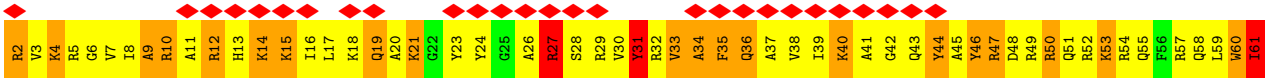
Chain BN:

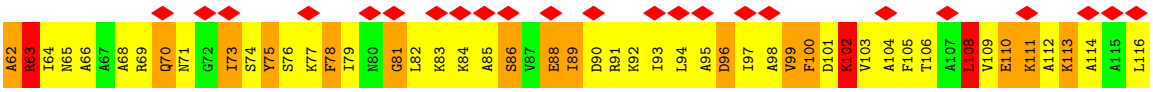




• Molecule 40: 50S RIBOSOMAL PROTEIN L20

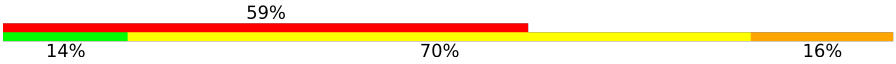
Chain BO:

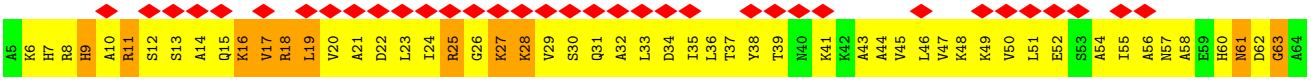


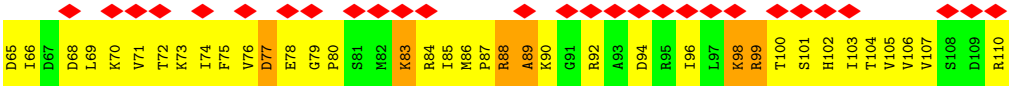


• Molecule 41: 50S ribosomal protein L22

Chain BQ:

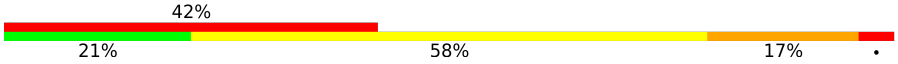


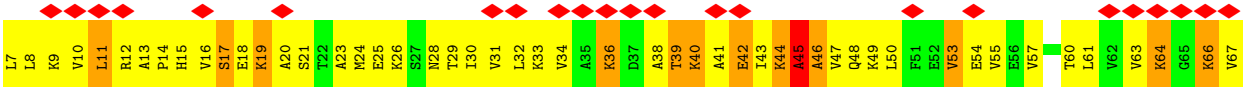


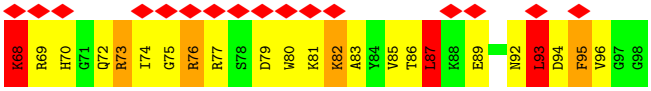


• Molecule 42: 50S ribosomal protein L23

Chain BR:

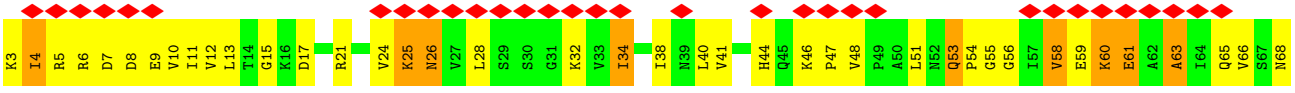


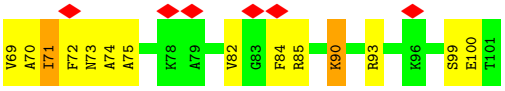




• Molecule 43: 50S ribosomal protein L24

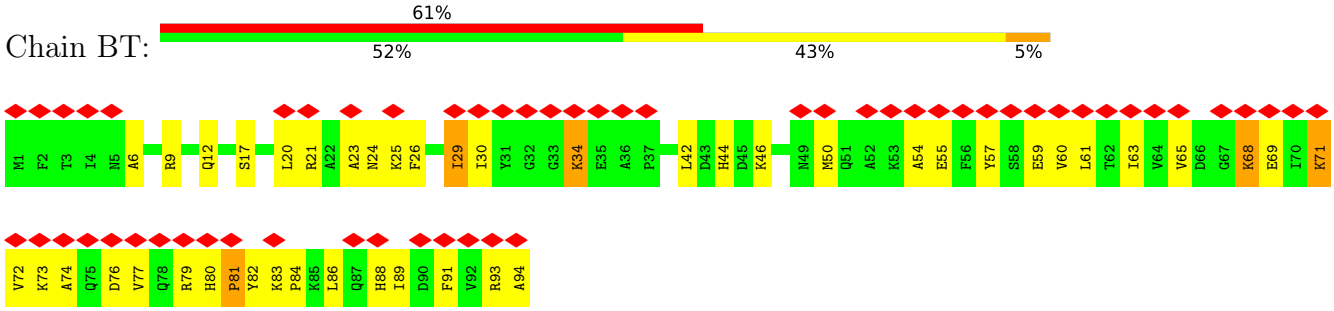
Chain BS:





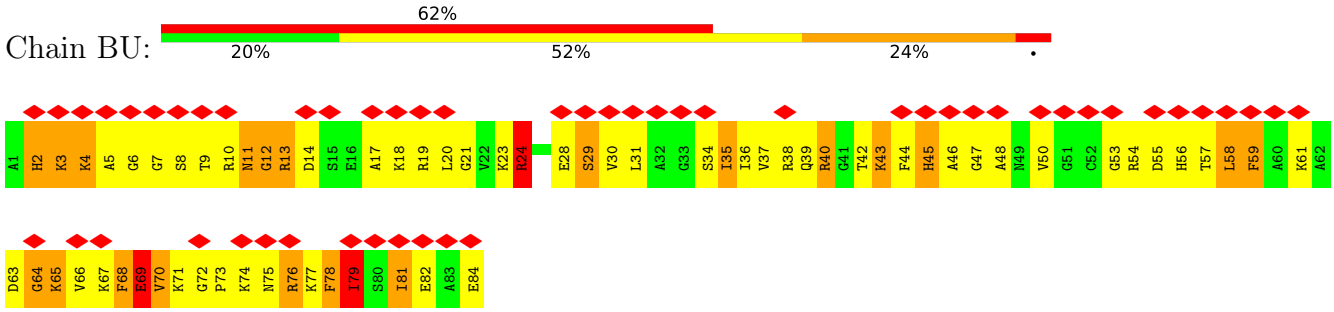
• Molecule 44: 50S ribosomal protein L25

Chain BT:



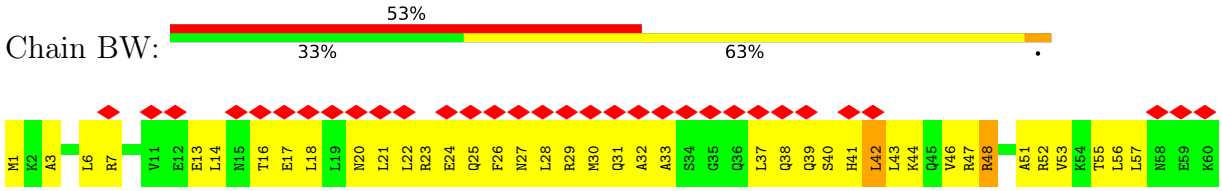
• Molecule 45: 50S ribosomal protein L27

Chain BU:



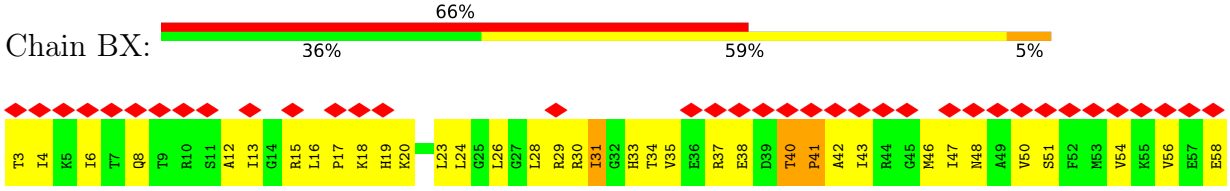
• Molecule 46: 50S ribosomal protein L29

Chain BW:



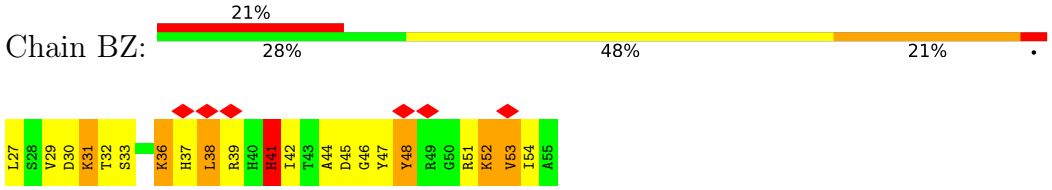
• Molecule 47: 50S ribosomal protein L30

Chain BX:



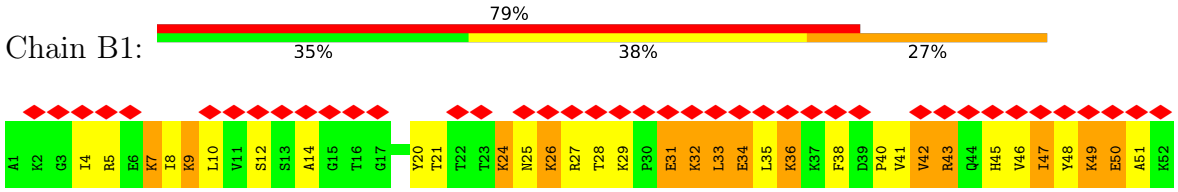
• Molecule 48: 50S ribosomal protein L32

Chain BZ:



• Molecule 49: 50S ribosomal protein L33

Chain B1:



4 Experimental information (i)

Property	Value	Source
EM reconstruction method	SINGLE PARTICLE	Depositor
Imposed symmetry	POINT, C1	Depositor
Number of particles used	52181	Depositor
Resolution determination method	Not provided	
CTF correction method	CTF correction of 3D-maps by Wiener filtration	Depositor
Microscope	FEI TECNAI F20	Depositor
Voltage (kV)	200	Depositor
Electron dose ($e^-/Å^2$)	20	Depositor
Minimum defocus (nm)	1.1	Depositor
Maximum defocus (nm)	3.8	Depositor
Magnification	49696	Depositor
Image detector	KODAK SO-163 FILM	Depositor
Maximum map value	250.773	Depositor
Minimum map value	-142.587	Depositor
Average map value	1.513	Depositor
Map value standard deviation	24.331	Depositor
Recommended contour level	43.4	Depositor
Map size (Å)	366.6, 366.6, 366.6	wwPDB
Map dimensions	130, 130, 130	wwPDB
Map angles (°)	90, 90, 90	wwPDB
Pixel spacing (Å)	2.82, 2.82, 2.82	Depositor

5 Model quality

5.1 Standard geometry

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	AA	0.31	12/35745 (0.0%)	0.67	10/55764 (0.0%)
2	AU	1.35	6/1814 (0.3%)	2.20	9/2827 (0.3%)
2	AV	0.20	0/1814	0.66	0/2827
2	AW	0.20	0/1814	0.65	0/2827
3	AB	0.25	0/1877	0.42	0/2523
4	AC	0.23	0/1652	0.44	0/2225
5	AD	0.22	0/1660	0.41	0/2220
6	AE	0.24	0/1106	0.44	0/1488
7	AF	0.24	0/802	0.49	0/1081
8	AG	0.23	0/1093	0.42	0/1467
9	AH	0.23	0/978	0.45	0/1311
10	AI	0.24	0/1026	0.49	1/1364 (0.1%)
11	AJ	0.23	0/783	0.52	0/1058
12	AK	0.25	0/886	0.46	0/1195
13	AL	0.22	0/799	0.46	0/1070
14	AM	0.22	0/900	0.48	0/1201
15	AN	0.25	0/510	0.42	0/679
16	AO	0.23	0/705	0.42	0/942
17	AP	0.26	0/632	0.49	0/848
18	AQ	0.24	0/649	0.47	0/870
19	AR	0.25	0/585	0.40	0/782
20	AS	0.25	0/712	0.48	0/955
21	AT	0.26	0/655	0.40	0/866
22	B0	0.41	28/65882 (0.0%)	0.71	50/102783 (0.0%)
23	B9	0.21	0/2583	0.66	0/4028
24	B2	0.46	2/1665 (0.1%)	0.56	1/2240 (0.0%)
25	B3	0.43	0/846	0.67	1/1135 (0.1%)
25	B5	0.23	0/845	0.48	0/1132
26	BA	0.55	2/1759 (0.1%)	0.90	9/2356 (0.4%)
27	BB	0.27	0/1582	0.54	0/2122
28	BC	0.26	0/1549	0.57	0/2082
29	BD	0.26	0/1438	0.54	0/1927
30	BE	0.23	0/1273	0.46	0/1725
31	BF	0.24	0/1120	0.47	0/1509

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#|Z| >5	RMSZ	#|Z| >5
32	BG	0.26	0/1032	0.69	1/1388 (0.1%)
33	BH	0.38	0/1152	0.80	5/1551 (0.3%)
34	BI	0.23	0/948	0.50	0/1269
35	BJ	0.27	0/1025	0.69	0/1363
36	BK	0.26	0/1055	0.52	0/1409
37	BL	0.26	0/920	0.72	2/1229 (0.2%)
38	BM	0.22	0/873	0.43	0/1170
39	BN	0.28	0/929	0.60	0/1242
40	BO	1.30	6/949 (0.6%)	3.63	12/1261 (1.0%)
41	BQ	0.24	0/832	0.69	1/1113 (0.1%)
42	BR	0.25	0/723	0.67	1/965 (0.1%)
43	BS	0.26	0/769	0.50	0/1023
44	BT	0.25	0/766	0.44	0/1025
45	BU	0.28	0/642	0.62	0/848
46	BW	0.23	0/496	0.45	0/658
47	BX	0.24	0/439	0.50	0/587
48	BZ	0.25	0/238	0.53	0/316
49	B1	0.27	0/431	0.51	0/572
All	All	0.39	56/153958 (0.0%)	0.75	103/230418 (0.0%)

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	AA	3	0
2	AU	0	1
22	B0	5	12
23	B9	0	1
26	BA	0	1
40	BO	0	1
All	All	8	16

All (56) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	AU	39	U	C5-C6	32.23	1.63	1.34
22	B0	1499	U	N3-C4	30.48	1.65	1.38
22	B0	2131	U	N3-C4	28.17	1.63	1.38
22	B0	2136	G	C2-N3	26.30	1.53	1.32
2	AU	39	U	N1-C6	25.41	1.60	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	AU	39	U	N1-C2	-25.11	1.16	1.38
2	AU	39	U	N3-C4	-23.34	1.17	1.38
22	B0	2136	G	N3-C4	21.64	1.50	1.35
22	B0	1499	U	C2-N3	21.13	1.52	1.37
40	BO	100	PHE	CD1-CE1	20.15	1.79	1.39
22	B0	2131	U	C2-N3	19.60	1.51	1.37
22	B0	2131	U	N1-C6	19.40	1.55	1.38
40	BO	100	PHE	CD2-CE2	19.06	1.77	1.39
1	AA	372	C	O3'-P	18.75	1.83	1.61
22	B0	2137	U	O5'-C5'	18.73	1.74	1.44
1	AA	518	C	O3'-P	-18.44	1.39	1.61
22	B0	2131	U	C4-C5	18.35	1.60	1.43
1	AA	532	A	O3'-P	-18.11	1.39	1.61
22	B0	2131	U	N1-C2	17.92	1.54	1.38
40	BO	100	PHE	CE2-CZ	-16.95	1.05	1.37
22	B0	2131	U	C5-C6	16.55	1.49	1.34
40	BO	100	PHE	CE1-CZ	-16.50	1.06	1.37
22	B0	1499	U	N1-C6	16.45	1.52	1.38
22	B0	2136	G	C5-C6	16.33	1.58	1.42
22	B0	1499	U	N1-C2	15.92	1.52	1.38
2	AU	39	U	C2-N3	-15.76	1.26	1.37
1	AA	451	A	O3'-P	15.02	1.79	1.61
1	AA	481	G	O3'-P	14.89	1.79	1.61
24	B2	33	ALA	N-CA	14.78	1.75	1.46
22	B0	2136	G	N1-C2	14.44	1.49	1.37
1	AA	389	A	O3'-P	13.83	1.77	1.61
22	B0	2137	U	P-O5'	13.78	1.73	1.59
22	B0	2136	G	C6-N1	13.62	1.49	1.39
22	B0	1499	U	C4-C5	13.60	1.55	1.43
1	AA	25	C	O3'-P	-13.37	1.45	1.61
1	AA	50	A	O3'-P	13.08	1.76	1.61
22	B0	1499	U	C5-C6	12.84	1.45	1.34
26	BA	155	ARG	CD-NE	12.71	1.68	1.46
2	AU	39	U	C4-C5	-11.24	1.33	1.43
26	BA	155	ARG	NE-CZ	11.24	1.47	1.33
40	BO	100	PHE	CG-CD2	10.77	1.54	1.38
40	BO	100	PHE	CG-CD1	9.53	1.53	1.38
1	AA	411	A	O3'-P	9.06	1.72	1.61
1	AA	360	G	O3'-P	7.96	1.70	1.61
1	AA	556	C	O3'-P	-7.05	1.52	1.61
22	B0	2824	C	C5'-C4'	6.39	1.59	1.51
22	B0	2136	G	C5-C4	6.14	1.42	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
22	B0	1352	U	O3'-P	5.76	1.68	1.61
22	B0	1579	A	C5-C6	-5.54	1.36	1.41
24	B2	32	LEU	C-N	5.51	1.46	1.34
1	AA	228	A	O3'-P	5.35	1.67	1.61
22	B0	1082	U	C5'-C4'	5.27	1.57	1.51
22	B0	2824	C	P-O5'	5.17	1.65	1.59
22	B0	1515	C	O3'-P	5.11	1.67	1.61
22	B0	1423	A	O3'-P	5.07	1.67	1.61
22	B0	2823	A	O3'-P	5.05	1.67	1.61

All (103) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
40	BO	100	PHE	CZ-CE2-CD2	-70.55	35.44	120.10
40	BO	100	PHE	CD1-CE1-CZ	-68.43	37.99	120.10
2	AU	39	U	N3-C4-C5	-67.79	73.93	114.60
40	BO	100	PHE	CE1-CZ-CE2	-53.38	23.91	120.00
2	AU	39	U	N1-C2-N3	-50.81	84.42	114.90
2	AU	39	U	C6-N1-C2	-42.70	95.38	121.00
2	AU	39	U	C4-C5-C6	-35.59	98.35	119.70
40	BO	100	PHE	CG-CD2-CE2	-33.34	84.12	120.80
40	BO	100	PHE	CG-CD1-CE1	-32.58	84.97	120.80
2	AU	39	U	C2-N3-C4	31.75	146.05	127.00
2	AU	39	U	N1-C2-O2	21.82	138.07	122.80
2	AU	39	U	N3-C2-O2	21.78	137.45	122.20
40	BO	100	PHE	CD1-CG-CD2	-19.01	93.58	118.30
40	BO	100	PHE	CB-CG-CD1	17.49	133.05	120.80
40	BO	100	PHE	CB-CG-CD2	17.44	133.01	120.80
26	BA	155	ARG	CD-NE-CZ	12.12	140.57	123.60
26	BA	57	HIS	N-CA-C	11.97	143.33	111.00
22	B0	2167	U	N1-C1'-C2'	-11.50	99.05	114.00
2	AU	39	U	C6-N1-C1'	10.86	136.40	121.20
22	B0	1653	G	N9-C1'-C2'	10.56	127.73	114.00
1	AA	1502	A	N9-C1'-C2'	9.67	126.57	114.00
26	BA	155	ARG	NE-CZ-NH1	9.46	125.03	120.30
22	B0	1593	G	N9-C1'-C2'	9.23	126.00	114.00
22	B0	2136	G	N1-C2-N3	-9.19	118.39	123.90
22	B0	2137	U	P-O5'-C5'	8.77	134.94	120.90
22	B0	2136	G	N9-C1'-C2'	-8.74	102.38	112.00
2	AU	39	U	C2-N1-C1'	8.73	128.18	117.70
22	B0	2655	G	N9-C1'-C2'	8.72	125.33	114.00
22	B0	2136	G	C4'-C3'-O3'	8.64	130.27	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
22	B0	2174	C	N1-C1'-C2'	-8.57	102.57	112.00
26	BA	66	PHE	N-CA-C	8.42	133.72	111.00
1	AA	190	A	N9-C1'-C2'	8.41	124.93	114.00
22	B0	2136	G	C3'-C2'-C1'	-8.23	94.92	101.50
22	B0	1494	A	N9-C1'-C2'	-8.15	103.04	112.00
22	B0	611	C	N1-C1'-C2'	-8.09	103.10	112.00
22	B0	301	G	N9-C1'-C2'	8.04	124.45	114.00
22	B0	885	C	N1-C1'-C2'	-7.84	103.38	112.00
22	B0	2165	C	C5'-C4'-C3'	7.80	128.48	116.00
22	B0	1653	G	O4'-C1'-N9	7.68	114.35	108.20
22	B0	1558	C	C5'-C4'-O4'	-7.56	100.03	109.10
24	B2	32	LEU	C-N-CA	7.51	140.47	121.70
1	AA	1503	A	O4'-C1'-N9	7.47	114.17	108.20
22	B0	2165	C	C4'-C3'-C2'	-7.39	95.21	102.60
22	B0	1578	U	O4'-C1'-N1	7.34	114.07	108.20
22	B0	1651	G	N9-C1'-C2'	-7.30	103.97	112.00
22	B0	2824	C	O5'-P-OP1	-6.96	99.44	105.70
22	B0	2167	U	O4'-C4'-C3'	-6.84	97.16	104.00
22	B0	2779	U	C2'-C3'-O3'	6.83	124.63	113.70
22	B0	2143	C	N1-C1'-C2'	6.77	122.81	114.00
22	B0	2166	U	C4'-C3'-O3'	6.71	126.42	113.00
1	AA	1503	A	N9-C1'-C2'	6.52	122.48	114.00
33	BH	45	THR	C-N-CD	-6.51	106.28	120.60
26	BA	56	GLY	C-N-CA	6.43	137.78	121.70
26	BA	195	GLY	N-CA-C	6.42	129.15	113.10
37	BL	52	ILE	N-CA-C	-6.42	93.68	111.00
22	B0	2166	U	N1-C1'-C2'	-6.31	105.06	112.00
22	B0	2003	A	O4'-C1'-N9	-6.30	103.16	108.20
22	B0	2004	G	O5'-P-OP1	-6.25	100.07	105.70
22	B0	2136	G	C2'-C3'-O3'	6.22	123.65	113.70
1	AA	50	A	P-O3'-C3'	6.20	127.13	119.70
22	B0	2136	G	O4'-C4'-C3'	-6.19	97.81	104.00
1	AA	556	C	P-O3'-C3'	6.18	127.11	119.70
22	B0	2135	A	N9-C1'-C2'	-6.09	105.31	112.00
22	B0	2136	G	C2-N3-C4	6.08	114.94	111.90
33	BH	45	THR	N-CA-C	6.07	127.40	111.00
22	B0	2164	C	N1-C1'-C2'	6.04	121.85	114.00
26	BA	57	HIS	N-CA-CB	-6.02	99.77	110.60
1	AA	1517	G	N9-C1'-C2'	6.00	121.81	114.00
22	B0	2167	U	O4'-C1'-N1	6.00	113.00	108.20
41	BQ	17	VAL	N-CA-C	-5.97	94.87	111.00
22	B0	2824	C	C5'-C4'-O4'	5.96	116.25	109.10

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
33	BH	48	VAL	CB-CA-C	-5.96	100.08	111.40
25	B3	89	SER	N-CA-C	-5.90	95.08	111.00
40	BO	34	ALA	N-CA-C	-5.83	95.27	111.00
22	B0	1082	U	C5'-C4'-C3'	5.75	125.20	116.00
32	BG	134	SER	N-CA-C	-5.74	95.50	111.00
26	BA	155	ARG	CG-CD-NE	5.74	123.84	111.80
1	AA	1502	A	O4'-C1'-N9	5.69	112.75	108.20
40	BO	61	ILE	N-CA-C	-5.67	95.68	111.00
22	B0	2135	A	O4'-C4'-C3'	-5.66	98.34	104.00
33	BH	140	LEU	CA-CB-CG	5.62	128.22	115.30
33	BH	136	GLN	C-N-CD	-5.58	108.31	120.60
22	B0	2556	C	N1-C1'-C2'	5.58	121.25	114.00
42	BR	45	ALA	N-CA-C	-5.45	96.30	111.00
40	BO	81	GLY	N-CA-C	-5.44	99.49	113.10
22	B0	2166	U	O4'-C4'-C3'	-5.44	98.56	104.00
22	B0	2175	C	O4'-C1'-N1	5.39	112.51	108.20
26	BA	96	LYS	N-CA-C	5.36	125.48	111.00
22	B0	2623	G	N9-C1'-C2'	-5.33	106.14	112.00
1	AA	25	C	P-O3'-C3'	5.29	126.04	119.70
22	B0	2823	A	C4'-C3'-C2'	-5.21	97.39	102.60
22	B0	2174	C	C4'-C3'-O3'	5.18	123.37	113.00
22	B0	2165	C	O4'-C4'-C3'	-5.16	98.84	104.00
22	B0	2678	C	O4'-C4'-C3'	-5.13	98.87	104.00
40	BO	63	ARG	N-CA-C	-5.13	97.14	111.00
10	AI	116	GLY	N-CA-C	-5.10	100.35	113.10
1	AA	451	A	P-O3'-C3'	5.09	125.81	119.70
22	B0	1418	G	N9-C1'-C2'	5.08	120.61	114.00
22	B0	1083	U	C4'-C3'-O3'	5.08	123.15	113.00
37	BL	22	ARG	N-CA-C	-5.06	97.33	111.00
22	B0	2824	C	O5'-P-OP2	5.03	116.74	110.70
22	B0	1558	C	O3'-P-O5'	5.01	113.53	104.00
22	B0	2780	G	C5'-C4'-C3'	5.00	124.00	116.00

All (8) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
1	AA	190	A	C1'
1	AA	1502	A	C1'
1	AA	1503	A	C1'
22	B0	301	G	C1'
22	B0	1593	G	C1'
22	B0	1653	G	C1'

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Mol	Chain	Res	Type	Atom
22	B0	2143	C	C1'
22	B0	2655	G	C1'

All (16) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
2	AU	39	U	Sidechain
22	B0	1417	U	Sidechain
22	B0	1418	G	Sidechain
22	B0	1421	G	Sidechain
22	B0	1651	G	Sidechain
22	B0	1652	A	Sidechain
22	B0	2005	A	Sidechain
22	B0	2109	U	Sidechain
22	B0	2165	C	Sidechain
22	B0	2175	C	Sidechain
22	B0	2825	G	Sidechain
22	B0	611	C	Sidechain
22	B0	884	U	Sidechain
23	B9	25	U	Sidechain
26	BA	95	TYR	Sidechain
40	BO	31	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	AA	31924	0	16068	1365	0
2	AU	1622	0	820	98	0
2	AV	1622	0	821	63	0
2	AW	1622	0	821	61	0
3	AB	1847	0	1855	113	0
4	AC	1625	0	1699	163	0
5	AD	1638	0	1702	148	0
6	AE	1093	0	1132	97	0
7	AF	784	0	776	98	0
8	AG	1079	0	1108	48	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
9	AH	968	0	1021	101	0
10	AI	1014	0	1064	148	0
11	AJ	773	0	812	137	0
12	AK	870	0	878	118	0
13	AL	787	0	825	86	0
14	AM	892	0	954	68	0
15	AN	500	0	526	54	0
16	AO	697	0	716	52	0
17	AP	622	0	637	75	0
18	AQ	640	0	678	52	0
19	AR	576	0	599	53	0
20	AS	695	0	725	107	0
21	AT	649	0	697	79	0
22	B0	58824	0	29589	4577	0
23	B9	2310	0	1173	65	0
24	B2	1652	0	1729	250	0
25	B3	845	0	880	418	0
25	B5	845	0	879	165	0
26	BA	1733	0	1766	956	0
27	BB	1565	0	1612	294	0
28	BC	1531	0	1593	456	0
29	BD	1415	0	1451	191	0
30	BE	1253	0	1289	79	0
31	BF	1111	0	1146	40	0
32	BG	1019	0	1076	168	0
33	BH	1129	0	1162	326	0
34	BI	939	0	1011	79	0
35	BJ	1017	0	1086	330	0
36	BK	1036	0	1109	91	0
37	BL	908	0	946	216	0
38	BM	864	0	902	61	0
39	BN	917	0	965	265	0
40	BO	937	0	1008	276	0
41	BQ	825	0	886	176	0
42	BR	717	0	773	166	0
43	BS	762	0	809	91	0
44	BT	753	0	780	39	0
45	BU	634	0	656	204	0
46	BW	495	0	530	53	0
47	BX	435	0	470	60	0
48	BZ	234	0	235	49	0
49	B1	424	0	461	60	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
All	All	141668	0	94906	11577	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 49.

All (11577) 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)
26:BA:155:ARG:NE	26:BA:155:ARG:CD	1.68	1.53
22:B0:1499:U:N3	26:BA:155:ARG:CD	1.67	1.52
22:B0:1083:U:C5'	25:B3:85:ASP:H	1.29	1.45
22:B0:2127:G:H3'	22:B0:2166:U:C5'	1.47	1.45
22:B0:2127:G:C8	22:B0:2166:U:H5"	1.52	1.42
22:B0:1499:U:C4	26:BA:155:ARG:CD	2.08	1.37
22:B0:2127:G:C3'	22:B0:2166:U:H5'	1.55	1.34
22:B0:1083:U:O4'	25:B3:84:LYS:HA	1.22	1.33
22:B0:1083:U:O5'	25:B3:84:LYS:N	1.63	1.31
22:B0:1499:U:C2	26:BA:155:ARG:CD	2.14	1.30
22:B0:1082:U:C5'	25:B3:81:LYS:H	1.45	1.29
22:B0:1082:U:OP2	25:B3:81:LYS:HB3	1.25	1.27
22:B0:1083:U:H5"	25:B3:85:ASP:N	1.50	1.26
22:B0:1083:U:P	25:B3:84:LYS:H	1.59	1.26
22:B0:1082:U:O4'	25:B3:80:LEU:HA	1.36	1.25
22:B0:2127:G:O3'	22:B0:2165:C:H2'	1.37	1.24
22:B0:1424:G:O5'	26:BA:58:LYS:N	1.67	1.23
22:B0:2624:G:H5"	22:B0:2825:G:N7	1.53	1.23
22:B0:1488:G:H8	26:BA:158:GLY:N	1.37	1.22
22:B0:1082:U:O3'	25:B3:83:ALA:N	1.72	1.21
22:B0:2780:G:H3'	33:BH:116:ARG:CD	1.71	1.19
22:B0:1491:A:H4'	26:BA:161:VAL:HG13	1.18	1.18
22:B0:1495:A:H3'	26:BA:190:THR:HA	1.25	1.17
22:B0:2678:C:C5'	27:BB:125:TRP:H	1.57	1.17
25:B3:29:LYS:HE3	25:B5:111:GLU:HB2	1.26	1.17
22:B0:1081:U:C2'	25:B3:80:LEU:HB2	1.76	1.16
22:B0:1141:U:H4'	22:B0:1142:A:O4'	1.44	1.16
26:BA:143:VAL:HG12	26:BA:189:ALA:HB1	1.28	1.16
22:B0:1082:U:C5'	25:B3:82:GLU:H	1.56	1.16
22:B0:1082:U:O5'	25:B3:80:LEU:N	1.78	1.15
24:B2:38:VAL:HG23	24:B2:177:VAL:HG12	1.16	1.15
22:B0:2779:U:H4'	33:BH:116:ARG:NE	1.59	1.14
22:B0:1082:U:H5"	25:B3:82:GLU:N	1.60	1.14

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1082:U:H5”	25:B3:82:GLU:H	1.08	1.14
22:B0:1082:U:C4’	25:B3:81:LYS:H	1.60	1.14
22:B0:1487:G:O5’	26:BA:196:ASN:N	1.80	1.13
22:B0:121:G:H4’	22:B0:149:A:H5’	1.25	1.13
22:B0:1083:U:C5’	25:B3:85:ASP:N	2.06	1.13
22:B0:1486:G:O2’	26:BA:196:ASN:HB3	1.49	1.12
2:AU:75:C:OP1	22:B0:2555:U:H2’	1.48	1.11
28:BC:32:VAL:H	35:BJ:16:GLY:HA3	1.11	1.11
35:BJ:118:THR:HG23	35:BJ:119:PRO:HA	1.30	1.11
1:AA:1139:G:H4’	1:AA:1140:C:H5’	1.14	1.11
22:B0:2109:U:H3’	22:B0:2110:G:H5’	1.31	1.10
28:BC:30:GLN:H	35:BJ:17:LYS:HA	1.04	1.10
37:BL:38:LEU:HB2	37:BL:39:PRO:HD3	1.27	1.10
22:B0:1083:U:O4’	25:B3:84:LYS:CA	2.00	1.10
4:AC:184:ASN:HD21	4:AC:199:VAL:HB	1.13	1.10
22:B0:1499:U:N3	26:BA:155:ARG:CG	2.16	1.09
22:B0:1083:U:H5”	25:B3:85:ASP:C	1.72	1.09
22:B0:1492:G:H2’	26:BA:145:MET:HA	1.13	1.09
26:BA:140:VAL:HG12	26:BA:141:HIS:H	1.09	1.08
28:BC:30:GLN:N	35:BJ:17:LYS:HA	1.68	1.08
29:BD:110:ILE:HG22	29:BD:111:ARG:HE	1.00	1.08
22:B0:2263:C:H6	45:BU:10:ARG:HA	1.14	1.08
22:B0:2780:G:H3’	33:BH:116:ARG:HD3	1.29	1.08
28:BC:30:GLN:H	35:BJ:17:LYS:CA	1.66	1.08
22:B0:1491:A:H4’	26:BA:161:VAL:CG1	1.82	1.08
22:B0:2779:U:H4’	33:BH:116:ARG:HE	0.94	1.08
25:B3:79:GLY:HA2	32:BG:117:THR:HB	1.11	1.08
22:B0:1840:G:H1	22:B0:1901:A:N6	1.50	1.07
25:B3:92:ALA:HB3	25:B5:44:PRO:HG2	1.35	1.07
22:B0:1488:G:C8	26:BA:158:GLY:N	2.23	1.07
22:B0:1083:U:H2’	25:B3:88:GLU:CG	1.84	1.07
22:B0:2128:G:O5’	22:B0:2165:C:H3’	1.54	1.07
25:B3:57:ILE:HA	25:B3:92:ALA:HB1	1.29	1.07
22:B0:2680:U:H2’	22:B0:2681:C:H5”	1.34	1.06
40:BO:54:ARG:H	40:BO:57:ARG:HG3	1.18	1.06
22:B0:1083:U:H4’	25:B3:87:VAL:H	0.99	1.06
22:B0:2898:G:H5”	33:BH:139:VAL:HA	1.36	1.06
22:B0:2164:C:H4’	22:B0:2165:C:H1’	1.36	1.06
22:B0:1487:G:H2’	26:BA:157:ALA:O	1.54	1.06
22:B0:2173:A:H2’	24:B2:39:GLU:HB2	1.30	1.06
2:AV:36:A:H2’	2:AV:37:G:H5”	1.38	1.06

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1424:G:C4’	26:BA:58:LYS:HB3	1.86	1.06
22:B0:2136:G:N1	22:B0:2137:U:H3’	1.69	1.05
32:BG:133:ARG:HA	32:BG:133:ARG:HE	1.19	1.05
2:AW:36:A:H2’	2:AW:37:G:H5”	1.38	1.05
22:B0:479:A:H4’	22:B0:480:A:O5’	1.46	1.05
22:B0:564:C:H4’	40:BO:36:GLN:HB2	1.38	1.05
24:B2:40:SER:HA	24:B2:176:LYS:HA	1.37	1.05
22:B0:1083:U:H5”	25:B3:85:ASP:H	1.01	1.05
22:B0:589:U:H3’	28:BC:87:ALA:H	1.17	1.05
22:B0:2161:C:H4’	22:B0:2162:G:OP1	1.56	1.05
1:AA:1286:U:H3’	1:AA:1287:A:H5”	1.33	1.04
22:B0:1581:A:P	26:BA:73:ILE:H	1.79	1.04
39:BN:91:VAL:HG12	39:BN:92:ARG:H	1.21	1.04
22:B0:1083:U:H2’	25:B3:88:GLU:HB2	1.40	1.04
22:B0:1083:U:H2’	25:B3:88:GLU:CB	1.88	1.04
22:B0:1495:A:N3	26:BA:65:ASP:HB3	1.71	1.04
22:B0:1583:G:H22	26:BA:75:ALA:HA	1.21	1.04
22:B0:2179:C:H3’	22:B0:2180:U:H4’	1.41	1.03
22:B0:1495:A:H5’	26:BA:189:ALA:O	1.57	1.03
22:B0:2004:G:C8	22:B0:2004:G:OP2	2.10	1.03
22:B0:1580:A:P	26:BA:117:SER:HB3	1.97	1.03
23:B9:13:G:H4’	23:B9:15:A:N6	1.72	1.03
23:B9:84:G:H2’	23:B9:85:G:H5”	1.41	1.03
33:BH:96:ARG:HB2	33:BH:97:PRO:HA	1.40	1.03
2:AU:58:A:H4’	2:AU:59:U:OP1	1.57	1.03
1:AA:1367:C:H5”	10:AI:115:VAL:HG11	1.35	1.02
22:B0:226:A:H61	22:B0:409:G:H21	1.03	1.02
1:AA:1318:A:H2’	20:AS:8:PRO:HD2	1.42	1.02
22:B0:1082:U:H2’	25:B3:84:LYS:HB2	1.38	1.02
22:B0:2263:C:O5’	45:BU:11:ASN:HA	1.60	1.02
37:BL:64:ARG:HH22	37:BL:67:PHE:HB3	1.23	1.02
1:AA:975:A:H4’	1:AA:976:G:H5”	1.41	1.02
22:B0:1043:C:H2’	22:B0:1044:C:H5”	1.37	1.02
22:B0:1081:U:H2’	25:B3:80:LEU:CB	1.89	1.02
22:B0:1579:A:O2’	26:BA:129:LEU:HA	1.59	1.02
22:B0:2135:A:H5”	22:B0:2150:C:H1’	1.35	1.02
26:BA:64:VAL:HG12	26:BA:65:ASP:H	1.19	1.02
26:BA:68:ARG:HE	26:BA:70:LYS:N	1.58	1.02
22:B0:1082:U:C5’	25:B3:81:LYS:N	2.21	1.02
22:B0:1083:U:H5”	25:B3:85:ASP:CA	1.88	1.02
28:BC:186:VAL:HG22	28:BC:187:VAL:H	1.23	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BL:97:ILE:HD12	37:BL:111:ALA:HB1	1.42	1.02
1:AA:718:A:H5”	12:AK:118:ASN:HA	1.42	1.02
22:B0:1083:U:C4’	25:B3:85:ASP:H	1.71	1.02
22:B0:1487:G:P	26:BA:196:ASN:H	1.83	1.02
22:B0:1499:U:C4	26:BA:155:ARG:HD3	1.93	1.02
2:AW:46:G:H4’	2:AW:47:U:OP1	1.59	1.01
22:B0:1083:U:P	25:B3:84:LYS:N	2.28	1.01
22:B0:1424:G:P	26:BA:58:LYS:H	1.83	1.01
22:B0:2137:U:H4’	22:B0:2138:G:OP1	1.55	1.01
1:AA:451:A:H61	1:AA:481:G:H1’	1.17	1.01
33:BH:72:LYS:HA	33:BH:72:LYS:HZ2	1.22	1.01
2:AW:58:A:H4’	2:AW:59:U:OP1	1.57	1.01
22:B0:1084:A:H8	25:B3:88:GLU:CA	1.72	1.01
22:B0:2779:U:C4’	33:BH:116:ARG:HE	1.73	1.01
22:B0:588:U:H2’	28:BC:85:PHE:HB3	1.43	1.01
36:BK:108:VAL:HG22	36:BK:109:PRO:HD2	1.42	1.01
2:AU:46:G:H4’	2:AU:47:U:OP1	1.59	1.00
2:AV:46:G:H4’	2:AV:47:U:OP1	1.59	1.00
22:B0:628:G:H21	22:B0:638:G:H4’	1.25	1.00
22:B0:1579:A:N6	26:BA:68:ARG:HB3	1.74	1.00
22:B0:2121:G:H4’	22:B0:2122:U:O5’	1.58	1.00
27:BB:28:GLU:HA	27:BB:186:LEU:HD22	1.44	1.00
2:AV:58:A:H4’	2:AV:59:U:OP1	1.57	1.00
10:AI:113:LYS:HA	10:AI:120:ALA:HB2	1.43	1.00
22:B0:1449:A:H1’	22:B0:1527:G:H22	1.25	1.00
22:B0:1083:U:C3’	25:B3:86:LEU:H	1.75	1.00
11:AJ:57:VAL:HG12	11:AJ:58:ASN:H	1.25	1.00
22:B0:1082:U:O4’	25:B3:80:LEU:CA	2.10	1.00
29:BD:68:LYS:H	29:BD:68:LYS:HD3	1.26	1.00
22:B0:1083:U:C5’	25:B3:86:LEU:N	2.25	0.99
22:B0:1424:G:H4’	26:BA:58:LYS:HB3	1.40	0.99
22:B0:2678:C:H5”	27:BB:125:TRP:H	1.27	0.99
2:AU:36:A:H2’	2:AU:37:G:H5”	1.40	0.99
22:B0:2125:G:H5’	22:B0:2126:A:OP2	1.61	0.99
1:AA:188:C:H2’	1:AA:189:A:O4’	1.61	0.99
26:BA:140:VAL:HB	26:BA:161:VAL:C	1.81	0.99
22:B0:588:U:H2’	28:BC:86:ALA:H	1.27	0.99
22:B0:1083:U:H4’	25:B3:87:VAL:N	1.77	0.99
22:B0:2780:G:C5’	33:BH:116:ARG:HA	1.92	0.99
28:BC:30:GLN:C	35:BJ:17:LYS:H	1.65	0.99
22:B0:1084:A:H8	25:B3:88:GLU:HA	1.25	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1082:U:H2'	25:B3:84:LYS:CB	1.92	0.99
22:B0:1082:U:H2'	25:B3:84:LYS:N	1.76	0.99
28:BC:31:VAL:N	35:BJ:17:LYS:H	1.59	0.99
27:BB:133:THR:HA	27:BB:136:ASN:HD22	1.25	0.98
29:BD:110:ILE:HG22	29:BD:111:ARG:NE	1.77	0.98
22:B0:1416:G:H1	26:BA:95:TYR:H	1.11	0.98
22:B0:2678:C:H5"	27:BB:124:ARG:HB3	1.45	0.98
28:BC:30:GLN:N	35:BJ:17:LYS:CA	2.26	0.98
22:B0:1492:G:C2'	26:BA:145:MET:HA	1.93	0.98
22:B0:1081:U:H2'	25:B3:80:LEU:HB2	0.98	0.98
24:B2:64:LEU:HB3	24:B2:65:PRO:HD2	1.46	0.98
22:B0:1479:G:OP2	22:B0:1559:U:O4'	1.82	0.97
22:B0:1083:U:C1'	25:B3:84:LYS:HA	1.94	0.97
39:BN:86:LYS:HG3	39:BN:87:ARG:HD3	1.45	0.97
7:AF:18:VAL:HB	7:AF:19:PRO:HD3	1.47	0.97
22:B0:1495:A:O2'	26:BA:128:THR:HA	1.63	0.97
22:B0:2127:G:C8	22:B0:2166:U:C5'	2.48	0.97
22:B0:2898:G:H2'	33:BH:137:PRO:HD2	1.44	0.97
32:BG:109:ALA:HA	32:BG:112:LYS:HE3	1.47	0.97
32:BG:11:GLN:HG3	32:BG:55:PRO:HB3	1.47	0.97
22:B0:500:G:H22	22:B0:503:A:H5'	1.28	0.97
22:B0:1422:G:H1'	26:BA:149:LYS:HE2	1.43	0.97
1:AA:1405:G:H2'	1:AA:1517:G:C4	2.00	0.96
9:AH:17:GLN:HE22	9:AH:71:VAL:HB	1.30	0.96
26:BA:61:TYR:HH	26:BA:102:TYR:HD1	0.99	0.96
22:B0:1579:A:H61	26:BA:67:LYS:C	1.69	0.96
1:AA:1443:C:H5"	1:AA:1446:A:H5'	1.48	0.96
40:BO:73:ILE:HD13	40:BO:73:ILE:H	1.30	0.96
22:B0:864:G:H21	22:B0:866:A:H61	1.13	0.96
22:B0:2780:G:H5"	33:BH:116:ARG:HA	1.46	0.96
42:BR:67:VAL:HG12	42:BR:68:LYS:H	1.28	0.96
9:AH:116:ARG:HB2	9:AH:116:ARG:HH11	1.29	0.96
4:AC:56:ILE:HG23	4:AC:63:ILE:HD11	1.45	0.96
11:AJ:52:LEU:HG	11:AJ:62:ARG:HD3	1.48	0.96
22:B0:1418:G:N3	26:BA:99:GLU:HG3	1.80	0.96
22:B0:1491:A:C4'	26:BA:161:VAL:HG13	1.96	0.96
22:B0:1493:A:H1'	26:BA:171:VAL:HG11	1.48	0.96
22:B0:2051:A:H3'	22:B0:2614:A:H61	1.28	0.96
22:B0:1839:G:H2'	22:B0:1840:G:H8	1.30	0.96
35:BJ:79:LEU:HD12	35:BJ:79:LEU:H	1.30	0.96
22:B0:784:G:H5'	22:B0:785:G:OP1	1.66	0.95

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1082:U:O3'	25:B3:82:GLU:N	1.98	0.95
22:B0:1840:G:H1	22:B0:1901:A:H61	1.04	0.95
22:B0:1500:A:H2	26:BA:176:ARG:HD3	1.31	0.95
24:B2:208:ILE:H	24:B2:208:ILE:HD13	1.31	0.95
28:BC:153:LEU:HD13	28:BC:158:PHE:HB2	1.46	0.95
29:BD:12:VAL:HG23	29:BD:13:LYS:HD2	1.49	0.95
41:BQ:16:LYS:HA	41:BQ:16:LYS:HZ2	1.29	0.95
22:B0:1423:A:H2'	26:BA:58:LYS:CA	1.96	0.95
22:B0:2145:C:H4'	22:B0:2145:C:OP1	1.65	0.95
26:BA:184:GLU:HG2	26:BA:185:ALA:H	1.31	0.95
1:AA:189:A:O2'	1:AA:190:A:H4'	1.67	0.95
4:AC:63:ILE:HD12	4:AC:65:VAL:HG23	1.49	0.95
22:B0:1493:A:H3'	26:BA:131:MET:HE2	1.45	0.95
33:BH:33:ALA:HB2	33:BH:105:VAL:HG23	1.47	0.95
22:B0:1083:U:C2'	25:B3:88:GLU:HB2	1.97	0.95
22:B0:1206:G:H22	22:B0:1240:U:H3	0.97	0.95
22:B0:1486:G:H3'	26:BA:195:GLY:HA2	1.49	0.95
39:BN:47:ILE:HD12	39:BN:63:ILE:HD12	1.47	0.95
21:AT:68:LYS:H	21:AT:68:LYS:HD3	1.32	0.95
22:B0:1082:U:C4'	25:B3:82:GLU:H	1.78	0.95
22:B0:1500:A:C2	26:BA:176:ARG:HD3	2.02	0.95
27:BB:157:LYS:H	27:BB:157:LYS:HD2	1.32	0.95
28:BC:32:VAL:HB	35:BJ:15:ALA:O	1.66	0.95
1:AA:451:A:N6	1:AA:481:G:H1'	1.80	0.95
42:BR:16:VAL:HG12	42:BR:17:SER:H	1.31	0.95
5:AD:120:LYS:HG2	5:AD:128:VAL:HG11	1.47	0.94
22:B0:1055:G:H2'	25:B3:64:ASN:HB2	1.48	0.94
22:B0:1082:U:O5'	25:B3:81:LYS:N	2.00	0.94
41:BQ:25:ARG:NE	41:BQ:25:ARG:H	1.65	0.94
22:B0:411:G:H5"	22:B0:412:A:OP1	1.67	0.94
22:B0:1046:A:H4'	22:B0:1047:G:OP2	1.66	0.94
26:BA:145:MET:O	26:BA:146:LYS:HD3	1.68	0.94
39:BN:20:ARG:HG2	39:BN:25:VAL:HG21	1.49	0.94
22:B0:1083:U:OP2	25:B3:84:LYS:C	2.06	0.94
22:B0:1579:A:O4'	26:BA:65:ASP:HB2	1.64	0.94
24:B2:14:VAL:HG21	24:B2:221:VAL:HG22	1.49	0.94
35:BJ:17:LYS:HD2	35:BJ:18:ARG:HG2	1.49	0.94
22:B0:2624:G:H5"	22:B0:2825:G:C8	2.03	0.94
36:BK:42:THR:HG22	36:BK:45:GLN:HE21	1.32	0.94
1:AA:975:A:H4'	1:AA:976:G:C5'	1.97	0.94
22:B0:1496:A:H8	26:BA:190:THR:OG1	1.51	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:535:G:H1'	40:BO:52:ARG:HD2	1.50	0.94
22:B0:581:C:H5"	40:BO:31:TYR:HE2	1.29	0.94
22:B0:1579:A:H61	26:BA:68:ARG:HB3	1.28	0.94
28:BC:30:GLN:N	35:BJ:17:LYS:N	2.15	0.94
28:BC:30:GLN:HB3	35:BJ:18:ARG:N	1.83	0.94
22:B0:1485:C:H5"	26:BA:87:SER:HB2	1.48	0.94
26:BA:93:VAL:HG11	26:BA:103:ILE:HD12	1.48	0.94
49:B1:42:VAL:HG22	49:B1:43:ARG:H	1.30	0.94
22:B0:1578:U:H5"	26:BA:101:ARG:CZ	1.98	0.94
22:B0:1083:U:C4'	25:B3:87:VAL:H	1.80	0.93
28:BC:30:GLN:HB2	35:BJ:18:ARG:HE	1.33	0.93
2:AW:18:G:H4'	2:AW:19:G:OP1	1.69	0.93
22:B0:1084:A:C8	25:B3:88:GLU:HA	2.02	0.93
22:B0:1084:A:C5'	25:B3:88:GLU:HB3	1.97	0.93
28:BC:155:GLU:HG3	28:BC:156:ASN:H	1.34	0.93
24:B2:38:VAL:HG22	24:B2:176:LYS:HB3	1.47	0.93
25:B3:16:VAL:HB	25:B5:50:GLU:HB3	1.49	0.93
28:BC:67:ARG:HH21	28:BC:68:ALA:C	1.70	0.93
39:BN:85:VAL:HG22	39:BN:86:LYS:H	1.32	0.93
45:BU:45:HIS:HB3	45:BU:79:ILE:HG21	1.50	0.93
10:AI:83:THR:HG21	10:AI:102:PHE:HB3	1.50	0.93
27:BB:74:GLU:HG2	27:BB:75:ALA:H	1.34	0.93
25:B3:78:LEU:HD12	25:B3:83:ALA:HB2	1.49	0.93
21:AT:54:GLN:HB3	21:AT:55:PRO:HD3	1.48	0.93
22:B0:84:A:N6	22:B0:102:U:H1'	1.84	0.93
22:B0:1082:U:C2'	25:B3:84:LYS:HB2	1.99	0.93
22:B0:1083:U:H5"	25:B3:86:LEU:N	1.82	0.93
22:B0:1275:A:H4'	22:B0:1276:A:O5'	1.67	0.93
22:B0:1494:A:H62	26:BA:188:ARG:HB3	1.31	0.93
22:B0:2127:G:H2'	22:B0:2165:C:O3'	1.69	0.93
22:B0:2678:C:H5'	27:BB:124:ARG:NE	1.83	0.93
22:B0:2780:G:C3'	33:BH:116:ARG:HD3	1.99	0.93
7:AF:39:LEU:HD23	7:AF:62:MET:HG2	1.48	0.93
22:B0:830:G:H4'	22:B0:2448:A:H62	1.34	0.93
22:B0:1557:C:H2'	22:B0:1558:C:C1'	1.99	0.93
22:B0:1082:U:C2	25:B3:80:LEU:HD12	2.03	0.93
1:AA:971:G:H5"	1:AA:972:C:H5'	1.49	0.92
4:AC:112:ALA:HB1	4:AC:184:ASN:HD22	1.34	0.92
22:B0:2772:C:H4'	27:BB:168:GLU:HG3	1.48	0.92
33:BH:100:VAL:HG13	33:BH:101:ILE:H	1.31	0.92
28:BC:28:VAL:H	35:BJ:17:LYS:HZ3	0.94	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BG:6:ALA:HB3	32:BG:60:VAL:HG21	1.50	0.92
1:AA:1319:A:N3	20:AS:6:LYS:HD3	1.85	0.92
1:AA:1349:A:H5"	10:AI:119:LYS:HE2	1.51	0.92
22:B0:1203:U:H5"	35:BJ:10:GLU:HB3	1.49	0.92
22:B0:2756:U:O2'	22:B0:2757:A:H5"	1.70	0.92
39:BN:10:GLU:HG2	39:BN:11:GLN:H	1.33	0.92
45:BU:66:VAL:HG22	45:BU:67:LYS:H	1.32	0.92
26:BA:141:HIS:O	26:BA:190:THR:HB	1.68	0.92
29:BD:111:ARG:HH22	29:BD:134:GLN:HG3	1.33	0.92
34:BI:38:ILE:H	34:BI:38:ILE:HD13	1.34	0.92
22:B0:285:G:H22	22:B0:355:U:H3	1.18	0.92
22:B0:1495:A:H1'	26:BA:128:THR:HG22	1.52	0.92
22:B0:1905:C:O2'	22:B0:1929:G:H1'	1.70	0.92
41:BQ:27:LYS:H	41:BQ:27:LYS:HD3	1.33	0.92
1:AA:1286:U:C3'	1:AA:1287:A:H5"	1.98	0.92
22:B0:1055:G:C2'	25:B3:64:ASN:HB2	1.99	0.92
22:B0:1211:C:H4'	22:B0:1212:G:OP2	1.68	0.92
22:B0:2164:C:C4'	22:B0:2165:C:H1'	2.00	0.92
22:B0:2898:G:H3'	33:BH:138:GLN:O	1.70	0.92
24:B2:26:ILE:HA	24:B2:29:LEU:HB2	1.52	0.92
26:BA:115:ILE:HD13	26:BA:115:ILE:H	1.34	0.92
1:AA:915:A:H2'	1:AA:916:U:H5'	1.49	0.92
22:B0:1417:U:H2'	26:BA:98:GLY:HA2	1.52	0.92
22:B0:1494:A:N6	26:BA:188:ARG:HB3	1.85	0.92
22:B0:1583:G:H21	26:BA:95:TYR:HA	1.34	0.92
28:BC:95:LYS:HB2	35:BJ:27:LEU:HD21	1.51	0.92
13:AL:55:ARG:HG2	13:AL:61:GLU:HG3	1.50	0.91
22:B0:2898:G:OP2	33:BH:138:GLN:HB2	1.70	0.91
1:AA:429:U:O2'	1:AA:430:A:H5"	1.70	0.91
29:BD:63:LYS:H	29:BD:63:LYS:HD3	1.30	0.91
6:AE:54:GLU:HG3	6:AE:56:PRO:HD2	1.52	0.91
22:B0:1582:C:H2'	26:BA:96:LYS:HG2	1.53	0.91
28:BC:28:VAL:N	35:BJ:17:LYS:HZ3	1.69	0.91
22:B0:352:A:H5'	22:B0:353:C:C6	2.05	0.91
38:BM:25:ARG:HH21	38:BM:40:ILE:HD12	1.35	0.91
22:B0:1828:G:H5"	22:B0:1829:A:OP1	1.71	0.91
22:B0:2712:C:H1'	37:BL:15:SER:HB2	1.49	0.91
46:BW:31:GLN:HA	46:BW:38:GLN:HE22	1.35	0.91
1:AA:1483:A:H4'	22:B0:1948:G:O2'	1.71	0.91
22:B0:1082:U:C2'	25:B3:84:LYS:N	2.33	0.91
22:B0:1270:C:H42	22:B0:2010:G:H1	0.92	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1579:A:N6	26:BA:67:LYS:C	2.23	0.91
22:B0:2585:U:H5”	22:B0:2586:U:OP1	1.71	0.91
22:B0:2263:C:C6	45:BU:10:ARG:HA	2.06	0.91
25:B5:107:LYS:HE3	25:B5:117:VAL:HB	1.54	0.91
22:B0:215:G:H4’	22:B0:216:A:H4’	1.51	0.90
22:B0:2678:C:H5”	27:BB:124:ARG:CB	2.01	0.90
1:AA:1322:C:H5”	1:AA:1323:G:OP1	1.71	0.90
2:AU:18:G:H4’	2:AU:19:G:OP1	1.71	0.90
22:B0:2678:C:H5”	27:BB:125:TRP:N	1.86	0.90
25:B3:84:LYS:NZ	25:B3:84:LYS:HB3	1.87	0.90
28:BC:118:LEU:H	28:BC:118:LEU:HD23	1.35	0.90
4:AC:149:LYS:HD3	4:AC:168:ARG:HD2	1.53	0.90
27:BB:130:GLN:HB3	27:BB:134:HIS:HB3	1.53	0.90
13:AL:42:LYS:HG3	13:AL:44:PRO:HD2	1.53	0.90
2:AV:18:G:H4’	2:AV:19:G:OP1	1.71	0.90
13:AL:84:GLY:H	13:AL:94:TYR:HA	1.36	0.90
22:B0:534:U:H3	22:B0:559:G:H22	0.93	0.90
22:B0:581:C:H5”	40:BO:31:TYR:CE2	2.07	0.90
22:B0:810:U:H2’	35:BJ:35:HIS:HB2	1.50	0.90
3:AB:36:LYS:HG3	3:AB:37:VAL:H	1.37	0.90
22:B0:1083:U:N3	25:B3:84:LYS:HE2	1.87	0.90
22:B0:2898:G:H2’	33:BH:137:PRO:CD	2.01	0.90
22:B0:589:U:H3’	28:BC:87:ALA:N	1.86	0.90
22:B0:1111:A:O2’	22:B0:1112:G:H4’	1.71	0.90
22:B0:226:A:O2’	22:B0:227:A:OP2	1.88	0.90
22:B0:2123:G:H5”	22:B0:2124:G:H4’	1.54	0.90
25:B3:51:LYS:HE3	25:B5:19:VAL:HB	1.53	0.90
28:BC:146:VAL:HA	28:BC:149:ILE:HD13	1.52	0.90
22:B0:2126:A:H4’	22:B0:2171:A:H2’	1.51	0.90
1:AA:720:C:H41	12:AK:118:ASN:ND2	1.70	0.90
22:B0:85:G:H5”	43:BS:6:ARG:HE	1.37	0.90
22:B0:1083:U:O5’	25:B3:83:ALA:C	2.10	0.90
45:BU:35:ILE:HG23	45:BU:36:ILE:H	1.38	0.90
1:AA:412:A:HO2’	1:AA:413:G:H8	0.91	0.89
22:B0:1204:A:H61	22:B0:1241:A:H61	1.18	0.89
22:B0:1408:G:H22	22:B0:1594:U:H3	1.20	0.89
22:B0:1577:C:H2’	26:BA:101:ARG:HD3	1.54	0.89
22:B0:2780:G:H3’	33:BH:116:ARG:HD2	1.50	0.89
25:B3:79:GLY:CA	32:BG:117:THR:HB	2.00	0.89
22:B0:2898:G:C4	33:BH:137:PRO:HB2	2.06	0.89
26:BA:62:ARG:HH21	26:BA:149:LYS:NZ	1.71	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2130:U:H2'	24:B2:178:ASP:HB2	1.54	0.89
22:B0:2137:U:O2'	22:B0:2138:G:H5'	1.70	0.89
5:AD:2:ARG:HE	5:AD:66:VAL:HA	1.35	0.89
22:B0:1416:G:H8	26:BA:100:ARG:HH11	1.20	0.89
22:B0:2169:A:H5"	22:B0:2170:A:OP2	1.72	0.89
39:BN:9:GLN:NE2	39:BN:9:GLN:H	1.70	0.89
22:B0:1250:G:H4'	40:BO:8:ILE:HD12	1.55	0.89
22:B0:1286:A:H4'	22:B0:1287:A:OP1	1.70	0.89
22:B0:1557:C:H2'	22:B0:1558:C:O4'	1.72	0.89
28:BC:130:LYS:HB2	28:BC:133:LEU:HD13	1.54	0.89
2:AU:75:C:H5'	22:B0:2555:U:H3'	1.54	0.89
15:AN:40:ARG:CZ	20:AS:17:LYS:HB3	2.01	0.89
22:B0:2128:G:O3'	22:B0:2165:C:H5"	1.71	0.89
1:AA:718:A:H8	12:AK:119:GLY:N	1.71	0.89
33:BH:96:ARG:CB	33:BH:97:PRO:HA	2.02	0.89
22:B0:2136:G:H3'	22:B0:2136:G:C4	2.07	0.89
22:B0:2150:C:H5"	22:B0:2151:U:OP1	1.73	0.89
22:B0:2401:U:H3	22:B0:2415:G:H1	1.17	0.89
45:BU:30:VAL:HG22	45:BU:31:LEU:HD23	1.51	0.89
22:B0:2137:U:O2	22:B0:2137:U:H2'	1.71	0.89
26:BA:49:THR:H	26:BA:52:HIS:HB2	1.38	0.89
27:BB:114:LYS:HD3	27:BB:196:ALA:HB2	1.55	0.89
17:AP:4:ILE:HD11	17:AP:65:ALA:HB1	1.55	0.89
1:AA:665:A:H62	1:AA:724:G:H1	1.19	0.88
4:AC:76:ILE:HA	4:AC:83:VAL:HG13	1.53	0.88
7:AF:81:ASN:HD21	7:AF:83:ALA:HB3	1.37	0.88
22:B0:2680:U:C2'	22:B0:2681:C:H5"	2.01	0.88
22:B0:655:A:H4'	22:B0:656:G:H5'	1.54	0.88
22:B0:1424:G:H4'	26:BA:58:LYS:HD3	1.55	0.88
22:B0:2680:U:H5"	27:BB:114:LYS:HE2	1.53	0.88
22:B0:588:U:H3'	28:BC:86:ALA:O	1.73	0.88
22:B0:1082:U:C1'	25:B3:80:LEU:HA	2.03	0.88
28:BC:29:HIS:H	35:BJ:17:LYS:CA	1.86	0.88
37:BL:64:ARG:NH2	37:BL:67:PHE:HB3	1.89	0.88
5:AD:94:GLU:HG2	5:AD:185:PRO:HG3	1.56	0.88
22:B0:1421:G:O6	26:BA:149:LYS:N	2.07	0.88
22:B0:2674:G:H3'	27:BB:128:ARG:HH22	1.35	0.88
22:B0:2678:C:C5'	27:BB:124:ARG:HB3	2.03	0.88
23:B9:13:G:H4'	23:B9:15:A:H61	1.36	0.88
1:AA:1296:C:H4'	1:AA:1302:C:N4	1.89	0.88
1:AA:1518:A:H2'	1:AA:1519:A:C8	2.08	0.88

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1519:A:H2'	1:AA:1520:C:H5'	1.54	0.88
22:B0:1484:U:H3	22:B0:1504:G:H22	1.19	0.88
22:B0:2143:C:O2'	22:B0:2144:G:H4'	1.72	0.88
39:BN:96:LEU:H	39:BN:96:LEU:HD13	1.36	0.88
49:B1:32:LYS:HA	49:B1:32:LYS:HZ2	1.36	0.88
1:AA:176:C:H2'	1:AA:177:G:H8	1.37	0.88
10:AI:57:VAL:HG23	10:AI:58:GLU:H	1.37	0.88
22:B0:2050:C:H2'	22:B0:2051:A:O4'	1.73	0.88
33:BH:25:LEU:HD13	33:BH:25:LEU:H	1.38	0.88
40:BO:40:LYS:HA	40:BO:40:LYS:HE3	1.55	0.88
22:B0:2677:G:C3'	27:BB:125:TRP:HB2	2.02	0.88
20:AS:86:LYS:H	20:AS:86:LYS:HD3	1.36	0.88
22:B0:432:A:O3'	28:BC:68:ALA:HB1	1.74	0.88
27:BB:13:ARG:HH21	27:BB:15:PHE:H	1.18	0.88
22:B0:589:U:H5"	28:BC:88:ARG:HG3	1.55	0.88
22:B0:1082:U:C4	25:B3:84:LYS:HD3	2.08	0.88
22:B0:2132:U:O4	24:B2:9:VAL:HG13	1.72	0.88
24:B2:22:ILE:HG23	24:B2:188:LEU:HD23	1.53	0.88
28:BC:33:VAL:HG12	35:BJ:15:ALA:N	1.89	0.88
42:BR:12:ARG:HB2	42:BR:33:LYS:HB2	1.56	0.88
42:BR:30:ILE:HG13	42:BR:87:LEU:HD11	1.54	0.88
1:AA:1158:C:O2	1:AA:1158:C:H2'	1.74	0.87
22:B0:1626:A:H4'	22:B0:1627:G:H5"	1.54	0.87
25:B5:81:LYS:H	25:B5:81:LYS:HD3	1.39	0.87
1:AA:1053:G:O6	1:AA:1199:U:H2'	1.74	0.87
22:B0:1421:G:N3	26:BA:146:LYS:HB2	1.89	0.87
22:B0:1578:U:OP2	26:BA:101:ARG:HD2	1.75	0.87
33:BH:110:PRO:HD2	33:BH:113:PRO:HB3	1.55	0.87
22:B0:1183:U:H2'	22:B0:1184:U:H4'	1.57	0.87
22:B0:1493:A:H3'	26:BA:131:MET:CE	2.04	0.87
39:BN:59:THR:HG23	39:BN:76:HIS:HA	1.57	0.87
22:B0:1084:A:O4'	25:B3:88:GLU:HB3	1.74	0.87
22:B0:2123:G:H5"	22:B0:2124:G:C4'	2.05	0.87
28:BC:30:GLN:NE2	35:BJ:18:ARG:HA	1.89	0.87
25:B3:60:ALA:HB3	25:B3:116:GLU:HB3	1.57	0.87
45:BU:36:ILE:HG23	45:BU:68:PHE:HB3	1.54	0.87
1:AA:1504:G:H4'	1:AA:1505:G:O4'	1.74	0.87
22:B0:2781:A:O5'	33:BH:116:ARG:HG3	1.73	0.87
22:B0:2835:A:H5"	22:B0:2836:U:OP1	1.74	0.87
26:BA:66:PHE:CZ	26:BA:99:GLU:HG2	2.10	0.87
1:AA:1502:A:O2'	1:AA:1504:G:H3'	1.74	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AJ:14:ASP:HB3	11:AJ:17:LEU:HG	1.55	0.87
11:AJ:52:LEU:HA	11:AJ:62:ARG:HG2	1.57	0.87
22:B0:1496:A:H2'	26:BA:63:ILE:HD12	1.57	0.87
33:BH:114:LEU:H	33:BH:114:LEU:HD13	1.39	0.87
22:B0:84:A:H4'	22:B0:85:G:O5'	1.73	0.87
22:B0:1244:A:H2'	35:BJ:18:ARG:HH11	1.37	0.87
22:B0:2333:A:H5"	22:B0:2334:U:OP1	1.74	0.87
26:BA:142:ASN:HA	26:BA:154:ALA:HB3	1.57	0.87
49:B1:12:SER:HA	49:B1:50:GLU:HA	1.57	0.87
22:B0:1479:G:O5'	22:B0:1558:C:H3'	1.74	0.86
1:AA:531:U:H5"	1:AA:532:A:OP1	1.75	0.86
1:AA:1029:U:H2'	1:AA:1030:U:C5	2.10	0.86
22:B0:2779:U:O2'	22:B0:2780:G:OP2	1.92	0.86
26:BA:163:ILE:HD12	26:BA:163:ILE:H	1.41	0.86
28:BC:108:ILE:HD12	28:BC:180:LEU:HB3	1.55	0.86
37:BL:64:ARG:NE	37:BL:64:ARG:HA	1.88	0.86
24:B2:202:GLN:NE2	24:B2:202:GLN:H	1.72	0.86
22:B0:1082:U:OP2	25:B3:81:LYS:CB	2.19	0.86
36:BK:78:LEU:HG	36:BK:79:ALA:H	1.41	0.86
1:AA:173:U:H5'	1:AA:197:A:H1'	1.56	0.86
1:AA:1366:C:H2'	11:AJ:62:ARG:CZ	2.04	0.86
22:B0:1494:A:H5"	26:BA:140:VAL:HG11	1.55	0.86
22:B0:2114:A:O2'	22:B0:2169:A:H5'	1.75	0.86
22:B0:2263:C:N4	22:B0:2277:G:H1	1.73	0.86
37:BL:38:LEU:C	37:BL:40:LYS:H	1.79	0.86
45:BU:38:ARG:HA	45:BU:38:ARG:CZ	2.06	0.86
39:BN:29:VAL:HG22	39:BN:30:TRP:H	1.38	0.86
39:BN:88:ARG:HH11	39:BN:88:ARG:H	1.22	0.86
22:B0:1252:G:H1'	40:BO:32:ARG:NE	1.91	0.86
22:B0:1869:G:H22	22:B0:1872:A:P	1.98	0.86
40:BO:14:LYS:NZ	40:BO:14:LYS:H	1.72	0.86
1:AA:8:A:H4'	1:AA:9:G:OP1	1.75	0.86
10:AI:34:LEU:H	10:AI:34:LEU:HD12	1.40	0.86
22:B0:2250:G:O2'	22:B0:2251:G:OP2	1.93	0.86
33:BH:32:LEU:HD22	33:BH:54:ILE:HD12	1.55	0.86
47:BX:40:THR:HG22	47:BX:41:PRO:HD2	1.57	0.86
4:AC:184:ASN:ND2	4:AC:199:VAL:HB	1.91	0.86
22:B0:850:U:H4'	22:B0:851:C:OP1	1.76	0.86
22:B0:1203:U:OP2	35:BJ:10:GLU:HG3	1.76	0.86
43:BS:4:ILE:HD13	43:BS:4:ILE:H	1.41	0.86
1:AA:1139:G:H5'	1:AA:1140:C:OP1	1.76	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AU:75:C:C5’	22:B0:2555:U:H3’	2.06	0.85
10:AI:27:ILE:H	10:AI:34:LEU:HD11	1.41	0.85
22:B0:712:G:H2’	22:B0:713:G:H8	1.40	0.85
22:B0:1478:G:H2’	22:B0:1558:C:O2’	1.76	0.85
37:BL:44:LEU:O	37:BL:47:VAL:HG22	1.74	0.85
42:BR:12:ARG:HA	42:BR:12:ARG:HH11	1.41	0.85
49:B1:26:LYS:HG2	49:B1:28:THR:HG22	1.56	0.85
22:B0:1202:G:H5’	35:BJ:12:SER:HB3	1.58	0.85
22:B0:1479:G:OP2	22:B0:1559:U:O5’	1.94	0.85
22:B0:1582:C:OP2	26:BA:73:ILE:HG13	1.76	0.85
26:BA:152:GLN:HG3	26:BA:153:LEU:HD22	1.57	0.85
1:AA:352:C:H4’	1:AA:354:G:OP1	1.76	0.85
1:AA:718:A:N3	12:AK:116:PRO:HB3	1.90	0.85
19:AR:33:THR:HG22	19:AR:34:GLU:H	1.41	0.85
22:B0:2158:A:O3’	22:B0:2159:G:H4’	1.77	0.85
22:B0:2678:C:C5’	27:BB:125:TRP:N	2.37	0.85
32:BG:133:ARG:HA	32:BG:133:ARG:NE	1.91	0.85
4:AC:10:ARG:HB2	4:AC:13:ILE:HD11	1.57	0.85
22:B0:1421:G:H1’	26:BA:146:LYS:CB	2.06	0.85
22:B0:1496:A:H2’	26:BA:63:ILE:HB	1.59	0.85
33:BH:68:LYS:HA	33:BH:68:LYS:NZ	1.90	0.85
1:AA:1064:G:H4’	1:AA:1065:U:C5’	2.06	0.85
22:B0:1084:A:O5’	25:B3:88:GLU:HB3	1.76	0.85
22:B0:2543:G:H1’	22:B0:2766:A:H4’	1.58	0.85
30:BE:25:ILE:HD12	30:BE:78:VAL:HG21	1.58	0.85
11:AJ:89:ARG:HB3	11:AJ:89:ARG:NH1	1.92	0.85
22:B0:2135:A:H61	22:B0:2140:G:N2	1.73	0.85
33:BH:123:LYS:HA	33:BH:123:LYS:NZ	1.91	0.85
22:B0:617:G:H3’	22:B0:617:G:N3	1.89	0.85
22:B0:1487:G:C8	26:BA:195:GLY:N	2.44	0.85
22:B0:2382:G:H5”	22:B0:2383:G:C5’	2.06	0.85
40:BO:16:ILE:C	40:BO:18:LYS:H	1.80	0.85
1:AA:1346:A:O2’	1:AA:1347:G:OP2	1.93	0.85
17:AP:35:ARG:H	17:AP:35:ARG:HD2	1.41	0.85
22:B0:1496:A:O2’	26:BA:63:ILE:HB	1.76	0.85
33:BH:37:ARG:HD3	33:BH:37:ARG:H	1.39	0.85
34:BI:99:ILE:HD13	34:BI:100:PHE:N	1.91	0.85
22:B0:1082:U:OP2	25:B3:81:LYS:HE3	1.75	0.85
22:B0:1244:A:O2’	35:BJ:18:ARG:HD2	1.77	0.85
22:B0:2678:C:H42	22:B0:2729:G:H22	1.18	0.85
25:B5:42:ALA:O	25:B5:45:VAL:HG13	1.77	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:28:A:N6	22:B0:512:G:H1’	1.92	0.85
22:B0:1444:A:H3’	22:B0:1445:U:C5’	2.07	0.85
22:B0:1492:G:C2	26:BA:152:GLN:HB3	2.12	0.85
22:B0:2382:G:H5”	22:B0:2383:G:H5”	1.57	0.85
39:BN:63:ILE:HG12	39:BN:74:GLN:HG2	1.58	0.85
45:BU:23:LYS:HZ2	45:BU:56:HIS:HB3	1.42	0.85
1:AA:1485:U:H5’	22:B0:1960:A:H4’	1.58	0.84
3:AB:19:THR:HG23	3:AB:20:ARG:H	1.42	0.84
22:B0:2127:G:H8	22:B0:2166:U:C5’	1.87	0.84
26:BA:75:ALA:HB3	26:BA:115:ILE:HG12	1.59	0.84
26:BA:140:VAL:HG12	26:BA:141:HIS:N	1.91	0.84
1:AA:181:A:O2’	1:AA:182:A:OP2	1.94	0.84
22:B0:2263:C:O2	22:B0:2263:C:H2’	1.77	0.84
1:AA:1286:U:H3’	1:AA:1287:A:C5’	2.08	0.84
4:AC:99:GLN:HG3	4:AC:100:ILE:H	1.40	0.84
22:B0:1496:A:C2’	26:BA:63:ILE:HB	2.06	0.84
22:B0:2166:U:H3’	22:B0:2166:U:H6	1.40	0.84
22:B0:2354:C:H4’	45:BU:20:LEU:HD13	1.59	0.84
26:BA:123:ILE:HG22	26:BA:134:ILE:HD13	1.56	0.84
2:AV:20:G:H21	2:AV:22:G:H5’	1.42	0.84
22:B0:2320:U:H5’	22:B0:2321:U:C5	2.12	0.84
33:BH:22:GLY:O	33:BH:23:LYS:HB3	1.75	0.84
22:B0:1252:G:H1	40:BO:36:GLN:HB3	1.42	0.84
22:B0:1423:A:H5”	26:BA:56:GLY:O	1.77	0.84
22:B0:2263:C:H42	22:B0:2277:G:H1	1.20	0.84
28:BC:28:VAL:H	35:BJ:17:LYS:NZ	1.74	0.84
28:BC:112:LEU:HA	28:BC:118:LEU:HD21	1.60	0.84
22:B0:2623:G:H2’	22:B0:2623:G:N3	1.92	0.84
24:B2:200:PRO:HG2	24:B2:203:ALA:HB2	1.60	0.84
35:BJ:78:ARG:HG2	35:BJ:101:ILE:HG13	1.60	0.84
40:BO:62:ALA:HA	40:BO:65:ASN:HD21	1.42	0.84
9:AH:102:VAL:HG13	9:AH:125:ILE:HB	1.58	0.84
22:B0:2127:G:H3’	22:B0:2166:U:H5’	0.84	0.84
22:B0:2127:G:O3’	22:B0:2165:C:C2’	2.24	0.84
1:AA:817:C:H1’	1:AA:819:A:OP2	1.76	0.84
1:AA:1429:A:H4’	22:B0:1703:G:O2’	1.77	0.84
7:AF:50:PRO:O	7:AF:51:ILE:HG13	1.78	0.84
22:B0:1581:A:OP1	26:BA:73:ILE:N	2.11	0.84
40:BO:54:ARG:N	40:BO:57:ARG:HG3	1.92	0.84
22:B0:573:U:H4’	22:B0:574:A:OP1	1.77	0.84
22:B0:1201:U:H2’	35:BJ:14:LYS:HG2	1.58	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2136:G:C4	22:B0:2136:G:C3'	2.57	0.84
22:B0:2779:U:O2'	33:BH:116:ARG:N	2.11	0.84
28:BC:67:ARG:HE	28:BC:68:ALA:H	1.25	0.84
35:BJ:63:LYS:H	35:BJ:63:LYS:HD2	1.43	0.84
41:BQ:11:ARG:HH12	41:BQ:46:LEU:HD22	1.43	0.84
22:B0:2109:U:H5'	22:B0:2110:G:C5'	2.08	0.84
22:B0:2136:G:H1	22:B0:2137:U:H3'	1.40	0.84
25:B3:79:GLY:O	25:B3:80:LEU:HD13	1.77	0.84
33:BH:68:LYS:HA	33:BH:68:LYS:HZ2	1.40	0.84
35:BJ:92:LEU:H	35:BJ:92:LEU:HD13	1.41	0.84
22:B0:1084:A:H3'	25:B3:88:GLU:OE2	1.76	0.83
22:B0:1423:A:H2'	26:BA:58:LYS:N	1.92	0.83
22:B0:1579:A:H61	26:BA:68:ARG:CB	1.90	0.83
22:B0:2128:G:C5'	22:B0:2165:C:H3'	2.08	0.83
26:BA:241:LYS:O	26:BA:243:PRO:HD2	1.78	0.83
42:BR:73:ARG:HD2	42:BR:74:ILE:N	1.93	0.83
48:BZ:31:LYS:H	48:BZ:31:LYS:HD3	1.42	0.83
49:B1:36:LYS:H	49:B1:36:LYS:HE3	1.41	0.83
22:B0:432:A:H2'	28:BC:69:ARG:N	1.93	0.83
22:B0:589:U:C3'	28:BC:87:ALA:H	1.90	0.83
22:B0:2109:U:H3'	22:B0:2110:G:C5'	2.07	0.83
22:B0:2127:G:C8	22:B0:2166:U:C6	2.67	0.83
1:AA:411:A:N6	1:AA:413:G:H21	1.76	0.83
22:B0:588:U:C2'	28:BC:85:PHE:HB3	2.06	0.83
22:B0:1578:U:H5"	26:BA:101:ARG:NH1	1.93	0.83
22:B0:2174:C:H4'	24:B2:32:LEU:O	1.78	0.83
28:BC:32:VAL:HA	28:BC:35:TYR:HB2	1.60	0.83
37:BL:38:LEU:HB2	37:BL:39:PRO:CD	2.08	0.83
13:AL:32:VAL:HG22	13:AL:78:VAL:HG22	1.60	0.83
14:AM:94:LEU:HB3	14:AM:95:PRO:HD2	1.60	0.83
22:B0:1499:U:C5	26:BA:155:ARG:CD	2.61	0.83
22:B0:1646:C:H4'	22:B0:1647:U:O5'	1.78	0.83
25:B3:61:ALA:HA	25:B3:115:ALA:HA	1.58	0.83
28:BC:27:LEU:CA	35:BJ:17:LYS:HG2	2.08	0.83
29:BD:91:ARG:HH11	29:BD:91:ARG:HB2	1.42	0.83
2:AU:75:C:H5"	22:B0:2556:C:H6	1.44	0.83
2:AW:16:U:H5"	2:AW:17:U:OP1	1.79	0.83
22:B0:1421:G:C6	26:BA:149:LYS:HG3	2.12	0.83
22:B0:2898:G:N9	33:BH:137:PRO:HB2	1.94	0.83
29:BD:109:ARG:H	29:BD:110:ILE:HD12	1.43	0.83
44:BT:72:VAL:HG12	44:BT:93:ARG:HA	1.60	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1164:C:H42	22:B0:1185:G:H1	1.25	0.83
22:B0:1869:G:H21	22:B0:1872:A:H8	1.24	0.83
22:B0:2781:A:C8	33:BH:116:ARG:HB3	2.14	0.83
27:BB:22:ILE:HG21	27:BB:190:LYS:HZ2	1.43	0.83
40:BO:64:ILE:HD12	40:BO:65:ASN:N	1.94	0.83
47:BX:12:ALA:HA	47:BX:15:ARG:HE	1.41	0.83
2:AU:75:C:H5"	22:B0:2556:C:C6	2.14	0.83
21:AT:8:LYS:HG3	21:AT:12:GLN:HE21	1.43	0.83
22:B0:630:G:H4'	22:B0:640:C:H5'	1.61	0.83
22:B0:1493:A:C4	26:BA:131:MET:HG2	2.14	0.83
22:B0:1495:A:C8	26:BA:189:ALA:C	2.52	0.83
22:B0:2007:U:H4'	22:B0:2824:C:H1'	1.59	0.83
22:B0:2142:A:H2'	22:B0:2143:C:H5'	1.61	0.83
22:B0:2728:U:H2'	22:B0:2729:G:C8	2.12	0.83
22:B0:2898:G:H2'	33:BH:137:PRO:CG	2.08	0.83
1:AA:595:A:H5"	1:AA:596:A:OP1	1.78	0.83
22:B0:2166:U:H3'	22:B0:2166:U:C6	2.13	0.83
22:B0:2263:C:P	45:BU:11:ASN:HA	2.18	0.83
24:B2:45:VAL:HG12	24:B2:211:VAL:HA	1.60	0.83
45:BU:20:LEU:HD23	45:BU:20:LEU:H	1.43	0.83
2:AW:76:A:H4'	22:B0:2433:A:H5'	1.61	0.83
22:B0:1419:A:H62	26:BA:67:LYS:HB3	1.42	0.83
23:B9:14:U:H4'	23:B9:15:A:OP2	1.77	0.83
25:B3:30:PHE:HB3	25:B3:34:ALA:HB3	1.61	0.83
27:BB:4:LEU:HB2	27:BB:100:LEU:HD23	1.58	0.83
43:BS:61:GLU:HG2	43:BS:63:ALA:H	1.44	0.83
22:B0:44:A:H61	22:B0:433:C:N4	1.77	0.83
15:AN:40:ARG:NH1	20:AS:17:LYS:H	1.77	0.82
22:B0:208:C:P	28:BC:61:ARG:HE	2.02	0.82
22:B0:1421:G:C2	26:BA:149:LYS:HE3	2.14	0.82
22:B0:1486:G:C2'	26:BA:196:ASN:HB3	2.09	0.82
22:B0:1494:A:H2'	26:BA:134:ILE:HB	1.61	0.82
22:B0:1579:A:H4'	26:BA:128:THR:HB	1.61	0.82
1:AA:718:A:O2'	12:AK:116:PRO:HB2	1.80	0.82
2:AW:20:G:H21	2:AW:22:G:H5'	1.43	0.82
10:AI:119:LYS:HD3	10:AI:122:ARG:HD2	1.61	0.82
22:B0:1082:U:C4'	25:B3:81:LYS:N	2.39	0.82
22:B0:1578:U:O2'	26:BA:65:ASP:N	2.11	0.82
22:B0:2163:G:H21	22:B0:2164:C:H2'	1.44	0.82
33:BH:8:PRO:HG2	33:BH:9:GLU:H	1.42	0.82
1:AA:978:A:H1'	20:AS:6:LYS:HB2	1.60	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AI:56:MET:HB3	10:AI:60:LEU:HD13	1.61	0.82
22:B0:1085:A:C5	25:B3:65:LYS:HG3	2.14	0.82
22:B0:1418:G:H2'	22:B0:1578:U:O4	1.78	0.82
22:B0:1491:A:H2'	26:BA:173:LEU:HD22	1.62	0.82
22:B0:1502:C:H2'	22:B0:1503:G:H8	1.43	0.82
22:B0:1896:G:H2'	22:B0:1897:G:H8	1.44	0.82
22:B0:2145:C:H2'	22:B0:2146:C:H5"	1.61	0.82
22:B0:2776:A:H4'	22:B0:2777:G:O5'	1.79	0.82
27:BB:79:LEU:H	27:BB:79:LEU:HD22	1.44	0.82
28:BC:33:VAL:HG12	35:BJ:14:LYS:C	1.99	0.82
49:B1:24:LYS:N	49:B1:24:LYS:HE3	1.94	0.82
1:AA:411:A:H2'	1:AA:413:G:H1'	1.60	0.82
22:B0:2345:G:H1'	22:B0:2381:A:N3	1.94	0.82
2:AU:20:G:H21	2:AU:22:G:H5'	1.42	0.82
2:AV:16:U:H5"	2:AV:17:U:OP1	1.79	0.82
22:B0:121:G:H4'	22:B0:149:A:C5'	2.06	0.82
22:B0:602:A:H1'	22:B0:656:G:N2	1.94	0.82
22:B0:1493:A:H4'	26:BA:173:LEU:CD1	2.10	0.82
22:B0:2174:C:H5	24:B2:217:MET:N	1.77	0.82
22:B0:2728:U:H2'	22:B0:2729:G:H8	1.45	0.82
26:BA:149:LYS:HD2	26:BA:150:GLY:N	1.94	0.82
28:BC:32:VAL:N	35:BJ:16:GLY:HA3	1.94	0.82
38:BM:7:ARG:H	38:BM:7:ARG:HD3	1.44	0.82
2:AV:20:G:H3'	2:AV:21:A:H5"	1.62	0.82
5:AD:148:ALA:HB1	5:AD:151:GLN:HE21	1.45	0.82
22:B0:2130:U:O4	24:B2:176:LYS:HB2	1.79	0.82
30:BE:118:ALA:HB3	30:BE:139:VAL:HG11	1.60	0.82
32:BG:9:LYS:HA	32:BG:9:LYS:HE3	1.61	0.82
41:BQ:96:ILE:HG22	41:BQ:98:LYS:H	1.44	0.82
2:AU:16:U:H5"	2:AU:17:U:OP1	1.80	0.82
3:AB:162:VAL:HG12	3:AB:164:ASP:H	1.43	0.82
22:B0:1486:G:H3'	26:BA:195:GLY:CA	2.10	0.82
25:B5:4:LYS:HA	25:B5:4:LYS:HE3	1.60	0.82
37:BL:36:THR:OG1	37:BL:40:LYS:HB2	1.78	0.82
39:BN:9:GLN:HA	39:BN:14:GLN:HE22	1.44	0.82
1:AA:792:A:H5"	1:AA:793:U:OP1	1.79	0.82
10:AI:54:VAL:HG23	10:AI:56:MET:HG2	1.62	0.82
22:B0:675:A:H4'	22:B0:2444:G:H5'	1.58	0.82
22:B0:2678:C:H42	22:B0:2729:G:N2	1.78	0.82
30:BE:88:LEU:HD13	30:BE:88:LEU:H	1.43	0.82
39:BN:83:ILE:HD13	39:BN:84:SER:H	1.45	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BN:105:LYS:HA	39:BN:105:LYS:NZ	1.95	0.82
43:BS:72:PHE:HB2	43:BS:84:PHE:HZ	1.43	0.82
22:B0:1084:A:N3	22:B0:1105:U:O2'	2.13	0.82
22:B0:2127:G:H8	22:B0:2166:U:H5"	1.11	0.82
25:B5:40:VAL:HG13	25:B5:41:ALA:H	1.42	0.82
28:BC:89:PRO:HG2	28:BC:90:GLN:NE2	1.93	0.82
22:B0:100:U:H5"	22:B0:102:U:OP2	1.80	0.82
22:B0:610:C:H2'	22:B0:611:C:C5	2.15	0.82
22:B0:1206:G:N2	22:B0:1240:U:H3	1.77	0.82
22:B0:1479:G:C1'	22:B0:1558:C:H5"	2.10	0.82
22:B0:1580:A:N3	26:BA:68:ARG:HB3	1.94	0.82
22:B0:2156:G:H8	22:B0:2157:G:H3'	1.45	0.82
38:BM:15:ARG:HG3	38:BM:18:LEU:HD22	1.61	0.82
22:B0:1578:U:H1'	26:BA:64:VAL:HB	1.62	0.81
22:B0:2152:G:H5"	22:B0:2153:C:O2	1.80	0.81
22:B0:2547:A:N7	22:B0:2566:A:H1'	1.94	0.81
22:B0:2553:G:H2'	22:B0:2554:U:H4'	1.60	0.81
28:BC:24:ASN:HB2	28:BC:27:LEU:HB2	1.62	0.81
37:BL:96:ARG:H	37:BL:96:ARG:NE	1.77	0.81
40:BO:53:LYS:HA	40:BO:53:LYS:HE3	1.62	0.81
41:BQ:16:LYS:HA	41:BQ:16:LYS:NZ	1.93	0.81
1:AA:403:C:H2'	1:AA:404:G:H8	1.45	0.81
22:B0:287:G:H5"	22:B0:352:A:C2	2.15	0.81
37:BL:63:ARG:NH1	37:BL:64:ARG:HE	1.78	0.81
1:AA:717:U:H5'	1:AA:718:A:OP1	1.80	0.81
22:B0:165:A:H5'	22:B0:172:A:OP1	1.80	0.81
22:B0:1270:C:N4	22:B0:2010:G:H1	1.76	0.81
22:B0:1486:G:H2'	26:BA:195:GLY:C	2.01	0.81
22:B0:1992:G:H5"	22:B0:1993:U:OP1	1.80	0.81
22:B0:2122:U:H5"	22:B0:2123:G:OP1	1.77	0.81
22:B0:2678:C:C4'	27:BB:125:TRP:HD1	1.92	0.81
23:B9:56:G:H5"	23:B9:57:A:OP1	1.80	0.81
42:BR:87:LEU:H	42:BR:87:LEU:HD12	1.42	0.81
19:AR:7:ARG:HD3	19:AR:7:ARG:H	1.44	0.81
22:B0:666:A:H3'	35:BJ:48:ARG:HH11	1.44	0.81
22:B0:1203:U:H5"	35:BJ:10:GLU:CB	2.10	0.81
6:AE:33:THR:HG22	6:AE:51:LYS:HG3	1.61	0.81
22:B0:1581:A:H5"	26:BA:72:GLY:N	1.96	0.81
26:BA:143:VAL:CG1	26:BA:189:ALA:HB1	2.08	0.81
37:BL:100:CYS:HB3	37:BL:110:MET:O	1.81	0.81
39:BN:26:GLU:H	39:BN:88:ARG:HG3	1.44	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1030:U:H2'	1:AA:1031:C:O4'	1.80	0.81
22:B0:1314:C:H42	22:B0:1338:G:H1	1.27	0.81
22:B0:1492:G:H21	26:BA:145:MET:HB2	1.45	0.81
22:B0:2822:G:H2'	22:B0:2823:A:H5"	1.63	0.81
24:B2:38:VAL:CG2	24:B2:177:VAL:HG12	2.05	0.81
25:B3:4:LYS:HE3	25:B3:4:LYS:HA	1.60	0.81
36:BK:7:THR:HG23	36:BK:8:LYS:H	1.46	0.81
22:B0:1201:U:H2'	35:BJ:14:LYS:CG	2.10	0.81
22:B0:1758:U:H3	22:B0:2695:U:H4'	1.45	0.81
24:B2:72:VAL:HB	24:B2:156:LYS:HE2	1.62	0.81
26:BA:140:VAL:HG13	26:BA:190:THR:O	1.81	0.81
39:BN:36:LYS:HD3	39:BN:37:LYS:HG3	1.61	0.81
17:AP:9:HIS:CE1	17:AP:18:GLN:HB2	2.16	0.81
26:BA:241:LYS:HG2	26:BA:242:HIS:N	1.94	0.81
41:BQ:45:VAL:HA	41:BQ:48:LYS:HG2	1.63	0.81
22:B0:124:G:H21	22:B0:126:A:H5'	1.45	0.81
22:B0:332:A:H4'	22:B0:333:G:OP1	1.80	0.81
22:B0:1082:U:O5'	25:B3:80:LEU:CA	2.28	0.81
22:B0:1487:G:C4	26:BA:157:ALA:HA	2.16	0.81
22:B0:1655:A:H61	22:B0:2005:A:H2'	1.46	0.81
1:AA:1316:G:H21	20:AS:6:LYS:NZ	1.79	0.80
4:AC:107:LYS:HB3	4:AC:143:LEU:HD21	1.64	0.80
22:B0:677:A:O2'	22:B0:2071:A:H5'	1.79	0.80
22:B0:2002:G:N2	22:B0:2003:A:H1'	1.96	0.80
22:B0:2116:G:H4'	22:B0:2116:G:OP1	1.79	0.80
22:B0:2722:G:H1'	37:BL:4:ARG:HH12	1.45	0.80
25:B3:57:ILE:CA	25:B3:92:ALA:HB1	2.11	0.80
28:BC:58:LYS:HB3	28:BC:62:GLN:HE22	1.44	0.80
37:BL:97:ILE:HD13	37:BL:98:LEU:H	1.43	0.80
1:AA:243:A:H4'	1:AA:244:U:H5'	1.61	0.80
1:AA:718:A:C8	12:AK:119:GLY:N	2.49	0.80
22:B0:482:A:H4'	43:BS:54:PRO:HB2	1.63	0.80
22:B0:1423:A:C3'	26:BA:56:GLY:O	2.30	0.80
22:B0:1423:A:H5'	26:BA:152:GLN:OE1	1.79	0.80
22:B0:2678:C:H5"	27:BB:124:ARG:CA	2.11	0.80
24:B2:69:GLY:HA2	24:B2:156:LYS:HB3	1.61	0.80
26:BA:184:GLU:HG2	26:BA:185:ALA:N	1.97	0.80
22:B0:215:G:C4'	22:B0:216:A:H4'	2.11	0.80
22:B0:1488:G:O5'	26:BA:158:GLY:HA3	1.80	0.80
28:BC:183:PHE:HA	35:BJ:15:ALA:HB1	1.64	0.80
33:BH:24:THR:HG22	33:BH:26:GLY:H	1.44	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BR:7:LEU:HG	42:BR:8:LEU:H	1.46	0.80
1:AA:1139:G:C4'	1:AA:1140:C:H5'	2.07	0.80
2:AU:20:G:H3'	2:AU:21:A:H5"	1.63	0.80
11:AJ:52:LEU:HD12	11:AJ:52:LEU:H	1.45	0.80
22:B0:44:A:N6	22:B0:433:C:N4	2.29	0.80
22:B0:1578:U:H3'	26:BA:101:ARG:NH2	1.97	0.80
22:B0:1581:A:N6	26:BA:95:TYR:HB3	1.96	0.80
27:BB:36:GLN:HG2	27:BB:54:ALA:HA	1.62	0.80
33:BH:122:LEU:H	33:BH:122:LEU:HD13	1.47	0.80
37:BL:99:LYS:HB3	48:BZ:52:LYS:HD2	1.63	0.80
46:BW:42:LEU:H	46:BW:42:LEU:HD13	1.44	0.80
1:AA:933:G:N2	10:AI:129:ARG:HH22	1.80	0.80
2:AW:20:G:H3'	2:AW:21:A:H5"	1.62	0.80
10:AI:118:ARG:HH11	10:AI:122:ARG:HH12	1.26	0.80
22:B0:1423:A:H2'	26:BA:58:LYS:C	2.00	0.80
24:B2:29:LEU:HD23	24:B2:184:LEU:HD13	1.63	0.80
28:BC:67:ARG:NE	28:BC:68:ALA:H	1.77	0.80
37:BL:28:LEU:HD23	37:BL:28:LEU:H	1.46	0.80
40:BO:91:ARG:HG3	40:BO:94:LEU:HD12	1.61	0.80
22:B0:321:U:H5"	22:B0:322:A:OP2	1.82	0.80
22:B0:789:A:H5"	22:B0:790:U:OP2	1.81	0.80
22:B0:1083:U:C2'	25:B3:88:GLU:CB	2.57	0.80
22:B0:1200:C:H2'	22:B0:1201:U:C6	2.17	0.80
22:B0:1418:G:C4	26:BA:99:GLU:HG3	2.16	0.80
40:BO:24:TYR:HD2	40:BO:27:ARG:HG3	1.45	0.80
2:AW:36:A:C2'	2:AW:37:G:H5"	2.12	0.80
22:B0:301:G:N3	22:B0:301:G:O2'	2.15	0.80
22:B0:532:A:H5'	22:B0:561:G:H21	1.45	0.80
22:B0:1299:G:H22	22:B0:1639:C:H5	1.29	0.80
22:B0:1495:A:H61	26:BA:144:GLU:HG2	1.45	0.80
22:B0:1609:A:H1'	22:B0:1616:A:H1'	1.62	0.80
16:AO:28:VAL:HG23	16:AO:62:ARG:HG3	1.62	0.80
22:B0:532:A:H5"	22:B0:533:G:OP2	1.82	0.80
22:B0:1422:G:H21	26:BA:62:ARG:CZ	1.94	0.80
22:B0:1478:G:O3'	22:B0:1558:C:H2'	1.81	0.80
22:B0:1499:U:H3	26:BA:155:ARG:CG	1.94	0.80
22:B0:2116:G:OP2	22:B0:2117:A:H5'	1.80	0.80
25:B3:29:LYS:HZ2	25:B5:112:GLU:HG3	1.45	0.80
26:BA:62:ARG:HE	26:BA:149:LYS:CD	1.94	0.80
39:BN:62:LYS:HA	39:BN:62:LYS:NZ	1.96	0.80
1:AA:1503:A:N6	1:AA:1532:U:H5'	1.96	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AB:110:ILE:HD13	3:AB:147:LEU:HD13	1.62	0.80
22:B0:226:A:N6	22:B0:409:G:H21	1.79	0.80
22:B0:748:G:H3'	41:BQ:90:LYS:HE3	1.64	0.80
22:B0:2898:G:H5"	33:BH:139:VAL:CA	2.12	0.80
28:BC:105:LEU:O	28:BC:109:LEU:HD13	1.80	0.80
1:AA:1405:G:O2'	1:AA:1517:G:H2'	1.79	0.80
22:B0:828:U:O2	22:B0:828:U:H2'	1.82	0.80
22:B0:1084:A:C4'	25:B3:88:GLU:HB3	2.12	0.80
22:B0:1322:A:N6	22:B0:1333:G:H21	1.79	0.80
22:B0:2155:U:H3'	22:B0:2156:G:H5"	1.62	0.80
22:B0:2156:G:C8	22:B0:2157:G:H3'	2.17	0.80
22:B0:2780:G:O5'	33:BH:116:ARG:HD3	1.82	0.80
49:B1:32:LYS:HA	49:B1:32:LYS:NZ	1.94	0.80
1:AA:1289:A:H2'	1:AA:1290:G:H5'	1.64	0.79
17:AP:2:VAL:HG13	17:AP:65:ALA:HA	1.64	0.79
22:B0:482:A:H5'	43:BS:55:GLY:HA2	1.61	0.79
22:B0:1184:U:H2'	22:B0:1185:G:C8	2.16	0.79
22:B0:2644:G:H2'	27:BB:160:LYS:NZ	1.98	0.79
26:BA:140:VAL:O	26:BA:141:HIS:HB3	1.78	0.79
26:BA:145:MET:C	26:BA:146:LYS:HD3	2.01	0.79
28:BC:31:VAL:N	35:BJ:17:LYS:N	2.30	0.79
37:BL:96:ARG:HH22	37:BL:114:GLU:HG3	1.47	0.79
40:BO:94:LEU:HD13	40:BO:95:ALA:N	1.96	0.79
42:BR:53:VAL:HG22	42:BR:54:GLU:H	1.47	0.79
1:AA:405:U:H3'	1:AA:406:G:H5'	1.64	0.79
2:AV:46:G:O2'	2:AV:47:U:H5'	1.82	0.79
22:B0:301:G:H4'	22:B0:302:C:OP1	1.80	0.79
26:BA:160:TYR:HD2	26:BA:160:TYR:N	1.80	0.79
22:B0:1083:U:O2'	25:B3:88:GLU:N	2.15	0.79
22:B0:2127:G:C3'	22:B0:2165:C:H2'	2.11	0.79
26:BA:66:PHE:HZ	26:BA:99:GLU:HG2	1.47	0.79
28:BC:164:LEU:HB2	28:BC:167:VAL:HG21	1.62	0.79
39:BN:88:ARG:HD3	39:BN:88:ARG:N	1.96	0.79
21:AT:31:ILE:HG12	21:AT:78:LEU:HG	1.65	0.79
22:B0:1487:G:O4'	26:BA:196:ASN:N	2.15	0.79
22:B0:2393:U:H5'	35:BJ:61:LEU:HD11	1.63	0.79
1:AA:934:C:H41	1:AA:1344:C:H2'	1.48	0.79
2:AW:60:C:H5"	2:AW:61:C:OP2	1.82	0.79
22:B0:1944:U:H5"	22:B0:1945:G:OP2	1.83	0.79
22:B0:2075:U:H4'	22:B0:2596:U:H3	1.48	0.79
22:B0:2263:C:C6	45:BU:11:ASN:N	2.50	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2898:G:C5'	33:BH:139:VAL:HA	2.12	0.79
27:BB:62:LYS:HB3	27:BB:63:PRO:HD3	1.65	0.79
35:BJ:30:THR:HG23	35:BJ:31:GLY:H	1.48	0.79
36:BK:80:VAL:HG13	36:BK:81:ARG:H	1.46	0.79
37:BL:41:ALA:O	37:BL:45:ARG:HG2	1.82	0.79
45:BU:65:LYS:H	45:BU:65:LYS:HD3	1.47	0.79
46:BW:37:LEU:H	46:BW:37:LEU:HD12	1.47	0.79
47:BX:12:ALA:HA	47:BX:15:ARG:NE	1.98	0.79
15:AN:54:SER:HB2	15:AN:58:ARG:HD2	1.63	0.79
22:B0:534:U:H3	22:B0:559:G:N2	1.76	0.79
22:B0:1579:A:N7	26:BA:66:PHE:CB	2.45	0.79
25:B3:23:ILE:HD12	25:B3:24:SER:N	1.97	0.79
26:BA:62:ARG:HE	26:BA:149:LYS:HD3	1.48	0.79
27:BB:53:GLY:HA2	27:BB:60:VAL:HG21	1.63	0.79
35:BJ:78:ARG:NH1	35:BJ:78:ARG:HB3	1.98	0.79
37:BL:53:THR:O	37:BL:54:LEU:HB2	1.80	0.79
42:BR:42:GLU:HG2	42:BR:43:ILE:HG12	1.63	0.79
42:BR:66:LYS:HE2	42:BR:66:LYS:HA	1.65	0.79
1:AA:31:G:H1	1:AA:48:C:H5"	1.48	0.79
2:AU:46:G:O2'	2:AU:47:U:H5'	1.82	0.79
7:AF:81:ASN:ND2	7:AF:83:ALA:HB3	1.98	0.79
13:AL:30:ARG:NH1	13:AL:30:ARG:HB2	1.97	0.79
22:B0:2164:C:H4'	22:B0:2165:C:C1'	2.13	0.79
24:B2:13:LYS:HD3	24:B2:32:LEU:HD23	1.63	0.79
28:BC:28:VAL:O	28:BC:184:ASP:HB3	1.82	0.79
1:AA:1128:C:H1'	1:AA:1146:A:H61	1.46	0.79
1:AA:1366:C:H3'	11:AJ:62:ARG:HH21	1.47	0.79
5:AD:7:LYS:HB3	5:AD:20:LEU:HG	1.64	0.79
22:B0:1164:C:N4	22:B0:1185:G:H1	1.80	0.79
22:B0:1579:A:N6	26:BA:68:ARG:CB	2.45	0.79
22:B0:2049:G:H2'	22:B0:2050:C:C6	2.18	0.79
24:B2:179:PHE:HB3	24:B2:184:LEU:HG	1.63	0.79
25:B3:90:ALA:O	25:B3:92:ALA:N	2.15	0.79
26:BA:98:GLY:O	26:BA:99:GLU:HB2	1.82	0.79
29:BD:16:MET:HA	29:BD:20:ASN:HD22	1.47	0.79
35:BJ:118:THR:HG23	35:BJ:119:PRO:CA	2.10	0.79
42:BR:70:HIS:HB2	42:BR:73:ARG:HG2	1.65	0.79
1:AA:327:A:H3'	1:AA:328:C:H5"	1.65	0.79
2:AU:60:C:H5"	2:AU:61:C:OP2	1.83	0.79
9:AH:63:LYS:HG3	9:AH:70:VAL:HG21	1.64	0.79
22:B0:800:A:H1'	22:B0:802:A:OP2	1.82	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2319:G:H4'	22:B0:2320:U:O5'	1.83	0.79
28:BC:141:MET:HG2	28:BC:143:LEU:HD23	1.64	0.79
39:BN:29:VAL:HG12	39:BN:45:VAL:HG12	1.63	0.79
43:BS:34:ILE:HB	43:BS:61:GLU:HG3	1.62	0.79
9:AH:116:ARG:HB2	9:AH:116:ARG:NH1	1.98	0.79
11:AJ:8:ILE:HG13	11:AJ:100:ILE:HG22	1.65	0.79
22:B0:1054:A:H2	25:B3:63:ALA:H	1.31	0.79
22:B0:1421:G:N1	26:BA:149:LYS:HE3	1.97	0.79
22:B0:2127:G:C4'	22:B0:2166:U:H5'	2.12	0.79
24:B2:174:ILE:HG12	24:B2:187:ASN:HB2	1.65	0.79
29:BD:77:LYS:HA	29:BD:77:LYS:HE3	1.65	0.79
33:BH:96:ARG:HD3	33:BH:99:ARG:H	1.46	0.79
42:BR:68:LYS:HA	42:BR:68:LYS:NZ	1.97	0.79
43:BS:25:LYS:HB3	43:BS:34:ILE:HG23	1.65	0.79
2:AW:46:G:O2'	2:AW:47:U:H5'	1.82	0.78
5:AD:131:ILE:HG23	5:AD:134:TYR:HB2	1.64	0.78
12:AK:44:ALA:HB3	12:AK:69:CYS:HB2	1.64	0.78
12:AK:122:PRO:HG2	12:AK:127:ARG:HG2	1.65	0.78
22:B0:2296:U:H4'	22:B0:2297:A:H5'	1.65	0.78
4:AC:109:GLU:HB2	4:AC:143:LEU:HD22	1.65	0.78
17:AP:4:ILE:HG13	17:AP:21:VAL:HG22	1.65	0.78
17:AP:20:VAL:HG11	17:AP:32:PHE:HB2	1.65	0.78
22:B0:1082:U:H3'	25:B3:81:LYS:N	1.97	0.78
22:B0:1492:G:H2'	26:BA:145:MET:CA	2.07	0.78
22:B0:1578:U:H5"	26:BA:101:ARG:HD2	1.64	0.78
22:B0:1579:A:N7	26:BA:66:PHE:HB2	1.97	0.78
22:B0:2126:A:N3	22:B0:2167:U:H5'	1.97	0.78
40:BO:14:LYS:H	40:BO:14:LYS:HZ2	1.28	0.78
1:AA:274:A:H4'	1:AA:275:G:O5'	1.83	0.78
1:AA:563:A:H1'	1:AA:566:G:O2'	1.84	0.78
1:AA:975:A:N6	11:AJ:52:LEU:HD22	1.97	0.78
16:AO:13:GLU:HG3	16:AO:14:PHE:HD1	1.49	0.78
22:B0:627:A:H4'	22:B0:628:G:OP1	1.81	0.78
22:B0:1494:A:H62	26:BA:188:ARG:CB	1.96	0.78
22:B0:2320:U:H2'	22:B0:2320:U:O2	1.83	0.78
38:BM:15:ARG:H	38:BM:15:ARG:NE	1.81	0.78
42:BR:66:LYS:HG3	42:BR:67:VAL:H	1.49	0.78
6:AE:92:ARG:HB3	6:AE:127:TYR:HB2	1.65	0.78
22:B0:800:A:O2'	22:B0:801:G:H5"	1.82	0.78
22:B0:1491:A:H2'	26:BA:173:LEU:CD2	2.14	0.78
22:B0:1579:A:H4'	26:BA:128:THR:CB	2.13	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2346:A:H5”	22:B0:2347:C:OP2	1.83	0.78
30:BE:5:LYS:HG2	30:BE:52:GLY:HA3	1.63	0.78
40:BO:116:LEU:HD23	40:BO:116:LEU:H	1.47	0.78
2:AV:60:C:H5”	2:AV:61:C:OP2	1.83	0.78
22:B0:1082:U:C3’	25:B3:81:LYS:N	2.47	0.78
22:B0:1943:U:H1’	22:B0:1945:G:OP2	1.83	0.78
22:B0:2117:A:H1’	22:B0:2124:G:H21	1.48	0.78
24:B2:10:ILE:HA	24:B2:13:LYS:HD2	1.66	0.78
25:B3:69:ILE:HG22	25:B3:73:ARG:HD2	1.66	0.78
28:BC:48:THR:HG21	28:BC:73:ILE:HD13	1.64	0.78
40:BO:62:ALA:H	40:BO:64:ILE:HG13	1.48	0.78
16:AO:47:LYS:HE2	16:AO:47:LYS:HA	1.64	0.78
18:AQ:64:ARG:HD2	18:AQ:65:PRO:HD2	1.66	0.78
22:B0:603:A:H4’	22:B0:604:G:C4’	2.12	0.78
22:B0:1417:U:H3’	26:BA:99:GLU:O	1.84	0.78
22:B0:2179:C:C3’	22:B0:2180:U:H4’	2.13	0.78
36:BK:14:LYS:HG3	36:BK:15:GLY:H	1.47	0.78
40:BO:9:ALA:O	40:BO:10:ARG:HB2	1.84	0.78
1:AA:1196:A:OP1	1:AA:1197:A:H5’	1.84	0.78
2:AV:36:A:C2’	2:AV:37:G:H5”	2.12	0.78
22:B0:884:U:N3	22:B0:885:C:N4	2.30	0.78
22:B0:1184:U:H2’	22:B0:1185:G:H8	1.47	0.78
22:B0:1252:G:H22	40:BO:36:GLN:NE2	1.82	0.78
22:B0:1488:G:H8	26:BA:158:GLY:CA	1.96	0.78
22:B0:1488:G:H22	26:BA:176:ARG:HG2	1.47	0.78
22:B0:1606:C:H4’	22:B0:1607:C:C6	2.19	0.78
22:B0:2289:G:H22	22:B0:2344:U:H1’	1.49	0.78
22:B0:2564:A:H2’	22:B0:2565:A:H5’	1.63	0.78
28:BC:3:LEU:HD21	28:BC:113:VAL:HG12	1.63	0.78
37:BL:37:THR:H	37:BL:40:LYS:HB3	1.47	0.78
37:BL:98:LEU:HB3	48:BZ:52:LYS:HG2	1.65	0.78
1:AA:345:C:H4’	1:AA:346:G:H5”	1.66	0.78
8:AG:78:ARG:HG2	8:AG:83:THR:HG22	1.64	0.78
22:B0:2162:G:OP1	22:B0:2162:G:H4’	1.84	0.78
22:B0:2677:G:H4’	27:BB:160:LYS:CB	2.14	0.78
22:B0:2856:A:H2’	22:B0:2862:G:H1	1.47	0.78
41:BQ:74:ILE:HD12	41:BQ:74:ILE:O	1.83	0.78
42:BR:11:LEU:HB2	42:BR:32:LEU:HD21	1.65	0.78
22:B0:531:C:H42	22:B0:563:G:H5”	1.47	0.78
22:B0:2136:G:N1	22:B0:2137:U:C3’	2.45	0.78
22:B0:2895:C:H42	33:BH:9:GLU:C	1.86	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:163:ILE:HG22	26:BA:164:VAL:H	1.49	0.78
22:B0:2263:C:O2'	22:B0:2264:C:H5'	1.84	0.78
22:B0:2898:G:C4	33:BH:137:PRO:CB	2.67	0.78
33:BH:10:THR:HA	33:BH:13:ARG:HG2	1.65	0.78
33:BH:112:GLY:HA2	33:BH:113:PRO:O	1.84	0.78
39:BN:10:GLU:CG	39:BN:11:GLN:H	1.97	0.78
49:B1:29:LYS:H	49:B1:29:LYS:HD2	1.48	0.78
1:AA:411:A:H62	1:AA:413:G:H21	1.32	0.77
22:B0:1043:C:C2'	22:B0:1044:C:H5"	2.13	0.77
27:BB:13:ARG:HD2	39:BN:10:GLU:HG3	1.66	0.77
33:BH:27:ARG:NE	33:BH:27:ARG:HA	1.99	0.77
37:BL:10:LEU:O	37:BL:10:LEU:HD22	1.85	0.77
1:AA:665:A:N6	1:AA:724:G:H1	1.81	0.77
1:AA:718:A:C5'	12:AK:118:ASN:HA	2.14	0.77
1:AA:991:U:O2'	1:AA:992:U:H5'	1.83	0.77
22:B0:278:A:O2'	22:B0:279:A:OP2	2.02	0.77
22:B0:2779:U:C1'	33:BH:116:ARG:HB2	2.14	0.77
22:B0:2899:A:O5'	33:BH:137:PRO:O	2.03	0.77
28:BC:110:SER:O	28:BC:113:VAL:HG22	1.83	0.77
42:BR:74:ILE:HD12	42:BR:76:ARG:HH12	1.48	0.77
45:BU:13:ARG:HE	45:BU:13:ARG:C	1.87	0.77
1:AA:125:U:H3	1:AA:236:A:H61	1.30	0.77
3:AB:23:ASN:HD22	3:AB:24:PRO:HD2	1.48	0.77
22:B0:610:C:H2'	22:B0:611:C:C6	2.19	0.77
22:B0:1423:A:H3'	26:BA:57:HIS:CA	2.14	0.77
26:BA:140:VAL:CG1	26:BA:141:HIS:H	1.92	0.77
1:AA:80:A:H3'	1:AA:81:A:H5"	1.66	0.77
1:AA:497:G:H4'	1:AA:498:U:OP1	1.84	0.77
11:AJ:48:ARG:HG2	11:AJ:66:GLU:HG3	1.66	0.77
22:B0:35:G:O4'	22:B0:454:A:H1'	1.83	0.77
22:B0:65:U:H5'	42:BR:74:ILE:HB	1.67	0.77
22:B0:1322:A:H61	22:B0:1333:G:H21	1.31	0.77
22:B0:1840:G:N1	22:B0:1901:A:N6	2.29	0.77
22:B0:1929:G:H5"	22:B0:1930:G:OP1	1.82	0.77
22:B0:2329:U:H5'	45:BU:9:THR:HA	1.67	0.77
22:B0:2515:C:H42	22:B0:2569:G:H1	1.32	0.77
22:B0:2677:G:H2'	27:BB:125:TRP:HB3	1.66	0.77
22:B0:2678:C:O4'	27:BB:125:TRP:HD1	1.67	0.77
22:B0:2899:A:C4	33:BH:137:PRO:HA	2.20	0.77
26:BA:62:ARG:HH21	26:BA:149:LYS:HZ2	1.29	0.77
3:AB:206:ILE:HD12	3:AB:237:VAL:HA	1.66	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1485:C:H5”	26:BA:87:SER:CB	2.14	0.77
22:B0:1487:G:C4	26:BA:195:GLY:O	2.37	0.77
22:B0:2397:G:H1	22:B0:2419:U:H3	1.30	0.77
22:B0:2543:G:C1’	22:B0:2766:A:H4’	2.15	0.77
22:B0:2897:U:H1’	33:BH:14:ASP:HA	1.66	0.77
26:BA:67:LYS:HG3	26:BA:188:ARG:NH2	2.00	0.77
40:BO:15:LYS:H	40:BO:15:LYS:HZ3	1.31	0.77
47:BX:40:THR:HB	47:BX:43:ILE:HD13	1.66	0.77
1:AA:189:A:C2’	1:AA:190:A:H4’	2.14	0.77
24:B2:59:ARG:CZ	24:B2:163:ARG:HD2	2.15	0.77
29:BD:91:ARG:HB2	29:BD:91:ARG:NH1	2.00	0.77
40:BO:24:TYR:CD2	40:BO:27:ARG:HG3	2.20	0.77
22:B0:571:U:H4’	22:B0:572:A:OP1	1.81	0.77
22:B0:1089:A:H4’	22:B0:1090:A:OP1	1.81	0.77
22:B0:2109:U:C3’	22:B0:2110:G:H5’	2.12	0.77
22:B0:2321:U:H2’	22:B0:2321:U:O2	1.84	0.77
41:BQ:16:LYS:HZ2	41:BQ:19:LEU:HD12	1.48	0.77
1:AA:1157:A:H5”	1:AA:1158:C:OP1	1.85	0.77
16:AO:24:THR:HG21	16:AO:69:LEU:HB2	1.67	0.77
22:B0:120:U:H4’	22:B0:121:G:H5”	1.67	0.77
22:B0:669:G:H2’	22:B0:669:G:N3	2.00	0.77
22:B0:1142:A:O2’	22:B0:1143:A:H3’	1.84	0.77
22:B0:2678:C:O4’	27:BB:125:TRP:CD1	2.38	0.77
24:B2:76:VAL:HG11	24:B2:86:ALA:HB1	1.67	0.77
20:AS:28:LYS:HB3	20:AS:29:PRO:HD2	1.65	0.77
22:B0:415:A:H61	22:B0:2408:U:H3	1.31	0.77
22:B0:447:A:H4’	22:B0:449:A:N7	2.00	0.77
22:B0:480:A:O2’	43:BS:53:GLN:HB3	1.84	0.77
22:B0:859:G:H5’	22:B0:860:U:OP1	1.83	0.77
22:B0:974:G:H5’	22:B0:975:A:OP1	1.84	0.77
22:B0:1202:G:H1’	35:BJ:14:LYS:HB2	1.66	0.77
22:B0:1500:A:H61	26:BA:156:SER:N	1.83	0.77
22:B0:1581:A:P	26:BA:73:ILE:N	2.57	0.77
22:B0:1609:A:H1’	22:B0:1616:A:C1’	2.14	0.77
22:B0:2496:C:H2’	22:B0:2497:A:O4’	1.84	0.77
39:BN:3:ILE:H	39:BN:3:ILE:HD12	1.50	0.77
1:AA:968:A:H5”	1:AA:969:A:OP2	1.84	0.77
6:AE:65:LYS:HE2	6:AE:65:LYS:HA	1.66	0.77
22:B0:241:A:O3’	22:B0:242:G:H4’	1.86	0.77
22:B0:611:C:N3	22:B0:618:G:C2	2.53	0.77
22:B0:1420:U:O5’	22:B0:1420:U:H6	1.68	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2122:U:O2	22:B0:2122:U:H2'	1.85	0.77
22:B0:2238:G:H5'	22:B0:2239:G:OP1	1.85	0.77
27:BB:133:THR:HA	27:BB:136:ASN:ND2	2.00	0.77
29:BD:79:ARG:HB3	29:BD:79:ARG:NH1	2.00	0.77
1:AA:1157:A:H4'	1:AA:1158:C:O5'	1.84	0.76
11:AJ:57:VAL:HG12	11:AJ:58:ASN:N	1.99	0.76
22:B0:1081:U:H6	22:B0:1081:U:O5'	1.68	0.76
22:B0:2296:U:O4	22:B0:2334:U:H4'	1.84	0.76
25:B3:29:LYS:HE3	25:B5:111:GLU:CB	2.13	0.76
25:B3:88:GLU:C	25:B3:90:ALA:N	2.31	0.76
26:BA:90:ILE:HD13	26:BA:90:ILE:H	1.50	0.76
26:BA:140:VAL:C	26:BA:161:VAL:H	1.88	0.76
32:BG:3:LYS:HE2	32:BG:3:LYS:HA	1.67	0.76
37:BL:44:LEU:HA	37:BL:47:VAL:HG13	1.66	0.76
40:BO:15:LYS:HZ3	40:BO:15:LYS:N	1.83	0.76
22:B0:1082:U:O5'	25:B3:80:LEU:C	2.23	0.76
22:B0:1479:G:C8	22:B0:1559:U:P	2.78	0.76
22:B0:2225:A:O2'	22:B0:2226:C:OP2	2.02	0.76
24:B2:39:GLU:OE2	24:B2:216:THR:HB	1.85	0.76
29:BD:111:ARG:NH2	29:BD:134:GLN:HG3	2.00	0.76
29:BD:116:LEU:HD23	29:BD:116:LEU:H	1.48	0.76
33:BH:56:VAL:HG11	33:BH:101:ILE:HD11	1.65	0.76
41:BQ:25:ARG:H	41:BQ:25:ARG:HE	1.31	0.76
42:BR:24:MET:HG2	42:BR:29:THR:O	1.84	0.76
45:BU:42:THR:HG22	45:BU:75:ASN:HA	1.67	0.76
1:AA:517:G:O6	1:AA:531:U:H1'	1.85	0.76
22:B0:408:G:H1	22:B0:419:U:H3	1.33	0.76
22:B0:1838:C:H5"	22:B0:1839:G:OP1	1.86	0.76
22:B0:2109:U:H5'	22:B0:2110:G:H4'	1.67	0.76
22:B0:2779:U:H5'	33:BH:116:ARG:HH21	1.50	0.76
26:BA:149:LYS:HD2	26:BA:149:LYS:C	2.05	0.76
31:BF:31:VAL:HB	31:BF:32:PRO:HD3	1.67	0.76
37:BL:50:PRO:O	37:BL:51:LEU:HB2	1.84	0.76
39:BN:111:GLU:HG3	39:BN:112:ARG:HG3	1.67	0.76
22:B0:1313:U:O2	22:B0:1313:U:H2'	1.84	0.76
22:B0:2458:G:H4'	22:B0:2459:A:OP1	1.85	0.76
26:BA:160:TYR:N	26:BA:160:TYR:CD2	2.51	0.76
28:BC:30:GLN:O	28:BC:33:VAL:HG13	1.86	0.76
33:BH:109:LEU:HB2	33:BH:110:PRO:C	2.05	0.76
5:AD:120:LYS:HE2	5:AD:128:VAL:HG21	1.67	0.76
22:B0:641:U:O2'	22:B0:2350:C:H5"	1.85	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:749:A:H5”	41:BQ:90:LYS:HD3	1.66	0.76
22:B0:1496:A:H2’	26:BA:63:ILE:CG1	2.16	0.76
22:B0:2109:U:H5’	22:B0:2110:G:C4’	2.15	0.76
39:BN:30:TRP:HE1	39:BN:82:SER:HA	1.49	0.76
40:BO:43:GLN:C	40:BO:45:ALA:H	1.88	0.76
45:BU:45:HIS:HB3	45:BU:79:ILE:CG2	2.14	0.76
1:AA:1298:U:H4’	1:AA:1299:A:C8	2.20	0.76
4:AC:140:ALA:HB3	4:AC:148:ILE:HD12	1.68	0.76
10:AI:50:PRO:HB3	10:AI:83:THR:HG22	1.68	0.76
22:B0:524:G:H4’	22:B0:555:U:H4’	1.66	0.76
22:B0:1479:G:C8	22:B0:1558:C:H5”	2.21	0.76
25:B3:90:ALA:HB3	25:B5:40:VAL:HG21	1.66	0.76
26:BA:97:ASP:CG	26:BA:98:GLY:H	1.86	0.76
49:B1:5:ARG:HA	49:B1:5:ARG:CZ	2.15	0.76
16:AO:69:LEU:HD11	16:AO:76:ARG:HD2	1.68	0.76
17:AP:4:ILE:O	17:AP:71:VAL:HG11	1.86	0.76
21:AT:51:ASN:O	21:AT:55:PRO:HD2	1.86	0.76
21:AT:60:GLN:HA	21:AT:65:LEU:HD12	1.65	0.76
21:AT:73:ARG:HG2	21:AT:77:ASN:HD21	1.51	0.76
22:B0:1424:G:H8	26:BA:57:HIS:HB3	1.49	0.76
22:B0:1581:A:H5’	26:BA:71:ASP:HA	1.67	0.76
22:B0:2894:U:H1’	33:BH:5:THR:HB	1.66	0.76
24:B2:114:ILE:HD13	24:B2:143:THR:HG23	1.67	0.76
25:B3:90:ALA:O	25:B3:91:PRO:C	2.24	0.76
25:B5:51:LYS:HG3	25:B5:52:THR:HG22	1.67	0.76
26:BA:142:ASN:H	26:BA:154:ALA:HB1	1.50	0.76
27:BB:24:VAL:HG11	27:BB:188:LEU:HB3	1.66	0.76
33:BH:110:PRO:HD2	33:BH:113:PRO:CB	2.15	0.76
11:AJ:89:ARG:HB3	11:AJ:89:ARG:HH11	1.51	0.76
16:AO:38:LEU:HD13	16:AO:55:LEU:HB2	1.68	0.76
20:AS:4:LEU:HD21	20:AS:8:PRO:HG3	1.68	0.76
26:BA:124:LYS:HB3	26:BA:127:ASN:HD22	1.48	0.76
28:BC:29:HIS:N	35:BJ:17:LYS:HD3	2.01	0.76
28:BC:30:GLN:O	28:BC:33:VAL:N	2.13	0.76
28:BC:134:LEU:HD13	28:BC:137:LYS:HZ1	1.50	0.76
29:BD:160:LYS:H	29:BD:160:LYS:HD2	1.51	0.76
37:BL:51:LEU:HD11	37:BL:69:ARG:HB2	1.66	0.76
39:BN:101:GLU:C	39:BN:103:THR:H	1.89	0.76
1:AA:1406:U:O5’	1:AA:1517:G:H1’	1.86	0.76
22:B0:433:C:C6	28:BC:69:ARG:HD3	2.21	0.76
22:B0:962:G:H2’	22:B0:963:U:C6	2.20	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1082:U:H2'	25:B3:84:LYS:CA	2.16	0.76
22:B0:1839:G:H2'	22:B0:1840:G:C8	2.17	0.76
22:B0:1997:C:O2	27:BB:138:LEU:HD13	1.86	0.76
22:B0:2127:G:H3'	22:B0:2166:U:O5'	1.85	0.76
24:B2:13:LYS:CD	24:B2:32:LEU:HD23	2.16	0.76
39:BN:71:ARG:H	39:BN:71:ARG:HE	1.34	0.76
41:BQ:28:LYS:HA	41:BQ:70:LYS:HD2	1.66	0.76
1:AA:959:A:H3'	1:AA:960:U:H5"	1.68	0.76
9:AH:29:SER:HB3	9:AH:32:LYS:HG2	1.67	0.76
12:AK:123:PRO:HD2	12:AK:126:ARG:HD2	1.67	0.76
22:B0:1495:A:H2'	22:B0:1496:A:O5'	1.86	0.76
22:B0:1799:G:H5"	22:B0:1800:C:OP1	1.86	0.76
22:B0:2677:G:H3'	27:BB:125:TRP:HB2	1.68	0.76
32:BG:80:LYS:HB3	32:BG:85:ILE:HD13	1.67	0.76
33:BH:1:MET:HG3	33:BH:2:LYS:HG3	1.67	0.76
35:BJ:17:LYS:HD2	35:BJ:18:ARG:H	1.50	0.76
37:BL:38:LEU:HG	37:BL:109:PRO:HG2	1.69	0.76
48:BZ:36:LYS:HA	48:BZ:42:ILE:HD11	1.66	0.76
1:AA:281:G:O2'	1:AA:282:A:OP2	2.04	0.75
22:B0:1344:U:H5"	22:B0:1345:C:OP2	1.87	0.75
22:B0:1486:G:H2'	26:BA:196:ASN:N	2.02	0.75
22:B0:1494:A:OP2	26:BA:189:ALA:HB2	1.85	0.75
22:B0:1583:G:H1'	26:BA:96:LYS:HB2	1.67	0.75
25:B3:91:PRO:HD3	25:B5:40:VAL:HB	1.68	0.75
33:BH:99:ARG:NH1	33:BH:99:ARG:HA	2.01	0.75
40:BO:62:ALA:HA	40:BO:65:ASN:ND2	2.00	0.75
1:AA:1053:G:H5'	1:AA:1054:C:H5'	1.67	0.75
16:AO:28:VAL:HG11	16:AO:80:LEU:HD11	1.68	0.75
22:B0:51:G:H1'	22:B0:118:A:N6	2.01	0.75
22:B0:1084:A:O5'	25:B3:88:GLU:CB	2.34	0.75
22:B0:1493:A:C3'	26:BA:131:MET:HE2	2.16	0.75
22:B0:2122:U:H4'	22:B0:2123:G:O5'	1.83	0.75
22:B0:2153:C:H4'	22:B0:2154:A:OP1	1.85	0.75
22:B0:2898:G:C2'	33:BH:137:PRO:HD2	2.16	0.75
24:B2:177:VAL:HG13	24:B2:178:ASP:N	2.00	0.75
33:BH:15:TRP:CZ2	33:BH:17:VAL:HG13	2.20	0.75
1:AA:508:U:H5"	1:AA:509:A:OP1	1.85	0.75
22:B0:1478:G:C2'	22:B0:1558:C:O2'	2.34	0.75
22:B0:2002:G:C2	22:B0:2003:A:H1'	2.20	0.75
37:BL:64:ARG:HA	37:BL:64:ARG:CZ	2.15	0.75
2:AV:12:U:H4'	22:B0:1907:G:O2'	1.87	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AW:7:U:H5”	2:AW:8:U:OP2	1.86	0.75
22:B0:1054:A:O2’	25:B3:114:GLY:HA3	1.86	0.75
22:B0:1424:G:H8	26:BA:57:HIS:CB	1.98	0.75
22:B0:1477:A:H2’	22:B0:1478:G:H1’	1.68	0.75
22:B0:1557:C:H2’	22:B0:1558:C:H1’	1.69	0.75
22:B0:2127:G:C3’	22:B0:2166:U:C5’	2.35	0.75
23:B9:57:A:H1’	29:BD:25:MET:SD	2.26	0.75
29:BD:79:ARG:HB3	29:BD:79:ARG:HH11	1.52	0.75
39:BN:24:THR:HA	39:BN:49:ILE:HG12	1.68	0.75
40:BO:16:ILE:HG13	40:BO:35:PHE:CZ	2.21	0.75
1:AA:717:U:O3’	12:AK:119:GLY:HA2	1.86	0.75
22:B0:204:A:O2’	22:B0:205:G:H1’	1.86	0.75
22:B0:352:A:H5”	22:B0:353:C:O4’	1.85	0.75
22:B0:1082:U:C6	25:B3:84:LYS:HB2	2.22	0.75
22:B0:1577:C:H4’	26:BA:62:ARG:N	2.02	0.75
22:B0:1583:G:N2	26:BA:75:ALA:HA	2.00	0.75
22:B0:2128:G:H4’	22:B0:2165:C:H5”	1.68	0.75
1:AA:49:U:H5’	1:AA:50:A:OP2	1.86	0.75
22:B0:800:A:H5”	22:B0:801:G:OP1	1.87	0.75
22:B0:1815:A:H5”	22:B0:1816:C:OP1	1.87	0.75
22:B0:2898:G:OP1	33:BH:140:LEU:HD13	1.86	0.75
35:BJ:78:ARG:HD3	35:BJ:126:ARG:HH12	1.51	0.75
1:AA:429:U:H5’	1:AA:430:A:OP1	1.86	0.75
12:AK:22:ILE:HD11	12:AK:99:LEU:HD11	1.69	0.75
22:B0:84:A:H62	22:B0:102:U:H1’	1.51	0.75
22:B0:1201:U:H3’	35:BJ:14:LYS:HE3	1.68	0.75
22:B0:1421:G:H21	26:BA:145:MET:CB	2.00	0.75
22:B0:2117:A:H2’	22:B0:2118:U:C2	2.22	0.75
32:BG:133:ARG:HG3	32:BG:137:LEU:HB3	1.68	0.75
39:BN:91:VAL:HG12	39:BN:92:ARG:N	1.99	0.75
43:BS:6:ARG:HA	43:BS:24:VAL:HB	1.68	0.75
2:AU:18:G:C2’	2:AU:57:G:H22	2.00	0.75
9:AH:86:LYS:HD2	9:AH:91:LEU:HA	1.67	0.75
13:AL:85:ARG:HH12	13:AL:87:LYS:HD2	1.52	0.75
22:B0:961:C:O2’	22:B0:962:G:OP1	2.03	0.75
26:BA:143:VAL:HG11	26:BA:161:VAL:HG11	1.69	0.75
28:BC:108:ILE:HD11	28:BC:181:ILE:HG23	1.67	0.75
29:BD:109:ARG:HA	29:BD:109:ARG:NE	2.01	0.75
33:BH:111:LYS:HA	33:BH:111:LYS:NZ	2.01	0.75
45:BU:40:ARG:NH1	45:BU:40:ARG:HB2	2.00	0.75
46:BW:25:GLN:HA	46:BW:28:LEU:HD12	1.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1101:A:H4'	1:AA:1102:A:O5'	1.84	0.74
22:B0:632:A:H5'	35:BJ:68:SER:HG	1.52	0.74
22:B0:1082:U:O3'	25:B3:82:GLU:C	2.24	0.74
22:B0:2654:A:O2'	22:B0:2655:G:H4'	1.85	0.74
25:B3:28:GLU:HG3	25:B5:108:LYS:HB2	1.69	0.74
27:BB:193:VAL:HG11	27:BB:201:LEU:HD22	1.68	0.74
28:BC:128:ALA:HB3	28:BC:158:PHE:HZ	1.52	0.74
40:BO:20:ALA:HB1	40:BO:23:TYR:HB3	1.67	0.74
49:B1:36:LYS:HE3	49:B1:36:LYS:N	2.02	0.74
1:AA:451:A:H61	1:AA:481:G:C1'	2.00	0.74
1:AA:1285:A:O2'	1:AA:1286:U:H5"	1.86	0.74
22:B0:1488:G:H5'	26:BA:198:GLU:HA	1.69	0.74
22:B0:1496:A:C8	26:BA:190:THR:OG1	2.31	0.74
22:B0:1610:A:H5"	22:B0:1611:C:OP2	1.86	0.74
22:B0:2136:G:H2'	22:B0:2136:G:N3	2.02	0.74
25:B3:51:LYS:HE2	25:B5:15:SER:C	2.08	0.74
33:BH:72:LYS:NZ	33:BH:73:VAL:H	1.86	0.74
33:BH:137:PRO:O	33:BH:138:GLN:O	2.04	0.74
42:BR:39:THR:HG23	42:BR:41:ALA:H	1.52	0.74
47:BX:6:ILE:HG13	47:BX:56:VAL:HG12	1.68	0.74
7:AF:47:LEU:HD11	7:AF:57:ALA:HB2	1.69	0.74
22:B0:1212:G:H2'	22:B0:1236:G:N2	2.02	0.74
22:B0:1416:G:C2	26:BA:94:LEU:HD13	2.22	0.74
22:B0:1579:A:H61	26:BA:68:ARG:N	1.84	0.74
22:B0:1580:A:N6	26:BA:66:PHE:CE1	2.55	0.74
22:B0:1900:A:H5"	22:B0:1901:A:OP2	1.88	0.74
32:BG:33:ASN:HD22	32:BG:34:ILE:H	1.36	0.74
1:AA:64:G:H4'	1:AA:65:A:H5"	1.68	0.74
10:AI:20:ILE:HG12	10:AI:62:LEU:HD22	1.69	0.74
17:AP:11:ALA:HB3	17:AP:14:ARG:HB3	1.68	0.74
19:AR:7:ARG:NH1	19:AR:7:ARG:HB2	2.02	0.74
22:B0:610:C:N3	22:B0:611:C:N4	2.35	0.74
22:B0:2136:G:N3	22:B0:2136:G:C2'	2.45	0.74
25:B3:86:LEU:O	25:B3:91:PRO:HD2	1.86	0.74
27:BB:81:GLU:O	27:BB:82:PHE:HB2	1.87	0.74
28:BC:28:VAL:N	35:BJ:17:LYS:HG2	2.02	0.74
1:AA:1349:A:H5"	10:AI:119:LYS:CE	2.18	0.74
2:AU:36:A:C2'	2:AU:37:G:H5"	2.17	0.74
12:AK:66:ALA:HB2	12:AK:95:THR:HG23	1.69	0.74
22:B0:265:A:H4'	22:B0:266:G:OP1	1.86	0.74
22:B0:589:U:O4'	28:BC:86:ALA:HA	1.87	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1578:U:N3	26:BA:67:LYS:NZ	2.36	0.74
22:B0:2085:U:H3	22:B0:2234:G:H1	1.32	0.74
25:B3:77:GLY:O	25:B3:78:LEU:HD23	1.88	0.74
35:BJ:17:LYS:HD2	35:BJ:18:ARG:N	2.01	0.74
43:BS:90:LYS:HA	43:BS:90:LYS:HE3	1.69	0.74
1:AA:718:A:H3'	12:AK:117:HIS:O	1.87	0.74
2:AV:7:U:H5"	2:AV:8:U:OP2	1.86	0.74
10:AI:8:THR:HB	10:AI:84:ARG:NH1	2.03	0.74
22:B0:304:U:H3	22:B0:313:G:H1	1.32	0.74
22:B0:811:U:C4	35:BJ:34:GLY:HA2	2.22	0.74
22:B0:1496:A:H2'	26:BA:63:ILE:CD1	2.17	0.74
26:BA:62:ARG:NE	26:BA:149:LYS:HD3	2.03	0.74
28:BC:29:HIS:H	35:BJ:17:LYS:HA	1.50	0.74
40:BO:65:ASN:HB3	40:BO:75:TYR:HB3	1.70	0.74
1:AA:243:A:N6	1:AA:281:G:H1'	2.01	0.74
1:AA:1054:C:H2'	1:AA:1054:C:O2	1.87	0.74
2:AV:18:G:C2'	2:AV:57:G:H22	1.99	0.74
3:AB:16:GLY:HA3	3:AB:39:ILE:HA	1.69	0.74
6:AE:10:LEU:HD11	6:AE:38:VAL:HB	1.69	0.74
22:B0:1996:C:H4'	22:B0:1997:C:O5'	1.86	0.74
22:B0:2131:U:N1	24:B2:33:ALA:CB	2.44	0.74
22:B0:2866:U:H1'	22:B0:2868:A:H1'	1.69	0.74
41:BQ:33:LEU:HD12	41:BQ:34:ASP:N	2.02	0.74
4:AC:188:ALA:HB3	4:AC:195:ILE:HG23	1.69	0.74
20:AS:11:ASP:HB2	20:AS:14:LEU:HG	1.69	0.74
22:B0:1312:U:H5"	22:B0:1313:U:OP1	1.88	0.74
22:B0:1417:U:H4'	22:B0:1588:A:O4'	1.88	0.74
22:B0:1493:A:H4'	26:BA:173:LEU:HD13	1.69	0.74
22:B0:2674:G:H3'	27:BB:128:ARG:NH2	2.02	0.74
22:B0:2778:A:H4'	22:B0:2779:U:OP1	1.87	0.74
39:BN:88:ARG:HH11	39:BN:88:ARG:N	1.85	0.74
1:AA:792:A:H4'	1:AA:793:U:C5'	2.17	0.74
3:AB:25:LYS:HA	3:AB:25:LYS:HE2	1.70	0.74
10:AI:27:ILE:HD13	10:AI:34:LEU:HD21	1.68	0.74
14:AM:6:ILE:HG13	29:BD:133:GLU:HG3	1.70	0.74
22:B0:1966:A:H1'	22:B0:2593:U:H5"	1.70	0.74
22:B0:2157:G:O2'	22:B0:2158:A:O5'	2.06	0.74
28:BC:31:VAL:H	35:BJ:17:LYS:C	1.92	0.74
41:BQ:83:LYS:HE2	41:BQ:85:ILE:HD11	1.69	0.74
42:BR:73:ARG:HD2	42:BR:74:ILE:H	1.53	0.74
2:AW:18:G:C2'	2:AW:57:G:H22	2.01	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AT:73:ARG:HG2	21:AT:77:ASN:ND2	2.02	0.74
22:B0:1082:U:O2'	25:B3:83:ALA:HB3	1.87	0.74
22:B0:1477:A:H2'	22:B0:1478:G:C1'	2.17	0.74
22:B0:2154:A:O2'	22:B0:2155:U:H5"	1.88	0.74
22:B0:2898:G:H3'	33:BH:137:PRO:O	1.88	0.74
29:BD:120:SER:HB3	29:BD:128:SER:HB2	1.70	0.74
40:BO:2:ARG:HG2	40:BO:3:VAL:H	1.53	0.74
46:BW:39:GLN:HB3	46:BW:42:LEU:HD11	1.68	0.74
1:AA:47:C:H4'	1:AA:48:C:OP1	1.85	0.73
1:AA:754:C:H2'	1:AA:754:C:O2	1.86	0.73
22:B0:1568:G:H4'	22:B0:1569:A:OP2	1.88	0.73
22:B0:1578:U:OP2	26:BA:101:ARG:HB3	1.88	0.73
22:B0:2871:U:H2'	22:B0:2872:A:H8	1.53	0.73
24:B2:147:ASN:HD22	24:B2:150:GLU:HB2	1.52	0.73
27:BB:124:ARG:O	27:BB:126:ASN:N	2.21	0.73
35:BJ:60:ARG:HB3	35:BJ:60:ARG:NH1	2.03	0.73
37:BL:43:GLU:OE1	37:BL:44:LEU:HG	1.88	0.73
37:BL:97:ILE:HD13	37:BL:98:LEU:N	2.03	0.73
41:BQ:88:ARG:H	41:BQ:88:ARG:CZ	2.01	0.73
2:AU:7:U:H5"	2:AU:8:U:OP2	1.87	0.73
4:AC:66:THR:HG22	4:AC:101:ASN:HD22	1.53	0.73
10:AI:18:VAL:HG22	10:AI:64:ILE:HD12	1.69	0.73
22:B0:1426:G:H1'	22:B0:1572:A:N6	2.03	0.73
22:B0:2156:G:OP1	22:B0:2156:G:H4'	1.87	0.73
22:B0:2335:A:O2'	22:B0:2336:A:H8	1.70	0.73
26:BA:101:ARG:NH1	26:BA:101:ARG:HB2	2.03	0.73
34:BI:19:VAL:HG22	34:BI:43:ILE:HG22	1.69	0.73
34:BI:39:ILE:HD13	34:BI:39:ILE:H	1.52	0.73
37:BL:42:LYS:HD3	37:BL:43:GLU:HG3	1.70	0.73
39:BN:105:LYS:HD3	39:BN:110:LYS:HE2	1.70	0.73
40:BO:2:ARG:NH1	40:BO:3:VAL:HG12	2.02	0.73
41:BQ:25:ARG:CZ	41:BQ:26:GLY:H	1.99	0.73
4:AC:42:LEU:HA	4:AC:46:LEU:HD23	1.70	0.73
13:AL:113:ARG:NH1	13:AL:120:ARG:HG3	2.03	0.73
22:B0:1141:U:O2'	22:B0:1142:A:OP2	2.05	0.73
28:BC:150:THR:HB	28:BC:182:ALA:HB3	1.71	0.73
37:BL:78:LYS:HE2	37:BL:78:LYS:HA	1.68	0.73
46:BW:44:LYS:O	46:BW:48:ARG:HD3	1.89	0.73
22:B0:302:C:N4	22:B0:315:G:H1	1.86	0.73
22:B0:1896:G:H2'	22:B0:1897:G:C8	2.24	0.73
22:B0:2428:G:O2'	22:B0:2429:G:OP2	2.05	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2472:G:H2'	22:B0:2475:C:H42	1.53	0.73
22:B0:2780:G:H5"	33:BH:116:ARG:CA	2.19	0.73
25:B3:66:VAL:HG23	25:B3:70:LYS:HE3	1.70	0.73
29:BD:110:ILE:CG2	29:BD:111:ARG:HE	1.91	0.73
40:BO:63:ARG:HB3	40:BO:63:ARG:HH11	1.52	0.73
41:BQ:17:VAL:HG12	41:BQ:76:VAL:HG21	1.69	0.73
42:BR:73:ARG:HH11	42:BR:73:ARG:C	1.91	0.73
2:AU:75:C:H4'	22:B0:2556:C:OP2	1.87	0.73
5:AD:186:GLU:HG2	5:AD:189:ASP:OD2	1.89	0.73
22:B0:851:C:H42	22:B0:926:G:H1	1.34	0.73
22:B0:1025:G:H5'	22:B0:1026:G:OP2	1.89	0.73
22:B0:1580:A:H5"	26:BA:118:GLY:HA2	1.70	0.73
22:B0:1943:U:H4'	22:B0:1944:U:O5'	1.88	0.73
23:B9:56:G:H4'	23:B9:57:A:H8	1.54	0.73
25:B3:66:VAL:HG13	25:B3:67:ALA:H	1.53	0.73
28:BC:5:LEU:HD22	28:BC:15:SER:HB2	1.70	0.73
29:BD:151:LEU:HD13	29:BD:152:ASP:N	2.04	0.73
1:AA:150:U:H3	1:AA:171:A:H62	1.37	0.73
1:AA:960:U:O2	1:AA:960:U:H2'	1.86	0.73
1:AA:1157:A:H5'	1:AA:1158:C:C6	2.23	0.73
12:AK:28:ASN:HD21	12:AK:45:THR:HG22	1.53	0.73
22:B0:752:A:C6	22:B0:1781:U:H1'	2.24	0.73
22:B0:973:A:H1'	22:B0:1186:G:N2	2.03	0.73
22:B0:1479:G:O4'	22:B0:1558:C:H3'	1.88	0.73
22:B0:1578:U:H5"	26:BA:101:ARG:CD	2.19	0.73
22:B0:1698:A:H5"	22:B0:1699:G:OP1	1.88	0.73
23:B9:52:A:O2'	23:B9:53:A:N7	2.22	0.73
29:BD:8:LYS:HD2	29:BD:8:LYS:O	1.88	0.73
40:BO:47:ARG:HA	40:BO:47:ARG:NE	2.02	0.73
41:BQ:76:VAL:HG12	41:BQ:103:ILE:HA	1.70	0.73
49:B1:24:LYS:HE3	49:B1:24:LYS:H	1.52	0.73
1:AA:1354:U:H2'	1:AA:1355:G:C8	2.24	0.73
2:AU:74:C:H2'	22:B0:2556:C:C4'	2.18	0.73
2:AV:55:U:O2	2:AV:55:U:H2'	1.88	0.73
10:AI:112:ARG:HD2	10:AI:114:LYS:HD2	1.71	0.73
10:AI:117:LEU:HA	10:AI:124:PRO:HD3	1.70	0.73
21:AT:23:ARG:HB3	21:AT:60:GLN:HE21	1.54	0.73
22:B0:27:G:H1'	22:B0:513:A:H62	1.54	0.73
22:B0:589:U:H5"	28:BC:88:ARG:CG	2.18	0.73
22:B0:1114:C:H2'	22:B0:1115:G:H8	1.54	0.73
22:B0:2115:G:H5"	22:B0:2168:G:O2'	1.87	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BC:30:GLN:HB3	35:BJ:18:ARG:CA	2.17	0.73
45:BU:54:ARG:NH1	45:BU:55:ASP:H	1.86	0.73
1:AA:1196:A:H4'	1:AA:1197:A:OP2	1.87	0.73
12:AK:14:GLN:HA	12:AK:76:TYR:O	1.88	0.73
22:B0:433:C:H2'	22:B0:434:U:O4'	1.89	0.73
22:B0:1423:A:C3'	26:BA:58:LYS:N	2.51	0.73
22:B0:1491:A:C5'	26:BA:161:VAL:HG13	2.19	0.73
22:B0:1496:A:H2'	26:BA:63:ILE:CB	2.18	0.73
22:B0:2677:G:H4'	27:BB:160:LYS:HB3	1.68	0.73
27:BB:13:ARG:HB2	27:BB:23:PRO:HA	1.69	0.73
33:BH:96:ARG:CB	33:BH:97:PRO:CA	2.66	0.73
39:BN:71:ARG:HE	39:BN:71:ARG:N	1.87	0.73
39:BN:83:ILE:CD1	39:BN:84:SER:H	2.02	0.73
1:AA:1029:U:H2'	1:AA:1030:U:C6	2.23	0.73
6:AE:87:VAL:HG12	6:AE:92:ARG:HG3	1.70	0.73
10:AI:46:VAL:HA	10:AI:49:GLN:HG2	1.71	0.73
10:AI:116:GLY:N	11:AJ:60:ASP:HB3	2.03	0.73
22:B0:668:A:H2'	22:B0:670:A:N6	2.04	0.73
24:B2:41:VAL:O	24:B2:174:ILE:HG22	1.88	0.73
25:B3:59:LYS:HD2	25:B3:118:GLU:HB3	1.71	0.73
26:BA:152:GLN:CG	26:BA:153:LEU:HD22	2.19	0.73
39:BN:25:VAL:HG13	39:BN:88:ARG:HE	1.54	0.73
39:BN:72:VAL:HG22	39:BN:73:PHE:H	1.53	0.73
1:AA:499:A:H4'	1:AA:500:G:OP1	1.88	0.73
2:AV:18:G:O2'	2:AV:57:G:N2	2.20	0.73
20:AS:12:LEU:HB2	20:AS:16:LYS:HE3	1.71	0.73
22:B0:1008:A:H5"	22:B0:1009:A:OP1	1.88	0.73
22:B0:1268:A:H1'	22:B0:2013:A:N6	2.04	0.73
22:B0:1423:A:H3'	26:BA:57:HIS:HA	1.70	0.73
22:B0:1579:A:C6	26:BA:68:ARG:HG2	2.23	0.73
22:B0:2108:A:H4'	22:B0:2147:A:OP1	1.88	0.73
22:B0:2899:A:OP2	33:BH:138:GLN:O	2.07	0.73
24:B2:29:LEU:HD21	24:B2:41:VAL:HG11	1.70	0.73
25:B5:35:ALA:O	25:B5:38:VAL:HG12	1.88	0.73
28:BC:58:LYS:HB3	28:BC:62:GLN:NE2	2.04	0.73
2:AU:18:G:O2'	2:AU:57:G:N2	2.21	0.72
22:B0:582:A:H5"	40:BO:10:ARG:HD2	1.69	0.72
22:B0:611:C:O5'	22:B0:611:C:H6	1.72	0.72
22:B0:1485:C:C5'	26:BA:87:SER:HB2	2.17	0.72
22:B0:1830:C:H42	22:B0:1975:G:H22	1.36	0.72
22:B0:2286:G:OP2	49:B1:26:LYS:HE2	1.89	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2832:U:O2'	22:B0:2833:U:OP2	2.07	0.72
25:B3:51:LYS:HG3	25:B5:45:VAL:HG11	1.70	0.72
26:BA:145:MET:HB3	26:BA:146:LYS:NZ	2.03	0.72
28:BC:29:HIS:H	35:BJ:17:LYS:CB	2.02	0.72
28:BC:114:ARG:HB3	28:BC:117:ARG:HG3	1.71	0.72
40:BO:111:LYS:HE2	40:BO:111:LYS:O	1.88	0.72
1:AA:1455:G:H2'	1:AA:1459:G:H8	1.54	0.72
22:B0:1082:U:C3'	25:B3:83:ALA:H	2.01	0.72
26:BA:140:VAL:O	26:BA:160:TYR:HA	1.87	0.72
39:BN:87:ARG:HD3	39:BN:87:ARG:H	1.54	0.72
1:AA:992:U:H4'	1:AA:993:G:O5'	1.89	0.72
2:AU:16:U:O2'	2:AU:17:U:H5"	1.89	0.72
22:B0:772:C:H5"	22:B0:1356:G:H5'	1.69	0.72
22:B0:791:C:O2'	22:B0:792:A:H5"	1.88	0.72
22:B0:1082:U:O4'	25:B3:79:GLY:O	2.07	0.72
22:B0:2006:C:H3'	22:B0:2006:C:C6	2.24	0.72
22:B0:2364:C:H2'	22:B0:2365:G:H8	1.53	0.72
22:B0:2711:A:H2'	22:B0:2714:G:H4'	1.72	0.72
22:B0:2780:G:O5'	33:BH:116:ARG:HA	1.89	0.72
28:BC:30:GLN:CB	35:BJ:18:ARG:HE	2.01	0.72
39:BN:30:TRP:NE1	39:BN:82:SER:HA	2.04	0.72
40:BO:94:LEU:HD13	40:BO:95:ALA:H	1.52	0.72
1:AA:1278:G:H5"	1:AA:1279:G:H5'	1.70	0.72
12:AK:24:ALA:HA	12:AK:29:THR:HG22	1.70	0.72
22:B0:433:C:OP2	28:BC:69:ARG:HD2	1.88	0.72
22:B0:1487:G:O4'	26:BA:196:ASN:CA	2.38	0.72
22:B0:1796:U:H3	22:B0:1823:G:H1	1.37	0.72
22:B0:1996:C:H1'	22:B0:1997:C:O4'	1.90	0.72
25:B5:59:LYS:HE2	25:B5:118:GLU:HB2	1.69	0.72
33:BH:41:LYS:HD3	33:BH:43:GLU:HB2	1.72	0.72
37:BL:90:ARG:NH1	37:BL:90:ARG:HA	2.05	0.72
46:BW:47:ARG:HG3	46:BW:48:ARG:HD2	1.72	0.72
1:AA:372:C:H4'	1:AA:373:A:C8	2.25	0.72
22:B0:276:U:H2'	22:B0:362:A:H2'	1.69	0.72
22:B0:945:A:O2'	22:B0:946:C:OP1	2.07	0.72
22:B0:1055:G:H2'	25:B3:64:ASN:CB	2.19	0.72
22:B0:1083:U:H5'	25:B3:86:LEU:HD23	1.72	0.72
22:B0:1416:G:O2'	22:B0:1587:A:N3	2.22	0.72
22:B0:1607:C:O2	22:B0:1607:C:H2'	1.89	0.72
27:BB:13:ARG:NH2	27:BB:15:PHE:H	1.86	0.72
33:BH:20:ALA:HA	33:BH:23:LYS:NZ	2.04	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BU:77:LYS:HB3	45:BU:77:LYS:NZ	2.05	0.72
46:BW:25:GLN:HB2	46:BW:46:VAL:HG11	1.72	0.72
1:AA:840:C:H5”	1:AA:841:U:OP1	1.90	0.72
1:AA:975:A:C4’	1:AA:976:G:H5”	2.17	0.72
1:AA:1399:C:H1’	1:AA:1401:G:C8	2.25	0.72
2:AU:74:C:H2’	22:B0:2556:C:H4’	1.70	0.72
3:AB:216:VAL:O	3:AB:220:VAL:HG23	1.89	0.72
5:AD:167:PRO:HG2	5:AD:170:LEU:HB2	1.69	0.72
22:B0:120:U:O2’	22:B0:121:G:OP2	2.06	0.72
22:B0:589:U:O5’	28:BC:86:ALA:C	2.27	0.72
22:B0:918:A:H62	22:B0:2268:A:H62	1.38	0.72
22:B0:1082:U:N1	25:B3:80:LEU:HA	2.04	0.72
22:B0:1423:A:C5’	26:BA:56:GLY:O	2.36	0.72
22:B0:1479:G:O4’	22:B0:1559:U:OP2	2.06	0.72
22:B0:2001:C:H2’	22:B0:2002:G:C8	2.25	0.72
22:B0:2364:C:H2’	22:B0:2365:G:C8	2.23	0.72
29:BD:48:LEU:HA	29:BD:51:ASN:ND2	2.04	0.72
29:BD:140:ILE:HD13	29:BD:141:ASP:N	2.05	0.72
1:AA:188:C:C2	1:AA:189:A:H1’	2.24	0.72
1:AA:1065:U:O2’	1:AA:1066:C:OP2	2.08	0.72
1:AA:1406:U:H2’	1:AA:1407:C:O4’	1.89	0.72
20:AS:20:LYS:O	20:AS:23:GLU:HG3	1.89	0.72
22:B0:1082:U:O4’	25:B3:79:GLY:C	2.28	0.72
22:B0:1321:A:H61	22:B0:1334:G:H1’	1.54	0.72
22:B0:2352:A:H2	22:B0:2365:G:H22	1.36	0.72
25:B5:46:GLU:HA	25:B5:49:GLU:HG3	1.69	0.72
26:BA:241:LYS:HG2	26:BA:242:HIS:H	1.52	0.72
45:BU:46:ALA:HB1	45:BU:76:ARG:H	1.53	0.72
16:AO:11:VAL:HG22	16:AO:30:LEU:HD11	1.71	0.72
22:B0:589:U:O5’	28:BC:87:ALA:N	2.23	0.72
22:B0:747:U:N3	22:B0:2014:A:H1’	2.05	0.72
22:B0:1060:U:H4’	22:B0:1061:U:O5’	1.88	0.72
22:B0:1201:U:C3’	35:BJ:14:LYS:HE3	2.20	0.72
22:B0:1202:G:C1’	35:BJ:14:LYS:HB2	2.20	0.72
22:B0:1668:A:H5”	22:B0:1669:A:OP1	1.89	0.72
29:BD:16:MET:HA	29:BD:20:ASN:ND2	2.05	0.72
40:BO:27:ARG:HA	40:BO:33:VAL:HG23	1.70	0.72
1:AA:173:U:C5’	1:AA:197:A:H1’	2.20	0.72
1:AA:871:U:H5”	1:AA:872:A:OP2	1.90	0.72
1:AA:1320:C:C5	20:AS:4:LEU:HB2	2.24	0.72
12:AK:58:THR:HG23	12:AK:61:ALA:H	1.54	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
18:AQ:45:VAL:HG11	18:AQ:60:ILE:HD12	1.71	0.72
22:B0:249:C:OP2	22:B0:2394:C:H4'	1.89	0.72
22:B0:639:U:H2'	22:B0:640:C:C6	2.25	0.72
22:B0:1479:G:C4'	22:B0:1559:U:OP2	2.38	0.72
22:B0:1578:U:H5"	26:BA:101:ARG:NE	2.04	0.72
22:B0:1932:A:H2	22:B0:1969:A:H62	1.35	0.72
22:B0:2502:G:O2'	22:B0:2503:A:OP2	2.08	0.72
24:B2:41:VAL:HA	24:B2:215:THR:CG2	2.19	0.72
28:BC:24:ASN:C	28:BC:26:ALA:H	1.91	0.72
30:BE:148:ARG:HH21	30:BE:168:VAL:HG12	1.54	0.72
39:BN:23:ASP:HB3	39:BN:96:LEU:HD12	1.70	0.72
44:BT:29:ILE:HD13	44:BT:30:ILE:N	2.04	0.72
48:BZ:36:LYS:HA	48:BZ:42:ILE:CD1	2.20	0.72
49:B1:10:LEU:HD12	49:B1:51:ALA:HA	1.71	0.72
22:B0:183:C:P	28:BC:67:ARG:HG3	2.30	0.72
22:B0:1126:A:H4'	22:B0:1127:A:H5"	1.71	0.72
22:B0:1250:G:H4'	40:BO:8:ILE:CD1	2.19	0.72
22:B0:1512:C:H2'	22:B0:1513:C:H5"	1.70	0.72
22:B0:2263:C:H6	45:BU:10:ARG:CA	1.98	0.72
22:B0:2319:G:H5"	22:B0:2320:U:OP1	1.90	0.72
29:BD:63:LYS:HD3	29:BD:63:LYS:N	2.04	0.72
31:BF:61:VAL:HG23	31:BF:62:LEU:HD12	1.70	0.72
22:B0:1716:U:H3	22:B0:1743:G:H1	1.37	0.71
22:B0:1758:U:H4'	22:B0:1759:A:OP1	1.90	0.71
22:B0:2249:U:H1'	22:B0:2275:C:N4	2.05	0.71
25:B5:55:ASP:O	25:B5:119:VAL:HG13	1.90	0.71
28:BC:30:GLN:HB2	35:BJ:18:ARG:NE	2.03	0.71
45:BU:43:LYS:CE	45:BU:43:LYS:H	2.03	0.71
4:AC:110:LEU:HG	4:AC:143:LEU:HD23	1.72	0.71
22:B0:682:G:H21	22:B0:795:C:N4	1.87	0.71
22:B0:830:G:N2	22:B0:2446:G:H4'	2.04	0.71
25:B3:16:VAL:O	25:B3:20:VAL:HG23	1.90	0.71
25:B3:78:LEU:HB3	25:B3:82:GLU:CB	2.20	0.71
40:BO:9:ALA:HB1	40:BO:10:ARG:HH21	1.55	0.71
40:BO:30:VAL:HG12	40:BO:32:ARG:H	1.55	0.71
2:AV:16:U:O2'	2:AV:17:U:H5"	1.90	0.71
4:AC:27:GLU:HG3	4:AC:31:ASN:OD1	1.89	0.71
20:AS:4:LEU:HD11	20:AS:8:PRO:HG3	1.71	0.71
22:B0:226:A:HO2'	22:B0:227:A:P	2.13	0.71
22:B0:1083:U:C4'	25:B3:86:LEU:H	2.04	0.71
22:B0:1085:A:H4'	22:B0:1104:C:O2'	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1458:C:C2’	22:B0:1459:U:H5’	2.19	0.71
22:B0:1486:G:HO2’	26:BA:196:ASN:HB3	1.54	0.71
22:B0:1499:U:O4	26:BA:155:ARG:HB3	1.89	0.71
22:B0:2346:A:H5’	22:B0:2381:A:O2’	1.91	0.71
39:BN:47:ILE:HG23	39:BN:63:ILE:HA	1.72	0.71
47:BX:43:ILE:H	47:BX:43:ILE:HD12	1.55	0.71
1:AA:1533:C:H2’	1:AA:1533:C:O2	1.90	0.71
4:AC:6:PRO:O	4:AC:10:ARG:HG2	1.89	0.71
22:B0:477:A:N6	22:B0:500:G:H4’	2.05	0.71
22:B0:1083:U:O2	25:B3:65:LYS:HG2	1.89	0.71
22:B0:1496:A:C6	22:B0:1498:C:N4	2.58	0.71
25:B5:69:ILE:HG22	25:B5:73:ARG:HD2	1.73	0.71
26:BA:97:ASP:CG	26:BA:98:GLY:N	2.43	0.71
26:BA:161:VAL:HG12	26:BA:161:VAL:O	1.87	0.71
35:BJ:63:LYS:HD2	35:BJ:63:LYS:N	2.05	0.71
40:BO:30:VAL:HB	40:BO:33:VAL:CG2	2.20	0.71
41:BQ:51:LEU:HD23	41:BQ:105:VAL:HG11	1.71	0.71
22:B0:1060:U:C2	22:B0:1062:G:H5’	2.24	0.71
22:B0:1408:G:N2	22:B0:1594:U:H3	1.88	0.71
22:B0:1819:A:H1’	22:B0:1821:A:C5	2.25	0.71
23:B9:32:U:OP1	29:BD:8:LYS:HD3	1.90	0.71
26:BA:131:MET:HE1	26:BA:188:ARG:N	2.05	0.71
39:BN:20:ARG:CG	39:BN:25:VAL:HG21	2.20	0.71
42:BR:92:ASN:C	42:BR:93:LEU:HD13	2.11	0.71
43:BS:11:ILE:HD12	43:BS:21:ARG:HG2	1.72	0.71
1:AA:718:A:O4’	12:AK:119:GLY:N	2.22	0.71
19:AR:35:SER:HA	19:AR:71:ASP:HB2	1.72	0.71
22:B0:1083:U:C6	25:B3:84:LYS:C	2.63	0.71
22:B0:1129:A:O2’	22:B0:2516:A:H5’	1.90	0.71
22:B0:1322:A:H2	22:B0:1334:G:H5’	1.55	0.71
22:B0:1499:U:H2’	22:B0:1500:A:C8	2.25	0.71
22:B0:1815:A:H4’	22:B0:1816:C:C5’	2.21	0.71
22:B0:2051:A:H3’	22:B0:2614:A:N6	2.05	0.71
38:BM:56:LYS:HE2	38:BM:73:ALA:HB1	1.73	0.71
39:BN:43:GLU:HG3	39:BN:44:GLY:H	1.55	0.71
39:BN:55:HIS:CG	39:BN:56:SER:H	2.09	0.71
40:BO:27:ARG:HA	40:BO:33:VAL:CG2	2.21	0.71
1:AA:915:A:C2’	1:AA:916:U:H5’	2.19	0.71
22:B0:660:C:H5”	28:BC:96:VAL:HG23	1.71	0.71
22:B0:891:G:H3’	22:B0:891:G:N3	2.04	0.71
22:B0:1494:A:C8	26:BA:131:MET:HG3	2.26	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:B2:29:LEU:HD11	24:B2:213:ILE:HG12	1.71	0.71
25:B3:89:SER:HB2	25:B3:91:PRO:HD3	1.72	0.71
27:BB:33:ARG:HB2	27:BB:81:GLU:HB2	1.72	0.71
33:BH:111:LYS:HA	33:BH:111:LYS:HZ3	1.55	0.71
40:BO:58:GLN:NE2	40:BO:59:LEU:HB2	2.05	0.71
41:BQ:69:LEU:O	41:BQ:69:LEU:HD12	1.90	0.71
1:AA:575:G:H4'	1:AA:576:C:O5'	1.88	0.71
3:AB:46:VAL:HB	3:AB:47:PRO:HD3	1.71	0.71
9:AH:6:ILE:HD12	9:AH:6:ILE:H	1.53	0.71
22:B0:1424:G:OP2	26:BA:56:GLY:O	2.09	0.71
22:B0:1495:A:N1	26:BA:188:ARG:HB2	2.06	0.71
22:B0:1500:A:N6	26:BA:156:SER:N	2.38	0.71
22:B0:1828:G:H4'	22:B0:1829:A:C5'	2.20	0.71
22:B0:2117:A:H1'	22:B0:2124:G:N2	2.06	0.71
22:B0:2261:C:H2'	22:B0:2262:U:C6	2.26	0.71
22:B0:2543:G:H2'	22:B0:2544:G:C8	2.26	0.71
22:B0:2624:G:H8	22:B0:2624:G:O5'	1.74	0.71
24:B2:30:LYS:C	24:B2:32:LEU:H	1.94	0.71
36:BK:112:LEU:H	36:BK:112:LEU:HD13	1.55	0.71
1:AA:1321:U:O4	20:AS:5:LYS:HG3	1.90	0.71
6:AE:133:ILE:O	6:AE:137:ARG:HD3	1.90	0.71
22:B0:1478:G:H21	22:B0:1558:C:H4'	1.56	0.71
22:B0:1578:U:C1'	26:BA:64:VAL:HB	2.21	0.71
25:B5:30:PHE:HB2	25:B5:35:ALA:HB2	1.73	0.71
32:BG:18:ASN:CG	32:BG:19:PRO:HA	2.11	0.71
35:BJ:89:VAL:HA	35:BJ:120:VAL:HG23	1.72	0.71
39:BN:91:VAL:CG1	39:BN:92:ARG:H	2.01	0.71
40:BO:32:ARG:NE	40:BO:32:ARG:HA	2.05	0.71
43:BS:71:ILE:HG22	43:BS:72:PHE:H	1.56	0.71
45:BU:35:ILE:HG21	45:BU:70:VAL:HG21	1.73	0.71
1:AA:718:A:H5"	12:AK:118:ASN:CA	2.18	0.71
1:AA:974:A:H5'	1:AA:975:A:OP1	1.90	0.71
22:B0:1084:A:O5'	25:B3:89:SER:N	2.24	0.71
22:B0:1299:G:N2	22:B0:1639:C:H41	1.86	0.71
22:B0:1487:G:H2'	26:BA:158:GLY:HA3	1.71	0.71
26:BA:187:CYS:C	26:BA:188:ARG:HG2	2.11	0.71
32:BG:108:ILE:HD13	32:BG:108:ILE:H	1.54	0.71
35:BJ:77:ILE:H	35:BJ:77:ILE:HD12	1.55	0.71
1:AA:1363:A:H4'	1:AA:1364:U:O5'	1.90	0.70
4:AC:24:ASN:HD22	4:AC:27:GLU:HB3	1.54	0.70
7:AF:8:PHE:HB3	7:AF:60:VAL:HG21	1.73	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1417:U:H2'	26:BA:98:GLY:CA	2.21	0.70
22:B0:1495:A:OP2	26:BA:140:VAL:HG13	1.89	0.70
22:B0:1579:A:H2'	22:B0:1580:A:H5'	1.71	0.70
22:B0:1635:A:O2'	22:B0:1636:U:OP1	2.09	0.70
22:B0:2078:C:O4'	22:B0:2434:A:H4'	1.91	0.70
22:B0:2154:A:H4'	22:B0:2155:U:OP1	1.89	0.70
25:B3:20:VAL:O	25:B3:23:ILE:HG13	1.90	0.70
27:BB:122:VAL:HG13	27:BB:127:PHE:O	1.90	0.70
37:BL:23:ASN:O	37:BL:24:MET:HB2	1.91	0.70
42:BR:92:ASN:O	42:BR:93:LEU:HD22	1.90	0.70
1:AA:1503:A:C2'	1:AA:1504:G:H5'	2.22	0.70
2:AU:74:C:C6	22:B0:2556:C:H1'	2.26	0.70
22:B0:527:C:H5"	22:B0:528:A:OP1	1.90	0.70
22:B0:1057:A:H1'	25:B3:66:VAL:HB	1.71	0.70
22:B0:1082:U:C6	25:B3:80:LEU:HA	2.25	0.70
22:B0:1082:U:C5	25:B3:84:LYS:HD3	2.26	0.70
22:B0:2115:G:H2'	22:B0:2125:G:H21	1.54	0.70
22:B0:2328:A:H2'	22:B0:2329:U:C6	2.26	0.70
22:B0:2328:A:OP1	45:BU:3:LYS:HB2	1.90	0.70
26:BA:140:VAL:HA	26:BA:190:THR:O	1.91	0.70
27:BB:89:GLU:HG3	27:BB:90:PHE:N	2.06	0.70
1:AA:965:U:O2'	1:AA:966:G:C5'	2.39	0.70
22:B0:182:A:H2'	28:BC:67:ARG:NH1	2.06	0.70
22:B0:209:C:OP2	28:BC:61:ARG:HG2	1.91	0.70
22:B0:1758:U:N3	22:B0:2695:U:H4'	2.05	0.70
22:B0:2154:A:N3	22:B0:2154:A:H2'	2.06	0.70
22:B0:2407:A:H2'	22:B0:2408:U:C6	2.27	0.70
25:B3:29:LYS:CE	25:B5:111:GLU:HB2	2.15	0.70
25:B3:78:LEU:HB3	25:B3:82:GLU:HB3	1.73	0.70
26:BA:173:LEU:O	26:BA:181:ARG:N	2.24	0.70
28:BC:89:PRO:HD2	28:BC:95:LYS:HG2	1.73	0.70
38:BM:79:ALA:HB1	38:BM:115:LEU:HD23	1.73	0.70
41:BQ:73:LYS:HD2	41:BQ:75:PHE:HZ	1.56	0.70
1:AA:718:A:H3'	12:AK:118:ASN:HA	1.73	0.70
11:AJ:52:LEU:HG	11:AJ:62:ARG:CD	2.20	0.70
22:B0:1495:A:N3	26:BA:65:ASP:CB	2.51	0.70
26:BA:80:LEU:HD21	26:BA:89:ASN:HB2	1.73	0.70
28:BC:50:ALA:HB3	28:BC:73:ILE:HD11	1.73	0.70
28:BC:96:VAL:HG21	35:BJ:19:LEU:HD21	1.71	0.70
1:AA:839:U:O2	1:AA:839:U:H2'	1.92	0.70
4:AC:112:ALA:CB	4:AC:184:ASN:HD22	2.04	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AI:119:LYS:HD2	10:AI:119:LYS:N	2.07	0.70
22:B0:2139:U:O2	22:B0:2139:U:H2'	1.89	0.70
23:B9:15:A:H5"	23:B9:16:G:OP2	1.91	0.70
36:BK:125:PRO:O	36:BK:126:ILE:HB	1.91	0.70
39:BN:25:VAL:HG13	39:BN:88:ARG:NE	2.07	0.70
42:BR:68:LYS:HD3	42:BR:69:ARG:H	1.55	0.70
3:AB:10:LYS:HE2	3:AB:211:LEU:HD21	1.74	0.70
5:AD:56:GLU:O	5:AD:60:VAL:HG23	1.91	0.70
22:B0:27:G:H22	22:B0:512:G:H2'	1.55	0.70
22:B0:241:A:O2'	22:B0:242:G:H1'	1.91	0.70
22:B0:1418:G:C8	26:BA:99:GLU:HA	2.25	0.70
22:B0:1421:G:H1'	26:BA:146:LYS:HB2	1.71	0.70
22:B0:1424:G:H4'	26:BA:58:LYS:CB	2.19	0.70
22:B0:1491:A:N1	26:BA:164:VAL:HB	2.07	0.70
22:B0:1834:U:H1'	22:B0:1972:G:N2	2.06	0.70
25:B3:91:PRO:N	25:B5:40:VAL:HG23	2.07	0.70
26:BA:153:LEU:O	26:BA:154:ALA:CB	2.40	0.70
29:BD:105:ILE:HD13	29:BD:138:PRO:HG3	1.73	0.70
30:BE:101:VAL:HG13	30:BE:113:ASP:HB3	1.74	0.70
32:BG:92:PRO:O	32:BG:93:ASN:HB3	1.90	0.70
34:BI:48:PRO:HG3	34:BI:54:LYS:HE2	1.73	0.70
35:BJ:96:LYS:HB3	35:BJ:101:ILE:HG23	1.73	0.70
46:BW:40:SER:HA	46:BW:43:LEU:HD12	1.73	0.70
1:AA:1150:A:O2'	11:AJ:43:PRO:HA	1.91	0.70
4:AC:63:ILE:HD13	4:AC:64:ARG:N	2.06	0.70
22:B0:1421:G:O6	26:BA:148:GLY:C	2.29	0.70
22:B0:1602:U:H5"	22:B0:1603:A:OP2	1.92	0.70
22:B0:2678:C:N4	22:B0:2729:G:H22	1.90	0.70
27:BB:5:VAL:HG22	27:BB:202:ILE:HA	1.74	0.70
28:BC:27:LEU:HA	35:BJ:17:LYS:HG2	1.72	0.70
49:B1:34:GLU:C	49:B1:35:LEU:HD22	2.11	0.70
1:AA:559:A:O2'	1:AA:560:A:OP2	2.09	0.70
1:AA:718:A:N3	12:AK:117:HIS:N	2.37	0.70
1:AA:718:A:H3'	12:AK:117:HIS:C	2.11	0.70
1:AA:1318:A:O2'	20:AS:8:PRO:HB2	1.91	0.70
4:AC:152:VAL:HG13	4:AC:195:ILE:HD11	1.73	0.70
22:B0:1082:U:C3'	25:B3:84:LYS:H	2.04	0.70
22:B0:1421:G:N2	26:BA:145:MET:H	1.90	0.70
22:B0:1496:A:N3	26:BA:63:ILE:O	2.25	0.70
22:B0:1500:A:N6	26:BA:155:ARG:H	1.89	0.70
22:B0:2289:G:N2	22:B0:2344:U:H1'	2.06	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2885:G:H2'	22:B0:2886:A:O4'	1.91	0.70
28:BC:108:ILE:CD1	28:BC:180:LEU:HB3	2.21	0.70
35:BJ:105:ILE:HG13	35:BJ:106:GLU:H	1.56	0.70
40:BO:27:ARG:HH21	40:BO:33:VAL:HG11	1.55	0.70
45:BU:58:LEU:O	45:BU:59:PHE:HB3	1.91	0.70
4:AC:137:VAL:HA	4:AC:148:ILE:HD13	1.73	0.70
7:AF:8:PHE:HB3	7:AF:60:VAL:CG2	2.21	0.70
19:AR:18:GLN:HB3	19:AR:20:ILE:HG22	1.72	0.70
22:B0:532:A:H5'	22:B0:561:G:N2	2.07	0.70
22:B0:1082:U:C3'	25:B3:82:GLU:N	2.54	0.70
22:B0:1423:A:C2'	26:BA:58:LYS:N	2.55	0.70
22:B0:1478:G:H2'	22:B0:1558:C:HO2'	1.56	0.70
22:B0:2144:G:H3'	22:B0:2145:C:H5"	1.74	0.70
22:B0:2677:G:H2'	27:BB:125:TRP:CB	2.21	0.70
22:B0:2678:C:O2'	27:BB:165:MET:HG2	1.91	0.70
32:BG:18:ASN:ND2	32:BG:19:PRO:HA	2.07	0.70
45:BU:54:ARG:HG3	45:BU:55:ASP:N	2.06	0.70
22:B0:1820:U:H5"	22:B0:1821:A:OP2	1.91	0.70
22:B0:2351:G:H22	22:B0:2366:A:H2	1.40	0.70
22:B0:2853:C:H2'	22:B0:2854:G:C8	2.26	0.70
24:B2:177:VAL:HG13	24:B2:178:ASP:H	1.56	0.70
25:B3:91:PRO:O	25:B3:93:ALA:N	2.24	0.70
35:BJ:56:PRO:HB2	35:BJ:59:ARG:HB3	1.74	0.70
1:AA:718:A:H8	12:AK:119:GLY:CA	2.05	0.69
1:AA:1367:C:H4'	11:AJ:62:ARG:HB2	1.74	0.69
22:B0:405:U:H5"	22:B0:406:G:OP2	1.92	0.69
22:B0:589:U:C3'	28:BC:88:ARG:H	2.04	0.69
22:B0:1210:G:H1'	22:B0:1212:G:N3	2.06	0.69
22:B0:1250:G:OP2	35:BJ:33:ARG:HD2	1.91	0.69
22:B0:1424:G:H4'	26:BA:58:LYS:CD	2.21	0.69
22:B0:2250:G:HO2'	22:B0:2251:G:P	2.15	0.69
22:B0:2690:U:H5	22:B0:2719:G:H21	1.38	0.69
22:B0:2848:G:H1'	22:B0:2868:A:N6	2.06	0.69
26:BA:140:VAL:HG23	26:BA:162:GLN:HA	1.73	0.69
28:BC:118:LEU:HB3	28:BC:186:VAL:O	1.92	0.69
40:BO:97:ILE:HD12	40:BO:98:ALA:N	2.06	0.69
1:AA:1064:G:H4'	1:AA:1065:U:H5'	1.74	0.69
3:AB:65:LYS:HB2	3:AB:89:PHE:HE1	1.57	0.69
22:B0:1416:G:H1	26:BA:95:TYR:N	1.85	0.69
22:B0:1417:U:OP1	22:B0:1588:A:N3	2.25	0.69
22:B0:1579:A:O5'	26:BA:65:ASP:HA	1.91	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BG:27:LEU:O	32:BG:32:VAL:HG13	1.92	0.69
1:AA:129:A:H2	1:AA:232:G:H1	1.40	0.69
2:AV:16:U:H4'	2:AV:18:G:OP2	1.92	0.69
11:AJ:52:LEU:HA	11:AJ:62:ARG:HA	1.73	0.69
22:B0:1082:U:C3'	25:B3:81:LYS:H	2.04	0.69
22:B0:1272:A:O2'	22:B0:1273:U:H5"	1.92	0.69
22:B0:1479:G:O5'	22:B0:1558:C:C3'	2.41	0.69
22:B0:1495:A:N6	22:B0:1496:A:C2	2.60	0.69
22:B0:1495:A:C6	26:BA:188:ARG:HB2	2.28	0.69
22:B0:1599:U:OP1	42:BR:40:LYS:HE2	1.93	0.69
22:B0:1608:A:O2'	22:B0:1609:A:OP2	2.05	0.69
22:B0:1990:C:H2'	22:B0:1991:U:C6	2.26	0.69
22:B0:2623:G:O2'	22:B0:2825:G:O6	2.10	0.69
23:B9:84:G:C2'	23:B9:85:G:H5"	2.18	0.69
39:BN:96:LEU:O	39:BN:97:TYR:HB3	1.91	0.69
1:AA:176:C:H2'	1:AA:177:G:C8	2.23	0.69
1:AA:933:G:N2	10:AI:129:ARG:NH2	2.40	0.69
1:AA:1344:C:OP1	10:AI:124:PRO:HA	1.92	0.69
1:AA:1368:A:OP1	10:AI:112:ARG:HD3	1.93	0.69
5:AD:53:GLN:HB3	5:AD:202:LEU:HB2	1.73	0.69
9:AH:9:MET:O	9:AH:13:ILE:HG12	1.92	0.69
22:B0:1420:U:N3	26:BA:148:GLY:HA3	2.08	0.69
22:B0:1491:A:C4	26:BA:173:LEU:HA	2.28	0.69
24:B2:35:ALA:O	24:B2:36:LYS:HD3	1.92	0.69
26:BA:211:ARG:HA	26:BA:211:ARG:HE	1.57	0.69
27:BB:15:PHE:HD1	27:BB:21:SER:HB3	1.57	0.69
28:BC:5:LEU:HB2	28:BC:14:VAL:HB	1.74	0.69
39:BN:34:GLY:HA2	39:BN:40:GLN:HE21	1.55	0.69
46:BW:31:GLN:HA	46:BW:38:GLN:NE2	2.06	0.69
1:AA:1528:U:H5"	1:AA:1529:G:OP1	1.92	0.69
16:AO:13:GLU:HG3	16:AO:14:PHE:CD1	2.28	0.69
22:B0:1493:A:OP1	26:BA:144:GLU:O	2.10	0.69
22:B0:2779:U:H1'	33:BH:116:ARG:HB2	1.72	0.69
25:B3:28:GLU:HB2	25:B5:104:GLU:HG3	1.75	0.69
37:BL:99:LYS:HG3	37:BL:100:CYS:N	2.08	0.69
39:BN:86:LYS:HG3	39:BN:87:ARG:H	1.56	0.69
40:BO:18:LYS:O	40:BO:19:GLN:HB3	1.92	0.69
1:AA:553:A:H1'	13:AL:27:PRO:HG3	1.72	0.69
1:AA:719:C:O5'	12:AK:117:HIS:O	2.11	0.69
1:AA:1029:U:H2'	1:AA:1030:U:H5	1.57	0.69
5:AD:100:VAL:O	5:AD:104:MET:HG3	1.93	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
7:AF:40:GLU:HB2	7:AF:61:LEU:HB2	1.73	0.69
9:AH:35:ILE:O	9:AH:38:VAL:HG12	1.91	0.69
22:B0:476:G:H1'	22:B0:480:A:N6	2.07	0.69
22:B0:1488:G:C8	26:BA:159:THR:N	2.60	0.69
22:B0:1498:C:H2'	22:B0:1499:U:C5'	2.22	0.69
22:B0:1500:A:H5'	26:BA:59:GLN:HB3	1.74	0.69
22:B0:1698:A:H1'	22:B0:1700:A:OP2	1.91	0.69
22:B0:2898:G:H5"	33:BH:138:GLN:C	2.13	0.69
24:B2:41:VAL:HG23	24:B2:177:VAL:HA	1.75	0.69
25:B3:56:VAL:HG13	25:B3:117:VAL:HG11	1.73	0.69
28:BC:99:LYS:HG3	28:BC:102:ARG:NH2	2.07	0.69
35:BJ:41:ARG:CZ	35:BJ:41:ARG:HA	2.21	0.69
36:BK:86:LYS:HE2	36:BK:86:LYS:HA	1.73	0.69
40:BO:14:LYS:HG2	40:BO:15:LYS:HG2	1.74	0.69
4:AC:112:ALA:HB1	4:AC:184:ASN:ND2	2.06	0.69
5:AD:33:ILE:HG12	5:AD:35:GLN:HG2	1.75	0.69
12:AK:106:ILE:HD11	12:AK:109:ILE:HG13	1.74	0.69
22:B0:1024:G:OP1	22:B0:1025:G:H4'	1.93	0.69
22:B0:1581:A:H5"	26:BA:71:ASP:C	2.13	0.69
22:B0:1655:A:N7	22:B0:2005:A:H2	1.90	0.69
22:B0:1763:G:H2'	22:B0:1764:C:H4'	1.74	0.69
22:B0:2035:G:O2'	22:B0:2036:C:OP1	2.10	0.69
22:B0:2131:U:C6	24:B2:33:ALA:CA	2.65	0.69
22:B0:2515:C:H41	27:BB:152:PRO:HD3	1.55	0.69
24:B2:170:ILE:HD13	24:B2:171:HIS:N	2.07	0.69
28:BC:67:ARG:NH2	28:BC:70:SER:N	2.41	0.69
35:BJ:80:SER:HB2	35:BJ:84:LYS:HE3	1.74	0.69
39:BN:72:VAL:HG13	39:BN:73:PHE:N	2.06	0.69
1:AA:547:A:H4'	1:AA:548:G:O5'	1.93	0.69
1:AA:560:A:O2'	1:AA:561:U:OP2	2.07	0.69
1:AA:719:C:O4'	12:AK:117:HIS:HA	1.93	0.69
1:AA:889:A:O2'	1:AA:890:G:H1'	1.92	0.69
4:AC:13:ILE:HD12	4:AC:14:VAL:N	2.07	0.69
11:AJ:56:HIS:CD2	11:AJ:57:VAL:HG23	2.27	0.69
17:AP:36:VAL:HG23	17:AP:56:ARG:HB3	1.75	0.69
22:B0:183:C:C6	28:BC:57:LYS:HD3	2.28	0.69
22:B0:481:G:OP2	43:BS:58:VAL:HG21	1.93	0.69
22:B0:598:U:H3	22:B0:659:G:H1	1.41	0.69
22:B0:636:G:H4'	22:B0:638:G:OP1	1.92	0.69
22:B0:846:U:O2'	22:B0:848:C:O4'	2.10	0.69
22:B0:1026:G:H2'	22:B0:1026:G:N3	2.08	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1081:U:H3'	25:B3:80:LEU:O	1.91	0.69
22:B0:1423:A:O2'	26:BA:59:GLN:HB2	1.93	0.69
22:B0:1484:U:OP1	26:BA:84:PRO:HB3	1.93	0.69
22:B0:1491:A:H2'	26:BA:173:LEU:HB3	1.75	0.69
22:B0:1646:C:H5"	22:B0:1647:U:OP1	1.91	0.69
22:B0:1680:U:H2'	22:B0:1681:G:O4'	1.92	0.69
22:B0:2179:C:C4	22:B0:2180:U:H1'	2.28	0.69
22:B0:2685:G:H1	22:B0:2724:U:H3	1.39	0.69
26:BA:96:LYS:HG3	26:BA:97:ASP:N	2.08	0.69
26:BA:131:MET:C	26:BA:133:ASN:H	1.96	0.69
29:BD:87:LYS:O	29:BD:87:LYS:HD3	1.93	0.69
30:BE:120:ILE:HD13	30:BE:120:ILE:H	1.57	0.69
43:BS:40:LEU:HD22	43:BS:51:LEU:O	1.93	0.69
47:BX:8:GLN:HA	47:BX:54:VAL:HG12	1.74	0.69
1:AA:1319:A:H1'	20:AS:6:LYS:HD2	1.74	0.69
5:AD:60:VAL:HG13	5:AD:194:ILE:HD13	1.74	0.69
9:AH:77:VAL:HG13	9:AH:84:ILE:HD11	1.75	0.69
22:B0:18:U:H2'	22:B0:19:A:C8	2.28	0.69
22:B0:279:A:H8	22:B0:279:A:O5'	1.75	0.69
22:B0:856:G:H4'	45:BU:54:ARG:HA	1.74	0.69
22:B0:954:G:H1	22:B0:963:U:H3	1.38	0.69
22:B0:1060:U:O2'	22:B0:1061:U:H5"	1.92	0.69
22:B0:1498:C:C6	26:BA:62:ARG:HA	2.28	0.69
22:B0:2175:C:H2'	22:B0:2176:A:O5'	1.93	0.69
22:B0:2443:C:H2'	22:B0:2444:G:C8	2.27	0.69
25:B3:57:ILE:O	25:B3:117:VAL:HG13	1.92	0.69
26:BA:131:MET:SD	26:BA:188:ARG:HA	2.33	0.69
28:BC:30:GLN:HB3	35:BJ:17:LYS:C	2.12	0.69
28:BC:117:ARG:HA	28:BC:185:LYS:NZ	2.08	0.69
29:BD:71:LYS:NZ	29:BD:81:GLY:H	1.91	0.69
33:BH:72:LYS:HZ1	33:BH:73:VAL:H	1.41	0.69
41:BQ:35:ILE:O	41:BQ:36:LEU:HB3	1.92	0.69
1:AA:717:U:O2'	12:AK:119:GLY:CA	2.41	0.69
2:AW:20:G:C3'	2:AW:21:A:H5"	2.22	0.69
21:AT:38:ILE:HG22	21:AT:85:LEU:HB2	1.75	0.69
22:B0:231:A:H2'	22:B0:232:G:O4'	1.92	0.69
22:B0:1083:U:O3'	25:B3:88:GLU:HB2	1.93	0.69
22:B0:1416:G:N2	26:BA:94:LEU:HD13	2.07	0.69
22:B0:1478:G:C2'	22:B0:1558:C:C2'	2.71	0.69
22:B0:1578:U:O2'	26:BA:65:ASP:C	2.31	0.69
22:B0:1578:U:O2	26:BA:67:LYS:HD3	1.93	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2067:G:H5”	22:B0:2068:U:OP2	1.93	0.69
22:B0:2271:G:P	45:BU:14:ASP:HB2	2.33	0.69
26:BA:143:VAL:HG23	26:BA:143:VAL:O	1.93	0.69
26:BA:220:ARG:HH22	26:BA:237:ARG:NH1	1.91	0.69
27:BB:177:VAL:HG13	27:BB:187:LEU:HD11	1.74	0.69
33:BH:72:LYS:HZ2	33:BH:72:LYS:CA	2.02	0.69
33:BH:97:PRO:HG2	33:BH:126:ALA:HB2	1.75	0.69
37:BL:28:LEU:HD23	37:BL:28:LEU:N	2.07	0.69
40:BO:50:ARG:NE	40:BO:54:ARG:HH22	1.91	0.69
40:BO:61:ILE:HD12	40:BO:61:ILE:O	1.92	0.69
1:AA:1256:A:H4’	1:AA:1257:A:H5’	1.75	0.68
10:AI:43:ALA:O	10:AI:46:VAL:HG12	1.91	0.68
10:AI:119:LYS:HZ2	10:AI:122:ARG:CZ	2.06	0.68
14:AM:63:VAL:O	14:AM:64:VAL:HG13	1.92	0.68
22:B0:221:A:H4’	22:B0:222:A:O5’	1.93	0.68
22:B0:588:U:H2’	28:BC:86:ALA:N	2.04	0.68
22:B0:632:A:H5’	35:BJ:68:SER:OG	1.92	0.68
22:B0:1418:G:N9	26:BA:99:GLU:HA	2.07	0.68
22:B0:1478:G:H2’	22:B0:1558:C:C2’	2.22	0.68
22:B0:1943:U:H5”	22:B0:1944:U:OP1	1.92	0.68
22:B0:2127:G:C8	22:B0:2166:U:H6	2.11	0.68
22:B0:2811:G:H2’	22:B0:2812:G:H8	1.58	0.68
32:BG:121:ILE:HD12	32:BG:122:GLU:N	2.08	0.68
33:BH:121:LYS:HE2	33:BH:121:LYS:HA	1.73	0.68
42:BR:25:GLU:HG3	42:BR:26:LYS:N	2.07	0.68
1:AA:1186:G:H5’	10:AI:121:ARG:HH11	1.57	0.68
16:AO:42:PHE:HE2	16:AO:55:LEU:HD13	1.56	0.68
22:B0:504:A:H5”	22:B0:505:A:OP2	1.92	0.68
22:B0:1272:A:H2’	22:B0:1272:A:N3	2.08	0.68
22:B0:2076:U:H5”	22:B0:2077:A:OP1	1.93	0.68
22:B0:2287:A:O2’	22:B0:2288:A:O5’	2.10	0.68
24:B2:54:SER:HA	24:B2:57:ASN:ND2	2.07	0.68
26:BA:68:ARG:NE	26:BA:70:LYS:N	2.37	0.68
30:BE:34:ARG:HE	30:BE:70:LEU:HD13	1.58	0.68
30:BE:136:ASP:OD1	30:BE:138:GLN:HG2	1.94	0.68
39:BN:26:GLU:N	39:BN:88:ARG:HG3	2.08	0.68
22:B0:531:C:H5’	22:B0:532:A:OP1	1.93	0.68
22:B0:859:G:H1’	22:B0:860:U:H5	1.58	0.68
22:B0:1082:U:H3’	25:B3:81:LYS:CA	2.23	0.68
22:B0:1084:A:C8	25:B3:88:GLU:CA	2.63	0.68
22:B0:1577:C:O2’	26:BA:62:ARG:O	2.10	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1830:C:N4	22:B0:1975:G:H22	1.91	0.68
22:B0:2873:A:H2'	22:B0:2873:A:N3	2.09	0.68
25:B5:107:LYS:HE2	25:B5:111:GLU:OE2	1.93	0.68
28:BC:134:LEU:HD13	28:BC:137:LYS:NZ	2.08	0.68
33:BH:13:ARG:HB3	33:BH:53:TYR:OH	1.94	0.68
38:BM:37:ALA:HB3	38:BM:78:VAL:HG21	1.75	0.68
39:BN:30:TRP:HZ3	39:BN:85:VAL:HB	1.58	0.68
40:BO:4:LYS:HE2	40:BO:5:ARG:H	1.58	0.68
40:BO:43:GLN:O	40:BO:45:ALA:N	2.23	0.68
42:BR:18:GLU:HA	42:BR:21:SER:OG	1.92	0.68
45:BU:40:ARG:HB2	45:BU:40:ARG:HH11	1.57	0.68
1:AA:978:A:N3	20:AS:6:LYS:HB3	2.07	0.68
1:AA:1382:C:H4'	8:AG:78:ARG:NH1	2.08	0.68
2:AV:54:U:H4'	45:BU:2:HIS:ND1	2.08	0.68
4:AC:50:SER:HB3	4:AC:114:LEU:HD22	1.74	0.68
11:AJ:52:LEU:CA	11:AJ:62:ARG:HG2	2.23	0.68
22:B0:479:A:H5"	22:B0:480:A:OP1	1.93	0.68
22:B0:480:A:H2'	43:BS:53:GLN:OE1	1.94	0.68
22:B0:1130:U:H3	22:B0:2025:C:H5"	1.58	0.68
22:B0:1201:U:C2'	35:BJ:14:LYS:HE3	2.22	0.68
22:B0:1490:C:C4'	26:BA:162:GLN:HB3	2.24	0.68
22:B0:2383:G:O2'	22:B0:2384:U:H5'	1.94	0.68
25:B3:16:VAL:HG21	25:B3:47:ALA:HB2	1.74	0.68
27:BB:123:LYS:HA	27:BB:141:ARG:HH21	1.59	0.68
37:BL:22:ARG:O	37:BL:23:ASN:HB2	1.93	0.68
45:BU:36:ILE:CG2	45:BU:68:PHE:HB3	2.23	0.68
46:BW:24:GLU:HA	46:BW:27:ASN:HD21	1.59	0.68
5:AD:205:LYS:HE2	5:AD:205:LYS:HA	1.75	0.68
20:AS:40:PHE:HB3	20:AS:41:PRO:HD2	1.74	0.68
22:B0:1418:G:N1	26:BA:101:ARG:NE	2.41	0.68
22:B0:1495:A:C2	26:BA:65:ASP:N	2.61	0.68
22:B0:1496:A:N7	26:BA:142:ASN:HB3	2.08	0.68
22:B0:1828:G:O2'	22:B0:1829:A:H5'	1.94	0.68
22:B0:1844:C:N3	22:B0:1896:G:N2	2.42	0.68
22:B0:2554:U:H2'	22:B0:2555:U:C5	2.29	0.68
22:B0:2756:U:H5"	22:B0:2757:A:OP1	1.94	0.68
28:BC:176:ASP:HB2	28:BC:178:VAL:HG12	1.76	0.68
33:BH:89:PHE:CE2	33:BH:91:GLU:HB2	2.29	0.68
35:BJ:108:ALA:H	35:BJ:126:ARG:HG2	1.58	0.68
42:BR:40:LYS:HD2	42:BR:40:LYS:N	2.08	0.68
1:AA:266:G:H5'	1:AA:267:C:OP1	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:933:G:H21	10:AI:129:ARG:HH22	1.41	0.68
1:AA:1504:G:O5'	1:AA:1505:G:H5'	1.93	0.68
22:B0:589:U:OP2	28:BC:87:ALA:HB3	1.92	0.68
22:B0:1494:A:C4	26:BA:131:MET:HA	2.28	0.68
22:B0:1801:A:H5"	22:B0:1802:A:OP2	1.93	0.68
22:B0:2490:G:H5"	22:B0:2491:U:OP1	1.93	0.68
22:B0:2776:A:H4'	22:B0:2777:G:C5'	2.24	0.68
24:B2:13:LYS:CE	24:B2:32:LEU:HD23	2.24	0.68
39:BN:10:GLU:HG2	39:BN:11:GLN:N	2.06	0.68
45:BU:23:LYS:NZ	45:BU:23:LYS:HB3	2.09	0.68
46:BW:42:LEU:HD22	46:BW:43:LEU:N	2.09	0.68
47:BX:3:THR:HG22	47:BX:38:GLU:HA	1.76	0.68
1:AA:722:G:H4'	1:AA:723:U:C5	2.29	0.68
1:AA:992:U:O2'	1:AA:993:G:OP2	2.12	0.68
2:AU:20:G:C3'	2:AU:21:A:H5"	2.23	0.68
9:AH:9:MET:HG3	9:AH:26:MET:HG3	1.76	0.68
22:B0:184:C:OP2	28:BC:53:THR:HG23	1.94	0.68
22:B0:2123:G:H5"	22:B0:2124:G:O5'	1.93	0.68
22:B0:2166:U:C6	22:B0:2166:U:C3'	2.74	0.68
25:B5:54:PHE:CE2	25:B5:100:LYS:HD3	2.28	0.68
29:BD:106:ALA:HB2	29:BD:138:PRO:HD3	1.75	0.68
33:BH:36:LEU:HG	33:BH:118:MET:HG3	1.74	0.68
35:BJ:92:LEU:HD22	35:BJ:94:THR:HG22	1.75	0.68
35:BJ:111:ILE:H	35:BJ:111:ILE:HD13	1.59	0.68
1:AA:1031:C:H2'	1:AA:1032:G:O5'	1.94	0.68
1:AA:1412:C:H2'	1:AA:1413:A:C8	2.29	0.68
1:AA:1503:A:H2'	1:AA:1504:G:H5'	1.76	0.68
2:AU:16:U:H4'	2:AU:18:G:OP2	1.93	0.68
2:AV:20:G:C3'	2:AV:21:A:H5"	2.23	0.68
22:B0:574:A:H5"	22:B0:575:A:H5"	1.76	0.68
22:B0:733:G:H5"	22:B0:761:A:N6	2.09	0.68
22:B0:1488:G:H5"	26:BA:198:GLU:HG3	1.74	0.68
22:B0:1495:A:C5'	26:BA:189:ALA:O	2.38	0.68
22:B0:1580:A:OP1	26:BA:117:SER:HB3	1.92	0.68
22:B0:2521:C:H4'	22:B0:2564:A:H1'	1.76	0.68
22:B0:2853:C:H2'	22:B0:2854:G:H8	1.59	0.68
25:B3:25:ALA:HB1	25:B5:107:LYS:HD2	1.75	0.68
25:B3:29:LYS:NZ	25:B5:112:GLU:HG3	2.08	0.68
26:BA:68:ARG:NE	26:BA:69:ASN:H	1.92	0.68
27:BB:9:VAL:CG2	27:BB:28:GLU:HG3	2.23	0.68
27:BB:13:ARG:HD2	39:BN:10:GLU:CG	2.24	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BC:151:GLY:HA2	28:BC:187:VAL:HG12	1.73	0.68
1:AA:51:A:H5"	1:AA:52:C:H5"	1.74	0.68
1:AA:913:A:H4'	1:AA:914:A:O5'	1.93	0.68
1:AA:975:A:H61	11:AJ:52:LEU:HB2	1.59	0.68
1:AA:999:C:H2'	1:AA:1000:A:C8	2.29	0.68
22:B0:535:G:H1'	40:BO:52:ARG:CD	2.24	0.68
22:B0:581:C:H2'	22:B0:582:A:C8	2.29	0.68
22:B0:1082:U:C6	25:B3:80:LEU:CA	2.77	0.68
22:B0:2357:G:H5"	22:B0:2358:A:OP1	1.94	0.68
25:B5:46:GLU:HB2	25:B5:50:GLU:HG3	1.74	0.68
28:BC:41:GLN:HE21	28:BC:41:GLN:HA	1.58	0.68
31:BF:15:LEU:HB3	31:BF:51:ARG:HH22	1.58	0.68
33:BH:37:ARG:HD3	33:BH:37:ARG:N	2.08	0.68
42:BR:18:GLU:O	42:BR:19:LYS:HB3	1.93	0.68
42:BR:25:GLU:C	42:BR:26:LYS:HD2	2.14	0.68
1:AA:251:G:H4'	1:AA:252:U:O5'	1.93	0.68
22:B0:864:G:H5'	23:B9:100:G:H5'	1.76	0.68
22:B0:1001:A:H61	22:B0:1154:G:H1'	1.59	0.68
22:B0:1083:U:H2'	25:B3:88:GLU:HG3	1.70	0.68
22:B0:1488:G:H2'	26:BA:159:THR:HB	1.75	0.68
22:B0:1583:G:C6	26:BA:74:PRO:HG2	2.29	0.68
22:B0:1814:G:H1	22:B0:1815:A:N6	1.91	0.68
22:B0:2163:G:H1'	22:B0:2164:C:C5	2.29	0.68
22:B0:2678:C:P	27:BB:124:ARG:HB3	2.34	0.68
26:BA:143:VAL:O	26:BA:144:GLU:O	2.12	0.68
32:BG:48:ILE:HD13	32:BG:48:ILE:H	1.59	0.68
33:BH:109:LEU:H	33:BH:110:PRO:HA	1.59	0.68
5:AD:148:ALA:O	5:AD:151:GLN:HG2	1.94	0.67
21:AT:49:ALA:O	21:AT:52:GLU:HG2	1.94	0.67
22:B0:738:G:H2'	22:B0:739:A:O4'	1.95	0.67
22:B0:1084:A:P	25:B3:88:GLU:HB2	2.34	0.67
22:B0:1130:U:H5'	22:B0:2515:C:H4'	1.75	0.67
22:B0:1421:G:N3	26:BA:146:LYS:NZ	2.42	0.67
26:BA:64:VAL:HG12	26:BA:65:ASP:N	2.01	0.67
45:BU:37:VAL:HG22	45:BU:38:ARG:N	2.09	0.67
45:BU:43:LYS:H	45:BU:43:LYS:HE2	1.58	0.67
1:AA:815:A:H61	1:AA:1509:C:H4'	1.60	0.67
13:AL:30:ARG:HB2	13:AL:30:ARG:HH11	1.57	0.67
22:B0:830:G:C4'	22:B0:2448:A:H62	2.08	0.67
22:B0:1424:G:OP2	26:BA:56:GLY:C	2.33	0.67
22:B0:1496:A:OP2	26:BA:191:LEU:O	2.11	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1755:A:H61	22:B0:2694:G:H1'	1.58	0.67
25:B3:96:GLU:HB3	25:B5:49:GLU:HA	1.75	0.67
26:BA:53:ILE:HD13	26:BA:54:GLY:N	2.09	0.67
26:BA:167:ASP:HB3	26:BA:170:TYR:O	1.94	0.67
28:BC:147:LEU:HB3	28:BC:165:HIS:HB2	1.76	0.67
29:BD:47:LYS:C	29:BD:49:LEU:H	1.97	0.67
36:BK:59:ARG:NH1	36:BK:59:ARG:HB3	2.10	0.67
37:BL:28:LEU:HA	37:BL:34:ILE:HD11	1.75	0.67
37:BL:63:ARG:NH2	37:BL:64:ARG:HG2	2.09	0.67
42:BR:53:VAL:HG22	42:BR:54:GLU:N	2.10	0.67
7:AF:24:ARG:NH2	7:AF:81:ASN:HB2	2.10	0.67
7:AF:29:ILE:HD11	7:AF:64:VAL:HG21	1.76	0.67
22:B0:1202:G:H3'	35:BJ:10:GLU:HG3	1.76	0.67
22:B0:1424:G:OP1	26:BA:59:GLN:HG3	1.95	0.67
22:B0:2024:G:H1	22:B0:2039:U:H3	1.42	0.67
22:B0:2411:A:H2'	22:B0:2412:A:C8	2.29	0.67
27:BB:13:ARG:HD2	39:BN:10:GLU:CD	2.15	0.67
28:BC:50:ALA:CB	28:BC:73:ILE:HD11	2.24	0.67
33:BH:17:VAL:HG12	33:BH:55:ILE:HB	1.77	0.67
42:BR:47:VAL:O	42:BR:48:GLN:HB3	1.93	0.67
42:BR:63:VAL:HG12	42:BR:81:LYS:HD3	1.77	0.67
45:BU:66:VAL:HG11	45:BU:73:PRO:HA	1.76	0.67
1:AA:411:A:H62	1:AA:413:G:N2	1.91	0.67
1:AA:438:U:H4'	1:AA:439:U:OP1	1.94	0.67
1:AA:1306:A:H62	1:AA:1331:G:H1'	1.59	0.67
1:AA:1342:C:H5"	10:AI:127:SER:OG	1.95	0.67
12:AK:78:ILE:HG21	12:AK:81:LEU:HD21	1.76	0.67
22:B0:478:A:H2'	22:B0:480:A:C8	2.29	0.67
22:B0:667:U:H5	35:BJ:48:ARG:HH12	1.41	0.67
22:B0:990:A:O2'	22:B0:991:C:H5"	1.95	0.67
22:B0:1026:G:H3'	22:B0:1027:A:O4'	1.93	0.67
22:B0:1418:G:O6	26:BA:101:ARG:HG3	1.93	0.67
22:B0:1494:A:C8	22:B0:1494:A:O5'	2.47	0.67
22:B0:1495:A:C2	26:BA:188:ARG:HB2	2.30	0.67
22:B0:1495:A:C1'	26:BA:128:THR:HG22	2.24	0.67
25:B5:98:VAL:HG23	25:B5:103:ALA:HB2	1.76	0.67
28:BC:29:HIS:N	35:BJ:16:GLY:O	2.27	0.67
30:BE:148:ARG:NH2	30:BE:168:VAL:HG12	2.09	0.67
43:BS:40:LEU:HG	43:BS:41:VAL:N	2.10	0.67
43:BS:53:GLN:HG3	43:BS:54:PRO:HD2	1.76	0.67
1:AA:422:C:H5"	1:AA:423:G:OP1	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:423:G:H3'	1:AA:423:G:N3	2.09	0.67
5:AD:59:LYS:O	5:AD:63:ILE:HG13	1.94	0.67
22:B0:120:U:H4'	22:B0:121:G:C5'	2.23	0.67
22:B0:608:A:H2'	22:B0:609:A:C8	2.29	0.67
22:B0:1060:U:H5"	22:B0:1061:U:OP1	1.94	0.67
22:B0:1568:G:H5"	22:B0:1569:A:H5'	1.75	0.67
22:B0:1578:U:O2	26:BA:66:PHE:HA	1.95	0.67
22:B0:2124:G:H2'	22:B0:2125:G:O5'	1.94	0.67
22:B0:2810:A:H2'	22:B0:2811:G:O4'	1.95	0.67
26:BA:145:MET:SD	26:BA:146:LYS:HE3	2.34	0.67
33:BH:39:LYS:O	33:BH:40:HIS:HB2	1.95	0.67
36:BK:126:ILE:HD13	36:BK:127:LYS:N	2.10	0.67
42:BR:8:LEU:CD1	46:BW:23:ARG:HG3	2.23	0.67
1:AA:566:G:H5"	1:AA:567:G:OP1	1.95	0.67
1:AA:1366:C:H3'	11:AJ:62:ARG:NH2	2.10	0.67
2:AW:18:G:O2'	2:AW:57:G:N2	2.24	0.67
12:AK:28:ASN:ND2	12:AK:45:THR:HG22	2.09	0.67
21:AT:17:ARG:HA	21:AT:20:ASN:HD21	1.58	0.67
22:B0:150:U:H4'	22:B0:1359:A:H4'	1.77	0.67
22:B0:1494:A:O5'	26:BA:189:ALA:HB3	1.93	0.67
22:B0:1803:A:N6	22:B0:1814:G:N2	2.43	0.67
22:B0:2115:G:H2'	22:B0:2125:G:N2	2.09	0.67
22:B0:2137:U:O2'	22:B0:2138:G:C5'	2.42	0.67
22:B0:2263:C:O5'	45:BU:11:ASN:CA	2.41	0.67
28:BC:186:VAL:HG22	28:BC:187:VAL:N	2.04	0.67
36:BK:71:LYS:O	36:BK:93:VAL:HG12	1.95	0.67
39:BN:100:ARG:NE	39:BN:100:ARG:HA	2.09	0.67
47:BX:31:ILE:HD13	47:BX:31:ILE:H	1.60	0.67
7:AF:34:GLY:HA2	7:AF:66:ALA:HB2	1.77	0.67
7:AF:51:ILE:HD12	7:AF:51:ILE:O	1.94	0.67
21:AT:38:ILE:HG13	21:AT:82:ILE:HG22	1.77	0.67
22:B0:337:C:H2'	22:B0:338:G:O4'	1.95	0.67
22:B0:977:G:H2'	22:B0:978:G:H8	1.60	0.67
22:B0:2824:C:N1	22:B0:2825:G:N2	2.43	0.67
24:B2:14:VAL:HG13	24:B2:28:LEU:HD21	1.76	0.67
25:B3:21:GLU:OE1	25:B5:119:VAL:HG12	1.93	0.67
25:B3:53:GLU:HB2	25:B5:46:GLU:OE2	1.95	0.67
28:BC:79:ARG:HH11	28:BC:80:SER:HB3	1.60	0.67
35:BJ:9:ALA:O	35:BJ:10:GLU:HB2	1.93	0.67
35:BJ:111:ILE:HD13	35:BJ:111:ILE:N	2.10	0.67
39:BN:3:ILE:HD12	39:BN:3:ILE:N	2.09	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BN:9:GLN:H	39:BN:9:GLN:HE21	1.42	0.67
22:B0:123:G:H4'	22:B0:1376:C:H5'	1.75	0.67
22:B0:1061:U:H1'	22:B0:1070:A:C1'	2.24	0.67
22:B0:1424:G:P	26:BA:56:GLY:O	2.53	0.67
22:B0:1513:C:H2'	22:B0:1514:U:O4'	1.95	0.67
22:B0:1652:A:C8	22:B0:1653:G:H5'	2.29	0.67
22:B0:1758:U:H2'	22:B0:1758:U:O2	1.94	0.67
25:B3:78:LEU:HD22	25:B3:82:GLU:HB3	1.76	0.67
26:BA:91:ALA:HB2	26:BA:105:ALA:HB2	1.77	0.67
26:BA:98:GLY:O	26:BA:99:GLU:CB	2.42	0.67
26:BA:131:MET:O	26:BA:133:ASN:N	2.27	0.67
27:BB:182:ALA:HB3	27:BB:186:LEU:HG	1.77	0.67
28:BC:6:LYS:HE3	28:BC:119:ILE:HG12	1.77	0.67
32:BG:33:ASN:ND2	32:BG:34:ILE:H	1.92	0.67
37:BL:102:PHE:HA	37:BL:109:PRO:HA	1.75	0.67
39:BN:10:GLU:OE2	39:BN:11:GLN:HG2	1.94	0.67
39:BN:25:VAL:HG13	39:BN:88:ARG:CD	2.25	0.67
40:BO:26:ALA:HB3	40:BO:27:ARG:NH1	2.08	0.67
40:BO:49:ARG:HG3	40:BO:50:ARG:H	1.58	0.67
40:BO:63:ARG:O	40:BO:63:ARG:HD2	1.94	0.67
42:BR:53:VAL:HG11	42:BR:87:LEU:HD23	1.77	0.67
4:AC:137:VAL:HG13	4:AC:148:ILE:HG23	1.77	0.67
9:AH:8:ASP:O	9:AH:12:ARG:HG3	1.94	0.67
9:AH:107:LYS:HG2	9:AH:120:LEU:HD22	1.77	0.67
21:AT:17:ARG:HA	21:AT:20:ASN:ND2	2.09	0.67
22:B0:885:C:N3	22:B0:892:A:N1	2.42	0.67
22:B0:1203:U:OP2	35:BJ:11:GLY:N	2.28	0.67
22:B0:1418:G:N2	26:BA:66:PHE:CE1	2.63	0.67
22:B0:1490:C:H4'	26:BA:162:GLN:O	1.95	0.67
22:B0:1579:A:C4'	26:BA:128:THR:HB	2.25	0.67
22:B0:2136:G:C2	22:B0:2137:U:H3'	2.30	0.67
22:B0:2370:G:H2'	22:B0:2371:G:O4'	1.95	0.67
25:B3:73:ARG:HH22	32:BG:117:THR:HG21	1.60	0.67
25:B3:79:GLY:HA2	32:BG:117:THR:CB	2.07	0.67
28:BC:114:ARG:HB3	28:BC:117:ARG:CG	2.25	0.67
31:BF:104:THR:HA	31:BF:108:VAL:O	1.95	0.67
35:BJ:78:ARG:HD3	35:BJ:126:ARG:NH1	2.09	0.67
44:BT:88:HIS:C	44:BT:89:ILE:HD12	2.15	0.67
1:AA:757:U:H2'	1:AA:758:C:O4'	1.95	0.67
1:AA:1352:C:H2'	1:AA:1353:G:C8	2.30	0.67
1:AA:1408:A:H2'	1:AA:1409:C:C6	2.29	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AM:106:ARG:NH2	14:AM:112:ARG:HA	2.10	0.67
21:AT:54:GLN:O	21:AT:57:VAL:HG12	1.95	0.67
22:B0:974:G:H4'	22:B0:975:A:O5'	1.95	0.67
22:B0:1253:A:H4'	22:B0:1254:A:OP1	1.95	0.67
22:B0:1427:A:H5'	22:B0:1428:C:N3	2.09	0.67
22:B0:2243:U:H2'	22:B0:2244:U:C6	2.30	0.67
22:B0:2279:G:H5"	45:BU:4:LYS:HE3	1.78	0.67
24:B2:5:LYS:HG3	24:B2:7:MET:H	1.59	0.67
44:BT:46:LYS:O	44:BT:50:MET:HG3	1.95	0.67
1:AA:351:G:H4'	1:AA:352:C:OP1	1.95	0.66
22:B0:182:A:O2'	28:BC:67:ARG:HD3	1.95	0.66
22:B0:415:A:N6	22:B0:2408:U:H3	1.92	0.66
22:B0:811:U:H1'	22:B0:1251:C:H1'	1.77	0.66
22:B0:1418:G:C2'	22:B0:1578:U:O4	2.43	0.66
22:B0:1578:U:C5'	26:BA:101:ARG:HD2	2.25	0.66
24:B2:138:ASN:OD1	24:B2:140:LYS:HG2	1.96	0.66
26:BA:114:GLN:HG3	26:BA:114:GLN:O	1.94	0.66
27:BB:123:LYS:CA	27:BB:141:ARG:HH21	2.07	0.66
35:BJ:81:ASP:C	35:BJ:83:ALA:H	1.96	0.66
37:BL:97:ILE:HG13	37:BL:112:TYR:C	2.16	0.66
45:BU:30:VAL:HG22	45:BU:31:LEU:H	1.60	0.66
1:AA:47:C:O5'	1:AA:48:C:OP1	2.14	0.66
1:AA:718:A:C8	12:AK:118:ASN:C	2.69	0.66
7:AF:22:ILE:HD13	7:AF:22:ILE:O	1.95	0.66
10:AI:117:LEU:HB3	10:AI:122:ARG:O	1.94	0.66
22:B0:590:A:OP2	28:BC:87:ALA:HA	1.95	0.66
22:B0:777:G:N7	22:B0:793:A:H2	1.92	0.66
22:B0:1085:A:H2'	25:B3:65:LYS:NZ	2.10	0.66
22:B0:1199:U:H3	22:B0:1246:A:H2	1.40	0.66
22:B0:1314:C:OP1	22:B0:1332:G:H5'	1.94	0.66
22:B0:2130:U:C2	24:B2:179:PHE:HA	2.31	0.66
22:B0:2514:U:H3	22:B0:2570:G:H1	1.43	0.66
42:BR:25:GLU:HG3	42:BR:26:LYS:H	1.58	0.66
49:B1:42:VAL:HG22	49:B1:43:ARG:N	2.08	0.66
1:AA:1368:A:H5"	10:AI:112:ARG:HH11	1.60	0.66
13:AL:23:LEU:HG	13:AL:58:ASN:HB3	1.77	0.66
14:AM:89:ARG:HD2	14:AM:92:ARG:HH21	1.59	0.66
19:AR:41:SER:HA	19:AR:44:THR:HG22	1.76	0.66
22:B0:1084:A:C2	22:B0:1106:G:O4'	2.48	0.66
22:B0:1156:A:H5"	22:B0:1157:G:OP2	1.95	0.66
22:B0:1499:U:C4	26:BA:155:ARG:HB3	2.30	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2044:C:N3	22:B0:2624:G:N2	2.32	0.66
22:B0:2092:U:O2'	22:B0:2093:G:OP2	2.12	0.66
22:B0:2121:G:H5"	22:B0:2122:U:OP1	1.96	0.66
22:B0:2514:U:H3'	27:BB:154:LYS:HD3	1.77	0.66
25:B3:81:LYS:O	25:B3:81:LYS:HG2	1.95	0.66
26:BA:101:ARG:CB	26:BA:101:ARG:HH11	2.08	0.66
28:BC:3:LEU:HD13	28:BC:18:THR:HB	1.76	0.66
28:BC:31:VAL:HG23	35:BJ:17:LYS:O	1.95	0.66
29:BD:110:ILE:HD12	29:BD:110:ILE:N	2.10	0.66
32:BG:78:LEU:O	32:BG:82:ALA:HB2	1.96	0.66
42:BR:47:VAL:C	42:BR:49:LYS:H	1.98	0.66
43:BS:6:ARG:HD2	43:BS:25:LYS:O	1.94	0.66
43:BS:72:PHE:HB2	43:BS:84:PHE:CZ	2.28	0.66
1:AA:876:C:H2'	1:AA:877:G:C8	2.29	0.66
22:B0:1498:C:H42	26:BA:151:GLY:HA2	1.61	0.66
22:B0:2411:A:H2'	22:B0:2412:A:H8	1.60	0.66
22:B0:2678:C:OP2	27:BB:124:ARG:HB3	1.95	0.66
37:BL:36:THR:N	37:BL:110:MET:SD	2.69	0.66
37:BL:45:ARG:NH2	37:BL:113:ILE:HG23	2.10	0.66
39:BN:50:ARG:O	39:BN:61:ARG:HB2	1.96	0.66
41:BQ:16:LYS:NZ	41:BQ:19:LEU:HD12	2.09	0.66
42:BR:8:LEU:C	42:BR:9:LYS:HD2	2.15	0.66
49:B1:27:ARG:HH22	49:B1:31:GLU:HG2	1.60	0.66
1:AA:1004:A:H2'	1:AA:1005:A:H5'	1.77	0.66
4:AC:87:ARG:HH21	4:AC:100:ILE:HG22	1.59	0.66
16:AO:66:LEU:HD11	16:AO:86:LEU:HD23	1.78	0.66
22:B0:184:C:O2'	22:B0:185:G:H5'	1.96	0.66
22:B0:276:U:C2'	22:B0:362:A:H2'	2.25	0.66
22:B0:1083:U:C2	25:B3:84:LYS:HE2	2.30	0.66
22:B0:1496:A:C2'	26:BA:63:ILE:HD12	2.25	0.66
22:B0:1579:A:C6	26:BA:67:LYS:N	2.63	0.66
22:B0:1579:A:N1	26:BA:68:ARG:N	2.44	0.66
22:B0:1799:G:H4'	22:B0:1800:C:O5'	1.95	0.66
22:B0:2155:U:H3'	22:B0:2156:G:C5'	2.25	0.66
26:BA:147:PRO:HB3	26:BA:186:ASP:C	2.16	0.66
32:BG:77:VAL:HG23	32:BG:78:LEU:HD23	1.77	0.66
35:BJ:55:MET:N	35:BJ:56:PRO:HA	2.10	0.66
40:BO:91:ARG:O	40:BO:92:LYS:HD2	1.95	0.66
41:BQ:17:VAL:HG21	41:BQ:101:SER:OG	1.95	0.66
1:AA:876:C:H2'	1:AA:877:G:H8	1.61	0.66
1:AA:1347:G:OP2	1:AA:1347:G:O4'	2.14	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AK:80:ASN:HD21	12:AK:107:THR:HB	1.60	0.66
13:AL:98:ARG:NH1	13:AL:106:VAL:HG22	2.10	0.66
15:AN:40:ARG:HH11	20:AS:17:LYS:H	1.40	0.66
17:AP:45:GLU:HG3	17:AP:46:LYS:N	2.11	0.66
22:B0:618:G:O2'	22:B0:619:G:H5'	1.96	0.66
22:B0:1245:G:O5'	35:BJ:18:ARG:HD3	1.96	0.66
22:B0:1438:U:H2'	22:B0:1439:A:N3	2.11	0.66
22:B0:1487:G:N7	26:BA:194:VAL:HB	2.11	0.66
22:B0:1578:U:P	26:BA:101:ARG:HD2	2.35	0.66
22:B0:1700:A:H2'	22:B0:1701:A:H5'	1.75	0.66
22:B0:2406:A:H2'	22:B0:2406:A:N3	2.09	0.66
22:B0:2514:U:OP2	27:BB:154:LYS:HG3	1.96	0.66
22:B0:2899:A:H1'	33:BH:136:GLN:O	1.96	0.66
25:B3:51:LYS:HE2	25:B5:16:VAL:N	2.11	0.66
25:B3:65:LYS:HB3	25:B3:69:ILE:HD12	1.76	0.66
26:BA:68:ARG:HE	26:BA:70:LYS:H	1.44	0.66
31:BF:11:ASN:O	31:BF:12:LEU:HD22	1.95	0.66
35:BJ:23:ILE:H	35:BJ:23:ILE:HD12	1.61	0.66
36:BK:59:ARG:HB3	36:BK:59:ARG:HH11	1.61	0.66
40:BO:46:TYR:O	40:BO:47:ARG:HG2	1.95	0.66
45:BU:23:LYS:HD3	45:BU:56:HIS:CG	2.30	0.66
1:AA:570:G:H1	1:AA:865:A:H61	1.43	0.66
13:AL:52:CYS:SG	13:AL:66:ILE:HD11	2.36	0.66
17:AP:6:LEU:HB3	17:AP:17:TYR:HB3	1.77	0.66
19:AR:39:VAL:HB	19:AR:43:ILE:CG2	2.26	0.66
22:B0:1677:A:H2	22:B0:1991:U:H1'	1.61	0.66
22:B0:1899:A:H2	22:B0:1901:A:H62	1.42	0.66
22:B0:2175:C:C4'	24:B2:219:ALA:O	2.44	0.66
22:B0:2296:U:H4'	22:B0:2297:A:OP1	1.95	0.66
22:B0:2366:A:H5'	45:BU:65:LYS:HE3	1.77	0.66
28:BC:67:ARG:HD2	28:BC:72:SER:N	2.11	0.66
28:BC:105:LEU:O	28:BC:108:ILE:HG22	1.96	0.66
40:BO:16:ILE:C	40:BO:18:LYS:N	2.48	0.66
42:BR:68:LYS:HA	42:BR:68:LYS:HZ3	1.61	0.66
42:BR:95:PHE:CD2	42:BR:96:VAL:HG23	2.31	0.66
1:AA:729:A:H2	1:AA:765:G:H4'	1.60	0.66
1:AA:1528:U:O2	1:AA:1530:G:H5"	1.95	0.66
9:AH:46:GLU:HB3	9:AH:61:THR:HG23	1.77	0.66
22:B0:1084:A:H61	25:B3:62:GLY:N	1.94	0.66
22:B0:1273:U:O2'	22:B0:1274:A:OP1	2.12	0.66
22:B0:1479:G:N2	22:B0:1480:G:H1'	2.11	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1493:A:H4'	26:BA:173:LEU:HD11	1.78	0.66
22:B0:2131:U:C5	24:B2:33:ALA:C	2.64	0.66
22:B0:2133:G:O6	24:B2:9:VAL:HG21	1.95	0.66
22:B0:2179:C:H3'	22:B0:2180:U:C4'	2.23	0.66
25:B5:38:VAL:C	25:B5:40:VAL:H	1.97	0.66
37:BL:24:MET:HB3	37:BL:44:LEU:HD13	1.76	0.66
39:BN:62:LYS:HA	39:BN:62:LYS:HZ3	1.57	0.66
40:BO:64:ILE:HB	40:BO:78:PHE:CZ	2.31	0.66
1:AA:1451:U:H5"	1:AA:1452:C:H5	1.61	0.66
13:AL:56:LEU:H	13:AL:56:LEU:HD22	1.61	0.66
17:AP:20:VAL:HG13	17:AP:34:GLU:O	1.96	0.66
22:B0:163:C:H5'	22:B0:164:C:H5'	1.76	0.66
22:B0:414:C:H2'	22:B0:415:A:C8	2.31	0.66
22:B0:478:A:H2'	22:B0:480:A:H8	1.59	0.66
22:B0:637:A:OP2	35:BJ:129:LYS:HG2	1.96	0.66
22:B0:1061:U:H1'	22:B0:1070:A:O4'	1.96	0.66
25:B3:84:LYS:HB3	25:B3:84:LYS:HZ3	1.61	0.66
28:BC:108:ILE:O	28:BC:108:ILE:HD13	1.96	0.66
37:BL:30:ARG:HB3	37:BL:75:ILE:HG21	1.78	0.66
41:BQ:88:ARG:H	41:BQ:88:ARG:NE	1.94	0.66
1:AA:1085:U:O2'	1:AA:1086:U:OP1	2.14	0.66
1:AA:1181:G:O2'	1:AA:1182:G:O4'	2.13	0.66
1:AA:1495:U:H4'	22:B0:1911:U:O2'	1.95	0.66
22:B0:433:C:O4'	28:BC:69:ARG:HB2	1.95	0.66
22:B0:447:A:H5"	22:B0:448:U:OP1	1.94	0.66
22:B0:685:A:O2'	22:B0:688:U:O4	2.14	0.66
22:B0:1495:A:N6	26:BA:144:GLU:HG2	2.10	0.66
22:B0:2414:G:H21	35:BJ:69:ARG:HH21	1.43	0.66
22:B0:2560:A:H2'	22:B0:2561:U:C6	2.31	0.66
22:B0:2644:G:N3	22:B0:2645:G:H1'	2.11	0.66
25:B5:23:ILE:HD12	25:B5:24:SER:N	2.11	0.66
25:B5:57:ILE:HB	25:B5:118:GLU:O	1.95	0.66
26:BA:244:VAL:HG22	26:BA:256:THR:O	1.96	0.66
32:BG:36:GLU:O	32:BG:37:PHE:HB3	1.95	0.66
40:BO:63:ARG:HH11	40:BO:63:ARG:C	1.99	0.66
1:AA:1363:A:H5"	1:AA:1364:U:OP1	1.96	0.65
2:AU:75:C:C6	22:B0:2556:C:H2'	2.31	0.65
10:AI:117:LEU:HD22	10:AI:123:ARG:HB3	1.76	0.65
22:B0:528:A:N1	22:B0:2043:C:H4'	2.09	0.65
22:B0:801:G:O2'	22:B0:802:A:OP1	2.10	0.65
22:B0:1040:A:H2	22:B0:1115:G:H22	1.42	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1086:A:C5	25:B3:65:LYS:HD3	2.30	0.65
22:B0:2678:C:N4	22:B0:2729:G:H1	1.93	0.65
23:B9:34:A:N6	23:B9:44:G:H2'	2.11	0.65
25:B3:42:ALA:O	25:B3:45:VAL:HG13	1.96	0.65
37:BL:96:ARG:NH2	37:BL:114:GLU:HG3	2.11	0.65
40:BO:50:ARG:HE	40:BO:54:ARG:HH22	1.42	0.65
45:BU:58:LEU:HA	45:BU:81:ILE:HA	1.78	0.65
1:AA:1129:C:H1'	1:AA:1132:C:H5	1.61	0.65
6:AE:143:LEU:HA	6:AE:146:MET:SD	2.36	0.65
22:B0:301:G:N2	22:B0:302:C:C6	2.64	0.65
22:B0:589:U:H3'	28:BC:87:ALA:CA	2.26	0.65
22:B0:1139:G:H5"	33:BH:72:LYS:HE2	1.79	0.65
22:B0:1417:U:H5"	26:BA:100:ARG:HB2	1.78	0.65
22:B0:1423:A:C2'	26:BA:58:LYS:C	2.64	0.65
22:B0:1578:U:H3'	26:BA:101:ARG:CZ	2.26	0.65
22:B0:2678:C:P	27:BB:125:TRP:HB2	2.36	0.65
23:B9:12:C:H5"	23:B9:13:G:OP1	1.96	0.65
26:BA:101:ARG:NH1	26:BA:101:ARG:CB	2.59	0.65
29:BD:91:ARG:HH12	29:BD:95:MET:HB2	1.61	0.65
35:BJ:74:THR:HA	35:BJ:107:PHE:HB2	1.77	0.65
37:BL:8:ARG:N	37:BL:8:ARG:HH11	1.94	0.65
39:BN:63:ILE:CG1	39:BN:74:GLN:HG2	2.25	0.65
1:AA:109:A:H5'	1:AA:110:C:OP2	1.96	0.65
7:AF:10:VAL:HG11	7:AF:21:MET:CE	2.27	0.65
22:B0:182:A:O2'	28:BC:67:ARG:NH1	2.29	0.65
22:B0:670:A:H5"	22:B0:671:C:O5'	1.96	0.65
22:B0:1084:A:H62	25:B3:61:ALA:HB3	1.61	0.65
22:B0:1114:C:H2'	22:B0:1115:G:C8	2.31	0.65
22:B0:1455:U:H2'	37:BL:63:ARG:HD3	1.76	0.65
22:B0:1493:A:C8	26:BA:131:MET:HE2	2.31	0.65
22:B0:1937:A:O2'	22:B0:1938:A:OP1	2.13	0.65
42:BR:67:VAL:HG12	42:BR:68:LYS:N	2.06	0.65
1:AA:196:A:H1'	1:AA:222:C:O2'	1.97	0.65
1:AA:1405:G:H1'	1:AA:1518:A:N3	2.11	0.65
1:AA:1502:A:C4	1:AA:1504:G:H2'	2.31	0.65
16:AO:7:THR:O	16:AO:10:ILE:HG22	1.97	0.65
22:B0:27:G:H1'	22:B0:513:A:N6	2.10	0.65
22:B0:63:A:H5"	22:B0:64:A:OP1	1.96	0.65
22:B0:182:A:C2'	28:BC:67:ARG:NH1	2.59	0.65
22:B0:711:G:H1	22:B0:720:U:H3	1.44	0.65
22:B0:1083:U:H2'	25:B3:88:GLU:OE1	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1494:A:H4'	26:BA:163:ILE:HG13	1.78	0.65
22:B0:1992:G:H22	27:BB:138:LEU:CD1	2.09	0.65
26:BA:188:ARG:HH11	26:BA:188:ARG:HG3	1.61	0.65
26:BA:242:HIS:HB3	26:BA:243:PRO:CD	2.27	0.65
27:BB:165:MET:HG3	27:BB:166:GLY:N	2.10	0.65
30:BE:25:ILE:HD13	30:BE:26:LYS:N	2.12	0.65
42:BR:16:VAL:HG12	42:BR:17:SER:N	2.08	0.65
46:BW:24:GLU:HA	46:BW:27:ASN:ND2	2.10	0.65
46:BW:42:LEU:O	46:BW:46:VAL:HG23	1.97	0.65
1:AA:320:A:H2'	1:AA:321:A:C8	2.32	0.65
1:AA:753:A:H5"	1:AA:754:C:OP1	1.96	0.65
1:AA:1239:A:H1'	1:AA:1241:G:C4	2.31	0.65
3:AB:27:LYS:N	3:AB:28:PRO:HD2	2.12	0.65
4:AC:54:ILE:HD13	4:AC:54:ILE:N	2.12	0.65
6:AE:37:VAL:HG12	6:AE:116:VAL:HG21	1.79	0.65
11:AJ:37:ARG:NH1	11:AJ:37:ARG:HB3	2.11	0.65
18:AQ:58:VAL:HG12	18:AQ:77:VAL:HG22	1.79	0.65
22:B0:122:G:N1	22:B0:130:C:N3	2.45	0.65
22:B0:386:G:H22	22:B0:411:G:H22	1.45	0.65
22:B0:1670:C:H1'	22:B0:1994:C:H4'	1.78	0.65
22:B0:2164:C:H1'	22:B0:2165:C:N1	2.10	0.65
22:B0:2899:A:O4'	33:BH:137:PRO:N	2.28	0.65
26:BA:99:GLU:O	26:BA:100:ARG:HB3	1.97	0.65
27:BB:158:GLY:O	27:BB:160:LYS:N	2.30	0.65
28:BC:89:PRO:CD	28:BC:95:LYS:HG2	2.27	0.65
33:BH:35:ARG:HE	33:BH:39:LYS:HD2	1.62	0.65
35:BJ:91:ASP:OD2	35:BJ:120:VAL:HG21	1.97	0.65
45:BU:23:LYS:NZ	45:BU:56:HIS:HB3	2.10	0.65
47:BX:43:ILE:O	47:BX:47:ILE:HG12	1.96	0.65
1:AA:1182:G:O2'	1:AA:1183:U:OP2	2.14	0.65
9:AH:34:ALA:HB1	9:AH:109:VAL:HG11	1.79	0.65
22:B0:228:C:H2'	22:B0:229:C:C5'	2.26	0.65
22:B0:1454:A:H3'	22:B0:1455:U:C5'	2.26	0.65
22:B0:1996:C:C2	27:BB:138:LEU:HD12	2.31	0.65
22:B0:2016:U:H4'	22:B0:2057:G:H4'	1.78	0.65
22:B0:2109:U:C6	22:B0:2110:G:H5'	2.32	0.65
22:B0:2713:U:O2'	22:B0:2714:G:OP1	2.14	0.65
22:B0:2789:C:HO2'	22:B0:2892:G:C2'	2.08	0.65
25:B3:84:LYS:HB3	25:B3:84:LYS:HZ2	1.62	0.65
26:BA:83:ASP:OD2	26:BA:86:ARG:HB2	1.96	0.65
32:BG:133:ARG:NH1	32:BG:135:MET:HB3	2.11	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BL:37:THR:H	37:BL:40:LYS:CB	2.09	0.65
40:BO:112:ALA:C	40:BO:114:ALA:H	1.97	0.65
4:AC:102:ILE:HD13	4:AC:102:ILE:N	2.12	0.65
4:AC:122:GLN:HB3	4:AC:127:VAL:HG11	1.77	0.65
22:B0:1499:U:C6	26:BA:155:ARG:CD	2.79	0.65
22:B0:2167:U:O4	22:B0:2168:G:H3'	1.97	0.65
22:B0:2668:G:H1'	30:BE:110:HIS:NE2	2.11	0.65
34:BI:19:VAL:HG11	34:BI:41:ILE:HD12	1.79	0.65
42:BR:55:VAL:HG12	42:BR:87:LEU:HA	1.79	0.65
45:BU:66:VAL:HG22	45:BU:67:LYS:N	2.10	0.65
49:B1:26:LYS:CG	49:B1:28:THR:HG22	2.24	0.65
1:AA:129:A:H4'	1:AA:130:A:OP1	1.96	0.65
1:AA:924:C:H1'	1:AA:1504:G:C6	2.31	0.65
1:AA:1285:A:O2'	1:AA:1286:U:OP2	2.14	0.65
1:AA:1367:C:C5'	10:AI:115:VAL:HG11	2.22	0.65
1:AA:1533:C:O2'	1:AA:1534:A:H5'	1.96	0.65
4:AC:129:PHE:HE2	4:AC:165:GLU:HB3	1.61	0.65
11:AJ:26:VAL:O	11:AJ:30:LYS:HG2	1.96	0.65
22:B0:666:A:P	35:BJ:48:ARG:HD3	2.36	0.65
22:B0:1492:G:N7	26:BA:153:LEU:O	2.30	0.65
22:B0:1499:U:N3	26:BA:155:ARG:HG2	2.07	0.65
22:B0:1579:A:N7	26:BA:66:PHE:HB3	2.11	0.65
22:B0:2055:C:H2'	22:B0:2504:U:O4'	1.96	0.65
22:B0:2070:A:H2'	22:B0:2071:A:C8	2.32	0.65
22:B0:2143:C:HO2'	22:B0:2144:G:H4'	1.60	0.65
24:B2:162:TYR:HB2	24:B2:170:ILE:HD11	1.78	0.65
26:BA:58:LYS:HG2	26:BA:59:GLN:H	1.62	0.65
33:BH:76:HIS:O	33:BH:77:HIS:HB3	1.96	0.65
35:BJ:76:GLU:O	35:BJ:108:ALA:HB1	1.97	0.65
37:BL:41:ALA:HA	37:BL:44:LEU:HB2	1.78	0.65
42:BR:68:LYS:HD3	42:BR:69:ARG:N	2.12	0.65
45:BU:39:GLN:HB2	45:BU:68:PHE:HD1	1.62	0.65
48:BZ:36:LYS:HD3	48:BZ:37:HIS:N	2.12	0.65
1:AA:978:A:H1'	20:AS:6:LYS:CB	2.26	0.65
10:AI:113:LYS:CA	10:AI:120:ALA:HB2	2.25	0.65
21:AT:48:LYS:NZ	21:AT:48:LYS:HB2	2.11	0.65
22:B0:433:C:C5	28:BC:69:ARG:HD3	2.32	0.65
22:B0:668:A:H5'	22:B0:669:G:OP2	1.97	0.65
22:B0:1085:A:N7	25:B3:65:LYS:HG3	2.11	0.65
22:B0:1388:G:H2'	22:B0:1389:G:C8	2.32	0.65
22:B0:1488:G:C2'	26:BA:159:THR:HB	2.27	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1491:A:C6	26:BA:164:VAL:HB	2.32	0.65
22:B0:1502:C:H2'	22:B0:1503:G:C8	2.31	0.65
22:B0:2145:C:C2'	22:B0:2146:C:H5"	2.26	0.65
22:B0:2345:G:H4'	22:B0:2346:A:O5'	1.96	0.65
25:B5:90:ALA:N	25:B5:91:PRO:HD3	2.12	0.65
29:BD:65:LEU:H	29:BD:88:VAL:HG21	1.62	0.65
33:BH:123:LYS:HA	33:BH:123:LYS:HZ2	1.58	0.65
39:BN:45:VAL:HG23	39:BN:65:ASN:OD1	1.97	0.65
40:BO:60:TRP:HA	40:BO:95:ALA:HB1	1.79	0.65
42:BR:53:VAL:HG21	42:BR:87:LEU:HD23	1.77	0.65
5:AD:169:TRP:CD2	5:AD:185:PRO:HB3	2.32	0.65
6:AE:12:GLU:HG3	6:AE:38:VAL:HG12	1.77	0.65
17:AP:4:ILE:HB	17:AP:67:ILE:HG22	1.79	0.65
21:AT:84:LYS:HE3	21:AT:84:LYS:HA	1.79	0.65
22:B0:25:U:H5"	41:BQ:80:PRO:HA	1.77	0.65
22:B0:1423:A:H3'	26:BA:57:HIS:C	2.18	0.65
22:B0:1698:A:H4'	22:B0:1699:G:O5'	1.95	0.65
22:B0:2006:C:H3'	22:B0:2006:C:H6	1.61	0.65
22:B0:2443:C:H2'	22:B0:2444:G:H8	1.62	0.65
22:B0:2546:U:H5'	22:B0:2547:A:O4'	1.96	0.65
22:B0:2561:U:H5'	34:BI:23:LYS:NZ	2.12	0.65
22:B0:2712:C:H1'	37:BL:15:SER:CB	2.26	0.65
27:BB:74:GLU:HG2	27:BB:75:ALA:N	2.10	0.65
32:BG:52:LEU:HD11	32:BG:73:PRO:HB2	1.79	0.65
39:BN:27:VAL:CG1	39:BN:88:ARG:HD2	2.27	0.65
40:BO:52:ARG:O	40:BO:55:GLN:HB3	1.97	0.65
10:AI:83:THR:CG2	10:AI:102:PHE:HB3	2.26	0.64
11:AJ:40:ILE:HG13	11:AJ:42:LEU:CD2	2.27	0.64
22:B0:704:G:H1'	22:B0:727:A:N6	2.12	0.64
22:B0:1083:U:H2'	25:B3:88:GLU:CD	2.18	0.64
22:B0:1203:U:H5"	35:BJ:10:GLU:CG	2.27	0.64
22:B0:1314:C:N4	22:B0:1338:G:H1	1.94	0.64
22:B0:1328:A:H2'	22:B0:1330:C:C5	2.32	0.64
22:B0:1667:G:O2'	22:B0:1669:A:N6	2.29	0.64
22:B0:2092:U:O2'	22:B0:2093:G:P	2.55	0.64
22:B0:2122:U:H1'	22:B0:2123:G:C5	2.32	0.64
22:B0:2135:A:C8	22:B0:2135:A:H3'	2.32	0.64
25:B3:20:VAL:HG21	25:B5:51:LYS:HB2	1.78	0.64
26:BA:48:ILE:HD12	26:BA:48:ILE:O	1.96	0.64
41:BQ:30:SER:O	41:BQ:33:LEU:HG	1.97	0.64
15:AN:40:ARG:NH1	20:AS:17:LYS:N	2.45	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1357:C:H2'	22:B0:1358:G:C8	2.32	0.64
22:B0:1493:A:C1'	26:BA:171:VAL:HG11	2.25	0.64
22:B0:1498:C:OP2	22:B0:1498:C:H6	1.80	0.64
22:B0:1932:A:H2	22:B0:1969:A:N6	1.95	0.64
22:B0:2365:G:H5"	45:BU:38:ARG:HH21	1.60	0.64
22:B0:2677:G:H1'	27:BB:160:LYS:HE3	1.79	0.64
25:B3:29:LYS:HZ2	25:B5:112:GLU:CG	2.09	0.64
25:B3:66:VAL:HG22	25:B3:67:ALA:N	2.11	0.64
25:B5:66:VAL:HG22	25:B5:70:LYS:HE3	1.79	0.64
27:BB:27:ILE:HG21	27:BB:201:LEU:HD11	1.79	0.64
35:BJ:78:ARG:O	35:BJ:110:VAL:HA	1.96	0.64
40:BO:108:LEU:O	40:BO:108:LEU:HD13	1.97	0.64
1:AA:181:A:H4'	1:AA:182:A:H5'	1.79	0.64
1:AA:1031:C:O2	1:AA:1032:G:C6	2.50	0.64
1:AA:1487:G:O2'	1:AA:1488:G:H5'	1.97	0.64
5:AD:56:GLU:HG2	5:AD:198:LEU:HB2	1.78	0.64
22:B0:352:A:H5"	22:B0:353:C:O5'	1.97	0.64
22:B0:535:G:H5'	40:BO:49:ARG:HB3	1.77	0.64
22:B0:539:G:H2'	22:B0:540:G:O4'	1.96	0.64
22:B0:1286:A:C4'	22:B0:1287:A:OP1	2.45	0.64
22:B0:1424:G:O4'	26:BA:58:LYS:HB3	1.96	0.64
22:B0:1479:G:N9	22:B0:1558:C:H5"	2.13	0.64
22:B0:1487:G:C8	26:BA:158:GLY:HA2	2.33	0.64
22:B0:1579:A:C8	26:BA:66:PHE:HB2	2.32	0.64
22:B0:2677:G:H1'	27:BB:160:LYS:CE	2.27	0.64
24:B2:14:VAL:HG21	24:B2:221:VAL:CG2	2.27	0.64
26:BA:99:GLU:O	26:BA:100:ARG:CB	2.45	0.64
26:BA:174:ARG:HA	26:BA:180:MET:HA	1.79	0.64
28:BC:158:PHE:O	28:BC:162:ARG:HG3	1.96	0.64
29:BD:84:ILE:H	29:BD:84:ILE:HD13	1.61	0.64
40:BO:49:ARG:HH12	40:BO:50:ARG:HB2	1.61	0.64
40:BO:83:LYS:HB2	40:BO:83:LYS:NZ	2.13	0.64
46:BW:31:GLN:HE22	46:BW:38:GLN:HB2	1.62	0.64
7:AF:42:TRP:CZ2	7:AF:61:LEU:HD21	2.33	0.64
15:AN:80:ARG:O	15:AN:84:ARG:HG2	1.97	0.64
22:B0:865:C:H4'	22:B0:866:A:OP1	1.98	0.64
22:B0:2120:G:H4'	22:B0:2121:G:O5'	1.94	0.64
22:B0:2150:C:C5'	22:B0:2151:U:OP1	2.45	0.64
22:B0:2898:G:H5"	33:BH:138:GLN:O	1.98	0.64
32:BG:133:ARG:CG	32:BG:137:LEU:HB3	2.27	0.64
37:BL:34:ILE:O	37:BL:112:TYR:HA	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BQ:11:ARG:NH1	41:BQ:46:LEU:HD22	2.11	0.64
42:BR:36:LYS:HD3	42:BR:36:LYS:H	1.60	0.64
42:BR:87:LEU:HD12	42:BR:87:LEU:N	2.11	0.64
45:BU:48:ALA:HB2	45:BU:76:ARG:HE	1.63	0.64
1:AA:751:U:H2'	1:AA:752:G:O4'	1.98	0.64
6:AE:75:LEU:HD11	6:AE:117:ALA:O	1.97	0.64
9:AH:6:ILE:HB	9:AH:76:ARG:NH1	2.12	0.64
22:B0:540:G:H2'	22:B0:541:C:C6	2.32	0.64
22:B0:1217:U:H3	22:B0:1232:G:H1	1.43	0.64
22:B0:1395:A:H4'	22:B0:1397:U:C4	2.33	0.64
22:B0:1493:A:C8	26:BA:131:MET:CE	2.81	0.64
22:B0:1498:C:H2'	22:B0:1499:U:H5'	1.79	0.64
22:B0:1581:A:H1'	26:BA:68:ARG:HH12	1.63	0.64
26:BA:141:HIS:HA	26:BA:161:VAL:HG23	1.79	0.64
39:BN:87:ARG:C	39:BN:88:ARG:HD3	2.17	0.64
45:BU:28:GLU:OE2	45:BU:61:LYS:HE2	1.97	0.64
1:AA:718:A:H2'	12:AK:117:HIS:N	2.12	0.64
1:AA:959:A:C3'	1:AA:960:U:H5"	2.27	0.64
1:AA:1030:U:H2'	1:AA:1030:U:O2	1.97	0.64
3:AB:36:LYS:HG3	3:AB:37:VAL:N	2.11	0.64
7:AF:47:LEU:HD23	7:AF:59:TYR:OH	1.98	0.64
9:AH:6:ILE:HG22	9:AH:76:ARG:HD2	1.78	0.64
17:AP:39:PHE:HA	17:AP:50:THR:HG22	1.79	0.64
21:AT:33:LYS:HA	21:AT:33:LYS:HE3	1.80	0.64
22:B0:712:G:H2'	22:B0:713:G:C8	2.29	0.64
22:B0:1039:A:H2'	22:B0:1040:A:H8	1.63	0.64
22:B0:1081:U:H2'	25:B3:80:LEU:CD2	2.27	0.64
22:B0:1422:G:H21	26:BA:62:ARG:NE	1.95	0.64
22:B0:1693:U:H4'	22:B0:1694:C:OP2	1.98	0.64
22:B0:1869:G:N2	22:B0:1871:A:H3'	2.12	0.64
22:B0:2004:G:P	22:B0:2004:G:H8	2.21	0.64
22:B0:2286:G:H5"	22:B0:2287:A:OP1	1.96	0.64
22:B0:2543:G:H2'	22:B0:2544:G:H8	1.61	0.64
24:B2:42:ASP:HB2	24:B2:214:SER:O	1.98	0.64
25:B3:86:LEU:O	25:B3:91:PRO:CD	2.45	0.64
26:BA:128:THR:C	26:BA:129:LEU:HD22	2.16	0.64
26:BA:143:VAL:HG11	26:BA:161:VAL:CG1	2.27	0.64
33:BH:37:ARG:O	33:BH:37:ARG:HG2	1.98	0.64
37:BL:42:LYS:HD3	37:BL:43:GLU:N	2.13	0.64
39:BN:91:VAL:O	39:BN:92:ARG:HG2	1.97	0.64
46:BW:39:GLN:O	46:BW:43:LEU:HG	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:184:C:H42	22:B0:212:G:H22	1.44	0.64
22:B0:278:A:O2'	22:B0:279:A:P	2.56	0.64
22:B0:1045:C:O4'	22:B0:1111:A:N6	2.30	0.64
22:B0:1324:G:H4'	22:B0:1616:A:N6	2.13	0.64
22:B0:1422:G:C1'	26:BA:149:LYS:HE2	2.25	0.64
22:B0:1494:A:C2	22:B0:1495:A:H5"	2.33	0.64
22:B0:1814:G:N1	22:B0:1815:A:N6	2.46	0.64
22:B0:2365:G:H5"	45:BU:38:ARG:NH2	2.13	0.64
22:B0:2756:U:H4'	22:B0:2757:A:O5'	1.97	0.64
22:B0:2788:C:H4'	22:B0:2810:A:H1'	1.79	0.64
26:BA:142:ASN:H	26:BA:154:ALA:CB	2.10	0.64
28:BC:58:LYS:O	28:BC:60:TRP:N	2.31	0.64
29:BD:129:MET:HG3	29:BD:153:ILE:H	1.63	0.64
1:AA:1320:C:H5	20:AS:4:LEU:HD13	1.61	0.64
1:AA:1363:A:H1'	1:AA:1365:G:C5	2.32	0.64
2:AU:75:C:C5'	22:B0:2556:C:H6	2.09	0.64
2:AW:20:G:H3'	2:AW:21:A:C5'	2.28	0.64
8:AG:19:SER:HB3	8:AG:22:LEU:HD13	1.79	0.64
22:B0:1388:G:H2'	22:B0:1389:G:H8	1.62	0.64
22:B0:1479:G:C8	22:B0:1559:U:OP1	2.51	0.64
25:B3:51:LYS:HD3	25:B5:14:MET:C	2.18	0.64
25:B3:107:LYS:HE3	25:B3:117:VAL:O	1.98	0.64
26:BA:190:THR:CG2	26:BA:191:LEU:N	2.61	0.64
27:BB:58:ASN:HA	27:BB:61:THR:HG22	1.80	0.64
28:BC:57:LYS:HG2	28:BC:62:GLN:OE1	1.98	0.64
28:BC:98:LYS:H	28:BC:98:LYS:HD2	1.62	0.64
30:BE:154:GLU:HB2	30:BE:155:PRO:HD3	1.79	0.64
30:BE:161:VAL:HG13	30:BE:162:ARG:HG2	1.79	0.64
36:BK:14:LYS:HG3	36:BK:15:GLY:N	2.11	0.64
39:BN:65:ASN:N	39:BN:71:ARG:HG2	2.13	0.64
1:AA:328:C:O2	1:AA:328:C:H2'	1.98	0.64
1:AA:929:G:H5"	1:AA:1533:C:C5	2.33	0.64
1:AA:1367:C:H5'	11:AJ:62:ARG:HE	1.62	0.64
5:AD:12:ARG:HD3	5:AD:29:THR:CG2	2.28	0.64
12:AK:113:THR:HG22	12:AK:115:ILE:HG13	1.80	0.64
22:B0:748:G:OP2	41:BQ:90:LYS:HE2	1.97	0.64
22:B0:830:G:H22	22:B0:2446:G:H4'	1.62	0.64
22:B0:1045:C:O2'	22:B0:1046:A:OP2	2.12	0.64
22:B0:1417:U:C5	26:BA:100:ARG:N	2.65	0.64
22:B0:1815:A:H4'	22:B0:1816:C:H5"	1.79	0.64
22:B0:1932:A:N6	22:B0:1968:G:N2	2.46	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2340:A:H4'	23:B9:41:G:O6	1.97	0.64
22:B0:2678:C:N4	27:BB:126:ASN:OD1	2.31	0.64
25:B3:107:LYS:HD2	25:B3:119:VAL:HG23	1.79	0.64
26:BA:58:LYS:HG2	26:BA:59:GLN:N	2.13	0.64
26:BA:78:GLU:N	26:BA:92:LEU:O	2.27	0.64
27:BB:131:ASP:O	27:BB:134:HIS:HB2	1.98	0.64
28:BC:175:ILE:HD13	28:BC:175:ILE:N	2.12	0.64
29:BD:105:ILE:C	29:BD:107:VAL:H	2.01	0.64
31:BF:10:ALA:O	31:BF:11:ASN:HB2	1.98	0.64
33:BH:100:VAL:HG13	33:BH:101:ILE:N	2.09	0.64
39:BN:63:ILE:HD11	39:BN:74:GLN:HE21	1.62	0.64
40:BO:5:ARG:HG3	40:BO:8:ILE:O	1.98	0.64
40:BO:49:ARG:NH1	40:BO:50:ARG:HB2	2.11	0.64
1:AA:1366:C:H2'	11:AJ:62:ARG:NH2	2.13	0.64
1:AA:1384:C:O2'	10:AI:129:ARG:HG2	1.98	0.64
5:AD:12:ARG:NH2	5:AD:37:PRO:HB3	2.12	0.64
15:AN:40:ARG:NH2	20:AS:14:LEU:HA	2.11	0.64
22:B0:688:U:O5'	22:B0:688:U:H6	1.81	0.64
22:B0:1496:A:P	26:BA:191:LEU:H	2.20	0.64
22:B0:2135:A:H3'	22:B0:2135:A:H8	1.63	0.64
26:BA:76:VAL:HG12	26:BA:114:GLN:HA	1.79	0.64
26:BA:101:ARG:HB3	26:BA:101:ARG:HH11	1.63	0.64
28:BC:52:VAL:HG22	28:BC:65:THR:O	1.97	0.64
28:BC:73:ILE:HG22	28:BC:80:SER:OG	1.97	0.64
29:BD:50:ASP:C	29:BD:52:ALA:H	2.01	0.64
1:AA:452:A:O4'	1:AA:452:A:OP2	2.16	0.63
5:AD:85:THR:O	5:AD:89:LEU:HG	1.98	0.63
6:AE:88:HIS:ND1	6:AE:89:THR:HG22	2.13	0.63
22:B0:877:A:H61	22:B0:900:A:H61	1.45	0.63
22:B0:1252:G:N2	40:BO:36:GLN:NE2	2.45	0.63
22:B0:1300:G:O2'	22:B0:1301:A:OP2	2.13	0.63
22:B0:1497:U:H3'	26:BA:63:ILE:HD13	1.80	0.63
22:B0:1581:A:O5'	26:BA:73:ILE:HB	1.98	0.63
22:B0:1985:C:H2'	22:B0:1986:C:C6	2.32	0.63
22:B0:2014:A:H2'	22:B0:2015:A:C8	2.33	0.63
22:B0:2135:A:N6	22:B0:2140:G:N2	2.45	0.63
22:B0:2149:U:H5"	22:B0:2150:C:OP1	1.98	0.63
22:B0:2263:C:C5'	45:BU:10:ARG:O	2.46	0.63
24:B2:64:LEU:HD12	24:B2:160:VAL:HG11	1.81	0.63
25:B3:89:SER:HB2	25:B3:91:PRO:CD	2.28	0.63
26:BA:123:ILE:CG2	26:BA:134:ILE:HD13	2.28	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BB:36:GLN:HB2	27:BB:79:LEU:HD23	1.78	0.63
32:BG:48:ILE:HG12	32:BG:49:GLU:N	2.12	0.63
34:BI:17:ARG:HA	34:BI:17:ARG:HE	1.62	0.63
40:BO:73:ILE:H	40:BO:73:ILE:CD1	2.06	0.63
41:BQ:18:ARG:NE	41:BQ:18:ARG:O	2.30	0.63
45:BU:37:VAL:HG22	45:BU:38:ARG:H	1.61	0.63
1:AA:517:G:C6	1:AA:531:U:H1'	2.34	0.63
1:AA:792:A:H4'	1:AA:793:U:H5'	1.80	0.63
22:B0:926:G:H2'	47:BX:42:ALA:CB	2.28	0.63
22:B0:1084:A:C5'	25:B3:88:GLU:CB	2.73	0.63
22:B0:1494:A:N1	26:BA:129:LEU:C	2.51	0.63
22:B0:2004:G:H2'	22:B0:2005:A:O4'	1.98	0.63
22:B0:2644:G:N7	27:BB:160:LYS:HD2	2.12	0.63
24:B2:174:ILE:CG1	24:B2:187:ASN:HB2	2.28	0.63
25:B3:48:ALA:HB1	25:B5:16:VAL:CG2	2.28	0.63
28:BC:30:GLN:HA	28:BC:33:VAL:HG13	1.79	0.63
28:BC:41:GLN:HA	28:BC:41:GLN:NE2	2.13	0.63
32:BG:96:LYS:HD2	32:BG:96:LYS:H	1.64	0.63
34:BI:38:ILE:H	34:BI:38:ILE:CD1	2.09	0.63
34:BI:46:ALA:O	34:BI:48:PRO:HD3	1.98	0.63
37:BL:21:PHE:O	37:BL:25:ALA:HB2	1.98	0.63
48:BZ:27:LEU:HA	48:BZ:36:LYS:CG	2.28	0.63
1:AA:1306:A:N6	1:AA:1331:G:H1'	2.13	0.63
4:AC:129:PHE:CE2	4:AC:152:VAL:HB	2.33	0.63
4:AC:206:ILE:N	4:AC:206:ILE:HD12	2.13	0.63
5:AD:18:LEU:HD22	5:AD:63:ILE:HG12	1.80	0.63
10:AI:118:ARG:C	10:AI:119:LYS:HD2	2.19	0.63
22:B0:368:A:H2'	22:B0:369:U:O4'	1.99	0.63
22:B0:1083:U:P	25:B3:83:ALA:N	2.71	0.63
22:B0:2129:C:H5'	22:B0:2130:U:OP2	1.98	0.63
22:B0:2614:A:H4'	22:B0:2615:U:H5	1.63	0.63
28:BC:29:HIS:O	35:BJ:15:ALA:HA	1.98	0.63
34:BI:8:LEU:HD23	34:BI:8:LEU:H	1.64	0.63
36:BK:108:VAL:CG2	36:BK:109:PRO:HD2	2.24	0.63
39:BN:20:ARG:HA	39:BN:20:ARG:HE	1.63	0.63
39:BN:30:TRP:CZ3	39:BN:85:VAL:HB	2.33	0.63
39:BN:63:ILE:HD11	39:BN:74:GLN:NE2	2.12	0.63
39:BN:107:ALA:O	39:BN:111:GLU:HG2	1.98	0.63
40:BO:69:ARG:O	40:BO:69:ARG:NE	2.31	0.63
1:AA:1287:A:H2'	1:AA:1288:A:C8	2.33	0.63
9:AH:74:ILE:HG13	9:AH:128:VAL:HG12	1.79	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:241:A:H1'	22:B0:243:U:C5	2.33	0.63
22:B0:554:U:O2'	22:B0:555:U:H5'	1.98	0.63
22:B0:739:A:O2'	22:B0:740:C:C5	2.50	0.63
22:B0:1084:A:H2'	22:B0:1105:U:O2'	1.97	0.63
22:B0:1223:G:N2	22:B0:1225:G:H3'	2.13	0.63
22:B0:1486:G:OP2	26:BA:86:ARG:HA	1.98	0.63
22:B0:1583:G:C1'	26:BA:96:LYS:HB2	2.29	0.63
22:B0:1996:C:N3	27:BB:138:LEU:HD12	2.12	0.63
22:B0:2093:G:OP2	22:B0:2093:G:H8	1.81	0.63
22:B0:2644:G:H1'	22:B0:2645:G:O4'	1.98	0.63
22:B0:2816:G:H4'	48:BZ:51:ARG:HH21	1.64	0.63
28:BC:29:HIS:HB2	35:BJ:17:LYS:HD3	1.80	0.63
29:BD:49:LEU:O	29:BD:49:LEU:HD23	1.99	0.63
32:BG:36:GLU:C	32:BG:38:CYS:H	2.00	0.63
32:BG:73:PRO:HA	32:BG:74:PRO:C	2.17	0.63
33:BH:10:THR:O	33:BH:13:ARG:HB2	1.98	0.63
37:BL:34:ILE:HD13	37:BL:113:ILE:HB	1.78	0.63
39:BN:54:LEU:O	39:BN:58:PHE:HB3	1.98	0.63
1:AA:1065:U:H4'	1:AA:1066:C:O5'	1.99	0.63
1:AA:1157:A:H1'	1:AA:1181:G:N2	2.12	0.63
22:B0:18:U:H2'	22:B0:19:A:H8	1.61	0.63
22:B0:524:G:C4'	22:B0:555:U:H4'	2.29	0.63
22:B0:1438:U:H2'	22:B0:1439:A:C4	2.33	0.63
22:B0:1487:G:O4'	26:BA:195:GLY:C	2.37	0.63
22:B0:1488:G:O4'	26:BA:157:ALA:C	2.36	0.63
24:B2:41:VAL:HA	24:B2:215:THR:HG21	1.79	0.63
1:AA:279:A:H4'	1:AA:280:C:OP2	1.97	0.63
1:AA:1396:A:H4'	1:AA:1398:A:H1'	1.81	0.63
7:AF:7:VAL:HG22	7:AF:88:MET:O	1.99	0.63
11:AJ:14:ASP:HB3	11:AJ:17:LEU:CG	2.29	0.63
12:AK:13:LYS:NZ	12:AK:15:VAL:HG22	2.13	0.63
22:B0:370:G:H5"	22:B0:371:A:OP2	1.97	0.63
22:B0:1083:U:C3'	25:B3:88:GLU:HB2	2.27	0.63
22:B0:1084:A:C8	25:B3:88:GLU:HG2	2.34	0.63
22:B0:1487:G:C8	26:BA:158:GLY:N	2.67	0.63
22:B0:2262:U:C2'	45:BU:10:ARG:HG2	2.28	0.63
22:B0:2320:U:H5"	22:B0:2321:U:OP1	1.98	0.63
22:B0:2458:G:C4'	22:B0:2459:A:OP1	2.46	0.63
25:B3:51:LYS:HZ2	25:B5:45:VAL:HG11	1.62	0.63
27:BB:146:ILE:HG13	27:BB:155:VAL:HB	1.80	0.63
28:BC:123:LYS:O	28:BC:126:VAL:HG22	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BN:64:SER:HA	39:BN:71:ARG:CD	2.29	0.63
1:AA:718:A:N3	12:AK:116:PRO:CB	2.62	0.63
1:AA:1468:A:H3'	1:AA:1469:C:C6	2.33	0.63
15:AN:46:LYS:NZ	15:AN:59:GLN:HB2	2.13	0.63
22:B0:1083:U:C4'	25:B3:85:ASP:N	2.52	0.63
22:B0:1616:A:H5"	22:B0:1617:C:OP1	1.99	0.63
22:B0:2123:G:C5'	22:B0:2124:G:C4'	2.75	0.63
22:B0:2437:G:H5'	22:B0:2598:A:N1	2.13	0.63
22:B0:2515:C:N4	27:BB:152:PRO:HB3	2.13	0.63
35:BJ:103:ILE:HB	35:BJ:105:ILE:HG22	1.80	0.63
1:AA:615:G:H1	1:AA:625:U:H3	1.46	0.63
1:AA:889:A:H5"	1:AA:890:G:OP1	1.99	0.63
1:AA:975:A:H61	11:AJ:52:LEU:CB	2.11	0.63
1:AA:1322:C:N3	20:AS:5:LYS:HA	2.13	0.63
21:AT:31:ILE:O	21:AT:31:ILE:HD13	1.99	0.63
22:B0:197:A:H2	22:B0:2434:A:H62	1.47	0.63
22:B0:608:A:H2'	22:B0:609:A:H8	1.63	0.63
22:B0:620:G:O2'	22:B0:621:A:OP2	2.13	0.63
22:B0:1083:U:P	25:B3:81:LYS:C	2.77	0.63
22:B0:1085:A:O2'	22:B0:1086:A:H5'	1.98	0.63
22:B0:1577:C:H4'	26:BA:62:ARG:CA	2.28	0.63
22:B0:1580:A:N3	26:BA:68:ARG:CB	2.61	0.63
22:B0:1771:C:H2'	22:B0:1772:A:H8	1.63	0.63
22:B0:2382:G:H5"	22:B0:2383:G:H5'	1.80	0.63
22:B0:2879:A:H5'	22:B0:2880:C:OP1	1.99	0.63
23:B9:90:C:O5'	23:B9:90:C:H6	1.82	0.63
28:BC:67:ARG:HD2	28:BC:72:SER:CA	2.29	0.63
29:BD:87:LYS:HB2	29:BD:87:LYS:NZ	2.14	0.63
37:BL:37:THR:N	37:BL:40:LYS:HB3	2.13	0.63
37:BL:52:ILE:O	37:BL:53:THR:HB	1.99	0.63
39:BN:10:GLU:CD	39:BN:10:GLU:H	2.02	0.63
40:BO:10:ARG:HA	40:BO:13:HIS:HD2	1.64	0.63
41:BQ:98:LYS:O	41:BQ:98:LYS:HD3	1.99	0.63
1:AA:109:A:H1'	1:AA:327:A:H1'	1.81	0.63
1:AA:817:C:H4'	1:AA:818:G:O5'	1.98	0.63
5:AD:6:PRO:O	5:AD:9:LYS:HG2	1.99	0.63
10:AI:49:GLN:N	10:AI:50:PRO:HD2	2.14	0.63
14:AM:44:ILE:HD12	14:AM:45:SER:N	2.14	0.63
22:B0:764:A:O2'	22:B0:765:C:OP1	2.14	0.63
22:B0:776:G:H5'	22:B0:777:G:OP1	1.99	0.63
22:B0:1416:G:H8	26:BA:100:ARG:NH1	1.95	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1495:A:OP1	26:BA:191:LEU:HA	1.99	0.63
22:B0:1853:A:C8	22:B0:1888:G:H1'	2.34	0.63
22:B0:1931:U:H2'	22:B0:1932:A:H5'	1.81	0.63
22:B0:2109:U:H5"	22:B0:2110:G:O3'	1.98	0.63
24:B2:59:ARG:HG3	24:B2:163:ARG:HG2	1.81	0.63
24:B2:215:THR:OG1	24:B2:216:THR:N	2.31	0.63
25:B3:2:ILE:HD12	25:B3:2:ILE:N	2.12	0.63
25:B3:58:LEU:HB3	25:B3:90:ALA:HB1	1.79	0.63
28:BC:182:ALA:O	28:BC:183:PHE:HB3	1.98	0.63
29:BD:47:LYS:HG2	29:BD:48:LEU:H	1.61	0.63
37:BL:48:VAL:O	37:BL:49:GLU:HB3	1.99	0.63
5:AD:120:LYS:O	5:AD:120:LYS:HD3	1.99	0.62
7:AF:1:MET:HA	7:AF:68:GLN:OE1	1.99	0.62
10:AI:79:ARG:O	10:AI:83:THR:HG23	1.99	0.62
12:AK:28:ASN:HB2	12:AK:56:LYS:HG3	1.80	0.62
14:AM:77:LYS:O	14:AM:77:LYS:HD3	1.99	0.62
15:AN:44:VAL:HG12	15:AN:47:LEU:HG	1.81	0.62
22:B0:558:G:H2'	22:B0:559:G:C8	2.34	0.62
22:B0:675:A:C4'	22:B0:2444:G:H5'	2.28	0.62
22:B0:1082:U:O4'	25:B3:80:LEU:N	2.31	0.62
22:B0:1084:A:H5"	25:B3:88:GLU:CD	2.19	0.62
22:B0:1579:A:O4'	26:BA:65:ASP:CB	2.43	0.62
22:B0:2335:A:HO2'	22:B0:2336:A:H8	1.46	0.62
22:B0:2624:G:H2'	22:B0:2625:G:O4'	1.98	0.62
25:B3:20:VAL:HG21	25:B5:51:LYS:CB	2.29	0.62
39:BN:49:ILE:HD12	39:BN:99:LEU:HD22	1.80	0.62
40:BO:116:LEU:H	40:BO:116:LEU:CD2	2.12	0.62
44:BT:26:PHE:CE2	44:BT:89:ILE:HD13	2.34	0.62
1:AA:523:A:H61	13:AL:88:ASP:CG	2.01	0.62
1:AA:781:A:H4'	1:AA:1523:G:O2'	1.99	0.62
1:AA:1301:U:O2'	1:AA:1302:C:OP1	2.15	0.62
7:AF:38:ARG:HG3	7:AF:39:LEU:H	1.63	0.62
9:AH:17:GLN:HA	9:AH:64:TYR:OH	1.99	0.62
12:AK:15:VAL:HB	12:AK:78:ILE:HG12	1.81	0.62
20:AS:4:LEU:HD11	20:AS:8:PRO:CA	2.29	0.62
22:B0:699:A:H4'	22:B0:1634:A:N6	2.14	0.62
22:B0:1322:A:H61	22:B0:1333:G:N2	1.97	0.62
22:B0:1417:U:OP2	26:BA:100:ARG:HG2	2.00	0.62
22:B0:1654:A:H62	22:B0:2006:C:H1'	1.62	0.62
22:B0:2004:G:OP2	22:B0:2004:G:H8	1.81	0.62
37:BL:37:THR:C	37:BL:40:LYS:HB3	2.19	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BL:114:GLU:C	37:BL:115:LEU:HD12	2.19	0.62
40:BO:54:ARG:H	40:BO:57:ARG:CG	2.05	0.62
41:BQ:103:ILE:HD12	41:BQ:103:ILE:N	2.14	0.62
42:BR:45:ALA:O	42:BR:46:ALA:HB3	1.98	0.62
49:B1:48:TYR:O	49:B1:49:LYS:HB2	1.98	0.62
1:AA:188:C:O2	1:AA:189:A:H1'	1.98	0.62
1:AA:571:U:N3	1:AA:864:A:N6	2.47	0.62
9:AH:47:ASP:CG	9:AH:48:PHE:H	2.03	0.62
18:AQ:35:LYS:NZ	18:AQ:37:ILE:HG22	2.14	0.62
22:B0:603:A:H4'	22:B0:604:G:H4'	1.79	0.62
22:B0:776:G:H1'	22:B0:793:A:N1	2.14	0.62
22:B0:2052:A:H61	22:B0:2617:U:H3	1.47	0.62
22:B0:2345:G:O2'	22:B0:2346:A:OP2	2.17	0.62
22:B0:2898:G:OP1	33:BH:139:VAL:C	2.38	0.62
24:B2:64:LEU:HB3	24:B2:65:PRO:CD	2.27	0.62
25:B3:89:SER:OG	25:B5:36:ALA:HB1	1.98	0.62
26:BA:131:MET:HE1	26:BA:187:CYS:HB2	1.81	0.62
26:BA:198:GLU:HB3	26:BA:201:LEU:HG	1.80	0.62
27:BB:185:ASN:C	27:BB:186:LEU:HD23	2.19	0.62
28:BC:29:HIS:N	35:BJ:17:LYS:HA	2.13	0.62
28:BC:151:GLY:HA2	28:BC:187:VAL:CG1	2.30	0.62
34:BI:43:ILE:CD1	34:BI:53:LYS:HG3	2.29	0.62
37:BL:96:ARG:H	37:BL:96:ARG:HE	1.43	0.62
40:BO:14:LYS:C	40:BO:16:ILE:H	2.01	0.62
42:BR:55:VAL:HA	42:BR:87:LEU:HA	1.79	0.62
45:BU:58:LEU:O	45:BU:58:LEU:HD12	1.99	0.62
1:AA:130:A:H8	18:AQ:64:ARG:HH12	1.47	0.62
1:AA:1367:C:O2'	1:AA:1368:A:H5'	1.98	0.62
6:AE:83:PRO:HD3	9:AH:96:ALA:HB2	1.82	0.62
17:AP:19:VAL:HG21	17:AP:75:ILE:HD11	1.80	0.62
22:B0:165:A:H2'	22:B0:165:A:N3	2.13	0.62
22:B0:898:C:H2'	22:B0:899:A:C8	2.34	0.62
22:B0:940:G:H2'	22:B0:941:A:O4'	1.99	0.62
22:B0:1499:U:N1	26:BA:155:ARG:CD	2.61	0.62
22:B0:1568:G:H5"	22:B0:1569:A:C5'	2.28	0.62
22:B0:2005:A:H2'	22:B0:2006:C:C2	2.34	0.62
22:B0:2133:G:N1	22:B0:2151:U:N3	2.47	0.62
22:B0:2329:U:C4'	45:BU:9:THR:HG23	2.29	0.62
26:BA:106:PRO:HD2	26:BA:109:LEU:HD23	1.79	0.62
26:BA:148:GLY:O	26:BA:149:LYS:HB3	1.99	0.62
28:BC:26:ALA:C	35:BJ:17:LYS:HE2	2.19	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BD:87:LYS:HB2	29:BD:87:LYS:HZ3	1.65	0.62
33:BH:99:ARG:HA	33:BH:99:ARG:CZ	2.29	0.62
35:BJ:124:GLY:O	35:BJ:125:LEU:HB2	1.98	0.62
36:BK:42:THR:HG22	36:BK:45:GLN:NE2	2.10	0.62
39:BN:47:ILE:HG22	39:BN:48:ALA:H	1.63	0.62
39:BN:113:LEU:HD22	39:BN:114:ASN:H	1.65	0.62
44:BT:61:LEU:O	44:BT:71:LYS:HA	1.99	0.62
48:BZ:31:LYS:H	48:BZ:31:LYS:CD	2.12	0.62
1:AA:1239:A:H1'	1:AA:1241:G:C5	2.34	0.62
1:AA:1500:A:O2'	1:AA:1501:C:H5'	1.99	0.62
2:AV:20:G:H3'	2:AV:21:A:C5'	2.29	0.62
2:AW:3:G:H2'	2:AW:4:G:H8	1.64	0.62
6:AE:10:LEU:HD21	6:AE:38:VAL:HB	1.81	0.62
7:AF:60:VAL:C	7:AF:61:LEU:HD12	2.20	0.62
22:B0:398:C:H5"	22:B0:2090:A:H4'	1.81	0.62
22:B0:627:A:C4'	22:B0:628:G:OP1	2.48	0.62
22:B0:1083:U:H6	22:B0:1083:U:H3'	1.64	0.62
22:B0:2173:A:C1'	24:B2:37:PHE:HD1	2.12	0.62
23:B9:56:G:H4'	23:B9:57:A:C8	2.34	0.62
25:B3:78:LEU:HD13	25:B3:82:GLU:C	2.19	0.62
32:BG:77:VAL:C	32:BG:79:LEU:H	2.01	0.62
32:BG:133:ARG:CD	32:BG:137:LEU:HB3	2.29	0.62
40:BO:34:ALA:O	40:BO:35:PHE:HB2	1.99	0.62
4:AC:184:ASN:HD21	4:AC:199:VAL:CB	2.02	0.62
6:AE:100:GLU:HA	6:AE:121:ASN:ND2	2.14	0.62
7:AF:42:TRP:HB2	7:AF:59:TYR:HB2	1.81	0.62
22:B0:27:G:N2	22:B0:512:G:H2'	2.15	0.62
22:B0:580:U:O2'	22:B0:581:C:H5'	1.98	0.62
22:B0:611:C:H42	22:B0:618:G:N2	1.98	0.62
22:B0:1082:U:O3'	25:B3:82:GLU:CA	2.48	0.62
22:B0:1138:G:H2'	22:B0:1139:G:O4'	1.99	0.62
22:B0:1340:U:H1'	22:B0:1603:A:O4'	2.00	0.62
22:B0:1580:A:C2	26:BA:68:ARG:HB3	2.34	0.62
22:B0:1932:A:H61	22:B0:1968:G:H21	1.46	0.62
22:B0:2130:U:H3'	24:B2:178:ASP:OD2	1.98	0.62
22:B0:2896:U:C2	33:BH:14:ASP:HB2	2.35	0.62
27:BB:9:VAL:HG22	27:BB:28:GLU:HG3	1.80	0.62
30:BE:140:ILE:HD12	30:BE:141:GLY:N	2.13	0.62
32:BG:60:VAL:HG12	32:BG:61:TYR:HD1	1.64	0.62
40:BO:2:ARG:NE	40:BO:2:ARG:N	2.46	0.62
42:BR:11:LEU:C	42:BR:11:LEU:HD12	2.20	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BR:93:LEU:HD23	42:BR:95:PHE:CD1	2.35	0.62
49:B1:14:ALA:HB2	49:B1:40:PRO:HG2	1.81	0.62
1:AA:815:A:N6	1:AA:1509:C:H4'	2.13	0.62
3:AB:23:ASN:HD22	3:AB:24:PRO:CD	2.12	0.62
19:AR:11:ARG:HD3	19:AR:46:THR:HG22	1.81	0.62
22:B0:733:G:H3'	22:B0:761:A:H61	1.64	0.62
22:B0:846:U:O2'	22:B0:848:C:P	2.57	0.62
22:B0:1106:G:H2'	22:B0:1107:G:H8	1.64	0.62
22:B0:1201:U:H2'	35:BJ:14:LYS:HE3	1.82	0.62
22:B0:1244:A:C2'	35:BJ:18:ARG:HH11	2.08	0.62
22:B0:1423:A:C8	26:BA:57:HIS:HA	2.35	0.62
22:B0:1485:C:H2'	22:B0:1486:G:N9	2.14	0.62
22:B0:1488:G:O4'	26:BA:157:ALA:O	2.18	0.62
22:B0:1491:A:C8	26:BA:174:ARG:HG2	2.34	0.62
22:B0:1598:A:O2'	42:BR:40:LYS:HD3	2.00	0.62
22:B0:1828:G:H4'	22:B0:1829:A:H5'	1.80	0.62
22:B0:1943:U:C1'	22:B0:1945:G:H5'	2.28	0.62
22:B0:2336:A:O2'	22:B0:2337:G:OP1	2.18	0.62
27:BB:201:LEU:HD12	27:BB:201:LEU:O	2.00	0.62
29:BD:174:PHE:HB3	29:BD:175:PRO:HA	1.79	0.62
30:BE:88:LEU:O	30:BE:88:LEU:HD22	1.98	0.62
39:BN:23:ASP:HA	39:BN:96:LEU:HB3	1.82	0.62
40:BO:102:LYS:N	40:BO:102:LYS:HE3	2.14	0.62
1:AA:60:A:O2'	1:AA:61:G:P	2.58	0.62
1:AA:702:A:H3'	22:B0:1848:A:OP1	1.99	0.62
1:AA:753:A:H5'	1:AA:754:C:C5	2.34	0.62
1:AA:1432:G:H21	1:AA:1468:A:H8	1.48	0.62
2:AU:20:G:H3'	2:AU:21:A:C5'	2.29	0.62
20:AS:4:LEU:O	20:AS:5:LYS:HB2	1.99	0.62
22:B0:1273:U:O4	22:B0:1608:A:H2'	2.00	0.62
22:B0:1426:G:H3'	22:B0:1428:C:H42	1.65	0.62
22:B0:1667:G:H21	22:B0:1994:C:H42	1.48	0.62
22:B0:1784:A:H4'	22:B0:1785:A:H5"	1.80	0.62
22:B0:1936:A:H2	22:B0:1943:U:H3	1.46	0.62
22:B0:2131:U:C5	24:B2:34:THR:N	2.67	0.62
22:B0:2174:C:N3	22:B0:2175:C:H5'	2.14	0.62
25:B5:57:ILE:HG23	25:B5:92:ALA:HA	1.82	0.62
29:BD:48:LEU:HA	29:BD:51:ASN:CG	2.20	0.62
37:BL:5:LYS:HD2	37:BL:5:LYS:C	2.20	0.62
39:BN:88:ARG:HG2	39:BN:89:GLY:N	2.15	0.62
41:BQ:49:LYS:N	41:BQ:49:LYS:HZ3	1.98	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:52:C:H42	1:AA:359:G:H1	1.48	0.62
1:AA:246:A:O2'	1:AA:247:G:H4'	1.99	0.62
1:AA:1349:A:OP1	10:AI:119:LYS:HG3	1.99	0.62
1:AA:1394:A:H5"	1:AA:1395:C:OP2	1.99	0.62
1:AA:1441:A:H4'	1:AA:1442:G:C5	2.35	0.62
1:AA:1485:U:C5'	22:B0:1960:A:H4'	2.29	0.62
22:B0:279:A:N6	22:B0:362:A:O4'	2.33	0.62
22:B0:873:C:H2'	22:B0:874:G:H8	1.65	0.62
22:B0:1387:A:H4'	22:B0:1468:G:H1'	1.81	0.62
22:B0:1488:G:C5'	26:BA:198:GLU:HG3	2.29	0.62
22:B0:2144:G:H3'	22:B0:2145:C:C5'	2.29	0.62
22:B0:2529:G:OP2	22:B0:2530:A:H5"	2.00	0.62
22:B0:2779:U:C2'	33:BH:116:ARG:HB2	2.30	0.62
22:B0:2779:U:C5'	33:BH:116:ARG:HE	2.13	0.62
25:B3:88:GLU:O	25:B3:89:SER:C	2.37	0.62
25:B5:40:VAL:HG22	25:B5:41:ALA:N	2.13	0.62
27:BB:130:GLN:HB3	27:BB:134:HIS:CB	2.30	0.62
32:BG:56:VAL:HG12	32:BG:70:THR:HA	1.81	0.62
33:BH:31:GLU:O	33:BH:33:ALA:N	2.30	0.62
35:BJ:27:LEU:HD23	35:BJ:27:LEU:H	1.64	0.62
35:BJ:101:ILE:HG23	35:BJ:101:ILE:O	1.98	0.62
37:BL:28:LEU:HD13	37:BL:45:ARG:HH22	1.64	0.62
37:BL:38:LEU:N	37:BL:38:LEU:HD12	2.15	0.62
38:BM:7:ARG:HA	38:BM:10:ARG:NE	2.14	0.62
40:BO:26:ALA:HB3	40:BO:27:ARG:CZ	2.29	0.62
42:BR:7:LEU:HG	42:BR:8:LEU:N	2.15	0.62
42:BR:68:LYS:O	42:BR:69:ARG:HB3	2.00	0.62
4:AC:26:LYS:HD2	4:AC:27:GLU:N	2.15	0.62
8:AG:145:GLU:O	8:AG:148:LYS:HD2	2.00	0.62
20:AS:17:LYS:HA	20:AS:20:LYS:HD3	1.82	0.62
22:B0:84:A:O3'	43:BS:7:ASP:HB2	1.99	0.62
22:B0:610:C:O5'	22:B0:610:C:H6	1.81	0.62
22:B0:1421:G:N2	26:BA:146:LYS:H	1.97	0.62
22:B0:1491:A:H5'	26:BA:161:VAL:HG13	1.80	0.62
22:B0:1492:G:C8	26:BA:153:LEU:HB2	2.34	0.62
22:B0:1494:A:H2'	22:B0:1494:A:N3	2.13	0.62
22:B0:2263:C:H5'	45:BU:9:THR:HG22	1.82	0.62
22:B0:2343:U:O2'	22:B0:2344:U:H5'	2.00	0.62
22:B0:2614:A:H5"	22:B0:2615:U:OP1	1.99	0.62
26:BA:68:ARG:HE	26:BA:69:ASN:C	2.02	0.62
27:BB:37:VAL:HA	27:BB:78:GLY:CA	2.30	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BB:152:PRO:C	27:BB:154:LYS:H	2.03	0.62
33:BH:8:PRO:HG2	33:BH:9:GLU:N	2.13	0.62
39:BN:27:VAL:HG13	39:BN:88:ARG:HD2	1.82	0.62
40:BO:17:LEU:HD11	40:BO:31:TYR:HD1	1.64	0.62
44:BT:34:LYS:HD3	44:BT:34:LYS:H	1.64	0.62
48:BZ:31:LYS:HG2	48:BZ:32:THR:H	1.64	0.62
49:B1:9:LYS:H	49:B1:9:LYS:HD2	1.65	0.62
1:AA:1030:U:O2	1:AA:1030:U:C2'	2.47	0.61
2:AW:54:U:N3	2:AW:55:U:H5	1.98	0.61
4:AC:109:GLU:HB2	4:AC:143:LEU:CD2	2.30	0.61
9:AH:111:THR:HG23	9:AH:114:ALA:H	1.65	0.61
13:AL:110:LYS:HA	13:AL:113:ARG:HH21	1.65	0.61
14:AM:16:ILE:HD13	14:AM:16:ILE:O	2.00	0.61
19:AR:39:VAL:HB	19:AR:43:ILE:HG23	1.82	0.61
22:B0:850:U:C2	22:B0:928:A:N6	2.60	0.61
22:B0:876:C:H2'	22:B0:877:A:C8	2.35	0.61
22:B0:1125:G:C6	22:B0:1126:A:N6	2.68	0.61
22:B0:1479:G:O2'	22:B0:1480:G:H5'	2.00	0.61
22:B0:1496:A:N3	26:BA:64:VAL:HA	2.15	0.61
22:B0:1581:A:OP1	26:BA:72:GLY:N	2.32	0.61
22:B0:1923:U:H2'	22:B0:1924:C:C6	2.35	0.61
22:B0:1994:C:H2'	22:B0:1995:U:C6	2.35	0.61
25:B5:73:ARG:NH1	25:B5:73:ARG:HB3	2.15	0.61
26:BA:80:LEU:HD11	26:BA:89:ASN:HB2	1.82	0.61
28:BC:96:VAL:HG21	35:BJ:19:LEU:CD2	2.30	0.61
35:BJ:78:ARG:HB3	35:BJ:78:ARG:HH11	1.65	0.61
37:BL:113:ILE:O	37:BL:114:GLU:HG2	2.00	0.61
39:BN:5:LYS:HA	39:BN:8:GLU:HG3	1.82	0.61
1:AA:119:A:O2'	1:AA:120:A:OP2	2.18	0.61
1:AA:516:U:H2'	1:AA:517:G:O4'	2.00	0.61
15:AN:56:PRO:O	15:AN:59:GLN:HG2	2.00	0.61
20:AS:10:ILE:HG22	20:AS:15:LEU:HB2	1.81	0.61
22:B0:531:C:H4'	22:B0:532:A:O5'	2.00	0.61
22:B0:858:G:H1	22:B0:919:U:H3	1.48	0.61
22:B0:1210:G:H4'	22:B0:1212:G:O4'	2.00	0.61
22:B0:1499:U:C2	26:BA:155:ARG:HD2	2.27	0.61
22:B0:1668:A:H61	22:B0:1676:A:H61	1.45	0.61
22:B0:1779:U:H4'	22:B0:1780:A:OP2	2.00	0.61
22:B0:1848:A:H2'	22:B0:1849:G:O4'	2.00	0.61
22:B0:1877:A:H2	22:B0:2411:A:H4'	1.64	0.61
22:B0:2047:C:H2'	22:B0:2048:G:H8	1.64	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2777:G:H5”	22:B0:2778:A:OP1	2.00	0.61
28:BC:31:VAL:O	28:BC:34:ALA:HB3	2.00	0.61
28:BC:181:ILE:HA	28:BC:185:LYS:O	2.00	0.61
29:BD:153:ILE:HD13	29:BD:153:ILE:N	2.14	0.61
37:BL:33:ILE:C	37:BL:34:ILE:HD12	2.21	0.61
39:BN:49:ILE:HD12	39:BN:99:LEU:HD13	1.81	0.61
40:BO:13:HIS:ND1	40:BO:14:LYS:N	2.48	0.61
40:BO:14:LYS:C	40:BO:16:ILE:N	2.51	0.61
1:AA:12:U:H2’	1:AA:13:U:H5”	1.82	0.61
1:AA:664:G:H22	1:AA:741:G:H1	1.47	0.61
1:AA:965:U:O2’	1:AA:966:G:H5’	2.00	0.61
1:AA:975:A:N6	11:AJ:52:LEU:HB2	2.14	0.61
4:AC:63:ILE:HD12	4:AC:65:VAL:CG2	2.27	0.61
7:AF:16:GLU:O	7:AF:19:PRO:HD2	2.01	0.61
22:B0:183:C:O5’	28:BC:67:ARG:NH1	2.34	0.61
22:B0:351:C:N3	22:B0:352:A:N6	2.47	0.61
22:B0:699:A:H4’	22:B0:1634:A:H61	1.66	0.61
22:B0:1246:A:H5”	28:BC:94:GLN:NE2	2.15	0.61
22:B0:1417:U:O2	26:BA:96:LYS:O	2.18	0.61
22:B0:1418:G:C5	26:BA:99:GLU:HB3	2.34	0.61
22:B0:2855:C:H2’	22:B0:2856:A:C5’	2.31	0.61
29:BD:7:TYR:HD1	29:BD:11:VAL:HG13	1.65	0.61
29:BD:59:ILE:HD12	29:BD:60:SER:N	2.15	0.61
29:BD:65:LEU:H	29:BD:88:VAL:CG2	2.12	0.61
32:BG:52:LEU:HD22	32:BG:77:VAL:HG11	1.83	0.61
32:BG:99:LYS:HD2	32:BG:99:LYS:O	2.01	0.61
39:BN:64:SER:C	39:BN:71:ARG:HG2	2.20	0.61
40:BO:59:LEU:O	40:BO:61:ILE:HG13	2.00	0.61
41:BQ:13:SER:OG	41:BQ:16:LYS:HB2	1.99	0.61
42:BR:63:VAL:HG22	42:BR:64:LYS:H	1.65	0.61
1:AA:558:G:H2’	1:AA:559:A:H2	1.65	0.61
1:AA:1009:U:H3	1:AA:1020:G:H22	1.46	0.61
1:AA:1391:U:H2’	1:AA:1392:G:C8	2.35	0.61
1:AA:1399:C:H5”	1:AA:1400:C:OP1	2.01	0.61
1:AA:1436:U:H5”	21:AT:17:ARG:HH21	1.65	0.61
2:AU:74:C:H2’	22:B0:2556:C:C1’	2.29	0.61
4:AC:150:VAL:HG22	4:AC:199:VAL:HG13	1.81	0.61
5:AD:151:GLN:HG3	5:AD:154:VAL:HG22	1.82	0.61
17:AP:22:ALA:HA	17:AP:33:ILE:HG12	1.82	0.61
22:B0:678:C:H5’	22:B0:2071:A:H5”	1.81	0.61
22:B0:919:U:H2’	22:B0:920:A:C8	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1083:U:C2	25:B3:84:LYS:HG2	2.35	0.61
22:B0:1248:G:O2'	22:B0:1249:U:OP1	2.15	0.61
22:B0:1500:A:H61	26:BA:155:ARG:H	1.49	0.61
22:B0:1626:A:H4'	22:B0:1627:G:C5'	2.28	0.61
22:B0:2116:G:OP1	22:B0:2117:A:C4'	2.48	0.61
22:B0:2160:C:H5"	22:B0:2162:G:OP2	2.01	0.61
22:B0:2679:A:OP1	27:BB:165:MET:HB3	2.00	0.61
22:B0:2789:C:H5'	22:B0:2892:G:H21	1.65	0.61
25:B3:58:LEU:HD11	25:B3:115:ALA:HB1	1.82	0.61
28:BC:149:ILE:HG22	28:BC:150:THR:HG22	1.81	0.61
32:BG:81:LYS:HE2	32:BG:81:LYS:HA	1.82	0.61
33:BH:90:GLU:O	33:BH:93:ILE:HG22	2.00	0.61
35:BJ:39:LYS:HE3	35:BJ:39:LYS:N	2.15	0.61
37:BL:19:ALA:C	37:BL:21:PHE:H	2.04	0.61
1:AA:421:U:H5'	1:AA:422:C:OP2	2.00	0.61
1:AA:451:A:N6	1:AA:481:G:C1'	2.59	0.61
5:AD:166:LYS:HG2	5:AD:172:VAL:HG22	1.81	0.61
18:AQ:37:ILE:HD12	18:AQ:39:ARG:NH1	2.15	0.61
22:B0:529:A:H5"	22:B0:530:G:OP1	1.99	0.61
22:B0:617:G:O3'	22:B0:618:G:H8	1.83	0.61
22:B0:696:G:H1	22:B0:766:U:H3	1.48	0.61
22:B0:830:G:H4'	22:B0:2448:A:N6	2.11	0.61
22:B0:1495:A:P	26:BA:140:VAL:HG22	2.40	0.61
22:B0:2821:A:O2'	22:B0:2822:G:H5'	2.01	0.61
27:BB:92:VAL:HG23	27:BB:94:GLN:H	1.65	0.61
28:BC:30:GLN:HB3	35:BJ:18:ARG:HA	1.81	0.61
31:BF:30:LEU:H	31:BF:30:LEU:HD12	1.66	0.61
32:BG:133:ARG:HG3	32:BG:137:LEU:CB	2.29	0.61
35:BJ:118:THR:CG2	35:BJ:119:PRO:HA	2.19	0.61
36:BK:80:VAL:HG13	36:BK:81:ARG:N	2.15	0.61
39:BN:48:ALA:HB3	39:BN:64:SER:OG	2.00	0.61
39:BN:96:LEU:HD13	39:BN:96:LEU:N	2.11	0.61
39:BN:105:LYS:HA	39:BN:105:LYS:HZ2	1.65	0.61
40:BO:82:LEU:HD23	40:BO:108:LEU:HD21	1.81	0.61
42:BR:92:ASN:O	42:BR:94:ASP:N	2.33	0.61
45:BU:45:HIS:ND1	45:BU:56:HIS:HB2	2.15	0.61
1:AA:1366:C:C3'	11:AJ:62:ARG:HH21	2.13	0.61
1:AA:1502:A:O5'	1:AA:1503:A:OP2	2.19	0.61
4:AC:205:GLU:HB3	4:AC:206:ILE:HD12	1.83	0.61
18:AQ:19:SER:C	18:AQ:20:ILE:HD12	2.21	0.61
22:B0:432:A:N3	28:BC:69:ARG:HA	2.16	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:564:C:H4'	40:BO:36:GLN:CB	2.23	0.61
22:B0:590:A:P	28:BC:88:ARG:H	2.23	0.61
22:B0:655:A:O2'	22:B0:656:G:C8	2.54	0.61
22:B0:1082:U:C4'	25:B3:82:GLU:N	2.57	0.61
22:B0:1332:G:H5"	22:B0:1333:G:OP2	2.00	0.61
22:B0:1557:C:C2'	22:B0:1558:C:O4'	2.48	0.61
22:B0:1932:A:N6	22:B0:1968:G:H21	1.99	0.61
22:B0:2173:A:H4'	24:B2:35:ALA:CB	2.29	0.61
22:B0:2898:G:H5"	33:BH:139:VAL:N	2.16	0.61
25:B3:14:MET:HB3	25:B3:18:ASP:HB2	1.82	0.61
25:B5:69:ILE:O	25:B5:73:ARG:HG3	2.00	0.61
28:BC:61:ARG:C	28:BC:61:ARG:HD3	2.20	0.61
33:BH:31:GLU:HA	33:BH:34:ARG:HG2	1.82	0.61
36:BK:78:LEU:HG	36:BK:79:ALA:N	2.15	0.61
37:BL:38:LEU:HD12	37:BL:38:LEU:H	1.66	0.61
37:BL:49:GLU:N	37:BL:52:ILE:HG23	2.15	0.61
39:BN:60:VAL:O	39:BN:61:ARG:HD3	1.99	0.61
40:BO:15:LYS:HA	40:BO:18:LYS:HE3	1.81	0.61
41:BQ:48:LYS:HG3	41:BQ:49:LYS:HZ3	1.65	0.61
47:BX:15:ARG:HD2	47:BX:20:LYS:HG2	1.80	0.61
48:BZ:27:LEU:HA	48:BZ:36:LYS:HG2	1.83	0.61
1:AA:1319:A:H1'	20:AS:6:LYS:CD	2.31	0.61
1:AA:1347:G:H1'	1:AA:1348:U:H5	1.64	0.61
5:AD:57:LYS:HD3	5:AD:202:LEU:HD23	1.83	0.61
5:AD:101:VAL:HG21	5:AD:122:ILE:HD13	1.81	0.61
10:AI:119:LYS:HB2	10:AI:122:ARG:HB3	1.82	0.61
22:B0:678:C:H5'	22:B0:2071:A:C5'	2.31	0.61
22:B0:1022:G:O5'	22:B0:1023:U:OP1	2.19	0.61
22:B0:1082:U:O2'	25:B3:83:ALA:CA	2.48	0.61
22:B0:1186:G:N2	22:B0:1187:G:H1'	2.15	0.61
22:B0:1186:G:H21	22:B0:1187:G:H1'	1.66	0.61
22:B0:1853:A:N7	22:B0:1888:G:H1'	2.14	0.61
22:B0:1872:A:O2'	22:B0:1877:A:H5'	2.01	0.61
22:B0:2557:G:O2'	22:B0:2558:C:H5'	2.01	0.61
22:B0:2639:A:P	27:BB:46:ARG:HD3	2.41	0.61
22:B0:2679:A:H5'	27:BB:116:LYS:HD2	1.83	0.61
22:B0:2789:C:O2'	22:B0:2892:G:H2'	2.01	0.61
25:B3:25:ALA:HB1	25:B5:107:LYS:CD	2.31	0.61
26:BA:143:VAL:CG1	26:BA:161:VAL:HG11	2.30	0.61
27:BB:119:ALA:HB3	27:BB:124:ARG:HG2	1.82	0.61
27:BB:172:VAL:HG13	27:BB:175:LEU:HD11	1.83	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BC:30:GLN:HB2	35:BJ:18:ARG:HH21	1.65	0.61
28:BC:30:GLN:HA	28:BC:33:VAL:CG1	2.29	0.61
29:BD:32:LYS:HA	29:BD:91:ARG:HG2	1.83	0.61
38:BM:97:PHE:HE2	38:BM:101:GLY:HA3	1.65	0.61
39:BN:9:GLN:HA	39:BN:14:GLN:NE2	2.15	0.61
40:BO:20:ALA:O	40:BO:23:TYR:HD2	1.82	0.61
40:BO:78:PHE:CE1	40:BO:79:ILE:HB	2.35	0.61
41:BQ:17:VAL:O	41:BQ:18:ARG:HB3	1.99	0.61
46:BW:24:GLU:O	46:BW:28:LEU:HG	2.00	0.61
1:AA:1001:C:H1'	1:AA:1041:G:N2	2.15	0.61
1:AA:1498:U:H1'	1:AA:1499:A:N7	2.15	0.61
14:AM:32:ILE:O	14:AM:32:ILE:HD13	2.01	0.61
22:B0:877:A:N1	22:B0:900:A:N1	2.49	0.61
22:B0:898:C:H2'	22:B0:899:A:H8	1.65	0.61
22:B0:1082:U:H5"	25:B3:81:LYS:C	2.21	0.61
22:B0:1203:U:H4'	28:BC:183:PHE:CE2	2.35	0.61
22:B0:1417:U:H4'	22:B0:1588:A:C4'	2.30	0.61
22:B0:1488:G:C8	26:BA:158:GLY:CA	2.80	0.61
22:B0:1608:A:HO2'	22:B0:1609:A:P	2.24	0.61
22:B0:2137:U:O2	22:B0:2137:U:C2'	2.48	0.61
22:B0:2478:A:H4'	22:B0:2527:C:O2'	2.00	0.61
32:BG:54:ILE:HD13	32:BG:55:PRO:N	2.15	0.61
35:BJ:77:ILE:HG23	35:BJ:111:ILE:HD11	1.83	0.61
35:BJ:105:ILE:HG23	35:BJ:106:GLU:N	2.15	0.61
39:BN:12:MET:HA	39:BN:12:MET:CE	2.30	0.61
41:BQ:85:ILE:N	41:BQ:85:ILE:HD12	2.16	0.61
42:BR:74:ILE:HD12	42:BR:76:ARG:NH1	2.15	0.61
45:BU:68:PHE:O	45:BU:73:PRO:HB3	2.01	0.61
47:BX:6:ILE:HD12	47:BX:6:ILE:N	2.15	0.61
1:AA:35:G:O2'	13:AL:114:SER:HA	2.01	0.61
1:AA:701:U:O5'	1:AA:702:A:OP2	2.19	0.61
1:AA:784:A:H5"	22:B0:1837:C:OP2	2.00	0.61
7:AF:10:VAL:HG22	7:AF:11:HIS:N	2.15	0.61
17:AP:52:LEU:CD1	17:AP:75:ILE:HG13	2.31	0.61
19:AR:33:THR:HG22	19:AR:34:GLU:N	2.15	0.61
22:B0:635:C:H1'	22:B0:639:U:OP1	2.01	0.61
22:B0:667:U:OP2	35:BJ:48:ARG:HD2	2.00	0.61
22:B0:1139:G:O2'	22:B0:1140:C:H5'	2.01	0.61
22:B0:1202:G:H4'	35:BJ:14:LYS:H	1.66	0.61
22:B0:1229:C:H2'	22:B0:1230:A:H8	1.64	0.61
22:B0:1478:G:O2'	22:B0:1558:C:O2'	2.18	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1479:G:OP2	22:B0:1559:U:C5'	2.48	0.61
22:B0:2126:A:O2'	22:B0:2171:A:H1'	2.01	0.61
24:B2:89:ALA:HB1	24:B2:152:VAL:HG11	1.81	0.61
25:B5:17:MET:O	25:B5:21:GLU:HG3	2.01	0.61
28:BC:28:VAL:HG11	28:BC:111:GLU:OE1	2.00	0.61
33:BH:8:PRO:HG2	33:BH:10:THR:H	1.66	0.61
33:BH:127:GLY:HA3	33:BH:131:ASN:CG	2.21	0.61
35:BJ:6:LEU:HD23	35:BJ:6:LEU:H	1.64	0.61
37:BL:28:LEU:HB3	37:BL:113:ILE:HG21	1.82	0.61
42:BR:33:LYS:HA	42:BR:82:LYS:HA	1.82	0.61
42:BR:46:ALA:O	42:BR:47:VAL:HG13	2.01	0.61
45:BU:65:LYS:HD3	45:BU:65:LYS:N	2.15	0.61
1:AA:934:C:H5'	1:AA:935:A:OP1	2.00	0.61
1:AA:1393:U:O2'	1:AA:1502:A:H5"	2.01	0.61
1:AA:1484:C:H2'	1:AA:1485:U:O4'	2.00	0.61
4:AC:195:ILE:HD13	4:AC:195:ILE:C	2.20	0.61
9:AH:76:ARG:HB2	9:AH:79:ARG:HE	1.66	0.61
22:B0:620:G:H4'	22:B0:621:A:O5'	2.01	0.61
22:B0:1082:U:C3'	25:B3:84:LYS:N	2.64	0.61
22:B0:1492:G:N7	26:BA:153:LEU:HB2	2.15	0.61
22:B0:1496:A:N7	26:BA:142:ASN:CB	2.63	0.61
22:B0:1579:A:C8	22:B0:1579:A:H3'	2.35	0.61
22:B0:1800:C:O2'	22:B0:1801:A:OP2	2.14	0.61
22:B0:2119:A:H2'	22:B0:2121:G:H5'	1.83	0.61
22:B0:2345:G:N2	22:B0:2380:C:H2'	2.15	0.61
25:B3:51:LYS:NZ	25:B5:45:VAL:HG21	2.15	0.61
26:BA:63:ILE:O	26:BA:64:VAL:HG22	2.01	0.61
28:BC:30:GLN:H	35:BJ:17:LYS:C	2.04	0.61
32:BG:119:ALA:O	32:BG:123:ALA:HB3	2.01	0.61
38:BM:15:ARG:HG2	38:BM:18:LEU:HB2	1.82	0.61
39:BN:31:VAL:HG22	39:BN:32:VAL:H	1.66	0.61
40:BO:63:ARG:HH11	40:BO:63:ARG:CB	2.13	0.61
41:BQ:7:HIS:O	41:BQ:102:HIS:HB2	2.01	0.61
4:AC:107:LYS:HB3	4:AC:143:LEU:CD2	2.31	0.60
4:AC:152:VAL:HG22	4:AC:195:ILE:HD11	1.83	0.60
22:B0:433:C:O4'	28:BC:69:ARG:CB	2.49	0.60
22:B0:729:G:H4'	22:B0:763:G:OP1	2.01	0.60
22:B0:1020:A:H5"	22:B0:1021:A:OP1	2.01	0.60
22:B0:1496:A:N7	26:BA:142:ASN:CG	2.54	0.60
22:B0:1577:C:H2'	26:BA:101:ARG:CD	2.28	0.60
22:B0:2127:G:OP2	22:B0:2128:G:P	2.59	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:142:ASN:CA	26:BA:154:ALA:HB3	2.29	0.60
28:BC:186:VAL:CG2	28:BC:187:VAL:H	2.05	0.60
37:BL:81:ASN:O	37:BL:82:GLU:HG2	1.99	0.60
39:BN:10:GLU:CG	39:BN:11:GLN:N	2.64	0.60
40:BO:85:ALA:HB3	40:BO:111:LYS:NZ	2.16	0.60
46:BW:53:VAL:O	46:BW:57:LEU:HG	2.01	0.60
49:B1:14:ALA:HA	49:B1:47:ILE:O	2.01	0.60
1:AA:426:U:H2'	1:AA:427:U:C6	2.36	0.60
1:AA:451:A:N6	1:AA:481:G:C4	2.69	0.60
1:AA:1354:U:H2'	1:AA:1355:G:H8	1.65	0.60
1:AA:1452:C:H4'	1:AA:1453:G:H5"	1.83	0.60
5:AD:169:TRP:CD1	5:AD:170:LEU:HG	2.36	0.60
8:AG:35:LYS:HD3	10:AI:42:THR:HG21	1.82	0.60
11:AJ:36:VAL:HG22	11:AJ:76:ILE:HG12	1.81	0.60
15:AN:43:ALA:HB2	20:AS:20:LYS:HD2	1.83	0.60
18:AQ:48:GLU:HG3	18:AQ:49:ASN:ND2	2.16	0.60
22:B0:571:U:C4'	22:B0:572:A:OP1	2.48	0.60
22:B0:590:A:OP1	28:BC:89:PRO:HD3	2.00	0.60
22:B0:1423:A:H3'	26:BA:56:GLY:O	2.01	0.60
22:B0:1495:A:C2	26:BA:188:ARG:CB	2.84	0.60
22:B0:1966:A:H2'	22:B0:1966:A:N3	2.16	0.60
22:B0:2074:U:H2'	22:B0:2075:U:C6	2.36	0.60
22:B0:2099:U:H3	22:B0:2190:G:H1	1.47	0.60
22:B0:2677:G:H4'	27:BB:160:LYS:HB2	1.82	0.60
28:BC:50:ALA:CB	28:BC:68:ALA:HB2	2.30	0.60
28:BC:192:ALA:O	28:BC:196:VAL:HG23	2.01	0.60
35:BJ:106:GLU:HG2	35:BJ:107:PHE:HD1	1.66	0.60
38:BM:17:LYS:O	38:BM:20:GLU:HG2	2.01	0.60
45:BU:35:ILE:HG23	45:BU:36:ILE:N	2.15	0.60
46:BW:27:ASN:O	46:BW:30:MET:HG3	2.01	0.60
1:AA:187:G:N2	1:AA:191:G:H1'	2.16	0.60
1:AA:717:U:O2'	12:AK:119:GLY:HA3	2.02	0.60
9:AH:77:VAL:HG22	9:AH:84:ILE:HD13	1.84	0.60
9:AH:84:ILE:HD11	9:AH:124:ILE:HB	1.83	0.60
15:AN:63:CYS:HB3	15:AN:67:GLY:H	1.66	0.60
22:B0:151:C:OP1	22:B0:1360:G:H5'	2.01	0.60
22:B0:276:U:O2'	22:B0:362:A:H2'	2.01	0.60
22:B0:563:G:C6	22:B0:2018:G:H1'	2.36	0.60
22:B0:800:A:H4'	22:B0:801:G:O5'	1.99	0.60
22:B0:877:A:H2'	22:B0:878:A:H8	1.66	0.60
22:B0:884:U:H2'	22:B0:885:C:C6	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1421:G:O6	26:BA:150:GLY:N	2.30	0.60
22:B0:1421:G:H1'	26:BA:146:LYS:HB3	1.82	0.60
22:B0:1493:A:H1'	26:BA:171:VAL:CG1	2.27	0.60
22:B0:1493:A:N7	26:BA:186:ASP:N	2.49	0.60
22:B0:1578:U:O2'	26:BA:65:ASP:CA	2.48	0.60
22:B0:2001:C:H2'	22:B0:2002:G:H8	1.64	0.60
22:B0:2286:G:N7	49:B1:24:LYS:NZ	2.49	0.60
22:B0:2712:C:O2'	22:B0:2713:U:P	2.59	0.60
22:B0:2824:C:C3'	22:B0:2825:G:H21	2.14	0.60
22:B0:2896:U:O2	33:BH:14:ASP:HB2	2.01	0.60
26:BA:68:ARG:CG	26:BA:69:ASN:N	2.62	0.60
27:BB:142:VAL:HG12	27:BB:144:GLY:H	1.66	0.60
28:BC:88:ARG:HG3	28:BC:88:ARG:O	2.00	0.60
33:BH:15:TRP:CH2	33:BH:17:VAL:HG22	2.36	0.60
37:BL:99:LYS:HB3	48:BZ:52:LYS:CD	2.29	0.60
37:BL:99:LYS:HG3	37:BL:100:CYS:H	1.65	0.60
39:BN:7:LEU:HD22	39:BN:7:LEU:N	2.16	0.60
2:AU:54:U:N3	2:AU:55:U:H5	1.99	0.60
7:AF:12:PRO:HD2	7:AF:54:LEU:HD23	1.83	0.60
11:AJ:8:ILE:N	11:AJ:8:ILE:HD12	2.16	0.60
22:B0:215:G:H4'	22:B0:216:A:C4'	2.27	0.60
22:B0:1300:G:H4'	22:B0:1301:A:O5'	2.01	0.60
22:B0:1487:G:C2'	26:BA:158:GLY:HA3	2.31	0.60
22:B0:1579:A:H8	22:B0:1579:A:H5"	1.66	0.60
22:B0:2144:G:O3'	22:B0:2144:G:OP1	2.18	0.60
22:B0:2174:C:H2'	22:B0:2175:C:OP1	2.00	0.60
22:B0:2484:G:H5"	36:BK:44:ARG:HD3	1.82	0.60
22:B0:2521:C:H2'	22:B0:2522:U:C6	2.35	0.60
28:BC:153:LEU:HD11	28:BC:156:ASN:O	2.01	0.60
39:BN:85:VAL:HG22	39:BN:86:LYS:N	2.10	0.60
42:BR:68:LYS:H	42:BR:73:ARG:NH2	1.98	0.60
46:BW:37:LEU:H	46:BW:37:LEU:CD1	2.14	0.60
49:B1:47:ILE:HG22	49:B1:48:TYR:N	2.15	0.60
1:AA:328:C:O2'	1:AA:329:A:OP2	2.18	0.60
1:AA:523:A:N1	13:AL:87:LYS:HB3	2.17	0.60
1:AA:754:C:O2	1:AA:754:C:C2'	2.48	0.60
1:AA:817:C:H5"	1:AA:818:G:OP1	2.02	0.60
1:AA:1148:U:H2'	1:AA:1149:C:O4'	2.01	0.60
1:AA:1366:C:H2'	11:AJ:62:ARG:NE	2.16	0.60
1:AA:1504:G:H4'	1:AA:1505:G:C5'	2.30	0.60
7:AF:85:ILE:HG23	7:AF:86:ARG:HG2	1.82	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AH:6:ILE:HB	9:AH:76:ARG:HH11	1.66	0.60
16:AO:42:PHE:CZ	16:AO:52:ARG:HA	2.36	0.60
22:B0:966:G:H5"	22:B0:2271:G:H22	1.65	0.60
22:B0:1265:A:O2'	22:B0:1266:G:C4'	2.50	0.60
22:B0:1426:G:O6	26:BA:57:HIS:NE2	2.34	0.60
22:B0:1479:G:C3'	22:B0:1559:U:OP2	2.49	0.60
22:B0:1594:U:O2'	22:B0:1595:C:H5'	2.02	0.60
22:B0:1695:G:H3'	22:B0:1695:G:N3	2.16	0.60
22:B0:2147:A:H2'	22:B0:2148:G:H5"	1.84	0.60
22:B0:2439:A:O2'	22:B0:2587:A:H5"	2.01	0.60
22:B0:2638:G:O2'	22:B0:2778:A:C6	2.54	0.60
22:B0:2677:G:O2'	27:BB:160:LYS:HG2	2.01	0.60
22:B0:2898:G:C3'	33:BH:138:GLN:O	2.47	0.60
23:B9:100:G:H2'	23:B9:101:A:C8	2.36	0.60
24:B2:208:ILE:HD13	24:B2:208:ILE:N	2.11	0.60
28:BC:27:LEU:C	35:BJ:17:LYS:HG2	2.20	0.60
28:BC:30:GLN:HE21	35:BJ:18:ARG:HA	1.63	0.60
41:BQ:12:SER:HB3	41:BQ:17:VAL:CG2	2.31	0.60
47:BX:26:LEU:HD12	47:BX:37:ARG:HG3	1.81	0.60
1:AA:718:A:O4'	12:AK:120:CYS:N	2.34	0.60
1:AA:1039:G:H2'	1:AA:1040:U:C6	2.36	0.60
1:AA:1137:C:H4'	1:AA:1138:G:C2	2.37	0.60
1:AA:1241:G:H2'	1:AA:1242:G:H8	1.64	0.60
1:AA:1323:G:H2'	1:AA:1324:A:C8	2.37	0.60
3:AB:37:VAL:HG22	3:AB:39:ILE:H	1.65	0.60
4:AC:120:THR:O	4:AC:124:GLU:HG3	2.00	0.60
5:AD:47:LEU:O	5:AD:47:LEU:HD12	2.02	0.60
19:AR:62:ARG:HB3	19:AR:69:TYR:CZ	2.36	0.60
22:B0:49:A:P	22:B0:51:G:H5'	2.42	0.60
22:B0:118:A:OP2	22:B0:119:A:H5"	2.01	0.60
22:B0:181:A:H2'	22:B0:182:A:C1'	2.31	0.60
22:B0:851:C:N4	22:B0:926:G:C6	2.68	0.60
22:B0:878:A:H61	22:B0:899:A:H61	1.47	0.60
22:B0:931:U:O2'	22:B0:932:U:O5'	2.11	0.60
22:B0:1199:U:N3	22:B0:1246:A:H2	2.00	0.60
22:B0:1416:G:O6	26:BA:93:VAL:HG23	2.02	0.60
22:B0:1422:G:H1'	26:BA:149:LYS:CE	2.27	0.60
22:B0:1618:A:H5'	22:B0:1619:G:OP2	2.02	0.60
22:B0:1655:A:N6	22:B0:2006:C:O2	2.34	0.60
22:B0:2100:G:H1	22:B0:2189:U:H3	1.48	0.60
22:B0:2131:U:O4'	24:B2:33:ALA:HB2	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:159:THR:HG23	26:BA:160:TYR:N	2.15	0.60
35:BJ:99:ASN:HB2	35:BJ:101:ILE:HG22	1.82	0.60
1:AA:563:A:H1'	1:AA:566:G:HO2'	1.66	0.60
1:AA:614:C:H2'	1:AA:615:G:C8	2.36	0.60
1:AA:640:A:H2'	1:AA:641:U:O4'	2.00	0.60
1:AA:652:U:O4	1:AA:752:G:H2'	2.00	0.60
1:AA:1062:U:H2'	1:AA:1063:C:C6	2.37	0.60
1:AA:1201:A:O2'	1:AA:1202:U:OP2	2.16	0.60
1:AA:1492:A:H5"	13:AL:43:LYS:HB2	1.84	0.60
3:AB:214:GLY:HA3	3:AB:231:GLN:NE2	2.17	0.60
4:AC:130:ARG:NH1	6:AE:53:ARG:HH12	2.00	0.60
4:AC:134:LYS:HA	4:AC:167:TYR:CE2	2.35	0.60
22:B0:500:G:N2	22:B0:503:A:H5'	2.09	0.60
22:B0:1418:G:C4	22:B0:1578:U:C5	2.90	0.60
22:B0:1487:G:P	26:BA:195:GLY:HA2	2.41	0.60
22:B0:1495:A:N6	22:B0:1496:A:C6	2.69	0.60
22:B0:2133:G:H1	22:B0:2151:U:H3	1.48	0.60
25:B5:81:LYS:H	25:B5:81:LYS:CD	2.13	0.60
28:BC:137:LYS:HZ2	28:BC:137:LYS:HB3	1.66	0.60
30:BE:14:VAL:HG13	30:BE:25:ILE:HD11	1.83	0.60
37:BL:37:THR:HB	37:BL:38:LEU:HD12	1.83	0.60
37:BL:41:ALA:CA	37:BL:44:LEU:HB2	2.32	0.60
38:BM:94:ARG:HD2	38:BM:103:VAL:HG21	1.82	0.60
39:BN:50:ARG:HD3	39:BN:62:LYS:HB2	1.83	0.60
42:BR:66:LYS:HA	42:BR:66:LYS:CE	2.31	0.60
45:BU:44:PHE:CD2	45:BU:78:PHE:HA	2.36	0.60
48:BZ:38:LEU:H	48:BZ:38:LEU:HD12	1.65	0.60
1:AA:1367:C:C6	11:AJ:62:ARG:NH2	2.69	0.60
2:AW:16:U:O2'	2:AW:17:U:H5"	2.02	0.60
4:AC:102:ILE:HD13	4:AC:102:ILE:H	1.67	0.60
12:AK:55:ARG:O	12:AK:58:THR:HG22	2.01	0.60
12:AK:69:CYS:O	12:AK:73:VAL:HG23	2.00	0.60
13:AL:49:ARG:HB3	13:AL:65:TYR:HE1	1.66	0.60
14:AM:6:ILE:HD12	14:AM:6:ILE:N	2.16	0.60
22:B0:182:A:C2'	28:BC:67:ARG:HH11	2.15	0.60
22:B0:211:C:H42	28:BC:56:GLY:HA2	1.65	0.60
22:B0:287:G:H5"	22:B0:352:A:H2	1.64	0.60
22:B0:864:G:H21	22:B0:866:A:N6	1.92	0.60
22:B0:878:A:N1	22:B0:899:A:N1	2.49	0.60
22:B0:1026:G:C5	22:B0:1027:A:H1'	2.36	0.60
22:B0:1054:A:H2'	22:B0:1055:G:O4'	2.00	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1288:G:O5'	22:B0:1288:G:H8	1.85	0.60
22:B0:1420:U:H3	26:BA:67:LYS:HG2	1.67	0.60
22:B0:1439:A:H4'	22:B0:1467:G:OP1	2.00	0.60
22:B0:1495:A:H8	26:BA:190:THR:HA	1.66	0.60
22:B0:1502:C:H5"	26:BA:213:ARG:NH2	2.17	0.60
22:B0:2119:A:O2'	22:B0:2121:G:H5'	2.01	0.60
22:B0:2127:G:C2'	22:B0:2165:C:C2'	2.80	0.60
22:B0:2263:C:O2	22:B0:2263:C:C2'	2.49	0.60
22:B0:2781:A:C5'	33:BH:116:ARG:HG3	2.31	0.60
24:B2:193:VAL:HG13	24:B2:196:LYS:HE2	1.82	0.60
25:B3:89:SER:HB3	25:B5:36:ALA:O	2.02	0.60
26:BA:144:GLU:OE1	26:BA:188:ARG:HG2	2.00	0.60
26:BA:163:ILE:HD12	26:BA:163:ILE:N	2.13	0.60
29:BD:90:LEU:HD13	29:BD:90:LEU:N	2.17	0.60
33:BH:13:ARG:NH2	33:BH:51:GLY:O	2.35	0.60
33:BH:24:THR:HG22	33:BH:26:GLY:N	2.15	0.60
33:BH:27:ARG:HA	33:BH:27:ARG:CZ	2.30	0.60
35:BJ:38:GLN:O	35:BJ:39:LYS:HB3	2.01	0.60
37:BL:29:VAL:HG11	37:BL:75:ILE:HD13	1.83	0.60
37:BL:49:GLU:N	37:BL:50:PRO:O	2.35	0.60
40:BO:63:ARG:HB3	40:BO:63:ARG:NH1	2.17	0.60
40:BO:89:ILE:HD13	40:BO:90:ASP:N	2.17	0.60
41:BQ:74:ILE:HG22	41:BQ:105:VAL:HG13	1.84	0.60
41:BQ:83:LYS:HB3	41:BQ:83:LYS:NZ	2.16	0.60
44:BT:44:HIS:HE1	44:BT:86:LEU:H	1.50	0.60
45:BU:39:GLN:HG2	45:BU:68:PHE:HA	1.84	0.60
46:BW:47:ARG:HG3	46:BW:48:ARG:CD	2.31	0.60
1:AA:718:A:C3'	12:AK:118:ASN:HA	2.32	0.60
1:AA:1009:U:H3	1:AA:1020:G:N2	2.00	0.60
1:AA:1319:A:C4	20:AS:6:LYS:HD3	2.37	0.60
4:AC:35:ASP:OD1	4:AC:56:ILE:HG21	2.02	0.60
6:AE:20:VAL:HB	6:AE:31:SER:O	2.01	0.60
9:AH:6:ILE:HD12	9:AH:6:ILE:N	2.15	0.60
12:AK:112:VAL:HG22	12:AK:112:VAL:O	2.02	0.60
22:B0:129:C:C4	22:B0:130:C:N4	2.69	0.60
22:B0:830:G:C5'	22:B0:2448:A:N6	2.64	0.60
22:B0:1083:U:C6	22:B0:1083:U:H3'	2.37	0.60
22:B0:1324:G:H5"	22:B0:1325:U:OP2	2.02	0.60
22:B0:1499:U:C5	26:BA:155:ARG:HD3	2.33	0.60
22:B0:2108:A:O5'	22:B0:2110:G:OP2	2.19	0.60
22:B0:2644:G:H4'	22:B0:2645:G:O5'	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:B3:79:GLY:C	25:B3:80:LEU:HD13	2.21	0.60
27:BB:79:LEU:H	27:BB:79:LEU:CD2	2.14	0.60
28:BC:32:VAL:HG21	28:BC:178:VAL:HA	1.82	0.60
29:BD:48:LEU:HA	29:BD:51:ASN:OD1	2.02	0.60
32:BG:52:LEU:HD12	32:BG:54:ILE:HB	1.83	0.60
33:BH:25:LEU:HD22	33:BH:26:GLY:N	2.17	0.60
37:BL:30:ARG:HG3	37:BL:31:HIS:ND1	2.16	0.60
40:BO:106:THR:O	40:BO:109:VAL:HG22	2.01	0.60
41:BQ:52:GLU:O	41:BQ:55:ILE:HG13	2.02	0.60
42:BR:30:ILE:CG1	42:BR:87:LEU:HD11	2.30	0.60
1:AA:8:A:N6	5:AD:205:LYS:N	2.49	0.60
1:AA:438:U:C4’	1:AA:439:U:OP1	2.50	0.60
1:AA:950:U:H2’	1:AA:951:G:C8	2.37	0.60
4:AC:35:ASP:O	4:AC:39:ARG:HG3	2.02	0.60
6:AE:89:THR:HG23	6:AE:90:GLY:N	2.16	0.60
10:AI:57:VAL:HG23	10:AI:58:GLU:N	2.13	0.60
16:AO:59:VAL:HG21	22:B0:715:A:O4’	2.01	0.60
19:AR:55:ALA:O	19:AR:59:LYS:HG2	2.02	0.60
22:B0:84:A:N6	22:B0:102:U:O2’	2.35	0.60
22:B0:183:C:O4’	28:BC:67:ARG:NH1	2.34	0.60
22:B0:589:U:C5’	28:BC:88:ARG:HG3	2.30	0.60
22:B0:1055:G:C2	25:B3:63:ALA:HB3	2.36	0.60
22:B0:1082:U:C6	25:B3:80:LEU:C	2.75	0.60
22:B0:1235:G:H2’	22:B0:1236:G:O4’	2.02	0.60
22:B0:1495:A:C8	26:BA:189:ALA:O	2.55	0.60
22:B0:1771:C:H2’	22:B0:1772:A:C8	2.36	0.60
22:B0:2102:G:H1	22:B0:2187:U:H3	1.50	0.60
22:B0:2734:A:H2’	22:B0:2735:G:O4’	2.02	0.60
22:B0:2854:G:H2’	22:B0:2855:C:C6	2.37	0.60
22:B0:2898:G:H2’	33:BH:137:PRO:CB	2.31	0.60
29:BD:48:LEU:HA	29:BD:51:ASN:HD21	1.64	0.60
33:BH:110:PRO:O	33:BH:111:LYS:HG2	2.01	0.60
41:BQ:7:HIS:ND1	41:BQ:8:ARG:N	2.49	0.60
48:BZ:41:HIS:O	48:BZ:42:ILE:HD13	2.01	0.60
1:AA:50:A:N6	1:AA:361:G:H4’	2.17	0.59
1:AA:1367:C:C5’	11:AJ:62:ARG:HE	2.15	0.59
3:AB:169:HIS:HE1	3:AB:173:LYS:HD3	1.67	0.59
5:AD:2:ARG:NE	5:AD:66:VAL:HA	2.11	0.59
5:AD:141:VAL:HG12	5:AD:180:THR:HG22	1.84	0.59
17:AP:4:ILE:HD11	17:AP:65:ALA:CB	2.32	0.59
20:AS:4:LEU:HD11	20:AS:8:PRO:CG	2.31	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:383:C:O2	22:B0:391:A:N1	2.35	0.59
22:B0:627:A:O2'	22:B0:628:G:O4'	2.20	0.59
22:B0:1081:U:H3'	25:B3:80:LEU:C	2.21	0.59
22:B0:1250:G:O2'	40:BO:8:ILE:HG21	2.02	0.59
22:B0:1500:A:N6	26:BA:155:ARG:N	2.50	0.59
22:B0:2160:C:C5'	22:B0:2162:G:OP2	2.50	0.59
22:B0:2624:G:O5'	22:B0:2624:G:C8	2.55	0.59
22:B0:2624:G:C5'	22:B0:2825:G:N7	2.48	0.59
22:B0:2644:G:H2'	27:BB:160:LYS:HZ1	1.67	0.59
26:BA:123:ILE:O	26:BA:123:ILE:HG13	2.02	0.59
28:BC:153:LEU:CD1	28:BC:158:PHE:HB2	2.26	0.59
29:BD:107:VAL:HG12	29:BD:110:ILE:HD11	1.83	0.59
35:BJ:56:PRO:CB	35:BJ:59:ARG:HB3	2.32	0.59
36:BK:40:ARG:HB3	36:BK:93:VAL:HG21	1.83	0.59
40:BO:11:ALA:HA	40:BO:14:LYS:CE	2.32	0.59
40:BO:12:ARG:HB3	40:BO:12:ARG:NH1	2.17	0.59
41:BQ:56:ALA:C	41:BQ:58:ALA:H	2.05	0.59
49:B1:26:LYS:H	49:B1:26:LYS:HE3	1.65	0.59
1:AA:8:A:N6	5:AD:205:LYS:H	2.00	0.59
1:AA:47:C:C4'	1:AA:48:C:OP1	2.50	0.59
1:AA:720:C:N4	12:AK:118:ASN:ND2	2.47	0.59
1:AA:1031:C:O2'	1:AA:1032:G:O4'	2.12	0.59
4:AC:150:VAL:HG22	4:AC:199:VAL:HG22	1.83	0.59
9:AH:38:VAL:HG13	9:AH:39:LEU:HD22	1.85	0.59
15:AN:97:LYS:NZ	15:AN:97:LYS:HB3	2.18	0.59
22:B0:51:G:H1'	22:B0:118:A:H62	1.67	0.59
22:B0:377:G:H1	22:B0:397:U:H3	1.49	0.59
22:B0:432:A:C2'	28:BC:69:ARG:HG3	2.32	0.59
22:B0:876:C:H2'	22:B0:877:A:H8	1.66	0.59
22:B0:917:A:C2	23:B9:80:U:H4'	2.37	0.59
22:B0:1204:A:N1	22:B0:1241:A:N1	2.50	0.59
22:B0:1496:A:C2	26:BA:63:ILE:O	2.55	0.59
22:B0:1607:C:O2	22:B0:1607:C:C2'	2.51	0.59
22:B0:2004:G:O2'	22:B0:2005:A:H5'	2.02	0.59
22:B0:2345:G:O2'	22:B0:2381:A:H1'	2.01	0.59
22:B0:2586:U:H5"	22:B0:2608:G:H22	1.66	0.59
22:B0:2780:G:C3'	33:BH:116:ARG:CD	2.60	0.59
22:B0:2897:U:O3'	33:BH:140:LEU:HD21	2.02	0.59
24:B2:14:VAL:HG12	24:B2:15:ASP:N	2.17	0.59
24:B2:38:VAL:CG2	24:B2:176:LYS:HB3	2.27	0.59
25:B5:66:VAL:O	25:B5:70:LYS:HG3	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:67:LYS:CG	26:BA:188:ARG:NH2	2.65	0.59
26:BA:141:HIS:N	26:BA:161:VAL:HB	2.16	0.59
28:BC:149:ILE:HG22	28:BC:150:THR:N	2.17	0.59
28:BC:183:PHE:HA	35:BJ:15:ALA:CB	2.32	0.59
33:BH:15:TRP:HZ2	33:BH:132:HIS:HE2	1.49	0.59
37:BL:60:VAL:HG13	37:BL:61:ALA:H	1.67	0.59
1:AA:1348:U:O2'	1:AA:1349:A:H5'	2.02	0.59
2:AW:18:G:H1'	2:AW:57:G:N2	2.16	0.59
3:AB:44:LYS:O	3:AB:48:MET:HG2	2.01	0.59
17:AP:20:VAL:HG22	17:AP:35:ARG:HA	1.84	0.59
18:AQ:28:VAL:O	18:AQ:37:ILE:HG12	2.02	0.59
19:AR:54:LEU:O	19:AR:58:ILE:HG12	2.03	0.59
21:AT:23:ARG:HG2	21:AT:65:LEU:HD13	1.84	0.59
22:B0:64:A:O2'	42:BR:74:ILE:HB	2.02	0.59
22:B0:885:C:O5'	22:B0:885:C:H6	1.85	0.59
22:B0:978:G:O2'	22:B0:1002:G:H4'	2.02	0.59
22:B0:1028:A:H2	22:B0:2487:G:HO2'	1.51	0.59
22:B0:1491:A:C2'	26:BA:173:LEU:HD22	2.31	0.59
22:B0:1656:C:O5'	22:B0:1656:C:H6	1.85	0.59
22:B0:1831:G:N2	22:B0:1975:G:H1'	2.16	0.59
22:B0:2006:C:C6	22:B0:2006:C:C3'	2.82	0.59
22:B0:2131:U:O4'	24:B2:33:ALA:CB	2.51	0.59
25:B3:51:LYS:NZ	25:B5:45:VAL:HG11	2.17	0.59
25:B5:107:LYS:HE2	25:B5:111:GLU:CD	2.23	0.59
25:B5:107:LYS:HG3	25:B5:117:VAL:HB	1.83	0.59
27:BB:13:ARG:CD	39:BN:10:GLU:HG3	2.33	0.59
27:BB:122:VAL:HG22	27:BB:127:PHE:CD2	2.37	0.59
44:BT:6:ALA:HB2	44:BT:42:LEU:HD23	1.84	0.59
1:AA:150:U:H3	1:AA:171:A:N6	2.00	0.59
1:AA:1405:G:H2'	1:AA:1517:G:N9	2.16	0.59
8:AG:99:ALA:O	8:AG:103:ILE:HG12	2.02	0.59
9:AH:13:ILE:HD12	9:AH:60:LEU:HD23	1.84	0.59
22:B0:1085:A:C8	25:B3:88:GLU:OE2	2.55	0.59
22:B0:1183:U:C2'	22:B0:1184:U:H4'	2.30	0.59
22:B0:1202:G:O5'	35:BJ:14:LYS:HG3	2.01	0.59
22:B0:1302:A:O2'	22:B0:1303:G:OP1	2.18	0.59
22:B0:1355:G:H2'	22:B0:1356:G:H8	1.67	0.59
22:B0:1424:G:C8	26:BA:57:HIS:HB3	2.36	0.59
22:B0:1499:U:H5'	22:B0:1499:U:H6	1.66	0.59
22:B0:2151:U:H2'	22:B0:2152:G:C2	2.38	0.59
22:B0:2175:C:H4'	24:B2:219:ALA:O	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:B2:26:ILE:HG12	24:B2:185:LYS:N	2.18	0.59
28:BC:26:ALA:CA	35:BJ:17:LYS:HE2	2.32	0.59
28:BC:44:ARG:HD3	28:BC:47:LYS:HG3	1.85	0.59
31:BF:123:ARG:NH1	31:BF:123:ARG:HB3	2.18	0.59
36:BK:62:LYS:HB3	36:BK:106:ASP:HB2	1.84	0.59
40:BO:73:ILE:HD11	40:BO:113:LYS:HG3	1.84	0.59
42:BR:28:ASN:O	42:BR:86:THR:HG23	2.02	0.59
1:AA:1195:C:H3'	1:AA:1196:A:C5'	2.33	0.59
1:AA:1346:A:O2'	1:AA:1347:G:P	2.60	0.59
1:AA:1483:A:H4'	22:B0:1948:G:HO2'	1.65	0.59
1:AA:1533:C:O2	1:AA:1533:C:C2'	2.50	0.59
2:AV:9:A:O2'	2:AV:45:G:H2'	2.03	0.59
2:AW:20:G:N2	2:AW:22:G:H5'	2.16	0.59
4:AC:99:GLN:HG3	4:AC:100:ILE:N	2.14	0.59
11:AJ:47:GLU:HB3	11:AJ:67:ILE:HG23	1.83	0.59
13:AL:106:VAL:HG23	13:AL:116:TYR:HB3	1.83	0.59
21:AT:38:ILE:HG21	21:AT:82:ILE:HA	1.83	0.59
21:AT:53:MET:CE	21:AT:78:LEU:HD12	2.33	0.59
22:B0:184:C:N4	22:B0:212:G:H22	1.99	0.59
22:B0:605:G:H1	22:B0:623:C:H42	1.48	0.59
22:B0:693:A:O2'	22:B0:694:U:H5'	2.02	0.59
22:B0:982:C:O2'	22:B0:983:A:OP1	2.17	0.59
22:B0:1418:G:C6	26:BA:101:ARG:HG3	2.37	0.59
22:B0:1578:U:C5'	26:BA:101:ARG:CZ	2.78	0.59
22:B0:1985:C:H2'	22:B0:1986:C:H6	1.67	0.59
22:B0:2126:A:H1'	22:B0:2171:A:C4	2.37	0.59
22:B0:2644:G:C5	27:BB:160:LYS:HD2	2.37	0.59
22:B0:2782:G:O2'	22:B0:2783:U:H5'	2.02	0.59
24:B2:189:GLU:O	24:B2:193:VAL:HG23	2.02	0.59
26:BA:62:ARG:HE	26:BA:149:LYS:HD2	1.67	0.59
26:BA:125:PRO:HG3	26:BA:191:LEU:HD22	1.83	0.59
26:BA:242:HIS:HB3	26:BA:243:PRO:HD3	1.85	0.59
28:BC:32:VAL:HA	28:BC:35:TYR:HD2	1.66	0.59
28:BC:118:LEU:HD13	28:BC:186:VAL:HG13	1.83	0.59
28:BC:155:GLU:HG3	28:BC:156:ASN:N	2.13	0.59
33:BH:96:ARG:HB3	33:BH:98:GLU:N	2.17	0.59
37:BL:78:LYS:HE2	37:BL:78:LYS:CA	2.33	0.59
39:BN:36:LYS:HD2	39:BN:40:GLN:OE1	2.03	0.59
42:BR:69:ARG:HB3	42:BR:69:ARG:NH1	2.17	0.59
1:AA:242:G:C2'	1:AA:243:A:H5'	2.32	0.59
2:AW:38:A:H2'	2:AW:39:U:O2	2.01	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AB:186:VAL:HG22	3:AB:187:ASP:H	1.68	0.59
17:AP:4:ILE:HD12	17:AP:4:ILE:N	2.16	0.59
22:B0:589:U:C5	28:BC:86:ALA:HB1	2.37	0.59
22:B0:1494:A:H4'	26:BA:163:ILE:CG1	2.32	0.59
22:B0:1822:C:H2'	22:B0:1823:G:C8	2.37	0.59
22:B0:2119:A:C2'	22:B0:2121:G:H5'	2.32	0.59
22:B0:2263:C:N4	22:B0:2277:G:N1	2.41	0.59
22:B0:2379:G:H2'	22:B0:2380:C:C6	2.38	0.59
22:B0:2644:G:O2'	22:B0:2645:G:P	2.61	0.59
25:B5:30:PHE:HB3	25:B5:34:ALA:HB3	1.83	0.59
26:BA:100:ARG:O	26:BA:101:ARG:HG3	2.03	0.59
31:BF:79:THR:O	31:BF:80:ILE:HD13	2.03	0.59
32:BG:76:ALA:O	32:BG:80:LYS:HG2	2.01	0.59
33:BH:74:TYR:HB2	33:BH:76:HIS:CE1	2.37	0.59
33:BH:109:LEU:HD22	33:BH:109:LEU:N	2.17	0.59
34:BI:2:ILE:HB	34:BI:33:ALA:O	2.03	0.59
39:BN:13:LYS:HD3	39:BN:13:LYS:N	2.18	0.59
40:BO:43:GLN:C	40:BO:45:ALA:N	2.56	0.59
40:BO:47:ARG:HA	40:BO:47:ARG:CZ	2.32	0.59
42:BR:87:LEU:H	42:BR:87:LEU:CD1	2.14	0.59
1:AA:247:G:O2'	1:AA:248:C:H5'	2.03	0.59
1:AA:817:C:C1'	1:AA:819:A:H5'	2.33	0.59
1:AA:1412:C:H2'	1:AA:1413:A:H8	1.65	0.59
2:AV:20:G:N2	2:AV:22:G:H5'	2.15	0.59
11:AJ:32:THR:HG21	11:AJ:83:THR:HA	1.84	0.59
15:AN:40:ARG:O	15:AN:44:VAL:HG23	2.02	0.59
22:B0:576:U:H1'	22:B0:2502:G:N2	2.17	0.59
22:B0:926:G:N3	47:BX:42:ALA:HB2	2.18	0.59
22:B0:1083:U:C6	25:B3:88:GLU:OE1	2.55	0.59
22:B0:1491:A:C3'	26:BA:173:LEU:HB3	2.33	0.59
22:B0:2004:G:C8	22:B0:2004:G:P	2.95	0.59
22:B0:2128:G:O3'	22:B0:2165:C:C5'	2.49	0.59
22:B0:2174:C:C5	24:B2:217:MET:N	2.66	0.59
22:B0:2678:C:O5'	27:BB:125:TRP:CD1	2.55	0.59
24:B2:177:VAL:CG1	24:B2:178:ASP:H	2.15	0.59
25:B3:57:ILE:HG23	25:B3:92:ALA:HB2	1.83	0.59
26:BA:58:LYS:CG	26:BA:59:GLN:N	2.65	0.59
26:BA:172:THR:O	26:BA:182:LYS:HA	2.02	0.59
27:BB:122:VAL:HA	27:BB:127:PHE:HB3	1.85	0.59
29:BD:7:TYR:HA	29:BD:11:VAL:CG1	2.33	0.59
33:BH:17:VAL:CG1	33:BH:55:ILE:HB	2.33	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BR:70:HIS:CB	42:BR:73:ARG:HG2	2.32	0.59
44:BT:77:VAL:HG13	44:BT:89:ILE:HG13	1.84	0.59
1:AA:64:G:H4'	1:AA:66:A:OP1	2.02	0.59
1:AA:593:U:H3	1:AA:646:G:H1	1.51	0.59
1:AA:926:G:H2'	1:AA:1505:G:O2'	2.01	0.59
3:AB:10:LYS:HE2	3:AB:211:LEU:CD2	2.33	0.59
4:AC:10:ARG:HB2	4:AC:13:ILE:CD1	2.31	0.59
4:AC:129:PHE:CZ	4:AC:133:MET:HB3	2.38	0.59
5:AD:148:ALA:HB1	5:AD:151:GLN:NE2	2.15	0.59
18:AQ:59:GLU:O	18:AQ:60:ILE:HD13	2.03	0.59
19:AR:62:ARG:HB3	19:AR:69:TYR:CE1	2.37	0.59
22:B0:828:U:H4'	22:B0:831:G:C6	2.38	0.59
22:B0:1082:U:C3'	25:B3:82:GLU:H	2.15	0.59
22:B0:1495:A:H3'	26:BA:190:THR:CA	2.17	0.59
22:B0:2142:A:H2'	22:B0:2142:A:N3	2.17	0.59
22:B0:2855:C:H2'	22:B0:2856:A:H5"	1.84	0.59
28:BC:88:ARG:HD3	28:BC:90:GLN:O	2.02	0.59
35:BJ:39:LYS:NZ	35:BJ:41:ARG:HG2	2.18	0.59
39:BN:50:ARG:HH21	39:BN:100:ARG:HE	1.51	0.59
40:BO:93:ILE:O	40:BO:97:ILE:HG23	2.03	0.59
41:BQ:45:VAL:O	41:BQ:46:LEU:HB3	2.02	0.59
1:AA:451:A:O2'	1:AA:452:A:P	2.61	0.59
9:AH:10:LEU:HD21	9:AH:74:ILE:O	2.03	0.59
10:AI:5:TYR:CE2	10:AI:89:TYR:HA	2.38	0.59
17:AP:52:LEU:HD11	17:AP:75:ILE:HG13	1.84	0.59
20:AS:4:LEU:HD11	20:AS:8:PRO:HA	1.84	0.59
22:B0:502:A:H2'	22:B0:503:A:H5"	1.85	0.59
22:B0:535:G:H5'	40:BO:49:ARG:CB	2.31	0.59
22:B0:1248:G:H1'	40:BO:2:ARG:HD2	1.84	0.59
22:B0:1424:G:O4'	26:BA:57:HIS:C	2.41	0.59
22:B0:2136:G:C2	22:B0:2137:U:C3'	2.82	0.59
22:B0:2226:C:OP2	22:B0:2226:C:H6	1.85	0.59
22:B0:2811:G:H2'	22:B0:2812:G:C8	2.37	0.59
29:BD:160:LYS:HD2	29:BD:160:LYS:N	2.17	0.59
33:BH:108:MET:N	33:BH:108:MET:SD	2.76	0.59
35:BJ:81:ASP:C	35:BJ:83:ALA:N	2.56	0.59
39:BN:31:VAL:HG22	39:BN:32:VAL:N	2.17	0.59
39:BN:102:ARG:O	39:BN:102:ARG:HD3	2.03	0.59
40:BO:27:ARG:NH2	40:BO:33:VAL:HG11	2.16	0.59
41:BQ:50:VAL:O	41:BQ:51:LEU:HB3	2.02	0.59
43:BS:6:ARG:HD2	43:BS:25:LYS:C	2.23	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BW:1:MET:HE1	46:BW:21:LEU:HD11	1.83	0.59
1:AA:500:G:N2	1:AA:546:A:H1'	2.18	0.59
1:AA:1031:C:C2'	1:AA:1032:G:O5'	2.51	0.59
10:AI:116:GLY:O	10:AI:117:LEU:HD23	2.03	0.59
11:AJ:40:ILE:HG13	11:AJ:42:LEU:HD21	1.85	0.59
12:AK:30:ILE:HD13	12:AK:30:ILE:C	2.24	0.59
22:B0:447:A:H1'	22:B0:449:A:N6	2.17	0.59
22:B0:490:C:O2'	22:B0:491:G:OP1	2.21	0.59
22:B0:588:U:C2'	28:BC:86:ALA:H	2.08	0.59
22:B0:694:U:H5"	22:B0:1569:A:N1	2.18	0.59
22:B0:885:C:N3	22:B0:892:A:C2	2.71	0.59
22:B0:1164:C:O2'	22:B0:1165:A:H5'	2.03	0.59
22:B0:1578:U:H3	26:BA:67:LYS:NZ	2.00	0.59
22:B0:1607:C:H1'	22:B0:1610:A:OP1	2.03	0.59
22:B0:2052:A:N6	22:B0:2617:U:H3	2.00	0.59
22:B0:2130:U:C5	24:B2:38:VAL:HG21	2.37	0.59
22:B0:2154:A:C4'	22:B0:2155:U:OP1	2.51	0.59
22:B0:2304:G:N1	22:B0:2312:U:N3	2.48	0.59
22:B0:2378:A:H2'	22:B0:2379:G:H5'	1.85	0.59
22:B0:2475:C:H42	22:B0:2529:G:H22	1.50	0.59
22:B0:2824:C:O2	22:B0:2824:C:H2'	2.02	0.59
22:B0:2884:U:C6	48:BZ:51:ARG:HD3	2.38	0.59
24:B2:69:GLY:O	24:B2:156:LYS:HD2	2.02	0.59
24:B2:177:VAL:CG1	24:B2:178:ASP:N	2.66	0.59
27:BB:60:VAL:C	27:BB:63:PRO:HD2	2.23	0.59
28:BC:44:ARG:O	28:BC:45:ALA:HB2	2.03	0.59
28:BC:175:ILE:HD13	28:BC:175:ILE:H	1.67	0.59
29:BD:108:PRO:O	29:BD:109:ARG:HB2	2.02	0.59
30:BE:76:ILE:O	30:BE:76:ILE:HD13	2.03	0.59
39:BN:4:ILE:HD11	39:BN:5:LYS:HD2	1.85	0.59
45:BU:5:ALA:O	45:BU:7:GLY:N	2.36	0.59
1:AA:177:G:H5"	21:AT:59:ARG:HH22	1.66	0.58
1:AA:721:G:H4'	1:AA:722:G:C5'	2.32	0.58
1:AA:1031:C:O2	1:AA:1032:G:C5	2.55	0.58
4:AC:36:PHE:O	4:AC:40:GLN:HG3	2.02	0.58
22:B0:1423:A:H3'	26:BA:58:LYS:N	2.18	0.58
22:B0:1478:G:H3'	22:B0:1559:U:O5'	2.03	0.58
22:B0:1579:A:C8	22:B0:1579:A:C3'	2.86	0.58
22:B0:2005:A:H3'	22:B0:2006:C:C4	2.37	0.58
22:B0:2174:C:H5	24:B2:217:MET:H	1.46	0.58
22:B0:2263:C:H5'	45:BU:10:ARG:O	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2462:C:H1'	22:B0:2491:U:O4	2.03	0.58
22:B0:2690:U:H2'	22:B0:2691:C:H5'	1.85	0.58
24:B2:13:LYS:HE3	24:B2:32:LEU:HD23	1.85	0.58
25:B5:65:LYS:O	25:B5:69:ILE:HG13	2.02	0.58
26:BA:86:ARG:C	26:BA:88:ALA:H	2.06	0.58
26:BA:138:SER:O	26:BA:140:VAL:HG23	2.03	0.58
39:BN:2:ASN:O	39:BN:6:GLN:HB2	2.03	0.58
39:BN:3:ILE:HG22	39:BN:3:ILE:O	2.00	0.58
39:BN:24:THR:CA	39:BN:49:ILE:HG12	2.33	0.58
39:BN:64:SER:HA	39:BN:71:ARG:HG2	1.84	0.58
40:BO:30:VAL:HB	40:BO:33:VAL:HG22	1.84	0.58
1:AA:243:A:H4'	1:AA:245:U:OP1	2.03	0.58
1:AA:531:U:C5'	1:AA:532:A:OP1	2.50	0.58
1:AA:950:U:H2'	1:AA:951:G:H8	1.68	0.58
1:AA:992:U:H4'	1:AA:993:G:C5'	2.34	0.58
2:AV:38:A:H2'	2:AV:39:U:O2	2.02	0.58
3:AB:202:ASN:HD22	3:AB:203:ASP:N	2.01	0.58
17:AP:71:VAL:O	17:AP:75:ILE:HD13	2.02	0.58
20:AS:49:ALA:HB1	20:AS:56:HIS:HB3	1.84	0.58
22:B0:293:U:H2'	22:B0:295:G:H8	1.66	0.58
22:B0:519:U:H2'	22:B0:520:G:C8	2.38	0.58
22:B0:1218:G:H1	22:B0:1231:U:H3	1.51	0.58
22:B0:1464:G:H2'	22:B0:1465:U:H5'	1.84	0.58
22:B0:1493:A:O5'	26:BA:183:VAL:HG21	2.03	0.58
22:B0:1580:A:H1'	26:BA:68:ARG:HD2	1.84	0.58
22:B0:1582:C:N3	26:BA:95:TYR:O	2.37	0.58
22:B0:2519:U:H5"	22:B0:2520:C:OP1	2.02	0.58
22:B0:2781:A:H8	33:BH:116:ARG:HB3	1.67	0.58
22:B0:2899:A:N3	33:BH:136:GLN:O	2.36	0.58
26:BA:93:VAL:O	26:BA:94:LEU:HD22	2.03	0.58
28:BC:57:LYS:HA	28:BC:57:LYS:HE2	1.84	0.58
32:BG:34:ILE:HG23	32:BG:34:ILE:O	2.03	0.58
36:BK:34:LYS:NZ	36:BK:34:LYS:HB3	2.18	0.58
40:BO:23:TYR:HB2	40:BO:28:SER:HB2	1.85	0.58
1:AA:753:A:H5'	1:AA:754:C:C6	2.38	0.58
1:AA:1016:A:H2'	1:AA:1017:U:O4'	2.04	0.58
13:AL:49:ARG:HB2	13:AL:89:LEU:HD11	1.85	0.58
16:AO:42:PHE:HZ	16:AO:52:ARG:HA	1.68	0.58
16:AO:81:ILE:HG21	16:AO:87:ARG:HE	1.69	0.58
22:B0:182:A:H3'	28:BC:62:GLN:OE1	2.02	0.58
22:B0:567:U:H1'	22:B0:2502:G:O6	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1029:A:H62	22:B0:1125:G:H21	1.51	0.58
22:B0:1416:G:N1	22:B0:1417:U:C4	2.71	0.58
22:B0:1493:A:OP2	26:BA:183:VAL:HB	2.03	0.58
22:B0:1577:C:H5"	26:BA:61:TYR:HA	1.85	0.58
22:B0:1578:U:OP2	26:BA:101:ARG:CD	2.47	0.58
22:B0:2165:C:N4	22:B0:2172:U:O2'	2.34	0.58
22:B0:2263:C:O5'	45:BU:10:ARG:O	2.21	0.58
22:B0:2278:A:H2	45:BU:10:ARG:HH12	1.50	0.58
22:B0:2492:U:H2'	22:B0:2493:U:C6	2.38	0.58
24:B2:141:VAL:HG11	24:B2:161:ARG:HH11	1.68	0.58
27:BB:165:MET:CG	27:BB:166:GLY:H	2.16	0.58
28:BC:24:ASN:C	28:BC:26:ALA:N	2.56	0.58
33:BH:69:ARG:NH1	33:BH:69:ARG:HB3	2.19	0.58
47:BX:8:GLN:NE2	47:BX:23:LEU:HD13	2.18	0.58
1:AA:107:G:H3'	1:AA:108:G:H21	1.69	0.58
1:AA:1157:A:H1'	1:AA:1181:G:C2	2.38	0.58
2:AU:35:A:H2'	2:AU:36:A:C8	2.39	0.58
7:AF:38:ARG:HG3	7:AF:39:LEU:N	2.18	0.58
22:B0:63:A:H4'	22:B0:64:A:C8	2.38	0.58
22:B0:684:G:O6	22:B0:775:G:N7	2.36	0.58
22:B0:772:C:H5'	22:B0:1355:G:O2'	2.04	0.58
22:B0:1478:G:H2'	22:B0:1478:G:N3	2.17	0.58
22:B0:1495:A:N6	22:B0:1496:A:N1	2.51	0.58
22:B0:1542:C:H2'	22:B0:1543:G:H5'	1.86	0.58
22:B0:1872:A:C2	22:B0:2411:A:H1'	2.38	0.58
22:B0:1900:A:H4'	22:B0:1901:A:OP1	2.02	0.58
22:B0:2414:G:N2	35:BJ:69:ARG:HH21	2.01	0.58
22:B0:2639:A:C2	22:B0:2640:G:H1'	2.39	0.58
24:B2:9:VAL:O	24:B2:9:VAL:HG22	2.03	0.58
25:B3:69:ILE:HG22	25:B3:73:ARG:CD	2.33	0.58
27:BB:5:VAL:HG13	27:BB:201:LEU:O	2.02	0.58
28:BC:98:LYS:HD2	28:BC:98:LYS:N	2.17	0.58
33:BH:51:GLY:O	33:BH:121:LYS:HD3	2.03	0.58
36:BK:96:ILE:N	36:BK:96:ILE:HD12	2.18	0.58
39:BN:4:ILE:HG13	39:BN:5:LYS:HD3	1.85	0.58
41:BQ:96:ILE:HG22	41:BQ:98:LYS:N	2.17	0.58
41:BQ:99:ARG:H	41:BQ:99:ARG:NH1	2.01	0.58
42:BR:72:GLN:HA	42:BR:72:GLN:HE21	1.68	0.58
43:BS:5:ARG:HB2	43:BS:8:ASP:OD2	2.03	0.58
1:AA:31:G:N1	1:AA:48:C:H5"	2.17	0.58
1:AA:571:U:H3	1:AA:864:A:N6	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AC:66:THR:HG22	4:AC:101:ASN:ND2	2.18	0.58
7:AF:10:VAL:HG12	7:AF:58:HIS:HB3	1.86	0.58
22:B0:39:G:H2'	22:B0:40:U:C6	2.39	0.58
22:B0:404:A:H1'	22:B0:406:G:C5	2.37	0.58
22:B0:479:A:H2'	22:B0:481:G:C8	2.38	0.58
22:B0:655:A:H4'	22:B0:656:G:C5'	2.30	0.58
22:B0:1083:U:P	25:B3:84:LYS:C	2.81	0.58
22:B0:1421:G:O2'	26:BA:146:LYS:HE2	2.04	0.58
22:B0:1932:A:H61	22:B0:1968:G:N2	2.01	0.58
22:B0:2128:G:C3'	22:B0:2165:C:H5"	2.34	0.58
22:B0:2133:G:C6	24:B2:9:VAL:HG21	2.38	0.58
22:B0:2180:U:H2'	22:B0:2181:U:C6	2.39	0.58
22:B0:2678:C:C6	27:BB:125:TRP:HA	2.38	0.58
24:B2:43:VAL:O	24:B2:171:HIS:HA	2.02	0.58
26:BA:144:GLU:HB2	26:BA:188:ARG:H	1.68	0.58
28:BC:28:VAL:N	35:BJ:17:LYS:CG	2.66	0.58
28:BC:117:ARG:HA	28:BC:185:LYS:HZ2	1.65	0.58
29:BD:68:LYS:H	29:BD:68:LYS:CD	2.10	0.58
32:BG:97:VAL:HG23	32:BG:136:GLY:HA3	1.86	0.58
33:BH:97:PRO:CG	33:BH:126:ALA:HB2	2.33	0.58
35:BJ:76:GLU:N	35:BJ:109:LYS:HE3	2.19	0.58
37:BL:89:SER:O	37:BL:90:ARG:HD2	2.04	0.58
42:BR:63:VAL:CG1	42:BR:81:LYS:HD3	2.33	0.58
47:BX:12:ALA:O	47:BX:15:ARG:HG2	2.04	0.58
47:BX:20:LYS:HE3	47:BX:24:LEU:HD11	1.86	0.58
1:AA:201:G:C6	1:AA:203:U:H1'	2.38	0.58
1:AA:428:G:O2'	1:AA:429:U:P	2.61	0.58
1:AA:687:A:O2'	1:AA:688:G:P	2.61	0.58
1:AA:1239:A:H5"	1:AA:1240:U:OP1	2.04	0.58
1:AA:1363:A:H1'	1:AA:1365:G:N7	2.19	0.58
1:AA:1366:C:C2'	11:AJ:62:ARG:NH2	2.66	0.58
13:AL:56:LEU:HD11	13:AL:81:ILE:HG13	1.85	0.58
19:AR:58:ILE:HG22	19:AR:62:ARG:HH11	1.67	0.58
22:B0:1202:G:H8	35:BJ:14:LYS:NZ	2.01	0.58
22:B0:1413:U:H2'	22:B0:1414:G:O4'	2.04	0.58
22:B0:1416:G:H4'	22:B0:1587:A:C2	2.38	0.58
22:B0:2018:G:H2'	22:B0:2019:A:C8	2.38	0.58
22:B0:2172:U:O3'	24:B2:36:LYS:HG3	2.03	0.58
22:B0:2173:A:H4'	24:B2:35:ALA:HB3	1.86	0.58
22:B0:2639:A:H5'	27:BB:46:ARG:NH1	2.19	0.58
22:B0:2833:U:H5"	22:B0:2834:G:OP2	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:B2:59:ARG:NH1	24:B2:138:ASN:HD22	2.01	0.58
25:B3:19:VAL:CG2	25:B3:42:ALA:HB1	2.33	0.58
25:B3:65:LYS:HB3	25:B3:69:ILE:CD1	2.32	0.58
26:BA:122:ALA:O	26:BA:129:LEU:HD21	2.02	0.58
26:BA:141:HIS:HA	26:BA:161:VAL:CG2	2.33	0.58
27:BB:37:VAL:HA	27:BB:78:GLY:HA3	1.86	0.58
32:BG:126:ARG:O	32:BG:127:SER:HB3	2.04	0.58
36:BK:33:LEU:HD12	36:BK:117:PHE:CD1	2.38	0.58
39:BN:25:VAL:CG1	39:BN:88:ARG:HE	2.16	0.58
1:AA:792:A:H4'	1:AA:793:U:O5'	2.03	0.58
1:AA:934:C:N4	1:AA:1344:C:H2'	2.16	0.58
1:AA:1234:C:H4'	1:AA:1364:U:O2'	2.04	0.58
3:AB:72:LYS:HG2	3:AB:74:ALA:H	1.68	0.58
8:AG:147:ASN:HB3	8:AG:150:PHE:HD2	1.68	0.58
12:AK:13:LYS:HZ2	12:AK:15:VAL:HG22	1.68	0.58
15:AN:46:LYS:O	15:AN:46:LYS:HD3	2.04	0.58
21:AT:27:MET:HE1	21:AT:74:HIS:ND1	2.18	0.58
22:B0:553:G:H2'	22:B0:554:U:O4'	2.04	0.58
22:B0:1082:U:O2'	25:B3:83:ALA:C	2.42	0.58
22:B0:1211:C:C4'	22:B0:1212:G:OP2	2.48	0.58
22:B0:1675:C:H42	22:B0:1993:U:H1'	1.69	0.58
22:B0:1936:A:H5"	22:B0:1937:A:O5'	2.04	0.58
22:B0:2124:G:C2'	22:B0:2125:G:O5'	2.51	0.58
22:B0:2732:G:H2'	22:B0:2734:A:O4'	2.04	0.58
28:BC:171:ASP:O	28:BC:175:ILE:HG23	2.02	0.58
41:BQ:48:LYS:C	41:BQ:50:VAL:H	2.07	0.58
41:BQ:55:ILE:O	41:BQ:58:ALA:HB3	2.03	0.58
1:AA:662:U:H2'	1:AA:663:A:C8	2.39	0.58
1:AA:718:A:C4'	12:AK:119:GLY:H	2.16	0.58
1:AA:1158:C:O2	1:AA:1158:C:C2'	2.46	0.58
1:AA:1399:C:C2	1:AA:1502:A:N6	2.72	0.58
1:AA:1401:G:H2'	1:AA:1402:C:O4'	2.04	0.58
2:AU:75:C:H6	22:B0:2556:C:H2'	1.68	0.58
2:AW:55:U:O2	2:AW:55:U:H2'	2.02	0.58
3:AB:116:LEU:HB2	3:AB:140:LEU:HD21	1.85	0.58
6:AE:12:GLU:HG2	6:AE:63:MET:SD	2.44	0.58
22:B0:215:G:H4'	22:B0:216:A:C5'	2.34	0.58
22:B0:859:G:HO2'	22:B0:860:U:H5	1.52	0.58
22:B0:962:G:H2'	22:B0:963:U:H6	1.68	0.58
22:B0:1238:G:O2'	22:B0:1239:G:H5'	2.04	0.58
22:B0:1299:G:H5"	22:B0:1300:G:OP1	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1485:C:H5”	26:BA:87:SER:N	2.18	0.58
22:B0:1581:A:N1	26:BA:97:ASP:OD1	2.37	0.58
22:B0:2263:C:O2	22:B0:2264:C:C6	2.56	0.58
22:B0:2780:G:H2’	22:B0:2781:A:OP1	2.04	0.58
26:BA:142:ASN:OD1	26:BA:155:ARG:NH1	2.36	0.58
27:BB:165:MET:CG	27:BB:166:GLY:N	2.67	0.58
27:BB:165:MET:CE	27:BB:166:GLY:H	2.16	0.58
28:BC:118:LEU:H	28:BC:118:LEU:CD2	2.13	0.58
29:BD:133:GLU:OE1	29:BD:148:VAL:HG21	2.04	0.58
32:BG:109:ALA:HA	32:BG:112:LYS:CE	2.29	0.58
34:BI:108:ARG:HD2	34:BI:116:ILE:HG13	1.85	0.58
40:BO:113:LYS:HD2	40:BO:113:LYS:N	2.19	0.58
42:BR:93:LEU:HD21	42:BR:96:VAL:O	2.04	0.58
1:AA:717:U:O2’	12:AK:119:GLY:HA2	2.04	0.58
1:AA:1355:G:H1	1:AA:1367:C:H42	1.50	0.58
8:AG:112:ASP:OD1	8:AG:118:ARG:HG2	2.04	0.58
11:AJ:28:THR:OG1	11:AJ:86:ALA:HB1	2.04	0.58
17:AP:71:VAL:HG22	17:AP:75:ILE:HD13	1.86	0.58
22:B0:129:C:N3	22:B0:130:C:N4	2.52	0.58
22:B0:221:A:O2’	22:B0:222:A:OP2	2.19	0.58
22:B0:683:U:H1’	22:B0:794:A:C6	2.38	0.58
22:B0:987:C:H2’	22:B0:988:A:O4’	2.04	0.58
22:B0:1141:U:C4’	22:B0:1142:A:O4’	2.37	0.58
22:B0:1166:G:H2’	22:B0:1167:C:C6	2.39	0.58
22:B0:2108:A:H3’	22:B0:2110:G:O5’	2.04	0.58
32:BG:75:ALA:O	32:BG:76:ALA:CB	2.52	0.58
39:BN:60:VAL:HB	39:BN:74:GLN:HG3	1.86	0.58
40:BO:12:ARG:HH22	40:BO:16:ILE:HG13	1.69	0.58
1:AA:179:A:N6	1:AA:196:A:N7	2.51	0.58
5:AD:71:PHE:HE1	5:AD:93:LEU:HD21	1.69	0.58
11:AJ:8:ILE:CG1	11:AJ:100:ILE:HG22	2.34	0.58
11:AJ:17:LEU:HD12	11:AJ:18:ILE:N	2.19	0.58
11:AJ:30:LYS:NZ	11:AJ:30:LYS:HB3	2.19	0.58
22:B0:1129:A:H1’	22:B0:2516:A:H4’	1.85	0.58
22:B0:1494:A:N1	26:BA:129:LEU:O	2.37	0.58
22:B0:2122:U:H1’	22:B0:2123:G:C6	2.38	0.58
22:B0:2126:A:H2’	22:B0:2166:U:O3’	2.04	0.58
22:B0:2776:A:N6	22:B0:2782:G:H1’	2.19	0.58
23:B9:97:C:H2’	23:B9:98:G:O4’	2.04	0.58
24:B2:7:MET:O	24:B2:10:ILE:HG22	2.03	0.58
28:BC:152:GLU:HB2	28:BC:187:VAL:O	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
31:BF:58:LEU:HD12	31:BF:59:ALA:N	2.19	0.58
32:BG:11:GLN:HG3	32:BG:55:PRO:CB	2.29	0.58
33:BH:127:GLY:HA3	33:BH:131:ASN:ND2	2.19	0.58
43:BS:65:GLN:HB2	43:BS:68:ASN:OD1	2.02	0.58
49:B1:8:ILE:O	49:B1:24:LYS:HA	2.04	0.58
1:AA:517:G:H4'	1:AA:519:C:C2	2.39	0.57
1:AA:1305:G:H22	1:AA:1331:G:H2'	1.68	0.57
7:AF:12:PRO:HD3	7:AF:57:ALA:HA	1.86	0.57
9:AH:79:ARG:HB3	9:AH:80:PRO:HD2	1.86	0.57
16:AO:7:THR:O	16:AO:11:VAL:HG23	2.03	0.57
16:AO:31:LEU:O	16:AO:35:ILE:HG12	2.04	0.57
17:AP:12:LYS:N	17:AP:12:LYS:HD2	2.19	0.57
22:B0:658:U:O2'	28:BC:99:LYS:HG2	2.03	0.57
22:B0:733:G:H5"	22:B0:761:A:H61	1.68	0.57
22:B0:1416:G:C2	22:B0:1417:U:C4	2.91	0.57
22:B0:1418:G:O6	26:BA:101:ARG:CG	2.52	0.57
22:B0:1418:G:O6	26:BA:100:ARG:C	2.42	0.57
22:B0:1478:G:C2'	22:B0:1558:C:H2'	2.34	0.57
22:B0:1488:G:C8	26:BA:158:GLY:C	2.77	0.57
22:B0:2128:G:O5'	22:B0:2165:C:C3'	2.43	0.57
22:B0:2677:G:H1'	27:BB:160:LYS:HD3	1.85	0.57
22:B0:2879:A:HO2'	22:B0:2881:U:H5	1.50	0.57
26:BA:140:VAL:CG1	26:BA:190:THR:O	2.50	0.57
26:BA:146:LYS:HB2	26:BA:146:LYS:NZ	2.19	0.57
27:BB:16:THR:HG23	27:BB:18:ASP:O	2.04	0.57
28:BC:4:VAL:CG2	28:BC:13:THR:HA	2.33	0.57
28:BC:32:VAL:HA	28:BC:35:TYR:CD2	2.39	0.57
32:BG:48:ILE:H	32:BG:48:ILE:CD1	2.16	0.57
32:BG:121:ILE:O	32:BG:125:THR:HG23	2.04	0.57
32:BG:133:ARG:HD3	32:BG:135:MET:O	2.03	0.57
34:BI:51:LYS:O	34:BI:51:LYS:HD3	2.03	0.57
35:BJ:21:ARG:O	35:BJ:23:ILE:HD12	2.03	0.57
36:BK:91:TYR:CG	36:BK:92:TRP:N	2.71	0.57
40:BO:61:ILE:O	40:BO:62:ALA:CB	2.51	0.57
40:BO:61:ILE:HA	40:BO:64:ILE:HG12	1.84	0.57
42:BR:18:GLU:O	42:BR:19:LYS:CB	2.52	0.57
42:BR:67:VAL:CG1	42:BR:68:LYS:H	2.10	0.57
45:BU:54:ARG:HG3	45:BU:55:ASP:H	1.68	0.57
47:BX:47:ILE:HG23	47:BX:56:VAL:HG11	1.86	0.57
49:B1:29:LYS:H	49:B1:29:LYS:CD	2.15	0.57
1:AA:1257:A:O2'	1:AA:1258:G:OP2	2.21	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1322:C:H4'	1:AA:1323:G:H5'	1.86	0.57
1:AA:1513:A:H2'	1:AA:1514:G:C8	2.39	0.57
10:AI:82:ILE:O	10:AI:86:LEU:HG	2.04	0.57
10:AI:119:LYS:C	10:AI:121:ARG:H	2.07	0.57
22:B0:990:A:O2'	22:B0:991:C:OP1	2.19	0.57
22:B0:1083:U:C2'	25:B3:88:GLU:CG	2.72	0.57
22:B0:1347:A:P	22:B0:1382:G:H22	2.27	0.57
22:B0:1423:A:O3'	26:BA:59:GLN:HG3	2.04	0.57
22:B0:1490:C:O2'	26:BA:164:VAL:HG23	2.04	0.57
22:B0:1491:A:H2'	26:BA:173:LEU:CB	2.33	0.57
22:B0:1491:A:C2'	26:BA:173:LEU:HB3	2.35	0.57
22:B0:1703:G:H2'	22:B0:1704:C:C6	2.38	0.57
22:B0:2198:A:N3	22:B0:2198:A:H2'	2.19	0.57
22:B0:2678:C:H5'	27:BB:124:ARG:CZ	2.34	0.57
24:B2:202:GLN:H	24:B2:202:GLN:HE21	1.47	0.57
25:B5:100:LYS:O	25:B5:104:GLU:HB2	2.04	0.57
29:BD:25:MET:C	29:BD:27:VAL:H	2.06	0.57
32:BG:112:LYS:HG2	32:BG:116:MET:HB2	1.86	0.57
33:BH:105:VAL:HA	33:BH:108:MET:HE1	1.86	0.57
39:BN:46:VAL:O	39:BN:47:ILE:HD13	2.04	0.57
40:BO:50:ARG:NE	40:BO:54:ARG:NH2	2.51	0.57
42:BR:33:LYS:HA	42:BR:82:LYS:HB3	1.86	0.57
1:AA:242:G:H2'	1:AA:243:A:H5'	1.85	0.57
1:AA:305:G:H5"	1:AA:306:A:OP1	2.04	0.57
1:AA:1152:A:H2'	1:AA:1153:G:C8	2.40	0.57
1:AA:1503:A:O2'	1:AA:1504:G:P	2.62	0.57
7:AF:38:ARG:HB3	7:AF:63:ASN:HD21	1.69	0.57
9:AH:102:VAL:HG22	9:AH:125:ILE:HD12	1.86	0.57
11:AJ:42:LEU:HB3	11:AJ:43:PRO:HD2	1.86	0.57
12:AK:106:ILE:HD13	12:AK:106:ILE:C	2.24	0.57
22:B0:379:G:H4'	22:B0:2232:C:H5"	1.86	0.57
22:B0:881:G:H1	22:B0:895:U:H3	1.51	0.57
22:B0:1061:U:C5	32:BG:10:LEU:HD23	2.39	0.57
22:B0:1258:U:H2'	22:B0:1259:G:C8	2.40	0.57
22:B0:1418:G:C6	26:BA:99:GLU:HB3	2.39	0.57
22:B0:2246:G:C2	22:B0:2426:A:H1'	2.39	0.57
22:B0:2292:U:H2'	22:B0:2293:G:C8	2.38	0.57
24:B2:50:ASP:OD2	24:B2:53:LYS:HG3	2.04	0.57
28:BC:28:VAL:O	28:BC:29:HIS:ND1	2.37	0.57
28:BC:89:PRO:HG2	28:BC:90:GLN:HE22	1.69	0.57
28:BC:112:LEU:HG	28:BC:118:LEU:HD11	1.85	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BC:152:GLU:OE2	28:BC:186:VAL:HG21	2.04	0.57
37:BL:95:THR:HG21	37:BL:115:LEU:HG	1.86	0.57
39:BN:37:LYS:HD3	39:BN:39:LEU:HD12	1.84	0.57
48:BZ:29:VAL:HG13	48:BZ:47:TYR:CZ	2.39	0.57
4:AC:166:TRP:CZ2	4:AC:168:ARG:HD3	2.40	0.57
10:AI:27:ILE:HB	10:AI:34:LEU:HG	1.86	0.57
22:B0:899:A:H2'	22:B0:900:A:H8	1.68	0.57
22:B0:1080:A:H2'	22:B0:1081:U:C6	2.40	0.57
22:B0:1581:A:H61	26:BA:95:TYR:HB3	1.67	0.57
22:B0:2259:U:H6	22:B0:2259:U:O5'	1.87	0.57
22:B0:2328:A:H1'	45:BU:10:ARG:HB3	1.85	0.57
22:B0:2381:A:H2'	22:B0:2382:G:H5'	1.85	0.57
22:B0:2553:G:H3'	22:B0:2554:U:H5"	1.86	0.57
22:B0:2677:G:O3'	27:BB:125:TRP:HB2	2.03	0.57
24:B2:177:VAL:HG13	24:B2:178:ASP:CG	2.25	0.57
25:B3:61:ALA:HB1	25:B3:68:VAL:HG11	1.86	0.57
26:BA:138:SER:N	26:BA:162:GLN:HG3	2.19	0.57
27:BB:28:GLU:CA	27:BB:186:LEU:HD22	2.26	0.57
27:BB:28:GLU:HG2	27:BB:186:LEU:HD22	1.86	0.57
28:BC:88:ARG:HG2	28:BC:88:ARG:HH11	1.68	0.57
29:BD:8:LYS:HA	29:BD:12:VAL:HG11	1.85	0.57
33:BH:136:GLN:N	33:BH:137:PRO:HD3	2.20	0.57
35:BJ:77:ILE:HD12	35:BJ:77:ILE:N	2.19	0.57
37:BL:38:LEU:O	37:BL:40:LYS:HG2	2.03	0.57
37:BL:90:ARG:HA	37:BL:90:ARG:HH11	1.69	0.57
39:BN:6:GLN:HB3	39:BN:7:LEU:HD22	1.85	0.57
39:BN:24:THR:HA	39:BN:49:ILE:CG1	2.35	0.57
40:BO:21:LYS:N	40:BO:21:LYS:HD2	2.18	0.57
41:BQ:51:LEU:O	41:BQ:51:LEU:HD13	2.04	0.57
42:BR:81:LYS:HE3	42:BR:82:LYS:HD2	1.85	0.57
45:BU:78:PHE:CG	45:BU:79:ILE:N	2.72	0.57
1:AA:730:G:H2'	1:AA:731:G:O4'	2.05	0.57
1:AA:1316:G:H21	20:AS:6:LYS:HZ2	1.52	0.57
1:AA:1369:C:OP2	10:AI:112:ARG:HA	2.05	0.57
19:AR:38:ILE:N	19:AR:38:ILE:HD12	2.19	0.57
22:B0:694:U:H5"	22:B0:1569:A:C2	2.39	0.57
22:B0:1217:U:H2'	22:B0:1218:G:C8	2.39	0.57
22:B0:1388:G:H4'	22:B0:1524:C:H1'	1.86	0.57
22:B0:2130:U:H5	24:B2:38:VAL:HG21	1.68	0.57
22:B0:2173:A:H3'	24:B2:39:GLU:OE1	2.04	0.57
22:B0:2365:G:H21	45:BU:30:VAL:HG21	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2515:C:H41	27:BB:152:PRO:CD	2.17	0.57
22:B0:2519:U:H4'	22:B0:2520:C:OP1	2.03	0.57
24:B2:174:ILE:HD11	24:B2:188:LEU:N	2.19	0.57
26:BA:119:VAL:HG12	26:BA:133:ASN:HD21	1.68	0.57
28:BC:52:VAL:HG12	28:BC:54:GLY:H	1.68	0.57
28:BC:53:THR:HG21	28:BC:57:LYS:HE3	1.86	0.57
28:BC:73:ILE:C	28:BC:73:ILE:HD12	2.25	0.57
28:BC:189:THR:O	28:BC:193:VAL:HG23	2.05	0.57
33:BH:25:LEU:H	33:BH:25:LEU:CD1	2.12	0.57
39:BN:79:VAL:HG12	39:BN:82:SER:HB2	1.87	0.57
45:BU:13:ARG:C	45:BU:13:ARG:NE	2.56	0.57
48:BZ:51:ARG:HG3	48:BZ:51:ARG:HH11	1.69	0.57
1:AA:7:A:O2'	1:AA:8:A:OP1	2.17	0.57
1:AA:80:A:H3'	1:AA:81:A:C5'	2.32	0.57
1:AA:351:G:H5"	1:AA:352:C:OP2	2.03	0.57
1:AA:1305:G:N2	1:AA:1331:G:H2'	2.20	0.57
1:AA:1367:C:H2'	1:AA:1368:A:O4'	2.04	0.57
2:AV:18:G:C4'	2:AV:19:G:OP1	2.50	0.57
4:AC:119:ILE:HD13	4:AC:150:VAL:HG11	1.86	0.57
5:AD:154:VAL:O	5:AD:158:LEU:HD23	2.05	0.57
10:AI:67:LYS:HD3	10:AI:67:LYS:N	2.19	0.57
13:AL:29:LYS:HG3	13:AL:58:ASN:HD21	1.68	0.57
14:AM:7:ASN:C	14:AM:8:ILE:HD12	2.25	0.57
18:AQ:13:SER:HB3	18:AQ:21:VAL:HG22	1.87	0.57
18:AQ:57:VAL:HB	18:AQ:79:GLU:HG2	1.86	0.57
21:AT:28:ARG:HA	21:AT:31:ILE:HG22	1.85	0.57
22:B0:19:A:OP2	40:BO:29:ARG:NH1	2.37	0.57
22:B0:411:G:C5'	22:B0:412:A:OP1	2.47	0.57
22:B0:567:U:H5'	22:B0:809:G:OP1	2.04	0.57
22:B0:662:G:OP2	35:BJ:27:LEU:HB2	2.04	0.57
22:B0:747:U:H3	22:B0:2014:A:H1'	1.69	0.57
22:B0:1494:A:N7	26:BA:189:ALA:N	2.51	0.57
22:B0:1865:U:H2'	22:B0:1869:G:C8	2.39	0.57
22:B0:2127:G:HO2'	22:B0:2165:C:C2'	2.16	0.57
26:BA:66:PHE:O	26:BA:67:LYS:HB2	2.04	0.57
27:BB:28:GLU:HG2	27:BB:186:LEU:CD2	2.35	0.57
27:BB:82:PHE:O	27:BB:83:ARG:HG3	2.05	0.57
28:BC:74:LYS:NZ	28:BC:74:LYS:HB2	2.19	0.57
28:BC:99:LYS:HG3	28:BC:102:ARG:HH22	1.68	0.57
36:BK:42:THR:CG2	36:BK:45:GLN:HG3	2.34	0.57
40:BO:35:PHE:O	40:BO:36:GLN:CB	2.53	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BX:28:LEU:HD12	47:BX:28:LEU:N	2.20	0.57
1:AA:812:G:HO2'	1:AA:813:U:H6	1.48	0.57
1:AA:1291:U:H2'	1:AA:1292:G:C8	2.40	0.57
2:AU:75:C:H2'	2:AU:76:A:OP2	2.04	0.57
2:AU:76:A:OP1	22:B0:2554:U:H3'	2.04	0.57
4:AC:13:ILE:HG12	4:AC:177:LEU:CD2	2.35	0.57
5:AD:166:LYS:HD3	5:AD:166:LYS:N	2.19	0.57
18:AQ:45:VAL:HG11	18:AQ:60:ILE:CD1	2.33	0.57
22:B0:183:C:H3'	28:BC:53:THR:CG2	2.33	0.57
22:B0:532:A:C5'	22:B0:533:G:OP2	2.53	0.57
22:B0:628:G:O2'	22:B0:629:G:H5'	2.05	0.57
22:B0:911:A:H2'	45:BU:8:SER:HB2	1.86	0.57
22:B0:1486:G:C2'	26:BA:196:ASN:N	2.67	0.57
22:B0:1488:G:C5	26:BA:159:THR:HG22	2.40	0.57
22:B0:1673:G:H2'	22:B0:1674:G:H5"	1.87	0.57
22:B0:1923:U:H2'	22:B0:1924:C:H6	1.69	0.57
22:B0:2644:G:H2'	27:BB:160:LYS:HZ3	1.70	0.57
22:B0:2789:C:H1'	22:B0:2892:G:O2'	2.05	0.57
23:B9:14:U:C4'	23:B9:15:A:OP2	2.50	0.57
25:B5:81:LYS:HE3	25:B5:82:GLU:OE1	2.05	0.57
26:BA:116:GLN:HG2	26:BA:117:SER:N	2.19	0.57
26:BA:139:THR:HG23	26:BA:191:LEU:HD23	1.86	0.57
27:BB:22:ILE:HG21	27:BB:190:LYS:NZ	2.19	0.57
32:BG:59:THR:HG22	32:BG:67:THR:HB	1.86	0.57
34:BI:116:ILE:O	34:BI:116:ILE:HD13	2.03	0.57
35:BJ:41:ARG:NH1	35:BJ:42:SER:H	2.03	0.57
39:BN:76:HIS:O	39:BN:79:VAL:HB	2.04	0.57
40:BO:60:TRP:O	40:BO:61:ILE:HG23	2.05	0.57
40:BO:68:ALA:HB1	40:BO:73:ILE:O	2.04	0.57
41:BQ:28:LYS:CA	41:BQ:70:LYS:HD2	2.34	0.57
42:BR:72:GLN:HA	42:BR:72:GLN:NE2	2.20	0.57
1:AA:718:A:C5'	12:AK:119:GLY:H	2.16	0.57
2:AU:18:G:C4'	2:AU:19:G:OP1	2.50	0.57
5:AD:76:LYS:NZ	5:AD:76:LYS:HB3	2.19	0.57
9:AH:119:GLY:C	9:AH:120:LEU:HD12	2.25	0.57
17:AP:10:GLY:HA2	17:AP:15:PRO:HA	1.86	0.57
20:AS:10:ILE:N	20:AS:10:ILE:HD12	2.20	0.57
22:B0:220:G:H4'	22:B0:234:U:H4'	1.86	0.57
22:B0:301:G:O2'	22:B0:302:C:O5'	2.22	0.57
22:B0:555:U:H2'	22:B0:556:A:C8	2.39	0.57
22:B0:588:U:HO2'	28:BC:85:PHE:HD2	1.50	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:617:G:N3	22:B0:617:G:C3'	2.64	0.57
22:B0:1082:U:C2'	25:B3:83:ALA:C	2.73	0.57
22:B0:1113:U:H2'	22:B0:1114:C:C6	2.40	0.57
22:B0:1426:G:H1'	22:B0:1572:A:H61	1.68	0.57
22:B0:1444:A:H3'	22:B0:1445:U:H5"	1.83	0.57
22:B0:1478:G:N2	22:B0:1558:C:H4'	2.19	0.57
22:B0:1485:C:H2'	22:B0:1486:G:C8	2.40	0.57
22:B0:1487:G:C3'	26:BA:158:GLY:HA3	2.34	0.57
22:B0:1943:U:H1'	22:B0:1945:G:H5'	1.87	0.57
22:B0:2128:G:C4'	22:B0:2165:C:H5"	2.34	0.57
23:B9:16:G:H8	23:B9:16:G:H5'	1.70	0.57
25:B3:110:LEU:HB3	25:B3:115:ALA:HB3	1.87	0.57
27:BB:27:ILE:HD12	27:BB:201:LEU:HD21	1.86	0.57
33:BH:30:THR:HG22	33:BH:31:GLU:H	1.69	0.57
35:BJ:81:ASP:H	35:BJ:84:LYS:HG3	1.69	0.57
40:BO:38:VAL:O	40:BO:41:ALA:HB3	2.05	0.57
40:BO:40:LYS:O	40:BO:44:TYR:HB3	2.05	0.57
42:BR:57:VAL:HG22	42:BR:86:THR:HB	1.87	0.57
45:BU:58:LEU:HB2	45:BU:81:ILE:HD13	1.87	0.57
46:BW:20:ASN:O	46:BW:23:ARG:HB3	2.04	0.57
1:AA:226:G:O2'	1:AA:227:G:H5'	2.04	0.57
1:AA:720:C:N4	12:AK:118:ASN:CG	2.57	0.57
4:AC:78:LYS:HB3	4:AC:78:LYS:NZ	2.19	0.57
6:AE:37:VAL:HG11	6:AE:113:VAL:HA	1.87	0.57
10:AI:4:GLN:OE1	10:AI:21:LYS:HE3	2.05	0.57
10:AI:70:GLY:O	10:AI:74:GLN:HG3	2.05	0.57
22:B0:70:G:H4'	22:B0:71:A:OP1	2.04	0.57
22:B0:810:U:C2'	35:BJ:35:HIS:HB2	2.30	0.57
22:B0:1083:U:H5'	25:B3:86:LEU:N	2.13	0.57
22:B0:1084:A:H8	25:B3:88:GLU:C	2.07	0.57
22:B0:1299:G:H1'	22:B0:1301:A:C2	2.40	0.57
22:B0:1313:U:O2	22:B0:1313:U:C2'	2.53	0.57
22:B0:1423:A:O3'	26:BA:56:GLY:O	2.23	0.57
22:B0:1581:A:H3'	26:BA:73:ILE:HD12	1.86	0.57
22:B0:1582:C:O4'	26:BA:73:ILE:HD11	2.04	0.57
22:B0:2135:A:C8	22:B0:2135:A:C3'	2.88	0.57
22:B0:2621:G:H4'	27:BB:118:PHE:CZ	2.39	0.57
22:B0:2722:G:H1'	37:BL:4:ARG:NH1	2.16	0.57
22:B0:2779:U:O3'	33:BH:116:ARG:CZ	2.53	0.57
26:BA:98:GLY:C	26:BA:99:GLU:CD	2.63	0.57
26:BA:101:ARG:CZ	26:BA:101:ARG:HB2	2.35	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:156:SER:O	26:BA:158:GLY:N	2.35	0.57
39:BN:12:MET:HA	39:BN:12:MET:HE3	1.86	0.57
39:BN:20:ARG:HA	39:BN:21:PRO:O	2.05	0.57
39:BN:64:SER:HA	39:BN:71:ARG:CG	2.35	0.57
41:BQ:78:GLU:HG3	41:BQ:79:GLY:H	1.70	0.57
42:BR:11:LEU:HG	46:BW:26:PHE:CZ	2.39	0.57
43:BS:34:ILE:HD13	43:BS:34:ILE:C	2.25	0.57
44:BT:55:GLU:O	44:BT:59:GLU:HG3	2.04	0.57
1:AA:570:G:H1	1:AA:865:A:N6	2.03	0.57
1:AA:1322:C:C5'	1:AA:1323:G:OP1	2.50	0.57
5:AD:35:GLN:NE2	5:AD:42:ALA:HA	2.20	0.57
21:AT:8:LYS:HB2	21:AT:8:LYS:NZ	2.20	0.57
22:B0:42:A:H2'	22:B0:44:A:C8	2.40	0.57
22:B0:1061:U:H1'	22:B0:1070:A:H1'	1.85	0.57
22:B0:1085:A:C8	25:B3:65:LYS:HE3	2.40	0.57
22:B0:1086:A:N7	25:B3:65:LYS:HD3	2.20	0.57
22:B0:1245:G:P	35:BJ:22:GLY:HA2	2.45	0.57
22:B0:1345:C:H5'	22:B0:1396:U:H3	1.70	0.57
22:B0:1456:G:H2'	22:B0:1457:G:O4'	2.05	0.57
22:B0:1966:A:H1'	22:B0:2593:U:C5'	2.35	0.57
22:B0:2001:C:H4'	22:B0:2689:U:O4	2.05	0.57
22:B0:2127:G:C2'	22:B0:2165:C:HO2'	2.11	0.57
22:B0:2173:A:H4'	24:B2:36:LYS:H	1.70	0.57
22:B0:2864:G:H2'	22:B0:2865:U:C6	2.40	0.57
25:B3:78:LEU:HD13	25:B3:82:GLU:O	2.04	0.57
37:BL:30:ARG:HB3	37:BL:30:ARG:NH1	2.20	0.57
38:BM:9:ARG:HH21	38:BM:16:ARG:HB2	1.68	0.57
40:BO:39:ILE:O	40:BO:43:GLN:HG2	2.05	0.57
41:BQ:49:LYS:NZ	41:BQ:49:LYS:HA	2.20	0.57
1:AA:21:G:H2'	1:AA:22:G:C8	2.40	0.56
1:AA:817:C:H1'	1:AA:819:A:H5'	1.87	0.56
1:AA:1182:G:O2'	1:AA:1183:U:C5'	2.52	0.56
1:AA:1210:C:H4'	1:AA:1214:C:N4	2.20	0.56
1:AA:1291:U:O3'	10:AI:40:ARG:HD3	2.04	0.56
1:AA:1302:C:C6	14:AM:16:ILE:HG13	2.40	0.56
1:AA:1486:G:H2'	1:AA:1487:G:C8	2.39	0.56
3:AB:135:MET:O	3:AB:139:GLU:HG3	2.04	0.56
5:AD:49:ASP:O	5:AD:52:VAL:HG12	2.04	0.56
22:B0:404:A:H1'	22:B0:406:G:C4	2.39	0.56
22:B0:457:A:O3'	22:B0:458:G:H4'	2.05	0.56
22:B0:474:G:H4'	22:B0:475:C:OP1	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1063:G:O2'	32:BG:135:MET:HG2	2.05	0.56
22:B0:1359:A:H2'	22:B0:1360:G:C8	2.40	0.56
22:B0:1494:A:O5'	26:BA:189:ALA:CB	2.53	0.56
22:B0:1996:C:HO2'	22:B0:1997:C:H6	1.48	0.56
22:B0:2163:G:H1'	22:B0:2164:C:C6	2.40	0.56
22:B0:2357:G:C5'	22:B0:2358:A:OP1	2.53	0.56
22:B0:2638:G:N2	22:B0:2776:A:OP2	2.28	0.56
22:B0:2678:C:OP2	27:BB:124:ARG:CB	2.53	0.56
22:B0:2690:U:H1'	22:B0:2873:A:N6	2.20	0.56
22:B0:2824:C:C2	22:B0:2825:G:N2	2.73	0.56
26:BA:115:ILE:HD13	26:BA:115:ILE:N	2.15	0.56
26:BA:143:VAL:HB	26:BA:189:ALA:HB2	1.87	0.56
33:BH:14:ASP:OD1	33:BH:15:TRP:N	2.35	0.56
34:BI:38:ILE:HG22	34:BI:61:VAL:HG22	1.86	0.56
35:BJ:99:ASN:HD22	35:BJ:99:ASN:N	2.02	0.56
37:BL:32:GLU:O	37:BL:114:GLU:HA	2.05	0.56
37:BL:99:LYS:CB	48:BZ:52:LYS:HD2	2.35	0.56
40:BO:75:TYR:CG	40:BO:76:SER:N	2.74	0.56
42:BR:32:LEU:HD23	42:BR:33:LYS:N	2.20	0.56
45:BU:43:LYS:H	45:BU:43:LYS:NZ	2.03	0.56
45:BU:43:LYS:HB3	45:BU:63:ASP:HA	1.86	0.56
47:BX:43:ILE:HD12	47:BX:43:ILE:N	2.20	0.56
1:AA:812:G:O2'	1:AA:813:U:O5'	2.22	0.56
2:AU:55:U:H2'	2:AU:55:U:O2	2.05	0.56
2:AU:75:C:H4'	22:B0:2556:C:H5"	1.86	0.56
4:AC:110:LEU:HG	4:AC:143:LEU:CD2	2.34	0.56
5:AD:78:ALA:HB3	5:AD:89:LEU:HD23	1.86	0.56
13:AL:85:ARG:HH12	13:AL:87:LYS:CD	2.18	0.56
22:B0:1267:U:H2'	22:B0:1268:A:H8	1.70	0.56
22:B0:1497:U:O2'	26:BA:83:ASP:OD1	2.23	0.56
22:B0:1498:C:H5	26:BA:63:ILE:CG1	2.19	0.56
22:B0:1499:U:H3	26:BA:155:ARG:HG2	1.64	0.56
22:B0:1580:A:N7	26:BA:66:PHE:CD2	2.73	0.56
22:B0:2126:A:H1'	22:B0:2171:A:C5	2.39	0.56
22:B0:2467:C:H2'	22:B0:2468:A:O4'	2.05	0.56
24:B2:25:ALA:O	24:B2:29:LEU:HB2	2.05	0.56
24:B2:30:LYS:C	24:B2:32:LEU:N	2.57	0.56
25:B3:90:ALA:N	25:B3:91:PRO:CD	2.68	0.56
26:BA:249:VAL:HB	26:BA:250:GLN:OE1	2.05	0.56
27:BB:122:VAL:HG22	27:BB:128:ARG:O	2.05	0.56
28:BC:137:LYS:NZ	28:BC:137:LYS:HB3	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BC:150:THR:CG2	28:BC:186:VAL:HA	2.34	0.56
28:BC:158:PHE:CE2	28:BC:160:ALA:HB3	2.40	0.56
32:BG:80:LYS:CB	32:BG:85:ILE:HD13	2.34	0.56
33:BH:54:ILE:HG12	33:BH:122:LEU:HB3	1.87	0.56
37:BL:38:LEU:C	37:BL:40:LYS:N	2.50	0.56
44:BT:68:LYS:O	44:BT:68:LYS:HD2	2.04	0.56
45:BU:70:VAL:HG23	45:BU:71:LYS:H	1.70	0.56
47:BX:15:ARG:HD2	47:BX:20:LYS:CG	2.34	0.56
1:AA:977:A:H2'	1:AA:977:A:N3	2.20	0.56
1:AA:1064:G:H4'	1:AA:1065:U:OP1	2.04	0.56
1:AA:1286:U:C2'	1:AA:1287:A:H5"	2.35	0.56
2:AU:74:C:C2	22:B0:2556:C:O2'	2.58	0.56
3:AB:75:ALA:HB2	3:AB:209:VAL:HG21	1.87	0.56
5:AD:67:LEU:HD22	5:AD:67:LEU:H	1.71	0.56
5:AD:87:GLU:OE2	5:AD:186:GLU:HA	2.05	0.56
6:AE:80:LEU:HD22	6:AE:80:LEU:N	2.20	0.56
9:AH:10:LEU:HG	9:AH:74:ILE:HG12	1.86	0.56
10:AI:27:ILE:N	10:AI:27:ILE:HD12	2.19	0.56
15:AN:40:ARG:N	15:AN:40:ARG:HD3	2.20	0.56
20:AS:86:LYS:H	20:AS:86:LYS:CD	2.15	0.56
21:AT:30:PHE:O	21:AT:34:VAL:HG23	2.05	0.56
21:AT:53:MET:HE2	21:AT:78:LEU:HD12	1.87	0.56
22:B0:33:C:H42	22:B0:446:G:H2'	1.70	0.56
22:B0:123:G:H4'	22:B0:1376:C:C5'	2.34	0.56
22:B0:352:A:H4'	22:B0:353:C:OP2	2.03	0.56
22:B0:519:U:OP1	41:BQ:18:ARG:HD2	2.05	0.56
22:B0:733:G:H3'	22:B0:761:A:N6	2.20	0.56
22:B0:1054:A:H2'	22:B0:1055:G:C8	2.40	0.56
22:B0:1070:A:O2'	22:B0:1071:G:OP2	2.23	0.56
22:B0:1082:U:O2'	25:B3:83:ALA:CB	2.52	0.56
22:B0:1418:G:N3	22:B0:1578:U:C5	2.73	0.56
22:B0:1424:G:C4'	26:BA:58:LYS:CB	2.74	0.56
22:B0:1438:U:H2'	22:B0:1439:A:C2	2.39	0.56
22:B0:1495:A:C2'	22:B0:1496:A:O5'	2.50	0.56
22:B0:1800:C:H4'	22:B0:1801:A:O5'	2.05	0.56
22:B0:2006:C:H5"	22:B0:2048:G:H5"	1.84	0.56
22:B0:2030:A:H4'	22:B0:2031:A:N7	2.19	0.56
22:B0:2109:U:OP2	22:B0:2109:U:O3'	2.24	0.56
22:B0:2263:C:O4'	45:BU:10:ARG:C	2.43	0.56
22:B0:2644:G:O2'	22:B0:2645:G:O4'	2.16	0.56
22:B0:2725:A:P	27:BB:141:ARG:HD2	2.45	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2898:G:OP2	33:BH:138:GLN:CB	2.50	0.56
24:B2:208:ILE:O	24:B2:208:ILE:HG12	2.04	0.56
25:B3:51:LYS:HG3	25:B5:45:VAL:CG1	2.33	0.56
25:B3:57:ILE:HG23	25:B3:92:ALA:CB	2.35	0.56
25:B3:66:VAL:CG2	25:B3:70:LYS:HE3	2.35	0.56
25:B5:7:ILE:O	25:B5:11:VAL:HG23	2.05	0.56
25:B5:64:ASN:O	25:B5:68:VAL:HG23	2.05	0.56
25:B5:117:VAL:HG12	25:B5:118:GLU:N	2.20	0.56
28:BC:143:LEU:HB3	28:BC:146:VAL:HG21	1.86	0.56
31:BF:29:PHE:O	31:BF:33:GLN:HG2	2.05	0.56
32:BG:33:ASN:HD22	32:BG:34:ILE:N	2.02	0.56
34:BI:57:VAL:C	34:BI:58:LEU:HD12	2.25	0.56
35:BJ:118:THR:OG1	35:BJ:120:VAL:N	2.37	0.56
36:BK:108:VAL:HG22	36:BK:109:PRO:CD	2.28	0.56
39:BN:13:LYS:HD3	39:BN:13:LYS:H	1.70	0.56
39:BN:34:GLY:CA	39:BN:40:GLN:HE21	2.18	0.56
39:BN:55:HIS:CD2	39:BN:56:SER:H	2.22	0.56
39:BN:107:ALA:HB3	39:BN:110:LYS:HG2	1.87	0.56
41:BQ:20:VAL:HG21	41:BQ:44:ALA:HA	1.87	0.56
41:BQ:86:MET:HB3	41:BQ:96:ILE:HD11	1.86	0.56
42:BR:7:LEU:HB3	42:BR:9:LYS:HE2	1.87	0.56
42:BR:45:ALA:O	42:BR:46:ALA:CB	2.54	0.56
42:BR:93:LEU:HD22	42:BR:95:PHE:H	1.69	0.56
44:BT:44:HIS:CE1	44:BT:86:LEU:H	2.24	0.56
45:BU:23:LYS:HZ2	45:BU:23:LYS:HB3	1.70	0.56
45:BU:23:LYS:HB2	45:BU:56:HIS:ND1	2.20	0.56
45:BU:36:ILE:HG23	45:BU:68:PHE:CB	2.31	0.56
45:BU:78:PHE:O	45:BU:79:ILE:HB	2.05	0.56
49:B1:8:ILE:HG22	49:B1:25:ASN:O	2.05	0.56
1:AA:25:C:H41	1:AA:558:G:N2	2.02	0.56
1:AA:80:A:C3’	1:AA:81:A:H5”	2.34	0.56
1:AA:820:U:OP2	1:AA:820:U:H6	1.88	0.56
2:AV:58:A:C4’	2:AV:59:U:OP1	2.44	0.56
4:AC:130:ARG:HH11	4:AC:130:ARG:HG3	1.70	0.56
10:AI:56:MET:O	10:AI:58:GLU:N	2.38	0.56
17:AP:20:VAL:HG11	17:AP:32:PHE:CB	2.35	0.56
21:AT:54:GLN:HB3	21:AT:55:PRO:CD	2.29	0.56
22:B0:121:G:N1	22:B0:130:C:C2	2.69	0.56
22:B0:385:C:HO2’	22:B0:387:U:H5	1.53	0.56
22:B0:762:U:O2’	22:B0:763:G:P	2.63	0.56
22:B0:776:G:H1’	22:B0:793:A:C6	2.40	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1083:U:OP2	25:B3:84:LYS:O	2.22	0.56
22:B0:1581:A:H3'	26:BA:73:ILE:CG1	2.36	0.56
22:B0:1659:G:C6	22:B0:2002:G:N1	2.74	0.56
22:B0:2179:C:OP2	22:B0:2180:U:O5'	2.23	0.56
22:B0:2528:U:H2'	22:B0:2530:A:O5'	2.04	0.56
26:BA:67:LYS:HD2	26:BA:148:GLY:HA2	1.88	0.56
26:BA:146:LYS:HB3	26:BA:147:PRO:HD2	1.87	0.56
35:BJ:134:ALA:O	35:BJ:136:GLU:N	2.38	0.56
38:BM:15:ARG:NE	38:BM:15:ARG:N	2.52	0.56
39:BN:20:ARG:HA	39:BN:20:ARG:NE	2.20	0.56
41:BQ:48:LYS:HG3	41:BQ:49:LYS:NZ	2.20	0.56
45:BU:42:THR:OG1	45:BU:65:LYS:HA	2.04	0.56
48:BZ:38:LEU:HD12	48:BZ:38:LEU:N	2.20	0.56
49:B1:35:LEU:HB3	49:B1:36:LYS:HE3	1.88	0.56
1:AA:65:A:H5"	1:AA:66:A:OP1	2.05	0.56
1:AA:765:G:H2'	1:AA:812:G:N2	2.20	0.56
1:AA:993:G:O2'	1:AA:994:A:P	2.63	0.56
1:AA:1126:U:O4'	1:AA:1280:A:N6	2.38	0.56
2:AW:9:A:O2'	2:AW:45:G:H2'	2.05	0.56
5:AD:12:ARG:HD3	5:AD:29:THR:HG21	1.88	0.56
7:AF:85:ILE:C	7:AF:85:ILE:HD13	2.25	0.56
11:AJ:32:THR:CG2	11:AJ:83:THR:HA	2.35	0.56
14:AM:4:ALA:H	14:AM:7:ASN:HD21	1.52	0.56
15:AN:40:ARG:HG3	20:AS:13:HIS:HA	1.88	0.56
22:B0:606:U:H2'	22:B0:607:U:O4'	2.04	0.56
22:B0:1487:G:C8	26:BA:158:GLY:CA	2.89	0.56
22:B0:1579:A:P	26:BA:65:ASP:HA	2.46	0.56
22:B0:1755:A:H2'	22:B0:1756:G:H5'	1.87	0.56
22:B0:1780:A:H5"	22:B0:1781:U:OP2	2.05	0.56
22:B0:2044:C:H42	22:B0:2624:G:H1	1.54	0.56
22:B0:2161:C:O2'	22:B0:2162:G:O4'	2.22	0.56
22:B0:2163:G:HO2'	22:B0:2164:C:H6	1.51	0.56
22:B0:2499:C:O2'	22:B0:2500:U:H5'	2.06	0.56
22:B0:2662:A:H2'	22:B0:2663:G:O4'	2.05	0.56
22:B0:2678:C:H5"	27:BB:124:ARG:C	2.25	0.56
26:BA:182:LYS:O	26:BA:183:VAL:HG13	2.05	0.56
27:BB:12:THR:HB	39:BN:7:LEU:HG	1.87	0.56
27:BB:15:PHE:CD1	27:BB:21:SER:HB3	2.40	0.56
29:BD:16:MET:CE	29:BD:24:VAL:HA	2.36	0.56
31:BF:77:THR:HG22	31:BF:143:ILE:HD12	1.88	0.56
35:BJ:17:LYS:CD	35:BJ:18:ARG:N	2.69	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BN:24:THR:N	39:BN:49:ILE:HG12	2.21	0.56
39:BN:37:LYS:HD2	39:BN:37:LYS:O	2.04	0.56
43:BS:25:LYS:NZ	43:BS:25:LYS:HB2	2.21	0.56
1:AA:115:G:H1'	1:AA:116:A:N7	2.19	0.56
1:AA:397:A:H3'	1:AA:397:A:N3	2.20	0.56
1:AA:1367:C:O4'	11:AJ:62:ARG:NE	2.38	0.56
2:AU:9:A:O2'	2:AU:45:G:H2'	2.05	0.56
5:AD:58:GLN:O	5:AD:62:ARG:HG3	2.05	0.56
14:AM:8:ILE:HD12	14:AM:8:ILE:N	2.21	0.56
22:B0:94:A:H2'	22:B0:95:A:O4'	2.05	0.56
22:B0:434:U:H6	22:B0:434:U:O5'	1.89	0.56
22:B0:596:U:H2'	22:B0:597:G:C8	2.40	0.56
22:B0:1083:U:H6	25:B3:85:ASP:N	2.02	0.56
22:B0:1318:U:H3	22:B0:1334:G:H1	1.53	0.56
22:B0:1395:A:H4'	22:B0:1397:U:C5	2.39	0.56
22:B0:1678:A:H2'	22:B0:1679:A:C8	2.40	0.56
22:B0:1815:A:H4'	22:B0:1816:C:O5'	2.05	0.56
22:B0:2278:A:H2	45:BU:10:ARG:NH1	2.03	0.56
22:B0:2343:U:H2'	22:B0:2344:U:O4'	2.05	0.56
25:B3:61:ALA:HB1	25:B3:68:VAL:HG21	1.88	0.56
25:B3:90:ALA:N	25:B3:91:PRO:HD2	2.21	0.56
26:BA:58:LYS:O	26:BA:59:GLN:C	2.44	0.56
26:BA:184:GLU:CG	26:BA:185:ALA:H	2.13	0.56
27:BB:108:ASP:OD2	27:BB:206:ALA:HA	2.05	0.56
28:BC:14:VAL:HG12	28:BC:15:SER:N	2.19	0.56
39:BN:101:GLU:O	39:BN:103:THR:N	2.38	0.56
40:BO:61:ILE:O	40:BO:62:ALA:HB3	2.05	0.56
40:BO:63:ARG:NH2	40:BO:96:ASP:N	2.54	0.56
42:BR:24:MET:HG2	42:BR:30:ILE:HA	1.86	0.56
43:BS:25:LYS:HB3	43:BS:34:ILE:CG2	2.36	0.56
1:AA:243:A:H4'	1:AA:244:U:C5'	2.33	0.56
1:AA:371:A:O2'	1:AA:372:C:H5'	2.06	0.56
1:AA:566:G:H4'	1:AA:567:G:OP1	2.06	0.56
1:AA:1435:G:H2'	1:AA:1436:U:C6	2.40	0.56
3:AB:53:LEU:HD12	3:AB:56:LEU:HD23	1.88	0.56
4:AC:67:ILE:HD13	4:AC:67:ILE:C	2.26	0.56
9:AH:29:SER:HB3	9:AH:32:LYS:CG	2.34	0.56
10:AI:50:PRO:CB	10:AI:83:THR:HG22	2.36	0.56
11:AJ:17:LEU:HD13	11:AJ:96:VAL:HG22	1.88	0.56
22:B0:192:C:H2'	22:B0:193:U:H5'	1.88	0.56
22:B0:204:A:H5"	22:B0:205:G:OP1	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:222:A:H5'	22:B0:223:A:OP2	2.05	0.56
22:B0:285:G:N2	22:B0:355:U:H3	1.97	0.56
22:B0:400:G:O2'	22:B0:401:A:H5"	2.06	0.56
22:B0:432:A:H2'	28:BC:69:ARG:HG3	1.87	0.56
22:B0:554:U:H2'	22:B0:555:U:O4'	2.06	0.56
22:B0:634:C:H2'	22:B0:635:C:C6	2.40	0.56
22:B0:655:A:H4'	22:B0:656:G:OP1	2.05	0.56
22:B0:1082:U:P	25:B3:80:LEU:H	2.28	0.56
22:B0:1252:G:H22	40:BO:36:GLN:CD	2.09	0.56
22:B0:1487:G:H5"	26:BA:194:VAL:O	2.06	0.56
22:B0:1498:C:C1'	26:BA:62:ARG:HA	2.36	0.56
22:B0:1579:A:N6	26:BA:67:LYS:O	2.39	0.56
22:B0:1964:G:H4'	22:B0:1965:C:OP2	2.05	0.56
22:B0:2128:G:H4'	22:B0:2165:C:H3'	1.88	0.56
22:B0:2391:G:N2	22:B0:2427:C:H4'	2.21	0.56
22:B0:2786:U:H2'	22:B0:2787:C:C6	2.41	0.56
24:B2:30:LYS:O	24:B2:32:LEU:N	2.39	0.56
24:B2:73:ARG:HA	24:B2:92:GLU:OE2	2.05	0.56
24:B2:172:THR:HG21	24:B2:191:LEU:HD21	1.86	0.56
25:B3:52:THR:C	25:B5:46:GLU:HG2	2.25	0.56
27:BB:114:LYS:CD	27:BB:196:ALA:HB2	2.33	0.56
28:BC:9:GLN:HG2	28:BC:9:GLN:O	2.04	0.56
28:BC:30:GLN:CA	35:BJ:17:LYS:H	2.19	0.56
28:BC:158:PHE:HD2	28:BC:161:ALA:HB2	1.69	0.56
29:BD:24:VAL:HG13	29:BD:25:MET:HE3	1.87	0.56
35:BJ:103:ILE:HD12	35:BJ:105:ILE:CG2	2.35	0.56
39:BN:28:LYS:H	39:BN:28:LYS:HD3	1.71	0.56
40:BO:9:ALA:C	40:BO:11:ALA:H	2.09	0.56
40:BO:65:ASN:HA	40:BO:74:SER:HB2	1.87	0.56
46:BW:37:LEU:HD12	46:BW:37:LEU:N	2.20	0.56
1:AA:982:U:H5"	1:AA:983:A:OP1	2.05	0.56
1:AA:1139:G:H4'	1:AA:1140:C:C5'	2.10	0.56
5:AD:109:THR:HG23	5:AD:112:GLU:H	1.70	0.56
15:AN:40:ARG:HB3	20:AS:16:LYS:HD2	1.87	0.56
22:B0:154:U:H2'	22:B0:161:A:O4'	2.06	0.56
22:B0:274:C:H2'	22:B0:275:C:O4'	2.06	0.56
22:B0:349:U:H2'	22:B0:350:G:H8	1.70	0.56
22:B0:617:G:O3'	22:B0:618:G:C8	2.59	0.56
22:B0:664:G:O2'	22:B0:665:U:H5'	2.06	0.56
22:B0:784:G:C5'	22:B0:785:G:OP1	2.48	0.56
22:B0:1082:U:C6	25:B3:84:LYS:CB	2.89	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1084:A:H3'	25:B3:88:GLU:CD	2.25	0.56
22:B0:1458:C:H2'	22:B0:1459:U:H5'	1.88	0.56
22:B0:2164:C:H1'	22:B0:2165:C:C2	2.41	0.56
22:B0:2249:U:O2'	22:B0:2250:G:OP1	2.15	0.56
22:B0:2345:G:O2'	22:B0:2346:A:P	2.62	0.56
22:B0:2690:U:H5	22:B0:2719:G:N2	2.03	0.56
22:B0:2887:A:H2'	22:B0:2888:C:O4'	2.05	0.56
24:B2:131:GLY:CA	24:B2:163:ARG:HH21	2.18	0.56
24:B2:161:ARG:H	24:B2:161:ARG:CD	2.18	0.56
25:B3:51:LYS:HA	25:B5:45:VAL:HB	1.87	0.56
26:BA:130:PRO:HD2	26:BA:133:ASN:HB2	1.87	0.56
26:BA:147:PRO:HB3	26:BA:186:ASP:O	2.06	0.56
28:BC:88:ARG:CD	28:BC:90:GLN:O	2.53	0.56
28:BC:158:PHE:H	28:BC:169:VAL:HG21	1.70	0.56
31:BF:18:GLN:CD	31:BF:18:GLN:H	2.09	0.56
32:BG:91:LYS:HD3	32:BG:91:LYS:H	1.71	0.56
33:BH:39:LYS:O	33:BH:40:HIS:CB	2.53	0.56
34:BI:61:VAL:HG23	34:BI:87:LEU:HD23	1.88	0.56
34:BI:114:LYS:O	34:BI:118:LEU:HD23	2.05	0.56
35:BJ:80:SER:O	35:BJ:81:ASP:HB2	2.06	0.56
41:BQ:18:ARG:HA	41:BQ:21:ALA:HB3	1.86	0.56
41:BQ:71:VAL:HA	41:BQ:107:VAL:HG12	1.88	0.56
42:BR:10:VAL:HG11	42:BR:38:ALA:HB2	1.88	0.56
45:BU:29:SER:H	45:BU:61:LYS:HG2	1.71	0.56
49:B1:26:LYS:H	49:B1:26:LYS:CE	2.18	0.56
1:AA:603:U:H3	1:AA:635:A:H61	1.51	0.56
1:AA:812:G:O2'	1:AA:813:U:C6	2.56	0.56
1:AA:1068:G:O2'	1:AA:1069:C:H5'	2.06	0.56
2:AW:70:C:H2'	2:AW:71:G:C8	2.41	0.56
4:AC:111:ASP:O	4:AC:115:VAL:HG23	2.06	0.56
5:AD:94:GLU:HA	5:AD:99:ASN:ND2	2.21	0.56
6:AE:114:LEU:HD13	6:AE:122:VAL:HG11	1.87	0.56
7:AF:26:THR:HA	7:AF:29:ILE:HG22	1.88	0.56
14:AM:9:PRO:HB2	14:AM:17:ALA:HB1	1.88	0.56
16:AO:27:GLN:O	16:AO:31:LEU:HD13	2.06	0.56
22:B0:85:G:OP2	43:BS:6:ARG:HB3	2.06	0.56
22:B0:618:G:C2	22:B0:619:G:C4	2.94	0.56
22:B0:662:G:OP1	35:BJ:29:LYS:HG3	2.06	0.56
22:B0:673:C:O2'	22:B0:674:G:H5'	2.06	0.56
22:B0:694:U:H5"	22:B0:1569:A:C6	2.41	0.56
22:B0:866:A:N3	22:B0:866:A:H2'	2.20	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1060:U:H1'	22:B0:1062:G:C5'	2.36	0.56
22:B0:1083:U:P	25:B3:82:GLU:C	2.85	0.56
22:B0:1084:A:C2	22:B0:1105:U:H2'	2.40	0.56
22:B0:1166:G:H1	22:B0:1183:U:H3	1.54	0.56
22:B0:1202:G:H4'	35:BJ:14:LYS:N	2.19	0.56
22:B0:1417:U:C2'	26:BA:98:GLY:HA2	2.30	0.56
22:B0:1421:G:H21	26:BA:145:MET:HB3	1.70	0.56
22:B0:1495:A:N1	26:BA:64:VAL:HG13	2.21	0.56
22:B0:1650:A:N1	22:B0:2008:C:C2	2.74	0.56
22:B0:1922:G:H2'	22:B0:1923:U:C6	2.41	0.56
22:B0:2624:G:H8	22:B0:2624:G:P	2.29	0.56
26:BA:62:ARG:O	26:BA:64:VAL:HG23	2.06	0.56
26:BA:131:MET:C	26:BA:133:ASN:N	2.59	0.56
26:BA:131:MET:SD	26:BA:187:CYS:O	2.64	0.56
27:BB:81:GLU:O	27:BB:82:PHE:CB	2.54	0.56
35:BJ:37:GLY:O	35:BJ:39:LYS:HD3	2.06	0.56
37:BL:10:LEU:CD1	37:BL:10:LEU:H	2.18	0.56
39:BN:34:GLY:C	39:BN:36:LYS:H	2.09	0.56
47:BX:20:LYS:O	47:BX:24:LEU:HG	2.06	0.56
47:BX:31:ILE:HD13	47:BX:31:ILE:N	2.21	0.56
1:AA:405:U:H5'	1:AA:497:G:N2	2.21	0.56
1:AA:913:A:O2'	1:AA:914:A:OP2	2.22	0.56
1:AA:965:U:O2'	1:AA:966:G:OP2	2.21	0.56
1:AA:979:C:H2'	1:AA:980:C:H5'	1.87	0.56
1:AA:1212:U:H4'	1:AA:1213:A:C1'	2.36	0.56
2:AV:1:G:H4'	36:BK:78:LEU:HD21	1.87	0.56
11:AJ:41:PRO:O	11:AJ:42:LEU:HB2	2.06	0.56
13:AL:85:ARG:HA	13:AL:93:ARG:HA	1.88	0.56
18:AQ:11:VAL:HG13	18:AQ:20:ILE:HG23	1.87	0.56
22:B0:184:C:H42	22:B0:212:G:H1	1.52	0.56
22:B0:477:A:H61	22:B0:500:G:H4'	1.70	0.56
22:B0:1083:U:C2'	25:B3:88:GLU:HG3	2.34	0.56
22:B0:1109:C:N4	22:B0:1110:G:N2	2.54	0.56
22:B0:1410:G:H22	22:B0:1591:A:N6	2.04	0.56
22:B0:1495:A:N7	22:B0:1496:A:C8	2.74	0.56
22:B0:1578:U:H4'	26:BA:64:VAL:N	2.20	0.56
22:B0:1579:A:C6	26:BA:67:LYS:C	2.79	0.56
22:B0:2109:U:H5'	22:B0:2110:G:H5'	1.85	0.56
22:B0:2143:C:O2'	22:B0:2144:G:P	2.64	0.56
22:B0:2164:C:N3	24:B2:36:LYS:HD2	2.21	0.56
22:B0:2296:U:H4'	22:B0:2297:A:C5'	2.34	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2472:G:H2'	22:B0:2475:C:N4	2.21	0.56
22:B0:2519:U:C4'	22:B0:2520:C:OP1	2.54	0.56
22:B0:2745:C:H2'	22:B0:2746:U:C6	2.41	0.56
22:B0:2781:A:N7	33:BH:117:ALA:HB2	2.20	0.56
23:B9:65:U:H2'	23:B9:66:A:H5'	1.87	0.56
25:B3:108:LYS:O	25:B3:112:GLU:HG3	2.06	0.56
26:BA:115:ILE:H	26:BA:115:ILE:CD1	2.10	0.56
28:BC:27:LEU:O	28:BC:28:VAL:HG13	2.06	0.56
28:BC:166:LYS:HE2	35:BJ:11:GLY:HA3	1.87	0.56
32:BG:35:MET:SD	32:BG:36:GLU:HG2	2.45	0.56
32:BG:52:LEU:CD1	32:BG:54:ILE:HB	2.36	0.56
35:BJ:94:THR:H	35:BJ:96:LYS:CD	2.18	0.56
36:BK:33:LEU:H	36:BK:101:VAL:HG23	1.71	0.56
1:AA:585:G:H21	1:AA:879:C:H4'	1.70	0.55
4:AC:55:VAL:HB	4:AC:66:THR:OG1	2.06	0.55
4:AC:63:ILE:HD13	4:AC:64:ARG:H	1.70	0.55
5:AD:58:GLN:HG3	5:AD:62:ARG:NE	2.21	0.55
9:AH:45:ILE:CD1	9:AH:60:LEU:HD11	2.35	0.55
12:AK:46:ALA:HB3	12:AK:56:LYS:HB2	1.87	0.55
14:AM:3:ILE:HD12	14:AM:3:ILE:N	2.21	0.55
16:AO:25:GLU:HA	16:AO:80:LEU:HD11	1.87	0.55
20:AS:38:THR:HB	20:AS:40:PHE:CE1	2.41	0.55
22:B0:162:U:H5"	22:B0:163:C:OP2	2.05	0.55
22:B0:340:A:H2'	22:B0:341:C:H5'	1.87	0.55
22:B0:415:A:N1	22:B0:2408:U:O2	2.39	0.55
22:B0:1063:G:H2'	22:B0:1064:C:C6	2.40	0.55
22:B0:1083:U:C6	25:B3:85:ASP:N	2.74	0.55
22:B0:1498:C:H2'	22:B0:1499:U:H5"	1.86	0.55
22:B0:1580:A:C1'	26:BA:68:ARG:HD2	2.35	0.55
22:B0:1758:U:O2	22:B0:1758:U:C2'	2.54	0.55
22:B0:1917:U:H2'	22:B0:1918:A:C8	2.41	0.55
22:B0:2517:C:O2'	22:B0:2518:A:H3'	2.06	0.55
22:B0:2547:A:N6	22:B0:2565:A:N7	2.54	0.55
26:BA:95:TYR:OH	26:BA:103:ILE:HD11	2.06	0.55
27:BB:66:GLY:O	27:BB:70:LYS:HG2	2.06	0.55
28:BC:52:VAL:HG12	28:BC:54:GLY:N	2.21	0.55
28:BC:143:LEU:HB3	28:BC:146:VAL:CG2	2.36	0.55
29:BD:24:VAL:CG1	29:BD:25:MET:HE3	2.35	0.55
33:BH:123:LYS:HA	33:BH:123:LYS:HZ1	1.70	0.55
37:BL:49:GLU:HB2	37:BL:52:ILE:CD1	2.37	0.55
42:BR:25:GLU:CG	42:BR:26:LYS:H	2.20	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BS:13:LEU:HD11	43:BS:70:ALA:HB2	1.89	0.55
48:BZ:51:ARG:CZ	48:BZ:51:ARG:HB2	2.36	0.55
4:AC:129:PHE:HB3	4:AC:156:LEU:HD11	1.88	0.55
5:AD:35:GLN:HE22	5:AD:42:ALA:HA	1.70	0.55
5:AD:137:SER:HB3	5:AD:138:PRO:HD2	1.88	0.55
7:AF:51:ILE:HD13	7:AF:85:ILE:HG13	1.87	0.55
9:AH:46:GLU:O	9:AH:47:ASP:HB2	2.06	0.55
11:AJ:7:ARG:NH1	11:AJ:7:ARG:HB2	2.21	0.55
12:AK:33:ILE:HD12	12:AK:81:LEU:HD13	1.88	0.55
14:AM:95:PRO:HB3	14:AM:101:THR:CG2	2.36	0.55
18:AQ:11:VAL:HG23	18:AQ:56:ASP:O	2.06	0.55
22:B0:358:U:H2'	22:B0:359:G:C8	2.41	0.55
22:B0:796:C:H2'	22:B0:797:G:C8	2.41	0.55
22:B0:856:G:H5'	45:BU:53:GLY:O	2.06	0.55
22:B0:968:C:H2'	22:B0:969:G:C8	2.42	0.55
22:B0:1082:U:C5'	25:B3:80:LEU:N	2.68	0.55
22:B0:1082:U:H5"	25:B3:81:LYS:H	1.60	0.55
22:B0:1421:G:H22	26:BA:145:MET:H	1.52	0.55
22:B0:1652:A:H2'	22:B0:1653:G:H5"	1.89	0.55
22:B0:1666:G:C2'	22:B0:1667:G:H5'	2.36	0.55
22:B0:1958:C:H2'	22:B0:1959:G:H8	1.72	0.55
22:B0:2127:G:N7	22:B0:2166:U:C6	2.74	0.55
22:B0:2678:C:H5'	27:BB:124:ARG:HE	1.67	0.55
22:B0:2895:C:H1'	33:BH:43:GLU:OE2	2.07	0.55
23:B9:90:C:H2'	23:B9:91:C:O4'	2.05	0.55
25:B3:68:VAL:O	25:B3:72:VAL:HG23	2.06	0.55
26:BA:141:HIS:NE2	26:BA:190:THR:HG21	2.21	0.55
29:BD:94:ARG:CZ	29:BD:94:ARG:HA	2.36	0.55
35:BJ:30:THR:HG23	35:BJ:31:GLY:N	2.21	0.55
37:BL:8:ARG:H	37:BL:8:ARG:HD3	1.71	0.55
39:BN:47:ILE:HD12	39:BN:63:ILE:CD1	2.28	0.55
39:BN:92:ARG:CZ	39:BN:92:ARG:HA	2.36	0.55
40:BO:18:LYS:O	40:BO:19:GLN:CB	2.54	0.55
40:BO:59:LEU:C	40:BO:61:ILE:H	2.09	0.55
40:BO:74:SER:O	40:BO:76:SER:N	2.39	0.55
43:BS:17:ASP:HB3	43:BS:38:ILE:HD12	1.88	0.55
44:BT:30:ILE:HG12	44:BT:91:PHE:HB2	1.88	0.55
45:BU:71:LYS:N	45:BU:71:LYS:HD2	2.22	0.55
2:AU:58:A:C4'	2:AU:59:U:OP1	2.44	0.55
5:AD:33:ILE:HD11	5:AD:35:GLN:OE1	2.06	0.55
7:AF:8:PHE:O	7:AF:60:VAL:HG22	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AJ:17:LEU:HD12	11:AJ:18:ILE:HG13	1.88	0.55
11:AJ:52:LEU:HA	11:AJ:62:ARG:CA	2.36	0.55
13:AL:88:ASP:O	13:AL:90:PRO:HD3	2.05	0.55
13:AL:106:VAL:HB	13:AL:109:ARG:HG3	1.89	0.55
22:B0:532:A:OP1	22:B0:561:G:N3	2.39	0.55
22:B0:538:A:H2'	22:B0:539:G:C5'	2.37	0.55
22:B0:589:U:N1	28:BC:86:ALA:HA	2.21	0.55
22:B0:1202:G:H3'	35:BJ:10:GLU:CG	2.35	0.55
22:B0:1298:C:O2'	22:B0:1301:A:O2'	2.20	0.55
22:B0:1454:A:H3'	22:B0:1455:U:H4'	1.88	0.55
22:B0:1675:C:N4	22:B0:1993:U:H1'	2.21	0.55
22:B0:2071:A:H2'	22:B0:2072:C:C6	2.41	0.55
22:B0:2291:U:H3	22:B0:2341:G:H1	1.53	0.55
22:B0:2677:G:N7	27:BB:127:PHE:HA	2.21	0.55
22:B0:2756:U:C2'	22:B0:2757:A:H5"	2.35	0.55
22:B0:2858:C:O2	22:B0:2858:C:H2'	2.07	0.55
22:B0:2894:U:O4	33:BH:8:PRO:HD2	2.06	0.55
24:B2:26:ILE:CG2	24:B2:181:ALA:HA	2.36	0.55
25:B5:46:GLU:HB3	25:B5:49:GLU:OE1	2.06	0.55
26:BA:146:LYS:HA	26:BA:187:CYS:SG	2.46	0.55
27:BB:106:LYS:HD2	27:BB:106:LYS:N	2.21	0.55
27:BB:130:GLN:CB	27:BB:134:HIS:HB3	2.33	0.55
27:BB:172:VAL:CG1	27:BB:175:LEU:HD11	2.37	0.55
28:BC:5:LEU:HD13	28:BC:15:SER:C	2.26	0.55
28:BC:32:VAL:CA	28:BC:35:TYR:HB2	2.33	0.55
32:BG:33:ASN:ND2	32:BG:34:ILE:N	2.53	0.55
32:BG:74:PRO:O	32:BG:75:ALA:CB	2.54	0.55
33:BH:85:LYS:HD3	33:BH:85:LYS:N	2.21	0.55
37:BL:32:GLU:HA	37:BL:115:LEU:HD13	1.88	0.55
40:BO:30:VAL:HB	40:BO:33:VAL:HG21	1.87	0.55
41:BQ:26:GLY:O	41:BQ:71:VAL:HB	2.07	0.55
45:BU:67:LYS:N	45:BU:67:LYS:HD3	2.21	0.55
49:B1:36:LYS:O	49:B1:38:PHE:HD1	1.88	0.55
1:AA:982:U:H4'	1:AA:983:A:C5'	2.37	0.55
1:AA:1030:U:C2	1:AA:1031:C:O2	2.60	0.55
3:AB:14:HIS:CE1	3:AB:211:LEU:HD23	2.42	0.55
7:AF:37:HIS:CE1	7:AF:65:GLU:HB2	2.41	0.55
19:AR:47:ARG:HE	19:AR:49:LYS:HB2	1.72	0.55
22:B0:476:G:H1'	22:B0:480:A:H62	1.72	0.55
22:B0:476:G:H22	22:B0:479:A:C5'	2.18	0.55
22:B0:527:C:H1'	22:B0:528:A:C8	2.41	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:705:A:N6	22:B0:726:G:O2'	2.39	0.55
22:B0:749:A:H5"	41:BQ:90:LYS:CD	2.34	0.55
22:B0:1005:C:H4'	22:B0:1012:U:O4'	2.07	0.55
22:B0:1247:A:H4'	22:B0:1248:G:OP1	2.06	0.55
22:B0:1580:A:O2'	26:BA:68:ARG:HD3	2.06	0.55
22:B0:1609:A:C1'	22:B0:1616:A:H1'	2.35	0.55
22:B0:2116:G:OP1	22:B0:2117:A:H4'	2.05	0.55
22:B0:2138:G:N2	22:B0:2158:A:N7	2.53	0.55
22:B0:2439:A:H5"	22:B0:2440:C:OP1	2.06	0.55
22:B0:2785:C:H2'	22:B0:2786:U:C6	2.42	0.55
24:B2:200:PRO:HG2	24:B2:203:ALA:CB	2.33	0.55
27:BB:34:VAL:HG21	27:BB:85:ALA:HB3	1.87	0.55
27:BB:80:TRP:CE3	27:BB:84:LEU:HB3	2.42	0.55
27:BB:165:MET:HG3	27:BB:166:GLY:H	1.70	0.55
38:BM:94:ARG:HG2	38:BM:94:ARG:HH11	1.71	0.55
1:AA:1038:C:H2'	1:AA:1039:G:C8	2.40	0.55
1:AA:1366:C:C3'	11:AJ:62:ARG:NH2	2.69	0.55
1:AA:1495:U:H2'	1:AA:1496:C:C6	2.41	0.55
4:AC:14:VAL:O	4:AC:15:LYS:HB2	2.06	0.55
22:B0:184:C:OP2	28:BC:53:THR:CG2	2.54	0.55
22:B0:529:A:H62	22:B0:2042:A:H2	1.49	0.55
22:B0:588:U:O2'	28:BC:85:PHE:HB3	2.05	0.55
22:B0:1082:U:N3	25:B3:84:LYS:HD3	2.21	0.55
22:B0:1083:U:O5'	25:B3:84:LYS:CA	2.51	0.55
22:B0:1487:G:N9	26:BA:195:GLY:O	2.40	0.55
22:B0:1492:G:H2'	22:B0:1492:G:N3	2.22	0.55
22:B0:1846:G:H2'	22:B0:1847:A:O4'	2.05	0.55
22:B0:2117:A:H61	24:B2:105:LYS:HG2	1.71	0.55
22:B0:2329:U:O4'	45:BU:9:THR:HG23	2.06	0.55
22:B0:2789:C:C5'	22:B0:2892:G:H21	2.20	0.55
26:BA:63:ILE:O	26:BA:64:VAL:CG2	2.55	0.55
27:BB:13:ARG:HE	27:BB:14:ILE:CA	2.19	0.55
31:BF:143:ILE:HD13	31:BF:143:ILE:C	2.26	0.55
33:BH:15:TRP:HZ2	33:BH:132:HIS:NE2	2.04	0.55
37:BL:34:ILE:HD12	37:BL:34:ILE:N	2.22	0.55
39:BN:113:LEU:HD22	39:BN:114:ASN:N	2.22	0.55
40:BO:112:ALA:C	40:BO:114:ALA:N	2.60	0.55
42:BR:36:LYS:HD3	42:BR:36:LYS:N	2.21	0.55
45:BU:13:ARG:HG2	45:BU:14:ASP:N	2.22	0.55
1:AA:269:C:H2'	1:AA:270:A:C8	2.41	0.55
1:AA:990:C:H2'	1:AA:991:U:C6	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1251:A:H2'	1:AA:1252:A:C8	2.42	0.55
1:AA:1317:C:H2'	1:AA:1318:A:O4'	2.06	0.55
1:AA:1494:G:H21	22:B0:1912:A:H4'	1.71	0.55
1:AA:1520:C:H2'	1:AA:1521:C:C6	2.42	0.55
3:AB:26:MET:O	3:AB:30:ILE:HG13	2.07	0.55
7:AF:18:VAL:CB	7:AF:19:PRO:HD3	2.30	0.55
8:AG:114:SER:O	8:AG:118:ARG:HG3	2.06	0.55
8:AG:148:LYS:NZ	12:AK:55:ARG:NH2	2.54	0.55
11:AJ:52:LEU:HA	11:AJ:62:ARG:CG	2.34	0.55
11:AJ:54:SER:OG	11:AJ:58:ASN:HB3	2.07	0.55
14:AM:4:ALA:N	14:AM:7:ASN:HD21	2.03	0.55
18:AQ:20:ILE:HD13	18:AQ:47:ASP:HB3	1.87	0.55
19:AR:28:LEU:HB3	19:AR:67:LEU:HD11	1.88	0.55
20:AS:41:PRO:O	20:AS:44:ILE:HG22	2.07	0.55
22:B0:72:U:H5"	22:B0:73:A:OP2	2.05	0.55
22:B0:1406:U:H2'	22:B0:1407:G:C8	2.42	0.55
22:B0:1426:G:O2'	22:B0:1571:A:N6	2.39	0.55
22:B0:1486:G:H8	22:B0:1486:G:O5'	1.88	0.55
22:B0:1491:A:N3	26:BA:173:LEU:HD23	2.21	0.55
22:B0:1496:A:C5'	26:BA:190:THR:OG1	2.54	0.55
22:B0:1588:A:H2'	22:B0:1589:A:O4'	2.05	0.55
22:B0:2151:U:H5"	22:B0:2152:G:OP1	2.05	0.55
22:B0:2677:G:C3'	27:BB:125:TRP:CB	2.82	0.55
27:BB:124:ARG:NH1	27:BB:163:GLY:N	2.53	0.55
28:BC:26:ALA:O	28:BC:27:LEU:HD22	2.07	0.55
28:BC:181:ILE:HB	28:BC:184:ASP:CA	2.37	0.55
32:BG:67:THR:HG22	32:BG:68:PHE:N	2.22	0.55
33:BH:36:LEU:HD12	33:BH:51:GLY:HA2	1.88	0.55
37:BL:22:ARG:CZ	37:BL:69:ARG:HB3	2.36	0.55
39:BN:101:GLU:C	39:BN:103:THR:N	2.59	0.55
40:BO:82:LEU:HD13	40:BO:88:GLU:HG2	1.87	0.55
42:BR:92:ASN:C	42:BR:94:ASP:H	2.09	0.55
45:BU:43:LYS:CB	45:BU:63:ASP:HA	2.37	0.55
45:BU:45:HIS:CB	45:BU:79:ILE:HG21	2.31	0.55
1:AA:121:U:H5'	1:AA:122:G:OP1	2.07	0.55
1:AA:438:U:H5"	1:AA:439:U:OP1	2.05	0.55
1:AA:718:A:C2	12:AK:116:PRO:HA	2.42	0.55
1:AA:1316:G:H21	20:AS:6:LYS:HZ1	1.52	0.55
1:AA:1319:A:O5'	20:AS:8:PRO:HG2	2.07	0.55
1:AA:1355:G:H1	1:AA:1367:C:N4	2.05	0.55
6:AE:148:SER:HB3	6:AE:149:PRO:HD2	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:16:C:H2'	22:B0:17:G:H8	1.70	0.55
22:B0:312:G:H4'	22:B0:331:C:C4	2.42	0.55
22:B0:320:A:H4'	22:B0:322:A:N7	2.21	0.55
22:B0:527:C:H1'	22:B0:528:A:N7	2.22	0.55
22:B0:1141:U:H4'	22:B0:1142:A:C4'	2.34	0.55
22:B0:1418:G:N7	26:BA:100:ARG:N	2.55	0.55
22:B0:1500:A:N6	26:BA:156:SER:HB3	2.22	0.55
22:B0:1553:A:H2'	22:B0:1555:G:H5'	1.89	0.55
22:B0:1869:G:N2	22:B0:1872:A:H8	2.01	0.55
22:B0:2044:C:C2	22:B0:2624:G:N2	2.73	0.55
22:B0:2119:A:O2'	22:B0:2121:G:C5'	2.54	0.55
22:B0:2174:C:N3	24:B2:214:SER:HA	2.22	0.55
22:B0:2600:A:O2'	22:B0:2601:C:H5'	2.07	0.55
22:B0:2700:A:H3'	22:B0:2702:G:H5"	1.88	0.55
22:B0:2748:A:O2'	30:BE:62:ALA:HA	2.07	0.55
25:B3:107:LYS:O	25:B3:111:GLU:HG3	2.07	0.55
26:BA:123:ILE:HG22	26:BA:134:ILE:CD1	2.31	0.55
26:BA:230:PRO:HB3	26:BA:255:LYS:HG2	1.88	0.55
28:BC:86:ALA:O	28:BC:87:ALA:HB3	2.06	0.55
29:BD:111:ARG:HH11	29:BD:111:ARG:HG3	1.71	0.55
33:BH:16:TYR:CZ	33:BH:39:LYS:HE3	2.42	0.55
33:BH:20:ALA:HA	33:BH:23:LYS:HZ2	1.69	0.55
40:BO:92:LYS:HZ3	40:BO:92:LYS:HA	1.71	0.55
43:BS:3:LYS:HD2	43:BS:4:ILE:HD13	1.88	0.55
46:BW:42:LEU:H	46:BW:42:LEU:CD1	2.16	0.55
47:BX:50:VAL:O	47:BX:54:VAL:HG22	2.07	0.55
48:BZ:52:LYS:O	48:BZ:53:VAL:HB	2.06	0.55
1:AA:358:U:H2'	1:AA:359:G:C8	2.41	0.55
1:AA:389:A:H2'	1:AA:390:U:O4'	2.07	0.55
1:AA:653:U:O2	1:AA:653:U:H2'	2.07	0.55
1:AA:730:G:O2'	1:AA:766:A:H4'	2.07	0.55
1:AA:1064:G:C4'	1:AA:1065:U:H5'	2.37	0.55
1:AA:1413:A:H2	1:AA:1487:G:H22	1.53	0.55
1:AA:1504:G:H4'	1:AA:1505:G:C4'	2.37	0.55
4:AC:71:ARG:O	4:AC:74:ILE:HG22	2.06	0.55
5:AD:145:ARG:O	5:AD:149:LYS:HG2	2.07	0.55
7:AF:77:THR:HG23	7:AF:78:PHE:HD1	1.72	0.55
15:AN:40:ARG:N	20:AS:16:LYS:HB2	2.21	0.55
17:AP:18:GLN:O	17:AP:20:VAL:HG23	2.06	0.55
17:AP:21:VAL:O	17:AP:33:ILE:HB	2.07	0.55
22:B0:24:G:O2'	22:B0:25:U:H5'	2.06	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:431:U:H1'	28:BC:49:ARG:NH1	2.22	0.55
22:B0:728:G:H5"	22:B0:729:G:OP2	2.07	0.55
22:B0:1486:G:OP1	26:BA:87:SER:N	2.40	0.55
22:B0:2257:U:O2'	22:B0:2258:C:OP1	2.24	0.55
22:B0:2592:G:H2'	22:B0:2593:U:C6	2.42	0.55
24:B2:7:MET:SD	24:B2:10:ILE:HG21	2.47	0.55
24:B2:117:PRO:HG3	24:B2:144:VAL:HG12	1.89	0.55
25:B3:62:GLY:O	25:B3:64:ASN:N	2.39	0.55
26:BA:172:THR:C	26:BA:173:LEU:HG	2.27	0.55
28:BC:146:VAL:O	28:BC:149:ILE:HB	2.07	0.55
28:BC:172:ALA:O	28:BC:175:ILE:HD12	2.06	0.55
29:BD:48:LEU:HD12	29:BD:48:LEU:N	2.22	0.55
32:BG:92:PRO:O	32:BG:93:ASN:CB	2.54	0.55
32:BG:135:MET:O	32:BG:135:MET:SD	2.64	0.55
35:BJ:39:LYS:HZ2	35:BJ:41:ARG:HG2	1.71	0.55
40:BO:48:ASP:C	40:BO:50:ARG:HB3	2.26	0.55
45:BU:54:ARG:HH11	45:BU:55:ASP:H	1.55	0.55
49:B1:29:LYS:HD2	49:B1:29:LYS:N	2.17	0.55
1:AA:383:A:H2'	1:AA:384:G:H5'	1.88	0.55
1:AA:1064:G:H4'	1:AA:1065:U:H5"	1.87	0.55
1:AA:1249:C:H2'	1:AA:1250:A:H5'	1.88	0.55
1:AA:1276:G:H2'	1:AA:1277:C:C6	2.42	0.55
1:AA:1429:A:H2'	1:AA:1430:A:C8	2.42	0.55
1:AA:1447:A:H2'	1:AA:1447:A:N3	2.22	0.55
1:AA:1518:A:H8	1:AA:1518:A:O5'	1.89	0.55
2:AU:76:A:N1	22:B0:2509:G:H5"	2.22	0.55
2:AW:2:C:H2'	2:AW:3:G:C8	2.42	0.55
5:AD:54:LEU:HD22	5:AD:55:ARG:HD2	1.89	0.55
5:AD:96:ARG:NH1	5:AD:133:SER:HA	2.22	0.55
10:AI:112:ARG:HE	10:AI:114:LYS:HE3	1.71	0.55
15:AN:66:THR:HB	15:AN:82:LYS:HE2	1.89	0.55
22:B0:25:U:H5"	41:BQ:80:PRO:CA	2.37	0.55
22:B0:70:G:H4'	22:B0:73:A:O4'	2.07	0.55
22:B0:413:C:H2'	22:B0:414:C:C6	2.42	0.55
22:B0:775:G:O2'	22:B0:776:G:P	2.65	0.55
22:B0:1126:A:H4'	22:B0:1127:A:C5'	2.37	0.55
22:B0:1417:U:H4'	22:B0:1588:A:C1'	2.37	0.55
22:B0:1488:G:C5'	26:BA:157:ALA:O	2.55	0.55
22:B0:1497:U:C4'	26:BA:86:ARG:HE	2.19	0.55
22:B0:1580:A:H5"	26:BA:118:GLY:CA	2.35	0.55
22:B0:1668:A:N1	22:B0:1674:G:H1'	2.22	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1695:G:C2’	22:B0:1696:G:H5’	2.37	0.55
22:B0:1910:G:O2’	22:B0:1911:U:H5’	2.07	0.55
22:B0:2335:A:O2’	22:B0:2336:A:C8	2.56	0.55
22:B0:2564:A:C2’	22:B0:2565:A:H5’	2.37	0.55
22:B0:2856:A:H3’	22:B0:2857:G:C8	2.42	0.55
25:B3:60:ALA:HB3	25:B3:116:GLU:CB	2.34	0.55
27:BB:181:ASP:O	27:BB:182:ALA:HB2	2.06	0.55
28:BC:14:VAL:HG12	28:BC:15:SER:H	1.72	0.55
29:BD:135:ILE:HD12	29:BD:135:ILE:N	2.22	0.55
32:BG:133:ARG:HE	32:BG:133:ARG:CA	2.05	0.55
33:BH:102:GLU:HB2	33:BH:124:VAL:HG11	1.89	0.55
34:BI:18:ARG:HG2	34:BI:45:GLU:HB3	1.87	0.55
35:BJ:77:ILE:H	35:BJ:77:ILE:CD1	2.18	0.55
1:AA:1032:G:H2’	1:AA:1033:G:O4’	2.06	0.55
1:AA:1197:A:OP1	1:AA:1197:A:H3’	2.07	0.55
3:AB:186:VAL:HG22	3:AB:187:ASP:N	2.22	0.55
4:AC:115:VAL:HG21	4:AC:201:ILE:HD11	1.88	0.55
11:AJ:63:ASP:CG	11:AJ:64:GLN:H	2.09	0.55
12:AK:73:VAL:CG1	12:AK:78:ILE:HD12	2.37	0.55
13:AL:44:PRO:C	13:AL:45:ASN:HD22	2.09	0.55
17:AP:19:VAL:O	17:AP:36:VAL:HG12	2.07	0.55
18:AQ:60:ILE:CG2	18:AQ:72:TRP:HB3	2.37	0.55
20:AS:15:LEU:O	20:AS:19:GLU:HG2	2.07	0.55
22:B0:70:G:H1’	22:B0:73:A:N3	2.21	0.55
22:B0:99:U:H4’	22:B0:100:U:OP2	2.08	0.55
22:B0:239:C:H4’	22:B0:621:A:H2	1.73	0.55
22:B0:498:G:H21	43:BS:53:GLN:HE21	1.55	0.55
22:B0:882:G:H2’	22:B0:883:G:C8	2.42	0.55
22:B0:1417:U:C4	26:BA:99:GLU:HB2	2.42	0.55
22:B0:1420:U:C4	26:BA:148:GLY:HA3	2.42	0.55
22:B0:1442:U:O2’	22:B0:1443:U:H5’	2.07	0.55
22:B0:1485:C:OP2	26:BA:86:ARG:N	2.40	0.55
22:B0:2014:A:H2’	22:B0:2015:A:H8	1.71	0.55
26:BA:140:VAL:HG12	26:BA:161:VAL:HB	1.89	0.55
28:BC:181:ILE:HB	28:BC:184:ASP:HA	1.87	0.55
28:BC:181:ILE:O	28:BC:183:PHE:N	2.39	0.55
32:BG:108:ILE:HD13	32:BG:108:ILE:N	2.21	0.55
32:BG:133:ARG:HG3	32:BG:137:LEU:O	2.06	0.55
37:BL:60:VAL:HG13	37:BL:61:ALA:N	2.21	0.55
41:BQ:60:HIS:O	41:BQ:61:ASN:HB3	2.07	0.55
1:AA:180:U:O5’	1:AA:180:U:H6	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:533:A:O2'	1:AA:534:U:OP1	2.22	0.54
1:AA:718:A:C4'	12:AK:118:ASN:HA	2.36	0.54
1:AA:1340:A:H2'	1:AA:1341:U:O4'	2.06	0.54
2:AW:18:G:C4'	2:AW:19:G:OP1	2.50	0.54
4:AC:187:GLU:HG3	4:AC:188:ALA:H	1.71	0.54
5:AD:196:GLU:H	5:AD:196:GLU:CD	2.10	0.54
6:AE:51:LYS:HD2	6:AE:51:LYS:N	2.22	0.54
8:AG:101:ARG:HG2	8:AG:105:GLU:OE2	2.07	0.54
12:AK:106:ILE:O	12:AK:106:ILE:HG23	2.07	0.54
13:AL:79:ILE:HG13	13:AL:80:LEU:N	2.22	0.54
14:AM:88:LEU:HB3	14:AM:94:LEU:HG	1.89	0.54
17:AP:9:HIS:NE2	17:AP:18:GLN:HB2	2.22	0.54
22:B0:442:G:H4'	22:B0:443:A:OP1	2.06	0.54
22:B0:595:C:H42	22:B0:662:G:H1	1.53	0.54
22:B0:1056:G:O4'	25:B3:64:ASN:ND2	2.40	0.54
22:B0:1417:U:C5	26:BA:99:GLU:C	2.80	0.54
22:B0:1478:G:H2'	22:B0:1558:C:O3'	2.07	0.54
22:B0:1479:G:H3'	22:B0:1559:U:OP2	2.07	0.54
22:B0:1497:U:H5'	26:BA:86:ARG:NE	2.21	0.54
22:B0:1579:A:H61	26:BA:68:ARG:CA	2.20	0.54
22:B0:1580:A:N3	26:BA:68:ARG:NH1	2.54	0.54
22:B0:2040:G:H2'	22:B0:2041:U:O4'	2.06	0.54
22:B0:2165:C:OP1	22:B0:2165:C:H4'	2.06	0.54
22:B0:2351:G:H2'	22:B0:2352:A:C8	2.42	0.54
22:B0:2776:A:N6	22:B0:2778:A:N6	2.55	0.54
22:B0:2779:U:H1'	33:BH:116:ARG:CB	2.37	0.54
25:B3:16:VAL:HG13	25:B3:45:VAL:HG21	1.89	0.54
25:B3:69:ILE:HG22	25:B3:73:ARG:HG3	1.88	0.54
25:B5:26:MET:HG3	25:B5:38:VAL:HG11	1.87	0.54
26:BA:190:THR:HG23	26:BA:191:LEU:N	2.21	0.54
28:BC:29:HIS:H	35:BJ:17:LYS:HB2	1.72	0.54
28:BC:88:ARG:HG2	28:BC:88:ARG:NH1	2.20	0.54
34:BI:66:LYS:HG2	34:BI:80:ASP:O	2.07	0.54
35:BJ:35:HIS:C	35:BJ:36:LYS:HE2	2.27	0.54
35:BJ:118:THR:OG1	35:BJ:120:VAL:HG12	2.07	0.54
39:BN:92:ARG:HA	39:BN:92:ARG:NH1	2.22	0.54
42:BR:12:ARG:HH11	42:BR:12:ARG:CA	2.18	0.54
45:BU:39:GLN:CG	45:BU:68:PHE:HA	2.37	0.54
49:B1:26:LYS:H	49:B1:26:LYS:CD	2.20	0.54
1:AA:109:A:N6	1:AA:326:G:C6	2.75	0.54
1:AA:197:A:N6	1:AA:221:C:H4'	2.23	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:547:A:H5'	1:AA:548:G:OP1	2.07	0.54
1:AA:566:G:C4'	1:AA:567:G:OP1	2.56	0.54
2:AV:16:U:C4'	2:AV:18:G:OP2	2.56	0.54
3:AB:174:GLU:HA	3:AB:177:ASN:OD1	2.07	0.54
13:AL:79:ILE:HD12	13:AL:80:LEU:H	1.72	0.54
18:AQ:20:ILE:O	18:AQ:45:VAL:HG22	2.07	0.54
18:AQ:58:VAL:HB	18:AQ:74:LEU:CD1	2.37	0.54
22:B0:241:A:O3'	22:B0:242:G:C4'	2.53	0.54
22:B0:777:G:N7	22:B0:793:A:C2	2.75	0.54
22:B0:993:G:H1	22:B0:1161:C:H42	1.53	0.54
22:B0:1082:U:C5	25:B3:80:LEU:HB3	2.42	0.54
22:B0:1209:U:O3'	22:B0:1212:G:H5'	2.07	0.54
22:B0:1341:G:H5'	22:B0:1342:A:OP2	2.08	0.54
22:B0:1427:A:H5"	22:B0:1428:C:N4	2.21	0.54
22:B0:1440:U:H1'	22:B0:1627:G:N2	2.22	0.54
22:B0:1495:A:O2'	26:BA:128:THR:CA	2.47	0.54
22:B0:1960:A:H2'	22:B0:1961:C:C6	2.42	0.54
22:B0:2175:C:C2'	22:B0:2176:A:O5'	2.55	0.54
22:B0:2408:U:H2'	22:B0:2409:G:H8	1.72	0.54
22:B0:2672:U:H2'	22:B0:2673:G:H8	1.71	0.54
22:B0:2780:G:C2'	22:B0:2781:A:OP1	2.56	0.54
24:B2:208:ILE:H	24:B2:208:ILE:CD1	2.12	0.54
29:BD:168:LEU:HD12	29:BD:169:LEU:N	2.22	0.54
34:BI:52:VAL:HG13	34:BI:52:VAL:O	2.07	0.54
35:BJ:29:LYS:O	35:BJ:29:LYS:HD3	2.07	0.54
39:BN:2:ASN:CB	39:BN:5:LYS:HZ3	2.20	0.54
39:BN:25:VAL:HG13	39:BN:88:ARG:HD2	1.89	0.54
39:BN:95:LYS:HG3	39:BN:97:TYR:HE1	1.72	0.54
40:BO:60:TRP:CA	40:BO:95:ALA:HB1	2.37	0.54
43:BS:10:VAL:HG12	43:BS:11:ILE:N	2.22	0.54
43:BS:25:LYS:HB3	43:BS:34:ILE:HD12	1.88	0.54
46:BW:48:ARG:O	46:BW:52:ARG:HG3	2.07	0.54
1:AA:67:C:H2'	1:AA:68:G:C8	2.42	0.54
1:AA:163:C:O2'	1:AA:164:G:H5'	2.07	0.54
1:AA:250:A:H4'	1:AA:251:G:O5'	2.06	0.54
6:AE:89:THR:HG23	6:AE:90:GLY:H	1.71	0.54
8:AG:31:VAL:O	8:AG:32:ASP:HB2	2.07	0.54
13:AL:41:PRO:HD2	13:AL:47:ALA:H	1.73	0.54
18:AQ:7:LEU:HD12	18:AQ:7:LEU:N	2.22	0.54
22:B0:183:C:OP2	28:BC:57:LYS:HD2	2.07	0.54
22:B0:606:U:H3	22:B0:622:G:H1	1.55	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:917:A:H3'	22:B0:918:A:H8	1.71	0.54
22:B0:1494:A:N7	26:BA:131:MET:HE3	2.22	0.54
22:B0:1655:A:H61	22:B0:2005:A:C2'	2.17	0.54
22:B0:1784:A:H4'	22:B0:1785:A:C5'	2.37	0.54
22:B0:2032:G:O6	22:B0:2572:A:H1'	2.07	0.54
22:B0:2386:A:H2'	22:B0:2387:U:C6	2.41	0.54
22:B0:2512:C:H2'	22:B0:2513:A:H8	1.72	0.54
24:B2:26:ILE:CA	24:B2:29:LEU:HB2	2.31	0.54
25:B3:89:SER:O	25:B3:90:ALA:HB3	2.07	0.54
26:BA:68:ARG:HG3	26:BA:69:ASN:N	2.22	0.54
26:BA:140:VAL:HB	26:BA:161:VAL:O	2.08	0.54
27:BB:117:GLY:HA2	27:BB:164:GLN:HE22	1.71	0.54
28:BC:117:ARG:HB3	28:BC:118:LEU:HD23	1.88	0.54
30:BE:85:LYS:HB2	30:BE:170:THR:HG22	1.88	0.54
32:BG:91:LYS:HD3	32:BG:91:LYS:N	2.23	0.54
32:BG:105:LEU:O	32:BG:105:LEU:HD13	2.07	0.54
35:BJ:27:LEU:HD23	35:BJ:27:LEU:N	2.23	0.54
37:BL:8:ARG:NH1	37:BL:8:ARG:O	2.40	0.54
39:BN:83:ILE:HG23	39:BN:84:SER:N	2.22	0.54
40:BO:24:TYR:HB2	40:BO:27:ARG:HG3	1.89	0.54
41:BQ:47:VAL:HG23	41:BQ:103:ILE:HG21	1.89	0.54
1:AA:392:C:H2'	1:AA:393:A:H8	1.72	0.54
1:AA:559:A:H4'	1:AA:560:A:O5'	2.07	0.54
1:AA:967:C:OP1	1:AA:969:A:H5'	2.07	0.54
1:AA:1101:A:H5'	1:AA:1102:A:OP1	2.07	0.54
1:AA:1342:C:OP1	10:AI:128:LYS:HB3	2.08	0.54
1:AA:1453:G:H3'	1:AA:1453:G:N3	2.22	0.54
1:AA:1460:C:H2'	1:AA:1461:G:O4'	2.07	0.54
2:AV:14:A:H2'	2:AV:15:G:O4'	2.07	0.54
5:AD:147:LYS:N	5:AD:147:LYS:HD2	2.22	0.54
6:AE:151:MET:O	6:AE:155:LYS:HB2	2.06	0.54
7:AF:78:PHE:O	7:AF:84:VAL:HG11	2.07	0.54
14:AM:72:ILE:O	14:AM:76:ILE:HD13	2.06	0.54
15:AN:66:THR:HB	15:AN:82:LYS:CE	2.38	0.54
22:B0:221:A:N1	22:B0:265:A:O2'	2.41	0.54
22:B0:323:C:H4'	22:B0:324:A:OP1	2.06	0.54
22:B0:805:G:H5"	22:B0:806:C:OP2	2.07	0.54
22:B0:1084:A:H61	25:B3:62:GLY:C	2.11	0.54
22:B0:1171:G:N1	22:B0:1178:C:N4	2.56	0.54
22:B0:1265:A:O2'	22:B0:1266:G:H4'	2.08	0.54
22:B0:1477:A:H2'	22:B0:1478:G:O4'	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2116:G:O3'	22:B0:2117:A:O4'	2.25	0.54
22:B0:2214:C:H2'	22:B0:2215:C:H5'	1.88	0.54
22:B0:2776:A:O2'	22:B0:2777:G:H5'	2.08	0.54
22:B0:2845:U:OP1	39:BN:55:HIS:HB3	2.07	0.54
24:B2:10:ILE:CA	24:B2:13:LYS:HD2	2.35	0.54
24:B2:41:VAL:O	24:B2:174:ILE:N	2.40	0.54
25:B3:16:VAL:HA	25:B3:19:VAL:HG12	1.88	0.54
33:BH:20:ALA:O	33:BH:62:VAL:HG22	2.08	0.54
33:BH:34:ARG:HG3	33:BH:35:ARG:NH2	2.23	0.54
37:BL:37:THR:O	37:BL:40:LYS:HD3	2.08	0.54
41:BQ:39:THR:O	41:BQ:41:LYS:HG3	2.06	0.54
41:BQ:83:LYS:HB3	41:BQ:83:LYS:HZ2	1.71	0.54
45:BU:68:PHE:CD2	45:BU:69:GLU:HG3	2.43	0.54
47:BX:43:ILE:H	47:BX:43:ILE:CD1	2.19	0.54
1:AA:280:C:H5"	1:AA:281:G:OP2	2.07	0.54
1:AA:1133:G:H2'	1:AA:1134:G:H8	1.71	0.54
1:AA:1218:C:H2'	1:AA:1219:A:C8	2.42	0.54
10:AI:29:ILE:HD13	10:AI:64:ILE:HB	1.90	0.54
22:B0:631:A:H2'	22:B0:632:A:O4'	2.07	0.54
22:B0:809:G:H2'	22:B0:810:U:C5	2.43	0.54
22:B0:845:A:H2	22:B0:932:U:O2'	1.90	0.54
22:B0:1082:U:O3'	25:B3:84:LYS:N	2.36	0.54
22:B0:1130:U:N3	22:B0:2025:C:H5"	2.21	0.54
22:B0:1463:G:H2'	22:B0:1464:G:C8	2.43	0.54
22:B0:1464:G:C2'	22:B0:1465:U:H5'	2.38	0.54
22:B0:1580:A:O2'	26:BA:68:ARG:CD	2.55	0.54
22:B0:1580:A:OP2	26:BA:117:SER:HB3	2.08	0.54
22:B0:1599:U:H5"	42:BR:40:LYS:HZ3	1.73	0.54
22:B0:2263:C:H4'	45:BU:9:THR:HB	1.89	0.54
22:B0:2554:U:H2'	22:B0:2555:U:C6	2.42	0.54
22:B0:2573:C:OP1	22:B0:2574:G:H5"	2.08	0.54
22:B0:2779:U:C4'	33:BH:116:ARG:NE	2.47	0.54
22:B0:2784:U:H2'	22:B0:2785:C:C6	2.43	0.54
24:B2:29:LEU:HD11	24:B2:213:ILE:HG21	1.89	0.54
25:B5:68:VAL:CG2	25:B5:115:ALA:HB2	2.37	0.54
26:BA:151:GLY:HA2	26:BA:155:ARG:HH22	1.73	0.54
27:BB:13:ARG:HH21	27:BB:15:PHE:N	1.99	0.54
29:BD:7:TYR:O	29:BD:8:LYS:CB	2.56	0.54
32:BG:58:ILE:HG23	32:BG:67:THR:O	2.07	0.54
32:BG:133:ARG:CZ	32:BG:135:MET:HB3	2.37	0.54
33:BH:58:ASN:HD21	33:BH:61:LYS:HB3	1.72	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
33:BH:59:ALA:C	33:BH:97:PRO:HG3	2.28	0.54
35:BJ:76:GLU:HB2	35:BJ:103:ILE:HD13	1.89	0.54
37:BL:40:LYS:HD3	37:BL:110:MET:SD	2.47	0.54
41:BQ:14:ALA:HB2	41:BQ:100:THR:O	2.08	0.54
49:B1:9:LYS:H	49:B1:9:LYS:CD	2.19	0.54
1:AA:231:U:H2'	1:AA:232:G:H8	1.73	0.54
1:AA:246:A:O2'	1:AA:247:G:C4'	2.56	0.54
1:AA:252:U:H2'	1:AA:253:A:H8	1.73	0.54
1:AA:300:A:H2'	1:AA:301:G:O4'	2.07	0.54
1:AA:518:C:C5	1:AA:530:G:C8	2.96	0.54
1:AA:595:A:C5'	1:AA:596:A:OP1	2.54	0.54
1:AA:688:G:O2'	1:AA:689:C:H5'	2.06	0.54
1:AA:1029:U:C2	1:AA:1030:U:H5	2.25	0.54
2:AU:20:G:N2	2:AU:22:G:H5'	2.15	0.54
4:AC:129:PHE:O	4:AC:133:MET:HG2	2.08	0.54
7:AF:74:LEU:HD13	7:AF:74:LEU:O	2.07	0.54
8:AG:139:ASP:HA	8:AG:142:ARG:HE	1.72	0.54
9:AH:6:ILE:H	9:AH:6:ILE:CD1	2.21	0.54
15:AN:68:ARG:NE	15:AN:70:HIS:HB3	2.21	0.54
19:AR:7:ARG:HB2	19:AR:7:ARG:HH11	1.69	0.54
19:AR:27:THR:HA	19:AR:30:ASN:ND2	2.23	0.54
22:B0:183:C:O5'	28:BC:67:ARG:HG3	2.08	0.54
22:B0:332:A:C4'	22:B0:333:G:OP1	2.54	0.54
22:B0:387:U:H2'	22:B0:391:A:C8	2.42	0.54
22:B0:1022:G:H4'	22:B0:1023:U:O5'	2.08	0.54
22:B0:1324:G:H4'	22:B0:1616:A:H62	1.72	0.54
22:B0:1418:G:C5	26:BA:100:ARG:N	2.75	0.54
22:B0:1580:A:C2'	26:BA:68:ARG:HD2	2.38	0.54
22:B0:1581:A:H3'	26:BA:73:ILE:HG13	1.88	0.54
22:B0:1698:A:O2'	22:B0:1699:G:H5"	2.08	0.54
22:B0:2321:U:O2	22:B0:2321:U:C2'	2.56	0.54
22:B0:2391:G:H2'	22:B0:2424:C:H41	1.72	0.54
24:B2:13:LYS:HD3	24:B2:32:LEU:CD2	2.34	0.54
24:B2:72:VAL:HB	24:B2:156:LYS:CE	2.37	0.54
24:B2:76:VAL:HA	24:B2:114:ILE:O	2.06	0.54
26:BA:153:LEU:O	26:BA:154:ALA:HB2	2.08	0.54
26:BA:170:TYR:CD1	26:BA:171:VAL:N	2.76	0.54
28:BC:134:LEU:HD11	28:BC:158:PHE:CE2	2.43	0.54
28:BC:149:ILE:O	28:BC:150:THR:HB	2.08	0.54
29:BD:71:LYS:N	29:BD:71:LYS:HE2	2.22	0.54
29:BD:94:ARG:HA	29:BD:94:ARG:NE	2.21	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BD:140:ILE:HD11	29:BD:145:VAL:HG21	1.90	0.54
32:BG:37:PHE:HA	32:BG:40:ALA:HB3	1.90	0.54
33:BH:56:VAL:HG11	33:BH:101:ILE:CD1	2.35	0.54
33:BH:68:LYS:HD3	33:BH:71:ASP:OD2	2.08	0.54
35:BJ:76:GLU:H	35:BJ:108:ALA:HA	1.73	0.54
37:BL:71:ARG:NH1	37:BL:71:ARG:HB3	2.22	0.54
40:BO:13:HIS:CE1	40:BO:14:LYS:HB3	2.41	0.54
45:BU:69:GLU:HA	45:BU:73:PRO:HB3	1.89	0.54
1:AA:33:A:OP2	1:AA:398:U:H5'	2.08	0.54
1:AA:429:U:H4'	1:AA:430:A:O5'	2.08	0.54
1:AA:975:A:N1	11:AJ:52:LEU:HB2	2.22	0.54
1:AA:1198:G:H2'	1:AA:1199:U:C6	2.42	0.54
1:AA:1369:C:H2'	1:AA:1370:G:C8	2.42	0.54
8:AG:129:ASN:O	8:AG:130:LYS:HB3	2.08	0.54
22:B0:121:G:C5	22:B0:140:C:C2	2.96	0.54
22:B0:539:G:O2'	22:B0:540:G:H5'	2.08	0.54
22:B0:1470:A:H2'	22:B0:1471:C:C6	2.43	0.54
22:B0:1473:C:H3'	22:B0:1474:U:H5'	1.89	0.54
22:B0:1495:A:C8	26:BA:190:THR:N	2.76	0.54
22:B0:1578:U:O2'	26:BA:64:VAL:HB	2.08	0.54
22:B0:1822:C:H2'	22:B0:1823:G:H8	1.72	0.54
22:B0:2143:C:O2'	22:B0:2144:G:O5'	2.23	0.54
22:B0:2381:A:C2'	22:B0:2382:G:H5'	2.37	0.54
22:B0:2445:G:O2'	22:B0:2446:G:H5'	2.08	0.54
24:B2:54:SER:HA	24:B2:57:ASN:HD22	1.71	0.54
24:B2:177:VAL:HG13	24:B2:178:ASP:OD1	2.08	0.54
26:BA:67:LYS:HG3	26:BA:188:ARG:CZ	2.37	0.54
26:BA:116:GLN:HG2	26:BA:117:SER:H	1.71	0.54
28:BC:175:ILE:H	28:BC:175:ILE:CD1	2.21	0.54
29:BD:7:TYR:O	29:BD:8:LYS:HB3	2.06	0.54
33:BH:34:ARG:HG3	33:BH:35:ARG:CZ	2.37	0.54
35:BJ:92:LEU:H	35:BJ:92:LEU:CD1	2.16	0.54
36:BK:69:PRO:HB2	36:BK:92:TRP:HB3	1.90	0.54
37:BL:21:PHE:HA	37:BL:44:LEU:CD2	2.37	0.54
37:BL:49:GLU:HB2	37:BL:52:ILE:HD13	1.89	0.54
39:BN:15:ASP:O	39:BN:16:VAL:C	2.46	0.54
39:BN:23:ASP:C	39:BN:49:ILE:HG12	2.28	0.54
40:BO:2:ARG:HG2	40:BO:3:VAL:N	2.21	0.54
40:BO:116:LEU:HD23	40:BO:116:LEU:N	2.18	0.54
41:BQ:51:LEU:HB2	41:BQ:105:VAL:HG21	1.90	0.54
42:BR:68:LYS:HA	42:BR:68:LYS:HZ2	1.70	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BW:28:LEU:HD13	46:BW:43:LEU:HD23	1.89	0.54
1:AA:25:C:N4	1:AA:558:G:H21	2.05	0.54
1:AA:392:C:H2'	1:AA:393:A:C8	2.42	0.54
1:AA:508:U:H1'	1:AA:509:A:N7	2.23	0.54
1:AA:925:G:H5"	1:AA:1505:G:C2	2.43	0.54
1:AA:1193:G:O2'	1:AA:1194:U:H5'	2.08	0.54
7:AF:18:VAL:HG13	7:AF:21:MET:CE	2.38	0.54
9:AH:54:THR:HG23	9:AH:55:LYS:HG3	1.89	0.54
11:AJ:52:LEU:HG	11:AJ:62:ARG:HG2	1.90	0.54
12:AK:23:HIS:HB3	12:AK:30:ILE:CG2	2.37	0.54
16:AO:34:GLN:HB3	16:AO:58:MET:HE3	1.88	0.54
21:AT:77:ASN:O	21:AT:81:GLN:HG3	2.07	0.54
22:B0:574:A:N6	22:B0:2033:A:H4'	2.22	0.54
22:B0:1086:A:H4'	22:B0:1103:A:C2	2.43	0.54
22:B0:1184:U:O2'	22:B0:1185:G:P	2.66	0.54
22:B0:1212:G:H2'	22:B0:1236:G:H22	1.72	0.54
22:B0:1245:G:OP1	35:BJ:22:GLY:HA2	2.07	0.54
22:B0:1310:G:C2'	22:B0:1311:G:H5'	2.37	0.54
22:B0:1424:G:P	26:BA:59:GLN:HG3	2.48	0.54
22:B0:1491:A:H8	26:BA:174:ARG:HG2	1.73	0.54
22:B0:1494:A:O5'	22:B0:1494:A:H8	1.91	0.54
22:B0:1795:C:H5'	22:B0:1900:A:N6	2.23	0.54
22:B0:2106:U:H2'	22:B0:2107:G:C8	2.42	0.54
22:B0:2123:G:P	22:B0:2123:G:H3'	2.47	0.54
22:B0:2153:C:C4'	22:B0:2154:A:OP1	2.55	0.54
22:B0:2581:G:H2'	22:B0:2610:C:N4	2.23	0.54
22:B0:2855:C:O5'	22:B0:2855:C:H6	1.89	0.54
22:B0:2899:A:C5'	33:BH:137:PRO:O	2.56	0.54
26:BA:131:MET:HE1	26:BA:187:CYS:C	2.28	0.54
26:BA:171:VAL:HG13	26:BA:173:LEU:HD11	1.90	0.54
28:BC:3:LEU:HB2	28:BC:17:THR:O	2.07	0.54
29:BD:31:GLU:C	29:BD:91:ARG:HE	2.10	0.54
29:BD:79:ARG:HG2	29:BD:80:GLN:H	1.73	0.54
29:BD:103:ILE:HG13	29:BD:173:ASP:OD2	2.08	0.54
33:BH:9:GLU:HG3	33:BH:9:GLU:O	2.07	0.54
34:BI:17:ARG:HA	34:BI:17:ARG:NE	2.23	0.54
35:BJ:39:LYS:HG2	35:BJ:40:SER:N	2.21	0.54
36:BK:63:ILE:C	36:BK:63:ILE:HD13	2.28	0.54
39:BN:28:LYS:NZ	39:BN:86:LYS:HB3	2.22	0.54
41:BQ:20:VAL:HG11	41:BQ:47:VAL:HG11	1.89	0.54
41:BQ:25:ARG:CZ	41:BQ:26:GLY:N	2.69	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BQ:27:LYS:HD3	41:BQ:27:LYS:N	2.13	0.54
41:BQ:73:LYS:HD2	41:BQ:75:PHE:CZ	2.39	0.54
41:BQ:87:PRO:HA	41:BQ:88:ARG:NH2	2.23	0.54
42:BR:39:THR:HA	42:BR:40:LYS:HZ1	1.71	0.54
47:BX:6:ILE:O	47:BX:34:THR:HA	2.07	0.54
48:BZ:37:HIS:CD2	48:BZ:39:ARG:HB2	2.43	0.54
1:AA:721:G:H4'	1:AA:722:G:H5"	1.89	0.54
1:AA:1316:G:N2	1:AA:1319:A:OP2	2.41	0.54
2:AU:74:C:H3'	22:B0:2556:C:C1'	2.37	0.54
2:AV:12:U:H4'	22:B0:1908:C:H5'	1.90	0.54
2:AW:70:C:H2'	2:AW:71:G:H8	1.72	0.54
8:AG:74:VAL:HG11	8:AG:85:GLN:HB3	1.89	0.54
16:AO:69:LEU:CD1	16:AO:76:ARG:HD2	2.37	0.54
18:AQ:13:SER:HB3	18:AQ:21:VAL:CG2	2.37	0.54
20:AS:5:LYS:O	20:AS:6:LYS:HG2	2.08	0.54
22:B0:184:C:N4	28:BC:57:LYS:O	2.41	0.54
22:B0:582:A:H2'	22:B0:583:G:C8	2.42	0.54
22:B0:628:G:N2	22:B0:638:G:H4'	2.09	0.54
22:B0:857:G:H5'	45:BU:54:ARG:HD3	1.89	0.54
22:B0:1031:G:H1	22:B0:1123:C:H42	1.56	0.54
22:B0:1417:U:C2	26:BA:98:GLY:CA	2.91	0.54
22:B0:1479:G:OP2	22:B0:1559:U:C4'	2.56	0.54
22:B0:1581:A:H3'	26:BA:73:ILE:CD1	2.38	0.54
22:B0:1668:A:HO2'	22:B0:1670:C:H5	1.51	0.54
22:B0:1938:A:O2'	22:B0:1939:U:OP1	2.26	0.54
22:B0:2469:A:H2'	22:B0:2470:G:O4'	2.08	0.54
22:B0:2729:G:N1	27:BB:126:ASN:OD1	2.38	0.54
25:B3:24:SER:O	25:B3:27:GLU:HB3	2.06	0.54
25:B3:58:LEU:CD1	25:B3:115:ALA:HB1	2.37	0.54
25:B3:85:ASP:CG	25:B3:85:ASP:O	2.45	0.54
27:BB:1:MET:HA	27:BB:86:GLU:HB3	1.88	0.54
29:BD:33:ILE:HG13	29:BD:91:ARG:NH2	2.23	0.54
34:BI:16:ALA:HA	34:BI:46:ALA:HB2	1.89	0.54
34:BI:43:ILE:HD11	34:BI:53:LYS:O	2.08	0.54
40:BO:13:HIS:CE1	40:BO:14:LYS:HZ2	2.26	0.54
1:AA:258:G:H1	1:AA:268:U:H3	1.56	0.54
1:AA:878:A:H2'	1:AA:879:C:C6	2.43	0.54
1:AA:1406:U:O5'	1:AA:1517:G:N3	2.41	0.54
2:AU:75:C:C2'	2:AU:76:A:OP2	2.55	0.54
4:AC:13:ILE:HG12	4:AC:177:LEU:HD23	1.89	0.54
4:AC:24:ASN:O	4:AC:28:PHE:HB2	2.08	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AE:29:ILE:HD13	6:AE:29:ILE:C	2.28	0.54
6:AE:110:MET:O	6:AE:114:LEU:HG	2.07	0.54
7:AF:93:LYS:HD2	7:AF:93:LYS:O	2.08	0.54
11:AJ:17:LEU:HD13	11:AJ:96:VAL:CG2	2.38	0.54
20:AS:38:THR:HB	20:AS:40:PHE:HE1	1.73	0.54
22:B0:481:G:OP2	43:BS:58:VAL:CG2	2.55	0.54
22:B0:603:A:H4'	22:B0:604:G:O5'	2.08	0.54
22:B0:1468:G:H2'	22:B0:1469:U:C6	2.43	0.54
22:B0:1497:U:C2	26:BA:90:ILE:HG21	2.43	0.54
22:B0:2055:C:O2	22:B0:2055:C:C2'	2.55	0.54
22:B0:2304:G:O6	22:B0:2313:C:C2	2.61	0.54
22:B0:2445:G:H2'	22:B0:2446:G:O4'	2.08	0.54
22:B0:2591:C:H2'	22:B0:2592:G:C8	2.43	0.54
22:B0:2779:U:H4'	33:BH:116:ARG:CD	2.35	0.54
22:B0:2780:G:C8	33:BH:116:ARG:NH1	2.76	0.54
24:B2:161:ARG:H	24:B2:161:ARG:HD3	1.72	0.54
25:B3:69:ILE:HG22	25:B3:73:ARG:CG	2.38	0.54
25:B3:92:ALA:CB	25:B5:44:PRO:HG2	2.24	0.54
28:BC:149:ILE:HG23	28:BC:185:LYS:CB	2.38	0.54
30:BE:162:ARG:HA	30:BE:162:ARG:HE	1.73	0.54
32:BG:28:GLY:HA2	32:BG:32:VAL:O	2.08	0.54
33:BH:15:TRP:HB2	33:BH:53:TYR:HE1	1.73	0.54
35:BJ:100:ILE:HG22	35:BJ:100:ILE:O	2.07	0.54
36:BK:31:PHE:CE2	36:BK:106:ASP:HA	2.43	0.54
37:BL:59:SER:OG	37:BL:62:ASN:ND2	2.41	0.54
39:BN:14:GLN:H	39:BN:14:GLN:CD	2.11	0.54
1:AA:281:G:O2'	1:AA:282:A:P	2.67	0.53
1:AA:500:G:H2'	1:AA:501:C:C6	2.43	0.53
1:AA:1322:C:H4'	1:AA:1323:G:C5'	2.38	0.53
1:AA:1503:A:O2'	1:AA:1504:G:OP1	2.26	0.53
4:AC:152:VAL:HG22	4:AC:197:VAL:HG22	1.90	0.53
10:AI:9:GLY:H	10:AI:84:ARG:HH11	1.56	0.53
10:AI:33:SER:HB3	10:AI:36:GLN:HG3	1.89	0.53
10:AI:59:LYS:C	10:AI:60:LEU:HD12	2.28	0.53
13:AL:56:LEU:HD22	13:AL:56:LEU:N	2.23	0.53
13:AL:111:GLN:O	13:AL:113:ARG:HG3	2.07	0.53
22:B0:163:C:H4'	22:B0:164:C:C6	2.42	0.53
22:B0:573:U:C4'	22:B0:574:A:OP1	2.54	0.53
22:B0:1410:G:N2	22:B0:1591:A:H61	2.06	0.53
22:B0:1490:C:O2	26:BA:164:VAL:HG22	2.08	0.53
22:B0:1591:A:H2'	22:B0:1592:U:C6	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2007:U:H4'	22:B0:2824:C:C1'	2.32	0.53
22:B0:2131:U:O2'	24:B2:31:GLU:N	2.36	0.53
22:B0:2677:G:H1'	27:BB:160:LYS:CD	2.38	0.53
22:B0:2897:U:H1'	33:BH:14:ASP:CA	2.36	0.53
24:B2:42:ASP:HA	24:B2:173:THR:HA	1.89	0.53
26:BA:211:ARG:HA	26:BA:211:ARG:NE	2.23	0.53
27:BB:179:ARG:HG2	27:BB:180:VAL:N	2.23	0.53
29:BD:7:TYR:HA	29:BD:11:VAL:HG12	1.90	0.53
33:BH:34:ARG:HA	33:BH:37:ARG:NH2	2.23	0.53
34:BI:8:LEU:HD23	34:BI:8:LEU:N	2.23	0.53
39:BN:36:LYS:HB2	39:BN:36:LYS:NZ	2.23	0.53
42:BR:63:VAL:HG22	42:BR:64:LYS:N	2.23	0.53
44:BT:83:LYS:HG3	44:BT:83:LYS:O	2.08	0.53
1:AA:337:G:H2'	1:AA:338:A:C8	2.43	0.53
1:AA:367:U:H5'	1:AA:368:U:OP2	2.08	0.53
1:AA:407:U:H2'	1:AA:408:A:C8	2.44	0.53
1:AA:482:A:H8	1:AA:482:A:OP2	1.89	0.53
1:AA:580:C:H2'	1:AA:581:G:O4'	2.09	0.53
1:AA:895:G:H1	1:AA:904:U:H3	1.56	0.53
1:AA:1468:A:H3'	1:AA:1469:C:C5	2.42	0.53
4:AC:150:VAL:HG13	4:AC:199:VAL:HG22	1.90	0.53
5:AD:144:ILE:HD11	5:AD:158:LEU:HD21	1.91	0.53
9:AH:86:LYS:HE3	9:AH:91:LEU:HG	1.90	0.53
13:AL:115:LYS:NZ	13:AL:115:LYS:HB3	2.23	0.53
21:AT:28:ARG:HA	21:AT:31:ILE:CG2	2.39	0.53
22:B0:165:A:C5'	22:B0:172:A:OP1	2.56	0.53
22:B0:222:A:H61	22:B0:232:G:H1'	1.74	0.53
22:B0:299:A:H1'	43:BS:99:SER:O	2.08	0.53
22:B0:856:G:H5'	45:BU:53:GLY:C	2.28	0.53
22:B0:926:G:H2'	47:BX:42:ALA:HB3	1.90	0.53
22:B0:1070:A:O2'	22:B0:1071:G:P	2.66	0.53
22:B0:1201:U:C2	35:BJ:14:LYS:HD3	2.43	0.53
22:B0:1397:U:O2'	22:B0:1398:C:OP1	2.25	0.53
22:B0:2109:U:H6	22:B0:2110:G:H5'	1.73	0.53
22:B0:2233:U:H2'	22:B0:2234:G:C8	2.43	0.53
22:B0:2296:U:C4'	22:B0:2297:A:OP1	2.56	0.53
22:B0:2789:C:HO2'	22:B0:2892:G:H2'	1.73	0.53
26:BA:158:GLY:O	26:BA:159:THR:O	2.27	0.53
27:BB:131:ASP:O	27:BB:132:ALA:HB3	2.09	0.53
30:BE:18:ILE:HG13	30:BE:22:VAL:O	2.09	0.53
33:BH:18:VAL:HA	33:BH:142:ILE:CG2	2.37	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BJ:108:ALA:O	35:BJ:126:ARG:HG2	2.08	0.53
38:BM:7:ARG:HA	38:BM:10:ARG:HE	1.72	0.53
39:BN:52:ARG:HG2	39:BN:53:GLY:N	2.24	0.53
39:BN:54:LEU:HD22	39:BN:54:LEU:N	2.23	0.53
41:BQ:88:ARG:HH12	41:BQ:92:ARG:HB3	1.73	0.53
46:BW:52:ARG:O	46:BW:56:LEU:HD13	2.08	0.53
1:AA:559:A:H4'	1:AA:560:A:C5'	2.38	0.53
1:AA:1052:U:H2'	1:AA:1200:C:N4	2.23	0.53
1:AA:1455:G:H2'	1:AA:1459:G:C8	2.39	0.53
3:AB:73:ARG:N	3:AB:73:ARG:HD3	2.23	0.53
3:AB:117:GLU:O	3:AB:121:GLN:HG3	2.09	0.53
7:AF:8:PHE:CE1	7:AF:10:VAL:HB	2.42	0.53
15:AN:44:VAL:HG12	15:AN:44:VAL:O	2.09	0.53
22:B0:239:C:H2'	22:B0:240:C:C6	2.43	0.53
22:B0:457:A:H1'	22:B0:459:U:C6	2.43	0.53
22:B0:589:U:OP1	28:BC:88:ARG:HG2	2.07	0.53
22:B0:703:U:H2'	22:B0:704:G:O4'	2.08	0.53
22:B0:830:G:H5'	22:B0:2448:A:N6	2.23	0.53
22:B0:1083:U:C5'	25:B3:85:ASP:C	2.57	0.53
22:B0:1494:A:C2'	26:BA:134:ILE:HB	2.36	0.53
22:B0:1500:A:H4'	26:BA:59:GLN:NE2	2.23	0.53
22:B0:1578:U:OP2	26:BA:101:ARG:CG	2.56	0.53
22:B0:1666:G:C2	22:B0:1667:G:H1'	2.44	0.53
22:B0:2175:C:O4'	24:B2:220:GLY:HA2	2.09	0.53
22:B0:2677:G:C2'	27:BB:125:TRP:CB	2.87	0.53
22:B0:2786:U:H2'	22:B0:2787:C:H6	1.74	0.53
22:B0:2834:G:O2'	22:B0:2835:A:H5'	2.07	0.53
23:B9:78:A:H61	23:B9:98:G:C2'	2.21	0.53
24:B2:76:VAL:HG21	24:B2:148:VAL:HG21	1.90	0.53
25:B3:30:PHE:HB3	25:B3:34:ALA:CB	2.35	0.53
25:B3:73:ARG:CB	25:B3:73:ARG:HH11	2.22	0.53
25:B5:58:LEU:HD11	25:B5:115:ALA:HB1	1.90	0.53
28:BC:4:VAL:O	28:BC:119:ILE:HD11	2.09	0.53
28:BC:100:MET:HG3	35:BJ:19:LEU:HD11	1.90	0.53
29:BD:147:ARG:NE	29:BD:147:ARG:HA	2.23	0.53
32:BG:46:ASP:O	32:BG:47:SER:CB	2.56	0.53
33:BH:99:ARG:HH22	33:BH:102:GLU:CB	2.22	0.53
36:BK:42:THR:HG22	36:BK:45:GLN:HG3	1.91	0.53
37:BL:29:VAL:CG1	37:BL:75:ILE:HD13	2.37	0.53
39:BN:105:LYS:HA	39:BN:105:LYS:HZ1	1.68	0.53
40:BO:92:LYS:HA	40:BO:92:LYS:NZ	2.23	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:499:A:H4'	1:AA:500:G:H5'	1.88	0.53
1:AA:537:G:H5"	13:AL:111:GLN:OE1	2.09	0.53
1:AA:1081:A:OP1	6:AE:22:LYS:HB2	2.09	0.53
1:AA:1400:C:H5"	1:AA:1401:G:OP2	2.08	0.53
1:AA:1504:G:H4'	1:AA:1505:G:H5'	1.90	0.53
6:AE:131:ASN:HB3	6:AE:134:ASN:HD22	1.73	0.53
8:AG:112:ASP:CG	8:AG:118:ARG:HG2	2.28	0.53
9:AH:88:LYS:HD3	9:AH:119:GLY:O	2.07	0.53
10:AI:78:ILE:O	10:AI:82:ILE:HG13	2.09	0.53
11:AJ:12:ALA:HB3	11:AJ:18:ILE:HD11	1.90	0.53
11:AJ:81:GLU:O	11:AJ:84:VAL:HG22	2.08	0.53
13:AL:79:ILE:HA	13:AL:101:LEU:HD12	1.90	0.53
15:AN:72:PHE:HA	15:AN:79:SER:HA	1.90	0.53
22:B0:26:G:H2'	22:B0:27:G:O4'	2.09	0.53
22:B0:311:A:N6	22:B0:329:G:H5"	2.24	0.53
22:B0:387:U:O2'	22:B0:388:G:OP2	2.24	0.53
22:B0:531:C:N4	22:B0:563:G:H5"	2.20	0.53
22:B0:740:C:N4	22:B0:757:G:N1	2.56	0.53
22:B0:963:U:H5'	22:B0:2497:A:H5"	1.91	0.53
22:B0:1083:U:C3'	25:B3:88:GLU:H	2.22	0.53
22:B0:1085:A:H2	25:B3:62:GLY:O	1.91	0.53
22:B0:1417:U:C6	26:BA:99:GLU:C	2.81	0.53
22:B0:1579:A:N6	26:BA:68:ARG:N	2.53	0.53
22:B0:1705:A:H2'	22:B0:1706:C:O4'	2.08	0.53
22:B0:1905:C:HO2'	22:B0:1929:G:H1'	1.72	0.53
22:B0:1964:G:O5'	22:B0:1965:C:OP2	2.25	0.53
22:B0:2052:A:N1	22:B0:2617:U:O2	2.41	0.53
22:B0:2110:G:H2'	22:B0:2110:G:N3	2.23	0.53
22:B0:2169:A:OP2	22:B0:2170:A:N7	2.41	0.53
22:B0:2515:C:N4	27:BB:152:PRO:HD3	2.24	0.53
25:B5:51:LYS:HE3	25:B5:53:GLU:OE1	2.09	0.53
26:BA:67:LYS:CG	26:BA:188:ARG:HH22	2.21	0.53
28:BC:28:VAL:HA	35:BJ:16:GLY:O	2.09	0.53
28:BC:97:ASN:O	28:BC:101:TYR:HB3	2.08	0.53
28:BC:97:ASN:OD1	28:BC:98:LYS:N	2.40	0.53
28:BC:175:ILE:CG1	28:BC:180:LEU:HD21	2.39	0.53
29:BD:132:ARG:O	29:BD:135:ILE:HD11	2.08	0.53
48:BZ:29:VAL:HG11	48:BZ:32:THR:HG23	1.90	0.53
1:AA:60:A:O2'	1:AA:61:G:O4'	2.25	0.53
1:AA:98:A:H2'	1:AA:99:C:C6	2.44	0.53
1:AA:321:A:O2'	1:AA:322:C:H5'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:499:A:C4'	1:AA:500:G:OP1	2.57	0.53
1:AA:539:A:H2'	1:AA:540:G:C8	2.44	0.53
1:AA:558:G:H2'	1:AA:559:A:C2	2.44	0.53
1:AA:817:C:O2'	1:AA:818:G:H5"	2.08	0.53
1:AA:837:U:H2'	1:AA:838:G:H8	1.73	0.53
1:AA:1032:G:C6	1:AA:1033:G:C5	2.97	0.53
1:AA:1305:G:HO2'	1:AA:1306:A:H8	1.56	0.53
1:AA:1368:A:OP2	10:AI:113:LYS:HE3	2.09	0.53
1:AA:1479:C:H2'	1:AA:1480:A:C8	2.44	0.53
3:AB:102:ASN:O	3:AB:106:VAL:HG23	2.08	0.53
4:AC:34:SER:O	4:AC:38:VAL:HG13	2.08	0.53
15:AN:40:ARG:HH11	20:AS:16:LYS:N	2.06	0.53
20:AS:11:ASP:HB2	20:AS:14:LEU:CG	2.38	0.53
20:AS:35:ARG:HD3	20:AS:71:GLY:HA3	1.90	0.53
22:B0:50:U:H5"	22:B0:51:G:OP2	2.09	0.53
22:B0:163:C:H5'	22:B0:164:C:C5'	2.39	0.53
22:B0:416:U:O4	22:B0:2407:A:H2	1.91	0.53
22:B0:748:G:P	41:BQ:90:LYS:HE2	2.48	0.53
22:B0:1084:A:O4'	25:B3:88:GLU:CB	2.54	0.53
22:B0:1492:G:C5	26:BA:143:VAL:O	2.62	0.53
22:B0:1492:G:O3'	26:BA:183:VAL:HG11	2.08	0.53
22:B0:1493:A:H62	26:BA:186:ASP:HA	1.74	0.53
22:B0:1580:A:N6	22:B0:1581:A:C2	2.76	0.53
22:B0:2120:G:HO2'	22:B0:2121:G:H3'	1.74	0.53
22:B0:2127:G:C2'	22:B0:2165:C:H2'	2.38	0.53
22:B0:2173:A:C1'	24:B2:37:PHE:CD1	2.91	0.53
22:B0:2438:U:OP1	22:B0:2600:A:H5'	2.07	0.53
25:B3:10:ALA:O	25:B3:14:MET:HG2	2.08	0.53
25:B3:19:VAL:O	25:B3:22:LEU:HB3	2.09	0.53
26:BA:65:ASP:CG	26:BA:188:ARG:HD2	2.29	0.53
27:BB:180:VAL:HG23	27:BB:180:VAL:O	2.08	0.53
29:BD:11:VAL:O	29:BD:11:VAL:HG22	2.08	0.53
29:BD:32:LYS:CA	29:BD:91:ARG:HG2	2.38	0.53
29:BD:114:ARG:HG3	29:BD:114:ARG:HH11	1.72	0.53
32:BG:109:ALA:O	32:BG:110:GLN:HB2	2.09	0.53
35:BJ:70:LYS:HD3	35:BJ:70:LYS:N	2.23	0.53
42:BR:16:VAL:CG1	42:BR:17:SER:H	2.14	0.53
42:BR:93:LEU:HD21	42:BR:96:VAL:N	2.23	0.53
45:BU:42:THR:O	45:BU:65:LYS:HA	2.08	0.53
1:AA:38:G:H4'	1:AA:547:A:N6	2.24	0.53
1:AA:181:A:H4'	1:AA:182:A:C5'	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:243:A:H61	1:AA:281:G:H1'	1.71	0.53
1:AA:439:U:H5	1:AA:495:A:N1	2.07	0.53
1:AA:451:A:N6	1:AA:481:G:N3	2.56	0.53
1:AA:496:A:H4'	1:AA:497:G:OP1	2.06	0.53
4:AC:126:ARG:NH1	4:AC:126:ARG:HB3	2.24	0.53
21:AT:79:THR:HA	21:AT:82:ILE:HG12	1.89	0.53
22:B0:531:C:OP1	22:B0:561:G:N1	2.42	0.53
22:B0:929:U:O5'	22:B0:929:U:H6	1.92	0.53
22:B0:1487:G:O5'	26:BA:195:GLY:C	2.46	0.53
22:B0:1495:A:OP1	26:BA:191:LEU:CA	2.57	0.53
22:B0:1892:C:H2'	22:B0:1893:C:H6	1.74	0.53
22:B0:2438:U:O3'	22:B0:2440:C:OP1	2.26	0.53
22:B0:2498:C:O2'	22:B0:2499:C:H5'	2.09	0.53
25:B3:51:LYS:HE2	25:B5:16:VAL:CA	2.39	0.53
26:BA:83:ASP:OD1	26:BA:84:PRO:N	2.42	0.53
30:BE:88:LEU:H	30:BE:88:LEU:CD1	2.19	0.53
33:BH:41:LYS:O	33:BH:41:LYS:HD2	2.09	0.53
33:BH:99:ARG:HH22	33:BH:102:GLU:CG	2.22	0.53
37:BL:48:VAL:O	37:BL:48:VAL:HG13	2.09	0.53
39:BN:30:TRP:O	39:BN:31:VAL:HB	2.08	0.53
40:BO:4:LYS:HE2	40:BO:5:ARG:N	2.23	0.53
40:BO:103:VAL:C	40:BO:105:PHE:H	2.12	0.53
42:BR:7:LEU:O	42:BR:46:ALA:HA	2.09	0.53
45:BU:24:ARG:O	45:BU:58:LEU:HD11	2.09	0.53
1:AA:405:U:H5"	1:AA:496:A:H2	1.73	0.53
1:AA:719:C:C5	12:AK:118:ASN:HB2	2.43	0.53
1:AA:1302:C:C5	14:AM:16:ILE:HG13	2.43	0.53
1:AA:1503:A:N6	1:AA:1532:U:C5'	2.70	0.53
2:AU:14:A:H2'	2:AU:15:G:O4'	2.09	0.53
2:AU:75:C:O5'	22:B0:2555:U:H3'	2.09	0.53
7:AF:22:ILE:HD13	7:AF:26:THR:HG23	1.91	0.53
10:AI:119:LYS:NZ	10:AI:122:ARG:CZ	2.71	0.53
14:AM:94:LEU:HD22	14:AM:94:LEU:N	2.24	0.53
20:AS:17:LYS:HA	20:AS:20:LYS:CD	2.38	0.53
20:AS:40:PHE:HB3	20:AS:41:PRO:CD	2.39	0.53
22:B0:163:C:H4'	22:B0:164:C:H5'	1.89	0.53
22:B0:611:C:N3	22:B0:618:G:N2	2.57	0.53
22:B0:713:G:H22	22:B0:717:C:H41	1.57	0.53
22:B0:1084:A:N6	25:B3:62:GLY:N	2.57	0.53
22:B0:1250:G:H5"	40:BO:5:ARG:HH12	1.72	0.53
22:B0:1311:G:OP2	22:B0:1311:G:N2	2.37	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1398:C:O5'	22:B0:1398:C:H6	1.91	0.53
22:B0:1495:A:N6	26:BA:144:GLU:CG	2.71	0.53
25:B3:86:LEU:HD23	25:B3:87:VAL:HG23	1.91	0.53
28:BC:183:PHE:O	28:BC:185:LYS:N	2.42	0.53
33:BH:122:LEU:H	33:BH:122:LEU:CD1	2.20	0.53
34:BI:3:GLN:HB2	34:BI:31:ARG:HB3	1.90	0.53
35:BJ:119:PRO:CB	35:BJ:138:ALA:HB1	2.39	0.53
36:BK:31:PHE:CD2	36:BK:106:ASP:HA	2.44	0.53
37:BL:65:LEU:O	37:BL:65:LEU:HD23	2.07	0.53
39:BN:3:ILE:H	39:BN:3:ILE:CD1	2.20	0.53
45:BU:58:LEU:CA	45:BU:81:ILE:HA	2.38	0.53
46:BW:28:LEU:HB3	46:BW:43:LEU:CD2	2.38	0.53
49:B1:10:LEU:N	49:B1:10:LEU:HD23	2.23	0.53
1:AA:197:A:H62	1:AA:221:C:H4'	1.74	0.53
1:AA:436:C:H2'	1:AA:437:U:C6	2.44	0.53
1:AA:449:G:N2	17:AP:13:LYS:HG3	2.24	0.53
1:AA:553:A:C1'	13:AL:27:PRO:HG3	2.39	0.53
1:AA:1302:C:O2'	1:AA:1303:C:OP1	2.20	0.53
1:AA:1406:U:H2'	1:AA:1407:C:C5'	2.39	0.53
1:AA:1408:A:H2'	1:AA:1409:C:H6	1.73	0.53
2:AU:16:U:C4'	2:AU:18:G:OP2	2.56	0.53
2:AU:54:U:C4	2:AU:55:U:H5	2.26	0.53
2:AW:14:A:H2'	2:AW:15:G:O4'	2.08	0.53
2:AW:37:G:H2'	2:AW:38:A:O4'	2.08	0.53
3:AB:221:ARG:NH1	3:AB:229:ALA:HB3	2.24	0.53
9:AH:45:ILE:HD12	9:AH:60:LEU:HD11	1.90	0.53
13:AL:84:GLY:N	13:AL:94:TYR:HA	2.15	0.53
14:AM:8:ILE:HG21	29:BD:147:ARG:NH2	2.24	0.53
17:AP:40:ASN:HD21	17:AP:42:ILE:HG22	1.72	0.53
22:B0:72:U:O4	22:B0:112:U:H1'	2.09	0.53
22:B0:607:U:H5"	22:B0:619:G:O6	2.09	0.53
22:B0:1064:C:H2'	22:B0:1065:U:O4'	2.09	0.53
22:B0:1204:A:H61	22:B0:1241:A:N6	1.99	0.53
22:B0:1299:G:H22	22:B0:1639:C:H41	1.55	0.53
22:B0:1397:U:O2'	22:B0:1398:C:P	2.67	0.53
22:B0:1655:A:N6	22:B0:2005:A:H2'	2.19	0.53
22:B0:1845:G:C6	22:B0:1896:G:N3	2.77	0.53
22:B0:2055:C:H2'	22:B0:2504:U:C4'	2.38	0.53
22:B0:2175:C:H2'	22:B0:2175:C:O2	2.09	0.53
25:B5:107:LYS:CE	25:B5:117:VAL:HB	2.33	0.53
26:BA:104:LEU:C	26:BA:104:LEU:HD13	2.29	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:152:GLN:HG3	26:BA:153:LEU:CD2	2.35	0.53
26:BA:156:SER:OG	26:BA:157:ALA:N	2.40	0.53
33:BH:13:ARG:HG2	33:BH:13:ARG:HH11	1.74	0.53
35:BJ:130:GLY:HA2	35:BJ:133:ALA:HB3	1.91	0.53
39:BN:88:ARG:H	39:BN:88:ARG:NH1	1.99	0.53
40:BO:10:ARG:NE	40:BO:10:ARG:N	2.57	0.53
41:BQ:11:ARG:H	41:BQ:11:ARG:NE	2.07	0.53
42:BR:72:GLN:HG3	42:BR:72:GLN:O	2.08	0.53
1:AA:498:U:O2	1:AA:498:U:H2'	2.08	0.53
1:AA:1145:A:O2'	1:AA:1146:A:H8	1.92	0.53
1:AA:1425:U:H2'	1:AA:1426:G:C8	2.44	0.53
3:AB:137:THR:O	3:AB:141:GLU:HG3	2.08	0.53
4:AC:86:LEU:O	4:AC:90:VAL:HG23	2.09	0.53
4:AC:133:MET:HG3	4:AC:134:LYS:H	1.73	0.53
10:AI:115:VAL:HB	11:AJ:60:ASP:HA	1.89	0.53
18:AQ:5:ARG:O	18:AQ:61:ARG:HA	2.08	0.53
18:AQ:6:THR:C	18:AQ:7:LEU:HD12	2.28	0.53
21:AT:54:GLN:HG3	21:AT:75:LYS:HE3	1.91	0.53
22:B0:332:A:O2'	22:B0:334:C:OP2	2.26	0.53
22:B0:385:C:H2'	22:B0:387:U:OP2	2.08	0.53
22:B0:851:C:N4	22:B0:926:G:H1	2.05	0.53
22:B0:977:G:H2'	22:B0:978:G:C8	2.42	0.53
22:B0:1084:A:H5"	25:B3:88:GLU:OE1	2.09	0.53
22:B0:1095:A:H2	32:BG:21:PRO:HA	1.72	0.53
22:B0:1424:G:HO2'	22:B0:1425:G:P	2.32	0.53
22:B0:1615:C:O2'	22:B0:1616:A:OP1	2.23	0.53
22:B0:1817:G:O2'	22:B0:1818:U:H5'	2.09	0.53
22:B0:2115:G:N3	22:B0:2168:G:O4'	2.41	0.53
22:B0:2425:A:H4'	22:B0:2427:C:C6	2.44	0.53
22:B0:2544:G:H2'	22:B0:2545:G:O4'	2.09	0.53
24:B2:42:ASP:OD1	24:B2:215:THR:HG22	2.09	0.53
25:B3:57:ILE:HB	25:B3:118:GLU:CG	2.38	0.53
25:B5:40:VAL:HG13	25:B5:41:ALA:N	2.20	0.53
25:B5:102:ASP:O	25:B5:106:LEU:HG	2.09	0.53
26:BA:115:ILE:HG12	26:BA:115:ILE:O	2.09	0.53
26:BA:243:PRO:HA	26:BA:256:THR:HG23	1.91	0.53
31:BF:26:ALA:HA	31:BF:30:LEU:HD13	1.90	0.53
35:BJ:47:ARG:HG2	35:BJ:47:ARG:HH11	1.74	0.53
41:BQ:11:ARG:HH22	41:BQ:46:LEU:CD2	2.21	0.53
42:BR:39:THR:OG1	42:BR:40:LYS:HD2	2.09	0.53
45:BU:17:ALA:O	45:BU:18:LYS:HD3	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
47:BX:31:ILE:H	47:BX:31:ILE:CD1	2.21	0.53
47:BX:43:ILE:HA	47:BX:46:MET:HE3	1.90	0.53
49:B1:10:LEU:HD21	49:B1:25:ASN:HD22	1.74	0.53
1:AA:266:G:O2'	1:AA:268:U:OP2	2.26	0.53
1:AA:428:G:O2'	1:AA:429:U:O5'	2.27	0.53
1:AA:720:C:H41	12:AK:118:ASN:CG	2.11	0.53
1:AA:960:U:O2'	1:AA:961:U:OP2	2.24	0.53
1:AA:1503:A:O2'	1:AA:1503:A:N3	2.42	0.53
2:AW:58:A:C4'	2:AW:59:U:OP1	2.44	0.53
4:AC:58:ARG:HG2	4:AC:63:ILE:HG12	1.92	0.53
11:AJ:46:LYS:O	11:AJ:46:LYS:HD2	2.08	0.53
11:AJ:67:ILE:C	11:AJ:67:ILE:HD13	2.28	0.53
22:B0:628:G:H21	22:B0:638:G:C4'	2.12	0.53
22:B0:762:U:O2'	22:B0:763:G:OP2	2.24	0.53
22:B0:1059:G:H2'	22:B0:1060:U:C5	2.43	0.53
22:B0:1083:U:O4'	25:B3:84:LYS:N	2.42	0.53
22:B0:1083:U:O5'	25:B3:85:ASP:N	2.42	0.53
22:B0:1269:A:N6	22:B0:2011:U:N3	2.57	0.53
22:B0:1493:A:N9	26:BA:131:MET:HG2	2.24	0.53
22:B0:2873:A:O2'	37:BL:5:LYS:HG2	2.09	0.53
22:B0:2898:G:C8	33:BH:137:PRO:HB2	2.43	0.53
25:B3:16:VAL:O	25:B3:19:VAL:HG12	2.09	0.53
26:BA:146:LYS:HB3	26:BA:147:PRO:CD	2.39	0.53
29:BD:84:ILE:HD13	29:BD:84:ILE:N	2.24	0.53
32:BG:129:GLU:O	32:BG:132:ALA:HB2	2.08	0.53
35:BJ:16:GLY:O	35:BJ:17:LYS:HB2	2.09	0.53
37:BL:12:ARG:HA	37:BL:12:ARG:NE	2.24	0.53
37:BL:40:LYS:HG3	37:BL:41:ALA:N	2.24	0.53
38:BM:6:ALA:O	38:BM:10:ARG:HG3	2.09	0.53
38:BM:17:LYS:HG3	38:BM:20:GLU:OE2	2.09	0.53
38:BM:31:THR:HG23	38:BM:32:PRO:HD2	1.91	0.53
47:BX:28:LEU:HD11	47:BX:35:VAL:CG1	2.39	0.53
49:B1:34:GLU:CD	49:B1:34:GLU:H	2.11	0.53
1:AA:251:G:H5'	1:AA:252:U:OP1	2.09	0.52
1:AA:960:U:O2'	1:AA:961:U:P	2.66	0.52
1:AA:1138:G:H3'	1:AA:1138:G:N3	2.24	0.52
1:AA:1226:C:H4'	1:AA:1227:A:OP1	2.10	0.52
2:AV:37:G:H2'	2:AV:38:A:O4'	2.09	0.52
3:AB:185:ILE:HG13	3:AB:185:ILE:O	2.08	0.52
3:AB:206:ILE:C	3:AB:206:ILE:HD13	2.30	0.52
10:AI:27:ILE:HB	10:AI:34:LEU:CG	2.39	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AL:56:LEU:HD11	13:AL:81:ILE:CG1	2.38	0.52
14:AM:80:MET:HG3	14:AM:91:ARG:HE	1.73	0.52
22:B0:279:A:O5'	22:B0:279:A:C8	2.59	0.52
22:B0:480:A:H5'	43:BS:51:LEU:HD13	1.89	0.52
22:B0:776:G:N3	22:B0:793:A:N6	2.57	0.52
22:B0:777:G:O2'	22:B0:778:G:H5'	2.08	0.52
22:B0:1329:U:H5"	22:B0:1330:C:OP2	2.09	0.52
22:B0:1418:G:C6	26:BA:101:ARG:NE	2.77	0.52
22:B0:1487:G:C2'	26:BA:157:ALA:O	2.42	0.52
22:B0:1578:U:P	26:BA:63:ILE:HA	2.49	0.52
22:B0:2122:U:O2	22:B0:2122:U:C2'	2.56	0.52
22:B0:2160:C:H6	22:B0:2161:C:O3'	1.92	0.52
26:BA:65:ASP:OD2	26:BA:188:ARG:HD2	2.08	0.52
26:BA:140:VAL:CA	26:BA:190:THR:O	2.57	0.52
26:BA:174:ARG:HB3	26:BA:180:MET:SD	2.48	0.52
27:BB:125:TRP:O	27:BB:127:PHE:N	2.42	0.52
29:BD:47:LYS:HB3	29:BD:48:LEU:HD12	1.91	0.52
32:BG:112:LYS:NZ	32:BG:116:MET:HG3	2.24	0.52
33:BH:16:TYR:CE1	33:BH:39:LYS:HE3	2.44	0.52
33:BH:22:GLY:O	33:BH:23:LYS:CB	2.54	0.52
37:BL:24:MET:O	37:BL:28:LEU:HD21	2.08	0.52
40:BO:35:PHE:O	40:BO:36:GLN:HG2	2.09	0.52
40:BO:48:ASP:HA	40:BO:50:ARG:NH2	2.24	0.52
43:BS:4:ILE:H	43:BS:4:ILE:CD1	2.17	0.52
45:BU:38:ARG:HA	45:BU:38:ARG:NE	2.23	0.52
46:BW:42:LEU:HD13	46:BW:42:LEU:N	2.19	0.52
1:AA:68:G:H22	1:AA:101:A:H2	1.52	0.52
1:AA:575:G:O5'	1:AA:576:C:OP1	2.26	0.52
1:AA:1067:A:O2'	1:AA:1068:G:P	2.68	0.52
1:AA:1329:A:O2'	1:AA:1330:U:H5'	2.09	0.52
7:AF:64:VAL:HG22	7:AF:65:GLU:N	2.25	0.52
11:AJ:48:ARG:HG2	11:AJ:66:GLU:CG	2.36	0.52
17:AP:20:VAL:CG1	17:AP:32:PHE:HB2	2.39	0.52
22:B0:91:A:H5'	22:B0:92:U:OP2	2.08	0.52
22:B0:290:U:H3	22:B0:350:G:H22	1.56	0.52
22:B0:677:A:H2'	22:B0:678:C:C6	2.45	0.52
22:B0:873:C:H2'	22:B0:874:G:C8	2.42	0.52
22:B0:1106:G:H2'	22:B0:1107:G:C8	2.44	0.52
22:B0:2263:C:N4	22:B0:2278:A:C6	2.76	0.52
22:B0:2542:A:H4'	22:B0:2543:G:C8	2.44	0.52
22:B0:2557:G:H2'	22:B0:2558:C:C6	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2591:C:H2'	22:B0:2592:G:H8	1.74	0.52
22:B0:2899:A:H1'	33:BH:136:GLN:C	2.29	0.52
25:B5:81:LYS:HD3	25:B5:81:LYS:N	2.18	0.52
27:BB:48:ILE:HD13	27:BB:49:GLN:N	2.23	0.52
28:BC:53:THR:HG21	28:BC:57:LYS:CE	2.39	0.52
28:BC:146:VAL:HG13	28:BC:149:ILE:HB	1.90	0.52
28:BC:153:LEU:HA	28:BC:189:THR:HG23	1.90	0.52
29:BD:79:ARG:HH11	29:BD:79:ARG:CB	2.21	0.52
32:BG:60:VAL:HG12	32:BG:61:TYR:CD1	2.42	0.52
33:BH:28:LEU:O	33:BH:28:LEU:HD13	2.09	0.52
33:BH:140:LEU:O	33:BH:141:ASP:HB2	2.10	0.52
40:BO:73:ILE:HD13	40:BO:73:ILE:N	2.12	0.52
1:AA:246:A:N6	1:AA:279:A:C4	2.78	0.52
1:AA:717:U:C5'	1:AA:718:A:OP1	2.55	0.52
1:AA:1241:G:H2'	1:AA:1242:G:C8	2.43	0.52
1:AA:1293:C:H2'	1:AA:1294:G:C8	2.45	0.52
1:AA:1316:G:H2'	1:AA:1318:A:OP2	2.09	0.52
1:AA:1502:A:N7	1:AA:1504:G:C2	2.77	0.52
2:AU:74:C:C2'	22:B0:2556:C:H1'	2.40	0.52
6:AE:45:VAL:HG22	6:AE:117:ALA:HA	1.92	0.52
8:AG:38:ALA:O	8:AG:42:VAL:HG23	2.09	0.52
10:AI:51:LEU:HD11	10:AI:62:LEU:HD11	1.91	0.52
12:AK:23:HIS:HB3	12:AK:30:ILE:HG23	1.90	0.52
14:AM:68:LEU:O	14:AM:68:LEU:HD23	2.09	0.52
17:AP:56:ARG:HA	17:AP:56:ARG:NE	2.24	0.52
20:AS:12:LEU:HD12	20:AS:13:HIS:N	2.24	0.52
22:B0:34:U:H5'	22:B0:35:G:OP2	2.10	0.52
22:B0:431:U:H1'	28:BC:49:ARG:HH11	1.74	0.52
22:B0:535:G:O2'	40:BO:52:ARG:HG3	2.09	0.52
22:B0:1418:G:N2	26:BA:66:PHE:CD1	2.74	0.52
22:B0:1512:C:C2'	22:B0:1513:C:H5"	2.39	0.52
22:B0:1580:A:H1'	26:BA:68:ARG:CD	2.39	0.52
22:B0:1652:A:C8	22:B0:1653:G:C5'	2.92	0.52
22:B0:1653:G:HO2'	22:B0:1654:A:P	2.32	0.52
22:B0:1993:U:H2'	22:B0:1994:C:H6	1.74	0.52
22:B0:2139:U:O2'	22:B0:2140:G:OP2	2.20	0.52
22:B0:2884:U:H2'	22:B0:2885:G:O4'	2.09	0.52
26:BA:66:PHE:CE1	26:BA:99:GLU:HG2	2.44	0.52
35:BJ:17:LYS:CD	35:BJ:18:ARG:H	2.21	0.52
37:BL:99:LYS:NZ	37:BL:99:LYS:HB2	2.24	0.52
39:BN:29:VAL:HG13	39:BN:30:TRP:N	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BR:68:LYS:N	42:BR:73:ARG:NH2	2.57	0.52
1:AA:766:A:OP2	1:AA:812:G:N2	2.38	0.52
1:AA:1406:U:O4'	1:AA:1517:G:C1'	2.57	0.52
1:AA:1510:C:H2'	1:AA:1511:G:C8	2.44	0.52
2:AU:75:C:OP2	22:B0:2556:C:C6	2.62	0.52
3:AB:219:THR:HA	3:AB:222:GLU:HG2	1.92	0.52
5:AD:33:ILE:CG1	5:AD:35:GLN:HG2	2.38	0.52
5:AD:146:GLU:CD	5:AD:146:GLU:H	2.13	0.52
11:AJ:40:ILE:HD11	11:AJ:73:LEU:CD2	2.39	0.52
11:AJ:80:THR:HG22	11:AJ:81:GLU:N	2.24	0.52
14:AM:91:ARG:HD2	14:AM:94:LEU:HD21	1.90	0.52
22:B0:482:A:H5'	43:BS:55:GLY:CA	2.35	0.52
22:B0:686:U:H5'	22:B0:687:C:OP2	2.09	0.52
22:B0:775:G:O2'	22:B0:776:G:O5'	2.25	0.52
22:B0:999:U:H5"	22:B0:1154:G:O6	2.08	0.52
22:B0:1418:G:N2	26:BA:66:PHE:CZ	2.78	0.52
22:B0:1423:A:C4	26:BA:57:HIS:O	2.62	0.52
22:B0:1478:G:O4'	22:B0:1478:G:OP2	2.27	0.52
22:B0:1568:G:H5"	22:B0:1569:A:O5'	2.09	0.52
22:B0:1853:A:H5"	22:B0:1888:G:C8	2.44	0.52
22:B0:2133:G:H2'	22:B0:2133:G:N3	2.24	0.52
22:B0:2514:U:C6	27:BB:154:LYS:HB2	2.45	0.52
22:B0:2824:C:H3'	22:B0:2825:G:H21	1.73	0.52
24:B2:161:ARG:HD3	24:B2:161:ARG:N	2.24	0.52
25:B3:51:LYS:HZ3	25:B5:45:VAL:HG21	1.74	0.52
25:B5:16:VAL:O	25:B5:20:VAL:HG23	2.10	0.52
25:B5:51:LYS:N	25:B5:51:LYS:HD2	2.25	0.52
26:BA:141:HIS:CE1	26:BA:190:THR:HG21	2.44	0.52
26:BA:149:LYS:NZ	26:BA:151:GLY:N	2.57	0.52
26:BA:161:VAL:CG1	26:BA:161:VAL:O	2.58	0.52
32:BG:99:LYS:HD2	32:BG:99:LYS:C	2.29	0.52
34:BI:2:ILE:HD11	34:BI:82:ASN:CG	2.29	0.52
35:BJ:84:LYS:C	35:BJ:86:GLU:H	2.12	0.52
35:BJ:110:VAL:HG22	35:BJ:131:ALA:HB2	1.90	0.52
35:BJ:124:GLY:C	35:BJ:126:ARG:HD3	2.30	0.52
41:BQ:75:PHE:O	41:BQ:104:THR:HG22	2.10	0.52
43:BS:25:LYS:O	43:BS:26:ASN:HB2	2.09	0.52
47:BX:8:GLN:HE21	47:BX:15:ARG:NH2	2.07	0.52
1:AA:17:U:H2'	1:AA:18:C:C6	2.44	0.52
1:AA:1279:G:H5"	1:AA:1280:A:OP1	2.08	0.52
14:AM:11:HIS:H	14:AM:44:ILE:HD11	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
19:AR:41:SER:HA	19:AR:44:THR:CG2	2.39	0.52
19:AR:64:LEU:CB	19:AR:66:LEU:HD13	2.39	0.52
21:AT:19:HIS:O	21:AT:23:ARG:HD3	2.08	0.52
22:B0:457:A:O2'	22:B0:458:G:H4'	2.09	0.52
22:B0:1418:G:H1	26:BA:101:ARG:NE	2.07	0.52
22:B0:1421:G:O2'	22:B0:1422:G:O5'	2.22	0.52
22:B0:1424:G:H2'	22:B0:1425:G:O5'	2.09	0.52
22:B0:1441:G:O2'	22:B0:1442:U:H5'	2.09	0.52
22:B0:1487:G:H2'	22:B0:1488:G:O5'	2.09	0.52
22:B0:1494:A:H5"	26:BA:140:VAL:CG1	2.35	0.52
22:B0:1495:A:HO2'	22:B0:1496:A:P	2.32	0.52
22:B0:1499:U:C6	22:B0:1499:U:H5'	2.45	0.52
22:B0:2115:G:C8	22:B0:2115:G:H3'	2.44	0.52
22:B0:2292:U:H2'	22:B0:2293:G:H8	1.74	0.52
24:B2:29:LEU:HD23	24:B2:184:LEU:CD1	2.35	0.52
25:B5:64:ASN:HB3	25:B5:67:ALA:HB3	1.91	0.52
25:B5:84:LYS:NZ	25:B5:84:LYS:HB3	2.25	0.52
26:BA:65:ASP:OD1	26:BA:65:ASP:O	2.27	0.52
26:BA:75:ALA:HB2	26:BA:95:TYR:CE2	2.44	0.52
27:BB:80:TRP:CZ3	27:BB:84:LEU:HB3	2.45	0.52
33:BH:18:VAL:HA	33:BH:142:ILE:HG21	1.90	0.52
33:BH:54:ILE:CG1	33:BH:122:LEU:HB3	2.39	0.52
33:BH:69:ARG:C	33:BH:71:ASP:H	2.13	0.52
34:BI:22:ILE:O	34:BI:23:LYS:HG3	2.09	0.52
36:BK:20:LEU:H	36:BK:20:LEU:HD12	1.75	0.52
36:BK:112:LEU:C	36:BK:112:LEU:HD22	2.30	0.52
37:BL:75:ILE:O	37:BL:75:ILE:HD12	2.09	0.52
39:BN:49:ILE:HD12	39:BN:99:LEU:CD1	2.39	0.52
42:BR:9:LYS:HD2	42:BR:9:LYS:N	2.25	0.52
45:BU:13:ARG:HG2	45:BU:14:ASP:H	1.73	0.52
1:AA:243:A:O2'	1:AA:244:U:P	2.68	0.52
2:AV:54:U:O3'	45:BU:2:HIS:HB3	2.10	0.52
4:AC:112:ALA:CA	4:AC:184:ASN:HD22	2.23	0.52
5:AD:51:GLY:O	5:AD:55:ARG:HG2	2.09	0.52
5:AD:144:ILE:O	5:AD:149:LYS:HE3	2.09	0.52
6:AE:14:LEU:HD12	6:AE:14:LEU:N	2.25	0.52
13:AL:28:GLN:HB3	13:AL:80:LEU:HD11	1.91	0.52
22:B0:25:U:OP1	41:BQ:80:PRO:HG3	2.09	0.52
22:B0:448:U:H5"	22:B0:449:A:OP2	2.09	0.52
22:B0:499:U:H1'	43:BS:53:GLN:NE2	2.25	0.52
22:B0:774:G:HO2'	22:B0:775:G:H8	1.58	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:858:G:O2'	22:B0:859:G:OP1	2.27	0.52
22:B0:1085:A:H2'	25:B3:65:LYS:HZ2	1.74	0.52
22:B0:1118:C:H2'	22:B0:1119:U:H6	1.75	0.52
22:B0:1322:A:C2	22:B0:1334:G:H5'	2.40	0.52
22:B0:1389:G:H5"	22:B0:1525:G:H5'	1.92	0.52
22:B0:1494:A:N7	26:BA:131:MET:SD	2.83	0.52
22:B0:1578:U:H4'	26:BA:64:VAL:CA	2.39	0.52
22:B0:1759:A:H1'	22:B0:2714:G:H21	1.74	0.52
22:B0:2345:G:N1	22:B0:2380:C:N3	2.57	0.52
22:B0:2347:C:N3	22:B0:2371:G:N2	2.57	0.52
22:B0:2779:U:C6	33:BH:112:GLY:HA3	2.43	0.52
22:B0:2779:U:C2	33:BH:112:GLY:HA2	2.45	0.52
24:B2:25:ALA:O	24:B2:29:LEU:N	2.41	0.52
26:BA:140:VAL:HB	26:BA:161:VAL:CA	2.40	0.52
26:BA:143:VAL:HG12	26:BA:189:ALA:CB	2.19	0.52
28:BC:30:GLN:HB2	35:BJ:18:ARG:NH2	2.24	0.52
29:BD:47:LYS:O	29:BD:49:LEU:N	2.41	0.52
33:BH:14:ASP:O	33:BH:15:TRP:HB2	2.10	0.52
39:BN:36:LYS:HG3	39:BN:40:GLN:NE2	2.25	0.52
40:BO:2:ARG:HH12	40:BO:3:VAL:HG12	1.73	0.52
40:BO:31:TYR:HA	40:BO:34:ALA:HB3	1.92	0.52
41:BQ:22:ASP:O	41:BQ:23:LEU:HB2	2.09	0.52
43:BS:10:VAL:HG11	43:BS:69:VAL:HB	1.91	0.52
45:BU:39:GLN:CB	45:BU:68:PHE:HA	2.40	0.52
1:AA:532:A:C2'	1:AA:533:A:O5'	2.57	0.52
1:AA:533:A:N6	1:AA:536:C:C2	2.78	0.52
1:AA:1271:A:H2'	1:AA:1272:G:C8	2.45	0.52
1:AA:1367:C:H6	11:AJ:62:ARG:NH2	2.08	0.52
1:AA:1406:U:C2'	1:AA:1407:C:H5'	2.40	0.52
1:AA:1503:A:H62	1:AA:1532:U:H5'	1.75	0.52
1:AA:1514:G:O2'	1:AA:1515:G:H5'	2.10	0.52
1:AA:1519:A:C2'	1:AA:1520:C:H5'	2.33	0.52
3:AB:56:LEU:HD22	3:AB:216:VAL:HG23	1.90	0.52
3:AB:161:PHE:HA	3:AB:183:PHE:O	2.09	0.52
4:AC:69:THR:O	4:AC:104:GLU:HA	2.09	0.52
6:AE:140:ILE:O	6:AE:144:GLU:HG3	2.10	0.52
10:AI:127:SER:O	10:AI:129:ARG:N	2.43	0.52
22:B0:1061:U:C1'	22:B0:1070:A:H1'	2.40	0.52
22:B0:1163:G:O2'	22:B0:1164:C:H5'	2.10	0.52
22:B0:1164:C:H2'	22:B0:1165:A:O4'	2.09	0.52
22:B0:1418:G:C4	26:BA:99:GLU:CG	2.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1441:G:H2'	22:B0:1442:U:O4'	2.10	0.52
22:B0:1593:G:O2'	22:B0:1594:U:O5'	2.28	0.52
22:B0:1784:A:H5"	22:B0:1785:A:OP1	2.09	0.52
22:B0:1842:G:H2'	22:B0:1843:C:C6	2.45	0.52
22:B0:2453:A:H61	22:B0:2499:C:H42	1.57	0.52
22:B0:2899:A:C1'	33:BH:136:GLN:C	2.78	0.52
28:BC:28:VAL:HG12	28:BC:181:ILE:HD13	1.91	0.52
28:BC:74:LYS:HB2	28:BC:74:LYS:HZ2	1.75	0.52
28:BC:79:ARG:C	28:BC:81:GLY:H	2.12	0.52
28:BC:126:VAL:HG11	28:BC:155:GLU:HG2	1.90	0.52
31:BF:90:LEU:HD13	31:BF:123:ARG:O	2.09	0.52
33:BH:127:GLY:HA3	33:BH:131:ASN:OD1	2.08	0.52
34:BI:52:VAL:HG22	34:BI:56:ASP:OD1	2.09	0.52
36:BK:5:LYS:H	36:BK:5:LYS:HD3	1.73	0.52
41:BQ:72:THR:HG23	41:BQ:73:LYS:N	2.24	0.52
42:BR:25:GLU:CG	42:BR:26:LYS:N	2.73	0.52
1:AA:535:A:H5"	1:AA:536:C:OP2	2.09	0.52
1:AA:783:C:O2'	1:AA:784:A:H5'	2.10	0.52
1:AA:1429:A:H2'	1:AA:1430:A:H8	1.73	0.52
1:AA:1431:A:H61	1:AA:1469:C:H42	1.58	0.52
2:AW:35:A:H2'	2:AW:36:A:H8	1.75	0.52
3:AB:45:THR:HG22	3:AB:49:PHE:CE2	2.45	0.52
4:AC:26:LYS:HD2	4:AC:26:LYS:C	2.30	0.52
4:AC:152:VAL:HG13	4:AC:195:ILE:CD1	2.39	0.52
6:AE:10:LEU:HD23	6:AE:10:LEU:C	2.31	0.52
9:AH:8:ASP:OD2	9:AH:12:ARG:HD2	2.09	0.52
16:AO:39:GLN:HA	16:AO:42:PHE:HD2	1.75	0.52
22:B0:211:C:N4	28:BC:56:GLY:HA2	2.24	0.52
22:B0:575:A:O2'	22:B0:2502:G:H2'	2.10	0.52
22:B0:589:U:C6	28:BC:86:ALA:HA	2.45	0.52
22:B0:811:U:O2'	22:B0:812:C:OP1	2.19	0.52
22:B0:1005:C:C5	22:B0:1143:A:H1'	2.45	0.52
22:B0:1090:A:H61	22:B0:1101:U:H3	1.58	0.52
22:B0:1578:U:O5'	26:BA:63:ILE:HA	2.10	0.52
22:B0:1913:A:N1	22:B0:1916:A:OP2	2.43	0.52
22:B0:2043:C:H42	22:B0:2625:G:H1	1.57	0.52
22:B0:2128:G:H4'	22:B0:2165:C:C5'	2.40	0.52
22:B0:2344:U:H5"	22:B0:2373:G:O2'	2.09	0.52
24:B2:41:VAL:HG13	24:B2:213:ILE:HG13	1.91	0.52
25:B5:14:MET:HB3	25:B5:18:ASP:HB2	1.91	0.52
25:B5:38:VAL:C	25:B5:40:VAL:N	2.63	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BB:20:VAL:HG22	27:BB:21:SER:N	2.25	0.52
28:BC:5:LEU:HG	28:BC:120:VAL:CG1	2.40	0.52
28:BC:24:ASN:CB	28:BC:27:LEU:HD23	2.39	0.52
28:BC:137:LYS:HZ2	28:BC:137:LYS:CB	2.23	0.52
29:BD:32:LYS:HD2	29:BD:32:LYS:O	2.10	0.52
30:BE:157:LYS:HE2	30:BE:162:ARG:HG3	1.91	0.52
35:BJ:134:ALA:HB3	35:BJ:135:ILE:HD13	1.92	0.52
39:BN:33:GLU:OE2	39:BN:81:ASP:HB3	2.10	0.52
42:BR:8:LEU:HD12	46:BW:23:ARG:HG3	1.90	0.52
1:AA:5:U:H1'	1:AA:6:G:C6	2.45	0.52
1:AA:340:U:H2'	1:AA:341:C:C6	2.45	0.52
1:AA:1182:G:O2'	1:AA:1183:U:H5"	2.10	0.52
2:AU:75:C:O5'	22:B0:2556:C:O5'	2.28	0.52
4:AC:87:ARG:HH21	4:AC:100:ILE:CG2	2.21	0.52
11:AJ:92:LEU:N	11:AJ:92:LEU:HD12	2.24	0.52
13:AL:109:ARG:HB2	13:AL:118:VAL:HG21	1.91	0.52
18:AQ:61:ARG:HG3	18:AQ:75:VAL:HG21	1.91	0.52
19:AR:6:ARG:HE	19:AR:42:ARG:HB3	1.75	0.52
19:AR:15:GLU:HG2	19:AR:16:GLY:N	2.24	0.52
20:AS:86:LYS:HD3	20:AS:86:LYS:N	2.16	0.52
21:AT:66:ILE:HG23	21:AT:71:ALA:HB2	1.90	0.52
22:B0:85:G:P	43:BS:6:ARG:HB3	2.49	0.52
22:B0:343:C:H2'	22:B0:347:A:H8	1.75	0.52
22:B0:507:A:H4'	22:B0:509:C:N1	2.25	0.52
22:B0:524:G:H3'	22:B0:525:U:C6	2.45	0.52
22:B0:549:G:H5"	22:B0:550:C:C5	2.44	0.52
22:B0:618:G:N2	22:B0:619:G:H1'	2.25	0.52
22:B0:676:A:H4'	22:B0:2442:C:O2'	2.10	0.52
22:B0:692:C:H2'	22:B0:693:A:H8	1.75	0.52
22:B0:735:A:H2'	22:B0:736:C:H5'	1.91	0.52
22:B0:828:U:O2	22:B0:828:U:C2'	2.53	0.52
22:B0:1242:U:H2'	22:B0:1243:C:C6	2.45	0.52
22:B0:1428:C:OP1	22:B0:1428:C:C6	2.63	0.52
22:B0:1580:A:C2	26:BA:68:ARG:NH1	2.78	0.52
22:B0:2145:C:C3'	22:B0:2146:C:H5"	2.40	0.52
22:B0:2170:A:C5'	22:B0:2171:A:OP2	2.58	0.52
22:B0:2231:U:H2'	22:B0:2232:C:C6	2.45	0.52
22:B0:2451:A:OP1	22:B0:2497:A:N6	2.41	0.52
22:B0:2458:G:H5"	22:B0:2459:A:OP1	2.09	0.52
22:B0:2677:G:H2'	27:BB:125:TRP:CE3	2.44	0.52
22:B0:2723:C:H2'	22:B0:2724:U:O4'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:B2:33:ALA:O	24:B2:35:ALA:N	2.43	0.52
25:B3:69:ILE:O	25:B3:73:ARG:HG3	2.09	0.52
27:BB:122:VAL:HG12	27:BB:141:ARG:NH2	2.25	0.52
28:BC:28:VAL:H	35:BJ:17:LYS:HG2	1.75	0.52
30:BE:85:LYS:HD3	30:BE:131:VAL:HG12	1.92	0.52
32:BG:136:GLY:O	32:BG:137:LEU:O	2.27	0.52
34:BI:39:ILE:HD13	34:BI:39:ILE:N	2.22	0.52
39:BN:59:THR:HG22	39:BN:60:VAL:N	2.25	0.52
40:BO:52:ARG:NE	40:BO:52:ARG:HA	2.24	0.52
41:BQ:23:LEU:C	41:BQ:25:ARG:HE	2.13	0.52
41:BQ:55:ILE:HG22	41:BQ:107:VAL:HG21	1.92	0.52
1:AA:1201:A:O2'	1:AA:1202:U:C5'	2.58	0.52
1:AA:1322:C:C2	20:AS:5:LYS:HA	2.45	0.52
1:AA:1368:A:P	10:AI:115:VAL:HG13	2.50	0.52
13:AL:23:LEU:HD11	13:AL:60:PHE:CE1	2.45	0.52
17:AP:18:GLN:HG2	17:AP:20:VAL:HG23	1.91	0.52
17:AP:20:VAL:HG12	17:AP:21:VAL:N	2.24	0.52
18:AQ:32:ILE:HD12	18:AQ:32:ILE:N	2.25	0.52
22:B0:203:A:C6	22:B0:204:A:N6	2.78	0.52
22:B0:290:U:H2'	22:B0:291:G:H8	1.74	0.52
22:B0:455:C:H2'	22:B0:472:A:C2	2.44	0.52
22:B0:467:G:O2'	22:B0:468:G:H5'	2.10	0.52
22:B0:1083:U:O3'	25:B3:86:LEU:N	2.41	0.52
22:B0:1203:U:C6	35:BJ:10:GLU:HG2	2.45	0.52
22:B0:1222:U:H3	22:B0:1227:G:H1	1.55	0.52
22:B0:1297:C:O2'	22:B0:1302:A:N6	2.38	0.52
22:B0:1363:C:H2'	22:B0:1364:G:OP1	2.09	0.52
22:B0:1479:G:O4'	22:B0:1558:C:H5"	2.09	0.52
22:B0:1493:A:O2'	26:BA:173:LEU:HD21	2.10	0.52
22:B0:2127:G:H8	22:B0:2166:U:H6	1.58	0.52
22:B0:2174:C:N3	24:B2:215:THR:N	2.57	0.52
22:B0:2392:A:H2'	22:B0:2393:U:C6	2.45	0.52
22:B0:2547:A:H5'	27:BB:148:GLN:HB2	1.91	0.52
22:B0:2769:U:H2'	22:B0:2770:G:O4'	2.10	0.52
22:B0:2780:G:O5'	33:BH:116:ARG:CD	2.56	0.52
22:B0:2894:U:C6	33:BH:6:ALA:HB3	2.44	0.52
22:B0:2899:A:P	33:BH:138:GLN:O	2.68	0.52
23:B9:45:A:OP1	29:BD:92:GLY:HA2	2.09	0.52
25:B3:107:LYS:HG2	25:B3:111:GLU:OE2	2.09	0.52
25:B5:73:ARG:CB	25:B5:73:ARG:HH11	2.23	0.52
25:B5:107:LYS:HE3	25:B5:117:VAL:CB	2.33	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BB:146:ILE:O	27:BB:155:VAL:HG23	2.10	0.52
30:BE:74:MET:O	30:BE:78:VAL:HG23	2.10	0.52
32:BG:129:GLU:HA	32:BG:132:ALA:HB2	1.92	0.52
35:BJ:42:SER:OG	35:BJ:43:GLY:N	2.43	0.52
35:BJ:60:ARG:HB3	35:BJ:60:ARG:HH11	1.74	0.52
35:BJ:81:ASP:OD2	35:BJ:116:VAL:HG12	2.10	0.52
39:BN:13:LYS:O	39:BN:15:ASP:N	2.43	0.52
39:BN:71:ARG:O	39:BN:72:VAL:HB	2.10	0.52
40:BO:35:PHE:O	40:BO:36:GLN:HB3	2.10	0.52
48:BZ:27:LEU:HA	48:BZ:36:LYS:HG3	1.92	0.52
49:B1:34:GLU:O	49:B1:35:LEU:HD22	2.10	0.52
1:AA:35:G:H2'	1:AA:36:C:C6	2.44	0.51
1:AA:665:A:N3	1:AA:733:G:H1'	2.25	0.51
1:AA:737:C:H2'	1:AA:738:C:C6	2.44	0.51
1:AA:1054:C:O2	1:AA:1054:C:C2'	2.57	0.51
1:AA:1376:U:H2'	1:AA:1377:A:H8	1.75	0.51
1:AA:1453:G:N2	1:AA:1454:G:N7	2.58	0.51
3:AB:52:ALA:HB3	3:AB:199:ILE:HD11	1.92	0.51
8:AG:144:ALA:C	8:AG:146:ALA:H	2.12	0.51
9:AH:62:LEU:N	9:AH:62:LEU:HD12	2.25	0.51
15:AN:63:CYS:HB2	15:AN:79:SER:OG	2.09	0.51
18:AQ:35:LYS:HD2	18:AQ:35:LYS:O	2.09	0.51
19:AR:44:THR:HG23	19:AR:46:THR:H	1.76	0.51
22:B0:354:A:H2'	22:B0:355:U:C6	2.45	0.51
22:B0:455:C:OP2	22:B0:455:C:H6	1.93	0.51
22:B0:630:G:H4'	22:B0:640:C:C5'	2.38	0.51
22:B0:755:U:H2'	22:B0:756:A:C8	2.44	0.51
22:B0:811:U:H1'	22:B0:1251:C:C2	2.45	0.51
22:B0:1081:U:H5'	32:BG:126:ARG:NH1	2.25	0.51
22:B0:1275:A:H5"	22:B0:1276:A:OP1	2.10	0.51
22:B0:1352:U:H4'	22:B0:1571:A:O2'	2.10	0.51
22:B0:1493:A:N7	26:BA:187:CYS:N	2.58	0.51
22:B0:1590:C:H2'	22:B0:1591:A:C8	2.45	0.51
22:B0:1656:C:C2	22:B0:2004:G:N2	2.78	0.51
22:B0:1710:G:H4'	22:B0:2858:C:O2	2.10	0.51
22:B0:1834:U:H4'	22:B0:1969:A:C5	2.44	0.51
22:B0:2262:U:O3'	45:BU:10:ARG:O	2.29	0.51
22:B0:2333:A:H4'	22:B0:2334:U:C5'	2.39	0.51
22:B0:2585:U:C5'	22:B0:2586:U:OP1	2.53	0.51
22:B0:2819:G:O2'	22:B0:2820:A:OP1	2.28	0.51
22:B0:2897:U:C2	33:BH:13:ARG:O	2.63	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B9:48:U:H2'	23:B9:49:C:C6	2.45	0.51
24:B2:45:VAL:CG1	24:B2:211:VAL:HG13	2.40	0.51
24:B2:62:THR:HG23	24:B2:64:LEU:HG	1.91	0.51
24:B2:170:ILE:HD13	24:B2:170:ILE:C	2.31	0.51
27:BB:104:VAL:O	27:BB:104:VAL:HG12	2.10	0.51
28:BC:158:PHE:N	28:BC:169:VAL:HG21	2.25	0.51
30:BE:101:VAL:CG1	30:BE:113:ASP:HB3	2.40	0.51
33:BH:21:THR:HB	33:BH:58:ASN:OD1	2.10	0.51
36:BK:16:ARG:HH12	36:BK:69:PRO:HG2	1.74	0.51
36:BK:124:LEU:HD23	36:BK:124:LEU:H	1.76	0.51
38:BM:15:ARG:NH1	38:BM:25:ARG:NH1	2.58	0.51
39:BN:18:SER:O	39:BN:19:PHE:C	2.49	0.51
39:BN:29:VAL:HG12	39:BN:45:VAL:CG1	2.37	0.51
39:BN:49:ILE:HD12	39:BN:99:LEU:CD2	2.39	0.51
42:BR:39:THR:HG23	42:BR:40:LYS:N	2.26	0.51
43:BS:40:LEU:HG	43:BS:41:VAL:H	1.73	0.51
45:BU:70:VAL:HG23	45:BU:71:LYS:N	2.24	0.51
1:AA:46:G:O2'	1:AA:365:U:H1'	2.10	0.51
1:AA:839:U:H5'	1:AA:840:C:H5	1.76	0.51
1:AA:873:A:H5"	1:AA:874:G:OP2	2.11	0.51
1:AA:1049:U:O2'	1:AA:1050:G:P	2.67	0.51
1:AA:1347:G:N2	1:AA:1373:G:H2'	2.24	0.51
2:AU:76:A:O5'	22:B0:2555:U:OP2	2.28	0.51
2:AW:35:A:H2'	2:AW:36:A:C8	2.45	0.51
4:AC:116:ALA:HB2	4:AC:184:ASN:OD1	2.09	0.51
5:AD:138:PRO:O	5:AD:139:ASN:HB2	2.09	0.51
5:AD:187:ARG:HH12	5:AD:192:ALA:HB3	1.75	0.51
12:AK:87:GLY:H	12:AK:113:THR:HG23	1.74	0.51
15:AN:63:CYS:O	15:AN:67:GLY:HA2	2.11	0.51
17:AP:11:ALA:HB3	17:AP:14:ARG:HH11	1.74	0.51
17:AP:13:LYS:N	17:AP:13:LYS:HD2	2.25	0.51
22:B0:533:G:H2'	22:B0:534:U:C6	2.45	0.51
22:B0:1083:U:P	25:B3:85:ASP:N	2.84	0.51
22:B0:1118:C:H2'	22:B0:1119:U:C6	2.46	0.51
22:B0:1421:G:H21	26:BA:145:MET:HB2	1.72	0.51
22:B0:1489:U:C5	26:BA:176:ARG:O	2.63	0.51
22:B0:1674:G:O6	22:B0:1989:G:O6	2.28	0.51
22:B0:2002:G:C2	22:B0:2003:A:C1'	2.91	0.51
22:B0:2175:C:C2'	22:B0:2175:C:O2	2.56	0.51
22:B0:2679:A:H2'	22:B0:2680:U:O4'	2.10	0.51
22:B0:2688:G:N1	22:B0:2720:U:OP2	2.42	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2857:G:O2'	22:B0:2859:A:N7	2.40	0.51
25:B3:59:LYS:CD	25:B3:118:GLU:HB3	2.40	0.51
32:BG:83:ALA:CB	32:BG:137:LEU:HB2	2.39	0.51
33:BH:104:ALA:C	33:BH:106:LYS:N	2.62	0.51
34:BI:58:LEU:HD12	34:BI:58:LEU:N	2.25	0.51
36:BK:75:GLU:HB2	36:BK:90:GLU:OE1	2.11	0.51
36:BK:102:LEU:HD12	36:BK:102:LEU:N	2.26	0.51
37:BL:44:LEU:HA	37:BL:47:VAL:CG1	2.40	0.51
37:BL:99:LYS:HB3	48:BZ:52:LYS:NZ	2.24	0.51
38:BM:97:PHE:CE2	38:BM:101:GLY:HA3	2.45	0.51
39:BN:107:ALA:H	39:BN:110:LYS:HB2	1.74	0.51
40:BO:64:ILE:HD13	40:BO:78:PHE:CE1	2.45	0.51
42:BR:68:LYS:N	42:BR:73:ARG:HH21	2.08	0.51
45:BU:59:PHE:CG	45:BU:59:PHE:O	2.63	0.51
49:B1:35:LEU:HB3	49:B1:36:LYS:CE	2.40	0.51
1:AA:509:A:O2'	1:AA:510:A:P	2.69	0.51
1:AA:538:G:OP1	13:AL:111:GLN:HB3	2.10	0.51
1:AA:783:C:H4'	22:B0:1836:C:OP1	2.10	0.51
1:AA:1084:G:H5'	1:AA:1102:A:OP2	2.10	0.51
1:AA:1171:A:H2'	1:AA:1172:C:C6	2.45	0.51
1:AA:1256:A:O2'	1:AA:1257:A:P	2.68	0.51
1:AA:1492:A:OP1	13:AL:43:LYS:HB2	2.10	0.51
1:AA:1519:A:C8	1:AA:1520:C:O4'	2.63	0.51
2:AU:37:G:H2'	2:AU:38:A:O4'	2.10	0.51
2:AV:18:G:H1'	2:AV:57:G:N2	2.25	0.51
2:AV:35:A:H2'	2:AV:36:A:C8	2.45	0.51
3:AB:110:ILE:HD11	3:AB:147:LEU:HD22	1.92	0.51
4:AC:107:LYS:HG2	4:AC:143:LEU:HD11	1.91	0.51
6:AE:131:ASN:O	6:AE:135:VAL:HG13	2.10	0.51
7:AF:20:GLY:O	7:AF:23:GLU:HB3	2.09	0.51
7:AF:45:ARG:HB2	7:AF:59:TYR:CE1	2.45	0.51
9:AH:84:ILE:HD12	9:AH:124:ILE:HD12	1.90	0.51
12:AK:15:VAL:HB	12:AK:78:ILE:CG1	2.39	0.51
12:AK:73:VAL:HG12	12:AK:78:ILE:HB	1.92	0.51
13:AL:56:LEU:H	13:AL:56:LEU:CD2	2.24	0.51
22:B0:233:A:O2'	22:B0:234:U:H5'	2.11	0.51
22:B0:372:G:HO2'	22:B0:373:U:H5	1.55	0.51
22:B0:395:U:H2'	22:B0:396:G:C8	2.46	0.51
22:B0:479:A:C4'	22:B0:480:A:O5'	2.36	0.51
22:B0:481:G:OP1	43:BS:55:GLY:HA3	2.11	0.51
22:B0:925:A:H2'	22:B0:926:G:C8	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1045:C:O2'	22:B0:1046:A:P	2.69	0.51
22:B0:1229:C:H2'	22:B0:1230:A:C8	2.44	0.51
22:B0:1416:G:N1	26:BA:94:LEU:HA	2.24	0.51
22:B0:1445:U:OP1	22:B0:1445:U:H3'	2.11	0.51
22:B0:1457:G:H2'	22:B0:1458:C:O4'	2.10	0.51
22:B0:1495:A:H8	26:BA:190:THR:CA	2.23	0.51
22:B0:1578:U:OP1	26:BA:61:TYR:CE2	2.63	0.51
22:B0:2674:G:P	27:BB:128:ARG:HH12	2.33	0.51
22:B0:2718:G:H2'	22:B0:2719:G:O4'	2.11	0.51
22:B0:2776:A:H4'	22:B0:2777:G:H5"	1.91	0.51
25:B3:78:LEU:HB3	25:B3:82:GLU:HB2	1.89	0.51
26:BA:68:ARG:HH21	26:BA:70:LYS:H	1.58	0.51
27:BB:136:ASN:C	27:BB:138:LEU:H	2.12	0.51
32:BG:54:ILE:HD13	32:BG:54:ILE:C	2.30	0.51
33:BH:12:LYS:HA	33:BH:12:LYS:HE3	1.91	0.51
37:BL:103:ARG:HH11	37:BL:103:ARG:HG2	1.74	0.51
39:BN:64:SER:CA	39:BN:71:ARG:HG2	2.41	0.51
41:BQ:78:GLU:HG3	41:BQ:79:GLY:N	2.23	0.51
42:BR:33:LYS:HA	42:BR:82:LYS:CB	2.40	0.51
45:BU:23:LYS:HD3	45:BU:56:HIS:ND1	2.25	0.51
1:AA:566:G:C5'	1:AA:567:G:OP1	2.58	0.51
1:AA:960:U:O2	1:AA:960:U:C2'	2.56	0.51
1:AA:1278:G:H5"	1:AA:1279:G:C5'	2.41	0.51
1:AA:1344:C:O5'	10:AI:122:ARG:NH2	2.43	0.51
1:AA:1420:U:H2'	1:AA:1421:G:H8	1.75	0.51
2:AU:75:C:O4'	22:B0:2556:C:C6	2.64	0.51
3:AB:80:LYS:O	3:AB:84:LEU:HG	2.09	0.51
7:AF:89:VAL:O	7:AF:89:VAL:HG23	2.10	0.51
8:AG:42:VAL:O	8:AG:46:LEU:HD13	2.10	0.51
18:AQ:46:HIS:HA	18:AQ:70:LYS:HZ1	1.76	0.51
20:AS:22:VAL:HG12	20:AS:22:VAL:O	2.10	0.51
22:B0:518:G:H2'	22:B0:519:U:C6	2.46	0.51
22:B0:1083:U:H3'	25:B3:86:LEU:H	1.70	0.51
22:B0:1418:G:C4	26:BA:99:GLU:CB	2.93	0.51
22:B0:1710:G:H4'	22:B0:2858:C:C2	2.45	0.51
22:B0:1932:A:H5'	22:B0:1932:A:H8	1.75	0.51
22:B0:2136:G:N1	22:B0:2137:U:C4'	2.64	0.51
22:B0:2334:U:O4	38:BM:11:ALA:HB2	2.11	0.51
22:B0:2458:G:N2	22:B0:2493:U:O4	2.44	0.51
22:B0:2493:U:H6	22:B0:2493:U:O5'	1.93	0.51
22:B0:2899:A:OP2	33:BH:139:VAL:HB	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:B5:57:ILE:HG12	25:B5:93:ALA:N	2.26	0.51
27:BB:110:THR:HG22	27:BB:202:ILE:HG12	1.93	0.51
28:BC:29:HIS:CA	35:BJ:17:LYS:HA	2.41	0.51
28:BC:165:HIS:O	28:BC:167:VAL:HG23	2.09	0.51
29:BD:71:LYS:HZ1	29:BD:81:GLY:H	1.55	0.51
29:BD:165:GLY:C	29:BD:167:ALA:H	2.14	0.51
33:BH:30:THR:HG22	33:BH:31:GLU:N	2.24	0.51
36:BK:16:ARG:NH1	36:BK:69:PRO:HG2	2.26	0.51
37:BL:42:LYS:HD3	37:BL:43:GLU:H	1.75	0.51
39:BN:60:VAL:O	39:BN:61:ARG:HB3	2.10	0.51
41:BQ:74:ILE:CG2	41:BQ:105:VAL:HG13	2.40	0.51
45:BU:13:ARG:HE	45:BU:14:ASP:N	2.09	0.51
1:AA:197:A:O2'	1:AA:198:G:O5'	2.27	0.51
1:AA:449:G:H22	17:AP:13:LYS:HG3	1.73	0.51
1:AA:532:A:H2'	1:AA:533:A:O5'	2.11	0.51
1:AA:718:A:N3	12:AK:116:PRO:CA	2.74	0.51
1:AA:812:G:O2'	1:AA:813:U:P	2.67	0.51
1:AA:848:C:H2'	1:AA:849:G:H8	1.75	0.51
1:AA:1367:C:C6	11:AJ:62:ARG:CZ	2.94	0.51
9:AH:38:VAL:O	9:AH:42:GLU:HG2	2.10	0.51
10:AI:90:ASP:OD1	10:AI:92:SER:HB2	2.10	0.51
11:AJ:70:HIS:C	11:AJ:71:LEU:HD12	2.30	0.51
14:AM:21:ILE:HG22	14:AM:23:GLY:H	1.75	0.51
14:AM:32:ILE:HG13	14:AM:59:VAL:HG22	1.91	0.51
18:AQ:46:HIS:HA	18:AQ:70:LYS:NZ	2.26	0.51
19:AR:7:ARG:HD3	19:AR:7:ARG:N	2.22	0.51
19:AR:39:VAL:HB	19:AR:43:ILE:HG21	1.92	0.51
20:AS:11:ASP:HB3	20:AS:13:HIS:ND1	2.26	0.51
21:AT:63:LYS:N	21:AT:63:LYS:HD2	2.25	0.51
22:B0:1111:A:HO2'	22:B0:1112:G:H4'	1.75	0.51
22:B0:1247:A:OP2	35:BJ:26:GLY:N	2.43	0.51
22:B0:1342:A:O2'	22:B0:1343:G:P	2.68	0.51
22:B0:1491:A:H4'	26:BA:161:VAL:HG12	1.86	0.51
22:B0:1779:U:H3'	22:B0:1779:U:H6	1.75	0.51
22:B0:2001:C:H4'	22:B0:2689:U:C4	2.45	0.51
22:B0:2251:G:H4'	22:B0:2449:U:O2'	2.10	0.51
22:B0:2433:A:H4'	22:B0:2434:A:OP1	2.11	0.51
22:B0:2472:G:H2'	22:B0:2529:G:N2	2.25	0.51
22:B0:2518:A:O5'	22:B0:2519:U:OP2	2.28	0.51
24:B2:26:ILE:HA	24:B2:29:LEU:CB	2.33	0.51
24:B2:97:GLU:OE1	24:B2:122:VAL:HG11	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:B3:44:PRO:C	25:B3:46:GLU:H	2.13	0.51
25:B5:90:ALA:C	25:B5:92:ALA:H	2.13	0.51
26:BA:194:VAL:HG12	26:BA:195:GLY:N	2.26	0.51
28:BC:28:VAL:CA	35:BJ:17:LYS:HB2	2.40	0.51
28:BC:29:HIS:N	35:BJ:16:GLY:C	2.64	0.51
28:BC:108:ILE:HD13	28:BC:108:ILE:C	2.30	0.51
33:BH:15:TRP:CZ2	33:BH:132:HIS:NE2	2.69	0.51
33:BH:74:TYR:OH	33:BH:93:ILE:HB	2.10	0.51
34:BI:99:ILE:HD13	34:BI:100:PHE:H	1.68	0.51
35:BJ:103:ILE:C	35:BJ:105:ILE:H	2.14	0.51
35:BJ:124:GLY:O	35:BJ:125:LEU:CB	2.57	0.51
37:BL:22:ARG:HD2	37:BL:22:ARG:N	2.24	0.51
42:BR:36:LYS:H	42:BR:36:LYS:CD	2.24	0.51
43:BS:66:VAL:O	43:BS:69:VAL:HG22	2.10	0.51
45:BU:45:HIS:HD2	45:BU:79:ILE:HG13	1.74	0.51
49:B1:34:GLU:HG2	49:B1:49:LYS:HA	1.93	0.51
1:AA:439:U:C5	1:AA:495:A:N1	2.78	0.51
1:AA:848:C:H2'	1:AA:849:G:C8	2.46	0.51
1:AA:916:U:H2'	1:AA:917:G:H8	1.76	0.51
1:AA:1278:G:H5"	1:AA:1279:G:OP1	2.11	0.51
2:AW:3:G:H2'	2:AW:4:G:C8	2.45	0.51
4:AC:133:MET:HG3	4:AC:134:LYS:N	2.26	0.51
7:AF:30:THR:C	7:AF:32:ALA:H	2.14	0.51
14:AM:2:ARG:H	14:AM:2:ARG:HD2	1.74	0.51
14:AM:6:ILE:HA	29:BD:133:GLU:CG	2.41	0.51
18:AQ:11:VAL:HG13	18:AQ:20:ILE:CG2	2.41	0.51
22:B0:431:U:O2'	22:B0:432:A:OP1	2.26	0.51
22:B0:478:A:H2'	22:B0:479:A:H5'	1.92	0.51
22:B0:482:A:H4'	43:BS:54:PRO:CB	2.38	0.51
22:B0:540:G:O2'	22:B0:541:C:H5'	2.10	0.51
22:B0:726:G:H5'	22:B0:727:A:OP1	2.09	0.51
22:B0:748:G:O5'	41:BQ:90:LYS:HE2	2.10	0.51
22:B0:877:A:H2'	22:B0:878:A:C8	2.45	0.51
22:B0:971:G:OP1	22:B0:974:G:H8	1.94	0.51
22:B0:1694:C:H4'	22:B0:1695:G:H5"	1.92	0.51
22:B0:1892:C:H2'	22:B0:1893:C:C6	2.45	0.51
22:B0:1939:U:H4'	22:B0:2591:C:O2'	2.10	0.51
22:B0:1944:U:H1'	22:B0:1955:U:C4'	2.41	0.51
22:B0:2139:U:O2	22:B0:2139:U:C2'	2.59	0.51
22:B0:2345:G:HO2'	22:B0:2346:A:P	2.34	0.51
22:B0:2639:A:OP1	27:BB:46:ARG:HD3	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2873:A:H1'	37:BL:5:LYS:CE	2.40	0.51
25:B3:21:GLU:HB3	25:B5:119:VAL:HG12	1.92	0.51
27:BB:29:VAL:HG23	27:BB:29:VAL:O	2.11	0.51
27:BB:40:LEU:HD13	27:BB:49:GLN:HA	1.93	0.51
27:BB:96:ILE:HB	27:BB:98:VAL:HG22	1.92	0.51
28:BC:30:GLN:HG3	28:BC:33:VAL:HG22	1.92	0.51
28:BC:111:GLU:O	28:BC:117:ARG:HG3	2.10	0.51
29:BD:129:MET:CG	29:BD:152:ASP:HB3	2.41	0.51
30:BE:66:THR:O	30:BE:70:LEU:HG	2.10	0.51
32:BG:46:ASP:O	32:BG:47:SER:HB3	2.09	0.51
32:BG:81:LYS:O	32:BG:81:LYS:HG3	2.09	0.51
33:BH:102:GLU:O	33:BH:106:LYS:HB2	2.10	0.51
35:BJ:80:SER:OG	35:BJ:112:LEU:HA	2.10	0.51
37:BL:30:ARG:CB	37:BL:75:ILE:HG21	2.41	0.51
37:BL:99:LYS:HB3	48:BZ:52:LYS:CE	2.39	0.51
40:BO:75:TYR:HA	40:BO:78:PHE:CD1	2.45	0.51
42:BR:61:LEU:HD22	42:BR:61:LEU:N	2.26	0.51
1:AA:8:A:H62	5:AD:204:SER:HB3	1.76	0.51
1:AA:484:G:O2'	1:AA:485:U:P	2.69	0.51
1:AA:1347:G:OP2	1:AA:1347:G:C4'	2.58	0.51
1:AA:1499:A:N3	1:AA:1499:A:H2'	2.25	0.51
3:AB:163:ILE:HD12	3:AB:164:ASP:N	2.26	0.51
4:AC:140:ALA:CB	4:AC:148:ILE:HD12	2.40	0.51
4:AC:178:ARG:HG3	4:AC:179:ALA:N	2.26	0.51
5:AD:56:GLU:OE2	5:AD:198:LEU:HD12	2.11	0.51
14:AM:92:ARG:HH11	14:AM:96:VAL:HG12	1.75	0.51
21:AT:81:GLN:O	21:AT:85:LEU:HD13	2.10	0.51
22:B0:124:G:H21	22:B0:126:A:C5'	2.21	0.51
22:B0:716:A:H2'	22:B0:717:C:O4'	2.11	0.51
22:B0:856:G:O3'	45:BU:54:ARG:HD2	2.11	0.51
22:B0:1286:A:O2'	22:B0:1288:G:P	2.68	0.51
22:B0:1416:G:O3'	22:B0:1587:A:H2	1.94	0.51
22:B0:1487:G:H3'	26:BA:158:GLY:CA	2.40	0.51
22:B0:1487:G:OP2	26:BA:194:VAL:O	2.29	0.51
22:B0:1577:C:O2'	26:BA:64:VAL:HG23	2.11	0.51
22:B0:1593:G:O2'	22:B0:1594:U:P	2.69	0.51
22:B0:1695:G:H2'	22:B0:1696:G:H5'	1.91	0.51
22:B0:2055:C:H2'	22:B0:2055:C:O2	2.11	0.51
22:B0:2152:G:C5'	22:B0:2153:C:O2	2.54	0.51
22:B0:2167:U:O4	22:B0:2169:A:OP2	2.29	0.51
22:B0:2861:U:O2	22:B0:2861:U:H2'	2.09	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
25:B5:22:LEU:O	25:B5:26:MET:HG2	2.11	0.51
26:BA:62:ARG:NH2	26:BA:149:LYS:HZ2	2.02	0.51
27:BB:37:VAL:HA	27:BB:78:GLY:HA2	1.92	0.51
29:BD:16:MET:HE1	29:BD:24:VAL:HA	1.92	0.51
29:BD:177:ARG:HH11	29:BD:177:ARG:HG3	1.74	0.51
30:BE:85:LYS:CD	30:BE:131:VAL:HG12	2.41	0.51
34:BI:10:VAL:HG12	34:BI:12:ASP:H	1.75	0.51
36:BK:5:LYS:HD3	36:BK:5:LYS:N	2.26	0.51
1:AA:815:A:H4'	1:AA:817:C:C4	2.46	0.51
1:AA:820:U:OP2	1:AA:820:U:C6	2.63	0.51
1:AA:1280:A:C4'	11:AJ:45:ARG:HD2	2.41	0.51
1:AA:1379:G:O2'	1:AA:1380:U:H5'	2.10	0.51
2:AU:74:C:C5	22:B0:2556:C:O2	2.63	0.51
14:AM:92:ARG:NH1	14:AM:96:VAL:HG12	2.26	0.51
22:B0:128:C:C4	22:B0:129:C:N4	2.79	0.51
22:B0:414:C:H2'	22:B0:415:A:H8	1.75	0.51
22:B0:535:G:O2'	22:B0:536:G:H5'	2.11	0.51
22:B0:963:U:OP1	22:B0:2498:C:H5"	2.11	0.51
22:B0:1112:G:O2'	22:B0:1113:U:H5'	2.11	0.51
22:B0:1202:G:P	35:BJ:14:LYS:HZ1	2.33	0.51
22:B0:1421:G:C4	26:BA:146:LYS:HB2	2.45	0.51
22:B0:1582:C:H2'	26:BA:96:LYS:CG	2.36	0.51
22:B0:1652:A:H3'	22:B0:1653:G:H5'	1.92	0.51
22:B0:2005:A:H3'	22:B0:2006:C:N3	2.26	0.51
22:B0:2033:A:O2'	22:B0:2034:U:P	2.69	0.51
22:B0:2282:G:C2'	22:B0:2283:C:OP2	2.59	0.51
25:B5:86:LEU:O	25:B5:91:PRO:HD2	2.11	0.51
38:BM:53:THR:OG1	38:BM:65:THR:HB	2.11	0.51
40:BO:15:LYS:O	40:BO:16:ILE:HG12	2.10	0.51
42:BR:12:ARG:HB2	42:BR:33:LYS:CB	2.35	0.51
1:AA:521:G:O2'	1:AA:522:C:H5'	2.11	0.51
2:AU:75:C:C4'	22:B0:2556:C:H5"	2.40	0.51
4:AC:6:PRO:O	4:AC:9:ILE:HG22	2.11	0.51
9:AH:17:GLN:NE2	9:AH:71:VAL:HB	2.11	0.51
11:AJ:53:ILE:HG13	11:AJ:63:ASP:H	1.76	0.51
12:AK:33:ILE:HG12	12:AK:69:CYS:SG	2.51	0.51
16:AO:61:GLN:O	16:AO:65:LEU:HG	2.11	0.51
17:AP:34:GLU:OE2	17:AP:56:ARG:HD3	2.10	0.51
19:AR:15:GLU:HG2	19:AR:16:GLY:H	1.76	0.51
22:B0:99:U:H5"	22:B0:100:U:O5'	2.11	0.51
22:B0:479:A:O4'	22:B0:480:A:C8	2.64	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:636:G:O2'	22:B0:638:G:H5'	2.11	0.51
22:B0:870:U:O3'	36:BK:8:LYS:HE3	2.11	0.51
22:B0:1097:U:H2'	22:B0:1098:A:H5'	1.93	0.51
22:B0:1498:C:OP2	26:BA:63:ILE:HG12	2.10	0.51
22:B0:1579:A:O2'	26:BA:129:LEU:CA	2.47	0.51
22:B0:1581:A:C2	26:BA:97:ASP:CG	2.84	0.51
22:B0:2154:A:O5'	22:B0:2155:U:OP1	2.29	0.51
22:B0:2647:U:H2'	22:B0:2648:G:H8	1.74	0.51
22:B0:2886:A:H2'	22:B0:2887:A:C8	2.45	0.51
24:B2:22:ILE:HG22	24:B2:185:LYS:HB2	1.93	0.51
25:B3:7:ILE:O	25:B3:11:VAL:HG23	2.11	0.51
29:BD:15:LEU:HD13	29:BD:15:LEU:O	2.11	0.51
29:BD:103:ILE:HG21	29:BD:173:ASP:HA	1.92	0.51
33:BH:14:ASP:HB3	33:BH:52:ASP:OD1	2.11	0.51
33:BH:104:ALA:O	33:BH:106:LYS:N	2.44	0.51
35:BJ:106:GLU:O	35:BJ:107:PHE:HB2	2.11	0.51
37:BL:28:LEU:CD1	37:BL:45:ARG:HH22	2.23	0.51
39:BN:71:ARG:O	39:BN:72:VAL:HG12	2.11	0.51
40:BO:85:ALA:HB3	40:BO:111:LYS:HZ1	1.76	0.51
40:BO:99:VAL:HG13	40:BO:100:PHE:N	2.26	0.51
42:BR:85:VAL:O	42:BR:85:VAL:HG13	2.10	0.51
45:BU:35:ILE:CG2	45:BU:70:VAL:HG21	2.41	0.51
47:BX:4:ILE:HG12	47:BX:58:GLU:HB3	1.93	0.51
1:AA:220:G:O2'	1:AA:221:C:H5'	2.10	0.51
1:AA:748:G:O2'	1:AA:749:A:O5'	2.28	0.51
1:AA:1029:U:C2	1:AA:1030:U:C5	2.99	0.51
1:AA:1333:A:H2'	1:AA:1334:G:O4'	2.10	0.51
1:AA:1406:U:H2'	1:AA:1407:C:H5'	1.92	0.51
3:AB:52:ALA:CB	3:AB:199:ILE:HD11	2.41	0.51
10:AI:117:LEU:HD13	10:AI:121:ARG:O	2.11	0.51
11:AJ:21:ALA:O	11:AJ:25:ILE:HG12	2.11	0.51
20:AS:9:PHE:C	20:AS:10:ILE:HD12	2.31	0.51
21:AT:50:PHE:CD1	21:AT:78:LEU:HD22	2.46	0.51
22:B0:28:A:H62	22:B0:512:G:H1'	1.74	0.51
22:B0:85:G:H5"	43:BS:6:ARG:NE	2.17	0.51
22:B0:95:A:O2'	22:B0:96:C:H5'	2.11	0.51
22:B0:371:A:H4'	22:B0:372:G:OP1	2.10	0.51
22:B0:379:G:H1	22:B0:395:U:H3	1.59	0.51
22:B0:659:G:H5'	28:BC:99:LYS:HD3	1.92	0.51
22:B0:996:A:H5"	40:BO:92:LYS:HD3	1.93	0.51
22:B0:1083:U:C3'	22:B0:1083:U:C6	2.92	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1194:A:O2'	22:B0:1195:G:H5'	2.11	0.51
22:B0:1417:U:C2	26:BA:98:GLY:C	2.85	0.51
22:B0:1479:G:H8	22:B0:1559:U:P	2.30	0.51
22:B0:1494:A:C8	26:BA:131:MET:HE3	2.46	0.51
22:B0:1550:C:H2'	22:B0:1551:A:C8	2.46	0.51
22:B0:1581:A:C5'	26:BA:71:ASP:HA	2.38	0.51
22:B0:1828:G:C4'	22:B0:1829:A:H5'	2.41	0.51
22:B0:2437:G:N2	22:B0:2440:C:H41	2.08	0.51
22:B0:2679:A:C8	27:BB:123:LYS:O	2.64	0.51
22:B0:2848:G:H1'	22:B0:2868:A:H61	1.75	0.51
25:B3:73:ARG:HH11	25:B3:73:ARG:HB3	1.75	0.51
25:B5:81:LYS:HG2	25:B5:82:GLU:OE2	2.10	0.51
28:BC:180:LEU:O	28:BC:181:ILE:HG23	2.11	0.51
29:BD:2:LYS:N	29:BD:2:LYS:HD3	2.25	0.51
31:BF:61:VAL:HG23	31:BF:62:LEU:CD1	2.38	0.51
37:BL:96:ARG:NE	37:BL:96:ARG:N	2.55	0.51
38:BM:92:PHE:HE2	38:BM:111:ARG:HH21	1.58	0.51
39:BN:6:GLN:OE1	39:BN:6:GLN:O	2.28	0.51
39:BN:55:HIS:CG	39:BN:56:SER:N	2.78	0.51
46:BW:3:ALA:O	46:BW:7:ARG:HG3	2.10	0.51
49:B1:34:GLU:HB3	49:B1:50:GLU:H	1.75	0.51
1:AA:144:G:H2'	1:AA:145:G:H8	1.76	0.50
1:AA:274:A:O2'	1:AA:275:G:O4'	2.29	0.50
1:AA:451:A:O2'	1:AA:452:A:OP2	2.28	0.50
1:AA:499:A:O2'	1:AA:500:G:C8	2.64	0.50
1:AA:888:G:N1	1:AA:889:A:N6	2.59	0.50
4:AC:130:ARG:HH22	6:AE:53:ARG:HH22	1.58	0.50
5:AD:12:ARG:HH21	5:AD:37:PRO:HB3	1.75	0.50
6:AE:104:ILE:CG2	6:AE:111:ARG:HG3	2.41	0.50
6:AE:132:PRO:HA	6:AE:135:VAL:HG22	1.93	0.50
7:AF:39:LEU:C	7:AF:39:LEU:HD13	2.32	0.50
8:AG:74:VAL:CG1	8:AG:85:GLN:HB3	2.41	0.50
9:AH:87:ARG:NH1	9:AH:87:ARG:HB2	2.26	0.50
13:AL:66:ILE:HA	13:AL:96:THR:HG22	1.93	0.50
22:B0:71:A:H5"	22:B0:72:U:O5'	2.12	0.50
22:B0:284:U:H3	22:B0:356:G:H1	1.58	0.50
22:B0:713:G:H22	22:B0:717:C:N4	2.08	0.50
22:B0:858:G:O2'	22:B0:859:G:P	2.69	0.50
22:B0:1042:G:H22	22:B0:1113:U:H3	1.58	0.50
22:B0:1046:A:C4'	22:B0:1047:G:OP2	2.52	0.50
22:B0:1076:C:H2'	22:B0:1077:A:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1425:G:H21	22:B0:1574:C:N4	2.09	0.50
22:B0:1854:A:H8	22:B0:1854:A:O5'	1.93	0.50
22:B0:2064:C:H2'	22:B0:2065:C:C6	2.46	0.50
22:B0:2073:C:N3	22:B0:2436:G:N2	2.58	0.50
22:B0:2123:G:H4'	22:B0:2124:G:OP2	2.08	0.50
22:B0:2153:C:H6	22:B0:2154:A:H2	1.58	0.50
22:B0:2162:G:H3'	22:B0:2163:G:H3'	1.91	0.50
22:B0:2473:U:OP1	22:B0:2529:G:N2	2.41	0.50
22:B0:2490:G:C5'	22:B0:2491:U:OP1	2.58	0.50
22:B0:2556:C:H5'	22:B0:2557:G:OP2	2.11	0.50
22:B0:2732:G:H3'	22:B0:2732:G:N3	2.26	0.50
22:B0:2856:A:H2'	22:B0:2862:G:N1	2.20	0.50
25:B3:98:VAL:HG23	25:B3:103:ALA:HB2	1.94	0.50
27:BB:79:LEU:HD22	27:BB:79:LEU:N	2.20	0.50
29:BD:65:LEU:N	29:BD:88:VAL:HG21	2.25	0.50
29:BD:129:MET:HG3	29:BD:152:ASP:HB3	1.93	0.50
30:BE:40:VAL:HB	30:BE:53:PRO:HG3	1.92	0.50
30:BE:57:TYR:HD1	30:BE:57:TYR:H	1.57	0.50
32:BG:60:VAL:O	32:BG:66:PHE:HA	2.11	0.50
33:BH:20:ALA:HA	33:BH:23:LYS:HZ1	1.74	0.50
37:BL:28:LEU:HD13	37:BL:113:ILE:HD13	1.93	0.50
39:BN:6:GLN:C	39:BN:9:GLN:HE22	2.13	0.50
40:BO:26:ALA:C	40:BO:27:ARG:HG2	2.31	0.50
42:BR:47:VAL:C	42:BR:49:LYS:N	2.64	0.50
48:BZ:27:LEU:CA	48:BZ:36:LYS:HG2	2.42	0.50
1:AA:344:A:H5"	1:AA:345:C:H5	1.76	0.50
1:AA:518:C:H5'	1:AA:530:G:O4'	2.10	0.50
1:AA:608:A:H2'	1:AA:609:A:O4'	2.11	0.50
1:AA:924:C:H2'	1:AA:925:G:C8	2.47	0.50
1:AA:1154:G:O2'	1:AA:1155:A:H5'	2.10	0.50
1:AA:1451:U:O2'	1:AA:1452:C:P	2.69	0.50
3:AB:46:VAL:HA	3:AB:49:PHE:HD2	1.75	0.50
4:AC:125:ARG:O	4:AC:126:ARG:HB3	2.12	0.50
5:AD:197:HIS:O	5:AD:201:GLU:HG3	2.12	0.50
9:AH:9:MET:HB2	9:AH:26:MET:HE3	1.93	0.50
17:AP:6:LEU:HD12	17:AP:6:LEU:N	2.26	0.50
17:AP:53:ASP:OD1	17:AP:56:ARG:HB2	2.09	0.50
22:B0:65:U:H5'	42:BR:74:ILE:CB	2.38	0.50
22:B0:809:G:H2'	22:B0:810:U:C6	2.46	0.50
22:B0:848:C:H1'	22:B0:933:A:C2	2.45	0.50
22:B0:1494:A:OP2	26:BA:143:VAL:HB	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1656:C:H2'	22:B0:1657:U:C6	2.46	0.50
22:B0:1828:G:C5'	22:B0:1829:A:OP1	2.52	0.50
22:B0:2137:U:O4	22:B0:2163:G:H4'	2.10	0.50
22:B0:2143:C:H4'	22:B0:2144:G:OP1	2.10	0.50
22:B0:2279:G:H1'	45:BU:10:ARG:HH22	1.76	0.50
22:B0:2515:C:H41	27:BB:152:PRO:HB3	1.75	0.50
22:B0:2519:U:C5'	22:B0:2520:C:OP1	2.58	0.50
22:B0:2614:A:H4'	22:B0:2615:U:C5	2.45	0.50
22:B0:2732:G:H2'	22:B0:2734:A:C8	2.45	0.50
26:BA:131:MET:CE	26:BA:188:ARG:N	2.72	0.50
29:BD:78:ILE:C	29:BD:78:ILE:HD13	2.31	0.50
30:BE:8:VAL:C	30:BE:48:THR:HG23	2.31	0.50
30:BE:85:LYS:C	30:BE:86:LEU:HD12	2.32	0.50
31:BF:80:ILE:CD1	31:BF:102:ALA:HB1	2.42	0.50
35:BJ:126:ARG:HD3	35:BJ:126:ARG:N	2.26	0.50
36:BK:7:THR:HG23	36:BK:8:LYS:N	2.20	0.50
36:BK:108:VAL:O	36:BK:110:GLU:N	2.44	0.50
39:BN:46:VAL:C	39:BN:47:ILE:HD13	2.30	0.50
40:BO:42:GLY:O	40:BO:46:TYR:HA	2.11	0.50
40:BO:45:ALA:O	40:BO:47:ARG:N	2.44	0.50
1:AA:566:G:O2'	1:AA:567:G:H5'	2.11	0.50
1:AA:955:U:H3	1:AA:1225:A:H61	1.59	0.50
3:AB:147:LEU:HA	3:AB:150:ILE:HG22	1.93	0.50
3:AB:206:ILE:HD13	3:AB:206:ILE:O	2.10	0.50
7:AF:52:ASN:OD1	7:AF:85:ILE:HG12	2.11	0.50
11:AJ:67:ILE:HG23	11:AJ:67:ILE:O	2.11	0.50
17:AP:23:ASP:HB3	17:AP:26:ASN:ND2	2.26	0.50
22:B0:115:C:H2'	22:B0:116:C:C6	2.46	0.50
22:B0:180:G:C5	28:BC:58:LYS:HE2	2.46	0.50
22:B0:610:C:C2	22:B0:611:C:N4	2.79	0.50
22:B0:870:U:H4'	36:BK:8:LYS:HG3	1.93	0.50
22:B0:926:G:H21	47:BX:42:ALA:HA	1.74	0.50
22:B0:1083:U:C4'	25:B3:86:LEU:N	2.68	0.50
22:B0:1388:G:H5'	22:B0:1467:G:H21	1.75	0.50
22:B0:1418:G:N7	26:BA:99:GLU:C	2.65	0.50
22:B0:1494:A:H62	26:BA:188:ARG:CA	2.24	0.50
22:B0:2065:C:H2'	22:B0:2066:C:C6	2.46	0.50
22:B0:2109:U:C5	22:B0:2110:G:H3'	2.47	0.50
22:B0:2126:A:OP2	22:B0:2172:U:C5	2.65	0.50
22:B0:2130:U:H5	24:B2:38:VAL:CG2	2.23	0.50
22:B0:2679:A:O3'	27:BB:116:LYS:HE2	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
24:B2:160:VAL:O	24:B2:160:VAL:HG13	2.11	0.50
25:B5:68:VAL:HG22	25:B5:115:ALA:HB2	1.93	0.50
26:BA:148:GLY:O	26:BA:149:LYS:CB	2.59	0.50
26:BA:152:GLN:H	26:BA:155:ARG:NH2	2.09	0.50
27:BB:1:MET:CA	27:BB:86:GLU:HB3	2.41	0.50
30:BE:105:SER:HB2	30:BE:151:ARG:NH2	2.27	0.50
32:BG:75:ALA:O	32:BG:76:ALA:HB3	2.10	0.50
35:BJ:90:VAL:HG13	35:BJ:90:VAL:O	2.11	0.50
37:BL:32:GLU:C	37:BL:33:ILE:HD12	2.31	0.50
39:BN:20:ARG:HB3	39:BN:25:VAL:HG11	1.92	0.50
40:BO:59:LEU:C	40:BO:61:ILE:N	2.62	0.50
41:BQ:83:LYS:HD2	41:BQ:83:LYS:C	2.31	0.50
43:BS:60:LYS:O	43:BS:61:GLU:HB3	2.12	0.50
1:AA:197:A:N6	1:AA:221:C:H5'	2.27	0.50
1:AA:424:G:O2'	1:AA:425:G:H5'	2.10	0.50
1:AA:438:U:C5'	1:AA:439:U:OP1	2.60	0.50
1:AA:1139:G:C5'	1:AA:1140:C:OP1	2.56	0.50
4:AC:129:PHE:CE2	4:AC:165:GLU:HB3	2.44	0.50
6:AE:73:VAL:HG12	6:AE:143:LEU:HB3	1.93	0.50
7:AF:81:ASN:O	7:AF:84:VAL:HG12	2.11	0.50
9:AH:10:LEU:HD23	9:AH:10:LEU:C	2.31	0.50
10:AI:118:ARG:NH1	10:AI:122:ARG:HH12	2.04	0.50
22:B0:24:G:H4'	41:BQ:78:GLU:OE2	2.12	0.50
22:B0:211:C:H2'	22:B0:212:G:H8	1.76	0.50
22:B0:299:A:O4'	43:BS:100:GLU:HA	2.11	0.50
22:B0:349:U:H2'	22:B0:350:G:C8	2.46	0.50
22:B0:903:C:H2'	22:B0:904:G:C8	2.46	0.50
22:B0:952:G:H2'	22:B0:953:G:O4'	2.11	0.50
22:B0:1423:A:C3'	26:BA:58:LYS:H	2.24	0.50
22:B0:1657:U:O2	22:B0:2003:A:H2	1.95	0.50
22:B0:1698:A:C1'	22:B0:1700:A:H5"	2.42	0.50
22:B0:2134:A:OP2	22:B0:2134:A:H4'	2.09	0.50
22:B0:2263:C:H3'	45:BU:11:ASN:HB2	1.92	0.50
22:B0:2512:C:H2'	22:B0:2513:A:C8	2.46	0.50
25:B5:73:ARG:HB3	25:B5:73:ARG:HH11	1.75	0.50
26:BA:68:ARG:CG	26:BA:69:ASN:H	2.23	0.50
27:BB:4:LEU:HG	27:BB:5:VAL:H	1.76	0.50
27:BB:22:ILE:HD12	27:BB:23:PRO:HD2	1.93	0.50
27:BB:89:GLU:CG	27:BB:90:PHE:N	2.74	0.50
28:BC:19:PHE:H	28:BC:113:VAL:HG11	1.75	0.50
28:BC:141:MET:O	28:BC:142:ALA:HB3	2.10	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
32:BG:133:ARG:HD2	32:BG:137:LEU:HB3	1.93	0.50
33:BH:114:LEU:H	33:BH:114:LEU:CD1	2.16	0.50
35:BJ:93:ASN:HA	35:BJ:96:LYS:HD2	1.92	0.50
37:BL:43:GLU:OE1	37:BL:44:LEU:N	2.45	0.50
39:BN:71:ARG:O	39:BN:72:VAL:CB	2.60	0.50
41:BQ:61:ASN:O	41:BQ:62:ASP:HB2	2.12	0.50
42:BR:31:VAL:HG13	42:BR:82:LYS:NZ	2.26	0.50
1:AA:56:U:H2'	1:AA:57:G:C8	2.47	0.50
1:AA:60:A:O2'	1:AA:61:G:O5'	2.29	0.50
1:AA:143:A:H2	1:AA:220:G:H22	1.59	0.50
1:AA:250:A:O2'	1:AA:251:G:P	2.69	0.50
1:AA:319:G:O2'	1:AA:320:A:H5'	2.11	0.50
1:AA:819:A:H5"	1:AA:820:U:OP2	2.11	0.50
1:AA:902:G:O2'	1:AA:903:G:H5'	2.12	0.50
1:AA:1406:U:H3'	1:AA:1407:C:C6	2.46	0.50
3:AB:26:MET:SD	3:AB:192:PRO:HD3	2.51	0.50
8:AG:135:LYS:HD2	8:AG:135:LYS:O	2.11	0.50
10:AI:16:ALA:HB1	10:AI:78:ILE:HG12	1.93	0.50
10:AI:98:ARG:HG2	10:AI:103:VAL:HG21	1.93	0.50
18:AQ:37:ILE:HD12	18:AQ:39:ARG:HH12	1.76	0.50
22:B0:638:G:H2'	22:B0:639:U:O4'	2.11	0.50
22:B0:1069:A:H4'	22:B0:1070:A:C8	2.47	0.50
22:B0:1184:U:O2'	22:B0:1185:G:OP1	2.30	0.50
22:B0:1203:U:H6	35:BJ:10:GLU:HG2	1.76	0.50
22:B0:1210:G:H1'	22:B0:1212:G:C2	2.46	0.50
22:B0:1213:A:H62	22:B0:1236:G:H1'	1.76	0.50
22:B0:1245:G:P	35:BJ:18:ARG:HD3	2.52	0.50
22:B0:1381:G:H2'	22:B0:1382:G:O4'	2.12	0.50
22:B0:1452:C:H2'	22:B0:1453:U:O4'	2.12	0.50
22:B0:1463:G:H2'	22:B0:1464:G:H8	1.77	0.50
22:B0:1794:A:H2'	22:B0:1795:C:C6	2.47	0.50
22:B0:1996:C:O2'	22:B0:1997:C:C6	2.63	0.50
22:B0:2135:A:H61	22:B0:2140:G:H21	1.56	0.50
22:B0:2547:A:H2'	22:B0:2548:U:H5'	1.94	0.50
24:B2:14:VAL:HG22	24:B2:28:LEU:HD21	1.94	0.50
25:B3:56:VAL:CG1	25:B3:117:VAL:HG11	2.41	0.50
26:BA:143:VAL:HA	26:BA:189:ALA:HA	1.94	0.50
32:BG:132:ALA:O	32:BG:133:ARG:NE	2.45	0.50
33:BH:100:VAL:CG1	33:BH:101:ILE:H	2.15	0.50
35:BJ:13:LYS:O	35:BJ:15:ALA:N	2.35	0.50
37:BL:22:ARG:HA	37:BL:22:ARG:NE	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BM:59:ALA:O	38:BM:60:GLU:HB2	2.12	0.50
40:BO:82:LEU:CD2	40:BO:108:LEU:HD21	2.41	0.50
41:BQ:18:ARG:HB2	41:BQ:76:VAL:CG2	2.42	0.50
42:BR:60:THR:HA	42:BR:83:ALA:CB	2.42	0.50
47:BX:8:GLN:HE21	47:BX:15:ARG:HH22	1.59	0.50
1:AA:115:G:O2'	1:AA:116:A:P	2.69	0.50
1:AA:1049:U:O2'	1:AA:1050:G:OP2	2.28	0.50
3:AB:222:GLU:OE1	3:AB:228:LEU:HD21	2.12	0.50
7:AF:6:ILE:HG12	7:AF:89:VAL:HG12	1.94	0.50
10:AI:117:LEU:HD22	10:AI:123:ARG:CB	2.40	0.50
13:AL:30:ARG:HH11	13:AL:30:ARG:CB	2.24	0.50
13:AL:43:LYS:NZ	13:AL:43:LYS:HB3	2.27	0.50
14:AM:67:ASP:O	14:AM:71:GLU:HG3	2.12	0.50
22:B0:176:A:H3'	22:B0:177:G:N2	2.26	0.50
22:B0:410:G:O6	22:B0:417:C:N4	2.38	0.50
22:B0:598:U:H3	22:B0:659:G:H22	1.60	0.50
22:B0:932:U:O3'	22:B0:933:A:H8	1.94	0.50
22:B0:1086:A:O5'	25:B3:65:LYS:NZ	2.44	0.50
22:B0:1500:A:H61	26:BA:156:SER:HB3	1.77	0.50
22:B0:1576:U:H2'	22:B0:1577:C:O4'	2.11	0.50
22:B0:1584:U:C4	26:BA:76:VAL:HG11	2.46	0.50
22:B0:1693:U:C4'	22:B0:1694:C:OP2	2.60	0.50
22:B0:2054:A:OP1	22:B0:2055:C:H4'	2.10	0.50
22:B0:2137:U:C4'	22:B0:2138:G:OP1	2.45	0.50
22:B0:2287:A:N3	22:B0:2287:A:H2'	2.26	0.50
24:B2:7:MET:HA	24:B2:10:ILE:CG2	2.42	0.50
28:BC:29:HIS:C	35:BJ:17:LYS:HA	2.31	0.50
29:BD:47:LYS:C	29:BD:49:LEU:N	2.65	0.50
29:BD:59:ILE:HD12	29:BD:60:SER:CB	2.42	0.50
29:BD:79:ARG:HG2	29:BD:80:GLN:N	2.27	0.50
32:BG:64:ARG:HG3	32:BG:64:ARG:HH11	1.77	0.50
35:BJ:109:LYS:C	35:BJ:126:ARG:HH21	2.15	0.50
35:BJ:134:ALA:O	35:BJ:135:ILE:C	2.50	0.50
44:BT:89:ILE:HD12	44:BT:89:ILE:N	2.27	0.50
45:BU:58:LEU:CB	45:BU:81:ILE:HA	2.42	0.50
48:BZ:31:LYS:HG2	48:BZ:32:THR:N	2.27	0.50
1:AA:687:A:O2'	1:AA:688:G:OP2	2.30	0.50
1:AA:766:A:H2'	1:AA:767:A:O4'	2.11	0.50
1:AA:962:C:H2'	1:AA:963:G:H8	1.76	0.50
1:AA:1404:C:O2	1:AA:1518:A:H2	1.95	0.50
1:AA:1479:C:H2'	1:AA:1480:A:H8	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AV:35:A:H2'	2:AV:36:A:H8	1.75	0.50
3:AB:162:VAL:HG12	3:AB:163:ILE:N	2.27	0.50
6:AE:25:LYS:HE3	6:AE:26:GLY:N	2.27	0.50
6:AE:47:PHE:O	6:AE:66:ALA:HA	2.11	0.50
7:AF:50:PRO:C	7:AF:51:ILE:HG13	2.30	0.50
8:AG:136:LYS:O	8:AG:140:VAL:HG23	2.11	0.50
9:AH:51:GLU:HG3	9:AH:52:GLY:H	1.76	0.50
11:AJ:52:LEU:HG	11:AJ:62:ARG:CG	2.40	0.50
15:AN:72:PHE:CE2	15:AN:74:ARG:HG2	2.46	0.50
17:AP:19:VAL:O	17:AP:19:VAL:HG13	2.12	0.50
21:AT:47:GLN:O	21:AT:50:PHE:HB3	2.12	0.50
22:B0:40:U:H2'	22:B0:41:C:C6	2.47	0.50
22:B0:241:A:HO2'	22:B0:242:G:C1'	2.24	0.50
22:B0:407:G:H2'	22:B0:408:G:C8	2.47	0.50
22:B0:733:G:N7	22:B0:761:A:N7	2.59	0.50
22:B0:739:A:O2'	22:B0:740:C:H5	1.92	0.50
22:B0:996:A:OP1	40:BO:92:LYS:HE3	2.11	0.50
22:B0:1095:A:H2'	22:B0:1096:A:C8	2.46	0.50
22:B0:1135:C:H5'	22:B0:1136:G:OP2	2.11	0.50
22:B0:1410:G:H2'	22:B0:1411:U:C5	2.46	0.50
22:B0:1421:G:N2	26:BA:145:MET:CB	2.72	0.50
22:B0:1424:G:C2'	22:B0:1425:G:O5'	2.59	0.50
22:B0:1491:A:H1'	26:BA:163:ILE:HA	1.92	0.50
22:B0:1631:G:N1	22:B0:1634:A:OP2	2.44	0.50
22:B0:2006:C:C5	22:B0:2007:U:H5	2.29	0.50
22:B0:2077:A:O2'	22:B0:2078:C:H5'	2.12	0.50
22:B0:2141:G:C2	22:B0:2142:A:H1'	2.47	0.50
22:B0:2280:G:O2'	22:B0:2281:A:H5'	2.12	0.50
22:B0:2776:A:H5'	22:B0:2777:G:OP1	2.12	0.50
22:B0:2898:G:H2'	33:BH:137:PRO:HG2	1.91	0.50
23:B9:56:G:C4'	23:B9:57:A:H8	2.22	0.50
24:B2:28:LEU:HD23	24:B2:221:VAL:HG13	1.94	0.50
25:B3:72:VAL:HG11	25:B3:87:VAL:HG21	1.94	0.50
27:BB:50:VAL:HG12	27:BB:51:THR:HG23	1.94	0.50
30:BE:127:GLN:HE21	30:BE:129:GLU:HB2	1.76	0.50
31:BF:30:LEU:H	31:BF:30:LEU:CD1	2.25	0.50
31:BF:99:ILE:HD11	31:BF:122:LEU:CD1	2.42	0.50
32:BG:50:LYS:HD2	32:BG:51:GLY:N	2.27	0.50
33:BH:36:LEU:N	33:BH:36:LEU:HD22	2.26	0.50
33:BH:104:ALA:O	33:BH:105:VAL:C	2.50	0.50
35:BJ:29:LYS:HD3	35:BJ:29:LYS:C	2.32	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BL:99:LYS:HD2	37:BL:109:PRO:HB2	1.93	0.50
40:BO:102:LYS:H	40:BO:102:LYS:CD	2.24	0.50
45:BU:17:ALA:CB	45:BU:35:ILE:HA	2.41	0.50
45:BU:30:VAL:HG22	45:BU:31:LEU:N	2.24	0.50
46:BW:28:LEU:O	46:BW:31:GLN:HG2	2.12	0.50
1:AA:60:A:O2'	1:AA:61:G:OP2	2.30	0.50
1:AA:701:U:P	22:B0:1848:A:H5'	2.52	0.50
1:AA:1422:G:H2'	1:AA:1423:G:H8	1.76	0.50
2:AU:18:G:H1'	2:AU:57:G:N2	2.27	0.50
2:AW:54:U:C4	2:AW:55:U:H5	2.29	0.50
7:AF:10:VAL:HG23	7:AF:83:ALA:C	2.32	0.50
17:AP:32:PHE:HE2	17:AP:35:ARG:HE	1.60	0.50
20:AS:52:ASN:HD22	20:AS:52:ASN:N	2.10	0.50
22:B0:183:C:H5"	28:BC:57:LYS:HD2	1.94	0.50
22:B0:432:A:C2	28:BC:69:ARG:HA	2.47	0.50
22:B0:762:U:O2'	22:B0:763:G:H5"	2.11	0.50
22:B0:868:U:H2'	22:B0:869:G:C8	2.47	0.50
22:B0:955:U:H3	22:B0:962:G:H1	1.60	0.50
22:B0:1084:A:P	25:B3:89:SER:H	2.35	0.50
22:B0:1264:A:C6	22:B0:1265:A:N6	2.79	0.50
22:B0:1444:A:C3'	22:B0:1445:U:H5"	2.42	0.50
22:B0:1488:G:H8	26:BA:157:ALA:C	2.11	0.50
22:B0:1995:U:N3	22:B0:1996:C:N4	2.60	0.50
22:B0:2172:U:H2'	24:B2:37:PHE:CZ	2.47	0.50
22:B0:2263:C:O2	22:B0:2264:C:N1	2.45	0.50
22:B0:2271:G:OP1	45:BU:14:ASP:HB2	2.10	0.50
22:B0:2312:U:H6	22:B0:2312:U:O5'	1.95	0.50
22:B0:2780:G:C4'	33:BH:116:ARG:HD3	2.41	0.50
25:B3:56:VAL:HG21	25:B3:106:LEU:HB2	1.93	0.50
25:B3:65:LYS:O	25:B3:66:VAL:C	2.49	0.50
25:B3:87:VAL:O	25:B3:87:VAL:HG12	2.12	0.50
25:B5:46:GLU:HA	25:B5:49:GLU:CG	2.40	0.50
28:BC:26:ALA:HA	35:BJ:17:LYS:HE2	1.92	0.50
28:BC:29:HIS:O	35:BJ:16:GLY:N	2.44	0.50
28:BC:134:LEU:O	28:BC:138:LEU:HG	2.12	0.50
31:BF:76:GLU:O	31:BF:77:THR:O	2.30	0.50
35:BJ:128:THR:O	35:BJ:131:ALA:HB3	2.12	0.50
38:BM:31:THR:CG2	38:BM:32:PRO:HD2	2.41	0.50
40:BO:8:ILE:O	40:BO:9:ALA:HB3	2.11	0.50
41:BQ:57:ASN:HA	41:BQ:60:HIS:CE1	2.46	0.50
45:BU:9:THR:HG22	45:BU:10:ARG:H	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:321:A:N7	1:AA:328:C:O2	2.45	0.50
1:AA:411:A:N7	1:AA:413:G:N3	2.60	0.50
1:AA:890:G:C2'	1:AA:891:U:OP2	2.60	0.50
1:AA:1185:G:O2'	10:AI:121:ARG:NH1	2.45	0.50
1:AA:1195:C:H3'	1:AA:1196:A:H5'	1.93	0.50
4:AC:76:ILE:HA	4:AC:83:VAL:CG1	2.32	0.50
4:AC:120:THR:OG1	4:AC:188:ALA:HB2	2.12	0.50
5:AD:12:ARG:HD3	5:AD:29:THR:HG22	1.94	0.50
7:AF:73:GLU:O	7:AF:76:THR:HG22	2.12	0.50
12:AK:86:LYS:HG2	12:AK:112:VAL:HG13	1.94	0.50
14:AM:94:LEU:HB3	14:AM:95:PRO:CD	2.38	0.50
21:AT:58:ASP:OD1	21:AT:75:LYS:HD2	2.11	0.50
22:B0:25:U:H5"	41:BQ:80:PRO:HB3	1.94	0.50
22:B0:882:G:H2'	22:B0:883:G:H8	1.76	0.50
22:B0:1083:U:C5'	25:B3:87:VAL:H	2.23	0.50
22:B0:1083:U:P	25:B3:84:LYS:CA	3.00	0.50
22:B0:1426:G:C8	22:B0:1428:C:N4	2.80	0.50
22:B0:1499:U:C6	26:BA:155:ARG:NH2	2.76	0.50
22:B0:1499:U:H4'	26:BA:59:GLN:O	2.12	0.50
22:B0:1811:G:O2'	22:B0:1812:U:H5'	2.12	0.50
22:B0:2123:G:H5"	22:B0:2124:G:C5'	2.41	0.50
22:B0:2130:U:C2'	24:B2:178:ASP:HB2	2.35	0.50
22:B0:2167:U:H2'	22:B0:2168:G:OP1	2.11	0.50
22:B0:2262:U:H1'	22:B0:2327:A:H2	1.77	0.50
22:B0:2618:G:H2'	22:B0:2619:C:C6	2.47	0.50
22:B0:2647:U:H2'	22:B0:2648:G:C8	2.47	0.50
22:B0:2756:U:O2'	22:B0:2757:A:C5'	2.53	0.50
22:B0:2855:C:C2'	22:B0:2856:A:H5"	2.42	0.50
22:B0:2894:U:C4	33:BH:11:VAL:HG22	2.46	0.50
23:B9:66:A:C2'	23:B9:67:G:OP2	2.59	0.50
24:B2:22:ILE:O	24:B2:26:ILE:HD13	2.12	0.50
24:B2:138:ASN:H	24:B2:143:THR:HB	1.77	0.50
25:B3:51:LYS:HD3	25:B5:14:MET:O	2.11	0.50
28:BC:29:HIS:C	35:BJ:17:LYS:N	2.64	0.50
28:BC:29:HIS:C	35:BJ:16:GLY:H	2.16	0.50
29:BD:149:ARG:HD2	29:BD:149:ARG:C	2.32	0.50
32:BG:34:ILE:O	32:BG:34:ILE:HD13	2.11	0.50
35:BJ:8:PRO:C	35:BJ:10:GLU:N	2.65	0.50
40:BO:41:ALA:HA	40:BO:44:TYR:CD2	2.47	0.50
40:BO:91:ARG:HG2	40:BO:91:ARG:HH11	1.77	0.50
41:BQ:14:ALA:HA	41:BQ:101:SER:HB3	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BQ:70:LYS:HB2	41:BQ:110:ARG:HG3	1.94	0.50
45:BU:29:SER:OG	45:BU:61:LYS:HG3	2.12	0.50
45:BU:58:LEU:C	45:BU:81:ILE:HD13	2.32	0.50
1:AA:234:C:H2'	1:AA:235:C:H6	1.76	0.49
1:AA:250:A:H1'	1:AA:252:U:C5	2.46	0.49
1:AA:346:G:H3'	1:AA:346:G:N3	2.27	0.49
1:AA:404:G:N2	1:AA:498:U:C5	2.80	0.49
1:AA:713:G:H2'	1:AA:714:G:C8	2.47	0.49
1:AA:994:A:N3	1:AA:994:A:H2'	2.27	0.49
1:AA:1238:A:O2'	1:AA:1239:A:H5'	2.12	0.49
1:AA:1330:U:OP1	14:AM:22:TYR:HA	2.12	0.49
4:AC:58:ARG:CG	4:AC:63:ILE:HG12	2.42	0.49
6:AE:10:LEU:HD23	6:AE:11:GLN:N	2.26	0.49
6:AE:17:VAL:HG23	6:AE:33:THR:O	2.11	0.49
6:AE:29:ILE:HG23	6:AE:29:ILE:O	2.12	0.49
7:AF:24:ARG:CZ	7:AF:81:ASN:HB2	2.41	0.49
10:AI:9:GLY:HA2	10:AI:80:HIS:CD2	2.47	0.49
22:B0:311:A:H61	22:B0:329:G:C5'	2.25	0.49
22:B0:371:A:O2'	22:B0:372:G:C4'	2.60	0.49
22:B0:1011:G:O2'	22:B0:1012:U:P	2.70	0.49
22:B0:1203:U:C5'	35:BJ:10:GLU:HB3	2.32	0.49
22:B0:1280:G:O2'	22:B0:1281:G:H5'	2.12	0.49
22:B0:1496:A:O4'	26:BA:190:THR:OG1	2.30	0.49
22:B0:1498:C:O2	26:BA:62:ARG:NH1	2.44	0.49
22:B0:1578:U:OP2	26:BA:101:ARG:CB	2.58	0.49
22:B0:1834:U:H4'	22:B0:1969:A:C6	2.46	0.49
22:B0:2115:G:O4'	22:B0:2168:G:H4'	2.12	0.49
22:B0:2164:C:O2'	22:B0:2165:C:C2	2.53	0.49
22:B0:2515:C:C4	27:BB:152:PRO:HB3	2.47	0.49
22:B0:2751:G:H5'	22:B0:2752:C:OP2	2.11	0.49
22:B0:2848:G:O2'	22:B0:2849:U:O4'	2.27	0.49
24:B2:119:ALA:O	24:B2:123:VAL:HG23	2.12	0.49
25:B3:29:LYS:HE2	25:B5:108:LYS:HA	1.94	0.49
25:B5:4:LYS:HE3	25:B5:7:ILE:HD12	1.94	0.49
26:BA:83:ASP:OD2	26:BA:85:ASN:OD1	2.30	0.49
26:BA:244:VAL:HG23	26:BA:244:VAL:O	2.12	0.49
27:BB:7:LYS:HD2	27:BB:198:GLY:O	2.11	0.49
28:BC:86:ALA:O	28:BC:87:ALA:CB	2.60	0.49
28:BC:105:LEU:O	28:BC:105:LEU:HD13	2.12	0.49
33:BH:112:GLY:CA	33:BH:113:PRO:O	2.58	0.49
36:BK:84:LYS:HD3	36:BK:84:LYS:C	2.31	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BL:34:ILE:HG22	37:BL:35:LYS:N	2.26	0.49
40:BO:101:ASP:C	40:BO:103:VAL:H	2.14	0.49
41:BQ:66:ILE:HA	41:BQ:69:LEU:CD2	2.42	0.49
45:BU:65:LYS:HZ3	45:BU:65:LYS:HB2	1.77	0.49
47:BX:4:ILE:HG21	47:BX:56:VAL:HB	1.93	0.49
1:AA:30:U:H4'	1:AA:31:G:OP1	2.11	0.49
1:AA:545:C:O2'	1:AA:546:A:H5'	2.12	0.49
1:AA:935:A:N3	1:AA:1383:C:N3	2.60	0.49
1:AA:975:A:C6	11:AJ:52:LEU:HB2	2.47	0.49
1:AA:1405:G:N3	1:AA:1517:G:N7	2.61	0.49
2:AU:74:C:C2'	22:B0:2556:C:H4'	2.40	0.49
2:AW:20:G:C2'	2:AW:21:A:H5"	2.43	0.49
5:AD:71:PHE:CE1	5:AD:93:LEU:HD21	2.47	0.49
10:AI:117:LEU:HD12	10:AI:120:ALA:O	2.12	0.49
11:AJ:13:PHE:CD1	11:AJ:67:ILE:HD11	2.48	0.49
13:AL:26:CYS:SG	13:AL:29:LYS:HE2	2.52	0.49
22:B0:84:A:H61	22:B0:102:U:H1'	1.68	0.49
22:B0:433:C:H1'	28:BC:70:SER:OG	2.12	0.49
22:B0:479:A:H5'	22:B0:480:A:H8	1.77	0.49
22:B0:518:G:H1'	41:BQ:77:ASP:OD1	2.12	0.49
22:B0:870:U:H4'	36:BK:8:LYS:HE3	1.94	0.49
22:B0:917:A:H2'	22:B0:918:A:O4'	2.12	0.49
22:B0:926:G:H2'	47:BX:42:ALA:HB2	1.94	0.49
22:B0:1082:U:P	25:B3:81:LYS:HE3	2.51	0.49
22:B0:1292:G:H2'	22:B0:1293:C:C6	2.47	0.49
22:B0:1417:U:O4	26:BA:95:TYR:HB2	2.12	0.49
22:B0:1434:A:H2	22:B0:1478:G:H5'	1.76	0.49
22:B0:1457:G:O2'	22:B0:1458:C:H5'	2.12	0.49
22:B0:1650:A:H2'	22:B0:1651:G:C8	2.46	0.49
22:B0:2154:A:H4'	22:B0:2155:U:H4'	1.94	0.49
22:B0:2263:C:C2	45:BU:11:ASN:HB3	2.48	0.49
22:B0:2291:U:H2'	22:B0:2292:U:C6	2.47	0.49
22:B0:2296:U:C4'	22:B0:2297:A:H5'	2.37	0.49
22:B0:2897:U:C1'	33:BH:14:ASP:HA	2.39	0.49
23:B9:14:U:O3'	23:B9:15:A:H8	1.95	0.49
26:BA:71:ASP:OD1	26:BA:118:GLY:HA3	2.12	0.49
28:BC:95:LYS:O	28:BC:96:VAL:HB	2.12	0.49
30:BE:102:ILE:HG12	30:BE:112:VAL:O	2.12	0.49
31:BF:143:ILE:HG23	31:BF:143:ILE:O	2.11	0.49
35:BJ:108:ALA:H	35:BJ:126:ARG:CG	2.25	0.49
35:BJ:120:VAL:HG22	35:BJ:121:THR:N	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BK:73:ILE:HG13	36:BK:90:GLU:HB3	1.93	0.49
37:BL:22:ARG:O	37:BL:23:ASN:CB	2.59	0.49
39:BN:50:ARG:HB2	39:BN:62:LYS:HB2	1.94	0.49
40:BO:16:ILE:CD1	40:BO:19:GLN:HE22	2.26	0.49
40:BO:49:ARG:HG3	40:BO:50:ARG:N	2.26	0.49
40:BO:63:ARG:HD2	40:BO:63:ARG:C	2.32	0.49
1:AA:25:C:N4	1:AA:558:G:N2	2.60	0.49
1:AA:407:U:H2'	1:AA:408:A:H8	1.77	0.49
1:AA:1032:G:H2'	1:AA:1033:G:O5'	2.12	0.49
1:AA:1196:A:H5"	1:AA:1197:A:O5'	2.11	0.49
1:AA:1365:G:C6	1:AA:1366:C:N3	2.79	0.49
1:AA:1464:U:H2'	1:AA:1465:A:C8	2.47	0.49
5:AD:27:ILE:O	5:AD:28:ASP:C	2.49	0.49
8:AG:144:ALA:O	8:AG:145:GLU:HB2	2.12	0.49
12:AK:58:THR:OG1	12:AK:59:PRO:HD2	2.12	0.49
18:AQ:58:VAL:HB	18:AQ:74:LEU:HD13	1.94	0.49
22:B0:527:C:H4'	22:B0:528:A:O5'	2.12	0.49
22:B0:859:G:C5'	22:B0:860:U:OP1	2.55	0.49
22:B0:1084:A:C8	25:B3:88:GLU:CG	2.96	0.49
22:B0:1412:G:H2'	22:B0:1413:U:C6	2.47	0.49
22:B0:1779:U:O2	22:B0:1783:A:N6	2.45	0.49
22:B0:2165:C:OP1	22:B0:2165:C:C4'	2.60	0.49
22:B0:2514:U:C5	27:BB:154:LYS:HB2	2.47	0.49
23:B9:58:A:H3'	23:B9:58:A:N3	2.27	0.49
25:B3:16:VAL:CB	25:B5:50:GLU:HB3	2.33	0.49
25:B3:57:ILE:HB	25:B3:118:GLU:HG3	1.94	0.49
25:B3:88:GLU:O	25:B3:90:ALA:N	2.44	0.49
26:BA:104:LEU:O	26:BA:106:PRO:HD3	2.12	0.49
27:BB:41:ALA:HB2	27:BB:50:VAL:CG2	2.42	0.49
28:BC:181:ILE:HG22	28:BC:185:LYS:N	2.28	0.49
34:BI:18:ARG:HG3	34:BI:44:LYS:HB3	1.94	0.49
36:BK:95:LEU:HD12	36:BK:95:LEU:N	2.26	0.49
38:BM:16:ARG:HH21	45:BU:75:ASN:CB	2.25	0.49
39:BN:2:ASN:HB3	39:BN:5:LYS:HZ3	1.76	0.49
40:BO:4:LYS:NZ	40:BO:5:ARG:HB3	2.26	0.49
44:BT:34:LYS:H	44:BT:34:LYS:CD	2.25	0.49
45:BU:69:GLU:HA	45:BU:73:PRO:CB	2.42	0.49
1:AA:173:U:H5"	1:AA:174:A:OP2	2.12	0.49
1:AA:653:U:O2	1:AA:653:U:C2'	2.60	0.49
1:AA:872:A:H4'	1:AA:873:A:OP1	2.11	0.49
1:AA:954:G:H21	1:AA:1227:A:H62	1.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:975:A:C5'	1:AA:976:G:H5"	2.42	0.49
1:AA:1271:A:H2'	1:AA:1272:G:H8	1.78	0.49
1:AA:1447:A:H2	1:AA:1459:G:H22	1.59	0.49
1:AA:1520:C:H2'	1:AA:1521:C:H6	1.77	0.49
3:AB:42:LEU:O	3:AB:46:VAL:HG23	2.13	0.49
5:AD:88:ASN:O	5:AD:92:LEU:HD13	2.12	0.49
5:AD:90:LEU:H	5:AD:90:LEU:HD12	1.76	0.49
6:AE:54:GLU:HG3	6:AE:56:PRO:CD	2.33	0.49
7:AF:35:LYS:C	7:AF:64:VAL:HG23	2.32	0.49
9:AH:86:LYS:HB2	9:AH:90:GLU:HB3	1.94	0.49
9:AH:95:MET:SD	9:AH:98:LEU:HD12	2.52	0.49
10:AI:20:ILE:CG2	10:AI:60:LEU:HD23	2.43	0.49
14:AM:95:PRO:HB3	14:AM:101:THR:HG21	1.94	0.49
21:AT:8:LYS:HD3	21:AT:11:ILE:HD11	1.94	0.49
22:B0:747:U:C4	22:B0:2014:A:H1'	2.47	0.49
22:B0:857:G:P	45:BU:53:GLY:O	2.70	0.49
22:B0:884:U:H2'	22:B0:885:C:C5	2.47	0.49
22:B0:1202:G:O6	22:B0:1243:C:N3	2.46	0.49
22:B0:1272:A:N3	22:B0:1272:A:C2'	2.74	0.49
22:B0:1487:G:O4'	26:BA:196:ASN:HA	2.10	0.49
22:B0:1487:G:C5	26:BA:157:ALA:HA	2.47	0.49
22:B0:1488:G:C8	26:BA:157:ALA:C	2.85	0.49
22:B0:1566:A:H5'	26:BA:42:ARG:HD2	1.93	0.49
22:B0:1579:A:C2'	22:B0:1580:A:H5'	2.41	0.49
22:B0:1799:G:C8	22:B0:1819:A:N6	2.80	0.49
22:B0:2152:G:P	22:B0:2153:C:N3	2.85	0.49
24:B2:106:GLY:O	24:B2:107:GLU:C	2.50	0.49
25:B3:91:PRO:C	25:B3:93:ALA:H	2.15	0.49
25:B5:107:LYS:C	25:B5:109:ALA:H	2.13	0.49
26:BA:173:LEU:HD12	26:BA:183:VAL:CG2	2.42	0.49
28:BC:99:LYS:N	28:BC:99:LYS:HD2	2.27	0.49
29:BD:46:LYS:O	29:BD:47:LYS:HB2	2.13	0.49
30:BE:37:ASN:HD22	30:BE:38:ASP:N	2.10	0.49
30:BE:101:VAL:HG11	30:BE:111:PRO:HB2	1.94	0.49
35:BJ:80:SER:HB2	35:BJ:84:LYS:CE	2.42	0.49
38:BM:15:ARG:H	38:BM:15:ARG:CZ	2.25	0.49
39:BN:5:LYS:HA	39:BN:8:GLU:CG	2.41	0.49
39:BN:21:PRO:HG2	39:BN:61:ARG:HE	1.77	0.49
39:BN:33:GLU:HG2	39:BN:81:ASP:CB	2.42	0.49
39:BN:49:ILE:HB	39:BN:99:LEU:HD22	1.94	0.49
45:BU:77:LYS:HB3	45:BU:77:LYS:HZ3	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:48:C:O2'	1:AA:49:U:OP1	2.23	0.49
1:AA:390:U:H2'	1:AA:391:G:C8	2.48	0.49
1:AA:484:G:O2'	1:AA:485:U:OP2	2.27	0.49
1:AA:497:G:H2'	1:AA:497:G:N3	2.26	0.49
1:AA:1131:G:H2'	1:AA:1132:C:C6	2.48	0.49
1:AA:1151:A:H2'	1:AA:1152:A:C8	2.48	0.49
1:AA:1257:A:O2'	1:AA:1258:G:P	2.69	0.49
1:AA:1454:G:O3'	21:AT:26:MET:HE3	2.13	0.49
2:AV:12:U:C5'	22:B0:1908:C:H5'	2.42	0.49
5:AD:33:ILE:HG23	5:AD:33:ILE:O	2.13	0.49
6:AE:10:LEU:HD21	6:AE:38:VAL:CB	2.42	0.49
6:AE:74:ALA:O	6:AE:81:GLN:NE2	2.45	0.49
22:B0:119:A:H5'	22:B0:120:U:OP1	2.13	0.49
22:B0:183:C:H3'	28:BC:53:THR:HG23	1.93	0.49
22:B0:343:C:H2'	22:B0:347:A:C8	2.47	0.49
22:B0:506:G:H5"	22:B0:507:A:H5'	1.94	0.49
22:B0:656:G:H2'	22:B0:657:U:C6	2.47	0.49
22:B0:1142:A:OP2	22:B0:1142:A:C8	2.65	0.49
22:B0:1406:U:H2'	22:B0:1407:G:H8	1.76	0.49
22:B0:1480:G:H1	22:B0:1511:G:H1	1.61	0.49
22:B0:1944:U:C1'	22:B0:1955:U:H1'	2.42	0.49
22:B0:2043:C:H2'	22:B0:2044:C:C6	2.48	0.49
22:B0:2685:G:H2'	22:B0:2686:G:H8	1.77	0.49
26:BA:99:GLU:N	26:BA:99:GLU:OE1	2.45	0.49
27:BB:177:VAL:CG1	27:BB:187:LEU:HD11	2.40	0.49
28:BC:108:ILE:HG23	28:BC:109:LEU:N	2.27	0.49
30:BE:132:LEU:HD12	30:BE:132:LEU:N	2.28	0.49
32:BG:36:GLU:C	32:BG:38:CYS:N	2.66	0.49
32:BG:108:ILE:O	32:BG:112:LYS:HD2	2.12	0.49
41:BQ:49:LYS:HZ3	41:BQ:49:LYS:CA	2.25	0.49
42:BR:34:VAL:HG11	42:BR:43:ILE:HD12	1.93	0.49
45:BU:13:ARG:CG	45:BU:14:ASP:N	2.74	0.49
45:BU:57:THR:OG1	45:BU:58:LEU:N	2.46	0.49
47:BX:30:ARG:HB2	47:BX:33:HIS:CE1	2.47	0.49
49:B1:47:ILE:HG22	49:B1:48:TYR:H	1.75	0.49
1:AA:508:U:H4'	1:AA:509:A:O5'	2.13	0.49
1:AA:817:C:O4'	1:AA:819:A:H5'	2.12	0.49
1:AA:962:C:H2'	1:AA:963:G:C8	2.47	0.49
1:AA:1030:U:O2	1:AA:1031:C:O4'	2.31	0.49
1:AA:1289:A:C2'	1:AA:1290:G:H5'	2.40	0.49
1:AA:1367:C:H2'	1:AA:1368:A:H8	1.77	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1513:A:H2'	1:AA:1514:G:H8	1.76	0.49
2:AV:12:U:H5'	22:B0:1908:C:C5'	2.42	0.49
9:AH:35:ILE:HD11	9:AH:125:ILE:HD13	1.93	0.49
9:AH:87:ARG:HB2	9:AH:87:ARG:HH11	1.77	0.49
10:AI:118:ARG:HB2	10:AI:119:LYS:NZ	2.28	0.49
12:AK:122:PRO:HG2	12:AK:127:ARG:CG	2.40	0.49
17:AP:18:GLN:HG2	17:AP:20:VAL:CG2	2.43	0.49
21:AT:53:MET:SD	21:AT:53:MET:O	2.71	0.49
22:B0:70:G:C4'	22:B0:71:A:OP1	2.61	0.49
22:B0:317:G:O2'	22:B0:318:C:H5'	2.12	0.49
22:B0:476:G:N2	22:B0:478:A:H3'	2.28	0.49
22:B0:560:C:N3	22:B0:561:G:C2	2.81	0.49
22:B0:1053:C:N4	22:B0:1054:A:N6	2.61	0.49
22:B0:1081:U:H2'	25:B3:80:LEU:HD23	1.95	0.49
22:B0:1121:C:H2'	22:B0:1122:G:H8	1.78	0.49
22:B0:1314:C:O5'	22:B0:1314:C:H6	1.95	0.49
22:B0:1417:U:N3	26:BA:98:GLY:O	2.46	0.49
22:B0:1478:G:O2'	22:B0:1558:C:C2'	2.61	0.49
22:B0:1499:U:N3	26:BA:155:ARG:CB	2.75	0.49
22:B0:1557:C:O2	22:B0:1558:C:H1'	2.12	0.49
22:B0:1709:U:O2'	22:B0:1710:G:H5'	2.13	0.49
22:B0:1859:U:H2'	22:B0:1860:G:O4'	2.12	0.49
22:B0:1869:G:N2	22:B0:1872:A:OP2	2.42	0.49
22:B0:2006:C:H4'	22:B0:2048:G:H4'	1.93	0.49
22:B0:2109:U:OP1	22:B0:2148:G:OP2	2.31	0.49
22:B0:2110:G:N2	22:B0:2111:U:H5"	2.27	0.49
22:B0:2458:G:C5'	22:B0:2459:A:OP1	2.61	0.49
23:B9:91:C:O5'	23:B9:91:C:H6	1.96	0.49
26:BA:66:PHE:O	26:BA:67:LYS:HE2	2.13	0.49
26:BA:139:THR:OG1	26:BA:160:TYR:HB3	2.12	0.49
26:BA:172:THR:O	26:BA:173:LEU:CB	2.61	0.49
27:BB:1:MET:N	27:BB:86:GLU:HB3	2.27	0.49
28:BC:115:GLN:CD	28:BC:115:GLN:H	2.15	0.49
31:BF:75:LEU:O	31:BF:76:GLU:HB2	2.12	0.49
32:BG:74:PRO:O	32:BG:75:ALA:HB2	2.12	0.49
32:BG:77:VAL:O	32:BG:78:LEU:HB2	2.12	0.49
35:BJ:36:LYS:N	35:BJ:36:LYS:HD2	2.27	0.49
35:BJ:105:ILE:HG13	35:BJ:106:GLU:N	2.23	0.49
39:BN:23:ASP:OD1	39:BN:91:VAL:HG13	2.13	0.49
39:BN:24:THR:OG1	39:BN:92:ARG:HB2	2.12	0.49
41:BQ:55:ILE:C	41:BQ:55:ILE:HD12	2.33	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BR:8:LEU:HD22	46:BW:26:PHE:CD1	2.47	0.49
43:BS:34:ILE:HB	43:BS:61:GLU:CG	2.38	0.49
44:BT:80:HIS:HD2	44:BT:83:LYS:HG2	1.77	0.49
1:AA:1157:A:H5'	1:AA:1158:C:C5	2.48	0.49
1:AA:1301:U:O2'	1:AA:1302:C:P	2.70	0.49
1:AA:1504:G:O2'	1:AA:1505:G:OP2	2.30	0.49
2:AU:35:A:H2'	2:AU:36:A:H8	1.74	0.49
12:AK:22:ILE:HD12	12:AK:95:THR:HG21	1.95	0.49
12:AK:71:ASP:HA	12:AK:74:LYS:HD3	1.93	0.49
13:AL:24:GLU:HB3	13:AL:26:CYS:SG	2.53	0.49
22:B0:120:U:H4'	22:B0:121:G:O5'	2.12	0.49
22:B0:211:C:H2'	22:B0:212:G:C8	2.48	0.49
22:B0:378:C:H42	22:B0:396:G:H1	1.59	0.49
22:B0:538:A:H2'	22:B0:539:G:H5"	1.93	0.49
22:B0:611:C:N4	22:B0:618:G:N2	2.61	0.49
22:B0:1008:A:O2'	22:B0:1009:A:C8	2.65	0.49
22:B0:1082:U:H5"	25:B3:81:LYS:N	2.20	0.49
22:B0:1816:C:H4'	22:B0:1817:G:OP2	2.12	0.49
22:B0:2176:A:H8	22:B0:2177:C:H4'	1.78	0.49
22:B0:2229:U:H2'	22:B0:2230:G:H8	1.77	0.49
22:B0:2521:C:H1'	22:B0:2564:A:C6	2.47	0.49
28:BC:3:LEU:HD13	28:BC:17:THR:O	2.13	0.49
29:BD:174:PHE:CB	29:BD:175:PRO:HA	2.43	0.49
30:BE:71:LEU:O	30:BE:75:VAL:HG23	2.11	0.49
32:BG:9:LYS:NZ	32:BG:27:LEU:HD22	2.27	0.49
33:BH:70:THR:O	33:BH:70:THR:HG22	2.12	0.49
33:BH:96:ARG:HB3	33:BH:97:PRO:CA	2.40	0.49
34:BI:4:GLU:O	34:BI:5:GLN:HB3	2.13	0.49
35:BJ:47:ARG:HG2	35:BJ:47:ARG:NH1	2.27	0.49
37:BL:98:LEU:N	37:BL:98:LEU:HD12	2.26	0.49
41:BQ:45:VAL:HA	41:BQ:48:LYS:CG	2.40	0.49
41:BQ:78:GLU:HB2	41:BQ:102:HIS:ND1	2.27	0.49
1:AA:266:G:H4'	1:AA:267:C:O5'	2.13	0.49
1:AA:603:U:H2'	1:AA:604:G:H8	1.78	0.49
1:AA:627:G:O2'	1:AA:628:G:H5'	2.13	0.49
1:AA:1120:C:H2'	1:AA:1121:U:C6	2.48	0.49
1:AA:1320:C:H2'	20:AS:2:ARG:HB2	1.94	0.49
1:AA:1382:C:H2'	1:AA:1383:C:C6	2.48	0.49
2:AU:75:C:P	22:B0:2555:U:H2'	2.51	0.49
3:AB:71:THR:HG23	3:AB:93:HIS:O	2.13	0.49
3:AB:91:VAL:HG11	3:AB:95:TRP:HD1	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AE:40:ASP:OD2	6:AE:44:ARG:HB2	2.13	0.49
7:AF:85:ILE:HD13	7:AF:85:ILE:O	2.12	0.49
13:AL:109:ARG:HH11	13:AL:111:GLN:HG3	1.77	0.49
22:B0:184:C:OP2	28:BC:53:THR:N	2.45	0.49
22:B0:458:G:C2'	22:B0:459:U:OP2	2.61	0.49
22:B0:660:C:H2'	22:B0:661:A:C8	2.47	0.49
22:B0:809:G:H4'	22:B0:810:U:OP1	2.13	0.49
22:B0:1082:U:OP1	32:BG:118:GLY:HA2	2.12	0.49
22:B0:1083:U:OP1	25:B3:82:GLU:C	2.51	0.49
22:B0:1141:U:H5"	22:B0:1142:A:H5'	1.95	0.49
22:B0:1245:G:O4'	35:BJ:18:ARG:NH1	2.46	0.49
22:B0:1252:G:H1'	40:BO:32:ARG:CZ	2.43	0.49
22:B0:1258:U:H2'	22:B0:1259:G:H8	1.76	0.49
22:B0:1407:G:H2'	22:B0:1408:G:C8	2.48	0.49
22:B0:1458:C:O2'	22:B0:1459:U:H5'	2.13	0.49
22:B0:1494:A:H2'	26:BA:134:ILE:CB	2.39	0.49
22:B0:1499:U:C4	26:BA:155:ARG:CB	2.95	0.49
22:B0:1644:C:O2'	22:B0:1645:G:H5'	2.13	0.49
22:B0:1922:G:O2'	22:B0:1923:U:P	2.71	0.49
22:B0:1943:U:C1'	22:B0:1945:G:OP2	2.58	0.49
22:B0:1944:U:O4'	22:B0:1955:U:H1'	2.13	0.49
22:B0:2032:G:C6	22:B0:2572:A:H1'	2.48	0.49
22:B0:2116:G:OP1	22:B0:2116:G:C4'	2.57	0.49
22:B0:2287:A:O2'	22:B0:2289:G:OP2	2.29	0.49
22:B0:2334:U:OP2	38:BM:10:ARG:HD2	2.13	0.49
22:B0:2365:G:C5'	45:BU:38:ARG:HH21	2.25	0.49
22:B0:2672:U:H2'	22:B0:2673:G:C8	2.48	0.49
26:BA:142:ASN:N	26:BA:154:ALA:HB1	2.23	0.49
27:BB:32:ASN:OD1	27:BB:83:ARG:HB2	2.12	0.49
27:BB:122:VAL:HG21	27:BB:141:ARG:HA	1.94	0.49
28:BC:25:GLU:O	35:BJ:17:LYS:NZ	2.40	0.49
28:BC:30:GLN:HG3	28:BC:33:VAL:CG2	2.42	0.49
29:BD:111:ARG:HH12	29:BD:134:GLN:HG2	1.78	0.49
29:BD:143:ASP:O	29:BD:144:LYS:HB3	2.13	0.49
31:BF:15:LEU:HB3	31:BF:51:ARG:NH2	2.25	0.49
32:BG:77:VAL:C	32:BG:79:LEU:N	2.66	0.49
34:BI:22:ILE:HG22	34:BI:23:LYS:HD3	1.94	0.49
35:BJ:17:LYS:CD	35:BJ:18:ARG:HG2	2.33	0.49
35:BJ:74:THR:HG22	35:BJ:107:PHE:CG	2.47	0.49
45:BU:29:SER:N	45:BU:61:LYS:HG2	2.28	0.49
45:BU:48:ALA:CB	45:BU:76:ARG:HE	2.26	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:31:G:H1'	1:AA:46:G:H5'	1.94	0.49
1:AA:50:A:O2'	1:AA:51:A:H5"	2.12	0.49
1:AA:99:C:HO2'	1:AA:101:A:P	2.35	0.49
1:AA:537:G:H2'	1:AA:538:G:C8	2.48	0.49
1:AA:1148:U:OP1	10:AI:10:ARG:NH2	2.45	0.49
1:AA:1390:U:H2'	1:AA:1391:U:C6	2.48	0.49
1:AA:1408:A:O2'	22:B0:1913:A:H4'	2.13	0.49
1:AA:1477:U:H2'	1:AA:1478:U:C6	2.47	0.49
1:AA:1523:G:H2'	1:AA:1524:C:C6	2.48	0.49
2:AV:54:U:C2	2:AV:55:U:H5	2.31	0.49
4:AC:51:VAL:O	4:AC:51:VAL:HG13	2.12	0.49
4:AC:130:ARG:CZ	6:AE:53:ARG:HH12	2.26	0.49
5:AD:96:ARG:O	5:AD:100:VAL:HG23	2.13	0.49
6:AE:37:VAL:CG1	6:AE:116:VAL:HG21	2.43	0.49
7:AF:14:GLN:HB3	7:AF:18:VAL:HG22	1.95	0.49
7:AF:37:HIS:HB2	7:AF:63:ASN:OD1	2.13	0.49
13:AL:113:ARG:HB3	13:AL:118:VAL:O	2.13	0.49
14:AM:52:ILE:O	14:AM:56:ARG:HG3	2.13	0.49
16:AO:24:THR:O	16:AO:28:VAL:HG12	2.13	0.49
21:AT:60:GLN:O	21:AT:65:LEU:HB2	2.13	0.49
22:B0:183:C:C5	28:BC:57:LYS:HD3	2.48	0.49
22:B0:194:G:OP1	22:B0:803:U:H4'	2.13	0.49
22:B0:323:C:N4	28:BC:164:LEU:HA	2.28	0.49
22:B0:493:G:H4'	41:BQ:9:HIS:NE2	2.28	0.49
22:B0:576:U:H5'	22:B0:2502:G:H2'	1.95	0.49
22:B0:609:A:H3'	22:B0:610:C:C6	2.48	0.49
22:B0:1085:A:C6	25:B3:65:LYS:HG3	2.47	0.49
22:B0:1343:G:H5'	22:B0:1598:A:OP2	2.13	0.49
22:B0:1424:G:H5'	26:BA:58:LYS:HE2	1.95	0.49
22:B0:1494:A:N3	26:BA:131:MET:HA	2.28	0.49
22:B0:1922:G:HO2'	22:B0:1923:U:P	2.35	0.49
22:B0:1992:G:N2	22:B0:1996:C:N3	2.61	0.49
22:B0:2033:A:H2'	22:B0:2035:G:OP2	2.13	0.49
22:B0:2043:C:N4	22:B0:2625:G:H1	2.10	0.49
22:B0:2378:A:C2'	22:B0:2379:G:H5'	2.43	0.49
22:B0:2598:A:H2'	22:B0:2599:G:H5'	1.94	0.49
22:B0:2831:G:O2'	22:B0:2883:A:H2'	2.12	0.49
26:BA:76:VAL:HG12	26:BA:114:GLN:CB	2.43	0.49
26:BA:109:LEU:HD22	26:BA:109:LEU:N	2.28	0.49
28:BC:100:MET:HG3	35:BJ:19:LEU:CD1	2.43	0.49
28:BC:137:LYS:O	28:BC:141:MET:HB2	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BD:47:LYS:CG	29:BD:48:LEU:H	2.24	0.49
32:BG:126:ARG:C	32:BG:128:ILE:H	2.16	0.49
33:BH:32:LEU:HB3	33:BH:54:ILE:CD1	2.42	0.49
34:BI:42:THR:HG23	34:BI:42:THR:O	2.13	0.49
35:BJ:85:VAL:HG22	35:BJ:85:VAL:O	2.12	0.49
37:BL:10:LEU:H	37:BL:10:LEU:HD12	1.78	0.49
38:BM:40:ILE:HA	38:BM:46:GLU:O	2.11	0.49
38:BM:70:ALA:O	38:BM:74:VAL:HG23	2.13	0.49
39:BN:2:ASN:ND2	39:BN:4:ILE:HG23	2.27	0.49
39:BN:50:ARG:HH22	39:BN:103:THR:HG21	1.77	0.49
46:BW:28:LEU:HD11	46:BW:46:VAL:HG21	1.95	0.49
1:AA:372:C:H4'	1:AA:373:A:H8	1.77	0.49
1:AA:390:U:O5'	1:AA:390:U:H6	1.95	0.49
1:AA:1225:A:H2'	1:AA:1225:A:N3	2.26	0.49
1:AA:1370:G:O2'	1:AA:1371:G:H5'	2.13	0.49
1:AA:1431:A:N1	1:AA:1469:C:N3	2.61	0.49
2:AU:74:C:H3'	22:B0:2556:C:H1'	1.95	0.49
3:AB:212:TYR:O	3:AB:216:VAL:HG12	2.13	0.49
4:AC:183:TYR:CG	4:AC:184:ASN:N	2.81	0.49
5:AD:90:LEU:HD12	5:AD:90:LEU:N	2.28	0.49
6:AE:20:VAL:HG21	6:AE:33:THR:HG23	1.95	0.49
10:AI:27:ILE:HA	10:AI:62:LEU:O	2.13	0.49
15:AN:61:ASN:O	15:AN:62:ARG:HB2	2.12	0.49
20:AS:30:LEU:HG	20:AS:31:ARG:N	2.28	0.49
21:AT:51:ASN:O	21:AT:55:PRO:CD	2.58	0.49
22:B0:64:A:O2'	22:B0:65:U:H5'	2.13	0.49
22:B0:92:U:H2'	22:B0:93:G:C8	2.48	0.49
22:B0:529:A:H4'	22:B0:530:G:O5'	2.12	0.49
22:B0:589:U:C6	28:BC:87:ALA:N	2.81	0.49
22:B0:749:A:C4	22:B0:1618:A:N7	2.81	0.49
22:B0:891:G:O3'	22:B0:892:A:C8	2.66	0.49
22:B0:950:G:H1	22:B0:967:U:H3	1.59	0.49
22:B0:1008:A:N6	22:B0:1136:G:C6	2.81	0.49
22:B0:1183:U:H2'	22:B0:1184:U:C4'	2.36	0.49
22:B0:1202:G:N2	22:B0:1244:A:H1'	2.27	0.49
22:B0:1299:G:N2	22:B0:1639:C:H5	2.05	0.49
22:B0:1306:C:N4	22:B0:1606:C:H2'	2.28	0.49
22:B0:1339:G:OP1	42:BR:19:LYS:HE2	2.13	0.49
22:B0:1579:A:H3'	22:B0:1579:A:H8	1.75	0.49
22:B0:1583:G:N2	26:BA:94:LEU:O	2.46	0.49
22:B0:1683:U:H2'	22:B0:1684:G:C8	2.48	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2127:G:OP2	22:B0:2128:G:OP2	2.30	0.49
22:B0:2176:A:C8	22:B0:2177:C:H4'	2.48	0.49
22:B0:2345:G:H22	22:B0:2380:C:H2'	1.77	0.49
22:B0:2408:U:H2'	22:B0:2409:G:C8	2.47	0.49
22:B0:2678:C:N4	22:B0:2729:G:N1	2.61	0.49
22:B0:2835:A:O4'	22:B0:2836:U:H5	1.96	0.49
26:BA:45:ASN:OD1	26:BA:46:GLY:N	2.46	0.49
27:BB:37:VAL:HG23	27:BB:37:VAL:O	2.12	0.49
28:BC:88:ARG:HA	28:BC:95:LYS:HD2	1.95	0.49
35:BJ:33:ARG:NE	35:BJ:33:ARG:N	2.61	0.49
35:BJ:127:VAL:HG23	35:BJ:131:ALA:HB3	1.93	0.49
36:BK:35:ALA:HB2	36:BK:128:THR:HG22	1.94	0.49
38:BM:88:LYS:HD2	38:BM:88:LYS:N	2.28	0.49
39:BN:93:LYS:O	39:BN:94:ALA:HB2	2.13	0.49
40:BO:15:LYS:HZ3	40:BO:15:LYS:CA	2.26	0.49
40:BO:30:VAL:HG12	40:BO:32:ARG:N	2.26	0.49
45:BU:19:ARG:HG2	45:BU:19:ARG:HH11	1.78	0.49
45:BU:20:LEU:H	45:BU:20:LEU:CD2	2.20	0.49
45:BU:36:ILE:HD13	45:BU:68:PHE:CD2	2.48	0.49
1:AA:335:C:H2'	1:AA:336:A:H8	1.78	0.48
1:AA:692:U:H2'	1:AA:694:A:OP2	2.12	0.48
1:AA:717:U:C3'	12:AK:119:GLY:HA2	2.42	0.48
4:AC:49:ALA:O	4:AC:50:SER:HB2	2.13	0.48
5:AD:66:VAL:HB	5:AD:70:GLN:NE2	2.27	0.48
10:AI:56:MET:HE2	10:AI:60:LEU:HD21	1.95	0.48
10:AI:84:ARG:HA	10:AI:87:MET:SD	2.53	0.48
12:AK:95:THR:O	12:AK:99:LEU:HG	2.14	0.48
14:AM:80:MET:CG	14:AM:91:ARG:HE	2.26	0.48
17:AP:12:LYS:HD2	17:AP:12:LYS:H	1.77	0.48
20:AS:82:HIS:O	20:AS:83:ALA:HB2	2.13	0.48
21:AT:53:MET:O	21:AT:56:ILE:HG22	2.13	0.48
22:B0:102:U:OP2	22:B0:102:U:H6	1.95	0.48
22:B0:288:U:H2'	22:B0:289:G:O4'	2.12	0.48
22:B0:852:U:O5'	22:B0:852:U:H6	1.95	0.48
22:B0:1030:C:N3	22:B0:1125:G:N2	2.61	0.48
22:B0:1083:U:O5'	25:B3:83:ALA:CA	2.61	0.48
22:B0:1294:U:O2'	22:B0:1295:C:H5'	2.13	0.48
22:B0:1495:A:OP1	26:BA:140:VAL:HG22	2.13	0.48
22:B0:1929:G:H4'	22:B0:1930:G:O5'	2.12	0.48
22:B0:1993:U:H2'	22:B0:1994:C:C6	2.48	0.48
22:B0:2135:A:H5"	22:B0:2150:C:C1'	2.25	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2198:A:C2	31:BF:8:LYS:HE3	2.48	0.48
22:B0:2266:A:H5"	22:B0:2267:A:O5'	2.12	0.48
22:B0:2426:A:HO2'	22:B0:2427:C:P	2.36	0.48
22:B0:2897:U:O3'	33:BH:140:LEU:CD2	2.61	0.48
24:B2:5:LYS:C	24:B2:7:MET:H	2.15	0.48
25:B3:2:ILE:HG22	25:B3:6:GLN:HB2	1.94	0.48
25:B3:69:ILE:HD13	25:B3:84:LYS:HG3	1.95	0.48
26:BA:76:VAL:HG12	26:BA:114:GLN:CA	2.43	0.48
27:BB:184:ARG:O	27:BB:186:LEU:HG	2.13	0.48
29:BD:15:LEU:O	29:BD:16:MET:HB2	2.12	0.48
34:BI:5:GLN:O	34:BI:5:GLN:HG2	2.12	0.48
37:BL:94:TYR:CG	37:BL:95:THR:N	2.81	0.48
37:BL:96:ARG:HH22	37:BL:114:GLU:CG	2.21	0.48
39:BN:1:SER:OG	39:BN:5:LYS:HE2	2.13	0.48
40:BO:85:ALA:O	40:BO:86:SER:CB	2.61	0.48
42:BR:53:VAL:CG2	42:BR:54:GLU:H	2.23	0.48
45:BU:45:HIS:CD2	45:BU:79:ILE:HG21	2.48	0.48
45:BU:65:LYS:H	45:BU:65:LYS:CD	2.11	0.48
1:AA:22:G:H2'	1:AA:23:C:C6	2.47	0.48
1:AA:99:C:O2'	1:AA:101:A:OP1	2.29	0.48
1:AA:614:C:H2'	1:AA:615:G:H8	1.78	0.48
1:AA:913:A:HO2'	1:AA:914:A:P	2.36	0.48
1:AA:914:A:H2'	1:AA:915:A:H8	1.78	0.48
1:AA:1320:C:C5	20:AS:4:LEU:HD13	2.46	0.48
1:AA:1320:C:C2'	20:AS:2:ARG:HB2	2.42	0.48
1:AA:1344:C:OP1	10:AI:125:GLN:N	2.41	0.48
1:AA:1460:C:OP1	21:AT:18:LYS:HE2	2.13	0.48
6:AE:39:GLY:HA3	6:AE:116:VAL:HB	1.95	0.48
10:AI:66:VAL:HG21	10:AI:74:GLN:HB3	1.95	0.48
11:AJ:63:ASP:CG	11:AJ:64:GLN:N	2.66	0.48
22:B0:99:U:H5'	22:B0:102:U:O4'	2.13	0.48
22:B0:524:G:H2'	22:B0:525:U:O4'	2.13	0.48
22:B0:1424:G:OP1	26:BA:58:LYS:HG2	2.13	0.48
22:B0:1494:A:O3'	26:BA:140:VAL:HG22	2.13	0.48
22:B0:1496:A:C3'	26:BA:63:ILE:HD12	2.43	0.48
22:B0:1570:A:H2'	22:B0:1571:A:C8	2.49	0.48
22:B0:1571:A:H2'	22:B0:1572:A:H8	1.78	0.48
22:B0:1615:C:O2'	22:B0:1616:A:P	2.70	0.48
22:B0:1666:G:H2'	22:B0:1667:G:O4'	2.13	0.48
22:B0:1899:A:H5"	22:B0:1900:A:OP1	2.12	0.48
22:B0:2083:G:H1	22:B0:2236:U:H3	1.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2227:A:O2'	22:B0:2228:G:H5'	2.12	0.48
22:B0:2363:G:H2'	22:B0:2364:C:C6	2.48	0.48
22:B0:2439:A:H5'	22:B0:2441:U:O5'	2.13	0.48
22:B0:2490:G:C4'	22:B0:2491:U:OP1	2.61	0.48
22:B0:2616:C:O5'	22:B0:2616:C:H6	1.96	0.48
24:B2:45:VAL:O	24:B2:169:ILE:HG13	2.13	0.48
25:B3:59:LYS:HE2	25:B3:118:GLU:OE1	2.12	0.48
25:B5:94:LEU:O	25:B5:94:LEU:HD13	2.13	0.48
26:BA:64:VAL:HG21	26:BA:149:LYS:O	2.13	0.48
26:BA:125:PRO:HG3	26:BA:191:LEU:CD2	2.42	0.48
29:BD:131:VAL:HG22	29:BD:132:ARG:N	2.28	0.48
30:BE:101:VAL:HG22	30:BE:113:ASP:HB3	1.94	0.48
33:BH:58:ASN:HA	33:BH:127:GLY:H	1.77	0.48
35:BJ:93:ASN:O	35:BJ:94:THR:HB	2.14	0.48
35:BJ:111:ILE:O	35:BJ:111:ILE:HG12	2.13	0.48
38:BM:106:LEU:O	38:BM:106:LEU:HD13	2.13	0.48
44:BT:34:LYS:HD3	44:BT:34:LYS:N	2.27	0.48
45:BU:65:LYS:HB2	45:BU:65:LYS:NZ	2.28	0.48
1:AA:49:U:C5'	1:AA:50:A:OP2	2.60	0.48
1:AA:137:U:H3	1:AA:226:G:H1	1.61	0.48
1:AA:145:G:N2	1:AA:177:G:N2	2.61	0.48
1:AA:575:G:H4'	1:AA:576:C:C5'	2.42	0.48
1:AA:1431:A:H61	1:AA:1469:C:N4	2.11	0.48
3:AB:102:ASN:OD1	3:AB:105:THR:HB	2.13	0.48
3:AB:159:ALA:C	3:AB:160:LEU:HD12	2.33	0.48
5:AD:15:GLY:O	5:AD:30:LYS:HE3	2.13	0.48
5:AD:52:VAL:HG13	5:AD:53:GLN:NE2	2.29	0.48
7:AF:10:VAL:HG21	7:AF:21:MET:SD	2.53	0.48
10:AI:113:LYS:O	10:AI:113:LYS:HD2	2.14	0.48
16:AO:38:LEU:O	16:AO:41:HIS:HB3	2.13	0.48
22:B0:164:C:H3'	22:B0:164:C:H6	1.78	0.48
22:B0:846:U:O2'	22:B0:848:C:OP2	2.31	0.48
22:B0:846:U:O2'	22:B0:848:C:O5'	2.29	0.48
22:B0:912:C:H2'	22:B0:913:U:O4'	2.12	0.48
22:B0:966:G:H5"	22:B0:2271:G:N2	2.28	0.48
22:B0:1085:A:H5'	22:B0:1105:U:H4'	1.95	0.48
22:B0:1299:G:H22	22:B0:1639:C:N4	2.11	0.48
22:B0:1316:U:H2'	22:B0:1317:G:C8	2.49	0.48
22:B0:1421:G:C2'	22:B0:1422:G:O5'	2.60	0.48
22:B0:1423:A:H4'	26:BA:59:GLN:OE1	2.14	0.48
22:B0:1996:C:O2'	22:B0:1997:C:H6	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2118:U:O2	22:B0:2125:G:H4'	2.13	0.48
22:B0:2160:C:H3'	22:B0:2162:G:OP2	2.13	0.48
22:B0:2416:C:H4'	35:BJ:66:PHE:CZ	2.49	0.48
22:B0:2495:G:O3'	36:BK:80:VAL:HG21	2.13	0.48
22:B0:2780:G:C5'	33:BH:116:ARG:HD3	2.42	0.48
23:B9:106:G:O2'	23:B9:108:A:H5'	2.13	0.48
26:BA:73:ILE:CG2	26:BA:74:PRO:N	2.76	0.48
27:BB:121:THR:HG21	27:BB:143:PRO:HD3	1.93	0.48
30:BE:32:LEU:HD23	30:BE:74:MET:HG2	1.93	0.48
31:BF:3:VAL:HG22	31:BF:36:ALA:HB1	1.95	0.48
39:BN:50:ARG:HE	39:BN:100:ARG:HH21	1.61	0.48
39:BN:83:ILE:HD13	39:BN:84:SER:N	2.23	0.48
40:BO:14:LYS:HG2	40:BO:15:LYS:N	2.27	0.48
40:BO:94:LEU:O	40:BO:95:ALA:HB3	2.13	0.48
43:BS:10:VAL:CG1	43:BS:69:VAL:HB	2.44	0.48
1:AA:687:A:N6	1:AA:701:U:O4'	2.47	0.48
1:AA:794:A:H2'	1:AA:795:C:O4'	2.14	0.48
1:AA:998:C:H2'	1:AA:999:C:C6	2.48	0.48
1:AA:1417:G:N2	1:AA:1484:C:N4	2.61	0.48
1:AA:1498:U:O2'	1:AA:1499:A:O5'	2.30	0.48
4:AC:67:ILE:O	4:AC:67:ILE:HG23	2.12	0.48
4:AC:146:LYS:HB2	4:AC:202:PHE:CD2	2.48	0.48
5:AD:89:LEU:O	5:AD:93:LEU:HD13	2.13	0.48
6:AE:34:ALA:HB1	6:AE:59:ILE:HD13	1.95	0.48
7:AF:47:LEU:HD21	7:AF:57:ALA:HB3	1.94	0.48
7:AF:75:GLU:HB3	7:AF:79:ARG:NH1	2.27	0.48
10:AI:119:LYS:HZ2	10:AI:122:ARG:NH1	2.11	0.48
15:AN:86:ALA:O	15:AN:91:GLU:HG2	2.12	0.48
17:AP:40:ASN:OD1	17:AP:45:GLU:HG2	2.12	0.48
18:AQ:64:ARG:HD2	18:AQ:65:PRO:CD	2.40	0.48
21:AT:34:VAL:HG21	21:AT:50:PHE:HA	1.95	0.48
21:AT:48:LYS:HB2	21:AT:48:LYS:HZ3	1.77	0.48
22:B0:705:A:H62	22:B0:726:G:H1'	1.78	0.48
22:B0:851:C:H3'	22:B0:852:U:C5	2.48	0.48
22:B0:991:C:O5'	22:B0:991:C:H6	1.95	0.48
22:B0:1487:G:O5'	26:BA:195:GLY:CA	2.61	0.48
22:B0:1492:G:O2'	26:BA:145:MET:SD	2.70	0.48
22:B0:1578:U:OP1	26:BA:63:ILE:HA	2.13	0.48
22:B0:1785:A:HO2'	22:B0:1786:A:H8	1.61	0.48
22:B0:1791:A:N6	22:B0:1828:G:O2'	2.46	0.48
22:B0:2131:U:N1	24:B2:33:ALA:HB3	2.26	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2167:U:O4	22:B0:2170:A:N7	2.46	0.48
22:B0:2581:G:O2'	22:B0:2582:G:P	2.72	0.48
22:B0:2677:G:C1'	27:BB:160:LYS:HD3	2.43	0.48
22:B0:2841:C:H2'	22:B0:2842:G:C8	2.47	0.48
23:B9:57:A:H1'	29:BD:25:MET:CE	2.43	0.48
24:B2:40:SER:O	24:B2:42:ASP:OD1	2.31	0.48
24:B2:89:ALA:HB1	24:B2:152:VAL:CG1	2.43	0.48
25:B3:81:LYS:O	25:B3:81:LYS:CG	2.61	0.48
25:B5:111:GLU:HA	25:B5:115:ALA:O	2.13	0.48
28:BC:24:ASN:HB2	28:BC:27:LEU:HD23	1.96	0.48
28:BC:30:GLN:H	35:BJ:18:ARG:N	2.11	0.48
28:BC:67:ARG:CZ	28:BC:68:ALA:H	2.26	0.48
30:BE:97:VAL:O	30:BE:97:VAL:HG13	2.13	0.48
32:BG:6:ALA:CB	32:BG:60:VAL:HG21	2.33	0.48
33:BH:96:ARG:HB2	33:BH:97:PRO:CA	2.23	0.48
35:BJ:70:LYS:HD3	35:BJ:70:LYS:H	1.78	0.48
35:BJ:103:ILE:HD12	35:BJ:105:ILE:HG23	1.95	0.48
39:BN:43:GLU:HG3	39:BN:44:GLY:N	2.25	0.48
41:BQ:84:ARG:CZ	41:BQ:84:ARG:HA	2.43	0.48
1:AA:423:G:N2	1:AA:424:G:C8	2.82	0.48
1:AA:613:C:H2'	1:AA:614:C:C6	2.48	0.48
1:AA:718:A:C5'	12:AK:119:GLY:N	2.77	0.48
1:AA:975:A:N7	11:AJ:55:PRO:O	2.46	0.48
3:AB:119:GLN:HG3	3:AB:124:THR:HG23	1.94	0.48
5:AD:165:GLU:C	5:AD:166:LYS:HD3	2.34	0.48
5:AD:205:LYS:HE2	5:AD:205:LYS:CA	2.42	0.48
6:AE:87:VAL:O	6:AE:87:VAL:HG23	2.13	0.48
9:AH:100:ILE:C	9:AH:100:ILE:HD12	2.33	0.48
9:AH:116:ARG:HH11	9:AH:116:ARG:CB	2.12	0.48
11:AJ:22:THR:O	11:AJ:26:VAL:HG23	2.14	0.48
11:AJ:37:ARG:HB3	11:AJ:37:ARG:HH11	1.75	0.48
18:AQ:11:VAL:HG12	18:AQ:54:ILE:HA	1.95	0.48
18:AQ:43:LEU:HD22	18:AQ:72:TRP:CH2	2.48	0.48
22:B0:535:G:H1'	40:BO:52:ARG:CG	2.43	0.48
22:B0:1029:A:H62	22:B0:1125:G:N2	2.11	0.48
22:B0:1055:G:O2'	25:B3:64:ASN:HB2	2.13	0.48
22:B0:1060:U:H1'	22:B0:1062:G:H5'	1.95	0.48
22:B0:1082:U:H3'	25:B3:81:LYS:HA	1.96	0.48
22:B0:1454:A:H3'	22:B0:1455:U:C4'	2.43	0.48
22:B0:1485:C:H2'	22:B0:1486:G:C4	2.48	0.48
22:B0:1498:C:C5	26:BA:63:ILE:HG12	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1695:G:N2	22:B0:1696:G:C8	2.82	0.48
22:B0:1732:C:OP2	22:B0:1741:C:H5"	2.12	0.48
22:B0:1758:U:O5'	22:B0:1759:A:OP2	2.31	0.48
22:B0:1778:U:O4	22:B0:1784:A:H1'	2.13	0.48
22:B0:2262:U:O2'	45:BU:10:ARG:HG2	2.13	0.48
22:B0:2484:G:H5"	36:BK:44:ARG:CG	2.44	0.48
22:B0:2824:C:C1'	22:B0:2825:G:H21	2.25	0.48
22:B0:2834:G:H2'	22:B0:2879:A:N6	2.27	0.48
25:B3:4:LYS:O	25:B3:8:ILE:HG12	2.12	0.48
25:B3:29:LYS:HZ2	25:B5:112:GLU:CB	2.26	0.48
25:B5:4:LYS:O	25:B5:8:ILE:HG13	2.14	0.48
28:BC:29:HIS:HB2	35:BJ:17:LYS:CD	2.44	0.48
28:BC:30:GLN:O	28:BC:32:VAL:N	2.47	0.48
28:BC:88:ARG:CG	28:BC:88:ARG:O	2.61	0.48
28:BC:99:LYS:O	28:BC:103:GLY:N	2.34	0.48
28:BC:118:LEU:HB2	28:BC:187:VAL:HA	1.95	0.48
29:BD:52:ALA:O	29:BD:53:ALA:HB3	2.13	0.48
34:BI:116:ILE:HD13	34:BI:116:ILE:C	2.33	0.48
37:BL:28:LEU:O	37:BL:115:LEU:HD21	2.13	0.48
39:BN:113:LEU:C	39:BN:113:LEU:HD13	2.34	0.48
40:BO:12:ARG:HH22	40:BO:16:ILE:CG1	2.26	0.48
41:BQ:31:GLN:O	41:BQ:35:ILE:HG22	2.14	0.48
41:BQ:72:THR:HG23	41:BQ:73:LYS:H	1.79	0.48
41:BQ:87:PRO:HA	41:BQ:88:ARG:HH21	1.79	0.48
41:BQ:98:LYS:HA	41:BQ:99:ARG:NH1	2.29	0.48
46:BW:42:LEU:HD22	46:BW:43:LEU:H	1.77	0.48
48:BZ:54:ILE:C	48:BZ:54:ILE:HD12	2.34	0.48
49:B1:26:LYS:N	49:B1:26:LYS:HD2	2.28	0.48
1:AA:496:A:H1'	1:AA:497:G:C8	2.48	0.48
1:AA:1125:U:H5"	1:AA:1126:U:H5	1.78	0.48
1:AA:1349:A:C5'	10:AI:119:LYS:HE2	2.32	0.48
2:AW:71:G:H4'	22:B0:1853:A:OP1	2.13	0.48
5:AD:10:LEU:HD22	5:AD:62:ARG:NH1	2.28	0.48
5:AD:131:ILE:HG23	5:AD:131:ILE:O	2.13	0.48
15:AN:79:SER:O	15:AN:83:VAL:HG13	2.12	0.48
20:AS:17:LYS:HA	20:AS:20:LYS:CG	2.43	0.48
21:AT:75:LYS:O	21:AT:79:THR:HG22	2.13	0.48
22:B0:629:G:H2'	22:B0:630:G:C8	2.49	0.48
22:B0:701:G:O2'	22:B0:702:U:H5'	2.12	0.48
22:B0:1033:U:H5"	22:B0:1034:G:OP1	2.13	0.48
22:B0:1069:A:H4'	22:B0:1070:A:H8	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1122:G:O2'	22:B0:1123:C:H5'	2.14	0.48
22:B0:1225:G:O2'	22:B0:1226:A:P	2.72	0.48
22:B0:1423:A:C4'	26:BA:56:GLY:O	2.61	0.48
22:B0:1458:C:H2'	22:B0:1459:U:O4'	2.14	0.48
22:B0:1495:A:C2	26:BA:64:VAL:HG12	2.48	0.48
22:B0:1666:G:H2'	22:B0:1667:G:H5'	1.94	0.48
22:B0:2004:G:H2'	22:B0:2005:A:O5'	2.14	0.48
22:B0:2086:U:H2'	22:B0:2087:G:H8	1.79	0.48
22:B0:2581:G:O2'	22:B0:2582:G:OP2	2.27	0.48
22:B0:2700:A:H3'	22:B0:2702:G:C5'	2.43	0.48
22:B0:2781:A:O4'	33:BH:116:ARG:HG2	2.13	0.48
22:B0:2898:G:P	33:BH:138:GLN:HB2	2.52	0.48
23:B9:58:A:C2'	23:B9:59:A:H5'	2.43	0.48
24:B2:56:GLN:HE22	24:B2:202:GLN:HB2	1.78	0.48
24:B2:163:ARG:O	24:B2:170:ILE:HG12	2.12	0.48
28:BC:61:ARG:HH11	28:BC:61:ARG:HA	1.78	0.48
32:BG:70:THR:HG23	32:BG:70:THR:O	2.14	0.48
33:BH:35:ARG:O	33:BH:39:LYS:HB2	2.14	0.48
33:BH:140:LEU:HB3	33:BH:141:ASP:H	1.47	0.48
37:BL:24:MET:HB3	37:BL:44:LEU:CD1	2.41	0.48
37:BL:35:LYS:HA	37:BL:110:MET:HE2	1.94	0.48
37:BL:45:ARG:HG2	37:BL:45:ARG:HH11	1.78	0.48
37:BL:63:ARG:CZ	37:BL:64:ARG:HE	2.25	0.48
38:BM:52:SER:OG	38:BM:54:VAL:HG12	2.13	0.48
39:BN:21:PRO:HG3	39:BN:61:ARG:NH2	2.27	0.48
39:BN:34:GLY:HA2	39:BN:40:GLN:NE2	2.26	0.48
41:BQ:106:VAL:HG23	41:BQ:106:VAL:O	2.13	0.48
45:BU:56:HIS:O	45:BU:57:THR:HB	2.14	0.48
47:BX:20:LYS:HD3	47:BX:24:LEU:HG	1.95	0.48
48:BZ:51:ARG:HH11	48:BZ:51:ARG:CG	2.27	0.48
1:AA:119:A:H4'	1:AA:120:A:O4'	2.13	0.48
1:AA:157:U:H3	1:AA:164:G:H22	1.61	0.48
1:AA:197:A:N6	1:AA:221:C:C4'	2.76	0.48
1:AA:975:A:C6	11:AJ:55:PRO:HA	2.48	0.48
1:AA:1473:G:H2'	1:AA:1474:U:C6	2.49	0.48
1:AA:1484:C:O2'	1:AA:1485:U:H5'	2.14	0.48
1:AA:1500:A:C2'	1:AA:1501:C:H5'	2.44	0.48
1:AA:1528:U:H5'	1:AA:1529:G:N2	2.28	0.48
2:AV:38:A:C4	2:AV:39:U:O2	2.67	0.48
3:AB:169:HIS:CE1	3:AB:173:LYS:HD3	2.46	0.48
13:AL:24:GLU:HG2	13:AL:24:GLU:O	2.14	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
14:AM:2:ARG:C	14:AM:3:ILE:HD12	2.34	0.48
17:AP:7:ALA:O	17:AP:17:TYR:HA	2.14	0.48
19:AR:58:ILE:O	19:AR:62:ARG:HG3	2.12	0.48
21:AT:84:LYS:HE3	21:AT:84:LYS:CA	2.44	0.48
22:B0:119:A:O2'	22:B0:120:U:H3'	2.13	0.48
22:B0:177:G:N2	22:B0:177:G:OP2	2.35	0.48
22:B0:241:A:O2'	22:B0:242:G:C1'	2.61	0.48
22:B0:362:A:O2'	22:B0:363:G:P	2.71	0.48
22:B0:636:G:H1'	22:B0:638:G:H5"	1.94	0.48
22:B0:689:A:H2'	22:B0:690:G:C8	2.49	0.48
22:B0:1162:G:O2'	22:B0:1163:G:H5'	2.12	0.48
22:B0:1171:G:H1	22:B0:1178:C:N4	2.11	0.48
22:B0:1499:U:C2	26:BA:155:ARG:CG	2.88	0.48
22:B0:1578:U:O2'	26:BA:66:PHE:N	2.46	0.48
22:B0:1578:U:C5'	26:BA:101:ARG:NH1	2.73	0.48
22:B0:1830:C:H42	22:B0:1975:G:H1	1.61	0.48
22:B0:1871:A:H8	22:B0:1871:A:O5'	1.96	0.48
22:B0:1970:A:H5'	22:B0:1972:G:O4'	2.13	0.48
22:B0:2123:G:C5'	22:B0:2124:G:H4'	2.35	0.48
22:B0:2382:G:OP1	22:B0:2383:G:H5"	2.13	0.48
22:B0:2741:A:H2'	22:B0:2742:G:O4'	2.14	0.48
26:BA:66:PHE:O	26:BA:67:LYS:CB	2.61	0.48
27:BB:166:GLY:O	27:BB:167:ASN:HB3	2.14	0.48
28:BC:21:ARG:O	28:BC:23:PHE:N	2.47	0.48
28:BC:98:LYS:H	28:BC:98:LYS:CD	2.27	0.48
29:BD:6:TYR:O	29:BD:10:GLU:HB2	2.14	0.48
30:BE:76:ILE:HD13	30:BE:76:ILE:C	2.32	0.48
32:BG:59:THR:HG23	32:BG:60:VAL:N	2.28	0.48
37:BL:45:ARG:HA	37:BL:45:ARG:CZ	2.44	0.48
40:BO:26:ALA:O	40:BO:28:SER:N	2.46	0.48
41:BQ:76:VAL:HG23	41:BQ:76:VAL:O	2.14	0.48
42:BR:64:LYS:N	42:BR:64:LYS:HD3	2.29	0.48
42:BR:81:LYS:HE3	42:BR:82:LYS:CD	2.44	0.48
43:BS:58:VAL:HG13	43:BS:59:GLU:N	2.28	0.48
45:BU:37:VAL:CG2	45:BU:38:ARG:N	2.77	0.48
1:AA:665:A:N6	1:AA:724:G:N1	2.50	0.48
1:AA:860:A:H2'	1:AA:861:G:O4'	2.13	0.48
1:AA:1422:G:H2'	1:AA:1423:G:C8	2.49	0.48
1:AA:1503:A:C2'	1:AA:1504:G:C5'	2.91	0.48
2:AV:32:C:H2'	2:AV:33:U:C6	2.49	0.48
2:AW:38:A:C4	2:AW:39:U:O2	2.66	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:AC:152:VAL:HG13	4:AC:195:ILE:CG1	2.44	0.48
5:AD:128:VAL:HG22	5:AD:145:ARG:HD3	1.94	0.48
9:AH:93:LYS:HE2	9:AH:116:ARG:NH2	2.29	0.48
10:AI:11:ARG:HD2	10:AI:12:LYS:N	2.28	0.48
10:AI:119:LYS:HD3	10:AI:122:ARG:CD	2.40	0.48
17:AP:4:ILE:CG1	17:AP:21:VAL:HG22	2.38	0.48
17:AP:20:VAL:HG11	17:AP:32:PHE:CD2	2.49	0.48
17:AP:57:ILE:HG12	17:AP:61:VAL:HG23	1.96	0.48
19:AR:39:VAL:HG23	19:AR:44:THR:HB	1.96	0.48
22:B0:407:G:H2'	22:B0:408:G:H8	1.79	0.48
22:B0:742:A:H2'	22:B0:743:A:C8	2.48	0.48
22:B0:840:C:H2'	22:B0:841:G:H8	1.78	0.48
22:B0:912:C:O2'	22:B0:913:U:H5'	2.13	0.48
22:B0:977:G:O2'	22:B0:1001:A:C2	2.67	0.48
22:B0:1250:G:C4'	40:BO:8:ILE:HD12	2.34	0.48
22:B0:1360:G:H8	22:B0:1360:G:O5'	1.95	0.48
22:B0:1425:G:N2	22:B0:1574:C:N4	2.62	0.48
22:B0:1665:A:C2	27:BB:136:ASN:HB3	2.48	0.48
22:B0:1667:G:H21	22:B0:1994:C:N4	2.09	0.48
22:B0:1703:G:H2'	22:B0:1704:C:H6	1.78	0.48
22:B0:1707:G:O2'	22:B0:1708:C:H5'	2.14	0.48
22:B0:1785:A:H5'	22:B0:1982:U:H4'	1.96	0.48
22:B0:2117:A:N1	24:B2:105:LYS:HG2	2.28	0.48
22:B0:2131:U:O2	24:B2:177:VAL:HG22	2.14	0.48
22:B0:2351:G:H2'	22:B0:2352:A:H8	1.78	0.48
22:B0:2559:C:O2'	22:B0:2560:A:H5'	2.14	0.48
22:B0:2643:G:H5"	27:BB:157:LYS:HB3	1.96	0.48
22:B0:2750:A:H2'	22:B0:2752:C:H41	1.79	0.48
23:B9:11:C:H2'	23:B9:12:C:H5'	1.95	0.48
23:B9:36:C:H2'	23:B9:37:C:C6	2.49	0.48
28:BC:6:LYS:CE	28:BC:119:ILE:HG12	2.43	0.48
29:BD:12:VAL:HG23	29:BD:13:LYS:CD	2.33	0.48
33:BH:15:TRP:N	33:BH:52:ASP:OD2	2.47	0.48
33:BH:89:PHE:HB3	33:BH:92:MET:HB2	1.95	0.48
33:BH:109:LEU:N	33:BH:110:PRO:HA	2.26	0.48
35:BJ:99:ASN:N	35:BJ:99:ASN:ND2	2.62	0.48
36:BK:53:MET:O	36:BK:57:VAL:HG22	2.14	0.48
37:BL:10:LEU:HB3	37:BL:17:ARG:HG3	1.95	0.48
37:BL:36:THR:HG1	37:BL:40:LYS:HB2	1.74	0.48
37:BL:40:LYS:CD	37:BL:110:MET:SD	3.02	0.48
38:BM:7:ARG:H	38:BM:7:ARG:CD	2.20	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
39:BN:98:TYR:CE1	39:BN:100:ARG:HG2	2.49	0.48
44:BT:77:VAL:HG13	44:BT:89:ILE:CG1	2.44	0.48
46:BW:39:GLN:HA	46:BW:39:GLN:HE21	1.78	0.48
47:BX:16:LEU:HD22	47:BX:16:LEU:N	2.28	0.48
1:AA:99:C:N4	1:AA:101:A:H62	2.11	0.48
1:AA:185:U:H3	1:AA:192:A:N6	2.12	0.48
1:AA:188:C:C2'	1:AA:189:A:O4'	2.49	0.48
1:AA:282:A:OP2	1:AA:282:A:C8	2.66	0.48
1:AA:384:G:H2'	1:AA:385:C:C6	2.48	0.48
1:AA:517:G:N2	1:AA:533:A:OP2	2.47	0.48
1:AA:926:G:OP2	1:AA:927:G:H5'	2.14	0.48
1:AA:1367:C:H2'	1:AA:1368:A:C8	2.49	0.48
3:AB:116:LEU:CB	3:AB:140:LEU:HD21	2.44	0.48
4:AC:54:ILE:O	4:AC:54:ILE:HG12	2.14	0.48
5:AD:20:LEU:HD22	5:AD:20:LEU:N	2.29	0.48
11:AJ:56:HIS:NE2	11:AJ:57:VAL:HG23	2.28	0.48
12:AK:39:ASN:O	12:AK:41:LEU:HD22	2.14	0.48
14:AM:2:ARG:HD2	14:AM:2:ARG:N	2.29	0.48
22:B0:184:C:H4'	22:B0:217:A:C2	2.49	0.48
22:B0:573:U:O3'	22:B0:575:A:OP1	2.32	0.48
22:B0:683:U:H1'	22:B0:794:A:N1	2.28	0.48
22:B0:852:U:H2'	22:B0:853:C:C6	2.49	0.48
22:B0:1055:G:N2	25:B3:64:ASN:OD1	2.47	0.48
22:B0:1083:U:O3'	25:B3:88:GLU:N	2.34	0.48
22:B0:1419:A:N6	26:BA:67:LYS:HB3	2.19	0.48
22:B0:1499:U:H2'	22:B0:1500:A:H8	1.74	0.48
22:B0:1681:G:N3	22:B0:1762:A:H2'	2.29	0.48
22:B0:1819:A:H1'	22:B0:1821:A:C4	2.48	0.48
22:B0:1940:U:O2'	22:B0:1941:C:C6	2.65	0.48
22:B0:1999:C:H2'	22:B0:2000:C:H6	1.79	0.48
22:B0:2020:A:H2'	22:B0:2021:C:O4'	2.13	0.48
22:B0:2049:G:O2'	22:B0:2050:C:P	2.72	0.48
22:B0:2126:A:H2'	22:B0:2167:U:P	2.54	0.48
22:B0:2138:G:O5'	22:B0:2139:U:OP1	2.31	0.48
22:B0:2262:U:H2'	45:BU:10:ARG:HG2	1.95	0.48
27:BB:106:LYS:HD2	27:BB:106:LYS:H	1.79	0.48
27:BB:150:GLN:O	27:BB:153:GLY:HA2	2.14	0.48
27:BB:208:LYS:HG3	27:BB:208:LYS:O	2.13	0.48
30:BE:167:VAL:HG12	30:BE:168:VAL:N	2.29	0.48
31:BF:127:GLU:HG2	31:BF:143:ILE:HD11	1.96	0.48
41:BQ:27:LYS:H	41:BQ:27:LYS:CD	2.15	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BQ:56:ALA:O	41:BQ:57:ASN:HB3	2.12	0.48
41:BQ:88:ARG:HD2	41:BQ:94:ASP:HB3	1.95	0.48
42:BR:67:VAL:HG12	42:BR:73:ARG:HH22	1.78	0.48
43:BS:85:ARG:HH11	43:BS:85:ARG:HG3	1.78	0.48
1:AA:785:G:OP1	22:B0:1837:C:H5"	2.13	0.48
1:AA:965:U:O2'	1:AA:966:G:H5"	2.11	0.48
1:AA:1258:G:H1	1:AA:1278:G:H22	1.62	0.48
1:AA:1296:C:H5'	14:AM:13:HIS:NE2	2.29	0.48
1:AA:1422:G:OP1	34:BI:54:LYS:HE3	2.13	0.48
1:AA:1502:A:H3'	1:AA:1502:A:OP2	2.13	0.48
2:AU:37:G:H2'	2:AU:38:A:C8	2.49	0.48
2:AV:58:A:HO2'	2:AV:60:C:H5	1.61	0.48
5:AD:44:LYS:O	5:AD:44:LYS:HG3	2.14	0.48
5:AD:97:LEU:O	5:AD:101:VAL:HG23	2.14	0.48
9:AH:4:ASP:OD2	9:AH:7:ALA:HB2	2.13	0.48
19:AR:6:ARG:HH21	19:AR:42:ARG:HE	1.62	0.48
22:B0:753:A:O2'	22:B0:754:U:H5'	2.14	0.48
22:B0:775:G:H1'	22:B0:777:G:C4	2.48	0.48
22:B0:839:U:H2'	22:B0:840:C:C6	2.49	0.48
22:B0:1022:G:O2'	22:B0:1024:G:N7	2.46	0.48
22:B0:1369:G:H2'	22:B0:1370:C:C5	2.49	0.48
22:B0:1417:U:C2	26:BA:98:GLY:HA2	2.49	0.48
22:B0:1421:G:O6	26:BA:148:GLY:N	2.46	0.48
22:B0:1487:G:H8	26:BA:158:GLY:HA2	1.78	0.48
22:B0:1496:A:N6	26:BA:142:ASN:OD1	2.47	0.48
22:B0:1578:U:O2	22:B0:1578:U:C2'	2.62	0.48
22:B0:1630:A:N6	22:B0:1637:A:N6	2.61	0.48
22:B0:1659:G:C4	22:B0:2002:G:N2	2.82	0.48
22:B0:1668:A:O2'	22:B0:1670:C:H5	1.96	0.48
22:B0:1854:A:H2'	22:B0:1859:U:C6	2.49	0.48
22:B0:2007:U:N3	22:B0:2008:C:C5	2.82	0.48
22:B0:2107:G:H2'	22:B0:2108:A:C8	2.49	0.48
22:B0:2251:G:C8	22:B0:2450:A:H1'	2.48	0.48
22:B0:2505:G:O2'	22:B0:2506:U:H5"	2.14	0.48
22:B0:2553:G:H2'	22:B0:2554:U:C4'	2.39	0.48
22:B0:2606:C:H2'	22:B0:2607:G:H8	1.79	0.48
22:B0:2844:G:H5'	39:BN:5:LYS:HE3	1.95	0.48
22:B0:2895:C:H41	33:BH:11:VAL:HG22	1.78	0.48
22:B0:2898:G:H4'	33:BH:15:TRP:CZ3	2.49	0.48
24:B2:149:ALA:O	24:B2:153:LYS:HG3	2.13	0.48
25:B5:40:VAL:C	25:B5:42:ALA:N	2.66	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BC:57:LYS:HG2	28:BC:62:GLN:CD	2.33	0.48
29:BD:90:LEU:O	29:BD:90:LEU:HD22	2.13	0.48
33:BH:15:TRP:CH2	33:BH:17:VAL:HG13	2.48	0.48
33:BH:50:THR:O	33:BH:51:GLY:C	2.51	0.48
33:BH:99:ARG:HH22	33:BH:102:GLU:HB3	1.78	0.48
33:BH:112:GLY:HA2	33:BH:113:PRO:C	2.34	0.48
33:BH:122:LEU:O	33:BH:122:LEU:HD22	2.14	0.48
35:BJ:105:ILE:HG13	35:BJ:106:GLU:OE2	2.14	0.48
35:BJ:106:GLU:HG2	35:BJ:107:PHE:CD1	2.47	0.48
40:BO:57:ARG:HG2	40:BO:57:ARG:HH11	1.79	0.48
40:BO:92:LYS:HZ2	40:BO:92:LYS:HB3	1.79	0.48
44:BT:79:ARG:HG2	44:BT:79:ARG:HH11	1.78	0.48
48:BZ:29:VAL:HB	48:BZ:32:THR:O	2.14	0.48
49:B1:42:VAL:HG13	49:B1:43:ARG:N	2.29	0.48
1:AA:344:A:HO2'	1:AA:345:C:P	2.36	0.47
1:AA:346:G:C2'	1:AA:347:G:H5'	2.44	0.47
1:AA:926:G:C5	1:AA:1505:G:H2'	2.49	0.47
2:AV:52:U:O2'	2:AV:53:G:H5'	2.12	0.47
4:AC:57:GLU:OE1	4:AC:64:ARG:HD2	2.14	0.47
4:AC:131:ARG:O	4:AC:135:ARG:HG2	2.14	0.47
22:B0:49:A:O5'	22:B0:51:G:H5'	2.14	0.47
22:B0:204:A:O2'	22:B0:205:G:C1'	2.60	0.47
22:B0:371:A:C4'	22:B0:372:G:OP1	2.62	0.47
22:B0:503:A:H1'	22:B0:505:A:H5"	1.95	0.47
22:B0:532:A:C4'	22:B0:533:G:OP2	2.62	0.47
22:B0:680:C:H2'	22:B0:681:G:C8	2.49	0.47
22:B0:769:U:H2'	22:B0:770:G:H8	1.77	0.47
22:B0:851:C:N4	22:B0:926:G:N1	2.44	0.47
22:B0:945:A:N3	22:B0:2448:A:H1'	2.29	0.47
22:B0:1085:A:C2	25:B3:63:ALA:C	2.88	0.47
22:B0:1107:G:H2'	22:B0:1108:U:C6	2.49	0.47
22:B0:1416:G:C2	26:BA:94:LEU:HA	2.49	0.47
22:B0:1416:G:N1	26:BA:95:TYR:N	2.55	0.47
22:B0:1418:G:N3	22:B0:1578:U:C4	2.82	0.47
22:B0:1498:C:OP2	26:BA:61:TYR:O	2.31	0.47
22:B0:1579:A:C8	22:B0:1579:A:H5"	2.48	0.47
22:B0:1605:C:H5'	22:B0:1610:A:N6	2.29	0.47
22:B0:1814:G:N2	22:B0:1815:A:H62	2.12	0.47
22:B0:2049:G:H2'	22:B0:2050:C:C5	2.49	0.47
22:B0:2109:U:C6	22:B0:2110:G:H3'	2.49	0.47
22:B0:2247:A:O2'	22:B0:2248:C:H5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2487:G:H2'	22:B0:2488:G:C8	2.49	0.47
22:B0:2648:G:H1	22:B0:2672:U:H3	1.62	0.47
22:B0:2747:G:O6	22:B0:2755:C:H5"	2.14	0.47
25:B3:48:ALA:HB1	25:B5:16:VAL:HG23	1.94	0.47
25:B3:102:ASP:O	25:B3:106:LEU:HG	2.13	0.47
26:BA:78:GLU:HB3	26:BA:92:LEU:HD22	1.96	0.47
28:BC:30:GLN:O	28:BC:31:VAL:C	2.51	0.47
28:BC:43:THR:HG23	28:BC:43:THR:O	2.14	0.47
28:BC:67:ARG:NE	28:BC:68:ALA:N	2.57	0.47
29:BD:71:LYS:HE2	29:BD:71:LYS:CA	2.44	0.47
33:BH:81:ILE:HD12	33:BH:81:ILE:C	2.34	0.47
35:BJ:134:ALA:C	35:BJ:136:GLU:N	2.67	0.47
38:BM:102:ARG:N	38:BM:102:ARG:HD2	2.30	0.47
40:BO:33:VAL:O	40:BO:37:ALA:HB2	2.13	0.47
41:BQ:72:THR:HG22	41:BQ:106:VAL:O	2.13	0.47
44:BT:57:TYR:HA	44:BT:74:ALA:HB3	1.95	0.47
1:AA:838:G:H2'	1:AA:839:U:H5"	1.96	0.47
1:AA:972:C:O3'	11:AJ:56:HIS:CE1	2.68	0.47
1:AA:1344:C:OP2	10:AI:125:GLN:HB2	2.14	0.47
7:AF:39:LEU:CD2	7:AF:62:MET:HG2	2.32	0.47
8:AG:20:GLU:O	8:AG:24:LYS:HG3	2.13	0.47
15:AN:40:ARG:CZ	20:AS:14:LEU:HA	2.44	0.47
19:AR:58:ILE:HG22	19:AR:62:ARG:NH1	2.29	0.47
20:AS:17:LYS:HA	20:AS:20:LYS:HG3	1.96	0.47
22:B0:116:C:H2'	22:B0:117:G:O4'	2.14	0.47
22:B0:205:G:C2'	22:B0:206:U:OP2	2.62	0.47
22:B0:350:G:H2'	22:B0:351:C:C6	2.49	0.47
22:B0:625:G:O2'	22:B0:626:A:H5'	2.14	0.47
22:B0:645:C:H2'	22:B0:647:G:O4'	2.13	0.47
22:B0:657:U:O2'	22:B0:658:U:H5'	2.14	0.47
22:B0:1038:G:H2'	22:B0:1039:A:H8	1.79	0.47
22:B0:1082:U:P	25:B3:81:LYS:N	2.87	0.47
22:B0:1084:A:C6	22:B0:1085:A:C2	3.02	0.47
22:B0:1095:A:N6	32:BG:25:PRO:HB2	2.29	0.47
22:B0:1170:C:H2'	22:B0:1171:G:H8	1.79	0.47
22:B0:1310:G:H2'	22:B0:1311:G:H5'	1.96	0.47
22:B0:1486:G:C3'	26:BA:196:ASN:N	2.77	0.47
22:B0:1583:G:H1	26:BA:75:ALA:CA	2.27	0.47
22:B0:1670:C:H2'	22:B0:1671:U:H5'	1.96	0.47
22:B0:1698:A:H1'	22:B0:1700:A:H5"	1.94	0.47
22:B0:1828:G:C3'	22:B0:1829:A:H5'	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1843:C:O5'	22:B0:1843:C:H6	1.96	0.47
22:B0:1937:A:H62	22:B0:1940:U:H5	1.61	0.47
22:B0:2046:G:O2'	22:B0:2047:C:H5'	2.14	0.47
22:B0:2126:A:O2'	22:B0:2171:A:C1'	2.62	0.47
22:B0:2134:A:C8	22:B0:2135:A:O2'	2.58	0.47
22:B0:2232:C:H2'	22:B0:2233:U:C6	2.49	0.47
22:B0:2251:G:C4'	22:B0:2449:U:O2'	2.61	0.47
22:B0:2564:A:C2	22:B0:2565:A:O4'	2.67	0.47
25:B5:108:LYS:HG3	25:B5:108:LYS:O	2.14	0.47
26:BA:63:ILE:C	26:BA:64:VAL:CG2	2.82	0.47
26:BA:93:VAL:CG1	26:BA:103:ILE:HD12	2.34	0.47
32:BG:111:THR:O	32:BG:111:THR:HG22	2.15	0.47
32:BG:126:ARG:HA	32:BG:129:GLU:HB2	1.96	0.47
34:BI:47:ILE:HG23	34:BI:47:ILE:O	2.14	0.47
38:BM:16:ARG:HH21	45:BU:75:ASN:HB2	1.79	0.47
42:BR:68:LYS:HE3	42:BR:70:HIS:O	2.14	0.47
45:BU:77:LYS:HB3	45:BU:77:LYS:HZ2	1.78	0.47
47:BX:24:LEU:HD22	47:BX:29:ARG:HG2	1.95	0.47
49:B1:4:ILE:HG23	49:B1:4:ILE:O	2.14	0.47
1:AA:328:C:O2	1:AA:328:C:C2'	2.62	0.47
1:AA:518:C:H1'	1:AA:529:G:C2	2.50	0.47
1:AA:654:G:C2	1:AA:753:A:H1'	2.49	0.47
1:AA:971:G:H5"	1:AA:972:C:C5'	2.33	0.47
1:AA:1293:C:H2'	1:AA:1294:G:H8	1.79	0.47
1:AA:1328:C:H2'	1:AA:1329:A:H8	1.79	0.47
1:AA:1388:C:H2'	1:AA:1389:C:C6	2.48	0.47
1:AA:1405:G:C2	1:AA:1517:G:N7	2.83	0.47
1:AA:1451:U:HO2'	1:AA:1452:C:P	2.37	0.47
4:AC:76:ILE:HG22	4:AC:80:GLY:HA2	1.96	0.47
4:AC:107:LYS:HD2	4:AC:107:LYS:N	2.29	0.47
7:AF:10:VAL:CG1	7:AF:58:HIS:HB3	2.43	0.47
10:AI:9:GLY:HA2	10:AI:80:HIS:HD2	1.78	0.47
10:AI:112:ARG:O	10:AI:114:LYS:HD2	2.14	0.47
12:AK:16:SER:HA	12:AK:78:ILE:HA	1.96	0.47
13:AL:79:ILE:CG1	13:AL:80:LEU:N	2.78	0.47
14:AM:44:ILE:HD12	14:AM:44:ILE:C	2.35	0.47
14:AM:92:ARG:O	14:AM:92:ARG:HD3	2.14	0.47
16:AO:55:LEU:O	16:AO:55:LEU:HD23	2.14	0.47
20:AS:49:ALA:HA	20:AS:57:VAL:O	2.14	0.47
22:B0:39:G:H2'	22:B0:40:U:H6	1.77	0.47
22:B0:183:C:OP2	28:BC:57:LYS:CD	2.61	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:242:G:C2’	22:B0:243:U:OP2	2.61	0.47
22:B0:403:U:O2’	22:B0:406:G:H1’	2.14	0.47
22:B0:660:C:C4’	35:BJ:19:LEU:HD12	2.44	0.47
22:B0:1183:U:N3	22:B0:1184:U:H1’	2.29	0.47
22:B0:1344:U:O2’	22:B0:1384:A:H2’	2.14	0.47
22:B0:1710:G:H2’	22:B0:1711:A:C8	2.49	0.47
22:B0:1958:C:H2’	22:B0:1959:G:C8	2.49	0.47
22:B0:2073:C:H42	22:B0:2436:G:H1	1.62	0.47
22:B0:2142:A:H2’	22:B0:2143:C:C5’	2.38	0.47
22:B0:2163:G:H21	22:B0:2164:C:C2’	2.23	0.47
22:B0:2263:C:N1	45:BU:11:ASN:HB3	2.29	0.47
22:B0:2266:A:H1’	22:B0:2272:U:H3	1.79	0.47
22:B0:2777:G:C5’	22:B0:2778:A:OP1	2.63	0.47
24:B2:39:GLU:HG2	24:B2:215:THR:OG1	2.14	0.47
26:BA:142:ASN:HA	26:BA:154:ALA:CB	2.39	0.47
27:BB:4:LEU:HG	27:BB:5:VAL:N	2.30	0.47
27:BB:5:VAL:HG22	27:BB:202:ILE:HG22	1.96	0.47
27:BB:151:THR:HG23	27:BB:151:THR:O	2.14	0.47
28:BC:4:VAL:HG23	28:BC:13:THR:HA	1.95	0.47
28:BC:67:ARG:NH2	28:BC:68:ALA:C	2.53	0.47
29:BD:163:GLU:C	29:BD:165:GLY:N	2.68	0.47
32:BG:81:LYS:HE2	32:BG:81:LYS:CA	2.44	0.47
37:BL:12:ARG:HA	37:BL:12:ARG:HE	1.80	0.47
37:BL:36:THR:N	37:BL:110:MET:HG2	2.30	0.47
39:BN:49:ILE:CD1	39:BN:99:LEU:HD13	2.42	0.47
41:BQ:31:GLN:HA	41:BQ:34:ASP:OD1	2.14	0.47
41:BQ:35:ILE:O	41:BQ:36:LEU:CB	2.60	0.47
43:BS:9:GLU:O	43:BS:82:VAL:HG13	2.13	0.47
1:AA:434:U:H2’	1:AA:435:A:C8	2.50	0.47
1:AA:511:C:H4’	5:AD:40:HIS:NE2	2.28	0.47
1:AA:784:A:H5”	22:B0:1837:C:P	2.54	0.47
1:AA:1030:U:N3	1:AA:1031:C:O2	2.48	0.47
1:AA:1060:U:H2’	1:AA:1061:G:H8	1.79	0.47
1:AA:1323:G:H2’	1:AA:1324:A:H8	1.80	0.47
3:AB:27:LYS:N	3:AB:28:PRO:CD	2.77	0.47
11:AJ:7:ARG:HA	11:AJ:75:ASP:HA	1.97	0.47
16:AO:33:ALA:HA	16:AO:36:ASN:HD22	1.79	0.47
17:AP:42:ILE:HG23	17:AP:44:SER:H	1.78	0.47
22:B0:25:U:H5”	41:BQ:80:PRO:CB	2.45	0.47
22:B0:121:G:O6	22:B0:130:C:C4	2.67	0.47
22:B0:329:G:H5’	22:B0:330:A:OP2	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:455:C:C5’	22:B0:456:C:OP2	2.62	0.47
22:B0:527:C:H4’	22:B0:528:A:C5’	2.45	0.47
22:B0:611:C:C6	22:B0:611:C:O5’	2.59	0.47
22:B0:973:A:H1’	22:B0:1186:G:H21	1.76	0.47
22:B0:1106:G:O2’	22:B0:1107:G:H5’	2.15	0.47
22:B0:1116:G:H2’	22:B0:1117:C:C6	2.49	0.47
22:B0:1201:U:H2’	35:BJ:14:LYS:CD	2.44	0.47
22:B0:1202:G:H8	35:BJ:14:LYS:HZ2	1.62	0.47
22:B0:1430:G:H1	22:B0:1563:U:H3	1.62	0.47
22:B0:1653:G:O2’	22:B0:1654:A:OP2	2.31	0.47
22:B0:1880:U:O2’	22:B0:1881:C:H5’	2.14	0.47
22:B0:2123:G:C5’	22:B0:2124:G:O5’	2.61	0.47
22:B0:2138:G:N2	22:B0:2158:A:C5	2.82	0.47
22:B0:2358:A:C2’	22:B0:2359:C:O5’	2.63	0.47
22:B0:2560:A:O2’	34:BI:23:LYS:HE3	2.15	0.47
22:B0:2660:A:H2’	22:B0:2661:G:O4’	2.14	0.47
22:B0:2779:U:O2’	33:BH:116:ARG:HB2	2.15	0.47
24:B2:13:LYS:HE3	24:B2:31:GLU:O	2.14	0.47
26:BA:80:LEU:HD11	26:BA:89:ASN:CB	2.44	0.47
27:BB:4:LEU:HB3	27:BB:101:PHE:HE2	1.80	0.47
27:BB:83:ARG:HG3	27:BB:83:ARG:HH11	1.79	0.47
30:BE:25:ILE:HD13	30:BE:25:ILE:C	2.35	0.47
32:BG:129:GLU:HA	32:BG:129:GLU:OE1	2.15	0.47
33:BH:35:ARG:HE	33:BH:39:LYS:CD	2.26	0.47
33:BH:68:LYS:HA	33:BH:68:LYS:HZ3	1.78	0.47
37:BL:94:TYR:N	37:BL:94:TYR:CD1	2.83	0.47
40:BO:77:LYS:HG2	40:BO:77:LYS:O	2.15	0.47
41:BQ:10:ALA:C	41:BQ:12:SER:H	2.17	0.47
44:BT:29:ILE:HD13	44:BT:29:ILE:C	2.35	0.47
1:AA:437:U:H2’	1:AA:438:U:O4’	2.14	0.47
1:AA:941:G:O2’	1:AA:942:G:H5’	2.15	0.47
1:AA:1030:U:C2	1:AA:1031:C:C2	3.02	0.47
1:AA:1495:U:H4’	22:B0:1912:A:H5’	1.97	0.47
2:AU:32:C:H2’	2:AU:33:U:C6	2.48	0.47
2:AU:74:C:C3’	22:B0:2556:C:O4’	2.63	0.47
2:AW:16:U:HO2’	2:AW:17:U:H5”	1.79	0.47
3:AB:112:ARG:O	3:AB:116:LEU:HG	2.14	0.47
5:AD:149:LYS:HD2	5:AD:177:MET:SD	2.55	0.47
8:AG:21:LEU:HD12	8:AG:61:PHE:CE2	2.50	0.47
10:AI:41:GLU:O	10:AI:44:ARG:HG2	2.14	0.47
13:AL:29:LYS:C	13:AL:80:LEU:HD12	2.34	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
13:AL:31:GLY:O	13:AL:78:VAL:HA	2.14	0.47
15:AN:66:THR:HG23	15:AN:68:ARG:H	1.79	0.47
17:AP:45:GLU:HG3	17:AP:46:LYS:H	1.76	0.47
22:B0:204:A:H1'	22:B0:206:U:C5	2.50	0.47
22:B0:406:G:O2'	22:B0:407:G:H5'	2.13	0.47
22:B0:414:C:C2	22:B0:415:A:N7	2.83	0.47
22:B0:669:G:N3	22:B0:669:G:C2'	2.76	0.47
22:B0:681:G:H22	22:B0:795:C:H42	1.63	0.47
22:B0:745:G:O2'	22:B0:748:G:H1'	2.15	0.47
22:B0:994:C:H2'	22:B0:996:A:C8	2.49	0.47
22:B0:1057:A:C1'	25:B3:66:VAL:HB	2.43	0.47
22:B0:1082:U:H6	25:B3:80:LEU:C	2.18	0.47
22:B0:1266:G:C2'	22:B0:1267:U:OP2	2.62	0.47
22:B0:1427:A:H5'	22:B0:1428:C:C4	2.49	0.47
22:B0:1577:C:H4'	26:BA:62:ARG:H	1.76	0.47
22:B0:1630:A:H61	22:B0:1637:A:N6	2.12	0.47
22:B0:1660:G:C2	22:B0:1661:G:C5	3.02	0.47
22:B0:1940:U:H1'	22:B0:1941:C:H5	1.79	0.47
22:B0:1992:G:C5'	22:B0:1993:U:OP1	2.58	0.47
22:B0:2167:U:OP2	22:B0:2167:U:H4'	2.13	0.47
22:B0:2207:C:H2'	22:B0:2208:C:C6	2.50	0.47
22:B0:2329:U:H2'	22:B0:2330:G:H8	1.79	0.47
22:B0:2617:U:O5'	22:B0:2617:U:H6	1.97	0.47
22:B0:2877:G:H2'	22:B0:2878:U:O4'	2.14	0.47
22:B0:2899:A:N9	33:BH:137:PRO:HA	2.28	0.47
24:B2:39:GLU:N	24:B2:177:VAL:HB	2.29	0.47
25:B3:72:VAL:HG21	25:B3:87:VAL:HG11	1.96	0.47
25:B5:84:LYS:O	25:B5:88:GLU:HG3	2.14	0.47
26:BA:91:ALA:O	26:BA:103:ILE:N	2.47	0.47
28:BC:146:VAL:O	28:BC:146:VAL:HG12	2.15	0.47
32:BG:34:ILE:O	32:BG:34:ILE:CD1	2.62	0.47
32:BG:67:THR:HG22	32:BG:68:PHE:H	1.79	0.47
32:BG:108:ILE:H	32:BG:108:ILE:CD1	2.24	0.47
33:BH:7:LYS:NZ	33:BH:48:VAL:HG12	2.28	0.47
33:BH:59:ALA:HB2	33:BH:101:ILE:HD11	1.96	0.47
37:BL:96:ARG:NE	37:BL:116:VAL:HG12	2.30	0.47
39:BN:27:VAL:HG12	39:BN:88:ARG:HD2	1.96	0.47
39:BN:52:ARG:HG2	39:BN:52:ARG:HH11	1.80	0.47
40:BO:16:ILE:O	40:BO:17:LEU:HB2	2.15	0.47
40:BO:44:TYR:CE1	40:BO:45:ALA:HB2	2.50	0.47
41:BQ:20:VAL:HB	41:BQ:43:ALA:O	2.13	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
42:BR:93:LEU:O	42:BR:94:ASP:HB3	2.15	0.47
47:BX:8:GLN:NE2	47:BX:15:ARG:NH2	2.63	0.47
49:B1:36:LYS:HA	49:B1:48:TYR:CE2	2.50	0.47
1:AA:19:A:H2'	1:AA:20:U:C6	2.50	0.47
1:AA:188:C:H2'	1:AA:189:A:C1'	2.42	0.47
1:AA:366:A:O2'	1:AA:367:U:P	2.72	0.47
1:AA:571:U:H4'	1:AA:819:A:C6	2.50	0.47
1:AA:766:A:O2'	1:AA:767:A:H5'	2.15	0.47
1:AA:1278:G:H4'	1:AA:1279:G:O5'	2.14	0.47
2:AW:8:U:O5'	2:AW:8:U:H6	1.98	0.47
3:AB:99:MET:HA	3:AB:106:VAL:HG21	1.97	0.47
14:AM:97:ARG:HB3	14:AM:98:GLY:N	2.29	0.47
15:AN:40:ARG:HD2	20:AS:12:LEU:O	2.14	0.47
22:B0:79:C:H2'	22:B0:80:G:C8	2.50	0.47
22:B0:432:A:H2'	28:BC:69:ARG:CA	2.44	0.47
22:B0:457:A:H1'	22:B0:459:U:C5	2.49	0.47
22:B0:479:A:N6	22:B0:505:A:C2	2.82	0.47
22:B0:694:U:H3	22:B0:768:G:H1	1.60	0.47
22:B0:1272:A:O2'	22:B0:1273:U:C5'	2.63	0.47
22:B0:1418:G:H1	26:BA:101:ARG:NH2	2.12	0.47
22:B0:1423:A:O2'	26:BA:58:LYS:C	2.53	0.47
22:B0:1486:G:C8	26:BA:195:GLY:HA3	2.50	0.47
22:B0:1492:G:C4	26:BA:143:VAL:O	2.68	0.47
22:B0:1494:A:C2	26:BA:129:LEU:HB2	2.49	0.47
22:B0:1495:A:C2	26:BA:65:ASP:CB	2.97	0.47
22:B0:1498:C:N3	26:BA:155:ARG:NH2	2.62	0.47
22:B0:2223:G:O2'	22:B0:2224:G:H5'	2.15	0.47
22:B0:2235:G:H2'	22:B0:2236:U:C6	2.49	0.47
25:B3:57:ILE:HD11	25:B3:120:LYS:HD2	1.97	0.47
25:B3:93:ALA:N	25:B5:44:PRO:HG3	2.29	0.47
26:BA:160:TYR:HD2	26:BA:160:TYR:H	1.50	0.47
27:BB:26:VAL:O	27:BB:27:ILE:HD13	2.14	0.47
27:BB:48:ILE:HD13	27:BB:48:ILE:C	2.35	0.47
28:BC:28:VAL:N	35:BJ:17:LYS:HB2	2.29	0.47
35:BJ:110:VAL:CG2	35:BJ:131:ALA:HB2	2.45	0.47
36:BK:11:LYS:HG2	36:BK:12:MET:N	2.29	0.47
40:BO:16:ILE:HD13	40:BO:19:GLN:HE22	1.79	0.47
40:BO:24:TYR:HD2	40:BO:27:ARG:CG	2.22	0.47
40:BO:34:ALA:O	40:BO:35:PHE:O	2.32	0.47
42:BR:40:LYS:N	42:BR:40:LYS:CD	2.77	0.47
45:BU:24:ARG:HH11	45:BU:24:ARG:HB2	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BW:25:GLN:O	46:BW:28:LEU:HB2	2.14	0.47
1:AA:47:C:O4'	1:AA:365:U:N3	2.48	0.47
1:AA:57:G:H2'	1:AA:58:C:C6	2.50	0.47
1:AA:64:G:H4'	1:AA:65:A:C5'	2.39	0.47
1:AA:109:A:H1'	1:AA:327:A:C1'	2.44	0.47
1:AA:509:A:HO2'	1:AA:510:A:P	2.36	0.47
1:AA:517:G:C6	1:AA:531:U:C1'	2.97	0.47
1:AA:719:C:H5	12:AK:118:ASN:HB2	1.78	0.47
1:AA:914:A:O2'	1:AA:915:A:H5'	2.15	0.47
1:AA:1068:G:H2'	1:AA:1069:C:H6	1.79	0.47
1:AA:1145:A:O2'	1:AA:1146:A:C8	2.63	0.47
1:AA:1347:G:H1'	1:AA:1348:U:C5	2.48	0.47
1:AA:1349:A:H1'	1:AA:1374:A:N6	2.30	0.47
2:AU:70:C:H2'	2:AU:71:G:H8	1.80	0.47
2:AW:18:G:O2'	2:AW:19:G:O5'	2.32	0.47
2:AW:18:G:H1'	2:AW:57:G:H22	1.79	0.47
3:AB:65:LYS:HB2	3:AB:89:PHE:CE1	2.44	0.47
4:AC:115:VAL:O	4:AC:119:ILE:HG13	2.14	0.47
7:AF:10:VAL:HG22	7:AF:11:HIS:H	1.79	0.47
9:AH:35:ILE:O	9:AH:39:LEU:HD23	2.15	0.47
9:AH:51:GLU:HG3	9:AH:52:GLY:N	2.29	0.47
11:AJ:61:ALA:O	11:AJ:62:ARG:C	2.52	0.47
13:AL:33:CYS:SG	13:AL:77:SER:HB2	2.54	0.47
13:AL:43:LYS:HB3	13:AL:43:LYS:HZ3	1.80	0.47
14:AM:32:ILE:HD12	14:AM:55:LEU:HD12	1.96	0.47
20:AS:14:LEU:C	20:AS:14:LEU:HD12	2.35	0.47
22:B0:130:C:H6	22:B0:130:C:H5"	1.80	0.47
22:B0:184:C:N4	22:B0:212:G:H1	2.12	0.47
22:B0:204:A:O3'	22:B0:205:G:H4'	2.15	0.47
22:B0:239:C:H4'	22:B0:621:A:C2	2.49	0.47
22:B0:323:C:O5'	22:B0:324:A:OP1	2.33	0.47
22:B0:432:A:H3'	28:BC:69:ARG:HG3	1.95	0.47
22:B0:434:U:O2'	22:B0:435:C:C6	2.67	0.47
22:B0:527:C:N4	22:B0:2777:G:N2	2.63	0.47
22:B0:582:A:H5"	40:BO:10:ARG:CD	2.40	0.47
22:B0:763:G:N3	22:B0:763:G:H2'	2.29	0.47
22:B0:1020:A:H4'	22:B0:1021:A:O4'	2.15	0.47
22:B0:1056:G:C5'	25:B3:66:VAL:HG11	2.44	0.47
22:B0:1199:U:H2'	22:B0:1200:C:C6	2.50	0.47
22:B0:1287:A:H2'	22:B0:1288:G:C8	2.49	0.47
22:B0:1479:G:H5"	22:B0:1559:U:C5	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1486:G:C2'	26:BA:195:GLY:C	2.77	0.47
22:B0:1490:C:H4'	26:BA:162:GLN:C	2.35	0.47
22:B0:1498:C:C5	26:BA:63:ILE:CG1	2.98	0.47
22:B0:1579:A:N6	22:B0:1580:A:N3	2.62	0.47
22:B0:1581:A:H61	26:BA:95:TYR:CB	2.28	0.47
22:B0:1581:A:C1'	26:BA:68:ARG:NH1	2.78	0.47
22:B0:1581:A:O4'	26:BA:68:ARG:NH1	2.47	0.47
22:B0:1607:C:O2'	22:B0:1608:A:H5"	2.14	0.47
22:B0:1626:A:N3	22:B0:1634:A:H1'	2.29	0.47
22:B0:1656:C:H2'	22:B0:1657:U:H6	1.79	0.47
22:B0:1700:A:C2'	22:B0:1701:A:H5'	2.44	0.47
22:B0:1846:G:H22	22:B0:1895:C:H1'	1.80	0.47
22:B0:1942:C:H2'	22:B0:1943:U:C5	2.49	0.47
22:B0:1969:A:O2'	22:B0:1972:G:H1'	2.15	0.47
22:B0:2128:G:OP2	22:B0:2166:U:H4'	2.15	0.47
22:B0:2138:G:H4'	22:B0:2139:U:O5'	2.15	0.47
22:B0:2164:C:H1'	22:B0:2165:C:C6	2.50	0.47
22:B0:2296:U:O2'	22:B0:2297:A:O4'	2.33	0.47
22:B0:2304:G:O4'	22:B0:2304:G:OP1	2.32	0.47
22:B0:2357:G:O2'	22:B0:2358:A:C8	2.67	0.47
22:B0:2678:C:H6	27:BB:124:ARG:C	2.17	0.47
22:B0:2816:G:C4'	48:BZ:51:ARG:HH21	2.28	0.47
22:B0:2830:C:O2'	22:B0:2831:G:H5'	2.14	0.47
22:B0:2854:G:C5	22:B0:2855:C:C4	3.03	0.47
24:B2:14:VAL:HG12	24:B2:15:ASP:H	1.79	0.47
24:B2:99:LEU:O	24:B2:103:ILE:HG12	2.14	0.47
25:B5:40:VAL:O	25:B5:42:ALA:N	2.48	0.47
27:BB:13:ARG:O	39:BN:7:LEU:HD12	2.13	0.47
27:BB:124:ARG:HH11	27:BB:163:GLY:N	2.13	0.47
27:BB:157:LYS:HD2	27:BB:157:LYS:N	2.15	0.47
28:BC:65:THR:O	28:BC:67:ARG:N	2.48	0.47
28:BC:126:VAL:HG21	28:BC:155:GLU:OE1	2.13	0.47
28:BC:183:PHE:O	28:BC:184:ASP:C	2.53	0.47
29:BD:29:ARG:HG2	29:BD:30:VAL:N	2.30	0.47
29:BD:41:GLU:O	29:BD:42:ALA:HB3	2.14	0.47
29:BD:168:LEU:HD12	29:BD:168:LEU:C	2.35	0.47
34:BI:11:ALA:HB3	34:BI:85:VAL:HG22	1.97	0.47
34:BI:32:TYR:CD1	34:BI:33:ALA:N	2.82	0.47
35:BJ:96:LYS:HD3	35:BJ:96:LYS:N	2.29	0.47
35:BJ:127:VAL:HG23	35:BJ:131:ALA:CB	2.44	0.47
36:BK:20:LEU:HD12	36:BK:20:LEU:N	2.29	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BL:17:ARG:NH2	37:BL:18:GLN:N	2.62	0.47
37:BL:63:ARG:NH1	37:BL:64:ARG:NE	2.55	0.47
38:BM:48:LEU:HD12	38:BM:48:LEU:N	2.29	0.47
40:BO:36:GLN:HA	40:BO:39:ILE:CG2	2.44	0.47
40:BO:70:GLN:O	40:BO:71:ASN:ND2	2.47	0.47
41:BQ:15:GLN:HA	41:BQ:15:GLN:NE2	2.30	0.47
41:BQ:56:ALA:C	41:BQ:58:ALA:N	2.66	0.47
44:BT:60:VAL:HG13	44:BT:60:VAL:O	2.14	0.47
44:BT:77:VAL:HG22	44:BT:89:ILE:HG13	1.95	0.47
45:BU:17:ALA:HB2	45:BU:35:ILE:HA	1.96	0.47
48:BZ:36:LYS:HD3	48:BZ:36:LYS:C	2.35	0.47
1:AA:99:C:O2'	1:AA:101:A:P	2.72	0.47
1:AA:141:G:O2'	1:AA:142:G:H5'	2.14	0.47
1:AA:279:A:H5"	1:AA:280:C:O5'	2.15	0.47
1:AA:908:A:H2'	1:AA:909:A:C8	2.50	0.47
1:AA:1101:A:O2'	1:AA:1102:A:O4'	2.30	0.47
1:AA:1169:A:H2'	1:AA:1171:A:O4'	2.15	0.47
1:AA:1368:A:H5"	10:AI:112:ARG:CG	2.45	0.47
2:AW:16:U:C5'	2:AW:17:U:OP1	2.58	0.47
6:AE:12:GLU:OE1	6:AE:12:GLU:N	2.48	0.47
6:AE:83:PRO:HA	6:AE:95:MET:O	2.15	0.47
10:AI:119:LYS:O	10:AI:120:ALA:HB3	2.15	0.47
12:AK:19:VAL:HG13	12:AK:82:GLU:O	2.14	0.47
12:AK:44:ALA:CB	12:AK:69:CYS:HB2	2.39	0.47
16:AO:9:LYS:O	16:AO:13:GLU:HG2	2.15	0.47
16:AO:70:LYS:HG3	16:AO:71:ARG:N	2.29	0.47
22:B0:504:A:C5'	22:B0:505:A:OP2	2.62	0.47
22:B0:531:C:N4	22:B0:562:U:O2'	2.46	0.47
22:B0:959:A:O2'	22:B0:2457:U:H4'	2.15	0.47
22:B0:1016:G:H2'	22:B0:1017:G:H8	1.79	0.47
22:B0:1083:U:P	25:B3:82:GLU:N	2.88	0.47
22:B0:1581:A:H2	26:BA:97:ASP:OD2	1.97	0.47
22:B0:1748:C:H2'	22:B0:1749:A:C8	2.50	0.47
22:B0:1944:U:H1'	22:B0:1955:U:H4'	1.97	0.47
22:B0:1999:C:H2'	22:B0:2000:C:C6	2.49	0.47
22:B0:2078:C:H1'	22:B0:2434:A:H1'	1.96	0.47
22:B0:2328:A:N6	22:B0:2386:A:N6	2.62	0.47
22:B0:2563:U:H2'	22:B0:2565:A:OP2	2.14	0.47
22:B0:2680:U:H5"	27:BB:114:LYS:CE	2.34	0.47
22:B0:2843:G:H2'	22:B0:2844:G:H8	1.78	0.47
22:B0:2879:A:O2'	22:B0:2881:U:H5	1.97	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2889:C:H2'	22:B0:2890:G:H5'	1.97	0.47
22:B0:2899:A:H2'	22:B0:2900:C:C6	2.50	0.47
24:B2:193:VAL:HA	24:B2:196:LYS:HE2	1.96	0.47
25:B3:50:GLU:HB3	25:B3:52:THR:HG23	1.96	0.47
28:BC:158:PHE:HD2	28:BC:161:ALA:CB	2.27	0.47
30:BE:116:LEU:HD21	30:BE:120:ILE:HD13	1.96	0.47
41:BQ:48:LYS:C	41:BQ:50:VAL:N	2.67	0.47
42:BR:40:LYS:O	42:BR:44:LYS:HG2	2.15	0.47
45:BU:21:GLY:O	45:BU:23:LYS:HG3	2.14	0.47
48:BZ:31:LYS:HE2	48:BZ:47:TYR:CG	2.49	0.47
1:AA:38:G:H4'	1:AA:547:A:C6	2.49	0.47
1:AA:678:U:H2'	1:AA:679:C:C6	2.50	0.47
4:AC:194:VAL:HG12	4:AC:195:ILE:N	2.30	0.47
10:AI:86:LEU:O	10:AI:93:LEU:HD12	2.15	0.47
14:AM:2:ARG:HG2	29:BD:133:GLU:OE1	2.14	0.47
16:AO:46:LYS:H	16:AO:46:LYS:HD2	1.78	0.47
22:B0:1492:G:C2'	26:BA:145:MET:HG2	2.44	0.47
22:B0:1495:A:OP2	26:BA:190:THR:O	2.32	0.47
22:B0:1580:A:P	26:BA:117:SER:CB	2.88	0.47
22:B0:2163:G:O2'	22:B0:2164:C:P	2.72	0.47
22:B0:2329:U:H5'	45:BU:9:THR:CA	2.42	0.47
22:B0:2377:A:H2'	22:B0:2378:A:C8	2.50	0.47
22:B0:2495:G:H5"	36:BK:80:VAL:CG1	2.45	0.47
22:B0:2592:G:H2'	22:B0:2593:U:H6	1.80	0.47
22:B0:2638:G:H1'	22:B0:2778:A:N6	2.29	0.47
22:B0:2644:G:O2'	22:B0:2645:G:OP2	2.32	0.47
25:B3:51:LYS:HE2	25:B5:16:VAL:HA	1.96	0.47
25:B3:72:VAL:HG13	25:B3:94:LEU:CD2	2.45	0.47
26:BA:106:PRO:HD2	26:BA:109:LEU:CD2	2.44	0.47
26:BA:140:VAL:CG2	26:BA:162:GLN:HA	2.43	0.47
26:BA:142:ASN:N	26:BA:154:ALA:CB	2.77	0.47
27:BB:83:ARG:HG3	27:BB:83:ARG:NH1	2.29	0.47
27:BB:157:LYS:H	27:BB:157:LYS:CD	2.12	0.47
28:BC:50:ALA:HB1	28:BC:67:ARG:O	2.14	0.47
28:BC:95:LYS:HB2	35:BJ:27:LEU:CD2	2.34	0.47
29:BD:42:ALA:O	29:BD:43:ILE:C	2.53	0.47
32:BG:126:ARG:HG3	32:BG:126:ARG:HH11	1.80	0.47
33:BH:100:VAL:C	33:BH:102:GLU:H	2.17	0.47
35:BJ:76:GLU:HB3	35:BJ:108:ALA:CB	2.45	0.47
40:BO:11:ALA:HA	40:BO:14:LYS:HE2	1.96	0.47
45:BU:37:VAL:CG2	45:BU:38:ARG:H	2.27	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
45:BU:77:LYS:O	45:BU:78:PHE:O	2.33	0.47
1:AA:934:C:O2	1:AA:938:A:N6	2.48	0.47
1:AA:975:A:N6	11:AJ:52:LEU:CB	2.75	0.47
1:AA:1256:A:N1	1:AA:1278:G:C6	2.83	0.47
1:AA:1319:A:N6	1:AA:1323:G:C2	2.84	0.47
1:AA:1343:G:P	10:AI:127:SER:HA	2.54	0.47
1:AA:1376:U:H2'	1:AA:1377:A:C8	2.50	0.47
1:AA:1431:A:N6	1:AA:1469:C:H42	2.12	0.47
1:AA:1502:A:N3	1:AA:1504:G:H2'	2.29	0.47
3:AB:6:ARG:HG2	3:AB:6:ARG:HH11	1.79	0.47
5:AD:162:GLU:O	5:AD:163:GLN:HB2	2.15	0.47
5:AD:183:ARG:HH11	5:AD:183:ARG:HG3	1.80	0.47
7:AF:14:GLN:HE21	7:AF:17:GLN:HB2	1.80	0.47
7:AF:18:VAL:O	7:AF:21:MET:HG2	2.14	0.47
8:AG:30:MET:HE1	8:AG:35:LYS:HD2	1.96	0.47
8:AG:119:LEU:O	8:AG:123:LEU:HG	2.15	0.47
10:AI:114:LYS:HB2	10:AI:120:ALA:HA	1.97	0.47
10:AI:118:ARG:NH1	10:AI:124:PRO:HB3	2.30	0.47
10:AI:118:ARG:HB2	10:AI:119:LYS:HD2	1.96	0.47
12:AK:27:ASN:O	12:AK:57:SER:HB3	2.15	0.47
12:AK:81:LEU:O	12:AK:107:THR:HG22	2.15	0.47
17:AP:8:ARG:HB3	17:AP:28:ARG:HH22	1.80	0.47
18:AQ:61:ARG:CG	18:AQ:75:VAL:HG21	2.45	0.47
21:AT:10:ALA:O	21:AT:14:GLU:HG2	2.15	0.47
22:B0:23:G:O2'	22:B0:24:G:H5'	2.14	0.47
22:B0:165:A:N3	22:B0:165:A:C2'	2.78	0.47
22:B0:223:A:H4'	22:B0:420:C:O2'	2.13	0.47
22:B0:265:A:O2'	22:B0:266:G:O5'	2.29	0.47
22:B0:482:A:H5'	43:BS:54:PRO:O	2.15	0.47
22:B0:649:G:H4'	22:B0:2352:A:OP1	2.15	0.47
22:B0:945:A:H1'	22:B0:2448:A:N3	2.30	0.47
22:B0:1418:G:H1	26:BA:101:ARG:CZ	2.27	0.47
22:B0:1436:G:H1'	22:B0:1477:A:N3	2.30	0.47
22:B0:1493:A:H3'	26:BA:131:MET:HE3	1.92	0.47
22:B0:1580:A:OP1	26:BA:117:SER:CB	2.63	0.47
22:B0:1761:C:O5'	22:B0:1761:C:H6	1.98	0.47
22:B0:1844:C:H42	22:B0:1896:G:H1	1.63	0.47
22:B0:2049:G:H1	22:B0:2619:C:H42	1.63	0.47
22:B0:2336:A:O2'	22:B0:2337:G:P	2.72	0.47
22:B0:2537:U:H2'	22:B0:2538:C:C6	2.50	0.47
22:B0:2821:A:H2'	22:B0:2822:G:O4'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
23:B9:56:G:C4’	23:B9:57:A:C8	2.98	0.47
24:B2:92:GLU:C	24:B2:93:LEU:HD12	2.36	0.47
26:BA:65:ASP:C	26:BA:65:ASP:OD1	2.53	0.47
28:BC:30:GLN:HB2	35:BJ:18:ARG:CZ	2.45	0.47
29:BD:50:ASP:C	29:BD:52:ALA:N	2.67	0.47
29:BD:110:ILE:HD12	29:BD:110:ILE:H	1.77	0.47
33:BH:111:LYS:HA	33:BH:111:LYS:CE	2.45	0.47
33:BH:135:GLN:C	33:BH:137:PRO:HD3	2.34	0.47
34:BI:49:ARG:HG3	34:BI:49:ARG:HH11	1.79	0.47
34:BI:64:ARG:HD2	34:BI:79:PHE:CD2	2.50	0.47
34:BI:87:LEU:C	34:BI:87:LEU:HD12	2.36	0.47
35:BJ:101:ILE:O	35:BJ:101:ILE:HD13	2.15	0.47
35:BJ:108:ALA:O	35:BJ:109:LYS:HB3	2.14	0.47
35:BJ:109:LYS:HA	35:BJ:126:ARG:HE	1.80	0.47
36:BK:14:LYS:CG	36:BK:15:GLY:H	2.22	0.47
37:BL:97:ILE:HG13	37:BL:113:ILE:N	2.30	0.47
39:BN:9:GLN:HE21	39:BN:9:GLN:N	2.11	0.47
39:BN:100:ARG:HA	39:BN:100:ARG:CZ	2.44	0.47
42:BR:13:ALA:HB3	42:BR:33:LYS:HD2	1.97	0.47
1:AA:400:C:H2’	1:AA:401:C:C6	2.50	0.46
1:AA:820:U:C5’	1:AA:821:G:OP2	2.63	0.46
1:AA:839:U:O2	1:AA:839:U:C2’	2.61	0.46
1:AA:981:U:H2’	1:AA:982:U:C5	2.50	0.46
1:AA:1089:G:H1’	1:AA:1167:A:H61	1.79	0.46
1:AA:1234:C:C5’	1:AA:1364:U:O2’	2.63	0.46
1:AA:1258:G:N1	1:AA:1278:G:N2	2.63	0.46
2:AU:8:U:O5’	2:AU:8:U:H6	1.98	0.46
2:AV:20:G:C2’	2:AV:21:A:H5”	2.45	0.46
3:AB:16:GLY:CA	3:AB:39:ILE:HA	2.43	0.46
5:AD:52:VAL:O	5:AD:56:GLU:HB2	2.15	0.46
5:AD:170:LEU:HD21	5:AD:181:PHE:CD1	2.50	0.46
6:AE:19:ARG:HG3	6:AE:19:ARG:HH11	1.80	0.46
7:AF:77:THR:HG23	7:AF:78:PHE:CD1	2.50	0.46
12:AK:53:GLY:O	12:AK:56:LYS:HG2	2.15	0.46
13:AL:98:ARG:HA	13:AL:103:CYS:SG	2.56	0.46
16:AO:32:THR:HG22	16:AO:36:ASN:HD21	1.79	0.46
18:AQ:13:SER:OG	18:AQ:15:LYS:HG2	2.15	0.46
20:AS:4:LEU:CD2	20:AS:8:PRO:HG3	2.43	0.46
22:B0:74:A:H4’	22:B0:75:G:O5’	2.15	0.46
22:B0:1355:G:H2’	22:B0:1356:G:C8	2.48	0.46
22:B0:1418:G:O6	26:BA:101:ARG:CB	2.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1421:G:C5	26:BA:149:LYS:HG3	2.48	0.46
22:B0:1578:U:O3'	26:BA:64:VAL:O	2.34	0.46
22:B0:1772:A:H2'	22:B0:1773:A:H5'	1.96	0.46
22:B0:1960:A:O2'	22:B0:1961:C:H5'	2.14	0.46
22:B0:2157:G:O2'	22:B0:2158:A:O4'	2.33	0.46
22:B0:2749:A:N1	22:B0:2750:A:N6	2.62	0.46
26:BA:74:PRO:HB3	26:BA:116:GLN:HG3	1.96	0.46
27:BB:60:VAL:O	27:BB:63:PRO:HD2	2.14	0.46
28:BC:108:ILE:HG13	28:BC:181:ILE:HG12	1.97	0.46
28:BC:178:VAL:HG13	28:BC:179:SER:N	2.29	0.46
29:BD:116:LEU:H	29:BD:116:LEU:CD2	2.21	0.46
32:BG:18:ASN:CB	32:BG:19:PRO:HA	2.45	0.46
37:BL:48:VAL:HG13	37:BL:94:TYR:HE2	1.80	0.46
39:BN:91:VAL:O	39:BN:92:ARG:NE	2.48	0.46
40:BO:16:ILE:HG22	40:BO:17:LEU:N	2.30	0.46
1:AA:975:A:H5'	1:AA:975:A:H8	1.80	0.46
1:AA:1049:U:H5'	1:AA:1201:A:OP2	2.15	0.46
1:AA:1065:U:HO2'	1:AA:1066:C:P	2.37	0.46
1:AA:1126:U:H1'	1:AA:1280:A:H61	1.79	0.46
1:AA:1347:G:C2'	1:AA:1348:U:OP2	2.63	0.46
1:AA:1528:U:H4'	1:AA:1529:G:O5'	2.15	0.46
2:AW:37:G:H2'	2:AW:38:A:C8	2.50	0.46
4:AC:190:THR:HG22	4:AC:191:THR:N	2.30	0.46
4:AC:190:THR:HG21	4:AC:192:TYR:CZ	2.50	0.46
5:AD:8:LEU:HD11	5:AD:29:THR:N	2.30	0.46
6:AE:83:PRO:HG3	6:AE:97:PRO:HD2	1.96	0.46
8:AG:37:THR:O	8:AG:41:ILE:HD13	2.15	0.46
9:AH:86:LYS:CE	9:AH:91:LEU:HG	2.44	0.46
10:AI:15:ALA:HB3	10:AI:67:LYS:HE3	1.98	0.46
11:AJ:24:GLU:O	11:AJ:28:THR:HG22	2.15	0.46
11:AJ:28:THR:HA	11:AJ:31:ARG:NH1	2.30	0.46
11:AJ:80:THR:H	11:AJ:83:THR:CB	2.28	0.46
13:AL:109:ARG:NH1	13:AL:111:GLN:HG3	2.29	0.46
15:AN:65:GLN:HG2	15:AN:82:LYS:HD2	1.97	0.46
22:B0:110:G:O2'	22:B0:111:A:H5'	2.16	0.46
22:B0:121:G:OP1	22:B0:140:C:C5	2.68	0.46
22:B0:300:A:H5"	43:BS:73:ASN:HA	1.96	0.46
22:B0:589:U:H3'	28:BC:87:ALA:HA	1.96	0.46
22:B0:666:A:H2'	22:B0:667:U:C6	2.51	0.46
22:B0:977:G:O2'	22:B0:978:G:H5'	2.15	0.46
22:B0:1085:A:N7	25:B3:88:GLU:HG3	2.29	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1203:U:H5'	35:BJ:10:GLU:O	2.15	0.46
22:B0:1494:A:P	26:BA:189:ALA:HB2	2.55	0.46
22:B0:1500:A:H61	26:BA:156:SER:H	1.61	0.46
22:B0:1849:G:H2'	22:B0:1850:G:C8	2.51	0.46
22:B0:1916:A:O2'	22:B0:1917:U:H5'	2.15	0.46
22:B0:2128:G:P	22:B0:2166:U:O5'	2.73	0.46
22:B0:2347:C:C5	22:B0:2381:A:N1	2.83	0.46
22:B0:2677:G:C4'	27:BB:160:LYS:HB2	2.44	0.46
22:B0:2894:U:O4'	33:BH:6:ALA:HB3	2.16	0.46
22:B0:2895:C:N4	33:BH:11:VAL:O	2.48	0.46
25:B3:4:LYS:HE3	25:B3:7:ILE:HD12	1.97	0.46
25:B5:103:ALA:HA	25:B5:106:LEU:HD12	1.96	0.46
26:BA:145:MET:HB3	26:BA:146:LYS:HZ1	1.79	0.46
26:BA:250:GLN:O	26:BA:251:THR:HB	2.14	0.46
28:BC:134:LEU:HD11	28:BC:158:PHE:HE2	1.80	0.46
32:BG:123:ALA:HA	32:BG:126:ARG:HD3	1.97	0.46
33:BH:15:TRP:HB2	33:BH:53:TYR:CE1	2.50	0.46
33:BH:58:ASN:HB3	33:BH:127:GLY:O	2.15	0.46
33:BH:109:LEU:HD23	33:BH:110:PRO:O	2.15	0.46
35:BJ:32:GLY:C	35:BJ:36:LYS:HZ2	2.18	0.46
35:BJ:134:ALA:O	35:BJ:136:GLU:HB3	2.15	0.46
38:BM:3:LYS:HD3	45:BU:74:LYS:HE3	1.97	0.46
38:BM:62:LEU:HD23	38:BM:62:LEU:C	2.35	0.46
39:BN:48:ALA:O	39:BN:61:ARG:NH1	2.48	0.46
40:BO:102:LYS:NZ	40:BO:103:VAL:HG13	2.29	0.46
43:BS:10:VAL:O	43:BS:11:ILE:HD13	2.15	0.46
44:BT:26:PHE:HE2	44:BT:89:ILE:HD13	1.79	0.46
44:BT:80:HIS:CG	44:BT:81:PRO:HD2	2.50	0.46
48:BZ:31:LYS:HD3	48:BZ:31:LYS:N	2.20	0.46
1:AA:184:G:H2'	1:AA:185:U:C6	2.50	0.46
1:AA:234:C:H2'	1:AA:235:C:C6	2.51	0.46
1:AA:398:U:O2'	1:AA:399:G:H5'	2.15	0.46
1:AA:477:C:H2'	1:AA:478:A:H8	1.80	0.46
1:AA:501:C:H2'	1:AA:502:A:H8	1.80	0.46
1:AA:719:C:H6	12:AK:117:HIS:O	1.98	0.46
1:AA:913:A:O2'	1:AA:914:A:P	2.73	0.46
1:AA:1285:A:O2'	1:AA:1286:U:C5'	2.62	0.46
1:AA:1308:U:H2'	1:AA:1309:G:H8	1.80	0.46
1:AA:1352:C:H2'	1:AA:1353:G:H8	1.78	0.46
2:AU:74:C:C2'	22:B0:2556:C:C1'	2.92	0.46
3:AB:54:ALA:O	3:AB:58:LYS:HG2	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
6:AE:81:GLN:NE2	6:AE:81:GLN:H	2.13	0.46
7:AF:10:VAL:HG11	7:AF:21:MET:SD	2.55	0.46
9:AH:31:LEU:O	9:AH:35:ILE:HG12	2.16	0.46
9:AH:74:ILE:O	9:AH:74:ILE:HG23	2.15	0.46
11:AJ:58:ASN:ND2	11:AJ:61:ALA:HB2	2.31	0.46
14:AM:21:ILE:HB	14:AM:24:VAL:HG22	1.97	0.46
14:AM:75:SER:O	14:AM:79:LEU:HD22	2.14	0.46
22:B0:121:G:O5'	22:B0:121:G:H8	1.97	0.46
22:B0:161:A:C2	22:B0:163:C:H1'	2.50	0.46
22:B0:352:A:H5"	22:B0:353:C:C5'	2.46	0.46
22:B0:479:A:N3	22:B0:481:G:O4'	2.48	0.46
22:B0:480:A:O2'	43:BS:53:GLN:CB	2.60	0.46
22:B0:621:A:H2'	22:B0:622:G:O4'	2.15	0.46
22:B0:634:C:H2'	22:B0:635:C:H6	1.77	0.46
22:B0:658:U:H2'	22:B0:659:G:C8	2.50	0.46
22:B0:885:C:N4	22:B0:892:A:N1	2.63	0.46
22:B0:1084:A:H2	22:B0:1105:U:H2'	1.78	0.46
22:B0:1245:G:H2'	22:B0:1246:A:C8	2.50	0.46
22:B0:1347:A:OP2	22:B0:1382:G:N2	2.48	0.46
22:B0:1370:C:O5'	22:B0:1370:C:H6	1.98	0.46
22:B0:1473:C:H3'	22:B0:1474:U:C5'	2.46	0.46
22:B0:1486:G:N2	22:B0:1503:G:C2	2.83	0.46
22:B0:1956:U:O5'	22:B0:1956:U:H6	1.97	0.46
22:B0:2126:A:O2'	22:B0:2167:U:O5'	2.33	0.46
22:B0:2130:U:H2'	24:B2:178:ASP:CB	2.35	0.46
22:B0:2217:G:O2'	22:B0:2223:G:H5'	2.15	0.46
22:B0:2484:G:O2'	22:B0:2485:G:H5'	2.15	0.46
22:B0:2494:G:O2'	22:B0:2495:G:H5'	2.15	0.46
23:B9:85:G:O6	23:B9:91:C:N3	2.48	0.46
24:B2:214:SER:O	24:B2:215:THR:HG22	2.16	0.46
29:BD:38:GLY:O	29:BD:39:VAL:C	2.53	0.46
30:BE:70:LEU:O	30:BE:74:MET:HG3	2.16	0.46
33:BH:1:MET:HG3	33:BH:2:LYS:N	2.30	0.46
33:BH:90:GLU:C	33:BH:92:MET:H	2.18	0.46
33:BH:105:VAL:HG22	33:BH:105:VAL:O	2.16	0.46
35:BJ:31:GLY:O	35:BJ:32:GLY:O	2.34	0.46
36:BK:50:ARG:HD2	36:BK:50:ARG:C	2.35	0.46
39:BN:12:MET:HG3	39:BN:78:PRO:HG2	1.96	0.46
41:BQ:36:LEU:HD11	41:BQ:44:ALA:O	2.15	0.46
41:BQ:50:VAL:HG21	41:BQ:103:ILE:CG2	2.46	0.46
42:BR:13:ALA:HB2	46:BW:32:ALA:C	2.35	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
43:BS:61:GLU:HG2	43:BS:63:ALA:N	2.22	0.46
45:BU:30:VAL:HG22	45:BU:31:LEU:CD2	2.33	0.46
47:BX:58:GLU:OE1	47:BX:58:GLU:N	2.42	0.46
49:B1:28:THR:HG23	49:B1:28:THR:O	2.15	0.46
1:AA:281:G:OP2	1:AA:281:G:H8	1.98	0.46
1:AA:485:U:HO2'	1:AA:486:U:H5	1.55	0.46
1:AA:591:U:H2'	1:AA:592:G:H8	1.79	0.46
1:AA:688:G:H2'	1:AA:689:C:H6	1.81	0.46
1:AA:736:C:H2'	1:AA:737:C:C6	2.51	0.46
1:AA:1067:A:H4'	1:AA:1068:G:O5'	2.16	0.46
2:AW:32:C:H2'	2:AW:33:U:C6	2.50	0.46
4:AC:121:SER:O	4:AC:125:ARG:HG3	2.14	0.46
7:AF:2:ARG:NE	7:AF:68:GLN:HG2	2.31	0.46
12:AK:92:ARG:O	12:AK:96:ILE:HG13	2.15	0.46
15:AN:68:ARG:HE	15:AN:70:HIS:HB3	1.81	0.46
22:B0:197:A:C2	22:B0:2434:A:N6	2.84	0.46
22:B0:284:U:H2'	22:B0:285:G:C8	2.51	0.46
22:B0:447:A:N6	22:B0:473:G:N3	2.62	0.46
22:B0:531:C:C5	22:B0:562:U:H4'	2.51	0.46
22:B0:603:A:H5'	22:B0:604:G:OP1	2.15	0.46
22:B0:655:A:O2'	22:B0:656:G:O4'	2.34	0.46
22:B0:956:G:N2	22:B0:959:A:H3'	2.30	0.46
22:B0:1351:C:N3	22:B0:1380:G:O6	2.48	0.46
22:B0:1492:G:H22	26:BA:151:GLY:H	1.63	0.46
22:B0:1494:A:N9	26:BA:131:MET:HG3	2.30	0.46
22:B0:1581:A:H1'	26:BA:68:ARG:NH1	2.30	0.46
22:B0:1660:G:N2	22:B0:2000:C:O2	2.46	0.46
22:B0:1966:A:N3	22:B0:2592:G:O2'	2.49	0.46
22:B0:2127:G:H5'	22:B0:2166:U:O3'	2.16	0.46
22:B0:2135:A:N7	22:B0:2136:G:C3'	2.78	0.46
22:B0:2418:A:H2'	22:B0:2419:U:C6	2.51	0.46
22:B0:2515:C:C5	27:BB:152:PRO:HB3	2.50	0.46
22:B0:2685:G:H2'	22:B0:2686:G:C8	2.50	0.46
22:B0:2781:A:P	33:BH:116:ARG:HG3	2.55	0.46
24:B2:174:ILE:HD11	24:B2:184:LEU:O	2.16	0.46
25:B3:89:SER:O	25:B5:40:VAL:HG11	2.14	0.46
25:B5:59:LYS:HB2	25:B5:116:GLU:O	2.15	0.46
26:BA:40:GLY:HA2	26:BA:45:ASN:HD22	1.80	0.46
28:BC:67:ARG:CZ	28:BC:67:ARG:HB3	2.44	0.46
29:BD:69:ALA:HB2	29:BD:84:ILE:HD11	1.97	0.46
29:BD:71:LYS:HZ2	29:BD:81:GLY:H	1.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
34:BI:80:ASP:OD2	39:BN:69:VAL:HG12	2.16	0.46
35:BJ:101:ILE:HD13	35:BJ:101:ILE:C	2.36	0.46
39:BN:12:MET:CE	39:BN:79:VAL:HA	2.45	0.46
45:BU:36:ILE:HD13	45:BU:68:PHE:HD2	1.79	0.46
1:AA:14:U:O5'	1:AA:14:U:H6	1.99	0.46
1:AA:764:C:H2'	1:AA:765:G:O4'	2.15	0.46
1:AA:890:G:H2'	1:AA:891:U:OP2	2.16	0.46
1:AA:1036:A:H2'	1:AA:1037:C:C6	2.50	0.46
1:AA:1218:C:H2'	1:AA:1219:A:H8	1.79	0.46
1:AA:1483:A:H3'	1:AA:1484:C:C6	2.50	0.46
2:AU:16:U:C5'	2:AU:17:U:OP1	2.58	0.46
2:AV:8:U:O5'	2:AV:8:U:H6	1.99	0.46
4:AC:102:ILE:O	4:AC:102:ILE:HG12	2.15	0.46
10:AI:26:LYS:C	10:AI:27:ILE:HD12	2.36	0.46
12:AK:53:GLY:O	12:AK:56:LYS:HE2	2.16	0.46
12:AK:85:VAL:CG1	12:AK:92:ARG:HD2	2.46	0.46
21:AT:82:ILE:HG13	21:AT:83:ASN:N	2.30	0.46
22:B0:79:C:H2'	22:B0:80:G:H8	1.80	0.46
22:B0:184:C:O2'	22:B0:217:A:N3	2.43	0.46
22:B0:192:C:H5	22:B0:203:A:H2	1.63	0.46
22:B0:500:G:H22	22:B0:503:A:C5'	2.13	0.46
22:B0:590:A:OP1	28:BC:89:PRO:CD	2.62	0.46
22:B0:658:U:H2'	22:B0:659:G:H8	1.80	0.46
22:B0:659:G:H2'	22:B0:660:C:C6	2.50	0.46
22:B0:687:C:H2'	22:B0:688:U:C6	2.50	0.46
22:B0:1083:U:N1	25:B3:84:LYS:HA	2.29	0.46
22:B0:1341:G:H8	22:B0:1341:G:OP1	1.98	0.46
22:B0:1421:G:N2	26:BA:145:MET:HB2	2.29	0.46
22:B0:1498:C:N3	26:BA:151:GLY:HA3	2.31	0.46
22:B0:1608:A:H4'	22:B0:1609:A:O5'	2.14	0.46
22:B0:1747:U:H2'	22:B0:1748:C:C6	2.50	0.46
22:B0:1799:G:N2	22:B0:1819:A:OP2	2.49	0.46
22:B0:1922:G:H2'	22:B0:1923:U:H6	1.79	0.46
22:B0:2164:C:O2'	22:B0:2165:C:O2	2.27	0.46
22:B0:2165:C:O2	22:B0:2165:C:O4'	2.32	0.46
22:B0:2303:G:C2	22:B0:2304:G:N7	2.83	0.46
22:B0:2533:U:H2'	22:B0:2534:A:O4'	2.15	0.46
22:B0:2780:G:O5'	33:BH:116:ARG:NH1	2.48	0.46
23:B9:23:G:O2'	23:B9:24:G:H5'	2.16	0.46
25:B5:57:ILE:HG23	25:B5:92:ALA:CA	2.45	0.46
26:BA:73:ILE:O	26:BA:117:SER:O	2.33	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:152:GLN:H	26:BA:155:ARG:HH22	1.63	0.46
26:BA:172:THR:O	26:BA:181:ARG:O	2.33	0.46
28:BC:90:GLN:NE2	28:BC:90:GLN:H	2.14	0.46
28:BC:102:ARG:O	28:BC:105:LEU:N	2.48	0.46
29:BD:9:ASP:H	29:BD:12:VAL:HG22	1.80	0.46
29:BD:107:VAL:HG23	29:BD:107:VAL:O	2.16	0.46
30:BE:140:ILE:HD12	30:BE:140:ILE:C	2.35	0.46
32:BG:123:ALA:HA	32:BG:126:ARG:CD	2.44	0.46
34:BI:3:GLN:H	34:BI:6:THR:HG21	1.80	0.46
35:BJ:81:ASP:O	35:BJ:82:LEU:HB2	2.15	0.46
37:BL:52:ILE:HD13	37:BL:94:TYR:HB3	1.98	0.46
39:BN:109:ILE:HG13	39:BN:110:LYS:HD2	1.97	0.46
40:BO:102:LYS:HE3	40:BO:102:LYS:H	1.81	0.46
41:BQ:86:MET:CB	41:BQ:96:ILE:HD11	2.46	0.46
42:BR:93:LEU:CD2	42:BR:95:PHE:H	2.27	0.46
45:BU:24:ARG:C	45:BU:58:LEU:HD11	2.35	0.46
45:BU:38:ARG:HA	45:BU:38:ARG:NH1	2.31	0.46
1:AA:97:G:H2'	1:AA:98:A:O4'	2.15	0.46
1:AA:105:G:H2'	1:AA:106:C:C6	2.51	0.46
1:AA:373:A:O2'	1:AA:451:A:C5	2.68	0.46
1:AA:517:G:H4'	1:AA:519:C:N3	2.31	0.46
1:AA:990:C:O2'	1:AA:991:U:P	2.73	0.46
2:AV:37:G:H2'	2:AV:38:A:C8	2.50	0.46
3:AB:100:LEU:N	3:AB:100:LEU:HD12	2.30	0.46
3:AB:163:ILE:HD12	3:AB:163:ILE:C	2.36	0.46
6:AE:61:LYS:O	6:AE:65:LYS:HG2	2.16	0.46
6:AE:131:ASN:CB	6:AE:134:ASN:HD22	2.29	0.46
10:AI:80:HIS:O	10:AI:84:ARG:HG2	2.15	0.46
16:AO:26:VAL:O	16:AO:30:LEU:HD13	2.15	0.46
19:AR:35:SER:HB2	19:AR:37:LYS:NZ	2.30	0.46
21:AT:24:ARG:O	21:AT:27:MET:HB3	2.16	0.46
22:B0:39:G:H1'	28:BC:41:GLN:OE1	2.15	0.46
22:B0:752:A:H5"	22:B0:753:A:OP1	2.15	0.46
22:B0:1086:A:H5'	22:B0:1104:C:H1'	1.97	0.46
22:B0:1244:A:H2'	35:BJ:18:ARG:NH1	2.17	0.46
22:B0:1263:U:H2'	22:B0:1264:A:O4'	2.16	0.46
22:B0:1418:G:C1'	26:BA:99:GLU:HA	2.46	0.46
22:B0:1485:C:H5"	26:BA:87:SER:H	1.78	0.46
22:B0:1495:A:N1	26:BA:64:VAL:CG1	2.78	0.46
22:B0:1497:U:H1'	26:BA:83:ASP:CG	2.35	0.46
22:B0:1852:U:H1'	22:B0:1891:G:O6	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2132:U:O4	24:B2:9:VAL:CG1	2.55	0.46
22:B0:2156:G:C8	22:B0:2157:G:C3'	2.96	0.46
22:B0:2263:C:HO2'	22:B0:2264:C:H5'	1.81	0.46
22:B0:2778:A:O2'	22:B0:2779:U:P	2.73	0.46
22:B0:2780:G:O4'	33:BH:106:LYS:NZ	2.44	0.46
24:B2:26:ILE:HG21	24:B2:181:ALA:HA	1.96	0.46
26:BA:225:ASN:HB3	26:BA:226:PRO:HD2	1.97	0.46
33:BH:8:PRO:CG	33:BH:10:THR:HG22	2.46	0.46
35:BJ:89:VAL:HG23	35:BJ:90:VAL:HG12	1.97	0.46
37:BL:44:LEU:HD23	37:BL:47:VAL:HG11	1.96	0.46
37:BL:49:GLU:HB2	37:BL:52:ILE:HG12	1.98	0.46
40:BO:31:TYR:O	40:BO:34:ALA:O	2.34	0.46
42:BR:75:GLY:O	42:BR:76:ARG:C	2.52	0.46
1:AA:8:A:H62	5:AD:205:LYS:N	2.14	0.46
1:AA:145:G:N2	1:AA:177:G:C2	2.84	0.46
1:AA:185:U:H2'	1:AA:186:C:C6	2.51	0.46
1:AA:748:G:O2'	1:AA:749:A:P	2.74	0.46
1:AA:935:A:H5'	10:AI:126:PHE:CE1	2.50	0.46
1:AA:975:A:H4'	1:AA:976:G:O5'	2.14	0.46
1:AA:1344:C:H4'	10:AI:122:ARG:HE	1.81	0.46
2:AW:16:U:H4'	2:AW:18:G:OP2	2.16	0.46
5:AD:101:VAL:CG2	5:AD:122:ILE:HD13	2.46	0.46
6:AE:88:HIS:CD2	6:AE:137:ARG:HB3	2.50	0.46
11:AJ:36:VAL:HG12	11:AJ:38:GLY:H	1.79	0.46
16:AO:35:ILE:O	16:AO:39:GLN:HG3	2.14	0.46
22:B0:99:U:H5'	22:B0:102:U:OP2	2.16	0.46
22:B0:130:C:H6	22:B0:130:C:C5'	2.29	0.46
22:B0:163:C:C4'	22:B0:164:C:H5'	2.45	0.46
22:B0:658:U:H4'	28:BC:99:LYS:NZ	2.31	0.46
22:B0:843:G:H2'	22:B0:844:A:C8	2.51	0.46
22:B0:864:G:N2	22:B0:913:U:H1'	2.31	0.46
22:B0:1039:A:H2'	22:B0:1040:A:C8	2.47	0.46
22:B0:1198:U:H2'	22:B0:1199:U:C6	2.50	0.46
22:B0:1419:A:N7	26:BA:67:LYS:HE3	2.30	0.46
22:B0:1487:G:C8	26:BA:194:VAL:HB	2.51	0.46
22:B0:1495:A:C3'	26:BA:190:THR:HA	2.19	0.46
22:B0:1556:C:H2'	22:B0:1557:C:C6	2.51	0.46
22:B0:1921:G:H2'	22:B0:1922:G:C8	2.50	0.46
22:B0:2033:A:HO2'	22:B0:2034:U:P	2.37	0.46
22:B0:2264:C:C5	22:B0:2265:U:C4	3.03	0.46
22:B0:2299:U:H2'	22:B0:2300:C:C6	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2358:A:H2'	22:B0:2359:C:O5'	2.16	0.46
22:B0:2898:G:P	33:BH:140:LEU:HD22	2.56	0.46
23:B9:16:G:H2'	23:B9:17:C:O5'	2.16	0.46
23:B9:30:C:H2'	23:B9:31:C:H5'	1.98	0.46
24:B2:141:VAL:O	24:B2:141:VAL:HG12	2.16	0.46
25:B5:66:VAL:HG13	25:B5:67:ALA:N	2.31	0.46
26:BA:213:ARG:HG2	26:BA:213:ARG:HH11	1.80	0.46
27:BB:137:SER:O	27:BB:139:SER:N	2.49	0.46
34:BI:38:ILE:HD13	34:BI:38:ILE:N	2.15	0.46
37:BL:41:ALA:HA	37:BL:44:LEU:CB	2.45	0.46
39:BN:15:ASP:O	39:BN:17:PRO:N	2.49	0.46
39:BN:16:VAL:HG23	39:BN:16:VAL:O	2.16	0.46
1:AA:88:U:H2'	1:AA:89:U:O4'	2.15	0.46
1:AA:281:G:HO2'	1:AA:282:A:P	2.36	0.46
1:AA:383:A:C2'	1:AA:384:G:H5'	2.45	0.46
1:AA:831:A:H2'	1:AA:832:G:H8	1.81	0.46
1:AA:1054:C:O2'	1:AA:1055:A:H5"	2.16	0.46
1:AA:1184:G:OP1	1:AA:1185:G:OP2	2.34	0.46
1:AA:1408:A:O2'	1:AA:1409:C:H5'	2.16	0.46
2:AW:8:U:O4'	2:AW:48:C:O2'	2.27	0.46
4:AC:42:LEU:O	4:AC:46:LEU:HB2	2.15	0.46
6:AE:93:VAL:HG22	6:AE:138:ALA:HB1	1.97	0.46
10:AI:60:LEU:HD12	10:AI:60:LEU:N	2.31	0.46
11:AJ:43:PRO:O	11:AJ:71:LEU:HD13	2.15	0.46
16:AO:26:VAL:O	16:AO:29:ALA:HB3	2.15	0.46
19:AR:44:THR:HG21	19:AR:51:GLN:NE2	2.30	0.46
21:AT:54:GLN:CB	21:AT:55:PRO:HD3	2.34	0.46
22:B0:326:G:O2'	22:B0:327:G:H5'	2.16	0.46
22:B0:523:C:H1'	22:B0:554:U:O2'	2.16	0.46
22:B0:775:G:HO2'	22:B0:776:G:P	2.37	0.46
22:B0:865:C:O2'	22:B0:866:A:P	2.73	0.46
22:B0:935:C:H2'	22:B0:936:A:H8	1.80	0.46
22:B0:1202:G:C8	35:BJ:14:LYS:NZ	2.84	0.46
22:B0:1270:C:O5'	22:B0:1270:C:H6	1.99	0.46
22:B0:1497:U:H3'	26:BA:63:ILE:HG21	1.98	0.46
22:B0:1577:C:H4'	26:BA:62:ARG:HB3	1.98	0.46
22:B0:1581:A:C2'	26:BA:73:ILE:HD12	2.46	0.46
22:B0:1582:C:C2	26:BA:96:LYS:HB3	2.50	0.46
22:B0:1582:C:H3'	22:B0:1582:C:H6	1.81	0.46
22:B0:1830:C:H42	22:B0:1975:G:N2	2.09	0.46
22:B0:2149:U:C5'	22:B0:2150:C:OP1	2.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2173:A:H4'	24:B2:35:ALA:HB1	1.96	0.46
22:B0:2349:G:O2'	22:B0:2350:C:H5'	2.15	0.46
22:B0:2351:G:N2	22:B0:2366:A:H2	2.11	0.46
24:B2:120:MET:HE2	24:B2:120:MET:HA	1.98	0.46
25:B5:46:GLU:CB	25:B5:49:GLU:HB2	2.46	0.46
26:BA:101:ARG:NH1	26:BA:102:TYR:O	2.48	0.46
27:BB:126:ASN:O	27:BB:127:PHE:C	2.54	0.46
27:BB:131:ASP:OD1	27:BB:132:ALA:N	2.48	0.46
29:BD:25:MET:HG2	29:BD:26:GLN:HG3	1.97	0.46
37:BL:49:GLU:HG3	37:BL:49:GLU:O	2.16	0.46
39:BN:102:ARG:NH2	39:BN:111:GLU:HB2	2.31	0.46
42:BR:33:LYS:HA	42:BR:82:LYS:CA	2.45	0.46
42:BR:80:TRP:C	42:BR:81:LYS:HA	2.36	0.46
1:AA:714:G:H2'	1:AA:715:A:C8	2.50	0.46
1:AA:895:G:H2'	1:AA:896:C:C6	2.51	0.46
1:AA:977:A:N3	1:AA:977:A:C2'	2.79	0.46
1:AA:982:U:H4'	1:AA:983:A:O4'	2.16	0.46
2:AU:75:C:C5'	22:B0:2556:C:C6	2.88	0.46
3:AB:150:ILE:HG13	3:AB:150:ILE:O	2.16	0.46
4:AC:107:LYS:CB	4:AC:143:LEU:HD21	2.41	0.46
4:AC:125:ARG:O	4:AC:126:ARG:CB	2.64	0.46
4:AC:145:ALA:HA	4:AC:203:LYS:HD2	1.97	0.46
6:AE:33:THR:HB	6:AE:49:TYR:CZ	2.51	0.46
9:AH:2:MET:N	9:AH:2:MET:SD	2.89	0.46
9:AH:79:ARG:HH11	9:AH:79:ARG:HG3	1.81	0.46
15:AN:58:ARG:HG2	15:AN:58:ARG:HH11	1.81	0.46
18:AQ:43:LEU:HD22	18:AQ:72:TRP:CZ3	2.51	0.46
22:B0:274:C:O2'	22:B0:275:C:H5'	2.16	0.46
22:B0:431:U:O2'	22:B0:432:A:P	2.73	0.46
22:B0:721:A:H2'	22:B0:722:A:C8	2.51	0.46
22:B0:962:G:O2'	22:B0:2497:A:H5'	2.16	0.46
22:B0:1083:U:O2'	25:B3:88:GLU:CA	2.63	0.46
22:B0:1085:A:C2	25:B3:62:GLY:O	2.68	0.46
22:B0:1492:G:HO2'	26:BA:145:MET:CG	2.29	0.46
22:B0:1496:A:C8	26:BA:142:ASN:HB3	2.50	0.46
22:B0:1926:U:O2'	22:B0:1927:A:C8	2.67	0.46
22:B0:2109:U:H3'	22:B0:2109:U:C6	2.50	0.46
22:B0:2146:C:H2'	22:B0:2147:A:H5"	1.97	0.46
22:B0:2173:A:C8	24:B2:39:GLU:OE1	2.69	0.46
22:B0:2776:A:C6	22:B0:2778:A:N6	2.83	0.46
22:B0:2780:G:OP2	33:BH:109:LEU:HD12	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2836:U:H2'	22:B0:2837:A:C8	2.51	0.46
26:BA:130:PRO:HD2	26:BA:133:ASN:CB	2.46	0.46
30:BE:18:ILE:CD1	30:BE:42:VAL:HG23	2.46	0.46
34:BI:44:LYS:O	34:BI:54:LYS:HG3	2.16	0.46
38:BM:31:THR:C	38:BM:33:ARG:H	2.18	0.46
40:BO:14:LYS:H	40:BO:14:LYS:HZ3	1.57	0.46
41:BQ:34:ASP:O	41:BQ:37:THR:HG22	2.16	0.46
45:BU:9:THR:HG22	45:BU:10:ARG:N	2.31	0.46
45:BU:67:LYS:NZ	45:BU:71:LYS:HB2	2.30	0.46
1:AA:187:G:H22	1:AA:191:G:H1'	1.80	0.46
1:AA:316:C:O4'	1:AA:351:G:H2'	2.16	0.46
1:AA:393:A:O2'	1:AA:394:G:H5'	2.16	0.46
1:AA:518:C:H4'	1:AA:519:C:C6	2.51	0.46
1:AA:591:U:H2'	1:AA:592:G:C8	2.49	0.46
1:AA:688:G:H2'	1:AA:689:C:C6	2.51	0.46
4:AC:179:ALA:HB1	4:AC:202:PHE:CE1	2.51	0.46
6:AE:33:THR:HG22	6:AE:51:LYS:CG	2.38	0.46
6:AE:55:VAL:N	6:AE:56:PRO:HD2	2.31	0.46
9:AH:62:LEU:HD12	9:AH:62:LEU:H	1.81	0.46
22:B0:864:G:N2	22:B0:866:A:H61	1.96	0.46
22:B0:942:G:OP1	35:BJ:41:ARG:O	2.33	0.46
22:B0:1038:G:H2'	22:B0:1039:A:C8	2.51	0.46
22:B0:1204:A:OP2	35:BJ:9:ALA:HB3	2.16	0.46
22:B0:1401:G:H2'	22:B0:1402:U:C6	2.51	0.46
22:B0:1422:G:N1	22:B0:1423:A:N6	2.64	0.46
22:B0:1426:G:O6	26:BA:57:HIS:CE1	2.68	0.46
22:B0:1427:A:C5'	22:B0:1428:C:C4	2.99	0.46
22:B0:1478:G:OP2	22:B0:1478:G:H8	1.97	0.46
22:B0:1490:C:H4'	26:BA:162:GLN:CA	2.45	0.46
22:B0:1494:A:H2	26:BA:129:LEU:HB2	1.80	0.46
22:B0:1570:A:H2'	22:B0:1571:A:H8	1.81	0.46
22:B0:1584:U:N3	26:BA:76:VAL:HG11	2.31	0.46
22:B0:1643:G:O2'	22:B0:1644:C:H5'	2.16	0.46
22:B0:1764:C:H2'	22:B0:1765:U:C6	2.51	0.46
22:B0:1877:A:N3	22:B0:2411:A:O2'	2.48	0.46
22:B0:2108:A:H2'	22:B0:2110:G:C4'	2.46	0.46
22:B0:2125:G:N3	22:B0:2171:A:N6	2.64	0.46
22:B0:2135:A:N7	22:B0:2136:G:O3'	2.49	0.46
22:B0:2162:G:N7	22:B0:2164:C:H2'	2.31	0.46
22:B0:2496:C:P	36:BK:80:VAL:HG11	2.56	0.46
22:B0:2561:U:H5'	34:BI:23:LYS:HZ3	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2677:G:H2'	22:B0:2677:G:N3	2.31	0.46
23:B9:37:C:H41	23:B9:44:G:H1	1.63	0.46
24:B2:37:PHE:CD1	24:B2:37:PHE:N	2.80	0.46
24:B2:114:ILE:CD1	24:B2:143:THR:HG23	2.43	0.46
25:B3:22:LEU:O	25:B3:25:ALA:HB3	2.15	0.46
25:B3:96:GLU:CG	25:B5:49:GLU:HG2	2.45	0.46
26:BA:197:ALA:CB	26:BA:198:GLU:N	2.79	0.46
27:BB:134:HIS:CE1	34:BI:30:ARG:HB2	2.51	0.46
29:BD:44:ALA:HB3	29:BD:48:LEU:CD2	2.46	0.46
29:BD:56:LEU:HD22	29:BD:56:LEU:N	2.30	0.46
29:BD:105:ILE:C	29:BD:107:VAL:N	2.69	0.46
31:BF:84:ALA:HA	31:BF:90:LEU:HA	1.97	0.46
32:BG:71:LYS:HG3	32:BG:72:THR:H	1.80	0.46
32:BG:129:GLU:C	32:BG:132:ALA:HB2	2.36	0.46
34:BI:78:ARG:HH11	34:BI:78:ARG:HB2	1.81	0.46
35:BJ:79:LEU:HB3	35:BJ:111:ILE:O	2.15	0.46
36:BK:50:ARG:HD2	36:BK:50:ARG:O	2.15	0.46
37:BL:35:LYS:HA	37:BL:110:MET:CE	2.45	0.46
39:BN:52:ARG:HG2	39:BN:53:GLY:H	1.79	0.46
39:BN:101:GLU:O	39:BN:103:THR:HG22	2.16	0.46
41:BQ:28:LYS:H	41:BQ:70:LYS:HD2	1.80	0.46
41:BQ:28:LYS:N	41:BQ:70:LYS:HD2	2.31	0.46
42:BR:67:VAL:HG12	42:BR:73:ARG:NH2	2.31	0.46
43:BS:28:LEU:HD22	43:BS:28:LEU:N	2.30	0.46
44:BT:82:TYR:CE1	44:BT:83:LYS:HG2	2.51	0.46
48:BZ:38:LEU:H	48:BZ:38:LEU:CD1	2.28	0.46
48:BZ:41:HIS:HB2	48:BZ:46:GLY:HA2	1.98	0.46
1:AA:229:U:O2'	1:AA:230:G:H5'	2.16	0.45
1:AA:401:C:H5"	5:AD:69:ARG:HH12	1.81	0.45
1:AA:812:G:O2'	1:AA:813:U:H6	1.93	0.45
1:AA:840:C:O5'	1:AA:840:C:H6	1.98	0.45
1:AA:1132:C:H2'	1:AA:1133:G:H8	1.81	0.45
2:AU:20:G:C2'	2:AU:21:A:H5"	2.45	0.45
2:AV:36:A:C3'	2:AV:37:G:H5"	2.47	0.45
2:AW:55:U:O2	2:AW:55:U:C2'	2.63	0.45
3:AB:44:LYS:C	3:AB:47:PRO:HD2	2.36	0.45
7:AF:11:HIS:CE1	7:AF:54:LEU:HD22	2.51	0.45
7:AF:42:TRP:CD2	7:AF:61:LEU:HD11	2.51	0.45
7:AF:88:MET:N	7:AF:88:MET:SD	2.90	0.45
10:AI:20:ILE:HA	10:AI:62:LEU:HD22	1.98	0.45
10:AI:27:ILE:HG13	10:AI:62:LEU:HB2	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
10:AI:74:GLN:O	10:AI:78:ILE:HG13	2.16	0.45
11:AJ:18:ILE:CD1	11:AJ:70:HIS:HB2	2.47	0.45
11:AJ:71:LEU:O	11:AJ:72:ARG:HD3	2.16	0.45
11:AJ:73:LEU:O	11:AJ:75:ASP:N	2.49	0.45
12:AK:15:VAL:HG12	12:AK:17:ASP:O	2.15	0.45
12:AK:62:ALA:HB1	12:AK:95:THR:OG1	2.17	0.45
17:AP:28:ARG:C	17:AP:29:ASN:HD22	2.19	0.45
22:B0:28:A:N6	22:B0:512:G:C1’	2.72	0.45
22:B0:311:A:H61	22:B0:329:G:H5”	1.81	0.45
22:B0:775:G:H1’	22:B0:777:G:N9	2.31	0.45
22:B0:1016:G:H2’	22:B0:1017:G:C8	2.51	0.45
22:B0:1116:G:H2’	22:B0:1117:C:H6	1.81	0.45
22:B0:1127:A:O2’	22:B0:1128:G:H5’	2.16	0.45
22:B0:1342:A:O4’	22:B0:1397:U:H1’	2.16	0.45
22:B0:1368:G:H8	22:B0:1368:G:OP2	1.99	0.45
22:B0:1582:C:N4	22:B0:1583:G:N2	2.64	0.45
22:B0:1764:C:H2’	22:B0:1765:U:H6	1.81	0.45
22:B0:2086:U:H2’	22:B0:2087:G:C8	2.50	0.45
22:B0:2127:G:O2’	22:B0:2165:C:C2’	2.62	0.45
22:B0:2153:C:C6	22:B0:2154:A:H2	2.34	0.45
22:B0:2172:U:O2’	24:B2:36:LYS:HB3	2.16	0.45
22:B0:2263:C:OP2	45:BU:12:GLY:N	2.50	0.45
22:B0:2328:A:C4’	45:BU:10:ARG:HB2	2.46	0.45
22:B0:2380:C:O5’	22:B0:2380:C:H6	2.00	0.45
22:B0:2490:G:H4’	22:B0:2491:U:H5’	1.97	0.45
22:B0:2581:G:H1’	22:B0:2582:G:N7	2.31	0.45
22:B0:2645:G:H2’	22:B0:2646:C:C6	2.51	0.45
22:B0:2779:U:C4’	33:BH:116:ARG:HB2	2.46	0.45
22:B0:2886:A:H2’	22:B0:2887:A:H8	1.81	0.45
22:B0:2898:G:H2’	33:BH:137:PRO:HB2	1.97	0.45
24:B2:29:LEU:CD1	24:B2:213:ILE:HG21	2.45	0.45
27:BB:40:LEU:HD22	27:BB:40:LEU:N	2.31	0.45
27:BB:146:ILE:O	27:BB:159:LYS:HG2	2.16	0.45
28:BC:175:ILE:HB	28:BC:180:LEU:CD2	2.46	0.45
32:BG:102:ARG:NH1	32:BG:102:ARG:HB3	2.31	0.45
36:BK:70:ASP:O	36:BK:72:PRO:HD3	2.15	0.45
37:BL:50:PRO:O	37:BL:51:LEU:CB	2.58	0.45
40:BO:109:VAL:O	40:BO:113:LYS:HD3	2.16	0.45
42:BR:19:LYS:HZ2	42:BR:20:ALA:HB2	1.81	0.45
42:BR:64:LYS:HA	42:BR:79:ASP:HB2	1.98	0.45
43:BS:72:PHE:O	43:BS:73:ASN:OD1	2.34	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
46:BW:51:ALA:O	46:BW:55:THR:HG23	2.16	0.45
49:B1:26:LYS:H	49:B1:26:LYS:HD2	1.81	0.45
1:AA:146:G:H2'	1:AA:147:G:H8	1.81	0.45
1:AA:244:U:H1'	1:AA:894:G:H1'	1.96	0.45
1:AA:356:A:H2'	1:AA:357:G:O4'	2.16	0.45
1:AA:901:A:H2'	1:AA:902:G:O4'	2.17	0.45
1:AA:927:G:O2'	1:AA:1503:A:N6	2.48	0.45
1:AA:1278:G:H4'	1:AA:1279:G:O4'	2.17	0.45
1:AA:1281:C:H5"	1:AA:1282:C:H5	1.82	0.45
1:AA:1316:G:N2	20:AS:6:LYS:NZ	2.58	0.45
1:AA:1331:G:HO2'	1:AA:1332:A:H8	1.62	0.45
1:AA:1417:G:O2'	1:AA:1483:A:N6	2.49	0.45
5:AD:144:ILE:HG22	5:AD:145:ARG:N	2.31	0.45
13:AL:28:GLN:OE1	13:AL:82:ARG:HA	2.16	0.45
22:B0:163:C:C5'	22:B0:164:C:H5'	2.42	0.45
22:B0:214:G:O2'	22:B0:215:G:H5'	2.16	0.45
22:B0:442:G:H5"	22:B0:443:A:OP2	2.16	0.45
22:B0:607:U:O4	22:B0:620:G:O4'	2.34	0.45
22:B0:782:A:H5"	22:B0:783:A:OP1	2.15	0.45
22:B0:1026:G:H5'	22:B0:1027:A:C8	2.52	0.45
22:B0:1195:G:H2'	22:B0:1196:C:C6	2.52	0.45
22:B0:1210:G:P	22:B0:1212:G:H5'	2.56	0.45
22:B0:1389:G:OP1	22:B0:1525:G:H4'	2.16	0.45
22:B0:1405:U:H2'	22:B0:1406:U:C6	2.51	0.45
22:B0:1675:C:H42	22:B0:1993:U:C1'	2.29	0.45
22:B0:2006:C:C5'	22:B0:2048:G:H5"	2.46	0.45
22:B0:2127:G:C3'	22:B0:2165:C:C2'	2.91	0.45
22:B0:2678:C:O4'	27:BB:125:TRP:HA	2.16	0.45
22:B0:2698:U:H2'	22:B0:2699:C:C6	2.51	0.45
22:B0:2813:A:N1	22:B0:2887:A:N1	2.64	0.45
25:B5:43:GLY:C	25:B5:45:VAL:H	2.20	0.45
26:BA:80:LEU:HD13	26:BA:80:LEU:C	2.37	0.45
26:BA:149:LYS:HZ1	26:BA:151:GLY:N	2.14	0.45
27:BB:96:ILE:HG22	27:BB:97:SER:N	2.32	0.45
28:BC:30:GLN:CA	28:BC:33:VAL:HG13	2.45	0.45
37:BL:52:ILE:CD1	37:BL:94:TYR:HB3	2.47	0.45
47:BX:24:LEU:CD2	47:BX:29:ARG:HG2	2.46	0.45
1:AA:129:A:O2'	1:AA:130:A:P	2.74	0.45
1:AA:828:U:H2'	1:AA:829:G:O4'	2.17	0.45
1:AA:1067:A:O2'	1:AA:1068:G:OP2	2.33	0.45
1:AA:1422:G:C5'	34:BI:48:PRO:HG2	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AD:54:LEU:C	5:AD:54:LEU:HD23	2.36	0.45
5:AD:117:VAL:HG22	5:AD:122:ILE:HD12	1.97	0.45
7:AF:8:PHE:CE2	7:AF:84:VAL:HB	2.51	0.45
8:AG:35:LYS:HD3	10:AI:42:THR:CG2	2.47	0.45
13:AL:106:VAL:CG2	13:AL:116:TYR:HB3	2.46	0.45
20:AS:31:ARG:HG2	20:AS:49:ALA:HB3	1.97	0.45
22:B0:70:G:O2'	22:B0:73:A:N3	2.46	0.45
22:B0:389:G:O5'	22:B0:390:U:H5	1.99	0.45
22:B0:395:U:H2'	22:B0:396:G:H8	1.81	0.45
22:B0:481:G:O2'	22:B0:506:G:N2	2.48	0.45
22:B0:497:A:H2'	22:B0:498:G:H8	1.81	0.45
22:B0:859:G:O2'	22:B0:860:U:C5	2.67	0.45
22:B0:1197:G:O2'	22:B0:1198:U:H5'	2.16	0.45
22:B0:1202:G:O4'	35:BJ:14:LYS:HB2	2.17	0.45
22:B0:1288:G:N1	22:B0:1326:U:N3	2.65	0.45
22:B0:1487:G:C8	26:BA:195:GLY:CA	2.99	0.45
22:B0:1544:A:H2'	22:B0:1545:A:O4'	2.16	0.45
22:B0:1749:A:H2'	22:B0:1750:G:H8	1.82	0.45
22:B0:2172:U:H2'	24:B2:37:PHE:CE1	2.51	0.45
22:B0:2518:A:H5'	22:B0:2518:A:N3	2.31	0.45
22:B0:2848:G:OP2	39:BN:95:LYS:HD2	2.17	0.45
22:B0:2849:U:C2'	22:B0:2850:A:OP2	2.64	0.45
22:B0:2866:U:H1'	22:B0:2868:A:C1'	2.40	0.45
22:B0:2895:C:H42	33:BH:9:GLU:CA	2.30	0.45
22:B0:2899:A:O2'	22:B0:2900:C:C5'	2.64	0.45
24:B2:24:GLU:O	24:B2:28:LEU:N	2.42	0.45
25:B5:3:THR:O	25:B5:7:ILE:HG13	2.17	0.45
25:B5:72:VAL:HG13	25:B5:94:LEU:HD21	1.98	0.45
26:BA:75:ALA:O	26:BA:114:GLN:HA	2.17	0.45
26:BA:154:ALA:O	26:BA:155:ARG:NH1	2.45	0.45
26:BA:241:LYS:C	26:BA:243:PRO:HD2	2.37	0.45
28:BC:117:ARG:HD3	28:BC:185:LYS:HZ2	1.81	0.45
28:BC:136:GLN:HE21	28:BC:136:GLN:HA	1.81	0.45
32:BG:131:THR:O	32:BG:132:ALA:C	2.55	0.45
33:BH:30:THR:O	33:BH:31:GLU:HB2	2.16	0.45
33:BH:132:HIS:ND1	33:BH:132:HIS:O	2.49	0.45
34:BI:51:LYS:O	34:BI:53:LYS:N	2.49	0.45
37:BL:29:VAL:HG13	37:BL:75:ILE:HB	1.99	0.45
37:BL:83:LEU:N	37:BL:83:LEU:HD12	2.31	0.45
39:BN:9:GLN:NE2	39:BN:9:GLN:N	2.52	0.45
40:BO:3:VAL:HG13	40:BO:3:VAL:O	2.16	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
41:BQ:15:GLN:HA	41:BQ:15:GLN:HE21	1.81	0.45
1:AA:423:G:H2'	1:AA:424:G:H5'	1.99	0.45
1:AA:501:C:H2'	1:AA:502:A:C8	2.51	0.45
1:AA:657:U:O2'	1:AA:658:C:H5'	2.17	0.45
1:AA:921:U:H6	1:AA:921:U:O5'	1.99	0.45
1:AA:967:C:P	1:AA:969:A:H5'	2.56	0.45
1:AA:1496:C:H2'	1:AA:1497:G:O4'	2.17	0.45
2:AV:63:C:H2'	2:AV:64:A:C8	2.51	0.45
4:AC:54:ILE:HD13	4:AC:54:ILE:H	1.78	0.45
4:AC:190:THR:HG21	4:AC:192:TYR:CE2	2.52	0.45
5:AD:39:GLN:HG3	5:AD:39:GLN:O	2.17	0.45
12:AK:71:ASP:HA	12:AK:74:LYS:CD	2.46	0.45
15:AN:48:GLN:HE21	15:AN:50:LEU:H	1.64	0.45
22:B0:39:G:O2'	22:B0:40:U:H5'	2.17	0.45
22:B0:265:A:O2'	22:B0:266:G:O4'	2.33	0.45
22:B0:457:A:O2'	22:B0:458:G:C4'	2.63	0.45
22:B0:532:A:H4'	22:B0:533:G:OP2	2.16	0.45
22:B0:994:C:H2'	22:B0:996:A:H8	1.81	0.45
22:B0:1009:A:N3	22:B0:1154:G:H5'	2.32	0.45
22:B0:1056:G:N2	22:B0:1104:C:N4	2.65	0.45
22:B0:1061:U:H5"	22:B0:1062:G:OP2	2.16	0.45
22:B0:1084:A:C8	25:B3:88:GLU:O	2.70	0.45
22:B0:1142:A:C2'	22:B0:1143:A:OP2	2.65	0.45
22:B0:1240:U:H2'	22:B0:1241:A:C8	2.52	0.45
22:B0:1279:G:OP1	37:BL:35:LYS:O	2.35	0.45
22:B0:1410:G:O2'	22:B0:1411:U:P	2.73	0.45
22:B0:1418:G:N3	26:BA:99:GLU:CG	2.68	0.45
22:B0:1578:U:H3	26:BA:67:LYS:CE	2.29	0.45
22:B0:1655:A:N7	22:B0:2005:A:C2	2.79	0.45
22:B0:1772:A:C2'	22:B0:1773:A:H5'	2.47	0.45
22:B0:1802:A:N6	22:B0:1817:G:H22	2.14	0.45
22:B0:2122:U:C5'	22:B0:2123:G:OP1	2.57	0.45
22:B0:2320:U:H1'	22:B0:2333:A:N6	2.31	0.45
22:B0:2333:A:C5'	22:B0:2334:U:OP1	2.57	0.45
22:B0:2581:G:H2'	22:B0:2610:C:H41	1.81	0.45
22:B0:2654:A:H1'	22:B0:2656:U:C6	2.52	0.45
22:B0:2678:C:C5'	27:BB:124:ARG:CB	2.78	0.45
22:B0:2678:C:H41	22:B0:2729:G:H1	1.62	0.45
22:B0:2871:U:H2'	22:B0:2872:A:C8	2.43	0.45
24:B2:64:LEU:CD1	24:B2:160:VAL:HG11	2.46	0.45
25:B3:19:VAL:HG21	25:B3:42:ALA:HB1	1.98	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BD:16:MET:O	29:BD:16:MET:HG2	2.17	0.45
29:BD:165:GLY:C	29:BD:167:ALA:N	2.69	0.45
32:BG:4:VAL:HG23	32:BG:4:VAL:O	2.15	0.45
33:BH:142:ILE:HG23	33:BH:142:ILE:OXT	2.17	0.45
36:BK:63:ILE:HD13	36:BK:64:TRP:N	2.31	0.45
37:BL:19:ALA:C	37:BL:21:PHE:N	2.68	0.45
37:BL:40:LYS:CG	37:BL:41:ALA:H	2.29	0.45
39:BN:22:GLY:O	39:BN:25:VAL:HB	2.17	0.45
39:BN:47:ILE:HG21	39:BN:61:ARG:NH1	2.32	0.45
39:BN:50:ARG:NE	39:BN:100:ARG:HH21	2.13	0.45
39:BN:97:TYR:CG	39:BN:98:TYR:N	2.85	0.45
41:BQ:54:ALA:O	41:BQ:58:ALA:HB2	2.16	0.45
41:BQ:99:ARG:H	41:BQ:99:ARG:CZ	2.28	0.45
42:BR:13:ALA:HB3	42:BR:33:LYS:NZ	2.31	0.45
49:B1:48:TYR:O	49:B1:49:LYS:CB	2.62	0.45
1:AA:189:A:N3	1:AA:190:A:O2'	2.50	0.45
1:AA:189:A:H2'	1:AA:190:A:H4'	1.93	0.45
1:AA:712:A:H5"	26:BA:252:LYS:NZ	2.32	0.45
1:AA:718:A:H2'	12:AK:116:PRO:C	2.36	0.45
1:AA:1030:U:N3	1:AA:1031:C:C2	2.85	0.45
1:AA:1257:A:H4'	1:AA:1258:G:C5'	2.46	0.45
1:AA:1286:U:C3'	1:AA:1287:A:C5'	2.79	0.45
1:AA:1394:A:C6	1:AA:1501:C:H4'	2.52	0.45
1:AA:1495:U:C4'	22:B0:1912:A:H5'	2.47	0.45
1:AA:1532:U:H2'	1:AA:1534:A:OP2	2.17	0.45
2:AU:60:C:C5'	2:AU:61:C:OP2	2.61	0.45
4:AC:115:VAL:HG11	4:AC:199:VAL:HG11	1.97	0.45
6:AE:15:ILE:HB	6:AE:35:LEU:HB2	1.97	0.45
7:AF:9:MET:HB2	7:AF:85:ILE:CG2	2.46	0.45
10:AI:34:LEU:CD2	10:AI:48:ARG:HD3	2.47	0.45
11:AJ:37:ARG:HH11	11:AJ:37:ARG:CB	2.29	0.45
15:AN:61:ASN:ND2	15:AN:72:PHE:CZ	2.85	0.45
16:AO:55:LEU:HD23	16:AO:55:LEU:C	2.37	0.45
17:AP:39:PHE:HD1	17:AP:50:THR:CG2	2.30	0.45
22:B0:78:U:H2'	22:B0:79:C:C6	2.51	0.45
22:B0:480:A:H2'	22:B0:480:A:N3	2.30	0.45
22:B0:602:A:H1'	22:B0:656:G:H22	1.75	0.45
22:B0:1054:A:H2'	22:B0:1055:G:H8	1.80	0.45
22:B0:1170:C:H2'	22:B0:1171:G:C8	2.51	0.45
22:B0:1201:U:C2	22:B0:1245:G:N2	2.85	0.45
22:B0:1273:U:OP1	22:B0:1608:A:N6	2.49	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1417:U:H1'	22:B0:1587:A:O2'	2.16	0.45
22:B0:1493:A:P	26:BA:183:VAL:HG21	2.56	0.45
22:B0:1493:A:C2	26:BA:131:MET:HB3	2.51	0.45
22:B0:1498:C:C2	26:BA:62:ARG:HG3	2.52	0.45
22:B0:1581:A:C5'	26:BA:72:GLY:N	2.74	0.45
22:B0:1652:A:C6	22:B0:1653:G:O3'	2.69	0.45
22:B0:1659:G:N2	22:B0:1660:G:H1'	2.31	0.45
22:B0:1775:U:H2'	22:B0:1776:G:H5'	1.98	0.45
22:B0:2484:G:H5"	36:BK:44:ARG:CD	2.46	0.45
22:B0:2677:G:C4'	27:BB:160:LYS:CB	2.92	0.45
22:B0:2722:G:N2	37:BL:4:ARG:HH22	2.14	0.45
22:B0:2819:G:O2'	22:B0:2820:A:P	2.75	0.45
25:B3:89:SER:O	25:B3:90:ALA:CB	2.64	0.45
26:BA:175:LEU:HD22	26:BA:176:ARG:HG3	1.97	0.45
27:BB:8:LYS:HA	27:BB:27:ILE:CD1	2.47	0.45
28:BC:87:ALA:HB1	28:BC:95:LYS:HZ2	1.82	0.45
33:BH:134:ALA:O	33:BH:135:GLN:HB2	2.16	0.45
39:BN:36:LYS:HD3	39:BN:37:LYS:N	2.31	0.45
40:BO:4:LYS:HD3	40:BO:6:GLY:H	1.81	0.45
40:BO:16:ILE:HG13	40:BO:35:PHE:HZ	1.75	0.45
40:BO:102:LYS:H	40:BO:102:LYS:HD3	1.81	0.45
43:BS:51:LEU:HD12	43:BS:51:LEU:N	2.32	0.45
44:BT:17:SER:O	44:BT:21:ARG:HG3	2.17	0.45
47:BX:17:PRO:O	47:BX:18:LYS:HB2	2.16	0.45
1:AA:166:U:H2'	1:AA:167:A:H8	1.82	0.45
1:AA:268:U:H2'	1:AA:269:C:H6	1.82	0.45
1:AA:994:A:OP1	1:AA:994:A:C8	2.70	0.45
1:AA:1101:A:C4'	1:AA:1102:A:O5'	2.61	0.45
1:AA:1306:A:H1'	1:AA:1332:A:C2	2.51	0.45
4:AC:130:ARG:NH1	4:AC:130:ARG:HG3	2.32	0.45
6:AE:79:THR:HG21	6:AE:98:ALA:O	2.17	0.45
8:AG:130:LYS:HG3	8:AG:130:LYS:O	2.15	0.45
10:AI:6:TYR:HA	10:AI:18:VAL:O	2.16	0.45
10:AI:57:VAL:CG2	10:AI:58:GLU:H	2.19	0.45
10:AI:116:GLY:CA	11:AJ:60:ASP:HB3	2.46	0.45
12:AK:86:LYS:CG	12:AK:112:VAL:HG13	2.47	0.45
14:AM:16:ILE:HD13	14:AM:16:ILE:C	2.36	0.45
17:AP:20:VAL:CG1	17:AP:21:VAL:N	2.79	0.45
22:B0:271:G:O6	22:B0:366:C:N3	2.49	0.45
22:B0:350:G:H2'	22:B0:351:C:O4'	2.16	0.45
22:B0:432:A:C3'	28:BC:69:ARG:HG3	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:433:C:O3'	28:BC:71:GLY:HA3	2.16	0.45
22:B0:538:A:H2'	22:B0:539:G:H5'	1.98	0.45
22:B0:851:C:O2	22:B0:851:C:H2'	2.16	0.45
22:B0:856:G:H2'	22:B0:857:G:C8	2.52	0.45
22:B0:1363:C:C2'	22:B0:1364:G:OP1	2.65	0.45
22:B0:1487:G:H2'	26:BA:157:ALA:C	2.30	0.45
22:B0:1501:C:N3	26:BA:156:SER:HB2	2.31	0.45
22:B0:1581:A:N6	26:BA:95:TYR:CB	2.73	0.45
22:B0:2179:C:C5	22:B0:2180:U:H1'	2.51	0.45
22:B0:2340:A:H2'	22:B0:2341:G:C8	2.51	0.45
22:B0:2484:G:H5"	36:BK:44:ARG:HG2	1.98	0.45
22:B0:2899:A:O2'	22:B0:2900:C:H5'	2.16	0.45
26:BA:79:ARG:HH11	26:BA:79:ARG:HG3	1.82	0.45
27:BB:117:GLY:C	27:BB:164:GLN:HE22	2.20	0.45
28:BC:61:ARG:HD3	28:BC:62:GLN:N	2.31	0.45
29:BD:22:ASN:OD1	29:BD:23:SER:N	2.47	0.45
29:BD:169:LEU:HD23	29:BD:169:LEU:C	2.37	0.45
32:BG:29:GLN:HA	32:BG:29:GLN:NE2	2.32	0.45
32:BG:109:ALA:C	32:BG:111:THR:H	2.19	0.45
34:BI:87:LEU:HD12	34:BI:87:LEU:O	2.17	0.45
35:BJ:56:PRO:O	35:BJ:60:ARG:HB2	2.16	0.45
37:BL:12:ARG:NE	37:BL:12:ARG:CA	2.79	0.45
37:BL:53:THR:O	37:BL:54:LEU:CB	2.54	0.45
39:BN:29:VAL:HG22	39:BN:30:TRP:N	2.18	0.45
40:BO:45:ALA:C	40:BO:47:ARG:N	2.69	0.45
40:BO:110:GLU:H	40:BO:110:GLU:HG2	1.55	0.45
41:BQ:13:SER:C	41:BQ:15:GLN:H	2.20	0.45
42:BR:7:LEU:HD12	42:BR:50:LEU:HD21	1.98	0.45
42:BR:34:VAL:CG1	42:BR:43:ILE:HD12	2.46	0.45
1:AA:203:U:H5"	1:AA:204:U:OP1	2.17	0.45
1:AA:674:G:H2'	1:AA:675:A:H8	1.82	0.45
1:AA:745:G:H2'	1:AA:746:A:H8	1.81	0.45
1:AA:872:A:OP1	1:AA:872:A:H3'	2.17	0.45
1:AA:1095:U:O5'	1:AA:1095:U:H6	1.99	0.45
1:AA:1127:G:N2	1:AA:1146:A:H62	2.14	0.45
1:AA:1196:A:H5"	1:AA:1197:A:C5'	2.47	0.45
1:AA:1256:A:O2'	1:AA:1257:A:O5'	2.35	0.45
1:AA:1347:G:O2'	1:AA:1348:U:P	2.74	0.45
1:AA:1349:A:P	10:AI:119:LYS:HG3	2.57	0.45
1:AA:1399:C:H4'	1:AA:1400:C:H5"	1.99	0.45
1:AA:1406:U:H3'	1:AA:1407:C:H6	1.80	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AU:75:C:C2'	2:AU:75:C:O2	2.65	0.45
2:AW:20:G:H2'	2:AW:21:A:H5"	1.99	0.45
2:AW:63:C:H2'	2:AW:64:A:C8	2.52	0.45
4:AC:35:ASP:O	4:AC:38:VAL:HG22	2.17	0.45
4:AC:122:GLN:HB3	4:AC:127:VAL:CG1	2.46	0.45
10:AI:14:SER:OG	10:AI:69:GLY:HA3	2.16	0.45
10:AI:46:VAL:HA	10:AI:49:GLN:CG	2.43	0.45
11:AJ:71:LEU:HD12	11:AJ:71:LEU:N	2.32	0.45
13:AL:98:ARG:HG2	13:AL:103:CYS:SG	2.56	0.45
15:AN:97:LYS:HB3	15:AN:97:LYS:HZ2	1.81	0.45
18:AQ:35:LYS:HZ1	18:AQ:37:ILE:HG22	1.80	0.45
22:B0:70:G:H1'	22:B0:73:A:H1'	1.98	0.45
22:B0:203:A:N1	22:B0:204:A:N6	2.65	0.45
22:B0:279:A:C2	22:B0:280:U:H1'	2.52	0.45
22:B0:352:A:C5'	22:B0:353:C:O4'	2.60	0.45
22:B0:446:G:H5'	22:B0:449:A:H1'	1.98	0.45
22:B0:844:A:N1	22:B0:934:U:O4	2.50	0.45
22:B0:905:A:H2'	22:B0:906:U:H5'	1.98	0.45
22:B0:1084:A:C8	25:B3:88:GLU:CB	2.99	0.45
22:B0:1085:A:C6	25:B3:65:LYS:HA	2.52	0.45
22:B0:1403:A:O2'	22:B0:1404:C:H5'	2.17	0.45
22:B0:1478:G:O4'	22:B0:1478:G:P	2.75	0.45
22:B0:1486:G:C3'	26:BA:195:GLY:CA	2.89	0.45
22:B0:1576:U:C2'	22:B0:1577:C:H5'	2.47	0.45
22:B0:1880:U:H2'	22:B0:1881:C:H6	1.82	0.45
22:B0:1992:G:H22	27:BB:138:LEU:HD12	1.80	0.45
22:B0:2004:G:H2'	22:B0:2005:A:C5'	2.47	0.45
22:B0:2032:G:H5'	22:B0:2033:A:OP1	2.16	0.45
22:B0:2076:U:C5'	22:B0:2077:A:OP1	2.63	0.45
22:B0:2115:G:C1'	22:B0:2168:G:H4'	2.47	0.45
22:B0:2357:G:O2'	22:B0:2358:A:N7	2.50	0.45
22:B0:2543:G:O4'	22:B0:2766:A:H4'	2.16	0.45
26:BA:63:ILE:C	26:BA:64:VAL:HG23	2.36	0.45
26:BA:175:LEU:HB3	26:BA:176:ARG:H	1.52	0.45
27:BB:152:PRO:HB2	27:BB:154:LYS:HB3	1.98	0.45
28:BC:102:ARG:HB3	28:BC:106:LYS:HE2	1.98	0.45
28:BC:112:LEU:HG	28:BC:118:LEU:HD21	1.98	0.45
28:BC:142:ALA:C	28:BC:143:LEU:HD22	2.37	0.45
30:BE:71:LEU:HA	30:BE:74:MET:HE2	1.99	0.45
33:BH:81:ILE:HD12	33:BH:81:ILE:O	2.17	0.45
35:BJ:30:THR:CG2	35:BJ:38:GLN:HG2	2.47	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BJ:55:MET:N	35:BJ:56:PRO:CA	2.80	0.45
36:BK:73:ILE:HG13	36:BK:73:ILE:O	2.16	0.45
39:BN:30:TRP:CB	39:BN:83:ILE:HG22	2.47	0.45
41:BQ:25:ARG:NE	41:BQ:25:ARG:N	2.49	0.45
41:BQ:98:LYS:HA	41:BQ:99:ARG:HH12	1.82	0.45
43:BS:65:GLN:O	43:BS:69:VAL:HG13	2.17	0.45
43:BS:71:ILE:HG22	43:BS:72:PHE:N	2.26	0.45
44:BT:65:VAL:HG13	44:BT:65:VAL:O	2.17	0.45
45:BU:59:PHE:N	45:BU:81:ILE:HD13	2.32	0.45
47:BX:20:LYS:O	47:BX:20:LYS:HD3	2.16	0.45
1:AA:224:U:H2'	1:AA:225:C:C6	2.52	0.45
1:AA:715:A:H2'	1:AA:716:A:C8	2.52	0.45
1:AA:1065:U:C5	1:AA:1190:G:N3	2.85	0.45
1:AA:1189:U:H2'	1:AA:1190:G:H5'	1.99	0.45
1:AA:1270:G:H4'	1:AA:1313:U:O2'	2.17	0.45
1:AA:1399:C:H4'	1:AA:1400:C:O5'	2.16	0.45
1:AA:1423:G:O2'	1:AA:1424:U:H5'	2.17	0.45
1:AA:1469:C:O5'	1:AA:1469:C:H6	1.98	0.45
1:AA:1520:C:O2'	1:AA:1521:C:H5'	2.17	0.45
2:AV:60:C:C5'	2:AV:61:C:OP2	2.61	0.45
3:AB:34:ARG:HB3	3:AB:34:ARG:NH1	2.32	0.45
4:AC:137:VAL:HG22	4:AC:150:VAL:HG23	1.99	0.45
4:AC:140:ALA:HB3	4:AC:148:ILE:CD1	2.44	0.45
5:AD:53:GLN:O	5:AD:202:LEU:HD22	2.17	0.45
7:AF:39:LEU:HD22	7:AF:40:GLU:N	2.31	0.45
20:AS:17:LYS:O	20:AS:20:LYS:HB2	2.16	0.45
21:AT:23:ARG:HB3	21:AT:60:GLN:NE2	2.26	0.45
22:B0:39:G:O2'	28:BC:41:GLN:NE2	2.45	0.45
22:B0:318:C:H2'	22:B0:319:G:H8	1.81	0.45
22:B0:494:G:OP1	41:BQ:8:ARG:CZ	2.64	0.45
22:B0:769:U:H2'	22:B0:770:G:C8	2.52	0.45
22:B0:1045:C:H5"	22:B0:1111:A:H61	1.80	0.45
22:B0:1083:U:O2	25:B3:84:LYS:HG2	2.15	0.45
22:B0:1168:G:O2'	22:B0:1169:A:H5'	2.16	0.45
22:B0:1193:G:H2'	22:B0:1194:A:H8	1.81	0.45
22:B0:1484:U:H3	22:B0:1504:G:N2	2.00	0.45
22:B0:1579:A:N6	26:BA:68:ARG:HG2	2.30	0.45
22:B0:1845:G:N1	22:B0:1896:G:H1'	2.32	0.45
22:B0:2030:A:H4'	22:B0:2031:A:C8	2.52	0.45
22:B0:2128:G:C4'	22:B0:2165:C:H3'	2.46	0.45
22:B0:2249:U:H1'	22:B0:2275:C:H41	1.77	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2279:G:H1’	45:BU:10:ARG:NH2	2.32	0.45
22:B0:2370:G:O2’	22:B0:2371:G:H5’	2.17	0.45
22:B0:2436:G:H2’	22:B0:2437:G:H8	1.80	0.45
22:B0:2771:C:H2’	22:B0:2772:C:C6	2.52	0.45
24:B2:42:ASP:CB	24:B2:214:SER:O	2.64	0.45
24:B2:137:PRO:HB3	24:B2:143:THR:HG22	1.99	0.45
24:B2:152:VAL:O	24:B2:155:ALA:HB3	2.17	0.45
26:BA:83:ASP:HA	26:BA:84:PRO:HD3	1.71	0.45
27:BB:3:GLY:HA3	27:BB:203:VAL:O	2.17	0.45
27:BB:119:ALA:HB3	27:BB:124:ARG:CG	2.46	0.45
27:BB:155:VAL:HG13	27:BB:155:VAL:O	2.16	0.45
28:BC:144:GLU:O	28:BC:147:LEU:HG	2.17	0.45
30:BE:5:LYS:HA	30:BE:51:PHE:O	2.17	0.45
34:BI:23:LYS:O	34:BI:39:ILE:HB	2.16	0.45
34:BI:31:ARG:O	34:BI:32:TYR:HB2	2.17	0.45
36:BK:121:ALA:HA	36:BK:124:LEU:HD21	1.98	0.45
37:BL:42:LYS:CD	37:BL:43:GLU:HG3	2.44	0.45
39:BN:47:ILE:CG2	39:BN:63:ILE:HA	2.44	0.45
41:BQ:15:GLN:C	41:BQ:17:VAL:H	2.19	0.45
42:BR:19:LYS:NZ	42:BR:20:ALA:HB2	2.32	0.45
42:BR:39:THR:OG1	42:BR:40:LYS:N	2.50	0.45
1:AA:89:U:H2’	1:AA:90:C:O4’	2.17	0.45
1:AA:115:G:O2’	1:AA:116:A:C8	2.64	0.45
1:AA:973:G:C6	1:AA:974:A:N6	2.85	0.45
1:AA:993:G:O2’	1:AA:994:A:OP1	2.35	0.45
1:AA:1126:U:C1’	1:AA:1280:A:N6	2.79	0.45
1:AA:1152:A:H2’	1:AA:1153:G:H8	1.79	0.45
2:AW:29:A:O2’	2:AW:30:G:H5’	2.17	0.45
5:AD:90:LEU:H	5:AD:90:LEU:CD1	2.30	0.45
5:AD:120:LYS:HG2	5:AD:128:VAL:CG1	2.33	0.45
8:AG:22:LEU:HD12	8:AG:22:LEU:N	2.32	0.45
10:AI:20:ILE:HG21	10:AI:60:LEU:HD23	1.99	0.45
12:AK:33:ILE:HG13	12:AK:73:VAL:HG21	1.99	0.45
13:AL:28:GLN:NE2	13:AL:82:ARG:HA	2.32	0.45
13:AL:105:GLY:HA3	13:AL:117:GLY:O	2.17	0.45
17:AP:3:THR:HG23	17:AP:66:THR:O	2.17	0.45
19:AR:64:LEU:O	19:AR:65:SER:HB3	2.16	0.45
20:AS:11:ASP:HB3	20:AS:13:HIS:CE1	2.51	0.45
22:B0:433:C:O2’	22:B0:434:U:H5’	2.17	0.45
22:B0:899:A:H2’	22:B0:900:A:C8	2.50	0.45
22:B0:1011:G:O2’	22:B0:1012:U:OP1	2.30	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1019:U:O2	22:B0:1021:A:N1	2.49	0.45
22:B0:1082:U:C3'	25:B3:81:LYS:CA	2.90	0.45
22:B0:1095:A:C6	32:BG:25:PRO:HD2	2.52	0.45
22:B0:1213:A:N1	22:B0:1237:A:H1'	2.32	0.45
22:B0:1346:G:O2'	22:B0:1347:A:H5'	2.17	0.45
22:B0:1498:C:C2'	22:B0:1499:U:H5'	2.46	0.45
22:B0:2384:U:HO2'	22:B0:2385:C:P	2.40	0.45
22:B0:2464:G:O2'	22:B0:2465:C:H5'	2.17	0.45
22:B0:2690:U:C1'	22:B0:2873:A:N6	2.79	0.45
22:B0:2808:G:O2'	22:B0:2809:A:O4'	2.28	0.45
22:B0:2824:C:C6	22:B0:2825:G:N2	2.85	0.45
22:B0:2836:U:H2'	22:B0:2837:A:H8	1.82	0.45
24:B2:28:LEU:O	24:B2:30:LYS:O	2.35	0.45
25:B3:47:ALA:HB1	25:B5:50:GLU:OE2	2.17	0.45
26:BA:145:MET:HB3	26:BA:146:LYS:HZ2	1.77	0.45
27:BB:5:VAL:CG2	27:BB:202:ILE:HG22	2.46	0.45
27:BB:158:GLY:O	27:BB:159:LYS:C	2.55	0.45
27:BB:185:ASN:O	27:BB:186:LEU:HD23	2.16	0.45
28:BC:32:VAL:HG11	28:BC:178:VAL:HG23	1.98	0.45
29:BD:9:ASP:HA	29:BD:13:LYS:HE2	1.97	0.45
31:BF:123:ARG:CA	31:BF:123:ARG:HH11	2.30	0.45
32:BG:116:MET:SD	32:BG:117:THR:N	2.90	0.45
32:BG:121:ILE:HD12	32:BG:121:ILE:C	2.38	0.45
34:BI:16:ALA:HA	34:BI:46:ALA:CB	2.46	0.45
35:BJ:124:GLY:HA2	35:BJ:126:ARG:NH1	2.32	0.45
36:BK:14:LYS:CG	36:BK:15:GLY:N	2.80	0.45
36:BK:34:LYS:HB3	36:BK:34:LYS:HZ2	1.81	0.45
36:BK:86:LYS:HE2	36:BK:86:LYS:CA	2.46	0.45
37:BL:41:ALA:HA	37:BL:44:LEU:HD12	1.97	0.45
37:BL:52:ILE:O	37:BL:53:THR:CB	2.64	0.45
39:BN:32:VAL:HG22	39:BN:32:VAL:O	2.16	0.45
39:BN:36:LYS:CD	39:BN:37:LYS:HG3	2.40	0.45
39:BN:46:VAL:HB	39:BN:65:ASN:ND2	2.32	0.45
40:BO:83:LYS:HB2	40:BO:83:LYS:HZ2	1.82	0.45
1:AA:266:G:C5'	1:AA:267:C:OP1	2.64	0.45
1:AA:535:A:OP1	1:AA:536:C:OP2	2.35	0.45
1:AA:890:G:O2'	1:AA:891:U:C6	2.70	0.45
1:AA:935:A:H5'	10:AI:126:PHE:CZ	2.52	0.45
1:AA:1064:G:C4'	1:AA:1065:U:OP1	2.64	0.45
1:AA:1418:A:H2'	1:AA:1419:G:H5'	1.98	0.45
2:AU:74:C:C3'	22:B0:2556:C:C1'	2.94	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AW:18:G:C1'	2:AW:57:G:H22	2.29	0.45
3:AB:139:GLU:O	3:AB:143:LEU:HG	2.17	0.45
4:AC:68:HIS:ND1	4:AC:103:ALA:HB3	2.32	0.45
5:AD:169:TRP:CZ3	5:AD:189:ASP:HB3	2.52	0.45
7:AF:7:VAL:HG23	7:AF:88:MET:H	1.82	0.45
7:AF:14:GLN:NE2	7:AF:17:GLN:OE1	2.50	0.45
12:AK:121:ARG:NH1	12:AK:127:ARG:NH1	2.65	0.45
20:AS:62:THR:HG22	20:AS:63:ASP:N	2.32	0.45
22:B0:179:C:H2'	22:B0:180:G:H8	1.81	0.45
22:B0:208:C:OP1	28:BC:63:LYS:HG2	2.16	0.45
22:B0:228:C:H6	22:B0:228:C:H3'	1.82	0.45
22:B0:749:A:OP2	41:BQ:90:LYS:NZ	2.38	0.45
22:B0:828:U:H4'	22:B0:831:G:N1	2.32	0.45
22:B0:840:C:H2'	22:B0:841:G:C8	2.52	0.45
22:B0:892:A:H8	22:B0:892:A:O5'	2.00	0.45
22:B0:1113:U:H2'	22:B0:1114:C:H6	1.80	0.45
22:B0:1254:A:H3'	22:B0:1256:G:O4'	2.17	0.45
22:B0:1490:C:H5'	26:BA:162:GLN:HB3	1.98	0.45
22:B0:1526:G:H21	22:B0:1545:A:H62	1.65	0.45
22:B0:1917:U:H2'	22:B0:1918:A:H8	1.82	0.45
22:B0:1929:G:OP2	22:B0:1929:G:N2	2.47	0.45
22:B0:1955:U:OP2	22:B0:1956:U:H5	2.00	0.45
22:B0:2081:U:H3	22:B0:2239:G:H1	1.65	0.45
22:B0:2114:A:H2	22:B0:2168:G:N2	2.14	0.45
22:B0:2116:G:OP1	22:B0:2117:A:O4'	2.35	0.45
22:B0:2677:G:O2'	27:BB:160:LYS:CG	2.64	0.45
22:B0:2897:U:O2	33:BH:13:ARG:O	2.35	0.45
23:B9:66:A:HO2'	23:B9:67:G:H8	1.55	0.45
23:B9:76:G:N2	23:B9:100:G:C2	2.85	0.45
25:B3:21:GLU:HB3	25:B5:119:VAL:CG1	2.47	0.45
25:B3:66:VAL:O	25:B3:67:ALA:C	2.55	0.45
26:BA:68:ARG:NE	26:BA:70:LYS:O	2.50	0.45
26:BA:119:VAL:HG12	26:BA:133:ASN:ND2	2.30	0.45
26:BA:163:ILE:HG22	26:BA:164:VAL:N	2.26	0.45
26:BA:187:CYS:C	26:BA:188:ARG:CG	2.85	0.45
29:BD:142:TYR:H	29:BD:142:TYR:HD1	1.64	0.45
30:BE:162:ARG:HA	30:BE:162:ARG:NE	2.31	0.45
31:BF:95:GLY:O	31:BF:99:ILE:HG12	2.17	0.45
32:BG:57:VAL:HG13	32:BG:69:VAL:HB	1.99	0.45
34:BI:38:ILE:O	34:BI:38:ILE:HG12	2.16	0.45
35:BJ:27:LEU:H	35:BJ:27:LEU:CD2	2.27	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
36:BK:125:PRO:O	36:BK:126:ILE:CB	2.64	0.45
43:BS:11:ILE:CD1	43:BS:21:ARG:HG2	2.44	0.45
44:BT:76:ASP:OD1	44:BT:77:VAL:N	2.50	0.45
46:BW:18:LEU:C	46:BW:18:LEU:HD13	2.37	0.45
49:B1:43:ARG:N	49:B1:43:ARG:NE	2.65	0.45
1:AA:559:A:H4'	1:AA:560:A:H5"	1.97	0.44
1:AA:656:G:O2'	1:AA:657:U:H5'	2.17	0.44
1:AA:669:G:H2'	1:AA:670:G:C8	2.52	0.44
1:AA:745:G:H2'	1:AA:746:A:C8	2.52	0.44
1:AA:1318:A:C2	20:AS:7:GLY:HA2	2.51	0.44
1:AA:1369:C:P	10:AI:112:ARG:HA	2.57	0.44
2:AV:63:C:H2'	2:AV:64:A:H8	1.83	0.44
2:AV:70:C:H2'	2:AV:71:G:H8	1.82	0.44
4:AC:28:PHE:CE2	4:AC:32:LEU:HD11	2.52	0.44
5:AD:113:ALA:O	5:AD:117:VAL:HG23	2.16	0.44
6:AE:34:ALA:CB	6:AE:59:ILE:HD13	2.47	0.44
7:AF:50:PRO:O	7:AF:51:ILE:O	2.35	0.44
14:AM:76:ILE:HA	14:AM:79:LEU:HD21	1.99	0.44
17:AP:11:ALA:CB	17:AP:14:ARG:HH11	2.30	0.44
18:AQ:81:ALA:O	18:AQ:82:VAL:HG13	2.17	0.44
22:B0:63:A:H4'	22:B0:64:A:N7	2.32	0.44
22:B0:446:G:H2'	22:B0:447:A:OP2	2.17	0.44
22:B0:535:G:H2'	22:B0:536:G:H8	1.82	0.44
22:B0:1024:G:N2	22:B0:1139:G:H22	2.15	0.44
22:B0:1083:U:OP2	25:B3:85:ASP:N	2.50	0.44
22:B0:1201:U:H2'	35:BJ:14:LYS:CE	2.47	0.44
22:B0:1479:G:O4'	22:B0:1558:C:C5'	2.65	0.44
22:B0:1488:G:H22	26:BA:176:ARG:CG	2.23	0.44
22:B0:1488:G:P	26:BA:158:GLY:HA3	2.56	0.44
22:B0:1494:A:P	26:BA:189:ALA:CB	3.05	0.44
22:B0:1800:C:O2'	22:B0:1801:A:P	2.74	0.44
22:B0:2120:G:C6	22:B0:2179:C:C4	3.05	0.44
22:B0:2162:G:N7	22:B0:2164:C:H3'	2.32	0.44
22:B0:2174:C:C6	24:B2:39:GLU:OE2	2.70	0.44
22:B0:2301:C:H2'	22:B0:2302:U:C6	2.52	0.44
22:B0:2725:A:OP1	27:BB:141:ARG:HD2	2.17	0.44
22:B0:2780:G:O3'	33:BH:116:ARG:O	2.35	0.44
24:B2:20:TYR:CD1	24:B2:20:TYR:N	2.85	0.44
24:B2:93:LEU:HD12	24:B2:93:LEU:N	2.32	0.44
25:B3:23:ILE:HD12	25:B3:23:ILE:C	2.38	0.44
26:BA:66:PHE:O	26:BA:67:LYS:HD3	2.16	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:114:GLN:O	26:BA:116:GLN:N	2.50	0.44
26:BA:144:GLU:HB3	26:BA:146:LYS:O	2.17	0.44
26:BA:182:LYS:C	26:BA:183:VAL:HG22	2.36	0.44
26:BA:239:PHE:O	26:BA:240:GLY:C	2.55	0.44
29:BD:105:ILE:O	29:BD:106:ALA:HB3	2.17	0.44
29:BD:119:LYS:HD2	29:BD:121:PHE:O	2.18	0.44
29:BD:123:GLY:C	29:BD:124:ARG:HG3	2.38	0.44
35:BJ:76:GLU:HB3	35:BJ:108:ALA:HB2	2.00	0.44
39:BN:23:ASP:OD2	39:BN:91:VAL:HA	2.18	0.44
39:BN:64:SER:HA	39:BN:71:ARG:HD2	1.97	0.44
39:BN:65:ASN:H	39:BN:71:ARG:CB	2.30	0.44
39:BN:95:LYS:HG3	39:BN:97:TYR:CE1	2.51	0.44
41:BQ:7:HIS:HB3	41:BQ:103:ILE:H	1.82	0.44
43:BS:44:HIS:NE2	43:BS:46:LYS:HD2	2.32	0.44
44:BT:63:ILE:O	44:BT:69:GLU:HA	2.17	0.44
49:B1:24:LYS:H	49:B1:24:LYS:CE	2.26	0.44
1:AA:718:A:C2'	12:AK:116:PRO:HB2	2.46	0.44
1:AA:774:G:O2'	1:AA:775:G:H5'	2.18	0.44
1:AA:1498:U:O2'	1:AA:1499:A:P	2.75	0.44
2:AU:22:G:O2'	2:AU:23:A:H5'	2.17	0.44
2:AW:36:A:C3'	2:AW:37:G:H5"	2.47	0.44
5:AD:21:LYS:HE2	5:AD:109:THR:HG21	1.99	0.44
5:AD:62:ARG:HG2	5:AD:62:ARG:HH11	1.82	0.44
12:AK:27:ASN:O	12:AK:28:ASN:HB2	2.16	0.44
16:AO:38:LEU:HD22	16:AO:42:PHE:CE2	2.52	0.44
17:AP:21:VAL:HG21	17:AP:60:TRP:CD1	2.52	0.44
19:AR:9:PHE:HD2	19:AR:45:GLY:HA2	1.82	0.44
19:AR:47:ARG:NE	19:AR:49:LYS:HB2	2.32	0.44
22:B0:323:C:H42	28:BC:164:LEU:HA	1.83	0.44
22:B0:481:G:H5'	43:BS:53:GLN:OE1	2.17	0.44
22:B0:571:U:H5"	22:B0:572:A:OP1	2.17	0.44
22:B0:574:A:H5"	22:B0:575:A:C5'	2.47	0.44
22:B0:623:C:H2'	22:B0:624:C:C6	2.52	0.44
22:B0:708:G:O2'	22:B0:709:U:H5'	2.17	0.44
22:B0:710:U:H2'	22:B0:711:G:C8	2.52	0.44
22:B0:1183:U:OP1	47:BX:29:ARG:NH1	2.50	0.44
22:B0:1358:G:H2'	22:B0:1359:A:H8	1.81	0.44
22:B0:1428:C:O2	22:B0:1428:C:H2'	2.17	0.44
22:B0:1492:G:N2	26:BA:145:MET:N	2.65	0.44
22:B0:1494:A:N7	26:BA:188:ARG:HA	2.32	0.44
22:B0:1499:U:O2'	22:B0:1500:A:H5'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1581:A:OP2	26:BA:73:ILE:O	2.35	0.44
22:B0:1682:G:C8	22:B0:1682:G:O5'	2.71	0.44
22:B0:1683:U:H2'	22:B0:1684:G:H8	1.82	0.44
22:B0:1775:U:C2'	22:B0:1776:G:H5'	2.46	0.44
22:B0:1802:A:N6	22:B0:1814:G:N2	2.66	0.44
22:B0:1993:U:O2'	22:B0:1994:C:H5'	2.17	0.44
22:B0:2115:G:C8	22:B0:2115:G:C3'	3.00	0.44
22:B0:2490:G:H4'	22:B0:2491:U:OP1	2.17	0.44
22:B0:2675:A:N7	27:BB:128:ARG:NH2	2.63	0.44
22:B0:2898:G:N2	33:BH:53:TYR:OH	2.50	0.44
25:B3:79:GLY:HA3	32:BG:117:THR:C	2.38	0.44
25:B5:17:MET:HG2	25:B5:21:GLU:OE2	2.17	0.44
27:BB:40:LEU:HB2	27:BB:74:GLU:HB3	2.00	0.44
28:BC:83:VAL:HG12	28:BC:85:PHE:H	1.82	0.44
28:BC:150:THR:OG1	28:BC:151:GLY:N	2.48	0.44
33:BH:7:LYS:HA	33:BH:8:PRO:HA	1.68	0.44
35:BJ:77:ILE:HG23	35:BJ:111:ILE:CD1	2.46	0.44
37:BL:38:LEU:O	37:BL:40:LYS:N	2.50	0.44
38:BM:36:TYR:CE1	38:BM:52:SER:HB2	2.52	0.44
39:BN:28:LYS:HZ3	39:BN:86:LYS:HB3	1.80	0.44
47:BX:6:ILE:HG12	47:BX:47:ILE:HD12	1.98	0.44
1:AA:274:A:H5"	1:AA:275:G:OP1	2.16	0.44
1:AA:718:A:H3'	12:AK:118:ASN:CA	2.44	0.44
1:AA:838:G:C2'	1:AA:839:U:H5"	2.47	0.44
1:AA:889:A:O2'	1:AA:890:G:C1'	2.65	0.44
1:AA:986:U:H2'	1:AA:987:G:C8	2.52	0.44
1:AA:1095:U:H2'	1:AA:1096:C:C6	2.53	0.44
1:AA:1105:A:H2'	1:AA:1106:G:H8	1.83	0.44
1:AA:1186:G:C5'	10:AI:121:ARG:HH11	2.28	0.44
1:AA:1391:U:H2'	1:AA:1392:G:H8	1.80	0.44
2:AU:74:C:H2'	22:B0:2556:C:H1'	1.98	0.44
2:AV:74:C:H2'	2:AV:75:C:C6	2.52	0.44
2:AW:60:C:C5'	2:AW:61:C:OP2	2.60	0.44
3:AB:36:LYS:CG	3:AB:37:VAL:H	2.20	0.44
3:AB:62:ARG:HG2	3:AB:62:ARG:O	2.17	0.44
3:AB:113:LEU:O	3:AB:117:GLU:HG3	2.17	0.44
4:AC:112:ALA:N	4:AC:201:ILE:HD12	2.32	0.44
5:AD:56:GLU:O	5:AD:59:LYS:HG2	2.17	0.44
5:AD:63:ILE:O	5:AD:110:ARG:HD2	2.17	0.44
5:AD:122:ILE:O	5:AD:128:VAL:HG13	2.17	0.44
5:AD:138:PRO:HA	5:AD:181:PHE:O	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
9:AH:37:ASN:O	9:AH:40:LYS:HG2	2.17	0.44
13:AL:49:ARG:CB	13:AL:89:LEU:HD11	2.46	0.44
15:AN:81:ILE:HG13	15:AN:82:LYS:N	2.32	0.44
16:AO:25:GLU:OE2	16:AO:76:ARG:HD3	2.18	0.44
20:AS:18:VAL:HG21	20:AS:43:MET:HG2	1.99	0.44
20:AS:29:PRO:HA	20:AS:47:THR:O	2.17	0.44
22:B0:432:A:H2'	28:BC:69:ARG:H	1.76	0.44
22:B0:445:C:H2'	22:B0:446:G:O4'	2.18	0.44
22:B0:655:A:C4'	22:B0:656:G:OP1	2.65	0.44
22:B0:723:C:H2'	22:B0:724:U:C6	2.52	0.44
22:B0:843:G:H2'	22:B0:844:A:H8	1.83	0.44
22:B0:1084:A:C2	22:B0:1105:U:C2'	2.99	0.44
22:B0:1246:A:H5"	28:BC:94:GLN:CD	2.38	0.44
22:B0:1489:U:H3	26:BA:178:GLY:HA2	1.82	0.44
22:B0:1492:G:C6	26:BA:153:LEU:N	2.84	0.44
22:B0:1577:C:H5"	26:BA:61:TYR:CD1	2.52	0.44
22:B0:1581:A:C3'	26:BA:73:ILE:HD12	2.46	0.44
22:B0:1582:C:N4	26:BA:95:TYR:HA	2.33	0.44
22:B0:1606:C:H4'	22:B0:1607:C:C5	2.53	0.44
22:B0:1649:G:C6	22:B0:2009:A:C6	3.06	0.44
22:B0:1900:A:H5'	22:B0:1971:U:OP1	2.18	0.44
22:B0:2003:A:N6	22:B0:2004:G:O6	2.50	0.44
22:B0:2077:A:N7	22:B0:2238:G:O6	2.50	0.44
22:B0:2128:G:OP2	22:B0:2166:U:C5'	2.65	0.44
22:B0:2136:G:C6	22:B0:2137:U:C5'	2.87	0.44
22:B0:2373:G:H2'	22:B0:2374:C:C6	2.52	0.44
22:B0:2599:G:O2'	22:B0:2600:A:H5'	2.17	0.44
22:B0:2812:G:N2	22:B0:2889:C:C4	2.85	0.44
24:B2:56:GLN:NE2	24:B2:202:GLN:HB2	2.33	0.44
26:BA:83:ASP:OD1	26:BA:84:PRO:HD2	2.18	0.44
26:BA:188:ARG:HH11	26:BA:188:ARG:CG	2.30	0.44
28:BC:23:PHE:CE1	28:BC:111:GLU:HB2	2.52	0.44
28:BC:108:ILE:CD1	28:BC:181:ILE:HG23	2.43	0.44
28:BC:149:ILE:HG23	28:BC:185:LYS:HB2	1.99	0.44
28:BC:181:ILE:HB	28:BC:184:ASP:N	2.31	0.44
29:BD:9:ASP:H	29:BD:12:VAL:CG2	2.30	0.44
30:BE:27:GLY:HA3	30:BE:78:VAL:CG1	2.47	0.44
32:BG:77:VAL:O	32:BG:79:LEU:HD23	2.18	0.44
33:BH:84:ILE:HG13	33:BH:84:ILE:O	2.16	0.44
36:BK:101:VAL:HG13	36:BK:101:VAL:O	2.18	0.44
37:BL:48:VAL:HG13	37:BL:94:TYR:CE2	2.52	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BM:94:ARG:HG2	38:BM:94:ARG:NH1	2.32	0.44
39:BN:17:PRO:O	39:BN:18:SER:C	2.55	0.44
39:BN:27:VAL:HG23	39:BN:27:VAL:O	2.17	0.44
39:BN:34:GLY:O	39:BN:35:SER:HB2	2.18	0.44
39:BN:96:LEU:O	39:BN:97:TYR:CB	2.62	0.44
45:BU:31:LEU:HD23	45:BU:31:LEU:H	1.82	0.44
1:AA:201:G:N1	1:AA:203:U:H1'	2.33	0.44
1:AA:292:G:O2'	1:AA:608:A:N6	2.50	0.44
1:AA:366:A:H4'	1:AA:367:U:OP1	2.18	0.44
1:AA:687:A:H4'	1:AA:688:G:O5'	2.16	0.44
1:AA:766:A:P	1:AA:812:G:H22	2.40	0.44
7:AF:10:VAL:CG2	7:AF:11:HIS:N	2.80	0.44
11:AJ:40:ILE:HD11	11:AJ:73:LEU:HD22	1.99	0.44
16:AO:47:LYS:HA	16:AO:47:LYS:CE	2.42	0.44
20:AS:2:ARG:HH11	20:AS:2:ARG:HG3	1.83	0.44
21:AT:31:ILE:HD13	21:AT:31:ILE:C	2.37	0.44
21:AT:79:THR:HA	21:AT:82:ILE:CD1	2.47	0.44
22:B0:204:A:O3'	22:B0:205:G:C4'	2.66	0.44
22:B0:283:G:O2'	22:B0:284:U:H5'	2.16	0.44
22:B0:711:G:H2'	22:B0:712:G:C8	2.52	0.44
22:B0:755:U:H2'	22:B0:756:A:H8	1.83	0.44
22:B0:1167:C:H2'	22:B0:1168:G:C8	2.53	0.44
22:B0:1193:G:H2'	22:B0:1194:A:C8	2.52	0.44
22:B0:1389:G:C5'	22:B0:1525:G:H5'	2.47	0.44
22:B0:1869:G:N2	22:B0:1872:A:O5'	2.50	0.44
22:B0:2157:G:H4'	22:B0:2158:A:OP1	2.17	0.44
22:B0:2160:C:C6	22:B0:2161:C:O3'	2.71	0.44
22:B0:2286:G:H5"	22:B0:2287:A:H5'	1.99	0.44
22:B0:2288:A:H5"	22:B0:2289:G:OP2	2.17	0.44
22:B0:2779:U:H4'	33:BH:116:ARG:CG	2.47	0.44
24:B2:39:GLU:O	24:B2:177:VAL:N	2.50	0.44
24:B2:191:LEU:C	24:B2:191:LEU:HD13	2.38	0.44
25:B3:80:LEU:HD22	32:BG:117:THR:OG1	2.18	0.44
26:BA:48:ILE:HD11	26:BA:181:ARG:NH1	2.33	0.44
26:BA:100:ARG:C	26:BA:100:ARG:HD2	2.38	0.44
27:BB:117:GLY:CA	27:BB:164:GLN:HE22	2.29	0.44
27:BB:171:THR:O	27:BB:171:THR:HG23	2.17	0.44
29:BD:129:MET:HB2	29:BD:153:ILE:HD11	2.00	0.44
29:BD:169:LEU:HD23	29:BD:169:LEU:O	2.17	0.44
36:BK:35:ALA:CB	36:BK:128:THR:HG22	2.47	0.44
37:BL:4:ARG:HB3	37:BL:5:LYS:NZ	2.33	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BO:36:GLN:H	40:BO:39:ILE:HB	1.82	0.44
41:BQ:20:VAL:CG1	41:BQ:47:VAL:HG11	2.47	0.44
45:BU:31:LEU:O	45:BU:31:LEU:HG	2.17	0.44
45:BU:43:LYS:HE2	45:BU:43:LYS:N	2.29	0.44
1:AA:381:C:H2'	1:AA:382:A:O4'	2.18	0.44
1:AA:428:G:H4'	1:AA:429:U:O5'	2.17	0.44
1:AA:485:U:O2'	1:AA:486:U:C5	2.70	0.44
1:AA:872:A:H5"	1:AA:873:A:OP1	2.18	0.44
1:AA:1070:U:O2'	1:AA:1071:C:H5'	2.17	0.44
1:AA:1288:A:H2'	1:AA:1289:A:H8	1.82	0.44
1:AA:1320:C:C2	20:AS:2:ARG:HB3	2.52	0.44
1:AA:1327:C:H2'	1:AA:1328:C:C6	2.52	0.44
1:AA:1367:C:H5'	11:AJ:62:ARG:HG3	1.99	0.44
2:AU:63:C:H2'	2:AU:64:A:C8	2.53	0.44
5:AD:120:LYS:O	5:AD:145:ARG:HG3	2.16	0.44
6:AE:15:ILE:HB	6:AE:35:LEU:CB	2.47	0.44
6:AE:132:PRO:O	6:AE:136:VAL:HG13	2.17	0.44
10:AI:8:THR:HB	10:AI:84:ARG:CZ	2.48	0.44
12:AK:34:THR:HA	12:AK:41:LEU:HD23	1.99	0.44
12:AK:46:ALA:CB	12:AK:61:ALA:HB1	2.47	0.44
14:AM:39:ALA:HB3	14:AM:42:VAL:HG23	2.00	0.44
18:AQ:21:VAL:O	18:AQ:21:VAL:HG23	2.18	0.44
18:AQ:22:VAL:HG21	18:AQ:60:ILE:HD11	2.00	0.44
20:AS:6:LYS:C	20:AS:8:PRO:HD3	2.38	0.44
22:B0:85:G:H2'	22:B0:86:G:H8	1.83	0.44
22:B0:446:G:C2'	22:B0:447:A:OP2	2.66	0.44
22:B0:589:U:C1'	28:BC:86:ALA:HA	2.48	0.44
22:B0:859:G:N2	22:B0:917:A:O5'	2.50	0.44
22:B0:860:U:O2'	22:B0:861:A:H5'	2.18	0.44
22:B0:1080:A:C2	22:B0:1081:U:C2	3.05	0.44
22:B0:1081:U:O2	25:B3:80:LEU:HD23	2.18	0.44
22:B0:1082:U:H2'	25:B3:83:ALA:C	2.37	0.44
22:B0:1175:A:H2'	22:B0:1177:G:C8	2.53	0.44
22:B0:1213:A:C6	22:B0:1237:A:H1'	2.53	0.44
22:B0:1358:G:N2	22:B0:1373:A:C2	2.85	0.44
22:B0:1425:G:N2	22:B0:1574:C:H42	2.15	0.44
22:B0:1491:A:H5"	26:BA:175:LEU:HA	2.00	0.44
22:B0:1498:C:C2'	22:B0:1499:U:C5'	2.92	0.44
22:B0:1579:A:C6	26:BA:68:ARG:N	2.85	0.44
22:B0:1609:A:H1'	22:B0:1616:A:O4'	2.18	0.44
22:B0:1660:G:O2'	22:B0:1661:G:H5'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2173:A:N3	24:B2:39:GLU:HA	2.32	0.44
22:B0:2342:C:H2'	22:B0:2343:U:O4'	2.18	0.44
22:B0:2821:A:O5'	22:B0:2821:A:H8	2.01	0.44
24:B2:22:ILE:O	24:B2:25:ALA:HB3	2.17	0.44
24:B2:214:SER:O	24:B2:215:THR:CG2	2.65	0.44
27:BB:49:GLN:O	27:BB:49:GLN:HG3	2.18	0.44
28:BC:48:THR:HG23	28:BC:74:LYS:NZ	2.32	0.44
29:BD:32:LYS:HB3	29:BD:91:ARG:HG2	2.00	0.44
29:BD:66:ILE:HD13	29:BD:86:CYS:SG	2.58	0.44
30:BE:148:ARG:NH2	30:BE:167:VAL:HG13	2.33	0.44
31:BF:129:GLU:HG3	31:BF:129:GLU:O	2.18	0.44
32:BG:7:TYR:O	32:BG:8:VAL:HB	2.17	0.44
33:BH:37:ARG:O	33:BH:37:ARG:NH1	2.51	0.44
33:BH:109:LEU:H	33:BH:109:LEU:HD22	1.81	0.44
34:BI:19:VAL:CG1	34:BI:41:ILE:HD12	2.45	0.44
37:BL:115:LEU:HD12	37:BL:115:LEU:N	2.32	0.44
38:BM:7:ARG:HD3	38:BM:7:ARG:N	2.23	0.44
38:BM:16:ARG:HG2	38:BM:16:ARG:HH11	1.82	0.44
39:BN:70:GLU:HB3	39:BN:71:ARG:HE	1.83	0.44
40:BO:102:LYS:HZ2	40:BO:103:VAL:HG13	1.81	0.44
41:BQ:32:ALA:HB1	41:BQ:51:LEU:HD11	1.98	0.44
42:BR:69:ARG:HB3	42:BR:69:ARG:CZ	2.47	0.44
45:BU:67:LYS:H	45:BU:67:LYS:HD3	1.81	0.44
45:BU:67:LYS:O	45:BU:68:PHE:HB2	2.17	0.44
46:BW:22:LEU:O	46:BW:22:LEU:HD23	2.18	0.44
47:BX:13:ILE:HG13	47:BX:13:ILE:O	2.17	0.44
48:BZ:29:VAL:HG13	48:BZ:47:TYR:OH	2.18	0.44
48:BZ:37:HIS:O	48:BZ:39:ARG:N	2.44	0.44
1:AA:269:C:H2'	1:AA:270:A:H8	1.82	0.44
1:AA:405:U:C3'	1:AA:406:G:H5'	2.43	0.44
1:AA:423:G:C2'	1:AA:424:G:H5'	2.48	0.44
1:AA:512:U:H2'	1:AA:513:C:C6	2.53	0.44
1:AA:718:A:O5'	12:AK:119:GLY:N	2.51	0.44
1:AA:721:G:H1'	1:AA:722:G:C2	2.53	0.44
1:AA:752:G:H4'	1:AA:754:C:H5	1.82	0.44
1:AA:802:A:H2'	1:AA:803:G:O4'	2.17	0.44
1:AA:858:G:O6	1:AA:869:G:H3'	2.18	0.44
1:AA:878:A:O4'	9:AH:3:GLN:OE1	2.36	0.44
1:AA:913:A:H1'	1:AA:914:A:O4'	2.18	0.44
1:AA:968:A:C5'	1:AA:969:A:OP2	2.60	0.44
1:AA:975:A:N6	11:AJ:52:LEU:CD2	2.75	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1278:G:H5'	1:AA:1279:G:O4'	2.17	0.44
1:AA:1282:C:O2'	1:AA:1283:U:H5'	2.17	0.44
1:AA:1330:U:H2'	1:AA:1331:G:O4'	2.17	0.44
3:AB:162:VAL:HG21	3:AB:172:ILE:HD11	2.00	0.44
4:AC:72:PRO:O	4:AC:76:ILE:HG13	2.17	0.44
5:AD:82:LYS:HD2	5:AD:82:LYS:C	2.36	0.44
5:AD:101:VAL:CG1	5:AD:106:PHE:HB2	2.48	0.44
9:AH:10:LEU:CG	9:AH:74:ILE:HG12	2.46	0.44
16:AO:83:ARG:HH11	16:AO:83:ARG:HG2	1.82	0.44
22:B0:96:C:H2'	22:B0:97:C:C6	2.53	0.44
22:B0:404:A:H4'	22:B0:406:G:C8	2.53	0.44
22:B0:740:C:N3	22:B0:758:C:H1'	2.33	0.44
22:B0:1421:G:H2'	22:B0:1422:G:O4'	2.16	0.44
22:B0:1557:C:C2	22:B0:1558:C:H1'	2.52	0.44
22:B0:1565:C:O2'	22:B0:1566:A:C8	2.70	0.44
22:B0:1854:A:O2'	22:B0:1859:U:P	2.76	0.44
22:B0:1937:A:N6	22:B0:1940:U:H5	2.15	0.44
22:B0:2001:C:C2	22:B0:2002:G:N7	2.86	0.44
22:B0:2073:C:N4	22:B0:2436:G:H1	2.16	0.44
22:B0:2173:A:C4	24:B2:37:PHE:CD1	3.05	0.44
22:B0:2213:U:H2'	22:B0:2214:C:C6	2.53	0.44
22:B0:2679:A:H5'	27:BB:116:LYS:CD	2.46	0.44
22:B0:2861:U:O2	22:B0:2862:G:N7	2.50	0.44
22:B0:2898:G:N7	33:BH:138:GLN:HG3	2.33	0.44
23:B9:57:A:H2'	23:B9:58:A:O5'	2.18	0.44
24:B2:211:VAL:HG21	24:B2:225:GLN:HB3	1.99	0.44
26:BA:62:ARG:NE	26:BA:150:GLY:O	2.50	0.44
27:BB:31:ALA:C	27:BB:32:ASN:HD22	2.21	0.44
27:BB:82:PHE:C	27:BB:83:ARG:HG3	2.38	0.44
28:BC:149:ILE:HG23	28:BC:185:LYS:HB3	1.98	0.44
29:BD:68:LYS:HD3	29:BD:68:LYS:N	2.09	0.44
32:BG:3:LYS:HE2	32:BG:3:LYS:CA	2.42	0.44
32:BG:82:ALA:HB1	32:BG:100:ILE:HD11	1.99	0.44
33:BH:31:GLU:HA	33:BH:34:ARG:CD	2.48	0.44
33:BH:56:VAL:HG21	33:BH:124:VAL:HG12	1.99	0.44
34:BI:65:THR:HA	34:BI:82:ASN:OD1	2.17	0.44
35:BJ:54:GLN:HB3	35:BJ:56:PRO:HA	2.00	0.44
36:BK:37:GLY:H	36:BK:98:PRO:HA	1.82	0.44
36:BK:40:ARG:HD3	36:BK:40:ARG:N	2.33	0.44
37:BL:95:THR:HB	37:BL:114:GLU:O	2.18	0.44
39:BN:63:ILE:CD1	39:BN:74:GLN:HG2	2.46	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BO:14:LYS:CG	40:BO:15:LYS:N	2.79	0.44
41:BQ:13:SER:CA	41:BQ:99:ARG:HH21	2.30	0.44
42:BR:34:VAL:H	42:BR:82:LYS:HA	1.82	0.44
42:BR:57:VAL:CG2	42:BR:86:THR:HB	2.47	0.44
49:B1:10:LEU:HD21	49:B1:25:ASN:ND2	2.31	0.44
1:AA:41:G:H2'	1:AA:42:G:C8	2.53	0.44
1:AA:252:U:H2'	1:AA:253:A:C8	2.52	0.44
1:AA:324:G:N1	1:AA:327:A:OP2	2.46	0.44
1:AA:358:U:H2'	1:AA:359:G:H8	1.80	0.44
1:AA:382:A:H2'	1:AA:383:A:C8	2.53	0.44
1:AA:531:U:C4'	1:AA:532:A:OP1	2.66	0.44
1:AA:547:A:H4'	1:AA:548:G:C4'	2.47	0.44
1:AA:701:U:O3'	22:B0:1848:A:H5"	2.18	0.44
1:AA:936:C:H2'	1:AA:937:A:O4'	2.18	0.44
1:AA:1127:G:H21	1:AA:1146:A:H62	1.65	0.44
1:AA:1317:C:OP1	15:AN:81:ILE:HG22	2.18	0.44
1:AA:1447:A:C2	1:AA:1459:G:N2	2.81	0.44
1:AA:1503:A:C3'	1:AA:1504:G:H5'	2.48	0.44
3:AB:80:LYS:HG3	3:AB:90:PHE:CZ	2.53	0.44
3:AB:202:ASN:HD22	3:AB:202:ASN:C	2.20	0.44
4:AC:128:MET:HB2	4:AC:131:ARG:HD3	2.00	0.44
5:AD:88:ASN:O	5:AD:91:ALA:HB3	2.17	0.44
5:AD:150:LYS:N	5:AD:150:LYS:HD2	2.32	0.44
6:AE:92:ARG:HD2	6:AE:127:TYR:CB	2.48	0.44
7:AF:18:VAL:HG13	7:AF:21:MET:HE2	1.99	0.44
10:AI:29:ILE:HG21	10:AI:37:TYR:CD2	2.53	0.44
10:AI:113:LYS:O	10:AI:113:LYS:CG	2.66	0.44
11:AJ:57:VAL:O	11:AJ:58:ASN:C	2.56	0.44
17:AP:60:TRP:O	17:AP:63:GLN:HB3	2.18	0.44
21:AT:47:GLN:HG3	21:AT:48:LYS:N	2.33	0.44
22:B0:128:C:N3	22:B0:129:C:N4	2.65	0.44
22:B0:508:A:H5"	22:B0:509:C:O5'	2.18	0.44
22:B0:529:A:H4'	22:B0:530:G:C5'	2.48	0.44
22:B0:717:C:H2'	22:B0:718:A:O4'	2.18	0.44
22:B0:720:U:H2'	22:B0:721:A:C8	2.53	0.44
22:B0:827:U:H5"	22:B0:828:U:O5'	2.18	0.44
22:B0:1156:A:H4'	22:B0:1157:G:OP1	2.15	0.44
22:B0:1212:G:H2'	22:B0:1213:A:OP2	2.18	0.44
22:B0:1499:U:O4	26:BA:142:ASN:ND2	2.51	0.44
22:B0:1666:G:N2	22:B0:1995:U:O2	2.51	0.44
22:B0:2078:C:H1'	22:B0:2434:A:C1'	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2138:G:O5'	22:B0:2139:U:P	2.75	0.44
22:B0:2319:G:O4'	22:B0:2320:U:C5	2.71	0.44
22:B0:2329:U:H2'	22:B0:2330:G:C8	2.53	0.44
22:B0:2778:A:O2'	22:B0:2779:U:O5'	2.30	0.44
24:B2:99:LEU:HD12	24:B2:99:LEU:N	2.32	0.44
26:BA:64:VAL:CG1	26:BA:65:ASP:N	2.72	0.44
26:BA:90:ILE:HD13	26:BA:90:ILE:N	2.24	0.44
26:BA:131:MET:CE	26:BA:188:ARG:CA	2.96	0.44
29:BD:101:ARG:O	29:BD:105:ILE:HD11	2.18	0.44
30:BE:40:VAL:HG22	30:BE:41:GLU:N	2.32	0.44
32:BG:29:GLN:HA	32:BG:29:GLN:HE21	1.83	0.44
33:BH:89:PHE:O	33:BH:92:MET:HB3	2.17	0.44
33:BH:125:TYR:CE1	33:BH:131:ASN:HB3	2.52	0.44
36:BK:63:ILE:HG23	36:BK:63:ILE:O	2.17	0.44
40:BO:39:ILE:CG2	40:BO:40:LYS:N	2.80	0.44
40:BO:99:VAL:HG13	40:BO:100:PHE:H	1.83	0.44
43:BS:53:GLN:CG	43:BS:54:PRO:HD2	2.46	0.44
1:AA:5:U:H2'	1:AA:6:G:OP2	2.17	0.44
1:AA:142:G:O2'	1:AA:143:A:H5'	2.18	0.44
1:AA:231:U:H2'	1:AA:232:G:C8	2.52	0.44
1:AA:873:A:H4'	1:AA:874:G:OP1	2.18	0.44
1:AA:1137:C:H4'	1:AA:1138:G:N1	2.32	0.44
1:AA:1288:A:H2'	1:AA:1289:A:C8	2.53	0.44
1:AA:1366:C:O2'	11:AJ:59:LYS:HD2	2.17	0.44
4:AC:64:ARG:HH11	4:AC:64:ARG:HG3	1.82	0.44
4:AC:145:ALA:HA	4:AC:203:LYS:CD	2.47	0.44
5:AD:112:GLU:O	5:AD:116:LEU:HG	2.18	0.44
6:AE:80:LEU:HG	6:AE:146:MET:HE1	2.00	0.44
22:B0:70:G:H5"	22:B0:71:A:OP1	2.18	0.44
22:B0:381:G:H2'	22:B0:383:C:H6	1.83	0.44
22:B0:529:A:O2'	22:B0:530:G:C8	2.71	0.44
22:B0:740:C:C4	22:B0:757:G:N2	2.86	0.44
22:B0:883:G:C5	22:B0:884:U:O4	2.71	0.44
22:B0:1031:G:N1	22:B0:1032:A:C2	2.86	0.44
22:B0:1104:C:H2'	22:B0:1105:U:C6	2.52	0.44
22:B0:1203:U:P	35:BJ:12:SER:H	2.40	0.44
22:B0:1217:U:H2'	22:B0:1218:G:H8	1.81	0.44
22:B0:1226:A:H2'	22:B0:1227:G:H5'	2.00	0.44
22:B0:1418:G:C4	26:BA:99:GLU:HB3	2.53	0.44
22:B0:1419:A:H3'	22:B0:1420:U:C5	2.53	0.44
22:B0:1478:G:O2'	22:B0:1558:C:H2'	2.18	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1496:A:H5”	26:BA:190:THR:OG1	2.18	0.44
22:B0:1567:G:H4’	22:B0:1568:G:N3	2.33	0.44
22:B0:1579:A:HO2’	26:BA:129:LEU:HA	1.75	0.44
22:B0:1661:G:O2’	22:B0:1662:U:H5’	2.17	0.44
22:B0:1852:U:O5’	22:B0:1852:U:H6	2.01	0.44
22:B0:2128:G:C4’	22:B0:2166:U:OP2	2.64	0.44
22:B0:2163:G:O2’	22:B0:2164:C:C6	2.71	0.44
22:B0:2366:A:H1’	45:BU:30:VAL:HG23	1.99	0.44
22:B0:2705:A:H2’	22:B0:2707:U:O4’	2.17	0.44
24:B2:30:LYS:NZ	24:B2:181:ALA:HB2	2.33	0.44
24:B2:202:GLN:NE2	24:B2:202:GLN:N	2.55	0.44
25:B3:18:ASP:HA	25:B5:120:LYS:HA	2.00	0.44
25:B3:107:LYS:HD2	25:B3:119:VAL:CG2	2.47	0.44
28:BC:28:VAL:HA	35:BJ:17:LYS:HB2	1.98	0.44
28:BC:150:THR:CB	28:BC:182:ALA:HB3	2.45	0.44
30:BE:86:LEU:HD12	30:BE:86:LEU:N	2.33	0.44
34:BI:106:GLU:H	34:BI:106:GLU:CD	2.22	0.44
35:BJ:74:THR:HG22	35:BJ:107:PHE:CB	2.48	0.44
40:BO:81:GLY:HA2	40:BO:84:LYS:HB2	2.00	0.44
41:BQ:37:THR:HG23	41:BQ:38:TYR:CD2	2.53	0.44
43:BS:93:ARG:HH11	43:BS:93:ARG:HG3	1.83	0.44
44:BT:60:VAL:O	44:BT:60:VAL:HG22	2.17	0.44
45:BU:54:ARG:NH1	45:BU:55:ASP:N	2.62	0.44
1:AA:857:C:H2’	1:AA:858:G:O4’	2.18	0.44
1:AA:868:C:H5’	1:AA:873:A:N6	2.33	0.44
1:AA:1356:G:H22	11:AJ:62:ARG:NH1	2.16	0.44
1:AA:1395:C:O5’	1:AA:1395:C:H6	2.01	0.44
1:AA:1399:C:H4’	1:AA:1400:C:C5’	2.48	0.44
2:AW:22:G:O2’	2:AW:23:A:H5’	2.17	0.44
3:AB:53:LEU:HD11	3:AB:219:THR:HG21	2.00	0.44
7:AF:22:ILE:O	7:AF:25:TYR:HB3	2.18	0.44
7:AF:26:THR:O	7:AF:30:THR:HG23	2.18	0.44
8:AG:130:LYS:N	8:AG:134:VAL:HG21	2.32	0.44
10:AI:87:MET:HE2	10:AI:94:ARG:NE	2.33	0.44
11:AJ:57:VAL:CG1	11:AJ:58:ASN:H	2.01	0.44
17:AP:71:VAL:HG13	17:AP:72:ALA:N	2.33	0.44
18:AQ:30:HIS:HE1	18:AQ:32:ILE:HD13	1.83	0.44
22:B0:229:C:C6	22:B0:229:C:OP1	2.70	0.44
22:B0:666:A:O5’	35:BJ:48:ARG:HD3	2.18	0.44
22:B0:743:A:O2’	22:B0:744:U:H5’	2.18	0.44
22:B0:1049:C:C4	22:B0:1050:A:N7	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1084:A:C8	25:B3:88:GLU:C	2.89	0.44
22:B0:1095:A:H62	32:BG:25:PRO:HB2	1.81	0.44
22:B0:1141:U:OP2	33:BH:71:ASP:HB2	2.17	0.44
22:B0:1157:G:H2'	22:B0:1157:G:N3	2.31	0.44
22:B0:1227:G:O2'	22:B0:1228:G:H5'	2.18	0.44
22:B0:1246:A:H8	22:B0:1246:A:O5'	2.01	0.44
22:B0:1480:G:H22	22:B0:1511:G:H22	1.66	0.44
22:B0:1482:G:H2'	22:B0:1483:A:C8	2.52	0.44
22:B0:1485:C:H5"	26:BA:87:SER:CA	2.48	0.44
22:B0:1487:G:O5'	26:BA:195:GLY:HA2	2.18	0.44
22:B0:1578:U:O3'	26:BA:65:ASP:HA	2.18	0.44
22:B0:2001:C:N4	22:B0:2002:G:O6	2.51	0.44
22:B0:2006:C:H4'	22:B0:2048:G:H5"	2.00	0.44
22:B0:2115:G:H3'	22:B0:2115:G:H8	1.83	0.44
22:B0:2327:A:N6	22:B0:2387:U:N3	2.64	0.44
22:B0:2752:C:H6	22:B0:2752:C:O5'	2.01	0.44
22:B0:2765:A:H3'	22:B0:2766:A:H8	1.81	0.44
23:B9:17:C:O5'	23:B9:17:C:H6	2.00	0.44
26:BA:77:VAL:HA	26:BA:93:VAL:HA	1.99	0.44
26:BA:188:ARG:HG3	26:BA:188:ARG:NH1	2.30	0.44
28:BC:108:ILE:HD11	28:BC:180:LEU:O	2.18	0.44
28:BC:136:GLN:HA	28:BC:136:GLN:NE2	2.32	0.44
28:BC:186:VAL:HG13	28:BC:187:VAL:N	2.32	0.44
33:BH:103:ILE:O	33:BH:106:LYS:HB3	2.18	0.44
35:BJ:21:ARG:NE	35:BJ:21:ARG:HA	2.32	0.44
40:BO:5:ARG:CG	40:BO:9:ALA:HB3	2.48	0.44
40:BO:102:LYS:H	40:BO:102:LYS:CE	2.31	0.44
41:BQ:6:LYS:HA	41:BQ:104:THR:HA	2.00	0.44
45:BU:68:PHE:O	45:BU:70:VAL:N	2.51	0.44
46:BW:39:GLN:HA	46:BW:39:GLN:NE2	2.33	0.44
1:AA:621:A:H2'	1:AA:622:A:C8	2.53	0.43
1:AA:785:G:O2'	1:AA:786:G:H5'	2.17	0.43
1:AA:792:A:C5'	1:AA:793:U:OP1	2.61	0.43
1:AA:952:U:H2'	1:AA:953:G:H8	1.83	0.43
2:AU:46:G:HO2'	2:AU:47:U:H5'	1.83	0.43
3:AB:23:ASN:ND2	3:AB:24:PRO:HD2	2.24	0.43
3:AB:198:VAL:HG22	3:AB:199:ILE:N	2.33	0.43
4:AC:126:ARG:HB3	4:AC:126:ARG:CZ	2.47	0.43
5:AD:10:LEU:O	5:AD:14:GLU:HG2	2.18	0.43
5:AD:67:LEU:HD22	5:AD:67:LEU:N	2.31	0.43
8:AG:148:LYS:HZ1	12:AK:55:ARG:NH2	2.16	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
11:AJ:12:ALA:HB3	11:AJ:18:ILE:CG1	2.48	0.43
13:AL:79:ILE:CD1	13:AL:80:LEU:H	2.29	0.43
16:AO:43:ALA:O	16:AO:46:LYS:HE3	2.18	0.43
20:AS:46:LEU:HD12	20:AS:46:LEU:N	2.33	0.43
21:AT:53:MET:C	21:AT:56:ILE:HG22	2.39	0.43
22:B0:183:C:H4'	28:BC:67:ARG:HB3	2.00	0.43
22:B0:444:C:H5'	28:BC:92:HIS:HE1	1.83	0.43
22:B0:540:G:H2'	22:B0:541:C:H6	1.81	0.43
22:B0:591:U:H2'	22:B0:592:A:C8	2.53	0.43
22:B0:676:A:H4'	22:B0:2442:C:HO2'	1.83	0.43
22:B0:727:A:H2'	22:B0:728:G:O4'	2.18	0.43
22:B0:1083:U:C2'	25:B3:88:GLU:N	2.80	0.43
22:B0:1096:A:N1	32:BG:26:ALA:HB2	2.33	0.43
22:B0:1485:C:O2'	22:B0:1486:G:C1'	2.66	0.43
22:B0:1493:A:OP1	26:BA:144:GLU:C	2.56	0.43
22:B0:1496:A:C2	26:BA:150:GLY:HA3	2.53	0.43
22:B0:1550:C:H2'	22:B0:1551:A:H8	1.83	0.43
22:B0:1581:A:H2	26:BA:97:ASP:CG	2.21	0.43
22:B0:1820:U:C5'	22:B0:1821:A:OP2	2.65	0.43
22:B0:1833:C:O2'	22:B0:1834:U:H5'	2.18	0.43
22:B0:1880:U:H2'	22:B0:1881:C:C6	2.53	0.43
22:B0:1938:A:HO2'	22:B0:1939:U:P	2.40	0.43
22:B0:2006:C:H4'	22:B0:2048:G:C5'	2.47	0.43
22:B0:2119:A:H2	22:B0:2121:G:H1'	1.82	0.43
22:B0:2282:G:H4'	22:B0:2282:G:OP1	2.18	0.43
22:B0:2726:A:OP1	27:BB:129:THR:OG1	2.31	0.43
22:B0:2835:A:H4'	22:B0:2836:U:C6	2.53	0.43
23:B9:43:C:H4'	29:BD:90:LEU:HB2	1.99	0.43
25:B3:22:LEU:HD13	25:B5:118:GLU:HB2	2.00	0.43
25:B3:29:LYS:NZ	25:B5:112:GLU:H	2.16	0.43
25:B3:50:GLU:O	25:B3:51:LYS:HB2	2.17	0.43
26:BA:67:LYS:HG2	26:BA:188:ARG:HH22	1.82	0.43
26:BA:86:ARG:C	26:BA:88:ALA:N	2.72	0.43
29:BD:39:VAL:HG23	29:BD:39:VAL:O	2.18	0.43
31:BF:99:ILE:O	31:BF:103:VAL:HG23	2.18	0.43
40:BO:63:ARG:HH22	40:BO:96:ASP:N	2.16	0.43
40:BO:83:LYS:HG2	40:BO:88:GLU:HG3	1.99	0.43
41:BQ:11:ARG:HH22	41:BQ:46:LEU:HD22	1.82	0.43
47:BX:47:ILE:CG2	47:BX:56:VAL:HG11	2.47	0.43
49:B1:7:LYS:HD3	49:B1:7:LYS:N	2.33	0.43
1:AA:129:A:O2'	1:AA:130:A:C8	2.71	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:268:U:H2'	1:AA:269:C:C6	2.53	0.43
1:AA:321:A:H2	1:AA:332:G:H22	1.66	0.43
1:AA:428:G:O2'	1:AA:429:U:OP2	2.36	0.43
1:AA:531:U:O2'	1:AA:532:A:H5"	2.17	0.43
1:AA:707:U:H2'	1:AA:708:C:C6	2.53	0.43
1:AA:1413:A:O2'	1:AA:1414:U:H5'	2.18	0.43
2:AU:74:C:C3'	22:B0:2556:C:H1'	2.48	0.43
3:AB:215:ALA:O	3:AB:219:THR:HG23	2.18	0.43
3:AB:218:ALA:O	3:AB:222:GLU:HG2	2.18	0.43
3:AB:234:GLU:HA	3:AB:237:VAL:HG23	1.99	0.43
11:AJ:57:VAL:O	11:AJ:59:LYS:N	2.51	0.43
12:AK:16:SER:CA	12:AK:78:ILE:HA	2.48	0.43
13:AL:49:ARG:HB3	13:AL:65:TYR:CE1	2.51	0.43
13:AL:115:LYS:HB3	13:AL:115:LYS:HZ3	1.82	0.43
20:AS:10:ILE:HG21	20:AS:15:LEU:HD13	2.00	0.43
21:AT:17:ARG:HG2	21:AT:17:ARG:HH11	1.82	0.43
22:B0:293:U:H2'	22:B0:295:G:C8	2.51	0.43
22:B0:334:C:O5'	22:B0:334:C:H6	2.02	0.43
22:B0:480:A:C4'	43:BS:51:LEU:HB2	2.48	0.43
22:B0:1299:G:H4'	22:B0:1300:G:H5'	1.99	0.43
22:B0:1417:U:H5	26:BA:100:ARG:N	2.12	0.43
22:B0:1424:G:H8	26:BA:57:HIS:HB2	1.78	0.43
22:B0:1466:U:H2'	22:B0:1467:G:C8	2.52	0.43
22:B0:1495:A:H61	26:BA:144:GLU:CG	2.22	0.43
22:B0:1495:A:N7	22:B0:1496:A:N9	2.66	0.43
22:B0:1583:G:H4'	26:BA:96:LYS:HD3	2.00	0.43
22:B0:1817:G:C2'	22:B0:1818:U:H5'	2.48	0.43
22:B0:1872:A:H2	22:B0:2411:A:H1'	1.82	0.43
22:B0:2214:C:C2'	22:B0:2215:C:H5'	2.46	0.43
22:B0:2396:G:H2'	22:B0:2397:G:C8	2.53	0.43
24:B2:33:ALA:O	24:B2:34:THR:C	2.56	0.43
24:B2:74:VAL:HG22	24:B2:112:VAL:CG1	2.48	0.43
25:B3:2:ILE:HG22	25:B3:3:THR:N	2.33	0.43
25:B3:91:PRO:CA	25:B5:40:VAL:HG23	2.49	0.43
25:B5:40:VAL:O	25:B5:44:PRO:HD2	2.18	0.43
25:B5:45:VAL:O	25:B5:46:GLU:C	2.56	0.43
25:B5:83:ALA:O	25:B5:87:VAL:HG23	2.17	0.43
27:BB:36:GLN:HA	27:BB:53:GLY:O	2.18	0.43
27:BB:118:PHE:HA	27:BB:163:GLY:O	2.18	0.43
29:BD:25:MET:SD	29:BD:25:MET:N	2.82	0.43
30:BE:116:LEU:HD23	30:BE:116:LEU:C	2.39	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BJ:19:LEU:O	35:BJ:19:LEU:HD13	2.19	0.43
35:BJ:75:ALA:HA	35:BJ:109:LYS:NZ	2.32	0.43
38:BM:36:TYR:HE1	38:BM:52:SER:HB2	1.83	0.43
39:BN:20:ARG:HG3	39:BN:22:GLY:N	2.33	0.43
39:BN:30:TRP:CD1	39:BN:82:SER:HA	2.53	0.43
40:BO:51:GLN:O	40:BO:55:GLN:HB2	2.18	0.43
40:BO:59:LEU:HD23	40:BO:60:TRP:CH2	2.53	0.43
40:BO:93:ILE:HG13	40:BO:94:LEU:N	2.33	0.43
41:BQ:12:SER:HB3	41:BQ:17:VAL:HG22	1.99	0.43
41:BQ:88:ARG:CD	41:BQ:94:ASP:HB3	2.48	0.43
43:BS:3:LYS:HB3	43:BS:5:ARG:HH12	1.82	0.43
44:BT:73:LYS:HG3	44:BT:94:ALA:HB2	2.00	0.43
44:BT:73:LYS:NZ	44:BT:94:ALA:HB2	2.32	0.43
49:B1:47:ILE:CG2	49:B1:48:TYR:N	2.81	0.43
1:AA:243:A:H62	1:AA:281:G:H1'	1.81	0.43
1:AA:477:C:H2'	1:AA:478:A:C8	2.52	0.43
1:AA:652:U:H2'	1:AA:653:U:H5"	2.00	0.43
3:AB:89:PHE:CD1	3:AB:89:PHE:N	2.87	0.43
4:AC:102:ILE:N	4:AC:102:ILE:CD1	2.80	0.43
5:AD:63:ILE:HD12	5:AD:194:ILE:HD11	2.00	0.43
5:AD:167:PRO:CG	5:AD:170:LEU:HD12	2.48	0.43
6:AE:139:THR:O	6:AE:143:LEU:HG	2.18	0.43
9:AH:40:LYS:HG3	9:AH:41:GLU:N	2.33	0.43
9:AH:101:ALA:HB2	9:AH:127:TYR:HD1	1.83	0.43
14:AM:89:ARG:CD	14:AM:92:ARG:HH21	2.27	0.43
16:AO:56:LEU:HD13	16:AO:56:LEU:C	2.39	0.43
17:AP:77:GLU:O	17:AP:78:VAL:HG22	2.18	0.43
18:AQ:6:THR:HA	18:AQ:60:ILE:O	2.19	0.43
18:AQ:47:ASP:OD2	18:AQ:50:ASN:HA	2.18	0.43
22:B0:35:G:O4'	22:B0:454:A:C1'	2.61	0.43
22:B0:381:G:H2'	22:B0:383:C:C6	2.54	0.43
22:B0:503:A:C1'	22:B0:505:A:H5"	2.48	0.43
22:B0:529:A:N7	22:B0:2042:A:H2	2.16	0.43
22:B0:632:A:H2'	22:B0:633:A:C8	2.53	0.43
22:B0:660:C:H6	22:B0:660:C:O5'	2.01	0.43
22:B0:689:A:O2'	22:B0:780:G:H5'	2.17	0.43
22:B0:748:G:O6	22:B0:751:A:H5'	2.17	0.43
22:B0:845:A:C2	22:B0:932:U:O2'	2.69	0.43
22:B0:870:U:H3	22:B0:907:G:H1	1.66	0.43
22:B0:1089:A:O2'	22:B0:1090:A:C8	2.71	0.43
22:B0:1201:U:N3	22:B0:1245:G:N2	2.66	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1214:A:H4'	22:B0:1239:G:H4'	2.01	0.43
22:B0:1293:C:H2'	22:B0:1294:U:C6	2.53	0.43
22:B0:1424:G:C8	26:BA:57:HIS:CB	2.90	0.43
22:B0:1479:G:C5'	22:B0:1559:U:OP2	2.65	0.43
22:B0:1486:G:C3'	26:BA:195:GLY:HA2	2.33	0.43
22:B0:1487:G:H3'	26:BA:158:GLY:HA2	1.99	0.43
22:B0:1579:A:H4'	26:BA:128:THR:OG1	2.17	0.43
22:B0:1697:G:N1	22:B0:1698:A:N6	2.66	0.43
22:B0:2123:G:C5'	22:B0:2124:G:O4'	2.65	0.43
22:B0:2157:G:H2'	22:B0:2157:G:N3	2.31	0.43
22:B0:2286:G:H4'	22:B0:2287:A:O5'	2.18	0.43
22:B0:2516:A:H2'	22:B0:2517:C:C6	2.53	0.43
24:B2:72:VAL:HG13	24:B2:111:ASP:HB2	2.00	0.43
24:B2:192:LEU:HD13	24:B2:192:LEU:C	2.39	0.43
25:B3:88:GLU:C	25:B3:90:ALA:H	2.14	0.43
25:B3:107:LYS:HG3	25:B3:117:VAL:HB	1.99	0.43
26:BA:76:VAL:O	26:BA:94:LEU:N	2.51	0.43
26:BA:98:GLY:O	26:BA:99:GLU:CD	2.56	0.43
26:BA:140:VAL:CG1	26:BA:141:HIS:N	2.64	0.43
26:BA:141:HIS:C	26:BA:141:HIS:ND1	2.71	0.43
27:BB:5:VAL:HG22	27:BB:202:ILE:CA	2.45	0.43
28:BC:114:ARG:HB3	28:BC:117:ARG:HG2	1.99	0.43
29:BD:29:ARG:HD2	29:BD:29:ARG:C	2.39	0.43
29:BD:94:ARG:O	29:BD:96:TRP:N	2.52	0.43
32:BG:129:GLU:CA	32:BG:132:ALA:HB2	2.48	0.43
33:BH:21:THR:O	33:BH:21:THR:HG23	2.18	0.43
33:BH:102:GLU:OE1	33:BH:122:LEU:HD21	2.17	0.43
35:BJ:123:ARG:HG3	35:BJ:143:GLU:HG2	1.99	0.43
37:BL:34:ILE:HB	37:BL:113:ILE:HD12	2.01	0.43
40:BO:45:ALA:O	40:BO:46:TYR:C	2.56	0.43
40:BO:94:LEU:HD22	40:BO:97:ILE:CG1	2.48	0.43
40:BO:111:LYS:HE2	40:BO:111:LYS:C	2.37	0.43
42:BR:70:HIS:HB2	42:BR:73:ARG:CG	2.42	0.43
43:BS:44:HIS:HE2	43:BS:46:LYS:HD2	1.84	0.43
45:BU:68:PHE:CG	45:BU:69:GLU:N	2.86	0.43
47:BX:8:GLN:HE22	47:BX:23:LEU:HD13	1.82	0.43
1:AA:254:G:O2'	1:AA:255:G:H5'	2.18	0.43
1:AA:399:G:H2'	1:AA:400:C:C6	2.53	0.43
1:AA:406:G:H2'	1:AA:407:U:C6	2.53	0.43
1:AA:523:A:N6	13:AL:88:ASP:OD2	2.52	0.43
1:AA:1038:C:H2'	1:AA:1039:G:H8	1.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1320:C:O2	20:AS:2:ARG:HD2	2.19	0.43
1:AA:1336:C:H4'	1:AA:1337:G:N3	2.33	0.43
1:AA:1386:G:H2'	1:AA:1387:G:H8	1.83	0.43
6:AE:83:PRO:CD	9:AH:96:ALA:HB2	2.49	0.43
9:AH:128:VAL:HG23	9:AH:128:VAL:OXT	2.18	0.43
22:B0:49:A:H61	22:B0:177:G:H22	1.66	0.43
22:B0:121:G:N1	22:B0:130:C:H2'	2.34	0.43
22:B0:323:C:O5'	22:B0:324:A:P	2.76	0.43
22:B0:705:A:OP2	22:B0:726:G:N2	2.50	0.43
22:B0:709:U:H2'	22:B0:710:U:C6	2.53	0.43
22:B0:764:A:O2'	22:B0:765:C:P	2.76	0.43
22:B0:1423:A:OP2	26:BA:56:GLY:HA3	2.19	0.43
22:B0:1500:A:H5'	26:BA:59:GLN:CB	2.44	0.43
22:B0:1581:A:C1'	26:BA:68:ARG:HH12	2.30	0.43
22:B0:1605:C:H2'	22:B0:1606:C:O4'	2.18	0.43
22:B0:1775:U:OP1	22:B0:1980:G:H4'	2.18	0.43
22:B0:2161:C:O2'	22:B0:2162:G:C4'	2.66	0.43
22:B0:2276:G:H2'	22:B0:2277:G:H8	1.84	0.43
24:B2:26:ILE:HG22	24:B2:181:ALA:HA	2.01	0.43
24:B2:147:ASN:ND2	24:B2:150:GLU:HB2	2.27	0.43
25:B5:2:ILE:HG22	25:B5:6:GLN:HB2	2.00	0.43
25:B5:86:LEU:HD12	25:B5:91:PRO:HB2	1.99	0.43
26:BA:75:ALA:HB3	26:BA:115:ILE:O	2.17	0.43
28:BC:157:LEU:N	28:BC:157:LEU:HD23	2.33	0.43
30:BE:131:VAL:C	30:BE:132:LEU:HD12	2.39	0.43
30:BE:142:GLN:HE21	30:BE:142:GLN:HA	1.83	0.43
33:BH:116:ARG:O	33:BH:117:ALA:C	2.56	0.43
34:BI:51:LYS:O	34:BI:52:VAL:C	2.57	0.43
35:BJ:71:ALA:O	35:BJ:73:ILE:HG13	2.18	0.43
35:BJ:124:GLY:CA	35:BJ:126:ARG:NH1	2.81	0.43
36:BK:121:ALA:HA	36:BK:124:LEU:CD2	2.48	0.43
40:BO:46:TYR:O	40:BO:47:ARG:NH1	2.52	0.43
41:BQ:27:LYS:HG2	41:BQ:28:LYS:HG2	2.00	0.43
45:BU:68:PHE:O	45:BU:70:VAL:HG22	2.17	0.43
49:B1:46:VAL:HG12	49:B1:47:ILE:N	2.34	0.43
1:AA:145:G:N2	1:AA:177:G:N1	2.67	0.43
1:AA:328:C:O2'	1:AA:329:A:P	2.76	0.43
1:AA:422:C:H4'	1:AA:423:G:N3	2.34	0.43
1:AA:720:C:C4	1:AA:721:G:C6	3.07	0.43
1:AA:777:A:H2'	1:AA:778:G:O4'	2.19	0.43
1:AA:1068:G:H2'	1:AA:1069:C:C6	2.53	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1226:C:O2'	1:AA:1227:A:OP1	2.35	0.43
1:AA:1366:C:H4'	11:AJ:59:LYS:HB3	1.99	0.43
1:AA:1367:C:C4'	11:AJ:62:ARG:HB2	2.46	0.43
2:AV:70:C:H2'	2:AV:71:G:C8	2.53	0.43
5:AD:25:ARG:N	5:AD:25:ARG:HD2	2.33	0.43
6:AE:60:GLN:HA	6:AE:60:GLN:NE2	2.33	0.43
9:AH:26:MET:HE1	9:AH:27:PRO:HG2	1.99	0.43
9:AH:31:LEU:O	9:AH:31:LEU:HD13	2.19	0.43
9:AH:77:VAL:CG1	9:AH:84:ILE:HD11	2.45	0.43
10:AI:94:ARG:HB3	10:AI:98:ARG:CD	2.48	0.43
12:AK:33:ILE:CB	12:AK:73:VAL:HG21	2.49	0.43
14:AM:79:LEU:HD23	14:AM:79:LEU:H	1.82	0.43
16:AO:66:LEU:HB3	16:AO:77:TYR:HE1	1.83	0.43
18:AQ:35:LYS:HZ2	18:AQ:37:ILE:HG22	1.83	0.43
22:B0:301:G:C4'	22:B0:302:C:OP1	2.61	0.43
22:B0:686:U:C5	22:B0:788:A:N1	2.87	0.43
22:B0:864:G:H2'	22:B0:865:C:C6	2.53	0.43
22:B0:919:U:H5'	23:B9:81:G:O2'	2.18	0.43
22:B0:1024:G:H5"	22:B0:1025:G:O4'	2.18	0.43
22:B0:1142:A:HO2'	22:B0:1143:A:H3'	1.79	0.43
22:B0:1155:A:N1	22:B0:1157:G:H1'	2.34	0.43
22:B0:1356:G:H2'	22:B0:1357:C:C6	2.54	0.43
22:B0:1421:G:C6	26:BA:148:GLY:N	2.87	0.43
22:B0:1423:A:C5	26:BA:57:HIS:O	2.72	0.43
22:B0:1561:C:O2'	22:B0:1562:U:H5'	2.19	0.43
22:B0:1577:C:H4'	26:BA:62:ARG:CB	2.48	0.43
22:B0:1587:A:H2'	22:B0:1588:A:C8	2.53	0.43
22:B0:1668:A:O2'	22:B0:1670:C:C5	2.68	0.43
22:B0:1763:G:H2'	22:B0:1764:C:C4'	2.47	0.43
22:B0:1763:G:O2'	22:B0:1764:C:H5'	2.17	0.43
22:B0:1954:G:H2'	22:B0:1956:U:C5	2.53	0.43
22:B0:2108:A:H2'	22:B0:2110:G:H4'	2.00	0.43
22:B0:2146:C:C2'	22:B0:2147:A:H5"	2.49	0.43
22:B0:2163:G:O2'	22:B0:2164:C:OP1	2.37	0.43
22:B0:2677:G:C6	27:BB:126:ASN:HB2	2.54	0.43
22:B0:2744:G:O2'	22:B0:2745:C:H5'	2.17	0.43
22:B0:2815:C:H2'	22:B0:2816:G:H8	1.83	0.43
23:B9:38:C:O2	23:B9:44:G:N2	2.52	0.43
25:B3:55:ASP:OD2	25:B3:57:ILE:HG13	2.19	0.43
25:B5:23:ILE:HD12	25:B5:23:ILE:C	2.37	0.43
25:B5:57:ILE:O	25:B5:117:VAL:HG13	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:83:ASP:N	26:BA:90:ILE:HD12	2.33	0.43
26:BA:100:ARG:HD2	26:BA:101:ARG:N	2.34	0.43
27:BB:123:LYS:N	27:BB:141:ARG:HH21	2.16	0.43
28:BC:59:PRO:O	28:BC:60:TRP:HB2	2.18	0.43
28:BC:67:ARG:HD2	28:BC:72:SER:HA	1.99	0.43
30:BE:18:ILE:HD12	30:BE:23:ILE:HG12	2.01	0.43
31:BF:3:VAL:HG22	31:BF:4:ILE:N	2.33	0.43
33:BH:68:LYS:NZ	33:BH:68:LYS:CA	2.74	0.43
34:BI:3:GLN:CB	34:BI:31:ARG:HB3	2.48	0.43
34:BI:92:GLU:OE2	34:BI:112:PHE:HE1	2.02	0.43
42:BR:11:LEU:O	42:BR:12:ARG:HD2	2.19	0.43
42:BR:30:ILE:HD11	42:BR:87:LEU:HD21	1.99	0.43
45:BU:35:ILE:HG21	45:BU:70:VAL:HG11	2.00	0.43
45:BU:39:GLN:HB2	45:BU:68:PHE:HA	2.00	0.43
1:AA:5:U:C2'	1:AA:6:G:OP2	2.66	0.43
1:AA:251:G:C6	1:AA:266:G:C6	3.07	0.43
1:AA:299:G:H2'	1:AA:300:A:C8	2.53	0.43
1:AA:665:A:C2	1:AA:733:G:H1'	2.53	0.43
1:AA:791:G:O6	1:AA:792:A:N6	2.51	0.43
1:AA:1053:G:H1'	1:AA:1056:U:H5	1.82	0.43
1:AA:1509:C:O2'	1:AA:1510:C:H5'	2.18	0.43
1:AA:1528:U:C5'	1:AA:1529:G:OP1	2.66	0.43
3:AB:53:LEU:O	3:AB:56:LEU:HB3	2.18	0.43
4:AC:133:MET:CE	4:AC:167:TYR:HB2	2.48	0.43
5:AD:30:LYS:O	5:AD:34:GLU:HG2	2.19	0.43
7:AF:74:LEU:HD13	7:AF:74:LEU:C	2.38	0.43
11:AJ:52:LEU:CG	11:AJ:62:ARG:HD3	2.33	0.43
11:AJ:53:ILE:HG13	11:AJ:63:ASP:N	2.34	0.43
11:AJ:82:LYS:HA	11:AJ:85:ASP:OD2	2.18	0.43
19:AR:7:ARG:HH11	19:AR:7:ARG:CB	2.30	0.43
19:AR:31:TYR:CG	19:AR:54:LEU:HD21	2.53	0.43
22:B0:184:C:H42	22:B0:212:G:N2	2.13	0.43
22:B0:372:G:C2'	22:B0:373:U:OP2	2.67	0.43
22:B0:416:U:O4	22:B0:2407:A:C2	2.70	0.43
22:B0:504:A:C4'	22:B0:505:A:OP2	2.67	0.43
22:B0:589:U:C6	28:BC:86:ALA:CA	3.01	0.43
22:B0:589:U:C4'	28:BC:87:ALA:H	2.30	0.43
22:B0:606:U:H4'	28:BC:99:LYS:NZ	2.34	0.43
22:B0:629:G:H21	22:B0:639:U:H5"	1.84	0.43
22:B0:1011:G:N2	22:B0:1150:C:O2	2.51	0.43
22:B0:1017:G:H2'	22:B0:1018:U:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1060:U:H1'	22:B0:1062:G:OP2	2.18	0.43
22:B0:1082:U:O3'	25:B3:81:LYS:C	2.52	0.43
22:B0:1095:A:C2	32:BG:21:PRO:HA	2.52	0.43
22:B0:1183:U:C2	22:B0:1184:U:H1'	2.53	0.43
22:B0:1266:G:N7	41:BQ:16:LYS:HD3	2.33	0.43
22:B0:1368:G:OP2	22:B0:1368:G:C8	2.71	0.43
22:B0:1495:A:OP2	26:BA:190:THR:C	2.57	0.43
22:B0:1498:C:H5	26:BA:63:ILE:HG13	1.83	0.43
22:B0:2002:G:H2'	22:B0:2003:A:O4'	2.19	0.43
22:B0:2004:G:OP2	22:B0:2004:G:O4'	2.35	0.43
22:B0:2126:A:O2'	22:B0:2167:U:C5'	2.67	0.43
22:B0:2131:U:H1'	24:B2:30:LYS:HA	2.01	0.43
22:B0:2174:C:C2	24:B2:215:THR:HG23	2.54	0.43
22:B0:2225:A:O2'	22:B0:2226:C:P	2.77	0.43
22:B0:2263:C:H3'	45:BU:11:ASN:CB	2.49	0.43
22:B0:2638:G:O2'	22:B0:2778:A:N6	2.51	0.43
22:B0:2824:C:C2'	22:B0:2825:G:H21	2.31	0.43
24:B2:28:LEU:O	24:B2:32:LEU:HD12	2.18	0.43
24:B2:43:VAL:HG22	24:B2:213:ILE:HD12	2.00	0.43
25:B5:117:VAL:CG1	25:B5:118:GLU:N	2.81	0.43
26:BA:80:LEU:HD13	26:BA:81:GLU:N	2.33	0.43
28:BC:79:ARG:C	28:BC:81:GLY:N	2.71	0.43
29:BD:163:GLU:OE2	29:BD:164:GLU:HB2	2.19	0.43
33:BH:31:GLU:HA	33:BH:34:ARG:CG	2.47	0.43
35:BJ:78:ARG:NH1	35:BJ:122:VAL:HG11	2.33	0.43
39:BN:91:VAL:HG12	39:BN:92:ARG:O	2.18	0.43
40:BO:95:ALA:O	40:BO:96:ASP:HB2	2.19	0.43
41:BQ:10:ALA:O	41:BQ:100:THR:HB	2.19	0.43
41:BQ:13:SER:O	41:BQ:14:ALA:HB3	2.19	0.43
41:BQ:14:ALA:H	41:BQ:17:VAL:CG2	2.31	0.43
43:BS:4:ILE:HD13	43:BS:4:ILE:N	2.21	0.43
43:BS:74:ALA:O	43:BS:75:ALA:HB2	2.19	0.43
1:AA:115:G:C2'	1:AA:116:A:OP2	2.66	0.43
1:AA:175:C:H2'	1:AA:176:C:C6	2.54	0.43
1:AA:580:C:H5'	16:AO:57:ARG:NH2	2.33	0.43
1:AA:717:U:O3'	12:AK:119:GLY:CA	2.62	0.43
1:AA:1053:G:C5'	1:AA:1054:C:H5'	2.43	0.43
1:AA:1096:C:H2'	1:AA:1097:C:C6	2.53	0.43
1:AA:1300:G:C2'	1:AA:1301:U:OP2	2.66	0.43
1:AA:1515:G:O2'	1:AA:1516:G:H5'	2.19	0.43
2:AV:67:A:H2'	2:AV:68:U:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AD:96:ARG:HB3	5:AD:98:ASP:OD1	2.18	0.43
11:AJ:40:ILE:O	11:AJ:72:ARG:HA	2.18	0.43
11:AJ:57:VAL:C	11:AJ:59:LYS:N	2.70	0.43
13:AL:23:LEU:C	13:AL:25:ALA:H	2.22	0.43
13:AL:32:VAL:HA	13:AL:78:VAL:HA	2.00	0.43
19:AR:25:ILE:HG13	19:AR:67:LEU:CD2	2.49	0.43
22:B0:84:A:C4'	22:B0:85:G:O5'	2.53	0.43
22:B0:221:A:H1'	22:B0:233:A:H1'	2.00	0.43
22:B0:457:A:O2'	22:B0:458:G:C1'	2.67	0.43
22:B0:618:G:H2'	22:B0:619:G:O4'	2.19	0.43
22:B0:644:A:H2'	22:B0:645:C:O4'	2.19	0.43
22:B0:1111:A:O2'	22:B0:1112:G:C4'	2.56	0.43
22:B0:1424:G:C5'	26:BA:58:LYS:N	2.74	0.43
22:B0:1650:A:C2	22:B0:2008:C:O2	2.72	0.43
22:B0:1668:A:N3	22:B0:1670:C:N4	2.67	0.43
22:B0:1854:A:HO2'	22:B0:1859:U:P	2.42	0.43
22:B0:2147:A:H2'	22:B0:2148:G:C5'	2.48	0.43
22:B0:2150:C:OP2	22:B0:2150:C:H6	2.01	0.43
22:B0:2336:A:HO2'	22:B0:2337:G:P	2.37	0.43
22:B0:2515:C:OP2	27:BB:154:LYS:CD	2.66	0.43
22:B0:2678:C:O4'	27:BB:125:TRP:CA	2.67	0.43
22:B0:2843:G:H2'	22:B0:2844:G:C8	2.54	0.43
23:B9:58:A:H2'	23:B9:59:A:H5'	2.00	0.43
24:B2:21:ASP:O	24:B2:25:ALA:N	2.49	0.43
25:B3:79:GLY:O	25:B3:80:LEU:CD1	2.59	0.43
27:BB:84:LEU:C	27:BB:84:LEU:HD12	2.39	0.43
27:BB:152:PRO:C	27:BB:154:LYS:N	2.71	0.43
28:BC:31:VAL:H	35:BJ:17:LYS:CA	2.31	0.43
28:BC:32:VAL:HA	28:BC:35:TYR:CB	2.42	0.43
28:BC:154:ASP:O	28:BC:155:GLU:C	2.57	0.43
30:BE:16:VAL:HG12	30:BE:25:ILE:HG12	2.00	0.43
32:BG:132:ALA:O	32:BG:133:ARG:HG2	2.17	0.43
33:BH:28:LEU:O	33:BH:32:LEU:HD12	2.18	0.43
34:BI:19:VAL:HG11	34:BI:41:ILE:CD1	2.47	0.43
37:BL:28:LEU:CB	37:BL:113:ILE:HG21	2.47	0.43
37:BL:41:ALA:HA	37:BL:44:LEU:CG	2.48	0.43
39:BN:24:THR:O	39:BN:25:VAL:C	2.57	0.43
45:BU:40:ARG:HA	45:BU:65:LYS:HB3	1.99	0.43
1:AA:248:C:O2'	1:AA:249:U:H5'	2.19	0.43
1:AA:251:G:H1'	1:AA:252:U:C6	2.53	0.43
1:AA:640:A:O2'	1:AA:641:U:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:869:G:H4'	1:AA:872:A:C8	2.53	0.43
1:AA:870:U:H4'	1:AA:871:U:H5"	2.01	0.43
1:AA:1263:C:H2'	1:AA:1264:U:C6	2.53	0.43
1:AA:1518:A:O5'	1:AA:1518:A:C8	2.72	0.43
1:AA:1519:A:N7	1:AA:1520:C:H1'	2.34	0.43
1:AA:1528:U:C2'	1:AA:1530:G:H5'	2.49	0.43
2:AU:55:U:O2	2:AU:57:G:C8	2.72	0.43
2:AV:16:U:C5'	2:AV:17:U:OP1	2.58	0.43
2:AV:22:G:O2'	2:AV:23:A:H5'	2.18	0.43
2:AV:28:C:H2'	2:AV:29:A:H8	1.84	0.43
3:AB:185:ILE:HG22	3:AB:199:ILE:HB	2.01	0.43
4:AC:148:ILE:HG12	4:AC:149:LYS:N	2.34	0.43
6:AE:81:GLN:OE1	6:AE:146:MET:HB3	2.19	0.43
8:AG:135:LYS:HD2	8:AG:135:LYS:C	2.39	0.43
9:AH:44:PHE:HA	9:AH:70:VAL:HG12	2.01	0.43
10:AI:34:LEU:H	10:AI:34:LEU:CD1	2.18	0.43
15:AN:65:GLN:HB3	15:AN:82:LYS:HG3	2.01	0.43
20:AS:26:ASP:OD1	20:AS:46:LEU:HD11	2.18	0.43
22:B0:90:U:H5"	22:B0:91:A:OP1	2.18	0.43
22:B0:582:A:OP1	40:BO:10:ARG:NH1	2.52	0.43
22:B0:603:A:H4'	22:B0:604:G:O4'	2.18	0.43
22:B0:611:C:N4	22:B0:618:G:C2	2.87	0.43
22:B0:743:A:HO2'	22:B0:1659:G:P	2.41	0.43
22:B0:1037:G:N2	22:B0:1119:U:H1'	2.33	0.43
22:B0:1104:C:H2'	22:B0:1105:U:H6	1.84	0.43
22:B0:1140:C:O2'	22:B0:1141:U:H5'	2.19	0.43
22:B0:1374:G:H2'	22:B0:1375:U:C6	2.53	0.43
22:B0:1570:A:N6	22:B0:1571:A:N6	2.66	0.43
22:B0:1911:U:H3	22:B0:1919:A:H61	1.66	0.43
22:B0:2128:G:O5'	22:B0:2166:U:P	2.77	0.43
22:B0:2162:G:C8	22:B0:2163:G:H2'	2.53	0.43
22:B0:2169:A:OP1	22:B0:2170:A:OP2	2.36	0.43
22:B0:2266:A:H1'	22:B0:2272:U:N3	2.34	0.43
23:B9:28:C:P	38:BM:33:ARG:HH22	2.42	0.43
24:B2:211:VAL:HG12	24:B2:212:SER:N	2.34	0.43
25:B3:26:MET:HG3	25:B3:38:VAL:HG11	2.00	0.43
26:BA:93:VAL:O	26:BA:94:LEU:CD2	2.67	0.43
26:BA:100:ARG:O	26:BA:100:ARG:HG3	2.18	0.43
27:BB:29:VAL:H	27:BB:186:LEU:HA	1.84	0.43
33:BH:34:ARG:HA	33:BH:37:ARG:HH22	1.82	0.43
35:BJ:21:ARG:O	35:BJ:23:ILE:N	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BL:8:ARG:HG2	37:BL:9:GLN:N	2.34	0.43
37:BL:25:ALA:HA	37:BL:28:LEU:HD21	2.00	0.43
37:BL:49:GLU:HB2	37:BL:52:ILE:CG1	2.49	0.43
37:BL:113:ILE:O	37:BL:114:GLU:CG	2.66	0.43
38:BM:39:VAL:O	38:BM:48:LEU:HD13	2.19	0.43
39:BN:17:PRO:HB3	39:BN:58:PHE:CZ	2.53	0.43
39:BN:30:TRP:HE1	39:BN:82:SER:CA	2.26	0.43
39:BN:32:VAL:CG1	39:BN:81:ASP:HA	2.49	0.43
40:BO:35:PHE:O	40:BO:36:GLN:CG	2.66	0.43
40:BO:43:GLN:O	40:BO:44:TYR:CD2	2.72	0.43
45:BU:39:GLN:HB2	45:BU:68:PHE:CD1	2.48	0.43
47:BX:15:ARG:HD2	47:BX:20:LYS:CB	2.49	0.43
49:B1:26:LYS:CD	49:B1:26:LYS:N	2.81	0.43
1:AA:270:A:H2'	1:AA:271:C:C6	2.54	0.43
1:AA:293:G:N2	1:AA:305:G:H1'	2.33	0.43
1:AA:408:A:O2'	1:AA:409:U:H5'	2.19	0.43
1:AA:722:G:H4'	1:AA:723:U:H5	1.81	0.43
1:AA:784:A:OP1	22:B0:1836:C:H5"	2.18	0.43
1:AA:951:G:O2'	1:AA:952:U:H5'	2.19	0.43
1:AA:985:C:H2'	1:AA:986:U:C6	2.54	0.43
1:AA:1003:G:N7	1:AA:1004:A:N3	2.66	0.43
1:AA:1145:A:O2'	1:AA:1146:A:O5'	2.37	0.43
1:AA:1462:C:H2'	1:AA:1463:U:C6	2.54	0.43
1:AA:1528:U:C5'	1:AA:1529:G:N2	2.82	0.43
2:AU:29:A:O2'	2:AU:30:G:H5'	2.19	0.43
2:AU:70:C:H2'	2:AU:71:G:C8	2.53	0.43
3:AB:19:THR:HG23	3:AB:20:ARG:N	2.20	0.43
7:AF:26:THR:O	7:AF:29:ILE:HG22	2.18	0.43
8:AG:35:LYS:CD	10:AI:42:THR:HG21	2.46	0.43
11:AJ:42:LEU:HD21	11:AJ:73:LEU:HB2	2.01	0.43
11:AJ:56:HIS:ND1	11:AJ:57:VAL:N	2.65	0.43
15:AN:49:THR:OG1	15:AN:50:LEU:HD12	2.18	0.43
21:AT:85:LEU:HD12	21:AT:85:LEU:N	2.34	0.43
22:B0:366:C:H2'	22:B0:367:G:C8	2.54	0.43
22:B0:479:A:N6	22:B0:505:A:H2	2.17	0.43
22:B0:483:A:O4'	43:BS:54:PRO:HB3	2.19	0.43
22:B0:892:A:C2	22:B0:893:C:C2	3.07	0.43
22:B0:1225:G:H2'	22:B0:1226:A:C8	2.53	0.43
22:B0:1479:G:H8	22:B0:1558:C:O3'	2.02	0.43
22:B0:1549:A:H2'	22:B0:1550:C:C6	2.54	0.43
22:B0:1579:A:N6	26:BA:68:ARG:CG	2.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2047:C:H2'	22:B0:2048:G:C8	2.50	0.43
22:B0:2117:A:O2'	22:B0:2125:G:H1'	2.19	0.43
22:B0:2117:A:N6	24:B2:105:LYS:HG2	2.33	0.43
22:B0:2174:C:H2'	22:B0:2174:C:O2	2.18	0.43
22:B0:2639:A:H1'	22:B0:2778:A:N3	2.33	0.43
22:B0:2645:G:H2'	22:B0:2646:C:H6	1.83	0.43
22:B0:2781:A:N6	33:BH:114:LEU:HB3	2.33	0.43
22:B0:2841:C:H2'	22:B0:2842:G:H8	1.83	0.43
22:B0:2899:A:O4'	33:BH:136:GLN:C	2.56	0.43
23:B9:44:G:O4'	23:B9:46:A:N6	2.51	0.43
23:B9:89:U:O5'	23:B9:89:U:H6	2.02	0.43
24:B2:45:VAL:HG12	24:B2:211:VAL:HG13	2.00	0.43
28:BC:4:VAL:HG21	28:BC:12:LEU:O	2.19	0.43
28:BC:29:HIS:H	35:BJ:17:LYS:HD3	1.73	0.43
28:BC:60:TRP:CD1	28:BC:61:ARG:N	2.86	0.43
28:BC:78:TRP:CD1	28:BC:79:ARG:HG3	2.54	0.43
32:BG:20:SER:O	32:BG:23:VAL:C	2.57	0.43
32:BG:39:LYS:HA	32:BG:42:ASN:OD1	2.19	0.43
35:BJ:92:LEU:O	35:BJ:96:LYS:HD2	2.19	0.43
38:BM:40:ILE:HD13	38:BM:41:ALA:N	2.34	0.43
39:BN:30:TRP:CG	39:BN:83:ILE:HG22	2.54	0.43
39:BN:71:ARG:HB2	39:BN:72:VAL:H	1.56	0.43
40:BO:41:ALA:HA	40:BO:44:TYR:HD2	1.82	0.43
40:BO:45:ALA:HA	40:BO:48:ASP:OD2	2.18	0.43
41:BQ:7:HIS:NE2	41:BQ:46:LEU:HD11	2.34	0.43
46:BW:28:LEU:HB3	46:BW:43:LEU:HD22	2.01	0.43
48:BZ:37:HIS:HD2	48:BZ:39:ARG:HB2	1.80	0.43
1:AA:320:A:H2'	1:AA:321:A:H8	1.79	0.43
1:AA:687:A:O2'	1:AA:688:G:O4'	2.27	0.43
1:AA:809:G:O2'	1:AA:810:C:H5'	2.19	0.43
1:AA:1096:C:H2'	1:AA:1097:C:H6	1.83	0.43
1:AA:1169:A:H2'	1:AA:1171:A:H5'	2.01	0.43
1:AA:1366:C:O2'	11:AJ:59:LYS:HB3	2.19	0.43
2:AU:75:C:C6	22:B0:2556:C:C2	3.06	0.43
7:AF:14:GLN:HG3	7:AF:17:GLN:HB2	2.00	0.43
8:AG:57:GLU:H	8:AG:57:GLU:CD	2.23	0.43
9:AH:107:LYS:CG	9:AH:120:LEU:HD22	2.47	0.43
14:AM:11:HIS:O	14:AM:12:LYS:HG2	2.18	0.43
17:AP:23:ASP:OD1	17:AP:25:ARG:HG3	2.18	0.43
19:AR:64:LEU:HB3	19:AR:66:LEU:HD13	2.00	0.43
22:B0:80:G:O2'	22:B0:81:G:H5'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:629:G:H2'	22:B0:630:G:H8	1.84	0.43
22:B0:660:C:H4'	35:BJ:19:LEU:HD12	2.00	0.43
22:B0:1486:G:O2'	26:BA:196:ASN:CB	2.41	0.43
22:B0:1491:A:O2'	22:B0:1494:A:OP1	2.28	0.43
22:B0:1542:C:C2'	22:B0:1543:G:H5'	2.48	0.43
22:B0:1579:A:C4	26:BA:65:ASP:OD1	2.72	0.43
22:B0:1960:A:H2'	22:B0:1961:C:H6	1.82	0.43
22:B0:1995:U:H2'	22:B0:1996:C:C5	2.54	0.43
22:B0:2406:A:H5'	22:B0:2407:A:OP2	2.18	0.43
22:B0:2451:A:P	22:B0:2497:A:N6	2.91	0.43
22:B0:2726:A:OP2	27:BB:129:THR:HG21	2.19	0.43
22:B0:2898:G:H3'	33:BH:137:PRO:C	2.39	0.43
23:B9:66:A:O2'	23:B9:67:G:C8	2.67	0.43
29:BD:141:ASP:HB3	29:BD:144:LYS:HG3	2.01	0.43
32:BG:63:ASP:C	32:BG:64:ARG:HG3	2.39	0.43
32:BG:105:LEU:HA	32:BG:108:ILE:HD11	2.01	0.43
33:BH:14:ASP:HB3	33:BH:52:ASP:CG	2.39	0.43
35:BJ:78:ARG:HB3	35:BJ:78:ARG:CZ	2.48	0.43
41:BQ:9:HIS:O	41:BQ:9:HIS:ND1	2.51	0.43
41:BQ:24:ILE:N	41:BQ:25:ARG:HE	2.16	0.43
45:BU:24:ARG:HH11	45:BU:24:ARG:CB	2.32	0.43
1:AA:70:U:O4	1:AA:98:A:N1	2.52	0.42
1:AA:436:C:H2'	1:AA:437:U:H6	1.82	0.42
1:AA:730:G:O2'	1:AA:766:A:C4'	2.67	0.42
1:AA:837:U:H2'	1:AA:838:G:C8	2.51	0.42
1:AA:1285:A:O2'	1:AA:1286:U:P	2.76	0.42
1:AA:1408:A:O2'	22:B0:1913:A:C5'	2.67	0.42
2:AU:75:C:O4'	22:B0:2556:C:O4'	2.37	0.42
5:AD:196:GLU:O	5:AD:200:VAL:HG13	2.18	0.42
11:AJ:89:ARG:HH11	11:AJ:89:ARG:CB	2.25	0.42
13:AL:79:ILE:HD13	13:AL:103:CYS:HB3	2.00	0.42
15:AN:73:LEU:CD1	15:AN:75:LYS:HB2	2.48	0.42
21:AT:34:VAL:HG11	21:AT:50:PHE:HB2	2.01	0.42
21:AT:60:GLN:C	21:AT:66:ILE:HG22	2.40	0.42
22:B0:571:U:C5'	22:B0:572:A:OP1	2.67	0.42
22:B0:627:A:H5'	22:B0:628:G:OP1	2.19	0.42
22:B0:675:A:H1'	22:B0:2443:C:O2'	2.19	0.42
22:B0:736:C:H2'	22:B0:737:C:C6	2.54	0.42
22:B0:928:A:OP2	22:B0:928:A:H8	2.02	0.42
22:B0:1083:U:C4'	25:B3:87:VAL:N	2.57	0.42
22:B0:1424:G:O5'	26:BA:57:HIS:C	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1424:G:H4'	26:BA:58:LYS:CG	2.49	0.42
22:B0:1593:G:N2	22:B0:1594:U:C5	2.87	0.42
22:B0:2174:C:C6	22:B0:2174:C:H3'	2.53	0.42
22:B0:2654:A:H1'	22:B0:2656:U:C5	2.54	0.42
23:B9:66:A:H2'	23:B9:67:G:OP2	2.18	0.42
24:B2:161:ARG:CD	24:B2:161:ARG:N	2.81	0.42
25:B3:16:VAL:HG21	25:B3:47:ALA:CB	2.45	0.42
25:B3:57:ILE:HB	25:B3:118:GLU:HG2	2.00	0.42
25:B5:45:VAL:O	25:B5:47:ALA:N	2.52	0.42
26:BA:65:ASP:HB2	26:BA:128:THR:HB	2.01	0.42
28:BC:28:VAL:C	35:BJ:16:GLY:O	2.58	0.42
28:BC:157:LEU:HD23	28:BC:157:LEU:H	1.83	0.42
29:BD:52:ALA:C	29:BD:54:ALA:H	2.21	0.42
33:BH:36:LEU:CD1	33:BH:51:GLY:HA2	2.48	0.42
33:BH:96:ARG:HG2	33:BH:96:ARG:HH11	1.84	0.42
37:BL:99:LYS:N	48:BZ:52:LYS:HD2	2.33	0.42
40:BO:8:ILE:O	40:BO:9:ALA:O	2.37	0.42
45:BU:69:GLU:O	45:BU:69:GLU:CD	2.58	0.42
46:BW:25:GLN:HB2	46:BW:46:VAL:CG1	2.44	0.42
47:BX:15:ARG:NH1	47:BX:23:LEU:HD12	2.34	0.42
48:BZ:29:VAL:HA	48:BZ:47:TYR:OH	2.20	0.42
49:B1:33:LEU:O	49:B1:34:GLU:O	2.36	0.42
1:AA:19:A:H2'	1:AA:20:U:H6	1.83	0.42
1:AA:456:A:H2'	1:AA:457:G:H8	1.84	0.42
1:AA:553:A:H2'	1:AA:554:A:C8	2.54	0.42
1:AA:962:C:H42	1:AA:974:A:H61	1.67	0.42
1:AA:978:A:C1'	20:AS:6:LYS:HB2	2.42	0.42
2:AU:75:C:C5	22:B0:2556:C:C2	3.07	0.42
2:AW:28:C:H2'	2:AW:29:A:H8	1.84	0.42
3:AB:96:LEU:N	3:AB:99:MET:SD	2.92	0.42
7:AF:12:PRO:HG2	7:AF:54:LEU:HD21	2.02	0.42
7:AF:51:ILE:HG21	7:AF:86:ARG:HH21	1.83	0.42
9:AH:86:LYS:HE2	9:AH:124:ILE:HG12	2.00	0.42
10:AI:11:ARG:NE	10:AI:12:LYS:HG3	2.34	0.42
10:AI:25:GLY:HA2	10:AI:60:LEU:O	2.18	0.42
11:AJ:28:THR:HA	11:AJ:31:ARG:HH12	1.84	0.42
14:AM:37:GLY:O	14:AM:38:ILE:HD13	2.19	0.42
15:AN:40:ARG:NH1	20:AS:15:LEU:N	2.67	0.42
17:AP:67:ILE:HD12	17:AP:72:ALA:HA	2.01	0.42
19:AR:31:TYR:O	19:AR:39:VAL:HG22	2.20	0.42
19:AR:64:LEU:HB2	19:AR:66:LEU:HD13	2.00	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
21:AT:8:LYS:HG3	21:AT:12:GLN:NE2	2.22	0.42
21:AT:23:ARG:NH1	21:AT:65:LEU:HD11	2.35	0.42
21:AT:66:ILE:HD11	21:AT:70:LYS:HG2	2.00	0.42
22:B0:533:G:O6	22:B0:559:G:N1	2.52	0.42
22:B0:609:A:H3'	22:B0:610:C:C5	2.53	0.42
22:B0:945:A:H1'	22:B0:2448:A:C4	2.54	0.42
22:B0:1081:U:C3'	25:B3:80:LEU:HB2	2.43	0.42
22:B0:1267:U:H2'	22:B0:1268:A:C8	2.52	0.42
22:B0:1275:A:H61	22:B0:1296:G:H4'	1.84	0.42
22:B0:1502:C:H4'	26:BA:199:HIS:NE2	2.35	0.42
22:B0:1556:C:O5'	22:B0:1556:C:H6	2.03	0.42
22:B0:1586:G:O2'	22:B0:1587:A:N7	2.50	0.42
22:B0:1658:C:N3	22:B0:2003:A:N3	2.67	0.42
22:B0:1843:C:H2'	22:B0:1844:C:C6	2.54	0.42
22:B0:1846:G:O2'	22:B0:1847:A:H5'	2.18	0.42
22:B0:2131:U:O4'	24:B2:33:ALA:HB3	2.19	0.42
22:B0:2138:G:OP2	22:B0:2140:G:N2	2.51	0.42
22:B0:2173:A:C8	24:B2:37:PHE:CE1	3.07	0.42
22:B0:2260:C:H2'	22:B0:2261:C:C6	2.54	0.42
22:B0:2265:U:P	22:B0:2267:A:OP1	2.77	0.42
22:B0:2328:A:O4'	45:BU:10:ARG:HB2	2.19	0.42
22:B0:2352:A:H2	22:B0:2365:G:N2	2.10	0.42
22:B0:2492:U:H2'	22:B0:2493:U:H6	1.82	0.42
22:B0:2510:C:H2'	22:B0:2511:U:C6	2.53	0.42
22:B0:2654:A:O2'	22:B0:2655:G:C4'	2.61	0.42
22:B0:2676:C:C2	22:B0:2677:G:C8	3.07	0.42
22:B0:2678:C:O5'	27:BB:125:TRP:N	2.44	0.42
22:B0:2712:C:HO2'	22:B0:2713:U:P	2.40	0.42
22:B0:2855:C:C3'	22:B0:2856:A:H5"	2.49	0.42
22:B0:2859:A:H2'	22:B0:2860:A:C8	2.54	0.42
25:B3:25:ALA:CB	25:B5:107:LYS:HZ3	2.32	0.42
25:B5:68:VAL:O	25:B5:72:VAL:HG23	2.19	0.42
26:BA:101:ARG:HB3	26:BA:102:TYR:H	1.54	0.42
26:BA:171:VAL:HG13	26:BA:171:VAL:O	2.18	0.42
27:BB:122:VAL:C	27:BB:124:ARG:N	2.72	0.42
28:BC:3:LEU:CD2	28:BC:113:VAL:HG12	2.42	0.42
28:BC:108:ILE:CG2	28:BC:109:LEU:N	2.81	0.42
28:BC:117:ARG:HD3	28:BC:185:LYS:NZ	2.34	0.42
33:BH:19:ASP:C	33:BH:21:THR:N	2.72	0.42
33:BH:102:GLU:HB2	33:BH:124:VAL:HG21	2.02	0.42
34:BI:18:ARG:HG2	34:BI:45:GLU:H	1.84	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
37:BL:102:PHE:CA	37:BL:109:PRO:HA	2.47	0.42
38:BM:40:ILE:HD13	38:BM:40:ILE:C	2.39	0.42
40:BO:63:ARG:O	40:BO:66:ALA:HB3	2.18	0.42
40:BO:83:LYS:HB2	40:BO:83:LYS:HZ3	1.84	0.42
44:BT:23:ALA:O	44:BT:24:ASN:HB2	2.20	0.42
46:BW:13:GLU:HA	46:BW:16:THR:HG22	2.01	0.42
1:AA:48:C:O2'	1:AA:49:U:P	2.77	0.42
1:AA:50:A:N6	1:AA:361:G:C4'	2.82	0.42
1:AA:274:A:O2'	1:AA:275:G:C8	2.72	0.42
1:AA:410:G:H1'	1:AA:433:G:H22	1.84	0.42
1:AA:687:A:O2'	1:AA:688:G:O5'	2.38	0.42
1:AA:837:U:H3	1:AA:849:G:H1	1.66	0.42
1:AA:1013:G:HO2'	1:AA:1014:A:H8	1.64	0.42
1:AA:1300:G:O2'	1:AA:1301:U:P	2.77	0.42
2:AU:18:G:O2'	2:AU:19:G:O5'	2.36	0.42
2:AW:67:A:H2'	2:AW:68:U:C6	2.54	0.42
4:AC:4:VAL:HG22	4:AC:9:ILE:HB	2.01	0.42
5:AD:129:VAL:CG1	5:AD:131:ILE:HG22	2.49	0.42
6:AE:25:LYS:HE3	6:AE:25:LYS:C	2.39	0.42
6:AE:55:VAL:O	6:AE:59:ILE:HG12	2.20	0.42
8:AG:34:LYS:O	8:AG:34:LYS:HG3	2.19	0.42
9:AH:74:ILE:HA	9:AH:127:TYR:O	2.19	0.42
22:B0:20:C:H2'	22:B0:21:A:H8	1.83	0.42
22:B0:215:G:H4'	22:B0:216:A:OP1	2.17	0.42
22:B0:231:A:C2'	22:B0:232:G:H5'	2.49	0.42
22:B0:538:A:N1	22:B0:556:A:C2	2.88	0.42
22:B0:589:U:H5"	28:BC:88:ARG:N	2.34	0.42
22:B0:590:A:P	28:BC:88:ARG:N	2.90	0.42
22:B0:726:G:OP1	22:B0:1432:G:O2'	2.36	0.42
22:B0:800:A:H1'	22:B0:802:A:P	2.59	0.42
22:B0:891:G:N3	22:B0:891:G:C3'	2.77	0.42
22:B0:973:A:H8	22:B0:973:A:OP1	2.02	0.42
22:B0:1018:U:H2'	22:B0:1019:U:C6	2.53	0.42
22:B0:1082:U:C6	25:B3:80:LEU:HB3	2.54	0.42
22:B0:1340:U:H1'	22:B0:1603:A:C4'	2.49	0.42
22:B0:1365:A:H2'	22:B0:1366:A:C8	2.54	0.42
22:B0:1375:U:H2'	22:B0:1376:C:C6	2.53	0.42
22:B0:1423:A:C5'	26:BA:56:GLY:C	2.88	0.42
22:B0:1490:C:O4'	26:BA:162:GLN:HB3	2.19	0.42
22:B0:1524:C:O2'	22:B0:1525:G:H5'	2.19	0.42
22:B0:1798:U:O2'	22:B0:1802:A:H1'	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2111:U:H4'	22:B0:2111:U:OP1	2.18	0.42
22:B0:2134:A:C2	22:B0:2152:G:H5'	2.54	0.42
23:B9:41:G:C2'	23:B9:42:C:OP1	2.67	0.42
26:BA:77:VAL:HB	26:BA:110:LYS:O	2.19	0.42
30:BE:71:LEU:HA	30:BE:74:MET:CE	2.49	0.42
30:BE:106:LEU:HD21	30:BE:164:ALA:HB3	1.99	0.42
32:BG:38:CYS:C	32:BG:40:ALA:H	2.22	0.42
33:BH:27:ARG:NH2	33:BH:30:THR:OG1	2.53	0.42
37:BL:30:ARG:CA	37:BL:75:ILE:HG21	2.49	0.42
37:BL:52:ILE:O	37:BL:53:THR:O	2.37	0.42
40:BO:78:PHE:CD1	40:BO:79:ILE:N	2.87	0.42
41:BQ:74:ILE:HG22	41:BQ:105:VAL:HG22	2.00	0.42
42:BR:33:LYS:HG2	42:BR:82:LYS:HB3	2.01	0.42
45:BU:58:LEU:HB2	45:BU:81:ILE:HA	2.01	0.42
48:BZ:29:VAL:HG11	48:BZ:32:THR:CG2	2.48	0.42
48:BZ:39:ARG:HG3	48:BZ:39:ARG:HH11	1.85	0.42
1:AA:102:G:O2'	1:AA:152:A:H4'	2.19	0.42
1:AA:103:U:H4'	1:AA:151:A:N3	2.34	0.42
1:AA:121:U:O4	1:AA:235:C:H3'	2.19	0.42
1:AA:145:G:H1	1:AA:177:G:H1	1.67	0.42
1:AA:423:G:H2'	1:AA:424:G:C5'	2.50	0.42
1:AA:533:A:HO2'	1:AA:534:U:P	2.42	0.42
1:AA:869:G:O2'	1:AA:872:A:N7	2.45	0.42
1:AA:939:G:H2'	1:AA:940:C:C6	2.54	0.42
1:AA:975:A:N6	11:AJ:54:SER:O	2.52	0.42
1:AA:978:A:C2	1:AA:1318:A:N6	2.87	0.42
1:AA:1052:U:H2'	1:AA:1200:C:H41	1.85	0.42
1:AA:1182:G:O2'	1:AA:1183:U:P	2.77	0.42
1:AA:1297:G:HO2'	1:AA:1298:U:H6	1.67	0.42
1:AA:1385:G:O2'	1:AA:1386:G:H5'	2.18	0.42
2:AU:16:U:P	2:AU:16:U:H6	2.43	0.42
4:AC:117:ASP:HA	4:AC:120:THR:HG22	2.00	0.42
9:AH:76:ARG:CB	9:AH:79:ARG:HE	2.32	0.42
13:AL:115:LYS:O	13:AL:116:TYR:HB2	2.20	0.42
16:AO:28:VAL:HG11	16:AO:80:LEU:CD1	2.44	0.42
19:AR:28:LEU:CB	19:AR:67:LEU:HD11	2.48	0.42
20:AS:10:ILE:CG2	20:AS:15:LEU:HB2	2.48	0.42
22:B0:433:C:O4'	28:BC:69:ARG:HB3	2.19	0.42
22:B0:482:A:H5'	43:BS:54:PRO:C	2.39	0.42
22:B0:659:G:O3'	28:BC:97:ASN:HB2	2.19	0.42
22:B0:1055:G:H2'	22:B0:1055:G:N3	2.34	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1164:C:C2’	22:B0:1165:A:H5’	2.48	0.42
22:B0:1342:A:HO2’	22:B0:1343:G:P	2.43	0.42
22:B0:1394:U:N3	22:B0:1395:A:C6	2.87	0.42
22:B0:1438:U:H5’	22:B0:1516:A:O2’	2.19	0.42
22:B0:1500:A:N6	26:BA:155:ARG:C	2.72	0.42
22:B0:1709:U:H2’	22:B0:1710:G:H8	1.84	0.42
22:B0:1785:A:H4’	22:B0:1982:U:O2’	2.19	0.42
22:B0:2175:C:C1’	24:B2:220:GLY:HA2	2.49	0.42
22:B0:2282:G:OP1	22:B0:2283:C:H1’	2.19	0.42
22:B0:2360:G:H2’	22:B0:2361:G:C8	2.53	0.42
22:B0:2443:C:O2’	22:B0:2444:G:H5’	2.19	0.42
22:B0:2446:G:C3’	22:B0:2447:G:H5”	2.50	0.42
22:B0:2504:U:H5”	22:B0:2505:G:OP2	2.20	0.42
22:B0:2677:G:N3	27:BB:125:TRP:HE3	2.16	0.42
23:B9:16:G:H5’	23:B9:16:G:C8	2.53	0.42
23:B9:93:C:O5’	23:B9:93:C:H6	2.02	0.42
24:B2:26:ILE:N	24:B2:26:ILE:HD12	2.34	0.42
24:B2:99:LEU:O	24:B2:102:GLN:HG2	2.20	0.42
24:B2:112:VAL:HG22	24:B2:113:VAL:N	2.34	0.42
24:B2:150:GLU:HA	24:B2:153:LYS:CE	2.49	0.42
25:B5:57:ILE:HG23	25:B5:92:ALA:CB	2.50	0.42
26:BA:152:GLN:N	26:BA:155:ARG:NH2	2.67	0.42
28:BC:32:VAL:O	28:BC:32:VAL:HG12	2.18	0.42
28:BC:112:LEU:HD12	28:BC:112:LEU:N	2.35	0.42
28:BC:183:PHE:O	28:BC:183:PHE:CD2	2.72	0.42
29:BD:166:ARG:HA	29:BD:166:ARG:HE	1.84	0.42
30:BE:101:VAL:HG12	30:BE:102:ILE:N	2.35	0.42
35:BJ:84:LYS:HD3	35:BJ:116:VAL:O	2.20	0.42
35:BJ:134:ALA:C	35:BJ:135:ILE:HD13	2.39	0.42
36:BK:25:ASP:HB2	36:BK:64:TRP:CZ2	2.54	0.42
37:BL:112:TYR:O	37:BL:114:GLU:N	2.52	0.42
39:BN:36:LYS:HE3	39:BN:37:LYS:HZ1	1.85	0.42
42:BR:74:ILE:HG23	42:BR:76:ARG:NH1	2.34	0.42
43:BS:12:VAL:HG12	43:BS:13:LEU:N	2.34	0.42
1:AA:808:C:H2’	1:AA:809:G:H8	1.84	0.42
1:AA:1234:C:H4’	1:AA:1364:U:H1’	2.00	0.42
1:AA:1240:U:O2	8:AG:31:VAL:HB	2.19	0.42
1:AA:1300:G:O2’	1:AA:1301:U:C6	2.72	0.42
1:AA:1330:U:H5”	14:AM:22:TYR:CE1	2.54	0.42
1:AA:1380:U:C2’	1:AA:1381:U:OP2	2.67	0.42
2:AU:37:G:H2’	2:AU:38:A:H8	1.83	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:AV:55:U:O2	2:AV:57:G:OP2	2.38	0.42
2:AW:63:C:H2'	2:AW:64:A:H8	1.83	0.42
4:AC:20:THR:HG23	4:AC:20:THR:O	2.19	0.42
5:AD:124:VAL:HG12	5:AD:125:ASN:ND2	2.34	0.42
9:AH:13:ILE:HD12	9:AH:60:LEU:CD2	2.49	0.42
12:AK:41:LEU:HD22	12:AK:41:LEU:N	2.35	0.42
12:AK:46:ALA:HB1	12:AK:61:ALA:HB1	1.99	0.42
22:B0:241:A:H1'	22:B0:243:U:C6	2.53	0.42
22:B0:342:A:O2'	22:B0:343:C:H5'	2.18	0.42
22:B0:387:U:O2'	22:B0:388:G:P	2.78	0.42
22:B0:535:G:H2'	22:B0:536:G:C8	2.55	0.42
22:B0:635:C:O2'	22:B0:636:G:H5'	2.19	0.42
22:B0:1057:A:H2	22:B0:1082:U:H3	1.66	0.42
22:B0:1622:G:O2'	22:B0:1623:G:H5'	2.19	0.42
22:B0:1652:A:H2'	22:B0:1653:G:C5'	2.48	0.42
22:B0:1772:A:H2'	22:B0:1773:A:C5'	2.50	0.42
22:B0:1838:C:H4'	22:B0:1839:G:C8	2.55	0.42
22:B0:1838:C:N4	22:B0:1899:A:OP2	2.52	0.42
22:B0:2123:G:C4'	22:B0:2124:G:O5'	2.66	0.42
22:B0:2162:G:H8	22:B0:2163:G:H2'	1.84	0.42
22:B0:2173:A:N9	24:B2:37:PHE:CD1	2.87	0.42
22:B0:2178:C:C2'	22:B0:2179:C:OP1	2.68	0.42
22:B0:2257:U:HO2'	22:B0:2258:C:P	2.43	0.42
22:B0:2353:G:O2'	22:B0:2354:C:H5'	2.19	0.42
22:B0:2361:G:H2'	22:B0:2362:C:O4'	2.19	0.42
22:B0:2419:U:H2'	22:B0:2420:C:C6	2.55	0.42
22:B0:2502:G:O2'	22:B0:2503:A:P	2.78	0.42
22:B0:2780:G:O3'	33:BH:116:ARG:C	2.58	0.42
24:B2:106:GLY:O	24:B2:108:MET:HG2	2.19	0.42
24:B2:129:VAL:HG23	24:B2:130:LEU:N	2.34	0.42
25:B5:15:SER:O	25:B5:16:VAL:C	2.58	0.42
27:BB:181:ASP:O	27:BB:182:ALA:CB	2.68	0.42
28:BC:48:THR:HG21	28:BC:73:ILE:CD1	2.42	0.42
28:BC:87:ALA:O	28:BC:88:ARG:HB3	2.19	0.42
29:BD:101:ARG:O	29:BD:101:ARG:HG2	2.19	0.42
30:BE:86:LEU:HD13	30:BE:132:LEU:HD13	2.01	0.42
33:BH:14:ASP:O	33:BH:15:TRP:CB	2.67	0.42
36:BK:112:LEU:HD13	36:BK:112:LEU:N	2.29	0.42
37:BL:36:THR:H	37:BL:110:MET:CE	2.32	0.42
40:BO:21:LYS:HD2	40:BO:21:LYS:H	1.84	0.42
40:BO:53:LYS:O	40:BO:54:ARG:NH1	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BO:64:ILE:HD12	40:BO:64:ILE:C	2.39	0.42
41:BQ:45:VAL:O	41:BQ:47:VAL:N	2.47	0.42
42:BR:14:PRO:HD3	46:BW:33:ALA:HB2	2.02	0.42
42:BR:69:ARG:NH1	42:BR:69:ARG:CB	2.82	0.42
43:BS:34:ILE:HG23	43:BS:34:ILE:O	2.18	0.42
49:B1:35:LEU:HD23	49:B1:50:GLU:OE2	2.19	0.42
1:AA:244:U:H5'	1:AA:245:U:OP1	2.19	0.42
1:AA:701:U:OP2	22:B0:1848:A:H5'	2.19	0.42
1:AA:719:C:H5	12:AK:118:ASN:CB	2.32	0.42
1:AA:993:G:H3'	1:AA:993:G:N3	2.35	0.42
1:AA:1017:U:H2'	1:AA:1018:G:C8	2.54	0.42
1:AA:1033:G:H2'	1:AA:1034:G:C5'	2.48	0.42
1:AA:1249:C:C2'	1:AA:1250:A:H5'	2.49	0.42
2:AU:20:G:H2'	2:AU:21:A:H5"	2.02	0.42
5:AD:30:LYS:HZ3	5:AD:34:GLU:HB3	1.83	0.42
5:AD:58:GLN:HG3	5:AD:62:ARG:HE	1.84	0.42
7:AF:9:MET:HA	7:AF:58:HIS:O	2.20	0.42
7:AF:18:VAL:HG13	7:AF:21:MET:HE1	2.01	0.42
8:AG:25:PHE:O	8:AG:28:ILE:HG12	2.20	0.42
9:AH:33:VAL:HG13	9:AH:48:PHE:CE2	2.55	0.42
11:AJ:52:LEU:CB	11:AJ:62:ARG:HG2	2.49	0.42
13:AL:23:LEU:CG	13:AL:58:ASN:HB3	2.48	0.42
13:AL:111:GLN:O	13:AL:113:ARG:N	2.51	0.42
14:AM:77:LYS:HD3	14:AM:77:LYS:C	2.39	0.42
17:AP:39:PHE:CE2	17:AP:41:PRO:HG3	2.55	0.42
19:AR:40:PRO:O	19:AR:44:THR:HG22	2.18	0.42
22:B0:228:C:C2	22:B0:230:G:C4	3.07	0.42
22:B0:235:U:O4	22:B0:262:A:N1	2.52	0.42
22:B0:280:U:H2'	22:B0:281:C:C6	2.55	0.42
22:B0:290:U:H2'	22:B0:291:G:C8	2.53	0.42
22:B0:321:U:C5'	22:B0:322:A:OP2	2.61	0.42
22:B0:432:A:O2'	28:BC:68:ALA:HB1	2.19	0.42
22:B0:589:U:OP2	28:BC:87:ALA:CB	2.66	0.42
22:B0:699:A:H62	22:B0:733:G:H21	1.68	0.42
22:B0:1063:G:H2'	22:B0:1064:C:H6	1.84	0.42
22:B0:1133:A:N1	22:B0:1138:G:OP1	2.53	0.42
22:B0:1274:A:C6	22:B0:2712:C:N4	2.87	0.42
22:B0:1490:C:H4'	26:BA:162:GLN:HB3	2.00	0.42
22:B0:1494:A:P	26:BA:143:VAL:HB	2.60	0.42
22:B0:1497:U:C6	26:BA:63:ILE:HG21	2.54	0.42
22:B0:1630:A:N6	22:B0:1637:A:C6	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1944:U:H1'	22:B0:1955:U:O4'	2.20	0.42
22:B0:1993:U:H2'	22:B0:1994:C:O4'	2.19	0.42
22:B0:2173:A:C8	24:B2:37:PHE:HE1	2.37	0.42
22:B0:2614:A:H8	22:B0:2614:A:OP1	2.02	0.42
22:B0:2668:G:O2'	22:B0:2669:G:H5'	2.20	0.42
22:B0:2780:G:O5'	33:BH:116:ARG:CZ	2.68	0.42
25:B3:69:ILE:CD1	25:B3:84:LYS:HG3	2.48	0.42
25:B3:70:LYS:HA	25:B3:73:ARG:HD3	2.00	0.42
25:B5:30:PHE:CD2	25:B5:30:PHE:N	2.87	0.42
26:BA:140:VAL:O	26:BA:141:HIS:CB	2.57	0.42
27:BB:134:HIS:NE2	34:BI:29:HIS:HB3	2.35	0.42
28:BC:139:LYS:HD2	28:BC:139:LYS:C	2.40	0.42
29:BD:25:MET:O	29:BD:26:GLN:HB2	2.20	0.42
29:BD:84:ILE:O	29:BD:84:ILE:HG12	2.19	0.42
29:BD:153:ILE:HG12	29:BD:153:ILE:O	2.19	0.42
32:BG:107:GLU:C	32:BG:109:ALA:N	2.73	0.42
32:BG:112:LYS:HZ3	32:BG:116:MET:CB	2.32	0.42
33:BH:23:LYS:NZ	33:BH:28:LEU:HG	2.35	0.42
33:BH:93:ILE:CG1	33:BH:96:ARG:HE	2.33	0.42
37:BL:67:PHE:O	37:BL:67:PHE:HD1	2.03	0.42
38:BM:15:ARG:N	38:BM:15:ARG:CD	2.83	0.42
39:BN:28:LYS:CE	39:BN:86:LYS:HB3	2.50	0.42
39:BN:37:LYS:CD	39:BN:39:LEU:HD12	2.50	0.42
40:BO:30:VAL:HG12	40:BO:31:TYR:N	2.35	0.42
40:BO:31:TYR:O	40:BO:32:ARG:NH2	2.53	0.42
40:BO:45:ALA:HA	40:BO:48:ASP:HB2	2.02	0.42
40:BO:50:ARG:HE	40:BO:51:GLN:HA	1.83	0.42
41:BQ:13:SER:HB2	41:BQ:99:ARG:HH21	1.85	0.42
42:BR:23:ALA:C	42:BR:25:GLU:H	2.22	0.42
42:BR:31:VAL:HG13	42:BR:82:LYS:HZ2	1.83	0.42
43:BS:13:LEU:CD1	43:BS:70:ALA:HB2	2.50	0.42
43:BS:46:LYS:O	43:BS:48:VAL:N	2.52	0.42
46:BW:6:LEU:O	46:BW:14:LEU:HD21	2.19	0.42
1:AA:114:U:O2'	1:AA:115:G:H5'	2.20	0.42
1:AA:616:G:H2'	1:AA:617:G:H8	1.85	0.42
1:AA:723:U:O2	1:AA:723:U:H2'	2.19	0.42
1:AA:940:C:H2'	1:AA:941:G:H8	1.85	0.42
1:AA:1312:G:O2'	1:AA:1313:U:H5'	2.20	0.42
1:AA:1372:U:H2'	1:AA:1373:G:O4'	2.19	0.42
1:AA:1454:G:O2'	1:AA:1455:G:H5'	2.19	0.42
2:AU:67:A:H2'	2:AU:68:U:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:AD:97:LEU:HB2	5:AD:134:TYR:HB3	2.02	0.42
6:AE:95:MET:SD	6:AE:146:MET:HE1	2.59	0.42
7:AF:70:VAL:O	7:AF:70:VAL:HG22	2.19	0.42
10:AI:10:ARG:HB3	10:AI:105:ARG:HE	1.85	0.42
10:AI:27:ILE:N	10:AI:34:LEU:HD11	2.22	0.42
10:AI:40:ARG:HG2	10:AI:40:ARG:HH11	1.83	0.42
10:AI:109:GLN:O	10:AI:111:GLU:N	2.52	0.42
13:AL:98:ARG:HB2	13:AL:116:TYR:HA	2.01	0.42
16:AO:86:LEU:HG	16:AO:87:ARG:H	1.85	0.42
17:AP:8:ARG:CZ	17:AP:10:GLY:HA3	2.49	0.42
18:AQ:29:LYS:HB2	18:AQ:34:GLY:O	2.19	0.42
18:AQ:30:HIS:HB3	18:AQ:34:GLY:H	1.84	0.42
22:B0:119:A:H4'	22:B0:120:U:H3'	2.00	0.42
22:B0:215:G:H4'	22:B0:216:A:O5'	2.17	0.42
22:B0:854:C:H2'	22:B0:855:G:H8	1.84	0.42
22:B0:1082:U:H5"	25:B3:81:LYS:CA	2.50	0.42
22:B0:1082:U:P	25:B3:80:LEU:C	2.98	0.42
22:B0:1089:A:O2'	22:B0:1090:A:N7	2.53	0.42
22:B0:1424:G:C8	26:BA:57:HIS:O	2.72	0.42
22:B0:1434:A:H2'	22:B0:1435:G:H8	1.85	0.42
22:B0:1454:A:H3'	22:B0:1455:U:H5"	1.98	0.42
22:B0:1456:G:H5'	37:BL:60:VAL:HA	2.02	0.42
22:B0:1495:A:N3	26:BA:65:ASP:OD2	2.53	0.42
22:B0:1497:U:H1'	26:BA:83:ASP:HB2	2.02	0.42
22:B0:1580:A:H1'	26:BA:68:ARG:HG2	2.01	0.42
22:B0:1583:G:H4'	26:BA:96:LYS:HZ2	1.83	0.42
22:B0:1615:C:OP2	22:B0:1617:C:N4	2.48	0.42
22:B0:1658:C:C2	22:B0:2003:A:N3	2.88	0.42
22:B0:1760:C:O5'	22:B0:1760:C:H6	2.00	0.42
22:B0:1802:A:N6	22:B0:1817:G:N2	2.67	0.42
22:B0:1889:A:H1'	22:B0:2087:G:H5'	2.01	0.42
22:B0:2008:C:H2'	22:B0:2009:A:H8	1.84	0.42
22:B0:2061:G:O2'	22:B0:2062:A:C8	2.72	0.42
22:B0:2109:U:C5'	22:B0:2110:G:H5'	2.50	0.42
22:B0:2262:U:C5	45:BU:12:GLY:HA2	2.55	0.42
22:B0:2282:G:H2'	22:B0:2283:C:OP2	2.20	0.42
22:B0:2313:C:N3	22:B0:2314:A:N7	2.68	0.42
22:B0:2407:A:H2'	22:B0:2408:U:H6	1.79	0.42
22:B0:2676:C:H2'	22:B0:2677:G:O4'	2.19	0.42
22:B0:2677:G:C8	27:BB:127:PHE:HA	2.54	0.42
26:BA:93:VAL:HG21	26:BA:95:TYR:CE1	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
27:BB:110:THR:HA	27:BB:170:VAL:O	2.20	0.42
28:BC:150:THR:HG23	28:BC:186:VAL:HA	2.01	0.42
29:BD:8:LYS:O	29:BD:9:ASP:CB	2.68	0.42
32:BG:20:SER:O	32:BG:24:GLY:N	2.53	0.42
33:BH:30:THR:C	33:BH:31:GLU:O	2.55	0.42
33:BH:31:GLU:O	33:BH:32:LEU:HB2	2.20	0.42
33:BH:74:TYR:HB2	33:BH:76:HIS:HE1	1.81	0.42
37:BL:95:THR:CG2	37:BL:115:LEU:HG	2.48	0.42
39:BN:23:ASP:HA	39:BN:49:ILE:HG23	2.02	0.42
40:BO:12:ARG:HB3	40:BO:12:ARG:HH11	1.83	0.42
42:BR:11:LEU:C	42:BR:11:LEU:CD1	2.87	0.42
42:BR:73:ARG:CD	42:BR:74:ILE:N	2.75	0.42
43:BS:32:LYS:HD2	43:BS:63:ALA:HB1	2.02	0.42
1:AA:197:A:HO2'	1:AA:198:G:P	2.42	0.42
1:AA:626:G:H2'	1:AA:627:G:C8	2.55	0.42
1:AA:721:G:H1'	1:AA:722:G:N1	2.34	0.42
1:AA:1126:U:O4	1:AA:1145:A:N1	2.53	0.42
1:AA:1132:C:H2'	1:AA:1133:G:C8	2.55	0.42
1:AA:1211:U:H5'	1:AA:1212:U:OP1	2.20	0.42
1:AA:1250:A:H2'	1:AA:1251:A:C8	2.54	0.42
1:AA:1253:G:N1	1:AA:1285:A:N6	2.67	0.42
2:AU:55:U:O2	2:AU:55:U:C2'	2.65	0.42
3:AB:33:ALA:HA	3:AB:37:VAL:O	2.20	0.42
4:AC:13:ILE:O	4:AC:15:LYS:N	2.53	0.42
4:AC:108:PRO:HB3	4:AC:114:LEU:HD13	2.02	0.42
5:AD:165:GLU:HG2	5:AD:166:LYS:N	2.35	0.42
5:AD:167:PRO:HG3	5:AD:170:LEU:HD12	2.01	0.42
6:AE:36:THR:HG21	6:AE:63:MET:N	2.33	0.42
6:AE:137:ARG:HG2	6:AE:137:ARG:HH11	1.85	0.42
8:AG:30:MET:CE	8:AG:35:LYS:HB2	2.49	0.42
10:AI:9:GLY:H	10:AI:84:ARG:NH1	2.18	0.42
11:AJ:80:THR:HG22	11:AJ:81:GLU:H	1.83	0.42
13:AL:28:GLN:HE22	13:AL:82:ARG:HG3	1.85	0.42
13:AL:30:ARG:HH22	13:AL:78:VAL:HG13	1.85	0.42
19:AR:60:ARG:O	19:AR:64:LEU:HG	2.19	0.42
20:AS:30:LEU:HG	20:AS:31:ARG:H	1.84	0.42
22:B0:25:U:C5'	41:BQ:80:PRO:HA	2.46	0.42
22:B0:44:A:N6	22:B0:433:C:H41	2.14	0.42
22:B0:86:G:O2'	22:B0:87:U:H5'	2.20	0.42
22:B0:205:G:H2'	22:B0:206:U:OP2	2.18	0.42
22:B0:228:C:C2'	22:B0:229:C:C5'	2.96	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:241:A:H1'	22:B0:243:U:C4	2.54	0.42
22:B0:351:C:C4	22:B0:352:A:N6	2.88	0.42
22:B0:385:C:O2	22:B0:387:U:H3'	2.20	0.42
22:B0:800:A:H4'	22:B0:801:G:H3'	2.01	0.42
22:B0:975:A:N6	22:B0:989:G:H1'	2.35	0.42
22:B0:1202:G:OP1	35:BJ:12:SER:CB	2.67	0.42
22:B0:1314:C:P	22:B0:1332:G:H5'	2.60	0.42
22:B0:1355:G:N2	22:B0:1376:C:O2	2.51	0.42
22:B0:1492:G:N3	26:BA:152:GLN:HB3	2.33	0.42
22:B0:1493:A:O2'	26:BA:171:VAL:HG11	2.20	0.42
22:B0:1940:U:O2'	22:B0:1941:C:P	2.77	0.42
22:B0:2023:C:H2'	22:B0:2024:G:H8	1.83	0.42
22:B0:2033:A:O2'	22:B0:2034:U:OP1	2.30	0.42
22:B0:2108:A:H3'	22:B0:2110:G:P	2.59	0.42
22:B0:2114:A:C2'	22:B0:2115:G:O5'	2.68	0.42
22:B0:2167:U:H5"	22:B0:2171:A:N3	2.35	0.42
22:B0:2238:G:C5'	22:B0:2239:G:OP1	2.59	0.42
22:B0:2244:U:O5'	22:B0:2244:U:H6	2.03	0.42
22:B0:2458:G:N2	22:B0:2493:U:C4	2.88	0.42
22:B0:2677:G:C2'	27:BB:125:TRP:HB2	2.47	0.42
22:B0:2678:C:OP1	27:BB:161:MET:O	2.38	0.42
22:B0:2808:G:O2'	22:B0:2809:A:N9	2.53	0.42
22:B0:2899:A:C2'	22:B0:2900:C:O5'	2.68	0.42
23:B9:92:C:H2'	23:B9:93:C:C6	2.55	0.42
26:BA:73:ILE:HG23	26:BA:74:PRO:N	2.35	0.42
27:BB:201:LEU:HD12	27:BB:201:LEU:C	2.40	0.42
28:BC:28:VAL:C	35:BJ:17:LYS:HZ2	2.23	0.42
28:BC:104:ALA:HA	28:BC:107:SER:OG	2.20	0.42
29:BD:166:ARG:NE	29:BD:166:ARG:CA	2.83	0.42
33:BH:96:ARG:HB3	33:BH:97:PRO:HA	1.95	0.42
33:BH:114:LEU:O	33:BH:114:LEU:HD23	2.20	0.42
33:BH:134:ALA:HB1	33:BH:135:GLN:NE2	2.35	0.42
35:BJ:82:LEU:HD22	35:BJ:82:LEU:N	2.35	0.42
36:BK:31:PHE:HA	36:BK:133:LYS:OXT	2.20	0.42
36:BK:78:LEU:CG	36:BK:79:ALA:H	2.11	0.42
37:BL:30:ARG:CB	37:BL:30:ARG:HH11	2.33	0.42
38:BM:87:ILE:C	38:BM:88:LYS:HD2	2.40	0.42
43:BS:34:ILE:CB	43:BS:61:GLU:HG3	2.43	0.42
45:BU:17:ALA:HB1	45:BU:34:SER:O	2.20	0.42
46:BW:29:ARG:C	46:BW:31:GLN:H	2.22	0.42
48:BZ:29:VAL:HB	48:BZ:33:SER:HA	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:258:G:O2'	1:AA:259:G:H5'	2.20	0.42
1:AA:266:G:O5'	1:AA:267:C:H5	2.02	0.42
1:AA:741:G:O2'	1:AA:742:G:H5'	2.19	0.42
1:AA:908:A:H2'	1:AA:909:A:H8	1.85	0.42
1:AA:913:A:O2'	1:AA:914:A:O4'	2.38	0.42
1:AA:1307:U:H2'	1:AA:1308:U:C6	2.55	0.42
1:AA:1452:C:H1'	1:AA:1453:G:N2	2.35	0.42
1:AA:1516:G:C4	1:AA:1518:A:OP2	2.72	0.42
2:AU:75:C:OP2	22:B0:2556:C:H6	2.03	0.42
4:AC:116:ALA:O	4:AC:120:THR:HG22	2.20	0.42
4:AC:148:ILE:HA	4:AC:200:TRP:O	2.19	0.42
5:AD:57:LYS:HG3	5:AD:58:GLN:N	2.34	0.42
10:AI:10:ARG:CB	10:AI:105:ARG:HE	2.33	0.42
11:AJ:80:THR:O	11:AJ:83:THR:HB	2.19	0.42
12:AK:122:PRO:HB2	12:AK:126:ARG:HB2	2.01	0.42
14:AM:5:GLY:HA2	29:BD:132:ARG:HD2	2.02	0.42
15:AN:46:LYS:HD3	15:AN:46:LYS:C	2.39	0.42
20:AS:11:ASP:OD1	20:AS:37:SER:HB3	2.20	0.42
22:B0:164:C:C6	22:B0:164:C:C3'	3.03	0.42
22:B0:446:G:C5'	22:B0:449:A:H1'	2.49	0.42
22:B0:519:U:H2'	22:B0:520:G:H8	1.82	0.42
22:B0:611:C:H42	22:B0:618:G:H22	1.67	0.42
22:B0:1022:G:H4'	22:B0:1023:U:C5'	2.49	0.42
22:B0:1141:U:P	33:BH:71:ASP:HB2	2.60	0.42
22:B0:1416:G:C8	26:BA:92:LEU:HD21	2.54	0.42
22:B0:1421:G:HO2'	26:BA:146:LYS:HE2	1.84	0.42
22:B0:1490:C:C5'	26:BA:162:GLN:HB3	2.50	0.42
22:B0:1567:G:OP2	26:BA:43:ASN:HB3	2.19	0.42
22:B0:1578:U:H5"	26:BA:101:ARG:HH11	1.82	0.42
22:B0:1650:A:H2'	22:B0:1651:G:H8	1.85	0.42
22:B0:1854:A:C2'	22:B0:1859:U:O5'	2.68	0.42
22:B0:2077:A:H2'	22:B0:2078:C:C6	2.55	0.42
22:B0:2163:G:O2'	22:B0:2164:C:H6	2.01	0.42
22:B0:2581:G:N2	22:B0:2581:G:OP2	2.52	0.42
22:B0:2675:A:OP2	27:BB:128:ARG:NH2	2.52	0.42
22:B0:2718:G:O2'	22:B0:2719:G:H5'	2.19	0.42
22:B0:2849:U:H4'	22:B0:2850:A:H5'	2.01	0.42
23:B9:112:G:H2'	23:B9:113:C:C6	2.54	0.42
25:B3:96:GLU:HG2	25:B5:49:GLU:HG2	2.01	0.42
26:BA:181:ARG:HA	26:BA:181:ARG:HE	1.85	0.42
28:BC:25:GLU:C	35:BJ:17:LYS:HZ1	2.21	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
28:BC:35:TYR:O	28:BC:39:ALA:CB	2.68	0.42
28:BC:175:ILE:N	28:BC:175:ILE:CD1	2.77	0.42
29:BD:165:GLY:O	29:BD:166:ARG:HB2	2.19	0.42
30:BE:89:VAL:O	30:BE:164:ALA:HA	2.20	0.42
32:BG:68:PHE:O	32:BG:69:VAL:HG23	2.20	0.42
33:BH:105:VAL:HA	33:BH:108:MET:SD	2.60	0.42
35:BJ:78:ARG:HG3	35:BJ:108:ALA:HB1	2.01	0.42
35:BJ:103:ILE:C	35:BJ:105:ILE:N	2.73	0.42
36:BK:73:ILE:HG12	36:BK:91:TYR:O	2.20	0.42
37:BL:27:SER:HA	37:BL:30:ARG:HG2	2.02	0.42
37:BL:31:HIS:C	37:BL:33:ILE:H	2.23	0.42
37:BL:41:ALA:CB	37:BL:44:LEU:HB2	2.50	0.42
41:BQ:45:VAL:CA	41:BQ:48:LYS:HG2	2.43	0.42
1:AA:344:A:O2’	1:AA:345:C:P	2.78	0.42
1:AA:401:C:H2’	1:AA:402:G:H8	1.85	0.42
1:AA:429:U:C5’	1:AA:430:A:OP1	2.63	0.42
1:AA:722:G:H3’	1:AA:722:G:N3	2.34	0.42
1:AA:819:A:H5”	1:AA:820:U:P	2.60	0.42
1:AA:1015:G:H2’	1:AA:1016:A:O4’	2.19	0.42
1:AA:1059:C:O5’	4:AC:2:GLN:NE2	2.51	0.42
1:AA:1159:U:O2’	1:AA:1160:G:C8	2.69	0.42
1:AA:1320:C:C6	20:AS:4:LEU:HB2	2.55	0.42
1:AA:1528:U:H2’	1:AA:1530:G:H5’	2.02	0.42
4:AC:126:ARG:NH1	4:AC:126:ARG:CB	2.82	0.42
4:AC:133:MET:O	4:AC:137:VAL:HG23	2.19	0.42
5:AD:104:MET:HE1	5:AD:142:VAL:HB	2.01	0.42
8:AG:25:PHE:CD1	8:AG:28:ILE:HD11	2.55	0.42
9:AH:45:ILE:HD13	9:AH:60:LEU:HD11	2.01	0.42
11:AJ:56:HIS:CG	11:AJ:57:VAL:N	2.88	0.42
13:AL:26:CYS:HA	13:AL:27:PRO:HD3	1.95	0.42
15:AN:40:ARG:HA	20:AS:16:LYS:HD2	2.02	0.42
20:AS:80:ARG:HG2	20:AS:80:ARG:HH11	1.85	0.42
22:B0:181:A:H2’	22:B0:182:A:O4’	2.19	0.42
22:B0:432:A:C2’	28:BC:69:ARG:N	2.75	0.42
22:B0:805:G:H1	22:B0:2068:U:H5	1.66	0.42
22:B0:810:U:H2’	35:BJ:35:HIS:CB	2.36	0.42
22:B0:892:A:O2’	22:B0:893:C:H5’	2.20	0.42
22:B0:1028:A:C2	22:B0:2488:G:H5’	2.54	0.42
22:B0:1141:U:HO2’	22:B0:1142:A:P	2.34	0.42
22:B0:1300:G:HO2’	22:B0:1301:A:P	2.38	0.42
22:B0:1332:G:C5’	22:B0:1333:G:OP2	2.66	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1342:A:O4'	22:B0:1397:U:C1'	2.68	0.42
22:B0:1485:C:OP2	26:BA:84:PRO:C	2.59	0.42
22:B0:1491:A:H1'	26:BA:162:GLN:O	2.20	0.42
22:B0:1567:G:O2'	22:B0:1568:G:C5	2.67	0.42
22:B0:1580:A:OP1	26:BA:118:GLY:N	2.49	0.42
22:B0:1584:U:C2	26:BA:76:VAL:HG21	2.54	0.42
22:B0:1669:A:C6	22:B0:1994:C:O2	2.72	0.42
22:B0:1674:G:O2'	22:B0:1675:C:H5	2.01	0.42
22:B0:1748:C:H2'	22:B0:1749:A:H8	1.85	0.42
22:B0:1889:A:H2'	22:B0:1890:A:C8	2.55	0.42
22:B0:1932:A:C2	22:B0:1969:A:N6	2.79	0.42
22:B0:2084:C:H2'	22:B0:2085:U:C6	2.55	0.42
22:B0:2106:U:H2'	22:B0:2107:G:H8	1.83	0.42
22:B0:2381:A:O2'	22:B0:2382:G:H5'	2.19	0.42
22:B0:2491:U:HO2'	22:B0:2492:U:P	2.43	0.42
22:B0:2673:G:H2'	22:B0:2674:G:C8	2.54	0.42
22:B0:2779:U:H5'	33:BH:116:ARG:NH2	2.26	0.42
22:B0:2866:U:C2'	22:B0:2867:G:OP2	2.68	0.42
24:B2:14:VAL:CG1	24:B2:15:ASP:N	2.83	0.42
24:B2:44:ALA:HB1	24:B2:169:ILE:HD11	2.01	0.42
24:B2:178:ASP:O	24:B2:184:LEU:HD11	2.20	0.42
26:BA:83:ASP:OD1	26:BA:84:PRO:CD	2.68	0.42
26:BA:149:LYS:NZ	26:BA:151:GLY:O	2.53	0.42
26:BA:243:PRO:HB3	26:BA:259:ASN:HD21	1.85	0.42
28:BC:89:PRO:HD3	28:BC:95:LYS:HG2	2.01	0.42
32:BG:39:LYS:HD3	32:BG:43:ALA:HB2	2.02	0.42
34:BI:88:ASN:OD1	34:BI:90:ASN:HB2	2.20	0.42
35:BJ:60:ARG:HB3	35:BJ:60:ARG:CZ	2.50	0.42
35:BJ:79:LEU:HB3	35:BJ:111:ILE:HG12	2.02	0.42
39:BN:62:LYS:HA	39:BN:62:LYS:HZ2	1.80	0.42
40:BO:47:ARG:O	40:BO:50:ARG:NH1	2.53	0.42
40:BO:63:ARG:HH11	40:BO:64:ILE:N	2.16	0.42
45:BU:20:LEU:HD23	45:BU:20:LEU:N	2.23	0.42
45:BU:24:ARG:O	45:BU:24:ARG:HG2	2.19	0.42
45:BU:48:ALA:O	45:BU:72:GLY:HA2	2.20	0.42
45:BU:66:VAL:CG2	45:BU:67:LYS:H	2.16	0.42
47:BX:48:ASN:HA	47:BX:51:SER:OG	2.20	0.42
48:BZ:54:ILE:HD12	48:BZ:54:ILE:O	2.20	0.42
1:AA:47:C:H1'	1:AA:49:U:C5	2.54	0.41
1:AA:149:A:H2'	1:AA:150:U:C6	2.55	0.41
1:AA:156:C:H2'	1:AA:157:U:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:186:C:H2'	1:AA:187:G:H8	1.85	0.41
1:AA:502:A:H2'	1:AA:503:C:C6	2.55	0.41
1:AA:575:G:N2	1:AA:880:C:C2	2.87	0.41
1:AA:719:C:H2'	1:AA:720:C:O4'	2.19	0.41
1:AA:872:A:C4'	1:AA:873:A:OP1	2.68	0.41
1:AA:924:C:H1'	1:AA:1504:G:N1	2.35	0.41
1:AA:927:G:O2'	1:AA:928:G:H5'	2.20	0.41
1:AA:991:U:H2'	1:AA:992:U:OP2	2.20	0.41
1:AA:1011:C:N4	1:AA:1012:A:N6	2.68	0.41
1:AA:1168:U:H2'	1:AA:1169:A:C8	2.55	0.41
1:AA:1330:U:C2'	1:AA:1331:G:H5'	2.50	0.41
1:AA:1483:A:H4'	22:B0:1949:G:H5'	2.01	0.41
2:AV:55:U:O2	2:AV:57:G:C8	2.73	0.41
3:AB:160:LEU:HD12	3:AB:160:LEU:N	2.35	0.41
4:AC:10:ARG:O	4:AC:15:LYS:HB3	2.20	0.41
5:AD:35:GLN:HB2	5:AD:41:GLY:O	2.20	0.41
5:AD:40:HIS:O	5:AD:43:ARG:HG2	2.20	0.41
7:AF:61:LEU:HD12	7:AF:61:LEU:N	2.35	0.41
9:AH:50:VAL:O	9:AH:50:VAL:HG13	2.19	0.41
13:AL:85:ARG:NH1	13:AL:87:LYS:HD2	2.29	0.41
14:AM:60:ALA:HB1	29:BD:112:ASP:OD2	2.20	0.41
14:AM:115:ILE:HG23	14:AM:115:ILE:OXT	2.20	0.41
21:AT:8:LYS:CG	21:AT:12:GLN:HE21	2.20	0.41
22:B0:238:C:H1'	22:B0:609:A:H1'	2.02	0.41
22:B0:621:A:H3'	22:B0:622:G:H8	1.84	0.41
22:B0:771:G:O2'	22:B0:772:C:H5'	2.20	0.41
22:B0:885:C:C6	22:B0:885:C:O5'	2.70	0.41
22:B0:891:G:HO2'	22:B0:892:A:P	2.42	0.41
22:B0:918:A:H62	22:B0:2268:A:N6	2.13	0.41
22:B0:948:C:H2'	22:B0:949:G:H8	1.84	0.41
22:B0:1082:U:H5'	25:B3:82:GLU:HB2	2.00	0.41
22:B0:1342:A:C4	22:B0:1397:U:O4'	2.73	0.41
22:B0:1344:U:O2'	22:B0:1385:A:H5'	2.20	0.41
22:B0:1374:G:H2'	22:B0:1375:U:H6	1.85	0.41
22:B0:1458:C:H2'	22:B0:1459:U:C4'	2.50	0.41
22:B0:1487:G:O4'	26:BA:196:ASN:C	2.58	0.41
22:B0:1757:A:H61	22:B0:1762:A:H2	1.68	0.41
22:B0:1769:U:H3	22:B0:1983:G:H1	1.68	0.41
22:B0:1944:U:C5'	22:B0:1945:G:OP2	2.61	0.41
22:B0:2039:U:H2'	22:B0:2040:G:C8	2.55	0.41
22:B0:2110:G:O6	22:B0:2180:U:O2	2.38	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2136:G:C6	22:B0:2137:U:C4’	3.03	0.41
22:B0:2214:C:H2’	22:B0:2215:C:C5’	2.50	0.41
22:B0:2606:C:H2’	22:B0:2607:G:C8	2.55	0.41
22:B0:2678:C:O4’	27:BB:125:TRP:N	2.53	0.41
22:B0:2688:G:H3’	22:B0:2688:G:C8	2.55	0.41
24:B2:136:MET:HA	24:B2:137:PRO:HD3	1.89	0.41
25:B5:43:GLY:O	25:B5:45:VAL:N	2.51	0.41
26:BA:66:PHE:O	26:BA:67:LYS:CD	2.68	0.41
26:BA:149:LYS:CD	26:BA:150:GLY:N	2.75	0.41
29:BD:110:ILE:HG22	29:BD:111:ARG:CD	2.47	0.41
32:BG:11:GLN:HA	32:BG:55:PRO:HA	2.02	0.41
35:BJ:60:ARG:HH11	35:BJ:60:ARG:CB	2.33	0.41
35:BJ:129:LYS:HD2	35:BJ:129:LYS:O	2.20	0.41
36:BK:20:LEU:H	36:BK:20:LEU:CD1	2.32	0.41
37:BL:12:ARG:HD3	37:BL:13:ASN:N	2.35	0.41
37:BL:39:PRO:O	37:BL:40:LYS:O	2.38	0.41
37:BL:45:ARG:NE	37:BL:95:THR:O	2.47	0.41
37:BL:63:ARG:CZ	37:BL:64:ARG:HG2	2.50	0.41
40:BO:82:LEU:HD13	40:BO:82:LEU:C	2.40	0.41
40:BO:91:ARG:HG2	40:BO:91:ARG:NH1	2.35	0.41
41:BQ:69:LEU:C	41:BQ:70:LYS:HD3	2.40	0.41
41:BQ:72:THR:HG23	41:BQ:106:VAL:HG23	2.02	0.41
43:BS:3:LYS:CB	43:BS:5:ARG:HH12	2.33	0.41
45:BU:58:LEU:HB2	45:BU:81:ILE:CD1	2.50	0.41
1:AA:539:A:H2’	1:AA:540:G:H8	1.83	0.41
1:AA:1279:G:O2’	1:AA:1282:C:N4	2.51	0.41
1:AA:1405:G:O2’	1:AA:1517:G:C2’	2.61	0.41
2:AU:28:C:H2’	2:AU:29:A:H8	1.85	0.41
2:AV:20:G:C3’	2:AV:21:A:C5’	2.94	0.41
3:AB:17:HIS:O	3:AB:18:GLN:HB2	2.20	0.41
6:AE:48:GLY:HA3	6:AE:66:ALA:HB2	2.01	0.41
7:AF:7:VAL:CG2	7:AF:88:MET:H	2.33	0.41
7:AF:86:ARG:HB3	7:AF:86:ARG:NH1	2.35	0.41
8:AG:61:PHE:O	8:AG:65:LEU:HD23	2.20	0.41
9:AH:74:ILE:CG1	9:AH:128:VAL:HG12	2.49	0.41
11:AJ:40:ILE:HG12	11:AJ:73:LEU:HB3	2.02	0.41
12:AK:53:GLY:HA2	12:AK:56:LYS:HD3	2.01	0.41
13:AL:65:TYR:O	13:AL:96:THR:HG22	2.20	0.41
15:AN:63:CYS:HB3	15:AN:68:ARG:H	1.85	0.41
19:AR:49:LYS:O	19:AR:52:ARG:HG2	2.20	0.41
20:AS:52:ASN:N	20:AS:52:ASN:ND2	2.67	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:215:G:H5”	22:B0:216:A:OP1	2.20	0.41
22:B0:242:G:H2’	22:B0:243:U:OP2	2.18	0.41
22:B0:387:U:H4’	22:B0:388:G:O5’	2.20	0.41
22:B0:661:A:H2’	22:B0:662:G:O4’	2.20	0.41
22:B0:891:G:O3’	22:B0:892:A:H8	2.03	0.41
22:B0:1156:A:OP1	40:BO:54:ARG:NE	2.52	0.41
22:B0:1165:A:O2’	22:B0:1166:G:H5’	2.19	0.41
22:B0:1203:U:H4’	28:BC:183:PHE:CZ	2.56	0.41
22:B0:1614:A:P	22:B0:1614:A:H8	2.42	0.41
22:B0:1652:A:N6	22:B0:1654:A:P	2.93	0.41
22:B0:1922:G:O2’	22:B0:1923:U:OP1	2.32	0.41
22:B0:2143:C:HO2’	22:B0:2144:G:C5’	2.33	0.41
22:B0:2490:G:H4’	22:B0:2491:U:C5’	2.50	0.41
22:B0:2676:C:H3’	27:BB:127:PHE:CE1	2.55	0.41
24:B2:76:VAL:HG22	24:B2:78:THR:HG23	2.01	0.41
24:B2:95:GLY:HA3	24:B2:99:LEU:CD2	2.50	0.41
25:B3:78:LEU:CD2	25:B3:82:GLU:HB3	2.48	0.41
26:BA:96:LYS:CG	26:BA:97:ASP:N	2.75	0.41
26:BA:141:HIS:H	26:BA:161:VAL:HB	1.84	0.41
29:BD:91:ARG:NH1	29:BD:95:MET:HB2	2.32	0.41
30:BE:86:LEU:HG	30:BE:168:VAL:HA	2.02	0.41
30:BE:142:GLN:HA	30:BE:142:GLN:NE2	2.35	0.41
31:BF:80:ILE:HD12	31:BF:102:ALA:HB1	2.01	0.41
32:BG:96:LYS:H	32:BG:96:LYS:CD	2.30	0.41
34:BI:80:ASP:OD1	39:BN:70:GLU:HG3	2.20	0.41
38:BM:77:ALA:O	38:BM:81:ARG:HG3	2.20	0.41
39:BN:36:LYS:HE3	39:BN:37:LYS:NZ	2.35	0.41
40:BO:33:VAL:HA	40:BO:36:GLN:OE1	2.20	0.41
42:BR:26:LYS:N	42:BR:26:LYS:HD2	2.35	0.41
42:BR:60:THR:HA	42:BR:83:ALA:HB1	2.01	0.41
42:BR:74:ILE:HG21	42:BR:76:ARG:CZ	2.50	0.41
42:BR:92:ASN:O	42:BR:92:ASN:OD1	2.37	0.41
1:AA:8:A:O3’	1:AA:9:G:O4’	2.39	0.41
1:AA:579:A:H2’	1:AA:580:C:C6	2.55	0.41
1:AA:717:U:C2’	12:AK:119:GLY:HA2	2.51	0.41
1:AA:1405:G:H1’	1:AA:1518:A:C4	2.55	0.41
2:AV:16:U:H6	2:AV:16:U:P	2.42	0.41
4:AC:148:ILE:HG13	4:AC:200:TRP:O	2.20	0.41
4:AC:149:LYS:HG3	4:AC:168:ARG:HB3	2.01	0.41
6:AE:15:ILE:HD11	6:AE:37:VAL:HG21	2.02	0.41
6:AE:59:ILE:HG22	6:AE:63:MET:CE	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
12:AK:22:ILE:HD12	12:AK:95:THR:CG2	2.50	0.41
13:AL:68:GLY:HA3	13:AL:98:ARG:HH11	1.85	0.41
14:AM:76:ILE:HA	14:AM:79:LEU:CD2	2.51	0.41
17:AP:7:ALA:HB3	17:AP:18:GLN:HB3	2.02	0.41
22:B0:120:U:H5'	22:B0:122:G:OP2	2.20	0.41
22:B0:265:A:C4'	22:B0:266:G:OP1	2.62	0.41
22:B0:340:A:H2'	22:B0:341:C:C5'	2.49	0.41
22:B0:772:C:H2'	22:B0:773:U:C6	2.56	0.41
22:B0:854:C:H2'	22:B0:855:G:C8	2.55	0.41
22:B0:1199:U:N3	22:B0:1246:A:C2	2.78	0.41
22:B0:1312:U:H5'	22:B0:1313:U:C6	2.55	0.41
22:B0:1417:U:C4	26:BA:98:GLY:O	2.73	0.41
22:B0:1424:G:H2'	22:B0:1425:G:C5'	2.50	0.41
22:B0:1445:U:OP1	22:B0:1446:G:OP1	2.38	0.41
22:B0:1479:G:C8	22:B0:1558:C:C5'	2.98	0.41
22:B0:1494:A:C8	26:BA:189:ALA:HB3	2.56	0.41
22:B0:1580:A:N6	26:BA:66:PHE:CZ	2.83	0.41
22:B0:1609:A:C4	22:B0:1616:A:H1'	2.55	0.41
22:B0:1674:G:O2'	22:B0:1675:C:C5	2.74	0.41
22:B0:1674:G:HO2'	22:B0:1675:C:H5	1.62	0.41
22:B0:1800:C:H5'	22:B0:1802:A:C5'	2.51	0.41
22:B0:2078:C:C4'	22:B0:2434:A:H4'	2.51	0.41
22:B0:2114:A:O2'	22:B0:2115:G:O5'	2.27	0.41
22:B0:2433:A:O2'	22:B0:2434:A:P	2.79	0.41
22:B0:2725:A:O2'	22:B0:2726:A:C8	2.73	0.41
22:B0:2847:U:OP1	39:BN:97:TYR:CE2	2.74	0.41
22:B0:2860:A:N6	22:B0:2862:G:C8	2.88	0.41
23:B9:11:C:C2'	23:B9:12:C:H5'	2.51	0.41
24:B2:185:LYS:HG3	24:B2:186:GLU:N	2.36	0.41
25:B3:3:THR:O	25:B3:7:ILE:HG13	2.20	0.41
25:B5:30:PHE:HB3	25:B5:34:ALA:CB	2.49	0.41
25:B5:51:LYS:CG	25:B5:52:THR:HG22	2.43	0.41
25:B5:90:ALA:O	25:B5:92:ALA:N	2.51	0.41
26:BA:151:GLY:O	26:BA:152:GLN:HB2	2.21	0.41
26:BA:241:LYS:O	26:BA:242:HIS:CB	2.67	0.41
27:BB:8:LYS:HA	27:BB:27:ILE:HD12	2.03	0.41
27:BB:41:ALA:HB2	27:BB:50:VAL:HG22	2.01	0.41
28:BC:18:THR:OG1	28:BC:113:VAL:HG11	2.20	0.41
29:BD:123:GLY:O	29:BD:124:ARG:HG3	2.20	0.41
30:BE:57:TYR:CD2	30:BE:59:ASP:HB2	2.55	0.41
30:BE:87:GLN:HA	30:BE:128:THR:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BJ:8:PRO:O	35:BJ:9:ALA:C	2.58	0.41
35:BJ:81:ASP:CG	35:BJ:114:GLY:HA3	2.40	0.41
35:BJ:133:ALA:O	35:BJ:134:ALA:HB3	2.20	0.41
36:BK:40:ARG:HB3	36:BK:93:VAL:CG2	2.49	0.41
36:BK:76:LYS:O	36:BK:76:LYS:HD3	2.19	0.41
37:BL:49:GLU:HA	37:BL:52:ILE:HG12	2.02	0.41
41:BQ:22:ASP:O	41:BQ:23:LEU:CB	2.68	0.41
41:BQ:25:ARG:NH2	41:BQ:26:GLY:H	2.18	0.41
41:BQ:47:VAL:HG23	41:BQ:103:ILE:CG2	2.50	0.41
1:AA:145:G:N2	1:AA:146:G:C4	2.89	0.41
1:AA:366:A:O2'	1:AA:367:U:OP1	2.35	0.41
1:AA:853:C:O2'	1:AA:854:U:H5'	2.20	0.41
1:AA:926:G:C2'	1:AA:1505:G:O2'	2.66	0.41
1:AA:1126:U:O2'	1:AA:1127:G:H5'	2.20	0.41
1:AA:1366:C:C2	11:AJ:62:ARG:NH1	2.88	0.41
2:AV:66:A:H2'	2:AV:67:A:H8	1.85	0.41
3:AB:76:SER:O	3:AB:79:VAL:HG12	2.20	0.41
3:AB:113:LEU:HD23	3:AB:113:LEU:C	2.40	0.41
4:AC:86:LEU:HA	4:AC:89:VAL:HG22	2.02	0.41
5:AD:44:LYS:HA	5:AD:45:PRO:HD3	1.91	0.41
5:AD:64:TYR:HA	5:AD:110:ARG:CD	2.50	0.41
12:AK:18:GLY:H	12:AK:81:LEU:HD23	1.85	0.41
17:AP:52:LEU:HD13	17:AP:75:ILE:HG13	2.01	0.41
18:AQ:24:ILE:HG12	18:AQ:41:THR:O	2.20	0.41
20:AS:50:VAL:O	20:AS:56:HIS:HA	2.20	0.41
21:AT:27:MET:CE	21:AT:57:VAL:HG23	2.51	0.41
21:AT:28:ARG:CA	21:AT:31:ILE:HG22	2.51	0.41
22:B0:85:G:O2'	22:B0:86:G:H5'	2.21	0.41
22:B0:164:C:C6	22:B0:164:C:H3'	2.56	0.41
22:B0:295:G:C2	22:B0:347:A:C2	3.09	0.41
22:B0:360:U:O2'	22:B0:362:A:OP1	2.29	0.41
22:B0:367:G:H2'	22:B0:368:A:C8	2.55	0.41
22:B0:508:A:H4'	22:B0:509:C:O5'	2.20	0.41
22:B0:589:U:OP2	28:BC:86:ALA:O	2.39	0.41
22:B0:1001:A:H2'	22:B0:1002:G:O4'	2.20	0.41
22:B0:1024:G:H22	22:B0:1139:G:N2	2.18	0.41
22:B0:1057:A:H2'	22:B0:1057:A:N3	2.35	0.41
22:B0:1099:G:O2'	22:B0:1100:C:H5'	2.19	0.41
22:B0:1269:A:N6	22:B0:2011:U:H3	2.18	0.41
22:B0:1320:C:N4	22:B0:1330:C:C5	2.88	0.41
22:B0:1340:U:O2'	22:B0:1603:A:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1418:G:C8	26:BA:99:GLU:CA	2.99	0.41
22:B0:1426:G:H1'	22:B0:1572:A:H62	1.85	0.41
22:B0:1488:G:C4	26:BA:156:SER:OG	2.64	0.41
22:B0:1488:G:O6	26:BA:154:ALA:CA	2.69	0.41
22:B0:1567:G:H4'	22:B0:1568:G:C4	2.56	0.41
22:B0:1572:A:O2'	22:B0:1573:G:H5'	2.20	0.41
22:B0:1579:A:C6	26:BA:67:LYS:CA	3.02	0.41
22:B0:1877:A:C2	22:B0:2411:A:H4'	2.51	0.41
22:B0:1964:G:C4'	22:B0:1965:C:OP2	2.68	0.41
22:B0:2109:U:C5'	22:B0:2110:G:H4'	2.46	0.41
22:B0:2328:A:C1'	45:BU:10:ARG:HB3	2.48	0.41
22:B0:2834:G:H2'	22:B0:2879:A:H62	1.85	0.41
24:B2:155:ALA:O	24:B2:156:LYS:CB	2.68	0.41
25:B3:61:ALA:HA	25:B3:115:ALA:CA	2.37	0.41
25:B3:78:LEU:HD13	25:B3:82:GLU:HB3	2.03	0.41
26:BA:153:LEU:O	26:BA:154:ALA:HB3	2.18	0.41
27:BB:88:GLU:OE1	27:BB:95:SER:HB3	2.21	0.41
28:BC:36:ALA:CB	35:BJ:13:LYS:HB2	2.50	0.41
28:BC:99:LYS:CG	28:BC:102:ARG:NH2	2.80	0.41
29:BD:70:ARG:HB3	29:BD:70:ARG:NH1	2.35	0.41
31:BF:123:ARG:HH11	31:BF:123:ARG:HA	1.84	0.41
33:BH:111:LYS:NZ	33:BH:111:LYS:CA	2.79	0.41
34:BI:8:LEU:HD23	34:BI:19:VAL:O	2.20	0.41
35:BJ:19:LEU:HA	35:BJ:19:LEU:HD22	1.84	0.41
35:BJ:33:ARG:CD	35:BJ:33:ARG:H	2.33	0.41
37:BL:28:LEU:HD12	37:BL:48:VAL:HG11	2.01	0.41
37:BL:37:THR:CA	37:BL:40:LYS:HB3	2.50	0.41
39:BN:37:LYS:HD2	39:BN:39:LEU:HB2	2.02	0.41
39:BN:46:VAL:HG12	39:BN:47:ILE:N	2.34	0.41
39:BN:72:VAL:O	39:BN:73:PHE:O	2.37	0.41
40:BO:105:PHE:CG	40:BO:106:THR:N	2.88	0.41
41:BQ:61:ASN:OD1	41:BQ:62:ASP:OD2	2.38	0.41
42:BR:20:ALA:HA	42:BR:31:VAL:HG21	2.02	0.41
42:BR:67:VAL:HG13	42:BR:76:ARG:H	1.85	0.41
42:BR:67:VAL:HG22	42:BR:76:ARG:HA	2.02	0.41
45:BU:50:VAL:HG23	45:BU:50:VAL:O	2.19	0.41
47:BX:6:ILE:HG12	47:BX:47:ILE:CD1	2.51	0.41
49:B1:42:VAL:HG22	49:B1:43:ARG:HD2	2.02	0.41
1:AA:356:A:O2'	1:AA:357:G:H5'	2.21	0.41
1:AA:410:G:H2'	1:AA:429:U:N3	2.35	0.41
1:AA:492:C:H2'	1:AA:494:G:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:749:A:N3	1:AA:749:A:H2'	2.35	0.41
1:AA:1318:A:N3	20:AS:7:GLY:HA2	2.36	0.41
1:AA:1380:U:H2'	1:AA:1381:U:OP2	2.20	0.41
1:AA:1503:A:O2'	1:AA:1504:G:C5'	2.68	0.41
1:AA:1525:G:O2'	1:AA:1526:G:H5'	2.21	0.41
2:AU:74:C:H6	2:AU:74:C:O5'	2.04	0.41
2:AV:29:A:O2'	2:AV:30:G:H5'	2.21	0.41
2:AW:31:A:H4'	8:AG:135:LYS:NZ	2.35	0.41
4:AC:206:ILE:O	4:AC:206:ILE:HG22	2.19	0.41
11:AJ:26:VAL:HG21	11:AJ:39:PRO:HD3	2.01	0.41
11:AJ:52:LEU:H	11:AJ:52:LEU:CD1	2.23	0.41
12:AK:17:ASP:HA	12:AK:80:ASN:O	2.20	0.41
13:AL:22:ALA:O	13:AL:23:LEU:HB2	2.21	0.41
13:AL:67:GLY:O	13:AL:98:ARG:HD2	2.20	0.41
17:AP:56:ARG:HH22	17:AP:59:HIS:CD2	2.37	0.41
19:AR:67:LEU:HA	19:AR:68:PRO:HD3	1.92	0.41
21:AT:68:LYS:HB2	21:AT:69:ASN:H	1.71	0.41
22:B0:37:C:H4'	22:B0:451:U:OP1	2.20	0.41
22:B0:64:A:H4'	42:BR:74:ILE:O	2.21	0.41
22:B0:120:U:O4	22:B0:177:G:N7	2.53	0.41
22:B0:177:G:H5"	22:B0:178:G:OP2	2.19	0.41
22:B0:362:A:O2'	22:B0:363:G:OP1	2.39	0.41
22:B0:485:C:H2'	22:B0:486:C:C6	2.56	0.41
22:B0:498:G:N2	43:BS:53:GLN:HE21	2.17	0.41
22:B0:589:U:O3'	28:BC:88:ARG:N	2.30	0.41
22:B0:849:A:H2'	22:B0:850:U:C2	2.55	0.41
22:B0:866:A:H61	22:B0:913:U:H1'	1.86	0.41
22:B0:1283:G:N2	22:B0:1285:A:H3'	2.35	0.41
22:B0:1286:A:O2'	22:B0:1288:G:OP2	2.33	0.41
22:B0:1487:G:C5'	26:BA:194:VAL:O	2.68	0.41
22:B0:1498:C:C6	22:B0:1498:C:P	3.14	0.41
22:B0:1659:G:N1	22:B0:1660:G:C4	2.89	0.41
22:B0:1666:G:H2'	22:B0:1667:G:C5'	2.50	0.41
22:B0:1940:U:C2'	22:B0:1941:C:OP2	2.69	0.41
22:B0:2120:G:C4'	22:B0:2121:G:O5'	2.65	0.41
22:B0:2131:U:C2'	24:B2:31:GLU:H	2.33	0.41
22:B0:2154:A:H4'	22:B0:2155:U:C4'	2.50	0.41
22:B0:2263:C:H4'	45:BU:9:THR:CG2	2.50	0.41
22:B0:2302:U:H2'	22:B0:2303:G:C8	2.55	0.41
22:B0:2564:A:H2'	22:B0:2564:A:N3	2.35	0.41
25:B3:21:GLU:HB2	25:B5:119:VAL:O	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
26:BA:213:ARG:HG2	26:BA:213:ARG:NH1	2.35	0.41
28:BC:30:GLN:CB	35:BJ:18:ARG:HH21	2.30	0.41
28:BC:31:VAL:N	35:BJ:17:LYS:CA	2.83	0.41
28:BC:42:GLY:HA2	28:BC:91:ASP:OD1	2.21	0.41
29:BD:13:LYS:HD2	29:BD:13:LYS:N	2.35	0.41
30:BE:77:GLY:HA3	30:BE:82:PHE:CE1	2.55	0.41
31:BF:7:ASP:HB2	31:BF:35:LYS:HG3	2.02	0.41
31:BF:30:LEU:HD12	31:BF:30:LEU:N	2.31	0.41
32:BG:116:MET:CE	32:BG:117:THR:H	2.34	0.41
33:BH:96:ARG:HB3	33:BH:97:PRO:C	2.41	0.41
34:BI:63:VAL:HG23	34:BI:64:ARG:N	2.35	0.41
37:BL:24:MET:C	37:BL:28:LEU:HD21	2.40	0.41
41:BQ:62:ASP:O	41:BQ:63:GLY:C	2.59	0.41
42:BR:31:VAL:O	42:BR:32:LEU:HB2	2.20	0.41
1:AA:177:G:H5”	21:AT:59:ARG:NH2	2.32	0.41
1:AA:935:A:H2’	1:AA:936:C:C6	2.55	0.41
1:AA:940:C:H2’	1:AA:941:G:C8	2.55	0.41
1:AA:1406:U:O4	1:AA:1495:U:O2	2.39	0.41
1:AA:1502:A:C2	1:AA:1505:G:OP2	2.73	0.41
2:AU:63:C:H2’	2:AU:64:A:H8	1.85	0.41
3:AB:56:LEU:CD2	3:AB:216:VAL:HG23	2.50	0.41
3:AB:163:ILE:HD12	3:AB:164:ASP:CB	2.51	0.41
3:AB:216:VAL:HG13	3:AB:217:ALA:N	2.36	0.41
4:AC:24:ASN:ND2	4:AC:27:GLU:C	2.74	0.41
5:AD:102:TYR:CE1	5:AD:109:THR:HA	2.55	0.41
7:AF:15:SER:O	7:AF:18:VAL:HG23	2.20	0.41
8:AG:41:ILE:N	8:AG:41:ILE:HD12	2.36	0.41
11:AJ:9:ARG:HA	11:AJ:72:ARG:O	2.21	0.41
12:AK:18:GLY:HA3	12:AK:34:THR:O	2.20	0.41
13:AL:30:ARG:HG3	13:AL:57:THR:HG23	2.02	0.41
18:AQ:20:ILE:HD12	18:AQ:20:ILE:N	2.35	0.41
21:AT:68:LYS:H	21:AT:68:LYS:CD	2.08	0.41
22:B0:236:C:H2’	22:B0:237:C:C6	2.56	0.41
22:B0:527:C:H4’	22:B0:528:A:O4’	2.20	0.41
22:B0:546:U:C5	22:B0:1220:G:H4’	2.56	0.41
22:B0:588:U:C2	28:BC:86:ALA:HB3	2.56	0.41
22:B0:1112:G:H2’	22:B0:1113:U:H6	1.84	0.41
22:B0:1272:A:H2’	22:B0:1273:U:OP2	2.20	0.41
22:B0:1383:A:OP1	22:B0:1573:G:H1’	2.20	0.41
22:B0:1389:G:H5’	22:B0:1524:C:O2’	2.20	0.41
22:B0:1410:G:H2’	22:B0:1411:U:H5	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1424:G:P	26:BA:59:GLN:H	2.43	0.41
22:B0:1494:A:O2'	26:BA:163:ILE:HD11	2.20	0.41
22:B0:1576:U:O2'	22:B0:1577:C:H5'	2.21	0.41
22:B0:1592:U:N3	22:B0:1593:G:N2	2.68	0.41
22:B0:1667:G:N2	22:B0:1994:C:H42	2.17	0.41
22:B0:2077:A:N3	22:B0:2434:A:O2'	2.54	0.41
22:B0:2128:G:H4'	22:B0:2165:C:C3'	2.49	0.41
22:B0:2180:U:H2'	22:B0:2181:U:C5	2.56	0.41
22:B0:2262:U:H5"	45:BU:13:ARG:NH1	2.35	0.41
22:B0:2392:A:H2'	22:B0:2393:U:H6	1.85	0.41
22:B0:2562:U:H2'	22:B0:2563:U:O4'	2.21	0.41
22:B0:2677:G:H3'	27:BB:125:TRP:CB	2.46	0.41
22:B0:2725:A:OP1	27:BB:141:ARG:CD	2.68	0.41
22:B0:2779:U:C2	33:BH:112:GLY:CA	3.04	0.41
22:B0:2789:C:O2'	22:B0:2892:G:C2'	2.60	0.41
25:B3:41:ALA:C	25:B3:44:PRO:HD2	2.41	0.41
25:B3:43:GLY:N	25:B3:44:PRO:CD	2.84	0.41
25:B5:26:MET:O	25:B5:35:ALA:HB2	2.20	0.41
25:B5:94:LEU:HD13	25:B5:94:LEU:C	2.40	0.41
26:BA:143:VAL:CB	26:BA:189:ALA:CB	2.98	0.41
27:BB:13:ARG:O	27:BB:14:ILE:HD13	2.21	0.41
31:BF:72:ILE:C	31:BF:74:ALA:H	2.23	0.41
32:BG:107:GLU:C	32:BG:109:ALA:H	2.24	0.41
33:BH:3:THR:HG23	33:BH:3:THR:O	2.20	0.41
34:BI:43:ILE:HD12	34:BI:53:LYS:HG3	2.02	0.41
34:BI:78:ARG:HB2	34:BI:78:ARG:NH1	2.34	0.41
35:BJ:105:ILE:HG23	35:BJ:106:GLU:H	1.85	0.41
36:BK:78:LEU:CG	36:BK:79:ALA:N	2.79	0.41
36:BK:126:ILE:HD13	36:BK:126:ILE:C	2.41	0.41
40:BO:18:LYS:O	40:BO:18:LYS:CG	2.68	0.41
40:BO:79:ILE:HG12	40:BO:79:ILE:O	2.21	0.41
41:BQ:99:ARG:HH11	41:BQ:99:ARG:HG3	1.85	0.41
44:BT:20:LEU:HB3	44:BT:25:LYS:HB2	2.03	0.41
49:B1:8:ILE:O	49:B1:8:ILE:HG23	2.21	0.41
1:AA:156:C:H2'	1:AA:157:U:H6	1.85	0.41
1:AA:511:C:H4'	5:AD:40:HIS:CE1	2.56	0.41
1:AA:792:A:H2'	1:AA:794:A:N7	2.36	0.41
1:AA:971:G:OP1	1:AA:972:C:OP1	2.38	0.41
1:AA:1064:G:H5"	1:AA:1065:U:OP1	2.20	0.41
1:AA:1318:A:C2'	20:AS:8:PRO:HD2	2.30	0.41
2:AW:66:A:H2'	2:AW:67:A:H8	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
3:AB:206:ILE:O	3:AB:210:THR:HG23	2.21	0.41
4:AC:108:PRO:HB3	4:AC:114:LEU:CD1	2.51	0.41
4:AC:113:LYS:HA	4:AC:184:ASN:HB2	2.03	0.41
5:AD:90:LEU:O	5:AD:94:GLU:HB2	2.21	0.41
6:AE:140:ILE:HG13	6:AE:141:ASP:N	2.36	0.41
14:AM:68:LEU:HD23	14:AM:68:LEU:C	2.41	0.41
19:AR:62:ARG:HD2	19:AR:69:TYR:HA	2.02	0.41
20:AS:15:LEU:C	20:AS:18:VAL:HG12	2.40	0.41
20:AS:27:LYS:HG2	20:AS:28:LYS:N	2.36	0.41
22:B0:44:A:O2'	22:B0:45:G:H5'	2.21	0.41
22:B0:222:A:N6	22:B0:232:G:HO2'	2.19	0.41
22:B0:655:A:H5"	22:B0:656:G:OP1	2.21	0.41
22:B0:1021:A:H8	22:B0:1022:G:H5"	1.86	0.41
22:B0:1032:A:C2	22:B0:1122:G:O6	2.74	0.41
22:B0:1083:U:H3'	25:B3:85:ASP:N	2.36	0.41
22:B0:1085:A:N7	25:B3:88:GLU:CG	2.84	0.41
22:B0:1198:U:H2'	22:B0:1199:U:H6	1.85	0.41
22:B0:1300:G:H4'	22:B0:1301:A:C5'	2.50	0.41
22:B0:1310:G:O2'	22:B0:1311:G:H5'	2.20	0.41
22:B0:1926:U:O2'	22:B0:1927:A:H8	2.03	0.41
22:B0:2126:A:OP2	22:B0:2172:U:C4	2.74	0.41
22:B0:2174:C:C5	24:B2:39:GLU:OE2	2.73	0.41
22:B0:2185:U:H2'	22:B0:2186:G:H8	1.86	0.41
22:B0:2227:A:H2'	22:B0:2228:G:C8	2.55	0.41
22:B0:2250:G:N3	22:B0:2250:G:O4'	2.53	0.41
22:B0:2262:U:H2'	45:BU:10:ARG:C	2.41	0.41
22:B0:2547:A:C5	22:B0:2566:A:N3	2.89	0.41
22:B0:2555:U:H5"	22:B0:2556:C:OP2	2.20	0.41
22:B0:2624:G:C2'	22:B0:2625:G:O5'	2.69	0.41
22:B0:2639:A:H5'	27:BB:46:ARG:HH11	1.86	0.41
22:B0:2646:C:N4	22:B0:2675:A:H2	2.18	0.41
24:B2:14:VAL:CG1	24:B2:28:LEU:HD21	2.49	0.41
25:B3:28:GLU:CB	25:B5:104:GLU:HG3	2.49	0.41
25:B3:73:ARG:HB3	25:B3:73:ARG:NH1	2.35	0.41
26:BA:68:ARG:NH2	26:BA:70:LYS:H	2.19	0.41
26:BA:129:LEU:HG	26:BA:134:ILE:HD11	2.03	0.41
26:BA:143:VAL:CG1	26:BA:189:ALA:CB	2.89	0.41
26:BA:165:ALA:O	26:BA:171:VAL:HG23	2.20	0.41
32:BG:109:ALA:CA	32:BG:112:LYS:HE3	2.35	0.41
33:BH:51:GLY:HA3	33:BH:121:LYS:HD2	2.03	0.41
35:BJ:8:PRO:O	35:BJ:10:GLU:N	2.53	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
35:BJ:56:PRO:HG2	35:BJ:60:ARG:HA	2.03	0.41
37:BL:18:GLN:O	37:BL:21:PHE:HB2	2.20	0.41
37:BL:49:GLU:N	37:BL:50:PRO:C	2.74	0.41
38:BM:51:ALA:HB3	38:BM:78:VAL:HG22	2.02	0.41
39:BN:28:LYS:HE2	39:BN:86:LYS:HB3	2.02	0.41
40:BO:50:ARG:HD2	40:BO:54:ARG:NH1	2.35	0.41
41:BQ:41:LYS:C	41:BQ:43:ALA:N	2.73	0.41
42:BR:73:ARG:HH11	42:BR:74:ILE:N	2.17	0.41
43:BS:25:LYS:HB2	43:BS:25:LYS:HZ3	1.85	0.41
47:BX:23:LEU:HD21	47:BX:50:VAL:HB	2.03	0.41
48:BZ:36:LYS:CA	48:BZ:42:ILE:HD11	2.43	0.41
1:AA:398:U:H2'	1:AA:399:G:H8	1.84	0.41
1:AA:416:G:H2'	1:AA:417:G:C8	2.56	0.41
1:AA:715:A:H2'	1:AA:716:A:H8	1.85	0.41
1:AA:815:A:O4'	1:AA:817:C:N4	2.54	0.41
1:AA:987:G:H2'	1:AA:988:G:C8	2.55	0.41
1:AA:1037:C:H2'	1:AA:1038:C:O4'	2.21	0.41
1:AA:1199:U:O2'	1:AA:1202:U:OP1	2.38	0.41
3:AB:191:ASP:OD1	3:AB:193:ASP:HB2	2.21	0.41
6:AE:59:ILE:HG22	6:AE:63:MET:HE2	2.02	0.41
6:AE:92:ARG:HD2	6:AE:127:TYR:HB2	2.03	0.41
12:AK:26:PHE:HE1	12:AK:88:PRO:HG2	1.86	0.41
14:AM:97:ARG:HB3	14:AM:98:GLY:CA	2.51	0.41
16:AO:28:VAL:HG21	16:AO:66:LEU:HD21	2.02	0.41
17:AP:12:LYS:H	17:AP:12:LYS:CD	2.33	0.41
17:AP:18:GLN:OE1	17:AP:35:ARG:HB3	2.20	0.41
19:AR:25:ILE:HG13	19:AR:67:LEU:HD21	2.03	0.41
22:B0:311:A:C6	22:B0:330:A:OP2	2.74	0.41
22:B0:323:C:C4	28:BC:163:ASN:O	2.74	0.41
22:B0:633:A:H2'	22:B0:634:C:H5'	2.02	0.41
22:B0:668:A:H2'	22:B0:670:A:H62	1.81	0.41
22:B0:817:C:H2'	22:B0:818:G:O4'	2.21	0.41
22:B0:856:G:O2'	45:BU:54:ARG:HD2	2.21	0.41
22:B0:1201:U:C5	35:BJ:14:LYS:HE2	2.56	0.41
22:B0:1202:G:O4'	35:BJ:14:LYS:CG	2.69	0.41
22:B0:1417:U:H4'	22:B0:1588:A:H4'	2.03	0.41
22:B0:1500:A:C5'	26:BA:59:GLN:HB3	2.48	0.41
22:B0:1570:A:C6	22:B0:1571:A:C6	3.09	0.41
22:B0:1670:C:H1'	22:B0:1994:C:C4'	2.48	0.41
22:B0:1690:A:H2'	22:B0:1691:C:O4'	2.20	0.41
22:B0:1795:C:H5'	22:B0:1900:A:H61	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1814:G:C2	22:B0:1815:A:N7	2.89	0.41
22:B0:2123:G:H4'	22:B0:2124:G:O5'	2.17	0.41
22:B0:2126:A:H2'	22:B0:2167:U:O5'	2.19	0.41
22:B0:2167:U:C4	22:B0:2170:A:N7	2.89	0.41
22:B0:2238:G:H1'	22:B0:2240:U:C5	2.56	0.41
22:B0:2353:G:H2'	22:B0:2354:C:C6	2.55	0.41
22:B0:2537:U:H2'	22:B0:2538:C:H6	1.84	0.41
22:B0:2553:G:H3'	22:B0:2554:U:C5'	2.50	0.41
22:B0:2557:G:H2'	22:B0:2558:C:H6	1.85	0.41
22:B0:2567:G:H2'	22:B0:2568:U:C6	2.56	0.41
22:B0:2849:U:O2'	22:B0:2850:A:P	2.78	0.41
22:B0:2900:C:H2'	22:B0:2901:C:C6	2.56	0.41
24:B2:76:VAL:CG1	24:B2:94:VAL:HG22	2.51	0.41
25:B5:4:LYS:HE3	25:B5:4:LYS:CA	2.43	0.41
25:B5:90:ALA:N	25:B5:91:PRO:CD	2.84	0.41
26:BA:138:SER:O	26:BA:162:GLN:HA	2.21	0.41
28:BC:14:VAL:CG1	28:BC:15:SER:H	2.31	0.41
28:BC:154:ASP:HB2	28:BC:192:ALA:HB2	2.02	0.41
32:BG:100:ILE:HD12	32:BG:137:LEU:HD21	2.01	0.41
32:BG:126:ARG:O	32:BG:127:SER:CB	2.68	0.41
33:BH:30:THR:HB	33:BH:31:GLU:OE1	2.21	0.41
33:BH:72:LYS:NZ	33:BH:73:VAL:N	2.63	0.41
36:BK:89:VAL:HG23	36:BK:90:GLU:N	2.35	0.41
37:BL:49:GLU:H	37:BL:50:PRO:C	2.24	0.41
38:BM:26:LEU:HD23	38:BM:92:PHE:HD1	1.86	0.41
38:BM:115:LEU:HD22	38:BM:115:LEU:N	2.36	0.41
39:BN:72:VAL:O	39:BN:73:PHE:CG	2.74	0.41
40:BO:13:HIS:O	40:BO:17:LEU:HG	2.21	0.41
40:BO:63:ARG:HE	40:BO:99:VAL:HB	1.84	0.41
41:BQ:88:ARG:O	41:BQ:89:ALA:HB3	2.20	0.41
45:BU:71:LYS:H	45:BU:71:LYS:HD2	1.85	0.41
47:BX:6:ILE:HG13	47:BX:56:VAL:CG1	2.44	0.41
1:AA:47:C:HO2'	1:AA:49:U:H5	1.65	0.41
1:AA:61:G:H2'	1:AA:62:U:O4'	2.20	0.41
1:AA:476:U:H2'	1:AA:477:C:C6	2.56	0.41
1:AA:485:U:C2'	1:AA:486:U:OP2	2.69	0.41
1:AA:636:U:H2'	1:AA:637:C:C6	2.55	0.41
1:AA:711:G:O2'	1:AA:712:A:H5'	2.20	0.41
1:AA:752:G:HO2'	1:AA:754:C:H5	1.62	0.41
1:AA:779:C:H2'	1:AA:780:A:O4'	2.21	0.41
1:AA:801:U:H2'	1:AA:802:A:C8	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:836:G:C6	1:AA:851:G:C6	3.09	0.41
1:AA:891:U:H2'	1:AA:892:A:H8	1.86	0.41
1:AA:935:A:H2'	1:AA:936:C:H6	1.86	0.41
1:AA:1029:U:C2'	1:AA:1030:U:H5	2.29	0.41
1:AA:1189:U:C2'	1:AA:1190:G:H5'	2.50	0.41
1:AA:1347:G:H5"	10:AI:108:ARG:HD2	2.02	0.41
1:AA:1373:G:H5'	8:AG:33:GLY:HA3	2.03	0.41
1:AA:1464:U:H2'	1:AA:1465:A:H8	1.85	0.41
1:AA:1499:A:N3	1:AA:1519:A:C2	2.88	0.41
2:AU:75:C:N4	22:B0:1944:U:O4	2.54	0.41
2:AV:20:G:H2'	2:AV:21:A:H5"	2.02	0.41
2:AW:55:U:O2	2:AW:57:G:C8	2.74	0.41
3:AB:34:ARG:O	3:AB:35:ASN:HB2	2.20	0.41
3:AB:38:HIS:O	3:AB:39:ILE:HB	2.21	0.41
3:AB:55:GLU:HG2	3:AB:197:PHE:CE2	2.56	0.41
3:AB:104:LYS:C	3:AB:104:LYS:HD3	2.41	0.41
4:AC:59:PRO:HD2	4:AC:62:SER:O	2.21	0.41
5:AD:60:VAL:HG22	5:AD:194:ILE:HD13	2.03	0.41
6:AE:24:VAL:HG22	6:AE:25:LYS:N	2.36	0.41
6:AE:45:VAL:HG12	6:AE:46:GLY:N	2.36	0.41
8:AG:148:LYS:NZ	12:AK:55:ARG:HH22	2.17	0.41
9:AH:20:ASN:HA	9:AH:64:TYR:CZ	2.56	0.41
9:AH:28:SER:HB2	9:AH:56:PRO:HB2	2.02	0.41
9:AH:46:GLU:HB3	9:AH:61:THR:CG2	2.45	0.41
11:AJ:48:ARG:NE	11:AJ:66:GLU:OE1	2.54	0.41
11:AJ:66:GLU:CD	11:AJ:68:ARG:HE	2.23	0.41
19:AR:61:ALA:HB3	19:AR:67:LEU:HD12	2.03	0.41
20:AS:14:LEU:HD21	20:AS:37:SER:HB3	2.02	0.41
21:AT:38:ILE:HG13	21:AT:82:ILE:CG2	2.48	0.41
22:B0:24:G:H2'	22:B0:25:U:H6	1.85	0.41
22:B0:124:G:H2'	22:B0:125:A:H5"	2.02	0.41
22:B0:151:C:H5'	22:B0:1360:G:OP1	2.20	0.41
22:B0:152:A:H2'	22:B0:153:U:C6	2.56	0.41
22:B0:179:C:H2'	22:B0:180:G:C8	2.56	0.41
22:B0:204:A:HO2'	22:B0:205:G:C1'	2.33	0.41
22:B0:224:U:O4	22:B0:420:C:H5'	2.21	0.41
22:B0:228:C:H2'	22:B0:229:C:O5'	2.19	0.41
22:B0:233:A:N6	22:B0:428:A:H61	2.19	0.41
22:B0:323:C:H42	28:BC:165:HIS:N	2.18	0.41
22:B0:490:C:N4	22:B0:492:A:N6	2.69	0.41
22:B0:506:G:H5"	22:B0:509:C:H1'	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:523:C:C5’	22:B0:553:G:H21	2.33	0.41
22:B0:529:A:H4’	22:B0:530:G:H5’	2.01	0.41
22:B0:530:G:N2	22:B0:2021:C:O2’	2.54	0.41
22:B0:608:A:N6	22:B0:609:A:N6	2.68	0.41
22:B0:673:C:H2’	22:B0:674:G:O4’	2.20	0.41
22:B0:690:G:H2’	22:B0:691:C:C6	2.56	0.41
22:B0:774:G:O2’	22:B0:775:G:H8	2.04	0.41
22:B0:809:G:O2’	22:B0:810:U:P	2.78	0.41
22:B0:813:U:H2’	22:B0:814:C:C6	2.56	0.41
22:B0:853:C:H6	22:B0:853:C:O5’	2.04	0.41
22:B0:917:A:H2	23:B9:80:U:HO2’	1.69	0.41
22:B0:918:A:N6	22:B0:2268:A:H62	2.12	0.41
22:B0:989:G:H4’	22:B0:990:A:OP1	2.21	0.41
22:B0:1042:G:H2’	22:B0:1043:C:H6	1.85	0.41
22:B0:1125:G:N1	22:B0:1126:A:N6	2.69	0.41
22:B0:1202:G:O4’	35:BJ:14:LYS:CD	2.68	0.41
22:B0:1250:G:H5”	40:BO:5:ARG:NH1	2.36	0.41
22:B0:1387:A:H2’	22:B0:1388:G:C8	2.56	0.41
22:B0:1410:G:C2	22:B0:1411:U:O4	2.74	0.41
22:B0:1423:A:H5”	26:BA:56:GLY:C	2.37	0.41
22:B0:1436:G:H2’	22:B0:1437:C:O4’	2.20	0.41
22:B0:1454:A:N7	22:B0:1455:U:H1’	2.36	0.41
22:B0:1458:C:H2’	22:B0:1459:U:C5’	2.50	0.41
22:B0:1491:A:C5	26:BA:173:LEU:HA	2.55	0.41
22:B0:1580:A:N6	22:B0:1581:A:N1	2.69	0.41
22:B0:1668:A:N6	22:B0:1674:G:N3	2.68	0.41
22:B0:1779:U:H3’	22:B0:1779:U:C6	2.56	0.41
22:B0:1814:G:H22	22:B0:1815:A:H62	1.69	0.41
22:B0:1844:C:O5’	22:B0:1844:C:H6	2.03	0.41
22:B0:1947:C:H2’	22:B0:1948:G:O4’	2.21	0.41
22:B0:1996:C:H5	27:BB:137:SER:HA	1.85	0.41
22:B0:2004:G:C5	22:B0:2005:A:C8	3.09	0.41
22:B0:2072:C:N3	22:B0:2437:G:C2	2.89	0.41
22:B0:2108:A:C6	22:B0:2110:G:H8	2.39	0.41
22:B0:2127:G:H2’	22:B0:2166:U:P	2.61	0.41
22:B0:2198:A:O2’	22:B0:2199:A:H5’	2.21	0.41
22:B0:2236:U:H2’	22:B0:2237:G:O4’	2.20	0.41
22:B0:2276:G:H2’	22:B0:2277:G:C8	2.56	0.41
22:B0:2358:A:HO2’	22:B0:2359:C:P	2.44	0.41
22:B0:2542:A:H4’	22:B0:2543:G:H8	1.86	0.41
22:B0:2578:G:O2’	22:B0:2579:C:H5’	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2584:U:HO2'	22:B0:2585:U:H5	1.66	0.41
22:B0:2688:G:H3'	22:B0:2688:G:H8	1.86	0.41
22:B0:2734:A:O2'	22:B0:2735:G:H5'	2.21	0.41
22:B0:2773:C:OP1	27:BB:168:GLU:HA	2.20	0.41
22:B0:2849:U:H1'	22:B0:2868:A:C4	2.56	0.41
22:B0:2888:C:H2'	22:B0:2889:C:C6	2.56	0.41
22:B0:2891:A:N6	22:B0:2892:G:C2	2.89	0.41
22:B0:2894:U:O4	33:BH:8:PRO:CD	2.69	0.41
22:B0:2898:G:C4'	33:BH:15:TRP:CE3	3.04	0.41
24:B2:78:THR:HB	24:B2:82:ASN:HB2	2.03	0.41
25:B3:58:LEU:HD23	25:B3:87:VAL:O	2.20	0.41
25:B3:90:ALA:H	25:B3:91:PRO:HD2	1.85	0.41
25:B5:23:ILE:CG2	25:B5:39:ALA:HA	2.51	0.41
26:BA:77:VAL:HG12	26:BA:78:GLU:N	2.36	0.41
26:BA:129:LEU:HB3	26:BA:130:PRO:CD	2.50	0.41
26:BA:241:LYS:HE2	26:BA:255:LYS:HZ1	1.86	0.41
27:BB:1:MET:H1	27:BB:87:GLY:H	1.68	0.41
27:BB:130:GLN:OE1	27:BB:140:HIS:O	2.38	0.41
28:BC:33:VAL:CG2	28:BC:34:ALA:N	2.83	0.41
28:BC:46:GLN:O	28:BC:48:THR:N	2.53	0.41
28:BC:124:PHE:H	28:BC:124:PHE:HD1	1.68	0.41
28:BC:183:PHE:O	28:BC:183:PHE:CG	2.70	0.41
29:BD:105:ILE:CD1	29:BD:138:PRO:HG3	2.47	0.41
30:BE:57:TYR:CD1	30:BE:57:TYR:N	2.89	0.41
32:BG:21:PRO:HA	32:BG:22:PRO:HA	1.90	0.41
32:BG:57:VAL:CG1	32:BG:69:VAL:HB	2.51	0.41
33:BH:8:PRO:CG	33:BH:9:GLU:N	2.74	0.41
33:BH:13:ARG:HG2	33:BH:13:ARG:NH1	2.35	0.41
35:BJ:18:ARG:O	35:BJ:20:GLY:N	2.54	0.41
35:BJ:135:ILE:HG13	35:BJ:142:ILE:HD11	2.01	0.41
36:BK:10:ARG:HG2	36:BK:10:ARG:HH11	1.86	0.41
37:BL:51:LEU:HD13	37:BL:51:LEU:HA	1.94	0.41
37:BL:72:ASP:OD2	37:BL:75:ILE:HD11	2.21	0.41
37:BL:103:ARG:HG2	37:BL:103:ARG:NH1	2.35	0.41
39:BN:3:ILE:N	39:BN:3:ILE:CD1	2.79	0.41
39:BN:47:ILE:HG21	39:BN:61:ARG:CZ	2.51	0.41
40:BO:13:HIS:CG	40:BO:14:LYS:N	2.88	0.41
40:BO:14:LYS:NZ	40:BO:14:LYS:N	2.55	0.41
40:BO:27:ARG:H	40:BO:33:VAL:HG21	1.86	0.41
40:BO:44:TYR:CD1	40:BO:44:TYR:C	2.94	0.41
40:BO:94:LEU:HD22	40:BO:97:ILE:HG12	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
40:BO:103:VAL:O	40:BO:104:ALA:HB3	2.21	0.41
41:BQ:49:LYS:NZ	41:BQ:49:LYS:CA	2.83	0.41
41:BQ:55:ILE:HD12	41:BQ:56:ALA:N	2.36	0.41
42:BR:19:LYS:HB3	42:BR:19:LYS:HE3	1.86	0.41
42:BR:24:MET:CG	42:BR:30:ILE:HA	2.51	0.41
43:BS:25:LYS:CB	43:BS:34:ILE:HD12	2.51	0.41
1:AA:98:A:O2'	1:AA:99:C:H5'	2.21	0.41
1:AA:535:A:H4'	1:AA:536:C:OP1	2.21	0.41
1:AA:557:G:H8	1:AA:557:G:O5'	2.04	0.41
1:AA:719:C:H5'	12:AK:116:PRO:O	2.21	0.41
1:AA:1348:U:O3'	10:AI:119:LYS:CG	2.69	0.41
3:AB:63:LYS:O	3:AB:63:LYS:HG2	2.20	0.41
4:AC:186:SER:OG	4:AC:197:VAL:HB	2.21	0.41
7:AF:11:HIS:CE1	7:AF:13:ASP:HB2	2.56	0.41
11:AJ:7:ARG:C	11:AJ:8:ILE:HD12	2.41	0.41
17:AP:4:ILE:HD12	17:AP:4:ILE:H	1.84	0.41
17:AP:8:ARG:HH11	17:AP:8:ARG:HG3	1.85	0.41
21:AT:8:LYS:HB2	21:AT:8:LYS:HZ3	1.85	0.41
22:B0:24:G:H2'	22:B0:25:U:C6	2.55	0.41
22:B0:439:A:H2'	22:B0:440:C:C6	2.56	0.41
22:B0:691:C:O2'	22:B0:692:C:H5'	2.22	0.41
22:B0:731:C:H2'	22:B0:732:C:C6	2.56	0.41
22:B0:837:C:N3	22:B0:941:A:N6	2.69	0.41
22:B0:862:G:H2'	22:B0:863:A:O4'	2.21	0.41
22:B0:885:C:N3	22:B0:892:A:C6	2.88	0.41
22:B0:1084:A:O5'	25:B3:88:GLU:HB2	2.14	0.41
22:B0:1202:G:O4'	35:BJ:14:LYS:NZ	2.42	0.41
22:B0:1203:U:H3'	35:BJ:10:GLU:HB3	2.03	0.41
22:B0:1799:G:O4'	22:B0:1800:C:H5	2.04	0.41
22:B0:2136:G:C5	22:B0:2163:G:OP1	2.74	0.41
22:B0:2179:C:N3	22:B0:2180:U:H1'	2.35	0.41
22:B0:2404:U:H1'	35:BJ:69:ARG:NH2	2.36	0.41
24:B2:5:LYS:C	24:B2:7:MET:N	2.74	0.41
25:B3:32:VAL:O	25:B3:36:ALA:HB2	2.21	0.41
25:B3:87:VAL:C	25:B3:90:ALA:HA	2.41	0.41
25:B3:94:LEU:HD13	25:B3:94:LEU:C	2.41	0.41
25:B5:15:SER:O	25:B5:18:ASP:N	2.54	0.41
27:BB:58:ASN:HA	27:BB:61:THR:CG2	2.49	0.41
28:BC:79:ARG:HH11	28:BC:80:SER:CB	2.30	0.41
28:BC:118:LEU:CD1	28:BC:187:VAL:HA	2.51	0.41
29:BD:47:LYS:HG2	29:BD:48:LEU:N	2.33	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
30:BE:42:VAL:HG23	30:BE:42:VAL:O	2.21	0.41
30:BE:147:LEU:HD21	30:BE:166:GLU:OE1	2.21	0.41
32:BG:131:THR:O	32:BG:131:THR:HG22	2.21	0.41
33:BH:25:LEU:HD13	33:BH:25:LEU:N	2.20	0.41
33:BH:128:ASN:OD1	33:BH:130:HIS:CE1	2.74	0.41
37:BL:71:ARG:NH1	37:BL:71:ARG:CB	2.83	0.41
37:BL:112:TYR:N	37:BL:112:TYR:CD1	2.89	0.41
38:BM:15:ARG:NH1	38:BM:25:ARG:HH11	2.19	0.41
38:BM:31:THR:O	38:BM:33:ARG:N	2.54	0.41
40:BO:9:ALA:C	40:BO:11:ALA:N	2.74	0.41
40:BO:53:LYS:HA	40:BO:53:LYS:CE	2.44	0.41
44:BT:9:ARG:NH2	44:BT:12:GLN:HA	2.35	0.41
46:BW:17:GLU:O	46:BW:21:LEU:HG	2.21	0.41
48:BZ:52:LYS:O	48:BZ:53:VAL:CB	2.68	0.41
1:AA:84:U:H2'	1:AA:88:U:C6	2.56	0.40
1:AA:271:C:H2'	1:AA:272:C:C6	2.56	0.40
1:AA:384:G:H2'	1:AA:385:C:H6	1.86	0.40
1:AA:418:C:H2'	1:AA:419:C:C6	2.55	0.40
1:AA:615:G:O2'	1:AA:616:G:H5'	2.21	0.40
1:AA:982:U:H4'	1:AA:983:A:O5'	2.21	0.40
1:AA:1059:C:O2'	1:AA:1060:U:H5'	2.21	0.40
1:AA:1300:G:O2'	1:AA:1301:U:H6	2.04	0.40
1:AA:1394:A:N6	1:AA:1501:C:H5"	2.36	0.40
1:AA:1401:G:O2'	1:AA:1402:C:H5'	2.20	0.40
3:AB:44:LYS:O	3:AB:47:PRO:HD2	2.21	0.40
3:AB:213:LEU:HA	3:AB:216:VAL:HG12	2.03	0.40
4:AC:67:ILE:HG22	4:AC:101:ASN:O	2.20	0.40
6:AE:143:LEU:C	6:AE:146:MET:HG3	2.41	0.40
9:AH:5:PRO:HB3	9:AH:32:LYS:NZ	2.37	0.40
9:AH:44:PHE:HA	9:AH:70:VAL:CG1	2.51	0.40
10:AI:79:ARG:HD2	10:AI:102:PHE:CE1	2.56	0.40
10:AI:90:ASP:HB3	10:AI:93:LEU:HG	2.03	0.40
16:AO:72:LYS:HD3	16:AO:72:LYS:C	2.41	0.40
22:B0:19:A:H2'	22:B0:20:C:C6	2.56	0.40
22:B0:81:G:O2'	22:B0:82:U:H5'	2.21	0.40
22:B0:282:A:H2'	22:B0:283:G:C8	2.56	0.40
22:B0:295:G:O2'	22:B0:296:U:H5'	2.21	0.40
22:B0:307:G:N2	22:B0:309:A:H3'	2.36	0.40
22:B0:431:U:O2'	22:B0:432:A:H5'	2.21	0.40
22:B0:873:C:H42	22:B0:905:A:N6	2.19	0.40
22:B0:1141:U:O2'	22:B0:1142:A:P	2.79	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:1360:G:C6	22:B0:1371:G:O6	2.74	0.40
22:B0:1418:G:H1'	26:BA:99:GLU:HG3	2.02	0.40
22:B0:1487:G:P	26:BA:196:ASN:N	2.68	0.40
22:B0:1577:C:N3	22:B0:1578:U:C5	2.89	0.40
22:B0:1580:A:O2'	26:BA:68:ARG:HD2	2.21	0.40
22:B0:1580:A:OP2	26:BA:117:SER:CB	2.68	0.40
22:B0:1582:C:H41	22:B0:1583:G:N2	2.20	0.40
22:B0:2010:G:O2'	22:B0:2011:U:H5'	2.22	0.40
22:B0:2127:G:H5"	22:B0:2167:U:OP1	2.21	0.40
22:B0:2131:U:C2'	24:B2:31:GLU:N	2.84	0.40
22:B0:2199:A:H61	22:B0:2226:C:H41	1.69	0.40
22:B0:2304:G:OP1	22:B0:2304:G:C4'	2.69	0.40
22:B0:2678:C:H6	27:BB:125:TRP:N	2.18	0.40
22:B0:2718:G:O3'	39:BN:98:TYR:CZ	2.75	0.40
22:B0:2781:A:C5'	33:BH:116:ARG:CG	2.99	0.40
22:B0:2782:G:OP2	22:B0:2782:G:H8	2.03	0.40
25:B3:90:ALA:C	25:B5:40:VAL:HG23	2.42	0.40
26:BA:146:LYS:HB2	26:BA:146:LYS:HZ2	1.85	0.40
32:BG:106:GLN:HA	32:BG:109:ALA:HB3	2.03	0.40
35:BJ:78:ARG:HH11	35:BJ:78:ARG:CB	2.32	0.40
37:BL:110:MET:HE2	37:BL:111:ALA:O	2.21	0.40
38:BM:16:ARG:HG2	38:BM:16:ARG:NH1	2.37	0.40
39:BN:20:ARG:HA	39:BN:21:PRO:C	2.41	0.40
39:BN:59:THR:HG23	39:BN:76:HIS:CA	2.40	0.40
39:BN:97:TYR:CZ	39:BN:98:TYR:HB3	2.57	0.40
41:BQ:51:LEU:HA	41:BQ:54:ALA:HB3	2.02	0.40
41:BQ:78:GLU:CG	41:BQ:79:GLY:H	2.33	0.40
44:BT:24:ASN:C	44:BT:44:HIS:HB2	2.42	0.40
47:BX:16:LEU:HB2	47:BX:19:HIS:HD2	1.85	0.40
1:AA:91:U:H2'	1:AA:92:U:C6	2.56	0.40
1:AA:411:A:N6	1:AA:413:G:N2	2.53	0.40
1:AA:496:A:C4'	1:AA:497:G:OP1	2.69	0.40
1:AA:717:U:C4'	1:AA:718:A:OP1	2.69	0.40
1:AA:877:G:H5"	9:AH:79:ARG:NH1	2.37	0.40
1:AA:970:C:H5"	1:AA:972:C:O4'	2.20	0.40
1:AA:1226:C:O2'	1:AA:1227:A:P	2.78	0.40
1:AA:1486:G:H2'	1:AA:1487:G:O4'	2.21	0.40
2:AU:66:A:H2'	2:AU:67:A:H8	1.85	0.40
4:AC:166:TRP:O	4:AC:167:TYR:HB3	2.21	0.40
6:AE:82:HIS:CD2	9:AH:98:LEU:HD11	2.56	0.40
7:AF:85:ILE:HG23	7:AF:86:ARG:N	2.36	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
8:AG:90:VAL:HG12	8:AG:91:ARG:N	2.36	0.40
8:AG:114:SER:HB3	8:AG:117:LEU:HB3	2.04	0.40
9:AH:78:SER:HB2	9:AH:84:ILE:HG12	2.04	0.40
14:AM:32:ILE:CG2	14:AM:33:LEU:N	2.84	0.40
15:AN:42:ASN:HB3	20:AS:20:LYS:NZ	2.36	0.40
15:AN:63:CYS:HB3	15:AN:67:GLY:N	2.33	0.40
18:AQ:83:LEU:HD13	18:AQ:83:LEU:C	2.42	0.40
20:AS:9:PHE:HE1	20:AS:11:ASP:OD1	2.04	0.40
21:AT:17:ARG:HG2	21:AT:17:ARG:NH1	2.36	0.40
22:B0:70:G:C1’	22:B0:73:A:H1’	2.51	0.40
22:B0:124:G:N2	22:B0:126:A:H5’	2.25	0.40
22:B0:307:G:H21	22:B0:330:A:H62	1.67	0.40
22:B0:583:G:OP1	40:BO:10:ARG:HG2	2.22	0.40
22:B0:589:U:C3’	28:BC:88:ARG:N	2.79	0.40
22:B0:605:G:O2’	22:B0:657:U:O2’	2.39	0.40
22:B0:734:A:OP2	22:B0:761:A:N1	2.54	0.40
22:B0:960:A:C2	22:B0:2496:C:H1’	2.56	0.40
22:B0:1082:U:C5’	25:B3:82:GLU:N	2.34	0.40
22:B0:1276:A:H2’	22:B0:1277:G:C8	2.57	0.40
22:B0:1410:G:N2	22:B0:1591:A:N6	2.64	0.40
22:B0:1486:G:O3’	26:BA:196:ASN:N	2.53	0.40
22:B0:1488:G:H5’	26:BA:198:GLU:HG3	2.03	0.40
22:B0:1499:U:N3	26:BA:155:ARG:HB3	2.37	0.40
22:B0:1772:A:H2’	22:B0:1773:A:H4’	2.03	0.40
22:B0:1940:U:O2’	22:B0:1941:C:O5’	2.38	0.40
22:B0:2138:G:O5’	22:B0:2139:U:O5’	2.38	0.40
22:B0:2194:U:H2’	22:B0:2195:U:C6	2.57	0.40
22:B0:2246:G:N1	22:B0:2426:A:H1’	2.36	0.40
22:B0:2320:U:O2	22:B0:2320:U:C2’	2.57	0.40
22:B0:2619:C:H2’	22:B0:2620:C:C6	2.56	0.40
22:B0:2643:G:OP1	27:BB:157:LYS:HB3	2.22	0.40
22:B0:2776:A:C6	22:B0:2778:A:C6	3.09	0.40
22:B0:2835:A:C5’	22:B0:2836:U:OP1	2.59	0.40
22:B0:2852:G:H2’	22:B0:2853:C:C6	2.57	0.40
24:B2:62:THR:HG21	24:B2:191:LEU:HD23	2.02	0.40
24:B2:155:ALA:O	24:B2:156:LYS:HB2	2.22	0.40
25:B3:43:GLY:C	25:B3:45:VAL:H	2.24	0.40
25:B5:19:VAL:CG1	25:B5:20:VAL:N	2.84	0.40
26:BA:64:VAL:CG2	26:BA:149:LYS:O	2.69	0.40
26:BA:188:ARG:CG	26:BA:188:ARG:NH1	2.83	0.40
28:BC:151:GLY:O	28:BC:152:GLU:HG3	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
29:BD:70:ARG:HG3	29:BD:70:ARG:O	2.20	0.40
29:BD:109:ARG:HA	29:BD:109:ARG:HE	1.79	0.40
32:BG:9:LYS:CD	32:BG:58:ILE:HD12	2.52	0.40
32:BG:112:LYS:HZ1	32:BG:116:MET:HG3	1.85	0.40
37:BL:28:LEU:CA	37:BL:34:ILE:HD11	2.49	0.40
38:BM:15:ARG:CG	38:BM:18:LEU:HD13	2.51	0.40
39:BN:2:ASN:H	39:BN:5:LYS:HE2	1.86	0.40
39:BN:25:VAL:HG22	39:BN:88:ARG:NE	2.36	0.40
39:BN:94:ALA:HB3	39:BN:99:LEU:CD1	2.51	0.40
39:BN:102:ARG:HH21	39:BN:111:GLU:HB2	1.86	0.40
40:BO:41:ALA:C	40:BO:43:GLN:H	2.23	0.40
42:BR:61:LEU:O	42:BR:81:LYS:HB3	2.20	0.40
45:BU:47:GLY:O	45:BU:54:ARG:HB3	2.21	0.40
46:BW:14:LEU:HD22	46:BW:53:VAL:HG23	2.04	0.40
47:BX:20:LYS:HD3	47:BX:20:LYS:C	2.42	0.40
1:AA:250:A:O2'	1:AA:251:G:OP2	2.39	0.40
1:AA:258:G:H2'	1:AA:259:G:H8	1.86	0.40
1:AA:346:G:N2	1:AA:347:G:N7	2.69	0.40
1:AA:482:A:OP2	1:AA:482:A:O4'	2.39	0.40
1:AA:901:A:H2'	1:AA:902:G:H5'	2.02	0.40
1:AA:1280:A:H4'	11:AJ:45:ARG:HD2	2.04	0.40
2:AU:35:A:H2'	2:AU:36:A:O4'	2.21	0.40
2:AU:66:A:H2'	2:AU:67:A:C8	2.57	0.40
5:AD:70:GLN:HG3	5:AD:71:PHE:N	2.37	0.40
6:AE:36:THR:HG21	6:AE:62:ALA:C	2.42	0.40
9:AH:84:ILE:O	9:AH:84:ILE:HG13	2.20	0.40
10:AI:103:VAL:HG12	10:AI:103:VAL:O	2.21	0.40
15:AN:50:LEU:HD12	15:AN:50:LEU:N	2.37	0.40
16:AO:10:ILE:HD12	16:AO:13:GLU:CD	2.41	0.40
16:AO:86:LEU:HG	16:AO:87:ARG:N	2.36	0.40
18:AQ:69:THR:HG23	18:AQ:70:LYS:HG3	2.03	0.40
19:AR:11:ARG:HG2	19:AR:44:THR:O	2.21	0.40
20:AS:6:LYS:HD2	20:AS:6:LYS:HA	1.88	0.40
20:AS:81:GLY:O	20:AS:83:ALA:N	2.54	0.40
22:B0:445:C:O2'	22:B0:446:G:H5'	2.22	0.40
22:B0:455:C:H5'	22:B0:456:C:OP2	2.21	0.40
22:B0:480:A:H4'	43:BS:51:LEU:HB2	2.04	0.40
22:B0:571:U:O4'	22:B0:2030:A:N6	2.55	0.40
22:B0:856:G:O3'	45:BU:53:GLY:O	2.40	0.40
22:B0:867:C:O5'	22:B0:867:C:H6	2.05	0.40
22:B0:892:A:C6	22:B0:893:C:C4	3.10	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:897:C:H2'	22:B0:898:C:C6	2.56	0.40
22:B0:1056:G:O5'	25:B3:66:VAL:HG11	2.21	0.40
22:B0:1181:U:H2'	22:B0:1182:G:H8	1.85	0.40
22:B0:1492:G:H5"	26:BA:183:VAL:HG21	2.04	0.40
22:B0:1578:U:H4'	26:BA:64:VAL:H	1.85	0.40
22:B0:1580:A:N6	22:B0:1581:A:C6	2.89	0.40
22:B0:1659:G:C6	22:B0:1660:G:C5	3.08	0.40
22:B0:1942:C:H6	22:B0:1942:C:O5'	2.04	0.40
22:B0:1978:A:H8	22:B0:1978:A:O5'	2.05	0.40
22:B0:2005:A:H2'	22:B0:2006:C:O2	2.21	0.40
22:B0:2154:A:C5'	22:B0:2155:U:OP1	2.69	0.40
22:B0:2169:A:C5'	22:B0:2170:A:OP2	2.56	0.40
22:B0:2296:U:H5"	22:B0:2297:A:OP1	2.21	0.40
22:B0:2590:A:O2'	22:B0:2591:C:H5'	2.22	0.40
22:B0:2623:G:N3	22:B0:2623:G:C2'	2.70	0.40
22:B0:2677:G:H22	22:B0:2731:G:H1'	1.86	0.40
22:B0:2679:A:H8	27:BB:123:LYS:O	2.04	0.40
22:B0:2711:A:H2'	22:B0:2714:G:C4'	2.45	0.40
22:B0:2714:G:H2'	22:B0:2715:C:C6	2.56	0.40
22:B0:2899:A:OP2	33:BH:139:VAL:CB	2.70	0.40
24:B2:89:ALA:CB	24:B2:152:VAL:HG11	2.49	0.40
24:B2:182:ASP:O	24:B2:186:GLU:HB2	2.20	0.40
25:B3:4:LYS:HE3	25:B3:4:LYS:CA	2.43	0.40
25:B5:105:ALA:O	25:B5:108:LYS:HB3	2.21	0.40
27:BB:37:VAL:HG22	27:BB:89:GLU:OE2	2.21	0.40
28:BC:17:THR:O	28:BC:18:THR:HB	2.21	0.40
28:BC:105:LEU:HD13	28:BC:105:LEU:C	2.41	0.40
28:BC:149:ILE:HD12	28:BC:149:ILE:N	2.36	0.40
28:BC:149:ILE:CG2	28:BC:185:LYS:HB3	2.52	0.40
29:BD:30:VAL:HG12	29:BD:31:GLU:N	2.37	0.40
29:BD:71:LYS:HZ2	29:BD:81:GLY:N	2.19	0.40
29:BD:90:LEU:N	29:BD:90:LEU:CD1	2.85	0.40
29:BD:110:ILE:N	29:BD:110:ILE:CD1	2.80	0.40
29:BD:129:MET:N	29:BD:129:MET:SD	2.94	0.40
33:BH:25:LEU:HD12	33:BH:64:VAL:HA	2.03	0.40
33:BH:69:ARG:NH1	33:BH:69:ARG:CB	2.84	0.40
33:BH:114:LEU:O	33:BH:114:LEU:CD2	2.70	0.40
35:BJ:41:ARG:O	35:BJ:42:SER:CB	2.69	0.40
36:BK:38:ARG:HA	36:BK:96:ILE:O	2.21	0.40
37:BL:51:LEU:HD21	37:BL:69:ARG:HG3	2.02	0.40
37:BL:80:PHE:C	37:BL:82:GLU:N	2.74	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
38:BM:15:ARG:CG	38:BM:18:LEU:HD22	2.42	0.40
40:BO:26:ALA:O	40:BO:27:ARG:C	2.60	0.40
40:BO:68:ALA:O	40:BO:69:ARG:C	2.57	0.40
42:BR:68:LYS:CA	42:BR:73:ARG:NH2	2.83	0.40
42:BR:72:GLN:HE21	42:BR:72:GLN:CA	2.31	0.40
45:BU:63:ASP:OD1	45:BU:64:GLY:N	2.49	0.40
1:AA:723:U:H5'	1:AA:724:G:OP2	2.21	0.40
1:AA:1315:U:H2'	1:AA:1316:G:O4'	2.22	0.40
1:AA:1329:A:OP1	14:AM:25:GLY:HA3	2.22	0.40
1:AA:1414:U:H2'	1:AA:1415:G:H8	1.87	0.40
1:AA:1438:G:H1	1:AA:1463:U:H3	1.69	0.40
1:AA:1443:C:C5'	1:AA:1446:A:H5'	2.33	0.40
2:AV:66:A:H2'	2:AV:67:A:C8	2.57	0.40
3:AB:140:LEU:O	3:AB:144:GLU:HG3	2.20	0.40
3:AB:186:VAL:HG21	3:AB:190:SER:CB	2.50	0.40
4:AC:112:ALA:C	4:AC:184:ASN:HB3	2.42	0.40
5:AD:2:ARG:HH11	5:AD:2:ARG:HG2	1.86	0.40
6:AE:10:LEU:CD1	6:AE:38:VAL:HB	2.47	0.40
6:AE:32:PHE:CD2	6:AE:55:VAL:HG22	2.57	0.40
6:AE:65:LYS:HE2	6:AE:65:LYS:CA	2.43	0.40
9:AH:6:ILE:N	9:AH:6:ILE:CD1	2.84	0.40
15:AN:63:CYS:SG	15:AN:66:THR:HG22	2.62	0.40
16:AO:10:ILE:HA	16:AO:13:GLU:OE2	2.21	0.40
16:AO:49:HIS:O	16:AO:52:ARG:HB3	2.21	0.40
19:AR:36:GLY:HA3	19:AR:69:TYR:C	2.42	0.40
21:AT:68:LYS:O	21:AT:71:ALA:HB3	2.21	0.40
22:B0:197:A:H8	22:B0:197:A:P	2.45	0.40
22:B0:228:C:O2'	22:B0:229:C:H5"	2.21	0.40
22:B0:372:G:O2'	22:B0:373:U:OP2	2.39	0.40
22:B0:393:C:H2'	22:B0:394:C:C6	2.57	0.40
22:B0:419:U:H2'	22:B0:420:C:C6	2.57	0.40
22:B0:482:A:C5'	43:BS:55:GLY:HA2	2.41	0.40
22:B0:600:G:H2'	22:B0:601:C:C6	2.56	0.40
22:B0:787:C:H5"	22:B0:788:A:H5'	2.02	0.40
22:B0:917:A:H2	23:B9:80:U:O2'	2.04	0.40
22:B0:1112:G:H2'	22:B0:1113:U:C6	2.57	0.40
22:B0:1167:C:H2'	22:B0:1168:G:H8	1.86	0.40
22:B0:1438:U:C2	22:B0:1439:A:C2	3.10	0.40
22:B0:1502:C:H5"	26:BA:213:ARG:HH22	1.83	0.40
22:B0:1749:A:H2'	22:B0:1750:G:C8	2.55	0.40
22:B0:1921:G:H2'	22:B0:1922:G:H8	1.85	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2042:A:H2'	22:B0:2043:C:H5"	2.04	0.40
22:B0:2109:U:OP2	22:B0:2110:G:P	2.79	0.40
22:B0:2262:U:O2'	45:BU:10:ARG:HB3	2.20	0.40
22:B0:2472:G:H2'	22:B0:2529:G:H22	1.86	0.40
22:B0:2491:U:H2'	22:B0:2492:U:O5'	2.21	0.40
22:B0:2619:C:H2'	22:B0:2620:C:H6	1.86	0.40
22:B0:2676:C:H3'	27:BB:127:PHE:CD1	2.57	0.40
22:B0:2677:G:H2'	27:BB:125:TRP:HE3	1.87	0.40
22:B0:2776:A:O2'	22:B0:2777:G:C5'	2.69	0.40
25:B3:52:THR:HB	25:B3:53:GLU:O	2.22	0.40
25:B3:92:ALA:H	25:B5:40:VAL:HG23	1.86	0.40
25:B5:40:VAL:C	25:B5:42:ALA:H	2.23	0.40
26:BA:130:PRO:HD2	26:BA:133:ASN:CG	2.42	0.40
26:BA:144:GLU:OE1	26:BA:147:PRO:HA	2.22	0.40
27:BB:110:THR:HB	27:BB:171:THR:HB	2.04	0.40
28:BC:153:LEU:HG	28:BC:154:ASP:N	2.36	0.40
29:BD:37:MET:SD	29:BD:56:LEU:HG	2.61	0.40
29:BD:155:ILE:O	29:BD:155:ILE:HG23	2.21	0.40
30:BE:43:LYS:O	30:BE:49:LEU:HD22	2.21	0.40
30:BE:49:LEU:HD13	30:BE:49:LEU:C	2.41	0.40
31:BF:96:THR:HG23	31:BF:97:ARG:N	2.37	0.40
32:BG:20:SER:OG	32:BG:21:PRO:CD	2.69	0.40
32:BG:111:THR:O	32:BG:112:LYS:HB3	2.20	0.40
33:BH:16:TYR:O	33:BH:54:ILE:HA	2.22	0.40
35:BJ:111:ILE:O	35:BJ:113:ALA:N	2.54	0.40
37:BL:53:THR:C	37:BL:55:ALA:H	2.19	0.40
39:BN:2:ASN:HD22	39:BN:4:ILE:CG1	2.35	0.40
39:BN:71:ARG:N	39:BN:71:ARG:NE	2.62	0.40
40:BO:34:ALA:O	40:BO:35:PHE:CB	2.64	0.40
40:BO:36:GLN:HA	40:BO:39:ILE:HG21	2.02	0.40
41:BQ:10:ALA:HA	41:BQ:11:ARG:NH2	2.37	0.40
41:BQ:29:VAL:CG2	41:BQ:55:ILE:HG21	2.51	0.40
43:BS:6:ARG:HA	43:BS:24:VAL:CB	2.46	0.40
45:BU:34:SER:HA	45:BU:67:LYS:HG2	2.03	0.40
1:AA:61:G:O2'	1:AA:62:U:H5'	2.21	0.40
1:AA:99:C:N4	1:AA:101:A:N6	2.69	0.40
1:AA:352:C:H2'	1:AA:353:A:OP2	2.22	0.40
1:AA:726:C:O2'	1:AA:727:G:H5'	2.21	0.40
1:AA:1033:G:H2'	1:AA:1034:G:H5'	2.03	0.40
1:AA:1129:C:H1'	1:AA:1132:C:C5	2.50	0.40
1:AA:1405:G:N3	1:AA:1518:A:C2	2.90	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:AA:1432:G:N2	1:AA:1469:C:N4	2.70	0.40
1:AA:1454:G:H8	1:AA:1454:G:O5'	2.05	0.40
1:AA:1477:U:H2'	1:AA:1478:U:H6	1.86	0.40
1:AA:1528:U:O2'	1:AA:1530:G:H5'	2.22	0.40
3:AB:29:PHE:O	3:AB:40:ILE:HG23	2.21	0.40
3:AB:133:ALA:O	3:AB:137:THR:HG23	2.22	0.40
4:AC:46:LEU:N	4:AC:46:LEU:HD22	2.37	0.40
5:AD:56:GLU:HA	5:AD:56:GLU:OE1	2.22	0.40
6:AE:137:ARG:HG2	6:AE:137:ARG:NH1	2.36	0.40
9:AH:101:ALA:HB3	9:AH:112:ASP:OD1	2.21	0.40
9:AH:102:VAL:HG13	9:AH:102:VAL:O	2.21	0.40
9:AH:109:VAL:HG13	9:AH:109:VAL:O	2.21	0.40
10:AI:91:GLU:O	10:AI:94:ARG:HG3	2.20	0.40
11:AJ:10:LEU:CD2	11:AJ:98:VAL:HG12	2.52	0.40
11:AJ:40:ILE:CG1	11:AJ:73:LEU:HB3	2.52	0.40
14:AM:32:ILE:HD12	14:AM:55:LEU:CD1	2.51	0.40
14:AM:112:ARG:HH11	14:AM:112:ARG:HG3	1.86	0.40
15:AN:40:ARG:NE	20:AS:17:LYS:HB3	2.34	0.40
18:AQ:76:ARG:HH11	18:AQ:76:ARG:HG2	1.87	0.40
21:AT:33:LYS:HE3	21:AT:33:LYS:CA	2.49	0.40
22:B0:85:G:H2'	22:B0:86:G:C8	2.57	0.40
22:B0:284:U:H2'	22:B0:285:G:H8	1.87	0.40
22:B0:435:C:O2	22:B0:435:C:H2'	2.21	0.40
22:B0:481:G:O2'	22:B0:482:A:OP2	2.31	0.40
22:B0:482:A:OP1	43:BS:56:GLY:N	2.54	0.40
22:B0:531:C:O5'	22:B0:532:A:C8	2.74	0.40
22:B0:589:U:C4	28:BC:86:ALA:HB1	2.56	0.40
22:B0:723:C:H2'	22:B0:724:U:H6	1.85	0.40
22:B0:926:G:O2'	47:BX:40:THR:HB	2.21	0.40
22:B0:1056:G:O4'	25:B3:64:ASN:CG	2.60	0.40
22:B0:1265:A:O2'	22:B0:1266:G:O4'	2.39	0.40
22:B0:1321:A:H61	22:B0:1334:G:C1'	2.31	0.40
22:B0:1429:G:C2	22:B0:1568:G:C2	3.09	0.40
22:B0:1679:A:H2	22:B0:1764:C:O4'	2.04	0.40
22:B0:1730:C:H2'	22:B0:1731:G:C8	2.56	0.40
22:B0:1790:C:OP2	22:B0:1828:G:N1	2.54	0.40
22:B0:2174:C:OP2	24:B2:39:GLU:OE1	2.38	0.40
22:B0:2303:G:O6	22:B0:2314:A:N6	2.54	0.40
22:B0:2547:A:H5"	27:BB:149:ASN:H	1.87	0.40
22:B0:2644:G:C4'	22:B0:2645:G:O5'	2.68	0.40
22:B0:2667:C:C2	30:BE:110:HIS:HD2	2.39	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
22:B0:2789:C:C4'	22:B0:2892:G:H21	2.34	0.40
22:B0:2887:A:O2'	22:B0:2888:C:H5'	2.21	0.40
23:B9:11:C:H2'	23:B9:12:C:O4'	2.22	0.40
24:B2:224:ASP:OD2	24:B2:226:ALA:HB3	2.22	0.40
26:BA:172:THR:O	26:BA:173:LEU:HB2	2.22	0.40
26:BA:198:GLU:HB2	26:BA:201:LEU:HD12	2.03	0.40
27:BB:86:GLU:C	27:BB:88:GLU:H	2.23	0.40
27:BB:114:LYS:HD3	27:BB:196:ALA:CB	2.37	0.40
28:BC:157:LEU:HB2	28:BC:169:VAL:HG11	2.03	0.40
29:BD:32:LYS:HA	29:BD:91:ARG:CG	2.50	0.40
29:BD:110:ILE:HD13	29:BD:113:PHE:HB3	2.04	0.40
30:BE:45:ALA:O	30:BE:47:ASN:N	2.55	0.40
31:BF:99:ILE:HD11	31:BF:122:LEU:HD11	2.04	0.40
34:BI:90:ASN:O	34:BI:91:SER:C	2.58	0.40
35:BJ:17:LYS:HA	35:BJ:17:LYS:HD3	1.70	0.40
35:BJ:134:ALA:CB	35:BJ:135:ILE:HD13	2.51	0.40
37:BL:32:GLU:HA	37:BL:115:LEU:CD1	2.50	0.40
39:BN:65:ASN:O	39:BN:71:ARG:HB3	2.21	0.40
41:BQ:50:VAL:HG21	41:BQ:103:ILE:HG21	2.03	0.40
42:BR:8:LEU:HD23	42:BR:50:LEU:CD1	2.51	0.40
45:BU:3:LYS:O	45:BU:3:LYS:HD3	2.21	0.40
48:BZ:32:THR:OG1	48:BZ:33:SER:N	2.54	0.40
49:B1:34:GLU:HB3	49:B1:50:GLU:N	2.36	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
3	AB	230/236 (98%)	192 (84%)	27 (12%)	11 (5%)	2 21
4	AC	204/206 (99%)	159 (78%)	33 (16%)	12 (6%)	1 17

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
5	AD	202/204 (99%)	180 (89%)	18 (9%)	4 (2%)	7 38
6	AE	146/148 (99%)	139 (95%)	5 (3%)	2 (1%)	11 46
7	AF	93/95 (98%)	81 (87%)	8 (9%)	4 (4%)	2 22
8	AG	135/137 (98%)	126 (93%)	8 (6%)	1 (1%)	22 63
9	AH	125/127 (98%)	114 (91%)	10 (8%)	1 (1%)	19 60
10	AI	124/126 (98%)	101 (82%)	14 (11%)	9 (7%)	1 14
11	AJ	94/96 (98%)	75 (80%)	13 (14%)	6 (6%)	1 16
12	AK	114/116 (98%)	96 (84%)	10 (9%)	8 (7%)	1 14
13	AL	99/101 (98%)	76 (77%)	18 (18%)	5 (5%)	2 19
14	AM	111/115 (96%)	100 (90%)	7 (6%)	4 (4%)	3 25
15	AN	59/61 (97%)	50 (85%)	5 (8%)	4 (7%)	1 15
16	AO	84/86 (98%)	79 (94%)	5 (6%)	0	100 100
17	AP	76/78 (97%)	69 (91%)	6 (8%)	1 (1%)	12 48
18	AQ	77/79 (98%)	69 (90%)	6 (8%)	2 (3%)	5 31
19	AR	67/69 (97%)	61 (91%)	6 (9%)	0	100 100
20	AS	85/87 (98%)	67 (79%)	12 (14%)	6 (7%)	1 14
21	AT	81/83 (98%)	68 (84%)	11 (14%)	2 (2%)	5 32
24	B2	216/222 (97%)	174 (81%)	29 (13%)	13 (6%)	1 17
25	B3	114/119 (96%)	90 (79%)	12 (10%)	12 (10%)	0 8
25	B5	113/119 (95%)	87 (77%)	16 (14%)	10 (9%)	1 11
26	BA	217/227 (96%)	121 (56%)	47 (22%)	49 (23%)	0 1
27	BB	199/209 (95%)	157 (79%)	30 (15%)	12 (6%)	1 17
28	BC	194/198 (98%)	127 (66%)	41 (21%)	26 (13%)	0 5
29	BD	173/177 (98%)	94 (54%)	51 (30%)	28 (16%)	0 3
30	BE	165/167 (99%)	147 (89%)	16 (10%)	2 (1%)	13 50
31	BF	143/149 (96%)	121 (85%)	17 (12%)	5 (4%)	3 25
32	BG	135/139 (97%)	80 (59%)	37 (27%)	18 (13%)	0 5
33	BH	140/142 (99%)	78 (56%)	37 (26%)	25 (18%)	0 3
34	BI	120/122 (98%)	96 (80%)	19 (16%)	5 (4%)	3 22
35	BJ	136/140 (97%)	70 (52%)	33 (24%)	33 (24%)	0 1
36	BK	129/131 (98%)	97 (75%)	25 (19%)	7 (5%)	2 19

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Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles
37	BL	110/114 (96%)	68 (62%)	25 (23%)	17 (16%)	0 3
38	BM	111/113 (98%)	91 (82%)	16 (14%)	4 (4%)	3 25
39	BN	112/114 (98%)	46 (41%)	38 (34%)	28 (25%)	0 1
40	BO	111/115 (96%)	65 (59%)	28 (25%)	18 (16%)	0 3
41	BQ	104/106 (98%)	73 (70%)	25 (24%)	6 (6%)	1 18
42	BR	88/92 (96%)	43 (49%)	31 (35%)	14 (16%)	0 3
43	BS	95/99 (96%)	71 (75%)	16 (17%)	8 (8%)	1 12
44	BT	92/94 (98%)	76 (83%)	12 (13%)	4 (4%)	2 22
45	BU	82/84 (98%)	37 (45%)	29 (35%)	16 (20%)	0 2
46	BW	58/60 (97%)	53 (91%)	4 (7%)	1 (2%)	9 42
47	BX	54/56 (96%)	49 (91%)	5 (9%)	0	100 100
48	BZ	27/29 (93%)	11 (41%)	10 (37%)	6 (22%)	0 1
49	B1	50/52 (96%)	28 (56%)	13 (26%)	9 (18%)	0 3
All	All	5494/5639 (97%)	4152 (76%)	884 (16%)	458 (8%)	2 12

All (458) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	AB	14	HIS
3	AB	225	SER
4	AC	14	VAL
4	AC	126	ARG
9	AH	47	ASP
10	AI	57	VAL
11	AJ	36	VAL
12	AK	52	ARG
13	AL	112	ALA
20	AS	82	HIS
21	AT	68	LYS
24	B2	34	THR
24	B2	37	PHE
25	B3	46	GLU
25	B3	63	ALA
25	B3	66	VAL
25	B3	81	LYS
25	B3	85	ASP
25	B3	86	LEU

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Mol	Chain	Res	Type
25	B3	90	ALA
25	B3	91	PRO
25	B3	92	ALA
25	B5	46	GLU
26	BA	44	ASN
26	BA	57	HIS
26	BA	59	GLN
26	BA	64	VAL
26	BA	66	PHE
26	BA	99	GLU
26	BA	100	ARG
26	BA	130	PRO
26	BA	131	MET
26	BA	132	ARG
26	BA	141	HIS
26	BA	144	GLU
26	BA	154	ALA
26	BA	155	ARG
26	BA	157	ALA
26	BA	159	THR
26	BA	172	THR
26	BA	196	ASN
26	BA	203	VAL
26	BA	242	HIS
27	BB	82	PHE
27	BB	125	TRP
27	BB	126	ASN
27	BB	128	ARG
27	BB	138	LEU
27	BB	159	LYS
27	BB	182	ALA
28	BC	22	ASP
28	BC	31	VAL
28	BC	44	ARG
28	BC	45	ALA
28	BC	59	PRO
28	BC	87	ALA
28	BC	155	GLU
28	BC	164	LEU
28	BC	184	ASP
28	BC	186	VAL
29	BD	8	LYS

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Mol	Chain	Res	Type
29	BD	16	MET
29	BD	43	ILE
29	BD	47	LYS
29	BD	109	ARG
29	BD	127	TYR
29	BD	128	SER
29	BD	144	LYS
31	BF	77	THR
32	BG	47	SER
32	BG	65	SER
32	BG	75	ALA
32	BG	76	ALA
32	BG	112	LYS
32	BG	115	ASP
32	BG	137	LEU
33	BH	8	PRO
33	BH	23	LYS
33	BH	40	HIS
33	BH	45	THR
33	BH	57	LEU
33	BH	96	ARG
33	BH	100	VAL
33	BH	113	PRO
33	BH	128	ASN
33	BH	137	PRO
33	BH	138	GLN
33	BH	141	ASP
34	BI	52	VAL
35	BJ	10	GLU
35	BJ	90	VAL
35	BJ	94	THR
35	BJ	120	VAL
36	BK	80	VAL
36	BK	109	PRO
36	BK	126	ILE
37	BL	40	LYS
37	BL	113	ILE
38	BM	60	GLU
39	BN	14	GLN
39	BN	32	VAL
39	BN	49	ILE
39	BN	60	VAL

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Mol	Chain	Res	Type
39	BN	61	ARG
39	BN	70	GLU
39	BN	72	VAL
39	BN	73	PHE
39	BN	91	VAL
39	BN	94	ALA
39	BN	100	ARG
40	BO	61	ILE
40	BO	62	ALA
40	BO	63	ARG
40	BO	70	GLN
40	BO	75	TYR
40	BO	96	ASP
42	BR	19	LYS
42	BR	44	LYS
42	BR	87	LEU
42	BR	93	LEU
45	BU	6	GLY
45	BU	24	ARG
45	BU	35	ILE
45	BU	58	LEU
45	BU	59	PHE
45	BU	78	PHE
45	BU	79	ILE
45	BU	81	ILE
48	BZ	30	ASP
49	B1	34	GLU
49	B1	42	VAL
3	AB	15	PHE
3	AB	39	ILE
4	AC	49	ALA
4	AC	59	PRO
4	AC	178	ARG
5	AD	29	THR
7	AF	51	ILE
8	AG	130	LYS
10	AI	110	VAL
10	AI	114	LYS
10	AI	128	LYS
11	AJ	57	VAL
11	AJ	62	ARG
11	AJ	75	ASP

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Mol	Chain	Res	Type
12	AK	28	ASN
12	AK	87	GLY
12	AK	116	PRO
15	AN	44	VAL
15	AN	52	ARG
15	AN	70	HIS
17	AP	10	GLY
20	AS	83	ALA
21	AT	69	ASN
24	B2	40	SER
24	B2	107	GLU
24	B2	109	ASN
24	B2	219	ALA
25	B3	65	LYS
25	B5	93	ALA
26	BA	106	PRO
26	BA	149	LYS
26	BA	150	GLY
26	BA	152	GLN
26	BA	171	VAL
26	BA	178	GLY
26	BA	241	LYS
27	BB	104	VAL
27	BB	149	ASN
28	BC	14	VAL
28	BC	28	VAL
28	BC	47	LYS
28	BC	57	LYS
28	BC	70	SER
28	BC	150	THR
28	BC	183	PHE
29	BD	9	ASP
29	BD	31	GLU
29	BD	39	VAL
29	BD	46	LYS
29	BD	71	LYS
29	BD	111	ARG
29	BD	176	PHE
30	BE	46	ASP
31	BF	9	VAL
32	BG	8	VAL
32	BG	84	GLY

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Mol	Chain	Res	Type
32	BG	93	ASN
32	BG	132	ALA
33	BH	14	ASP
33	BH	15	TRP
33	BH	22	GLY
33	BH	51	GLY
33	BH	62	VAL
33	BH	77	HIS
33	BH	114	LEU
33	BH	119	PHE
34	BI	91	SER
35	BJ	17	LYS
35	BJ	22	GLY
35	BJ	32	GLY
35	BJ	39	LYS
35	BJ	42	SER
35	BJ	112	LEU
35	BJ	123	ARG
36	BK	78	LEU
37	BL	5	LYS
37	BL	29	VAL
37	BL	51	LEU
37	BL	56	LYS
37	BL	86	ARG
37	BL	88	ALA
37	BL	99	LYS
38	BM	42	PRO
39	BN	3	ILE
39	BN	31	VAL
39	BN	38	ARG
39	BN	88	ARG
39	BN	92	ARG
39	BN	95	LYS
39	BN	97	TYR
40	BO	7	VAL
40	BO	19	GLN
40	BO	27	ARG
40	BO	86	SER
41	BQ	9	HIS
41	BQ	19	LEU
41	BQ	28	LYS
41	BQ	63	GLY

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Mol	Chain	Res	Type
42	BR	17	SER
42	BR	45	ALA
42	BR	76	ARG
42	BR	89	GLU
42	BR	95	PHE
43	BS	71	ILE
44	BT	81	PRO
45	BU	70	VAL
48	BZ	44	ALA
49	B1	21	THR
49	B1	45	HIS
49	B1	49	LYS
3	AB	13	VAL
3	AB	18	GLN
3	AB	205	ALA
4	AC	24	ASN
4	AC	125	ARG
4	AC	176	THR
5	AD	28	ASP
6	AE	20	VAL
6	AE	25	LYS
7	AF	20	GLY
7	AF	91	ARG
10	AI	24	ASN
18	AQ	82	VAL
20	AS	6	LYS
20	AS	41	PRO
24	B2	13	LYS
24	B2	106	GLY
24	B2	179	PHE
25	B3	45	VAL
25	B5	37	ALA
25	B5	41	ALA
26	BA	96	LYS
26	BA	116	GLN
26	BA	180	MET
26	BA	186	ASP
28	BC	172	ALA
28	BC	181	ILE
29	BD	93	GLU
29	BD	126	ASN
29	BD	172	PHE

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Mol	Chain	Res	Type
32	BG	14	ALA
32	BG	59	THR
33	BH	36	LEU
34	BI	90	ASN
35	BJ	14	LYS
35	BJ	19	LEU
35	BJ	27	LEU
35	BJ	37	GLY
35	BJ	85	VAL
35	BJ	93	ASN
35	BJ	118	THR
36	BK	111	GLU
37	BL	107	ASN
37	BL	114	GLU
39	BN	25	VAL
39	BN	51	ASN
39	BN	55	HIS
39	BN	56	SER
40	BO	9	ALA
40	BO	46	TYR
40	BO	47	ARG
40	BO	99	VAL
40	BO	108	LEU
42	BR	15	HIS
42	BR	39	THR
42	BR	68	LYS
43	BS	60	LYS
44	BT	84	PRO
45	BU	29	SER
45	BU	68	PHE
45	BU	76	ARG
48	BZ	38	LEU
48	BZ	41	HIS
48	BZ	53	VAL
49	B1	33	LEU
49	B1	41	VAL
3	AB	19	THR
3	AB	122	ASP
4	AC	15	LYS
5	AD	4	LEU
10	AI	25	GLY
10	AI	55	ASP

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Mol	Chain	Res	Type
12	AK	101	ALA
12	AK	119	GLY
13	AL	23	LEU
14	AM	4	ALA
15	AN	62	ARG
20	AS	5	LYS
24	B2	31	GLU
24	B2	178	ASP
24	B2	215	THR
25	B5	16	VAL
25	B5	43	GLY
25	B5	44	PRO
25	B5	88	GLU
26	BA	45	ASN
26	BA	87	SER
26	BA	97	ASP
26	BA	147	PRO
26	BA	175	LEU
26	BA	187	CYS
26	BA	194	VAL
27	BB	91	THR
27	BB	185	ASN
29	BD	104	THR
29	BD	112	ASP
29	BD	119	LYS
29	BD	120	SER
29	BD	147	ARG
31	BF	7	ASP
32	BG	60	VAL
32	BG	120	ASP
33	BH	37	ARG
33	BH	46	PRO
33	BH	101	ILE
35	BJ	41	ARG
35	BJ	46	VAL
35	BJ	60	ARG
35	BJ	64	PHE
35	BJ	108	ALA
35	BJ	125	LEU
37	BL	32	GLU
37	BL	82	GLU
38	BM	12	THR

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Mol	Chain	Res	Type
40	BO	35	PHE
40	BO	88	GLU
40	BO	102	LYS
41	BQ	61	ASN
42	BR	46	ALA
44	BT	54	ALA
45	BU	82	GLU
48	BZ	48	TYR
49	B1	20	TYR
4	AC	65	VAL
5	AD	21	LYS
10	AI	125	GLN
11	AJ	58	ASN
12	AK	53	GLY
13	AL	117	GLY
14	AM	6	ILE
20	AS	2	ARG
24	B2	38	VAL
25	B5	45	VAL
25	B5	91	PRO
26	BA	67	LYS
26	BA	74	PRO
26	BA	125	PRO
26	BA	142	ASN
26	BA	217	PRO
28	BC	48	THR
29	BD	42	ALA
30	BE	126	THR
33	BH	135	GLN
34	BI	31	ARG
34	BI	46	ALA
35	BJ	62	PRO
35	BJ	89	VAL
35	BJ	100	ILE
35	BJ	105	ILE
35	BJ	136	GLU
36	BK	106	ASP
37	BL	38	LEU
37	BL	53	THR
37	BL	111	ALA
39	BN	16	VAL
39	BN	108	ARG

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Mol	Chain	Res	Type
41	BQ	89	ALA
43	BS	26	ASN
43	BS	47	PRO
43	BS	53	GLN
43	BS	63	ALA
44	BT	71	LYS
45	BU	64	GLY
45	BU	69	GLU
7	AF	50	PRO
12	AK	14	GLN
13	AL	41	PRO
13	AL	78	VAL
25	B3	44	PRO
26	BA	183	VAL
28	BC	153	LEU
28	BC	166	LYS
29	BD	4	HIS
29	BD	30	VAL
29	BD	114	ARG
31	BF	16	GLY
32	BG	71	LYS
35	BJ	77	ILE
37	BL	104	ALA
39	BN	29	VAL
39	BN	74	GLN
43	BS	61	GLU
46	BW	41	HIS
4	AC	107	LYS
14	AM	66	GLY
18	AQ	65	PRO
26	BA	135	PRO
27	BB	92	VAL
28	BC	88	ARG
32	BG	69	VAL
3	AB	24	PRO
11	AJ	74	VAL
29	BD	12	VAL
32	BG	48	ILE
35	BJ	20	GLY
36	BK	57	VAL
42	BR	53	VAL
4	AC	13	ILE

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Mol	Chain	Res	Type
26	BA	146	LYS
28	BC	66	GLY
28	BC	149	ILE
35	BJ	135	ILE
10	AI	9	GLY
26	BA	93	VAL
26	BA	115	ILE
28	BC	113	VAL
31	BF	85	GLY
38	BM	32	PRO
43	BS	15	GLY
3	AB	200	PRO
14	AM	64	VAL
26	BA	164	VAL
35	BJ	16	GLY
39	BN	47	ILE
45	BU	12	GLY
49	B1	47	ILE
39	BN	21	PRO

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	
3	AB	195/195 (100%)	189 (97%)	6 (3%)	40	62
4	AC	170/170 (100%)	162 (95%)	8 (5%)	26	51
5	AD	172/172 (100%)	170 (99%)	2 (1%)	71	83
6	AE	112/112 (100%)	106 (95%)	6 (5%)	22	47
7	AF	83/83 (100%)	79 (95%)	4 (5%)	25	51
8	AG	112/112 (100%)	107 (96%)	5 (4%)	27	52
9	AH	103/103 (100%)	99 (96%)	4 (4%)	32	56
10	AI	104/104 (100%)	99 (95%)	5 (5%)	25	51
11	AJ	84/84 (100%)	79 (94%)	5 (6%)	19	44

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
12	AK	89/89 (100%)	87 (98%)	2 (2%)	52 71
13	AL	85/85 (100%)	84 (99%)	1 (1%)	71 83
14	AM	93/93 (100%)	90 (97%)	3 (3%)	39 61
15	AN	52/52 (100%)	50 (96%)	2 (4%)	33 57
16	AO	74/74 (100%)	74 (100%)	0	100 100
17	AP	63/63 (100%)	61 (97%)	2 (3%)	39 61
18	AQ	73/73 (100%)	71 (97%)	2 (3%)	44 65
19	AR	60/60 (100%)	59 (98%)	1 (2%)	60 78
20	AS	75/75 (100%)	73 (97%)	2 (3%)	44 65
21	AT	63/63 (100%)	54 (86%)	9 (14%)	3 16
24	B2	172/172 (100%)	165 (96%)	7 (4%)	30 55
25	B3	83/83 (100%)	76 (92%)	7 (8%)	11 33
25	B5	83/83 (100%)	79 (95%)	4 (5%)	25 51
26	BA	176/176 (100%)	147 (84%)	29 (16%)	2 12
27	BB	164/164 (100%)	160 (98%)	4 (2%)	49 69
28	BC	163/163 (100%)	153 (94%)	10 (6%)	18 44
29	BD	149/149 (100%)	123 (83%)	26 (17%)	2 11
30	BE	130/130 (100%)	123 (95%)	7 (5%)	22 47
31	BF	114/114 (100%)	113 (99%)	1 (1%)	78 87
32	BG	108/108 (100%)	87 (81%)	21 (19%)	1 8
33	BH	116/116 (100%)	96 (83%)	20 (17%)	2 11
34	BI	103/103 (100%)	97 (94%)	6 (6%)	20 45
35	BJ	99/99 (100%)	73 (74%)	26 (26%)	0 3
36	BK	104/104 (100%)	91 (88%)	13 (12%)	4 19
37	BL	94/94 (100%)	76 (81%)	18 (19%)	1 8
38	BM	83/83 (100%)	78 (94%)	5 (6%)	19 44
39	BN	99/99 (100%)	73 (74%)	26 (26%)	0 3
40	BO	89/89 (100%)	64 (72%)	25 (28%)	0 3
41	BQ	89/89 (100%)	77 (86%)	12 (14%)	4 17
42	BR	77/77 (100%)	65 (84%)	12 (16%)	2 14
43	BS	82/82 (100%)	77 (94%)	5 (6%)	18 44

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Mol	Chain	Analysed	Rotameric	Outliers	Percentiles
44	BT	78/78 (100%)	75 (96%)	3 (4%)	33 57
45	BU	62/62 (100%)	49 (79%)	13 (21%)	1 6
46	BW	55/55 (100%)	53 (96%)	2 (4%)	35 59
47	BX	47/47 (100%)	44 (94%)	3 (6%)	17 42
48	BZ	24/24 (100%)	18 (75%)	6 (25%)	0 3
49	B1	46/46 (100%)	37 (80%)	9 (20%)	1 8
All	All	4551/4551 (100%)	4162 (92%)	389 (8%)	14 33

All (389) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
3	AB	23	ASN
3	AB	89	PHE
3	AB	95	TRP
3	AB	166	ASP
3	AB	202	ASN
3	AB	206	ILE
4	AC	26	LYS
4	AC	54	ILE
4	AC	63	ILE
4	AC	67	ILE
4	AC	102	ILE
4	AC	111	ASP
4	AC	165	GLU
4	AC	195	ILE
5	AD	82	LYS
5	AD	205	LYS
6	AE	9	GLU
6	AE	19	ARG
6	AE	25	LYS
6	AE	29	ILE
6	AE	81	GLN
6	AE	137	ARG
7	AF	22	ILE
7	AF	49	TYR
7	AF	85	ILE
7	AF	93	LYS
8	AG	21	LEU
8	AG	57	GLU
8	AG	135	LYS

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Mol	Chain	Res	Type
8	AG	148	LYS
8	AG	154	ARG
9	AH	26	MET
9	AH	66	GLN
9	AH	87	ARG
9	AH	116	ARG
10	AI	24	ASN
10	AI	34	LEU
10	AI	67	LYS
10	AI	113	LYS
10	AI	122	ARG
11	AJ	46	LYS
11	AJ	52	LEU
11	AJ	58	ASN
11	AJ	67	ILE
11	AJ	88	MET
12	AK	30	ILE
12	AK	106	ILE
13	AL	30	ARG
14	AM	2	ARG
14	AM	16	ILE
14	AM	32	ILE
15	AN	40	ARG
15	AN	61	ASN
17	AP	35	ARG
17	AP	40	ASN
18	AQ	35	LYS
18	AQ	39	ARG
19	AR	7	ARG
20	AS	41	PRO
20	AS	86	LYS
21	AT	8	LYS
21	AT	23	ARG
21	AT	31	ILE
21	AT	33	LYS
21	AT	39	GLU
21	AT	53	MET
21	AT	68	LYS
21	AT	78	LEU
21	AT	84	LYS
24	B2	37	PHE
24	B2	161	ARG

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Mol	Chain	Res	Type
24	B2	170	ILE
24	B2	178	ASP
24	B2	179	PHE
24	B2	202	GLN
24	B2	208	ILE
25	B3	4	LYS
25	B3	73	ARG
25	B3	80	LEU
25	B3	81	LYS
25	B3	84	LYS
25	B3	86	LEU
25	B3	91	PRO
25	B5	4	LYS
25	B5	19	VAL
25	B5	30	PHE
25	B5	81	LYS
26	BA	51	ARG
26	BA	53	ILE
26	BA	57	HIS
26	BA	58	LYS
26	BA	65	ASP
26	BA	66	PHE
26	BA	68	ARG
26	BA	90	ILE
26	BA	94	LEU
26	BA	99	GLU
26	BA	115	ILE
26	BA	128	THR
26	BA	131	MET
26	BA	141	HIS
26	BA	145	MET
26	BA	146	LYS
26	BA	149	LYS
26	BA	155	ARG
26	BA	156	SER
26	BA	159	THR
26	BA	160	TYR
26	BA	163	ILE
26	BA	175	LEU
26	BA	181	ARG
26	BA	183	VAL
26	BA	188	ARG

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Mol	Chain	Res	Type
26	BA	196	ASN
26	BA	216	ARG
26	BA	241	LYS
27	BB	13	ARG
27	BB	43	ASP
27	BB	48	ILE
27	BB	160	LYS
28	BC	57	LYS
28	BC	61	ARG
28	BC	88	ARG
28	BC	90	GLN
28	BC	92	HIS
28	BC	99	LYS
28	BC	101	TYR
28	BC	108	ILE
28	BC	139	LYS
28	BC	175	ILE
29	BD	29	ARG
29	BD	32	LYS
29	BD	47	LYS
29	BD	51	ASN
29	BD	63	LYS
29	BD	68	LYS
29	BD	71	LYS
29	BD	77	LYS
29	BD	78	ILE
29	BD	84	ILE
29	BD	87	LYS
29	BD	90	LEU
29	BD	91	ARG
29	BD	93	GLU
29	BD	98	PHE
29	BD	111	ARG
29	BD	124	ARG
29	BD	126	ASN
29	BD	129	MET
29	BD	133	GLU
29	BD	139	GLU
29	BD	140	ILE
29	BD	144	LYS
29	BD	153	ILE
29	BD	160	LYS

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Mol	Chain	Res	Type
29	BD	166	ARG
30	BE	25	ILE
30	BE	37	ASN
30	BE	57	TYR
30	BE	76	ILE
30	BE	88	LEU
30	BE	120	ILE
30	BE	151	ARG
31	BF	143	ILE
32	BG	9	LYS
32	BG	33	ASN
32	BG	34	ILE
32	BG	41	PHE
32	BG	48	ILE
32	BG	50	LYS
32	BG	54	ILE
32	BG	61	TYR
32	BG	63	ASP
32	BG	81	LYS
32	BG	91	LYS
32	BG	94	LYS
32	BG	96	LYS
32	BG	99	LYS
32	BG	104	GLN
32	BG	108	ILE
32	BG	112	LYS
32	BG	116	MET
32	BG	124	MET
32	BG	133	ARG
32	BG	135	MET
33	BH	12	LYS
33	BH	13	ARG
33	BH	17	VAL
33	BH	23	LYS
33	BH	25	LEU
33	BH	37	ARG
33	BH	41	LYS
33	BH	45	THR
33	BH	46	PRO
33	BH	53	TYR
33	BH	68	LYS
33	BH	72	LYS

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Mol	Chain	Res	Type
33	BH	85	LYS
33	BH	108	MET
33	BH	109	LEU
33	BH	111	LYS
33	BH	114	LEU
33	BH	122	LEU
33	BH	123	LYS
33	BH	140	LEU
34	BI	38	ILE
34	BI	39	ILE
34	BI	51	LYS
34	BI	56	ASP
34	BI	99	ILE
34	BI	116	ILE
35	BJ	18	ARG
35	BJ	19	LEU
35	BJ	29	LYS
35	BJ	30	THR
35	BJ	33	ARG
35	BJ	36	LYS
35	BJ	39	LYS
35	BJ	41	ARG
35	BJ	47	ARG
35	BJ	56	PRO
35	BJ	58	TYR
35	BJ	63	LYS
35	BJ	70	LYS
35	BJ	79	LEU
35	BJ	81	ASP
35	BJ	92	LEU
35	BJ	96	LYS
35	BJ	101	ILE
35	BJ	104	GLN
35	BJ	109	LYS
35	BJ	111	ILE
35	BJ	115	GLU
35	BJ	118	THR
35	BJ	126	ARG
35	BJ	129	LYS
35	BJ	135	ILE
36	BK	5	LYS
36	BK	18	ARG

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Mol	Chain	Res	Type
36	BK	40	ARG
36	BK	59	ARG
36	BK	63	ILE
36	BK	76	LYS
36	BK	84	LYS
36	BK	92	TRP
36	BK	104	GLU
36	BK	109	PRO
36	BK	111	GLU
36	BK	112	LEU
36	BK	126	ILE
37	BL	5	LYS
37	BL	8	ARG
37	BL	10	LEU
37	BL	12	ARG
37	BL	17	ARG
37	BL	20	MET
37	BL	22	ARG
37	BL	28	LEU
37	BL	38	LEU
37	BL	42	LYS
37	BL	43	GLU
37	BL	52	ILE
37	BL	63	ARG
37	BL	64	ARG
37	BL	96	ARG
37	BL	97	ILE
37	BL	99	LYS
37	BL	112	TYR
38	BM	7	ARG
38	BM	15	ARG
38	BM	30	ARG
38	BM	40	ILE
38	BM	88	LYS
39	BN	5	LYS
39	BN	6	GLN
39	BN	8	GLU
39	BN	9	GLN
39	BN	10	GLU
39	BN	12	MET
39	BN	13	LYS
39	BN	19	PHE

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Mol	Chain	Res	Type
39	BN	20	ARG
39	BN	28	LYS
39	BN	36	LYS
39	BN	38	ARG
39	BN	40	GLN
39	BN	61	ARG
39	BN	62	LYS
39	BN	71	ARG
39	BN	74	GLN
39	BN	83	ILE
39	BN	87	ARG
39	BN	88	ARG
39	BN	92	ARG
39	BN	96	LEU
39	BN	99	LEU
39	BN	102	ARG
39	BN	105	LYS
39	BN	108	ARG
40	BO	2	ARG
40	BO	4	LYS
40	BO	10	ARG
40	BO	12	ARG
40	BO	14	LYS
40	BO	15	LYS
40	BO	21	LYS
40	BO	27	ARG
40	BO	31	TYR
40	BO	33	VAL
40	BO	36	GLN
40	BO	40	LYS
40	BO	44	TYR
40	BO	50	ARG
40	BO	53	LYS
40	BO	60	TRP
40	BO	63	ARG
40	BO	73	ILE
40	BO	78	PHE
40	BO	89	ILE
40	BO	102	LYS
40	BO	108	LEU
40	BO	110	GLU
40	BO	111	LYS

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Mol	Chain	Res	Type
40	BO	113	LYS
41	BQ	11	ARG
41	BQ	16	LYS
41	BQ	18	ARG
41	BQ	25	ARG
41	BQ	27	LYS
41	BQ	65	ASP
41	BQ	68	ASP
41	BQ	77	ASP
41	BQ	83	LYS
41	BQ	88	ARG
41	BQ	98	LYS
41	BQ	99	ARG
42	BR	11	LEU
42	BR	36	LYS
42	BR	40	LYS
42	BR	42	GLU
42	BR	64	LYS
42	BR	66	LYS
42	BR	68	LYS
42	BR	73	ARG
42	BR	77	ARG
42	BR	82	LYS
42	BR	87	LEU
42	BR	93	LEU
43	BS	4	ILE
43	BS	25	LYS
43	BS	34	ILE
43	BS	58	VAL
43	BS	90	LYS
44	BT	29	ILE
44	BT	34	LYS
44	BT	68	LYS
45	BU	2	HIS
45	BU	3	LYS
45	BU	4	LYS
45	BU	11	ASN
45	BU	13	ARG
45	BU	24	ARG
45	BU	40	ARG
45	BU	43	LYS
45	BU	45	HIS

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Mol	Chain	Res	Type
45	BU	65	LYS
45	BU	69	GLU
45	BU	79	ILE
45	BU	84	GLU
46	BW	42	LEU
46	BW	48	ARG
47	BX	31	ILE
47	BX	40	THR
47	BX	41	PRO
48	BZ	31	LYS
48	BZ	36	LYS
48	BZ	41	HIS
48	BZ	45	ASP
48	BZ	48	TYR
48	BZ	52	LYS
49	B1	7	LYS
49	B1	9	LYS
49	B1	24	LYS
49	B1	26	LYS
49	B1	31	GLU
49	B1	32	LYS
49	B1	36	LYS
49	B1	43	ARG
49	B1	50	GLU

Sometimes sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (137) such sidechains are listed below:

Mol	Chain	Res	Type
3	AB	14	HIS
3	AB	18	GLN
3	AB	23	ASN
3	AB	88	GLN
3	AB	119	GLN
3	AB	145	ASN
3	AB	169	HIS
3	AB	176	ASN
3	AB	202	ASN
4	AC	2	GLN
4	AC	5	HIS
4	AC	7	ASN
4	AC	24	ASN
4	AC	40	GLN

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Mol	Chain	Res	Type
4	AC	68	HIS
4	AC	101	ASN
4	AC	139	ASN
4	AC	184	ASN
5	AD	35	GLN
5	AD	70	GLN
5	AD	88	ASN
5	AD	99	ASN
5	AD	151	GLN
6	AE	60	GLN
6	AE	77	ASN
6	AE	120	HIS
6	AE	134	ASN
7	AF	14	GLN
7	AF	46	GLN
7	AF	58	HIS
7	AF	81	ASN
8	AG	67	ASN
8	AG	121	ASN
9	AH	17	GLN
9	AH	37	ASN
10	AI	24	ASN
10	AI	80	HIS
10	AI	125	GLN
11	AJ	20	GLN
11	AJ	35	GLN
11	AJ	58	ASN
12	AK	118	ASN
13	AL	45	ASN
15	AN	48	GLN
15	AN	61	ASN
16	AO	19	ASN
16	AO	34	GLN
16	AO	36	ASN
16	AO	39	GLN
17	AP	26	ASN
17	AP	29	ASN
17	AP	40	ASN
17	AP	59	HIS
18	AQ	49	ASN
19	AR	30	ASN
19	AR	53	GLN

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Mol	Chain	Res	Type
20	AS	51	HIS
20	AS	52	ASN
20	AS	56	HIS
21	AT	12	GLN
21	AT	47	GLN
21	AT	51	ASN
21	AT	54	GLN
21	AT	77	ASN
24	B2	56	GLN
24	B2	57	ASN
24	B2	154	ASN
24	B2	202	GLN
26	BA	44	ASN
26	BA	127	ASN
26	BA	133	ASN
26	BA	162	GLN
26	BA	199	HIS
26	BA	231	HIS
26	BA	242	HIS
27	BB	32	ASN
27	BB	36	GLN
27	BB	136	ASN
27	BB	149	ASN
27	BB	164	GLN
27	BB	185	ASN
28	BC	9	GLN
28	BC	24	ASN
28	BC	30	GLN
28	BC	41	GLN
28	BC	90	GLN
28	BC	92	HIS
28	BC	136	GLN
29	BD	126	ASN
30	BE	37	ASN
30	BE	110	HIS
30	BE	127	GLN
30	BE	142	GLN
31	BF	33	GLN
32	BG	5	GLN
32	BG	29	GLN
32	BG	33	ASN
32	BG	106	GLN

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Mol	Chain	Res	Type
33	BH	40	HIS
33	BH	86	GLN
33	BH	128	ASN
33	BH	130	HIS
35	BJ	99	ASN
35	BJ	104	GLN
36	BK	22	GLN
36	BK	45	GLN
36	BK	60	GLN
37	BL	9	GLN
37	BL	18	GLN
37	BL	62	ASN
39	BN	2	ASN
39	BN	9	GLN
39	BN	11	GLN
39	BN	40	GLN
40	BO	19	GLN
40	BO	36	GLN
40	BO	58	GLN
40	BO	71	ASN
41	BQ	15	GLN
42	BR	48	GLN
42	BR	72	GLN
42	BR	91	GLN
42	BR	92	ASN
43	BS	73	ASN
44	BT	24	ASN
44	BT	44	HIS
45	BU	45	HIS
46	BW	15	ASN
46	BW	25	GLN
46	BW	31	GLN
46	BW	38	GLN
46	BW	39	GLN
47	BX	19	HIS
47	BX	33	HIS
48	BZ	37	HIS
49	B1	25	ASN
49	B1	45	HIS

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	AA	1487/1488 (99%)	249 (16%)	95 (6%)
2	AU	75/76 (98%)	16 (21%)	7 (9%)
2	AV	75/76 (98%)	15 (20%)	7 (9%)
2	AW	75/76 (98%)	14 (18%)	7 (9%)
22	B0	2739/2740 (99%)	580 (21%)	182 (6%)
23	B9	107/108 (99%)	23 (21%)	6 (5%)
All	All	4558/4564 (99%)	897 (19%)	304 (6%)

All (897) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	AA	8	A
1	AA	9	G
1	AA	13	U
1	AA	31	G
1	AA	32	A
1	AA	39	G
1	AA	47	C
1	AA	48	C
1	AA	49	U
1	AA	50	A
1	AA	51	A
1	AA	52	C
1	AA	61	G
1	AA	65	A
1	AA	66	A
1	AA	68	G
1	AA	81	A
1	AA	82	G
1	AA	101	A
1	AA	110	C
1	AA	116	A
1	AA	120	A
1	AA	121	U
1	AA	122	G
1	AA	130	A
1	AA	144	G
1	AA	174	A
1	AA	182	A
1	AA	189	A
1	AA	190	A
1	AA	191	G
1	AA	195	A

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Mol	Chain	Res	Type
1	AA	197	A
1	AA	198	G
1	AA	203	U
1	AA	204	U
1	AA	244	U
1	AA	245	U
1	AA	247	G
1	AA	251	G
1	AA	252	U
1	AA	266	G
1	AA	267	C
1	AA	275	G
1	AA	280	C
1	AA	281	G
1	AA	282	A
1	AA	289	G
1	AA	306	A
1	AA	328	C
1	AA	329	A
1	AA	330	C
1	AA	332	G
1	AA	345	C
1	AA	346	G
1	AA	352	C
1	AA	353	A
1	AA	354	G
1	AA	367	U
1	AA	368	U
1	AA	373	A
1	AA	397	A
1	AA	398	U
1	AA	412	A
1	AA	413	G
1	AA	421	U
1	AA	422	C
1	AA	423	G
1	AA	428	G
1	AA	429	U
1	AA	430	A
1	AA	439	U
1	AA	451	A
1	AA	452	A

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Mol	Chain	Res	Type
1	AA	461	C
1	AA	462	G
1	AA	481	G
1	AA	482	A
1	AA	484	G
1	AA	485	U
1	AA	497	G
1	AA	498	U
1	AA	500	G
1	AA	508	U
1	AA	509	A
1	AA	510	A
1	AA	511	C
1	AA	518	C
1	AA	519	C
1	AA	527	G
1	AA	532	A
1	AA	533	A
1	AA	534	U
1	AA	536	C
1	AA	548	G
1	AA	559	A
1	AA	560	A
1	AA	561	U
1	AA	563	A
1	AA	566	G
1	AA	567	G
1	AA	572	A
1	AA	573	A
1	AA	575	G
1	AA	576	C
1	AA	596	A
1	AA	653	U
1	AA	665	A
1	AA	673	A
1	AA	688	G
1	AA	701	U
1	AA	702	A
1	AA	703	G
1	AA	718	A
1	AA	721	G
1	AA	722	G

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Mol	Chain	Res	Type
1	AA	723	U
1	AA	733	G
1	AA	749	A
1	AA	754	C
1	AA	777	A
1	AA	793	U
1	AA	813	U
1	AA	815	A
1	AA	816	A
1	AA	818	G
1	AA	819	A
1	AA	820	U
1	AA	821	G
1	AA	828	U
1	AA	839	U
1	AA	841	U
1	AA	871	U
1	AA	872	A
1	AA	873	A
1	AA	874	G
1	AA	885	G
1	AA	889	A
1	AA	890	G
1	AA	891	U
1	AA	914	A
1	AA	927	G
1	AA	934	C
1	AA	935	A
1	AA	960	U
1	AA	961	U
1	AA	966	G
1	AA	969	A
1	AA	972	C
1	AA	974	A
1	AA	975	A
1	AA	976	G
1	AA	977	A
1	AA	982	U
1	AA	983	A
1	AA	991	U
1	AA	992	U
1	AA	993	G

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Mol	Chain	Res	Type
1	AA	994	A
1	AA	1004	A
1	AA	1026	G
1	AA	1029	U
1	AA	1030	U
1	AA	1032	G
1	AA	1050	G
1	AA	1054	C
1	AA	1055	A
1	AA	1064	G
1	AA	1065	U
1	AA	1066	C
1	AA	1068	G
1	AA	1085	U
1	AA	1086	U
1	AA	1101	A
1	AA	1102	A
1	AA	1129	C
1	AA	1130	A
1	AA	1131	G
1	AA	1136	C
1	AA	1137	C
1	AA	1138	G
1	AA	1139	G
1	AA	1140	C
1	AA	1146	A
1	AA	1158	C
1	AA	1159	U
1	AA	1183	U
1	AA	1184	G
1	AA	1196	A
1	AA	1197	A
1	AA	1201	A
1	AA	1202	U
1	AA	1212	U
1	AA	1215	G
1	AA	1224	U
1	AA	1225	A
1	AA	1226	C
1	AA	1227	A
1	AA	1240	U
1	AA	1241	G

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Mol	Chain	Res	Type
1	AA	1257	A
1	AA	1258	G
1	AA	1279	G
1	AA	1280	A
1	AA	1281	C
1	AA	1285	A
1	AA	1286	U
1	AA	1287	A
1	AA	1297	G
1	AA	1300	G
1	AA	1301	U
1	AA	1302	C
1	AA	1303	C
1	AA	1305	G
1	AA	1319	A
1	AA	1320	C
1	AA	1322	C
1	AA	1323	G
1	AA	1345	U
1	AA	1347	G
1	AA	1348	U
1	AA	1363	A
1	AA	1364	U
1	AA	1366	C
1	AA	1381	U
1	AA	1397	C
1	AA	1398	A
1	AA	1400	C
1	AA	1401	G
1	AA	1442	G
1	AA	1443	C
1	AA	1446	A
1	AA	1452	C
1	AA	1453	G
1	AA	1468	A
1	AA	1469	C
1	AA	1492	A
1	AA	1497	G
1	AA	1499	A
1	AA	1502	A
1	AA	1503	A
1	AA	1504	G

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Mol	Chain	Res	Type
1	AA	1505	G
1	AA	1506	U
1	AA	1507	A
1	AA	1517	G
1	AA	1520	C
1	AA	1529	G
1	AA	1530	G
2	AU	8	U
2	AU	10	G
2	AU	16	U
2	AU	17	U
2	AU	18	G
2	AU	19	G
2	AU	20	G
2	AU	21	A
2	AU	37	G
2	AU	46	G
2	AU	47	U
2	AU	49	C
2	AU	59	U
2	AU	61	C
2	AU	75	C
2	AU	76	A
2	AV	8	U
2	AV	10	G
2	AV	16	U
2	AV	17	U
2	AV	18	G
2	AV	19	G
2	AV	20	G
2	AV	21	A
2	AV	37	G
2	AV	46	G
2	AV	47	U
2	AV	49	C
2	AV	59	U
2	AV	61	C
2	AV	76	A
2	AW	8	U
2	AW	10	G
2	AW	16	U
2	AW	17	U

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Mol	Chain	Res	Type
2	AW	18	G
2	AW	19	G
2	AW	20	G
2	AW	21	A
2	AW	37	G
2	AW	46	G
2	AW	47	U
2	AW	49	C
2	AW	59	U
2	AW	61	C
22	B0	34	U
22	B0	49	A
22	B0	50	U
22	B0	51	G
22	B0	64	A
22	B0	71	A
22	B0	72	U
22	B0	74	A
22	B0	75	G
22	B0	85	G
22	B0	90	U
22	B0	91	A
22	B0	99	U
22	B0	100	U
22	B0	102	U
22	B0	119	A
22	B0	120	U
22	B0	121	G
22	B0	125	A
22	B0	130	C
22	B0	140	C
22	B0	141	G
22	B0	163	C
22	B0	164	C
22	B0	165	A
22	B0	172	A
22	B0	181	A
22	B0	196	A
22	B0	199	A
22	B0	204	A
22	B0	205	G
22	B0	216	A

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Mol	Chain	Res	Type
22	B0	221	A
22	B0	222	A
22	B0	223	A
22	B0	227	A
22	B0	228	C
22	B0	229	C
22	B0	230	G
22	B0	241	A
22	B0	242	G
22	B0	248	G
22	B0	249	C
22	B0	250	G
22	B0	266	G
22	B0	269	C
22	B0	271	G
22	B0	276	U
22	B0	279	A
22	B0	302	C
22	B0	312	G
22	B0	322	A
22	B0	323	C
22	B0	324	A
22	B0	329	G
22	B0	330	A
22	B0	331	C
22	B0	333	G
22	B0	352	A
22	B0	353	C
22	B0	362	A
22	B0	363	G
22	B0	370	G
22	B0	371	A
22	B0	372	G
22	B0	388	G
22	B0	390	U
22	B0	401	A
22	B0	405	U
22	B0	406	G
22	B0	411	G
22	B0	412	A
22	B0	416	U
22	B0	417	C

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Mol	Chain	Res	Type
22	B0	431	U
22	B0	432	A
22	B0	443	A
22	B0	447	A
22	B0	448	U
22	B0	449	A
22	B0	451	U
22	B0	455	C
22	B0	456	C
22	B0	458	G
22	B0	475	C
22	B0	480	A
22	B0	482	A
22	B0	491	G
22	B0	492	A
22	B0	503	A
22	B0	504	A
22	B0	505	A
22	B0	506	G
22	B0	507	A
22	B0	509	C
22	B0	528	A
22	B0	530	G
22	B0	531	C
22	B0	532	A
22	B0	533	G
22	B0	539	G
22	B0	545	U
22	B0	547	A
22	B0	549	G
22	B0	550	C
22	B0	563	G
22	B0	572	A
22	B0	574	A
22	B0	575	A
22	B0	587	C
22	B0	588	U
22	B0	589	U
22	B0	603	A
22	B0	604	G
22	B0	611	C
22	B0	618	G

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Mol	Chain	Res	Type
22	B0	621	A
22	B0	627	A
22	B0	628	G
22	B0	637	A
22	B0	656	G
22	B0	669	G
22	B0	670	A
22	B0	671	C
22	B0	684	G
22	B0	685	A
22	B0	686	U
22	B0	718	A
22	B0	726	G
22	B0	727	A
22	B0	729	G
22	B0	730	A
22	B0	747	U
22	B0	753	A
22	B0	762	U
22	B0	763	G
22	B0	764	A
22	B0	765	C
22	B0	776	G
22	B0	777	G
22	B0	783	A
22	B0	784	G
22	B0	785	G
22	B0	790	U
22	B0	794	A
22	B0	800	A
22	B0	801	G
22	B0	802	A
22	B0	805	G
22	B0	810	U
22	B0	811	U
22	B0	812	C
22	B0	819	A
22	B0	828	U
22	B0	830	G
22	B0	848	C
22	B0	850	U
22	B0	851	C

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Mol	Chain	Res	Type
22	B0	852	U
22	B0	859	G
22	B0	860	U
22	B0	866	A
22	B0	884	U
22	B0	885	C
22	B0	892	A
22	B0	910	A
22	B0	912	C
22	B0	926	G
22	B0	928	A
22	B0	932	U
22	B0	946	C
22	B0	961	C
22	B0	962	G
22	B0	973	A
22	B0	974	G
22	B0	975	A
22	B0	983	A
22	B0	990	A
22	B0	991	C
22	B0	1008	A
22	B0	1009	A
22	B0	1011	G
22	B0	1012	U
22	B0	1013	C
22	B0	1021	A
22	B0	1022	G
22	B0	1023	U
22	B0	1026	G
22	B0	1027	A
22	B0	1044	C
22	B0	1045	C
22	B0	1046	A
22	B0	1047	G
22	B0	1056	G
22	B0	1060	U
22	B0	1061	U
22	B0	1062	G
22	B0	1070	A
22	B0	1071	G
22	B0	1077	A

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Mol	Chain	Res	Type
22	B0	1082	U
22	B0	1083	U
22	B0	1084	A
22	B0	1088	A
22	B0	1090	A
22	B0	1111	A
22	B0	1126	A
22	B0	1127	A
22	B0	1129	A
22	B0	1131	G
22	B0	1132	U
22	B0	1135	C
22	B0	1136	G
22	B0	1142	A
22	B0	1143	A
22	B0	1144	A
22	B0	1157	G
22	B0	1176	U
22	B0	1184	U
22	B0	1185	G
22	B0	1186	G
22	B0	1210	G
22	B0	1211	C
22	B0	1212	G
22	B0	1226	A
22	B0	1236	G
22	B0	1237	A
22	B0	1246	A
22	B0	1248	G
22	B0	1249	U
22	B0	1250	G
22	B0	1251	C
22	B0	1252	G
22	B0	1254	A
22	B0	1255	U
22	B0	1256	G
22	B0	1265	A
22	B0	1266	G
22	B0	1271	G
22	B0	1272	A
22	B0	1273	U
22	B0	1274	A

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Mol	Chain	Res	Type
22	B0	1276	A
22	B0	1287	A
22	B0	1300	G
22	B0	1301	A
22	B0	1303	G
22	B0	1313	U
22	B0	1314	C
22	B0	1321	A
22	B0	1325	U
22	B0	1326	U
22	B0	1329	U
22	B0	1333	G
22	B0	1341	G
22	B0	1342	A
22	B0	1343	G
22	B0	1345	C
22	B0	1364	G
22	B0	1368	G
22	B0	1371	G
22	B0	1378	A
22	B0	1380	G
22	B0	1381	G
22	B0	1383	A
22	B0	1385	A
22	B0	1397	U
22	B0	1398	C
22	B0	1411	U
22	B0	1416	G
22	B0	1418	G
22	B0	1419	A
22	B0	1423	A
22	B0	1425	G
22	B0	1427	A
22	B0	1428	C
22	B0	1429	G
22	B0	1445	U
22	B0	1455	U
22	B0	1456	G
22	B0	1459	U
22	B0	1466	U
22	B0	1474	U
22	B0	1478	G

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Mol	Chain	Res	Type
22	B0	1479	G
22	B0	1487	G
22	B0	1488	G
22	B0	1491	A
22	B0	1492	G
22	B0	1493	A
22	B0	1495	A
22	B0	1496	A
22	B0	1498	C
22	B0	1499	U
22	B0	1508	C
22	B0	1513	C
22	B0	1536	C
22	B0	1548	A
22	B0	1553	A
22	B0	1555	G
22	B0	1559	U
22	B0	1566	A
22	B0	1569	A
22	B0	1579	A
22	B0	1593	G
22	B0	1594	U
22	B0	1603	A
22	B0	1607	C
22	B0	1609	A
22	B0	1611	C
22	B0	1616	A
22	B0	1617	C
22	B0	1618	A
22	B0	1627	G
22	B0	1631	G
22	B0	1635	A
22	B0	1636	U
22	B0	1646	C
22	B0	1647	U
22	B0	1648	U
22	B0	1651	G
22	B0	1653	G
22	B0	1654	A
22	B0	1669	A
22	B0	1694	C
22	B0	1695	G

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Mol	Chain	Res	Type
22	B0	1698	A
22	B0	1699	G
22	B0	1700	A
22	B0	1732	C
22	B0	1758	U
22	B0	1759	A
22	B0	1764	C
22	B0	1773	A
22	B0	1780	A
22	B0	1781	U
22	B0	1785	A
22	B0	1800	C
22	B0	1801	A
22	B0	1802	A
22	B0	1815	A
22	B0	1816	C
22	B0	1817	G
22	B0	1820	U
22	B0	1821	A
22	B0	1829	A
22	B0	1839	G
22	B0	1848	A
22	B0	1853	A
22	B0	1859	U
22	B0	1870	C
22	B0	1871	A
22	B0	1872	A
22	B0	1900	A
22	B0	1901	A
22	B0	1923	U
22	B0	1927	A
22	B0	1930	G
22	B0	1931	U
22	B0	1932	A
22	B0	1937	A
22	B0	1938	A
22	B0	1939	U
22	B0	1940	U
22	B0	1941	C
22	B0	1943	U
22	B0	1944	U
22	B0	1955	U

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Mol	Chain	Res	Type
22	B0	1964	G
22	B0	1965	C
22	B0	1966	A
22	B0	1967	C
22	B0	1971	U
22	B0	1972	G
22	B0	1977	A
22	B0	1981	A
22	B0	1992	G
22	B0	1993	U
22	B0	1996	C
22	B0	1997	C
22	B0	2004	G
22	B0	2031	A
22	B0	2032	G
22	B0	2033	A
22	B0	2034	U
22	B0	2036	C
22	B0	2043	C
22	B0	2050	C
22	B0	2052	A
22	B0	2055	C
22	B0	2060	A
22	B0	2068	U
22	B0	2069	G
22	B0	2077	A
22	B0	2092	U
22	B0	2093	G
22	B0	2109	U
22	B0	2110	G
22	B0	2111	U
22	B0	2112	G
22	B0	2115	G
22	B0	2116	G
22	B0	2117	A
22	B0	2118	U
22	B0	2120	G
22	B0	2121	G
22	B0	2122	U
22	B0	2123	G
22	B0	2124	G
22	B0	2126	A

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Mol	Chain	Res	Type
22	B0	2127	G
22	B0	2128	G
22	B0	2130	U
22	B0	2131	U
22	B0	2133	G
22	B0	2134	A
22	B0	2135	A
22	B0	2136	G
22	B0	2137	U
22	B0	2138	G
22	B0	2139	U
22	B0	2140	G
22	B0	2141	G
22	B0	2144	G
22	B0	2145	C
22	B0	2146	C
22	B0	2147	A
22	B0	2148	G
22	B0	2149	U
22	B0	2150	C
22	B0	2151	U
22	B0	2152	G
22	B0	2153	C
22	B0	2154	A
22	B0	2155	U
22	B0	2156	G
22	B0	2157	G
22	B0	2158	A
22	B0	2159	G
22	B0	2160	C
22	B0	2161	C
22	B0	2162	G
22	B0	2163	G
22	B0	2164	C
22	B0	2165	C
22	B0	2166	U
22	B0	2167	U
22	B0	2168	G
22	B0	2169	A
22	B0	2170	A
22	B0	2171	A
22	B0	2173	A

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Mol	Chain	Res	Type
22	B0	2174	C
22	B0	2175	C
22	B0	2176	A
22	B0	2177	C
22	B0	2179	C
22	B0	2180	U
22	B0	2198	A
22	B0	2199	A
22	B0	2226	C
22	B0	2238	G
22	B0	2239	G
22	B0	2250	G
22	B0	2251	G
22	B0	2258	C
22	B0	2266	A
22	B0	2267	A
22	B0	2282	G
22	B0	2283	C
22	B0	2287	A
22	B0	2288	A
22	B0	2297	A
22	B0	2304	G
22	B0	2310	C
22	B0	2311	A
22	B0	2320	U
22	B0	2321	U
22	B0	2334	U
22	B0	2335	A
22	B0	2337	G
22	B0	2345	G
22	B0	2346	A
22	B0	2347	C
22	B0	2356	U
22	B0	2357	G
22	B0	2358	A
22	B0	2359	C
22	B0	2385	C
22	B0	2399	G
22	B0	2400	G
22	B0	2405	G
22	B0	2406	A
22	B0	2425	A

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Mol	Chain	Res	Type
22	B0	2427	C
22	B0	2429	G
22	B0	2434	A
22	B0	2435	A
22	B0	2440	C
22	B0	2441	U
22	B0	2447	G
22	B0	2448	A
22	B0	2459	A
22	B0	2476	A
22	B0	2491	U
22	B0	2492	U
22	B0	2498	C
22	B0	2502	G
22	B0	2503	A
22	B0	2504	U
22	B0	2505	G
22	B0	2506	U
22	B0	2518	A
22	B0	2519	U
22	B0	2520	C
22	B0	2529	G
22	B0	2543	G
22	B0	2554	U
22	B0	2555	U
22	B0	2556	C
22	B0	2557	G
22	B0	2567	G
22	B0	2578	G
22	B0	2582	G
22	B0	2586	U
22	B0	2602	A
22	B0	2603	G
22	B0	2610	C
22	B0	2613	U
22	B0	2614	A
22	B0	2615	U
22	B0	2631	G
22	B0	2639	A
22	B0	2645	G
22	B0	2654	A
22	B0	2655	G

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Mol	Chain	Res	Type
22	B0	2677	G
22	B0	2678	C
22	B0	2681	C
22	B0	2682	A
22	B0	2688	G
22	B0	2689	U
22	B0	2690	U
22	B0	2712	C
22	B0	2713	U
22	B0	2714	G
22	B0	2732	G
22	B0	2750	A
22	B0	2751	G
22	B0	2756	U
22	B0	2757	A
22	B0	2765	A
22	B0	2766	A
22	B0	2776	A
22	B0	2777	G
22	B0	2778	A
22	B0	2779	U
22	B0	2780	G
22	B0	2781	A
22	B0	2782	G
22	B0	2808	G
22	B0	2809	A
22	B0	2820	A
22	B0	2825	G
22	B0	2826	A
22	B0	2833	U
22	B0	2834	G
22	B0	2836	U
22	B0	2850	A
22	B0	2856	A
22	B0	2857	G
22	B0	2866	U
22	B0	2867	G
22	B0	2868	A
22	B0	2873	A
22	B0	2874	C
22	B0	2880	C
22	B0	2884	U

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Mol	Chain	Res	Type
22	B0	2898	G
22	B0	2899	A
23	B9	9	G
23	B9	13	G
23	B9	14	U
23	B9	15	A
23	B9	16	G
23	B9	17	C
23	B9	25	U
23	B9	26	C
23	B9	29	A
23	B9	30	C
23	B9	35	C
23	B9	42	C
23	B9	44	G
23	B9	45	A
23	B9	53	A
23	B9	57	A
23	B9	58	A
23	B9	67	G
23	B9	85	G
23	B9	90	C
23	B9	99	A
23	B9	100	G
23	B9	109	A

All (304) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	AA	7	A
1	AA	8	A
1	AA	30	U
1	AA	47	C
1	AA	48	C
1	AA	50	A
1	AA	60	A
1	AA	99	C
1	AA	115	G
1	AA	119	A
1	AA	129	A
1	AA	173	U
1	AA	181	A

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Mol	Chain	Res	Type
1	AA	197	A
1	AA	243	A
1	AA	250	A
1	AA	251	G
1	AA	266	G
1	AA	274	A
1	AA	279	A
1	AA	281	G
1	AA	328	C
1	AA	344	A
1	AA	351	G
1	AA	366	A
1	AA	372	C
1	AA	428	G
1	AA	429	U
1	AA	438	U
1	AA	451	A
1	AA	484	G
1	AA	496	A
1	AA	497	G
1	AA	499	A
1	AA	508	U
1	AA	509	A
1	AA	531	U
1	AA	533	A
1	AA	535	A
1	AA	547	A
1	AA	559	A
1	AA	560	A
1	AA	566	G
1	AA	575	G
1	AA	595	A
1	AA	687	A
1	AA	701	U
1	AA	717	U
1	AA	748	G
1	AA	792	A
1	AA	812	G
1	AA	817	C
1	AA	820	U
1	AA	840	C
1	AA	872	A

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Mol	Chain	Res	Type
1	AA	873	A
1	AA	890	G
1	AA	913	A
1	AA	960	U
1	AA	965	U
1	AA	975	A
1	AA	982	U
1	AA	990	C
1	AA	992	U
1	AA	993	G
1	AA	1049	U
1	AA	1064	G
1	AA	1065	U
1	AA	1067	A
1	AA	1085	U
1	AA	1101	A
1	AA	1145	A
1	AA	1157	A
1	AA	1182	G
1	AA	1196	A
1	AA	1201	A
1	AA	1226	C
1	AA	1256	A
1	AA	1257	A
1	AA	1285	A
1	AA	1300	G
1	AA	1301	U
1	AA	1302	C
1	AA	1322	C
1	AA	1346	A
1	AA	1347	G
1	AA	1363	A
1	AA	1380	U
1	AA	1399	C
1	AA	1451	U
1	AA	1498	U
1	AA	1502	A
1	AA	1503	A
1	AA	1504	G
1	AA	1528	U
2	AU	7	U
2	AU	16	U

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Mol	Chain	Res	Type
2	AU	18	G
2	AU	19	G
2	AU	46	G
2	AU	58	A
2	AU	60	C
2	AV	7	U
2	AV	16	U
2	AV	18	G
2	AV	19	G
2	AV	46	G
2	AV	58	A
2	AV	60	C
2	AW	7	U
2	AW	16	U
2	AW	18	G
2	AW	19	G
2	AW	46	G
2	AW	58	A
2	AW	60	C
22	B0	70	G
22	B0	84	A
22	B0	99	U
22	B0	119	A
22	B0	120	U
22	B0	140	C
22	B0	165	A
22	B0	215	G
22	B0	221	A
22	B0	226	A
22	B0	265	A
22	B0	278	A
22	B0	301	G
22	B0	321	U
22	B0	323	C
22	B0	329	G
22	B0	332	A
22	B0	352	A
22	B0	360	U
22	B0	362	A
22	B0	371	A
22	B0	387	U
22	B0	431	U

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Mol	Chain	Res	Type
22	B0	442	G
22	B0	446	G
22	B0	474	G
22	B0	479	A
22	B0	490	C
22	B0	504	A
22	B0	508	A
22	B0	527	C
22	B0	529	A
22	B0	531	C
22	B0	532	A
22	B0	571	U
22	B0	573	U
22	B0	603	A
22	B0	620	G
22	B0	627	A
22	B0	655	A
22	B0	762	U
22	B0	764	A
22	B0	775	G
22	B0	782	A
22	B0	784	G
22	B0	800	A
22	B0	801	G
22	B0	809	G
22	B0	811	U
22	B0	846	U
22	B0	850	U
22	B0	851	C
22	B0	858	G
22	B0	859	G
22	B0	865	C
22	B0	891	G
22	B0	931	U
22	B0	945	A
22	B0	961	C
22	B0	974	G
22	B0	982	C
22	B0	989	G
22	B0	990	A
22	B0	1008	A
22	B0	1011	G

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Mol	Chain	Res	Type
22	B0	1022	G
22	B0	1045	C
22	B0	1046	A
22	B0	1060	U
22	B0	1061	U
22	B0	1070	A
22	B0	1089	A
22	B0	1141	U
22	B0	1143	A
22	B0	1156	A
22	B0	1184	U
22	B0	1211	C
22	B0	1225	G
22	B0	1247	A
22	B0	1248	G
22	B0	1253	A
22	B0	1273	U
22	B0	1275	A
22	B0	1286	A
22	B0	1300	G
22	B0	1302	A
22	B0	1341	G
22	B0	1342	A
22	B0	1363	C
22	B0	1380	G
22	B0	1397	U
22	B0	1410	G
22	B0	1424	G
22	B0	1568	G
22	B0	1593	G
22	B0	1608	A
22	B0	1610	A
22	B0	1615	C
22	B0	1635	A
22	B0	1646	C
22	B0	1653	G
22	B0	1668	A
22	B0	1693	U
22	B0	1698	A
22	B0	1758	U
22	B0	1779	U
22	B0	1799	G

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Mol	Chain	Res	Type
22	B0	1800	C
22	B0	1815	A
22	B0	1816	C
22	B0	1820	U
22	B0	1828	G
22	B0	1854	A
22	B0	1900	A
22	B0	1922	G
22	B0	1929	G
22	B0	1937	A
22	B0	1938	A
22	B0	1940	U
22	B0	1943	U
22	B0	1964	G
22	B0	1992	G
22	B0	1996	C
22	B0	2033	A
22	B0	2035	G
22	B0	2049	G
22	B0	2067	G
22	B0	2092	U
22	B0	2120	G
22	B0	2121	G
22	B0	2122	U
22	B0	2123	G
22	B0	2127	G
22	B0	2135	A
22	B0	2136	G
22	B0	2137	U
22	B0	2139	U
22	B0	2140	G
22	B0	2143	C
22	B0	2153	C
22	B0	2154	A
22	B0	2157	G
22	B0	2161	C
22	B0	2163	G
22	B0	2164	C
22	B0	2225	A
22	B0	2249	U
22	B0	2250	G
22	B0	2257	U

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Mol	Chain	Res	Type
22	B0	2282	G
22	B0	2286	G
22	B0	2287	A
22	B0	2296	U
22	B0	2319	G
22	B0	2333	A
22	B0	2336	A
22	B0	2345	G
22	B0	2357	G
22	B0	2358	A
22	B0	2384	U
22	B0	2426	A
22	B0	2428	G
22	B0	2433	A
22	B0	2458	G
22	B0	2490	G
22	B0	2491	U
22	B0	2502	G
22	B0	2518	A
22	B0	2519	U
22	B0	2581	G
22	B0	2644	G
22	B0	2712	C
22	B0	2713	U
22	B0	2756	U
22	B0	2776	A
22	B0	2778	A
22	B0	2779	U
22	B0	2819	G
22	B0	2832	U
22	B0	2835	A
22	B0	2849	U
22	B0	2873	A
23	B9	14	U
23	B9	16	G
23	B9	56	G
23	B9	57	A
23	B9	66	A
23	B9	99	A

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

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

5.5 Carbohydrates

There are no monosaccharides in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

The following chains have linkage breaks:

Mol	Chain	Number of breaks
1	AA	7
26	BA	4
27	BB	4
25	B5	3
25	B3	2
3	AB	2
31	BF	2
24	B2	2
29	BD	1
28	BC	1
14	AM	1
43	BS	1
37	BL	1
32	BG	1
40	BO	1
42	BR	1
35	BJ	1

All chain breaks are listed below:

Model	Chain	Residue-1	Atom-1	Residue-2	Atom-2	Distance (Å)
1	B5	52:THR	C	53:GLU	N	8.77
1	B5	51:LYS	C	52:THR	N	8.07
1	BA	60:ALA	C	61:TYR	N	8.05
1	B3	53:GLU	C	54:PHE	N	7.33
1	BB	167:ASN	C	168:GLU	N	7.32
1	BB	114:LYS	C	115:GLY	N	6.46
1	B3	52:THR	C	53:GLU	N	5.34
1	BA	121:ALA	C	122:ALA	N	5.31
1	B5	53:GLU	C	54:PHE	N	5.24
1	BB	101:PHE	C	102:ALA	N	4.64
1	BD	28:PRO	C	29:ARG	N	4.47
1	BC	96:VAL	C	97:ASN	N	4.42
1	AB	156:LEU	C	157:PRO	N	4.31
1	BF	40:THR	C	41:LYS	N	4.23
1	AM	97:ARG	C	98:GLY	N	4.21
1	B2	65:PRO	C	66:HIS	N	4.08
1	BA	197:ALA	C	198:GLU	N	4.04
1	AB	95:TRP	C	96:LEU	N	3.92
1	BS	84:PHE	C	85:ARG	N	3.90
1	BL	17:ARG	C	18:GLN	N	3.83
1	BA	218:THR	C	219:VAL	N	3.77
1	BG	72:THR	C	73:PRO	N	3.45
1	BO	48:ASP	C	49:ARG	N	3.41
1	BB	30:GLU	C	31:ALA	N	3.31
1	B2	158:GLY	C	159:GLN	N	3.22
1	BR	80:TRP	C	81:LYS	N	3.19
1	BJ	73:ILE	C	74:THR	N	2.90
1	BF	58:LEU	C	59:ALA	N	2.82
1	AA	372:C	O3’	373:A	P	1.83
1	AA	451:A	O3’	452:A	P	1.79
1	AA	481:G	O3’	482:A	P	1.79
1	AA	389:A	O3’	390:U	P	1.77
1	AA	50:A	O3’	51:A	P	1.76
1	AA	518:C	O3’	519:C	P	1.39
1	AA	532:A	O3’	533:A	P	1.39

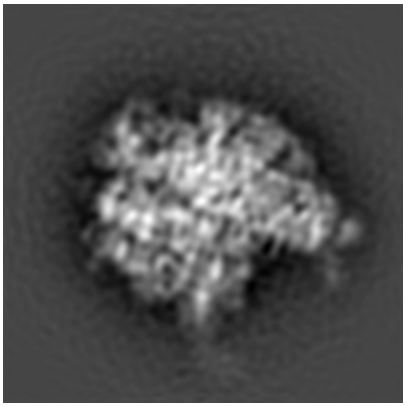
6 Map visualisation

This section contains visualisations of the EMDB entry EMD-1056. These allow visual inspection of the internal detail of the map and identification of artifacts.

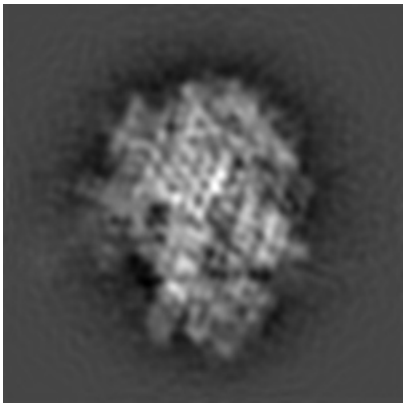
No raw map or half-maps were deposited for this entry and therefore no images, graphs, etc. pertaining to the raw map can be shown.

6.1 Orthogonal projections

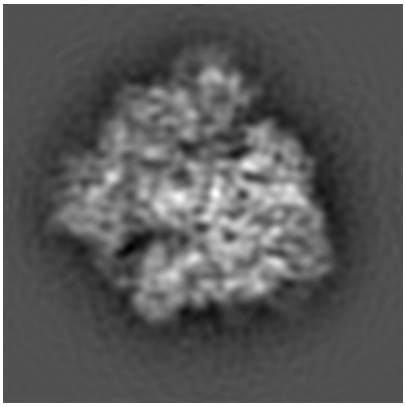
6.1.1 Primary map



X



Y

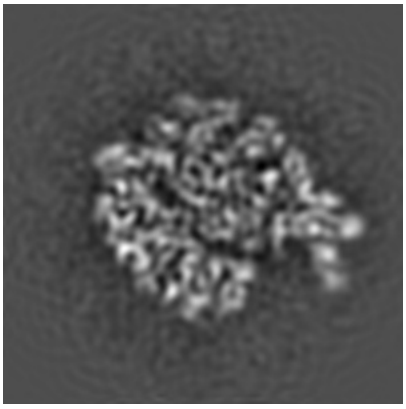


Z

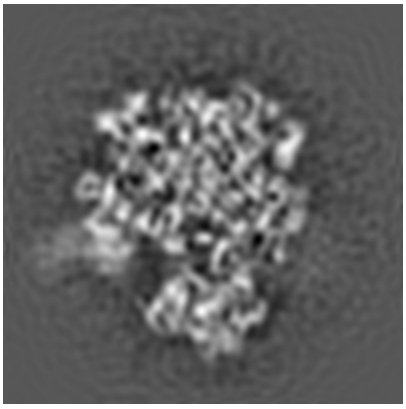
The images above show the map projected in three orthogonal directions.

6.2 Central slices

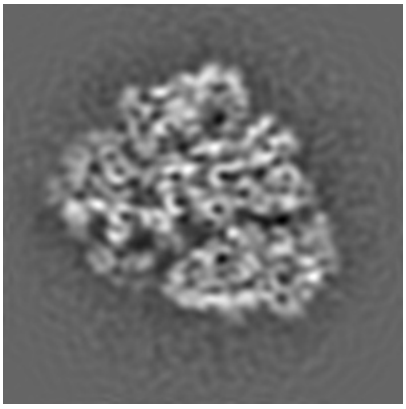
6.2.1 Primary map



X Index: 65



Y Index: 65

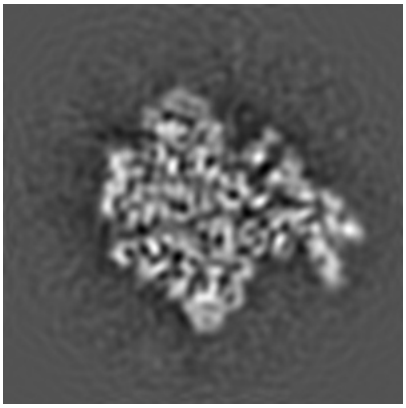


Z Index: 65

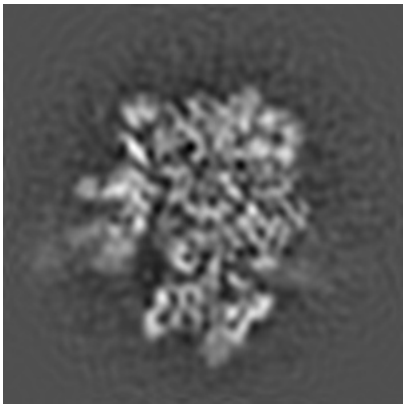
The images above show central slices of the map in three orthogonal directions.

6.3 Largest variance slices (i)

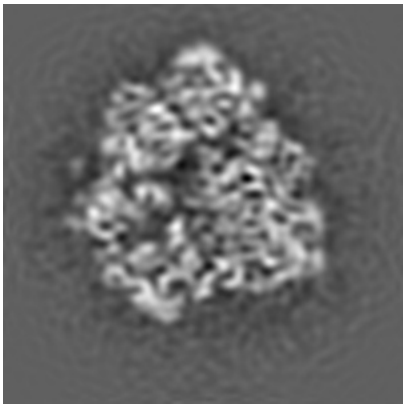
6.3.1 Primary map



X Index: 68



Y Index: 68

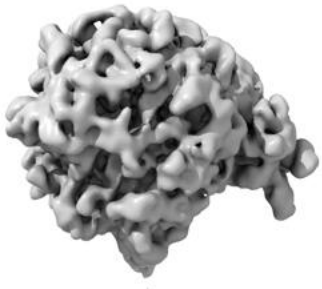


Z Index: 58

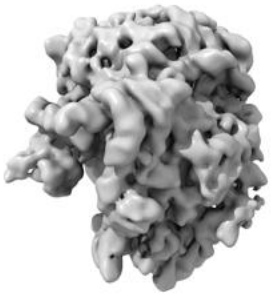
The images above show the largest variance slices of the map in three orthogonal directions.

6.4 Orthogonal surface views (i)

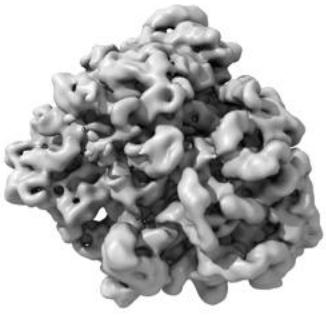
6.4.1 Primary map



X



Y



Z

The images above show the 3D surface view of the map at the recommended contour level 43.4. These images, in conjunction with the slice images, may facilitate assessment of whether an appropriate contour level has been provided.

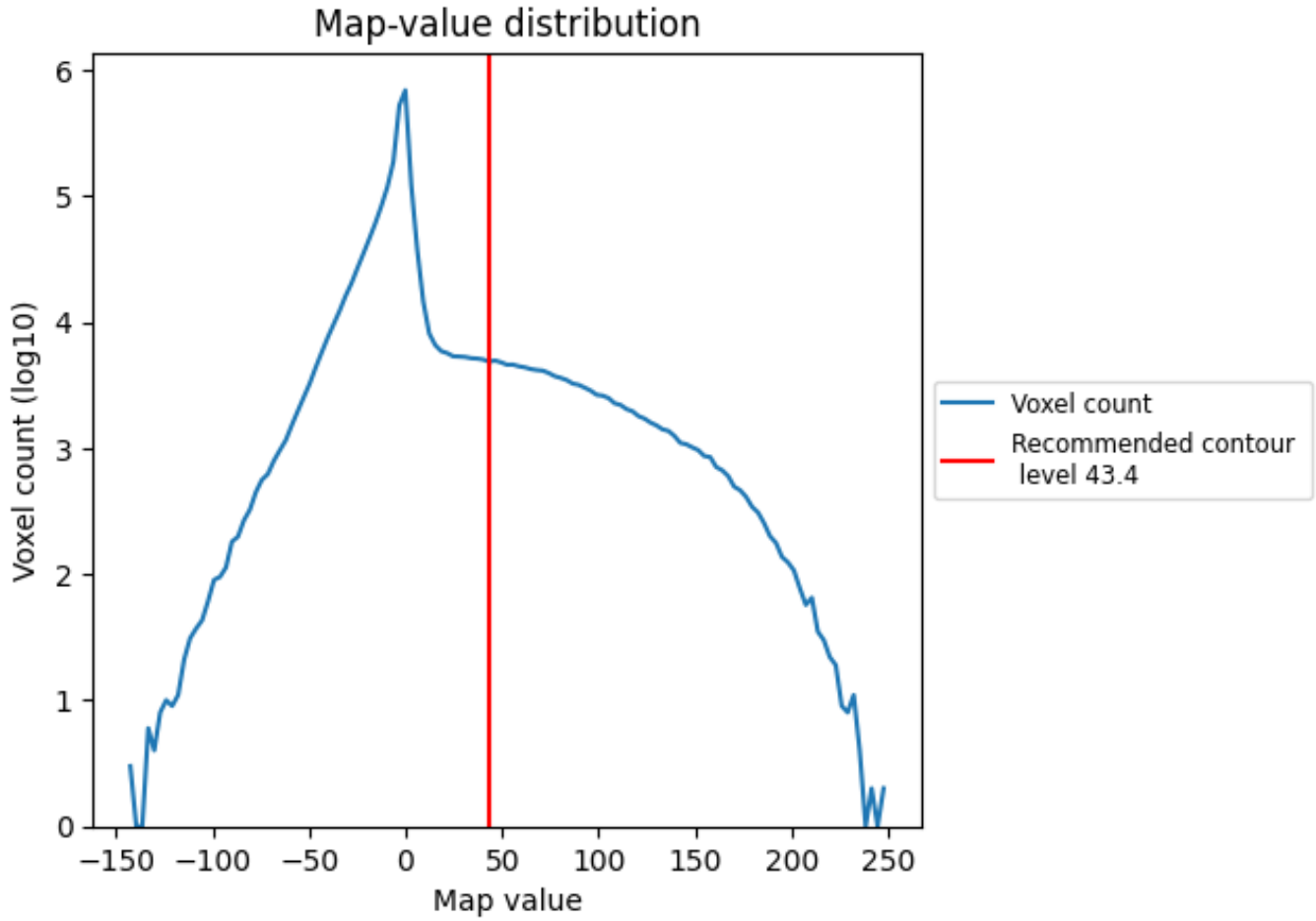
6.5 Mask visualisation (i)

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

7 Map analysis

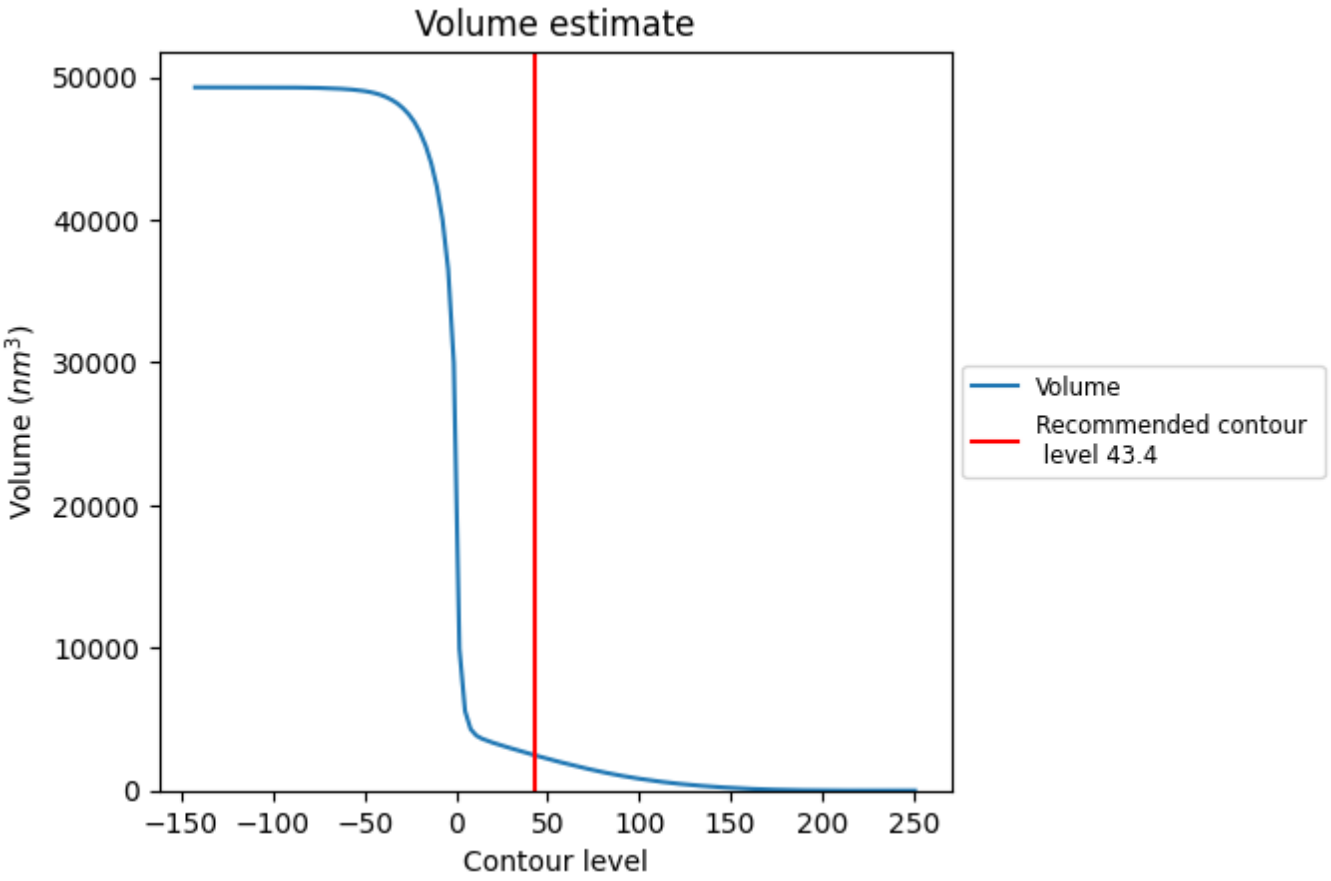
This section contains the results of statistical analysis of the map.

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.

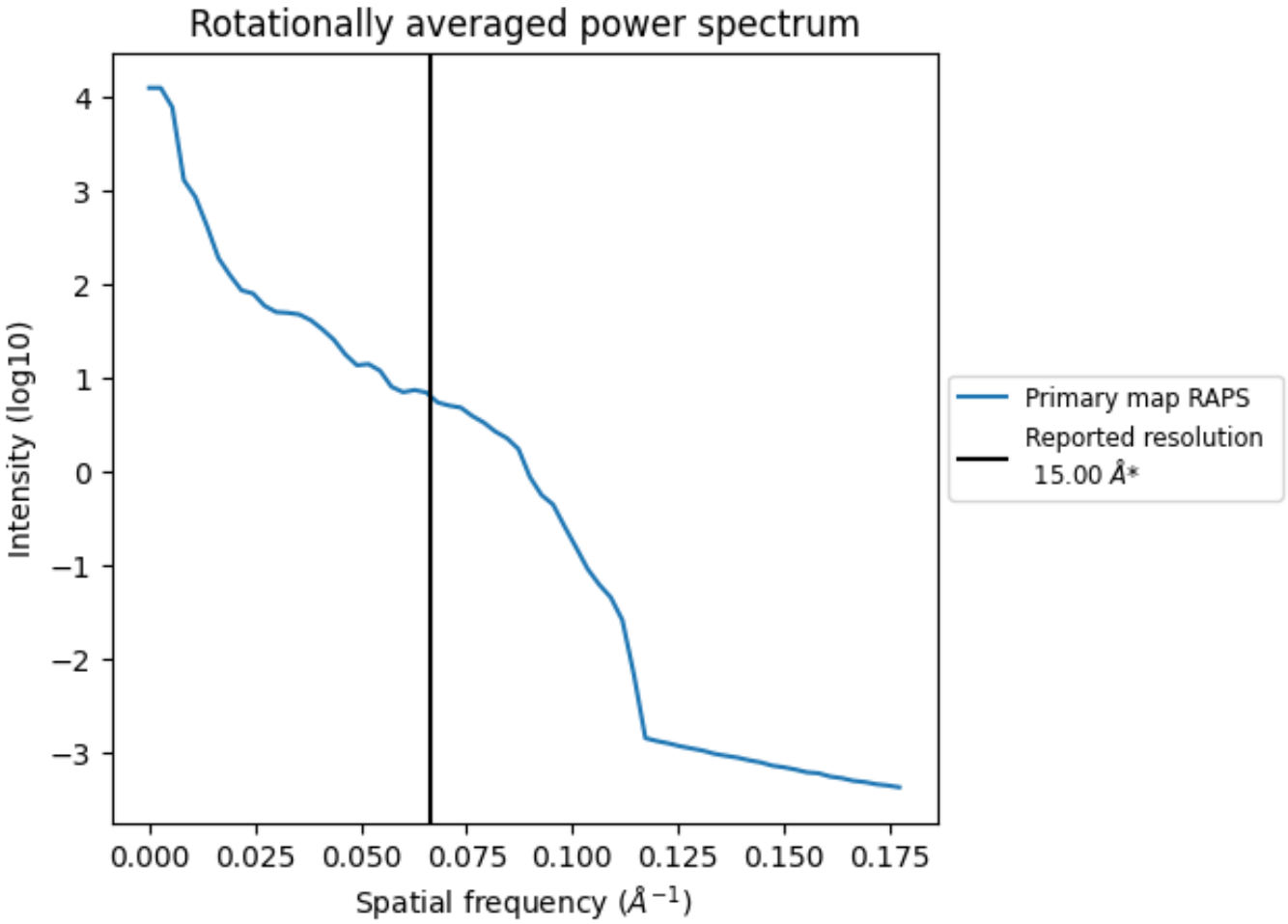
7.2 Volume estimate



The volume at the recommended contour level is 2462 nm^3; this corresponds to an approximate mass of 2224 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 0.067 Å^{-1}

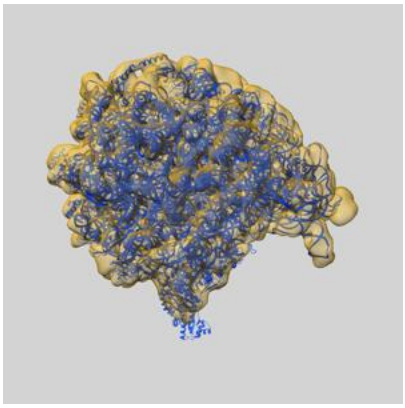
8 Fourier-Shell correlation

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

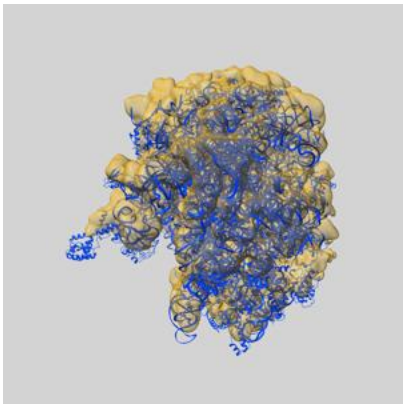
9 Map-model fit

This section contains information regarding the fit between EMDB map EMD-1056 and PDB model 4V4V. Per-residue inclusion information can be found in section 3 on page 13.

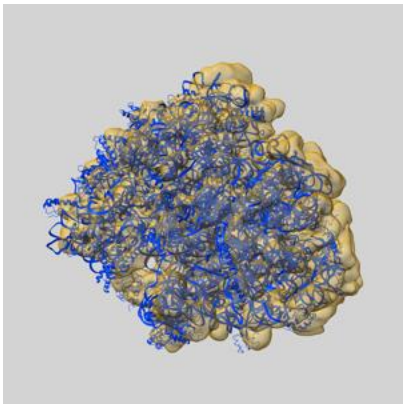
9.1 Map-model overlay



X



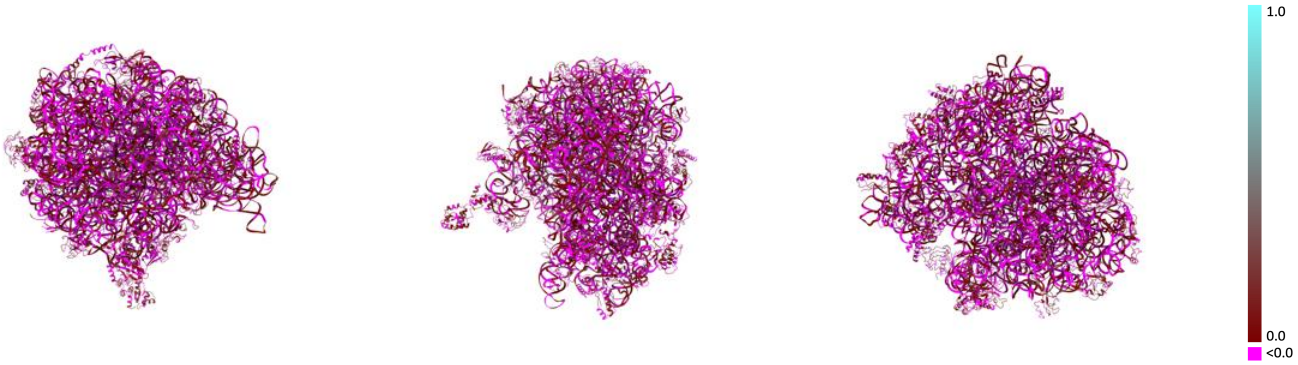
Y



Z

The images above show the 3D surface view of the map at the recommended contour level 43.4 at 50% transparency in yellow overlaid with a ribbon representation of the model coloured in blue. These images allow for the visual assessment of the quality of fit between the atomic model and the map.

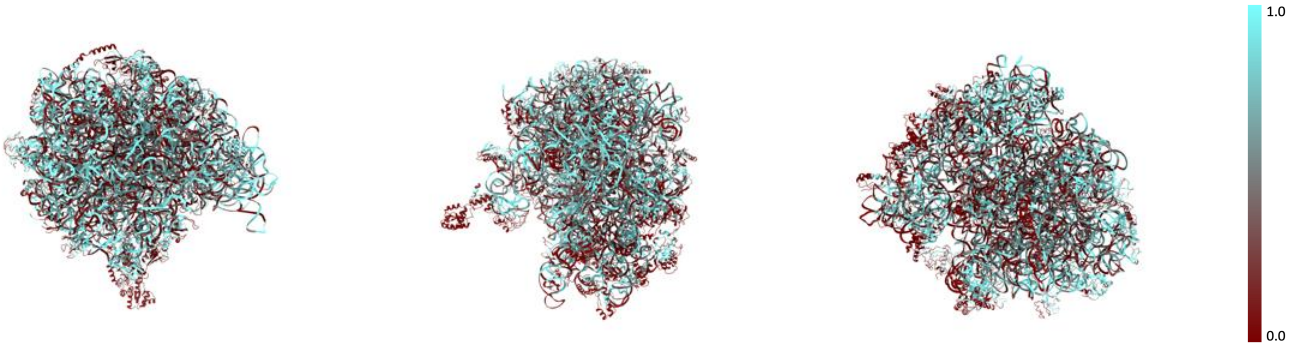
9.2 Q-score mapped to coordinate model (i)



X Y Z

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

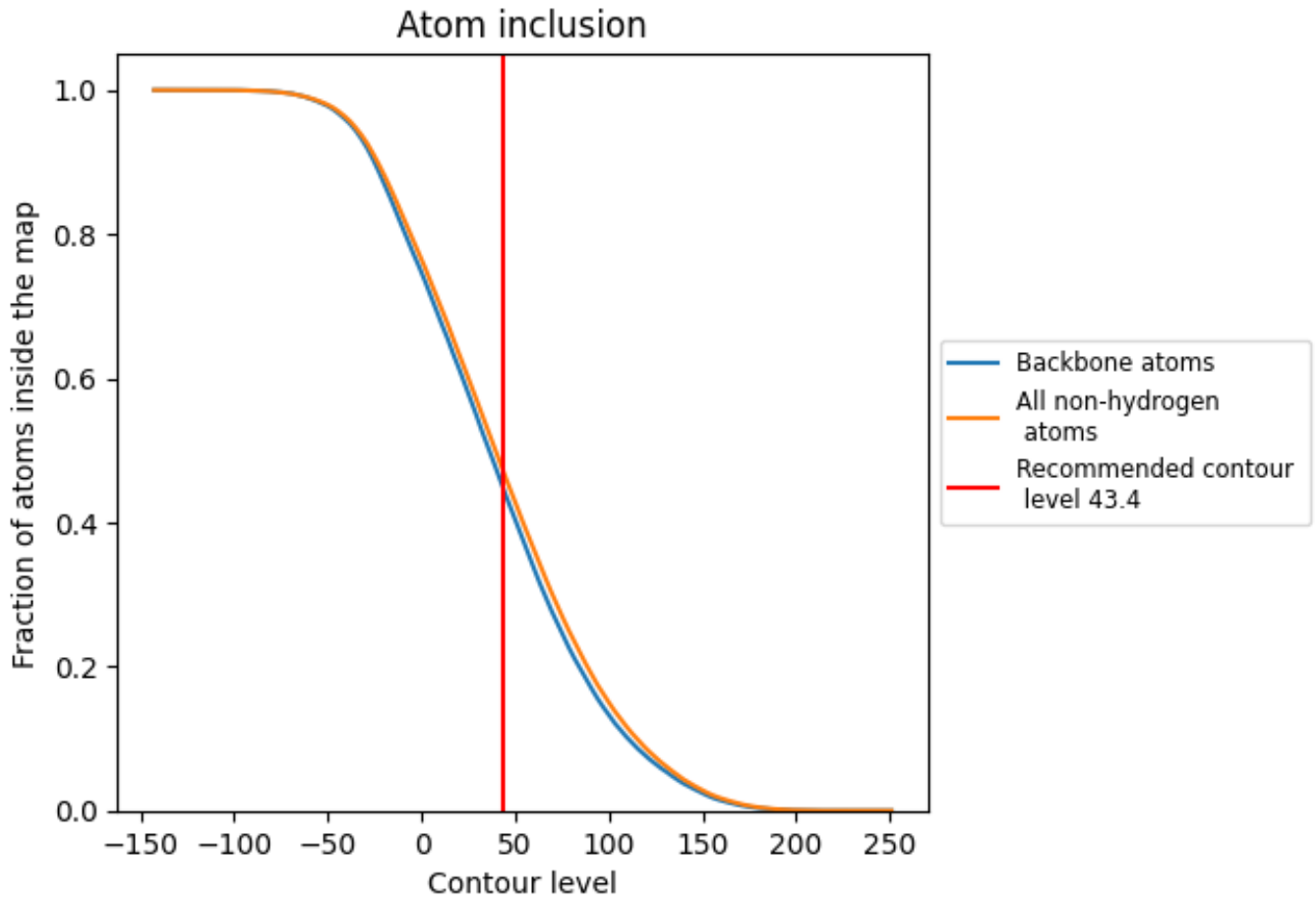
9.3 Atom inclusion mapped to coordinate model (i)



X Y Z

The images above show the model with each residue coloured according to its atom inclusion. This shows to what extent they are inside the map at the recommended contour level (43.4).

9.4 Atom inclusion (i)



At the recommended contour level, 45% of all backbone atoms, 47% 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 (43.4) and Q-score for the entire model and for each chain.

Chain	Atom inclusion	Q-score
All	0.4728	0.0020
AA	0.5227	0.0010
AB	0.3563	-0.0010
AC	0.3205	0.0010
AD	0.2795	-0.0070
AE	0.3277	0.0090
AF	0.4417	0.0080
AG	0.4809	0.0140
AH	0.4341	0.0050
AI	0.4882	0.0030
AJ	0.3503	0.0100
AK	0.2896	0.0060
AL	0.5455	0.0280
AM	0.3209	-0.0080
AN	0.0819	-0.0290
AO	0.6281	0.0110
AP	0.5817	-0.0090
AQ	0.4936	-0.0010
AR	0.2595	0.0140
AS	0.3888	0.0050
AT	0.6546	0.0170
AU	0.4131	0.0110
AV	0.3656	-0.0210
AW	0.3366	-0.0200
B0	0.5043	0.0010
B1	0.2163	0.0070
B2	0.4456	0.0200
B3	0.1898	0.0230
B5	0.0427	0.0170
B9	0.5143	0.0000
BA	0.4502	0.0130
BB	0.4350	0.0080
BC	0.5871	0.0170
BD	0.4224	0.0170
BE	0.4231	-0.0310

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Chain	Atom inclusion	Q-score
BF	0.2400	-0.0250
BG	0.2091	0.0150
BH	0.3882	-0.0020
BI	0.1718	-0.0150
BJ	0.5545	0.0200
BK	0.3237	-0.0140
BL	0.4828	-0.0050
BM	0.6156	0.0330
BN	0.4459	0.0070
BO	0.5367	-0.0010
BQ	0.3794	-0.0280
BR	0.5248	-0.0030
BS	0.5720	0.0030
BT	0.3631	-0.0090
BU	0.3786	0.0060
BW	0.4803	-0.0360
BX	0.2979	-0.0380
BZ	0.7434	0.0410