Full wwPDB X-ray Structure Validation Report (i)

Aug 15, 2023 – 04:24 PM EDT

PDB ID	:	1XBP
Title	:	Inhibition of peptide bond formation by pleuromutilins: The structure of the 50S ribosomal subunit from Deinococcus radiodurans in complex with Tiamulin
Authors	:	Schluenzen, F.; Pyetan, E.; Fucini, P.; Yonath, A.; Harms, J.M.
Deposited on	:	2004-08-31
Resolution	:	3.50 Å(reported)

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

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

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

The following versions of software and data (see references (1)) were used in the production of this report:

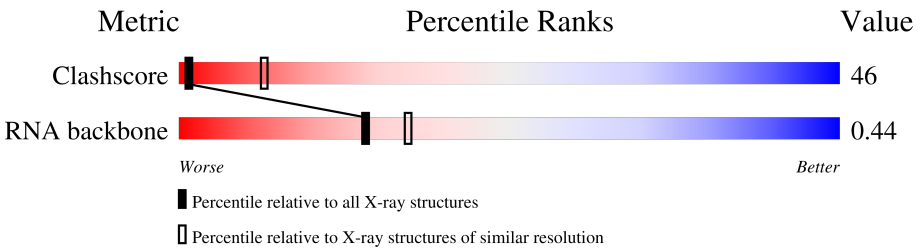
MolProbity	:	4.02b-467
Mogul	:	1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix)	:	NOT EXECUTED
EDS	:	NOT EXECUTED
buster-report	:	1.1.7 (2018)
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.35

1 Overall quality at a glance (i)

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

The reported resolution of this entry is 3.50 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
Clashscore	141614	1036 (3.58-3.42)
RNA backbone	3102	1002 (4.00-3.00)

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

Note EDS was not executed.

Mol	Chain	Length	Quality of chain
1	0	2880	11% 63% 19% . .
2	9	124	13% 69% 14% 5%
3	A	274	98% . .
4	B	211	96% . .
5	C	204	97% .
6	D	180	99% .
7	E	185	95% . .
8	F	146	36% 64%
9	G	144	99% .

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Mol	Chain	Length	Quality of chain
10	H	174	82% 18%
11	I	134	97%
12	J	156	90% 10%
13	K	141	87% 12%
14	L	116	97%
15	M	113	98%
16	N	166	75% 25%
17	O	118	99%
18	P	100	100%
19	Q	134	94% 5%
20	R	94	97%
21	S	115	98%
22	T	237	94% 6%
23	U	91	95% 5%
24	W	67	97%
25	X	55	100%
26	Y	73	100%
27	Z	59	98%
28	1	55	96%
29	2	47	98%
30	3	65	97%
31	4	37	95% 5%

2 Entry composition (i)

There are 32 unique types of molecules in this entry. The entry contains 65328 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

- Molecule 1 is a RNA chain called 23S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
1	0	2766	59359	26479	10949	19166	2765	0	0	0

- Molecule 2 is a RNA chain called 5S RIBOSOMAL RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
2	9	118	2516	1124	464	811	117	0	0	0

- Molecule 3 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
			Total	C			
3	A	270	270	270	0	0	270

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
			Total	C			
4	B	205	205	205	0	0	205

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
			Total	C			
5	C	197	197	197	0	0	197

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
			Total	C			
6	D	178	178	178	0	0	178

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
			Total	C			
7	E	177	177	177	0	0	177

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
			Total	C			
8	F	52	52	52	0	0	52

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
			Total	C			
9	G	143	143	143	0	0	143

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
			Total	C			
10	H	143	143	143	0	0	143

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
			Total	C			
11	I	132	132	132	0	0	132

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

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
			Total	C			
12	J	141	141	141	0	0	141

- Molecule 13 is a protein called ribosomal protein L16.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
			Total	C			
13	K	124	124	124	0	0	124

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
14	L	114	Total C 114 114	0	0	114

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
15	M	111	Total C 111 111	0	0	111

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
16	N	125	Total C 125 125	0	0	125

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
17	O	117	Total C 117 117	0	0	117

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
18	P	100	Total C 100 100	0	0	100

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
19	Q	127	Total C 127 127	0	0	127

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
20	R	93	Total C 93 93	0	0	93

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
21	S	113	Total C 113 113	0	0	113

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
22	T	223	Total C 223 223	0	0	223

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
23	U	86	Total C 86 86	0	0	86

- Molecule 24 is a protein called 50S ribosomal protein L29.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
24	W	65	Total C 65 65	0	0	65

- Molecule 25 is a protein called 50S ribosomal protein L30.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
25	X	55	Total C 55 55	0	0	55

- Molecule 26 is a protein called 50S ribosomal protein L31.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
26	Y	73	Total C 73 73	0	0	73

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
27	Z	58	Total C 58 58	0	0	58

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
28	1	53	Total C 53 53	0	0	53

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
29	2	46	Total C 46 46	0	0	46

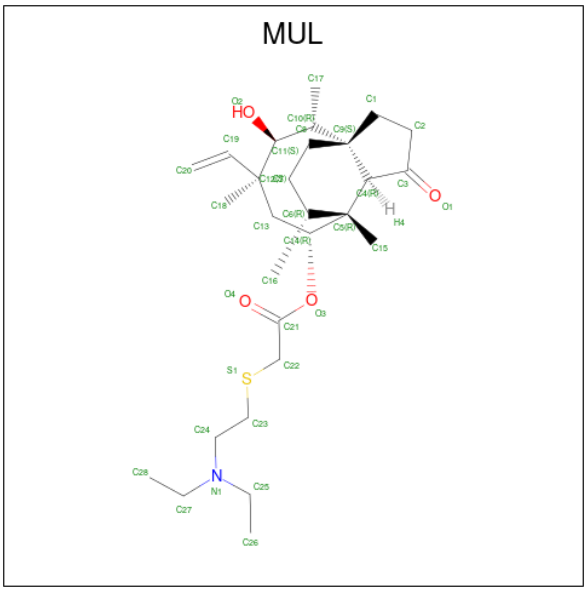
- Molecule 30 is a protein called 50S ribosomal protein L35.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
30	3	63	Total C 63 63	0	0	63

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

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
31	4	35	Total C 35 35	0	0	35

- Molecule 32 is TIAMULIN (three-letter code: MUL) (formula: $C_{28}H_{47}NO_4S$).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
32	0	1	Total C N O S 34 28 1 4 1	0	0

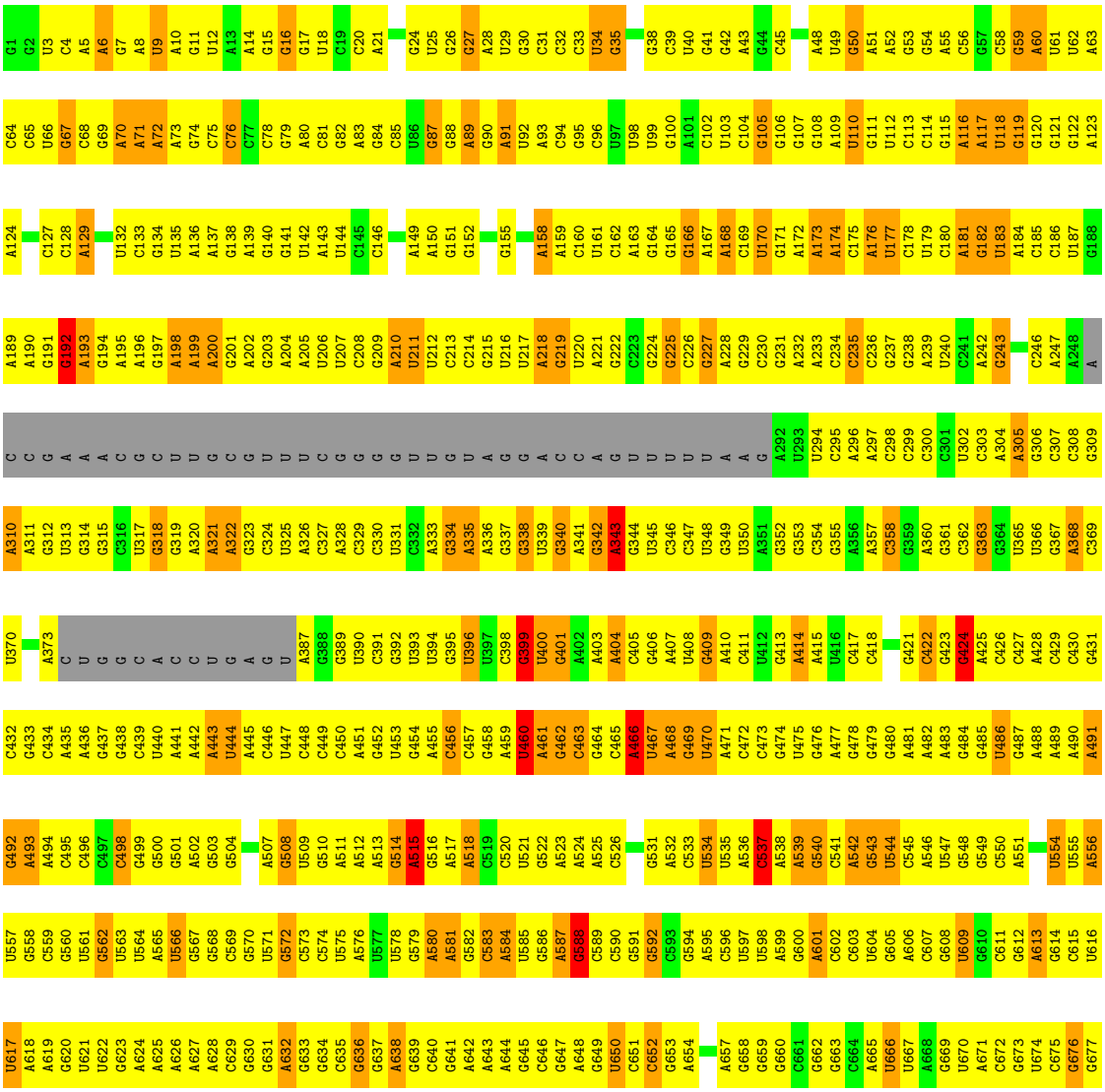
3 Residue-property plots (i)

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

Note EDS was not executed.

- Molecule 1: 23S RIBOSOMAL RNA

Chain 0: 11% 63% 19%



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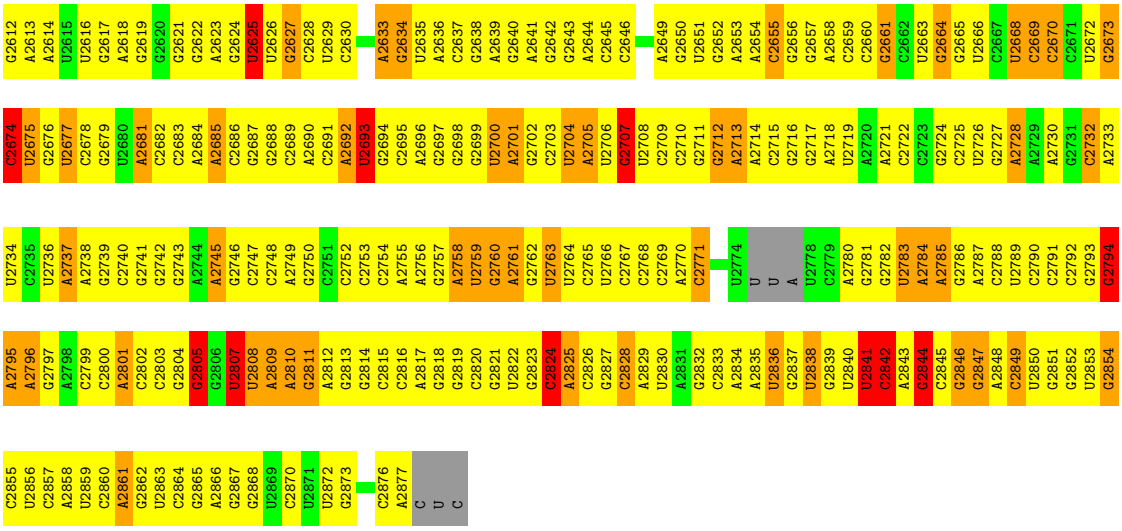
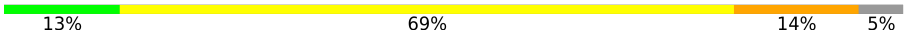
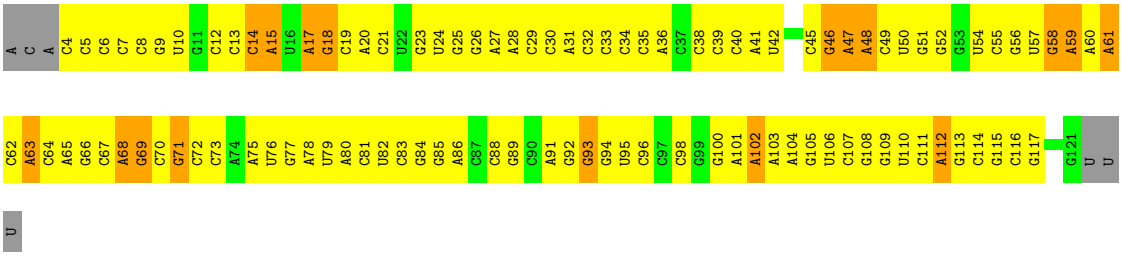
G1545 C1546 U1547 U1548 C1549 C1552 G1553 G1554 A1555 A1556 G1557 C1558 G1559 A1560 A1561 G1562 U1563 U1564 U1565 G1566 A1567 A1568 A1569 C1572 G1573 A1574 C1575 G1576 G1577 U1578 G1579 C1580 C1581 A1582 A1583 G1584 A1585 A1586 A1587 A1588 U1591 U1592 C1593 U1594 A1595 C1598 G1599 G1602 A1603 A1604 A1605 C1606 A1607 U1608 G1609
U1481 U1482 G1483 G1484 U1485 A1486 C1487 G1488 C1489 U1490 C1491 A1492 G1496 C1497 G1498 A1499 U1500 C1501 G1502 G1503 G1504 U1505 C1506 A1507 G1508 A1509 A1510 A1511 A1512 U1513 C1514 U1515 A1516 C1517 C1518 G1519 G1520 U1521 C1522 A1523 C1524 G1527 C1528 C1529 U1530 C1531 A1532 G1533 G1536 U1537 A1538 U1539 C1540 G1541 G1542 G1543 A1544
A1416 C1417 U1424 G1425 U1426 G1427 G1428 A1429 G1430 U1431 G1432 A1433 U1434 G1435 G1436 A1437 G1438 G1439 G1440 A1441 C1442 G1443 C1444 A1445 U1446 U1447 A1448 G1449 G1450 C1451 U1452 A1453 U1454 C1455 C1456 A1457 A1458 U1459 G1460 C1461 C1462 A1463 A1464 G1465 C1466 U1467 A1468 U1469 G1470 G1471 C1472 U1473 A1474 U1475 G1476 C1477 U1478 G1479 G1480
G1356 U1357 C1358 G1359 G1360 G1361 A1362 C1363 C1364 U1365 A1366 A1367 G1368 G1369 U1370 G1371 A1372 G1373 G1374 G1375 G1376 G1377 A1378 A1379 C1380 A1381 G1382 C1383 C1384 C1385 A1386 C1387 C1388 C1389 G1390 A1391 U1392 G1393 G1394 A1395 C1396 A1397 G1398 C1399 A1400 G1401 G1402 U1403 C1404 A1405 A1406 G1407 C1408 U1409 U1410 C1411 C1412 U1413 G1414 C1415
G1296 A1297 G1298 A1299 A1300 U1301 C1302 U1303 U1304 C1305 U1306 U1307 C1308 G1309 C1310 C1311 G1312 U1313 A1314 A1315 G1316 G1317 A1318 C1319 A1320 A1321 G1322 G1323 G1324 U1325 U1326 C1327 C1328 U1329 G1330 C1331 G1332 G1333 A1334 A1335 G1336 G1337 G1338 U1339 C1340 G1341 U1342 C1343 C1344 G1345 C1346 C1347 C1348 A1349 G1350 G1351 G1352 A1353 A1354 A1355
C1234 C1235 C1236 A1239 G1240 G1241 A1242 G1243 U1244 G1245 G1248 G1249 A1250 G1251 C1252 C1253 G1254 A1255 C1256 U1257 G1258 A1259 A1260 U1261 U1262 G1263 C1264 G1265 G1266 A1267 U1268 G1269 C1270 C1271 G1272 G1273 C1274 A1275 U1276 G1277 A1278 G1279 U1280 A1281 A1282 C1283 G1284 A1285 U1286 A1287 A1288 A1289 A1290 G1291 A1292 A1293 G1294 U1295
U1172 G1173 G1174 A1175 U1176 U1177 C1181 U1182 C1183 G1184 C1185 G1186 A1187 A1188 G1189 C1190 G1191 A1192 A1193 U1194 U1195 G1196 U1197 C1198 U1199 G1200 G1201 U1202 A1203 G1204 G1205 G1206 G1207 A1208 G1209 C1210 G1211 U1212 U1213 C1214 A1215 G1216 U1217 C1218 C1219 G1220 C1221 G1222 G1223 A1224 G1225 A1226 A1227 G1228 C1229 C1230 A1231 U1232 A1233
G1110 C1111 U1112 C1113 A1114 C1115 U1116 G1117 G1118 U1119 C1120 G1121 G1125 A1126 C1127 G1128 A1129 U1130 G1131 G1132 G1133 C1134 C1135 G1136 A1137 A1138 A1139 A1140 U1141 G1142 A1143 U1144 C1145 G1146 G1147 G1148 G1149 C1150 U1151 C1152 A1153 A1154 G1155 U1156 G1157 A1158 U1159 C1160 U1161 A1162 C1163 C1164 G1165 A1166 A1167 G1168 C1169 U1170 A1171
U1044 G1045 U1046 G1047 U1048 C1049 C1052 G1053 C1054 A1055 U1056 A1057 G1058 A1059 C1060 C1063 C1064 A1065 G1066 G1067 A1068 G1069 U1072 G1073 G1074 C1075 U1076 U1077 A1078 G1079 A1080 A1081 G1082 C1083 A1084 G1085 C1086 C1087 A1088 C1089 C1090 C1091 C1094 A1095 A1096 A1097 G1098 A1099 G1102 C1103 G1104 U1105 A1106 A1107
G983 A984 G985 A986 G987 G988 G989 A990 A991 A992 C993 A994 A995 C996 C997 C998 A999 G1000 A1001 C1002 C1003 A1004 U1005 C1006 A1007 G1008 C1009 U1010 A1011 A1012 G1013 G1014 U1015 C1016 C1017 C1018 U1019 A1020 A1021 A1022 U1023 G1024 A1025 U1026 C1027 G1028 C1029 U1030 C1031 A1032 G1033 U1034 G1035 G1036 U1037 U1038 A1039 A1040 G1041
A922 A923 C924 U925 C926 C927 G928 A929 A930 G931 G932 G933 G934 C935 A936 C937 G940 U941 U942 U943 A944 G945 U946 C947 C948 G949 G950 G951 A952 G953 U954 G955 A956 G957 G958 C959 U960 G961 C962 G963 A964 G965 A966 G967 C968 U969 A970 A971 C972 U973 U974 C975 C976 G977 U978 A979 G980 C981 C982
G861 A862 C863 C864 A865 U866 G867 U868 C869 C870 U871 G872 U873 A874 G875 A876 G877 C878 A879 C880 U881 C882 A883 A886 G887 G888 C889 U890 A891 G G G G C C U U A C C C A G C U U A C C A911 A912 A913 C914 C915 U916 U917 A918 U919 G920 A921
A801 A802 C803 C804 G805 A806 A807 C808 C809 U810 G811 G812 A813 G814 A815 U816 A817 G818 C819 U820 A821 G822 U823 U824 C825 U826 C827 C828 C829 C830 G831 A832 A833 A834 U835 G836 U837 A838 U839 U840 G841 A842 G843 G844 U845 A846 C847 A848 G849 C850 C851 U852 C853 G854 G855 A856 U857 G858 U859 U860
A740 G741 G742 A743 C744 C745 G746 A747 A748 C749 C750 G751 G752 U753 G754 C755 C756 U757 G758 C759 U760 G761 A762 A763 A764 C765 A766 G767 U770 C771 G772 G773 A774 U775 G776 A777 G778 U779 U780 G781 U782 U784 U785 U786 A787 G788 G789 A790 G791 U792 G793 A794 A795 A796 A797 G798 C799 U800
G678 C679 U680 A681 G682 A683 C684 U685 C686 G687 A688 A689 A690 C691 C692 A693 G694 G695 U696 G697 A698 G699 C700 U701 A702 A703 G704 C705 A706 U707 G708 A709 C710 C711 A712 G713 G714 U715 U716 G717 A718 A719 A720 C721 C722 C723 G726 U727 G728 A729 C730 G733 G734 G735 G736 C737 G738 G739



- Molecule 2: 5S RIBOSOMAL RNA

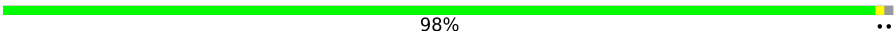
Chain 9:





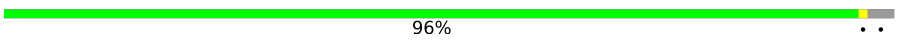
- Molecule 3: 50S ribosomal protein L2

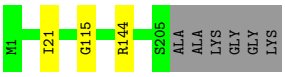
Chain A:



- Molecule 4: 50S ribosomal protein L3

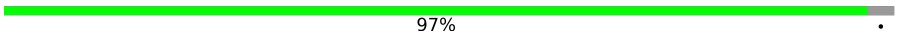
Chain B:

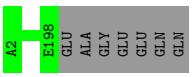




- Molecule 5: 50S ribosomal protein L4

Chain C:



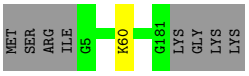


- Molecule 6: 50S ribosomal protein L5

Chain D: 99%

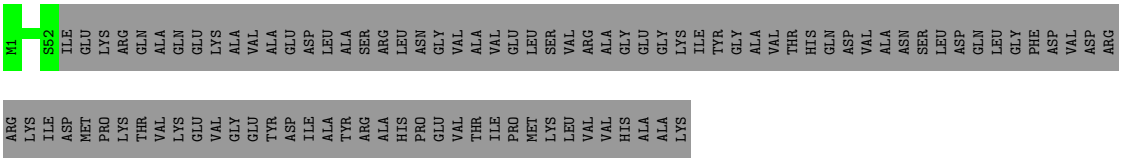
• Molecule 7: 50S ribosomal protein L6

Chain E: 95%



• Molecule 8: 50S ribosomal protein L9

Chain F: 36% 64%



• Molecule 9: 50S ribosomal protein L11

Chain G: 99%

• Molecule 10: 50S ribosomal protein L13

Chain H: 82% 18%

• Molecule 11: 50S ribosomal protein L14

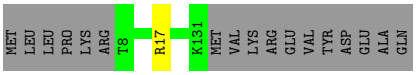
Chain I: 97%

• Molecule 12: 50S ribosomal protein L15

Chain J: 90% 10%

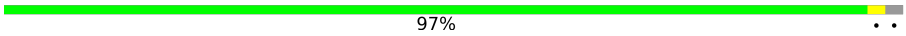
• Molecule 13: ribosomal protein L16

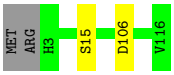
Chain K:



• Molecule 14: 50S ribosomal protein L17

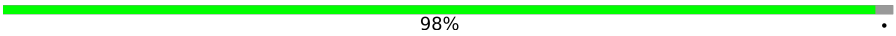
Chain L:





• Molecule 15: 50S ribosomal protein L18

Chain M:

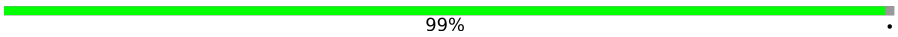


• Molecule 16: 50S ribosomal protein L19

Chain N:

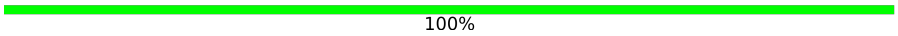
• Molecule 17: 50S ribosomal protein L20

Chain O:



• Molecule 18: 50S ribosomal protein L21

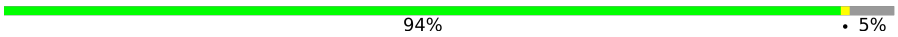
Chain P:



There are no outlier residues recorded for this chain.

• Molecule 19: 50S ribosomal protein L22

Chain Q:



• Molecule 20: 50S ribosomal protein L23

Chain R: 97%

• Molecule 21: 50S ribosomal protein L24

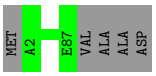
Chain S: 98%

• Molecule 22: 50S ribosomal protein L25

Chain T: 94% 6%

• Molecule 23: 50S ribosomal protein L27

Chain U: 95% 5%



• Molecule 24: 50S ribosomal protein L29

Chain W: 97%

• Molecule 25: 50S ribosomal protein L30

Chain X: 100%

There are no outlier residues recorded for this chain.

• Molecule 26: 50S ribosomal protein L31

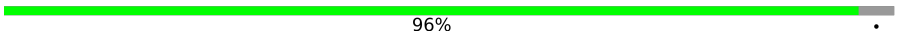
Chain Y: 100%

There are no outlier residues recorded for this chain.

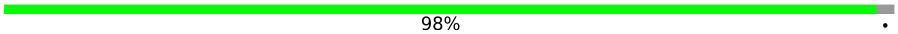
• Molecule 27: 50S ribosomal protein L32

Chain Z: 98%

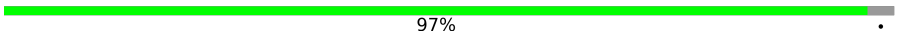
• Molecule 28: 50S ribosomal protein L33

Chain 1: 

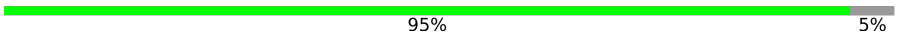
• Molecule 29: 50S ribosomal protein L34

Chain 2: 

• Molecule 30: 50S ribosomal protein L35

Chain 3: 

• Molecule 31: 50S ribosomal protein L36

Chain 4: 

4 Data and refinement statistics (i)

Xtriage (Phenix) and EDS were not executed - this section is therefore incomplete.

Property	Value	Source
Space group	I 2 2 2	Depositor
Cell constants a, b, c, α, β, γ	168.70Å 405.00Å 693.00Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	15.00 – 3.50	Depositor
% Data completeness (in resolution range)	88.3 (15.00-3.50)	Depositor
R_{merge}	(Not available)	Depositor
R_{sym}	0.14	Depositor
Refinement program	CNS	Depositor
R, R_{free}	0.290 , 0.360	Depositor
Estimated twinning fraction	No twinning to report.	Xtriage
Total number of atoms	65328	wwPDB-VP
Average B, all atoms (Å^2)	40.0	wwPDB-VP

5 Model quality (i)

5.1 Standard geometry (i)

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	#$\|Z\|$ >5	RMSZ	#$\|Z\|$ >5
1	0	0.79	21/66467 (0.0%)	0.82	43/103673 (0.0%)
2	9	0.44	0/2813	0.73	0/4384
All	All	0.78	21/69280 (0.0%)	0.82	43/108057 (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	0	0	260

All (21) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	0	1646	G	C5-C6	-7.94	1.34	1.42
1	0	2570	C	N1-C2	6.85	1.47	1.40
1	0	2801	A	C5-C6	-6.62	1.35	1.41
1	0	2673	G	C5-C6	-6.49	1.35	1.42
1	0	2222	U	N3-C4	-6.45	1.32	1.38
1	0	833	A	C5-C6	-6.24	1.35	1.41
1	0	754	G	C5-C6	-6.18	1.36	1.42
1	0	2574	G	C5-C6	-6.17	1.36	1.42
1	0	1410	U	N1-C2	6.01	1.44	1.38
1	0	2492	G	C5-C6	-6.00	1.36	1.42
1	0	803	C	N1-C2	5.69	1.45	1.40
1	0	1686	A	C5-C6	-5.66	1.35	1.41
1	0	1340	C	N1-C2	5.60	1.45	1.40
1	0	2664	G	C5-C6	-5.54	1.36	1.42
1	0	1160	C	N1-C2	5.40	1.45	1.40
1	0	2807	U	N1-C2	5.39	1.43	1.38

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	0	2218	G	C5-C6	-5.37	1.36	1.42
1	0	1993	G	C5-C6	-5.06	1.37	1.42
1	0	537	C	N1-C2	5.06	1.45	1.40
1	0	1672	A	C5-C6	-5.04	1.36	1.41
1	0	689	A	C5-C6	-5.03	1.36	1.41

All (43) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	0	2482	A	N9-C1'-C2'	8.75	125.37	114.00
1	0	460	U	N1-C1'-C2'	7.48	123.72	114.00
1	0	859	U	N1-C1'-C2'	-7.43	103.83	112.00
1	0	1710	U	N1-C1'-C2'	7.14	123.28	114.00
1	0	1266	G	N9-C1'-C2'	6.48	122.43	114.00
1	0	1281	A	N9-C1'-C2'	-6.39	104.97	112.00
1	0	1715	A	N9-C1'-C2'	6.36	122.27	114.00
1	0	2427	A	O4'-C4'-C3'	-6.32	97.69	104.00
1	0	2044	G	N9-C1'-C2'	6.18	122.04	114.00
1	0	993	C	N1-C1'-C2'	6.11	121.94	114.00
1	0	468	A	N9-C1'-C2'	6.07	121.89	114.00
1	0	1634	A	N9-C1'-C2'	5.98	121.77	114.00
1	0	1337	G	N9-C1'-C2'	5.89	121.66	114.00
1	0	2521	A	N9-C1'-C2'	5.87	121.64	114.00
1	0	1775	A	N9-C1'-C2'	5.83	121.58	114.00
1	0	918	A	N9-C1'-C2'	-5.77	105.65	112.00
1	0	860	U	N1-C1'-C2'	5.73	121.45	114.00
1	0	869	C	N1-C1'-C2'	5.69	121.39	114.00
1	0	1313	U	C2'-C3'-O3'	5.64	122.72	113.70
1	0	2805	G	C5'-C4'-C3'	-5.55	107.12	116.00
1	0	1749	G	O4'-C1'-N9	5.54	112.63	108.20
1	0	1685	A	C5'-C4'-O4'	5.54	115.74	109.10
1	0	804	C	N1-C1'-C2'	5.53	121.18	114.00
1	0	2560	G	N9-C1'-C2'	5.51	121.16	114.00
1	0	1333	G	N9-C1'-C2'	5.49	121.14	114.00
1	0	955	G	N9-C1'-C2'	-5.46	106.00	112.00
1	0	700	C	N1-C1'-C2'	5.42	121.05	114.00
1	0	2794	G	C5'-C4'-C3'	-5.42	107.33	116.00
1	0	1264	C	N1-C1'-C2'	5.41	121.04	114.00
1	0	562	G	OP2-P-O3'	5.36	117.00	105.20
1	0	2093	G	C2'-C3'-O3'	5.33	122.23	113.70
1	0	2674	C	N1-C1'-C2'	-5.31	106.16	112.00
1	0	1141	U	OP1-P-O3'	5.31	116.88	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
1	0	1698	C	N1-C1'-C2'	5.30	120.89	114.00
1	0	192	G	C2'-C3'-O3'	5.23	122.06	113.70
1	0	1137	A	N9-C1'-C2'	5.13	120.67	114.00
1	0	972	C	OP1-P-O3'	5.09	116.41	105.20
1	0	1652	G	C5'-C4'-O4'	5.09	115.21	109.10
1	0	2592	U	O4'-C1'-N1	-5.07	104.14	108.20
1	0	1335	A	N9-C1'-C2'	-5.04	106.46	112.00
1	0	518	A	N9-C1'-C2'	5.04	120.55	114.00
1	0	2707	G	O4'-C1'-N9	5.01	112.21	108.20
1	0	815	A	OP1-P-O3'	5.00	116.20	105.20

There are no chirality outliers.

All (260) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	0	1005	U	Sidechain
1	0	1011	A	Sidechain
1	0	1018	C	Sidechain
1	0	1077	U	Sidechain
1	0	1137	A	Sidechain
1	0	1139	A	Sidechain
1	0	1142	G	Sidechain
1	0	1145	C	Sidechain
1	0	1151	U	Sidechain
1	0	1168	G	Sidechain
1	0	1176	U	Sidechain
1	0	1199	U	Sidechain
1	0	1203	A	Sidechain
1	0	1209	G	Sidechain
1	0	1262	U	Sidechain
1	0	1263	G	Sidechain
1	0	1264	C	Sidechain
1	0	1266	G	Sidechain
1	0	1275	A	Sidechain
1	0	1278	A	Sidechain
1	0	1294	G	Sidechain
1	0	1299	A	Sidechain
1	0	1304	U	Sidechain
1	0	1307	U	Sidechain
1	0	1310	C	Sidechain
1	0	1312	G	Sidechain
1	0	1325	U	Sidechain

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Mol	Chain	Res	Type	Group
1	0	1333	G	Sidechain
1	0	1335	A	Sidechain
1	0	1342	U	Sidechain
1	0	1343	C	Sidechain
1	0	1345	G	Sidechain
1	0	1346	C	Sidechain
1	0	1355	A	Sidechain
1	0	1366	A	Sidechain
1	0	1410	U	Sidechain
1	0	1448	A	Sidechain
1	0	1459	U	Sidechain
1	0	1471	G	Sidechain
1	0	1482	U	Sidechain
1	0	1490	U	Sidechain
1	0	1509	A	Sidechain
1	0	1521	U	Sidechain
1	0	1563	U	Sidechain
1	0	16	G	Sidechain
1	0	1619	A	Sidechain
1	0	1625	A	Sidechain
1	0	1626	A	Sidechain
1	0	1631	C	Sidechain
1	0	1632	A	Sidechain
1	0	1633	C	Sidechain
1	0	1647	U	Sidechain
1	0	1649	A	Sidechain
1	0	166	G	Sidechain
1	0	1663	C	Sidechain
1	0	1671	A	Sidechain
1	0	1673	C	Sidechain
1	0	1674	C	Sidechain
1	0	1678	G	Sidechain
1	0	1680	U	Sidechain
1	0	1688	U	Sidechain
1	0	170	U	Sidechain
1	0	1707	A	Sidechain
1	0	1710	U	Sidechain
1	0	1720	G	Sidechain
1	0	1723	U	Sidechain
1	0	1733	U	Sidechain
1	0	1745	C	Sidechain
1	0	1752	U	Sidechain

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Mol	Chain	Res	Type	Group
1	0	1766	U	Sidechain
1	0	1767	G	Sidechain
1	0	1769	U	Sidechain
1	0	1812	U	Sidechain
1	0	1819	U	Sidechain
1	0	183	U	Sidechain
1	0	1832	G	Sidechain
1	0	1887	G	Sidechain
1	0	1916	G	Sidechain
1	0	1922	U	Sidechain
1	0	1926	U	Sidechain
1	0	1934	U	Sidechain
1	0	1935	A	Sidechain
1	0	1936	A	Sidechain
1	0	1938	U	Sidechain
1	0	1945	C	Sidechain
1	0	1951	G	Sidechain
1	0	1953	A	Sidechain
1	0	1955	G	Sidechain
1	0	1956	G	Sidechain
1	0	1969	G	Sidechain
1	0	1976	U	Sidechain
1	0	1980	A	Sidechain
1	0	1992	G	Sidechain
1	0	2004	U	Sidechain
1	0	2018	G	Sidechain
1	0	2020	G	Sidechain
1	0	2033	C	Sidechain
1	0	2034	A	Sidechain
1	0	2038	C	Sidechain
1	0	2039	G	Sidechain
1	0	2046	C	Sidechain
1	0	2059	U	Sidechain
1	0	2066	G	Sidechain
1	0	2074	U	Sidechain
1	0	211	U	Sidechain
1	0	2207	G	Sidechain
1	0	2211	U	Sidechain
1	0	2216	G	Sidechain
1	0	2219	U	Sidechain
1	0	2222	U	Sidechain
1	0	2229	G	Sidechain

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Mol	Chain	Res	Type	Group
1	0	2230	G	Sidechain
1	0	2251	U	Sidechain
1	0	2255	G	Sidechain
1	0	2261	G	Sidechain
1	0	2280	A	Sidechain
1	0	2297	G	Sidechain
1	0	2302	G	Sidechain
1	0	2306	A	Sidechain
1	0	2317	G	Sidechain
1	0	2334	C	Sidechain
1	0	2342	U	Sidechain
1	0	235	C	Sidechain
1	0	2356	A	Sidechain
1	0	2365	U	Sidechain
1	0	2371	A	Sidechain
1	0	2375	G	Sidechain
1	0	2376	G	Sidechain
1	0	2377	U	Sidechain
1	0	2392	G	Sidechain
1	0	2412	A	Sidechain
1	0	2428	U	Sidechain
1	0	2430	A	Sidechain
1	0	2447	G	Sidechain
1	0	2459	C	Sidechain
1	0	2480	C	Sidechain
1	0	2483	U	Sidechain
1	0	2485	U	Sidechain
1	0	2492	G	Sidechain
1	0	2493	U	Sidechain
1	0	2498	U	Sidechain
1	0	2513	A	Sidechain
1	0	2520	A	Sidechain
1	0	2524	G	Sidechain
1	0	2525	U	Sidechain
1	0	2548	G	Sidechain
1	0	2549	G	Sidechain
1	0	2551	A	Sidechain
1	0	2553	G	Sidechain
1	0	2554	C	Sidechain
1	0	2573	C	Sidechain
1	0	2583	U	Sidechain
1	0	2585	C	Sidechain

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Mol	Chain	Res	Type	Group
1	0	2587	G	Sidechain
1	0	2599	U	Sidechain
1	0	2603	G	Sidechain
1	0	2609	G	Sidechain
1	0	2610	G	Sidechain
1	0	2625	U	Sidechain
1	0	2627	G	Sidechain
1	0	2655	C	Sidechain
1	0	2674	C	Sidechain
1	0	2675	U	Sidechain
1	0	2677	U	Sidechain
1	0	2685	A	Sidechain
1	0	2693	U	Sidechain
1	0	27	G	Sidechain
1	0	2700	U	Sidechain
1	0	2701	A	Sidechain
1	0	2704	U	Sidechain
1	0	2705	A	Sidechain
1	0	2763	U	Sidechain
1	0	2794	G	Sidechain
1	0	2796	A	Sidechain
1	0	2824	C	Sidechain
1	0	2828	C	Sidechain
1	0	2836	U	Sidechain
1	0	2838	U	Sidechain
1	0	2841	U	Sidechain
1	0	2842	C	Sidechain
1	0	2844	G	Sidechain
1	0	2846	G	Sidechain
1	0	310	A	Sidechain
1	0	338	G	Sidechain
1	0	342	G	Sidechain
1	0	343	A	Sidechain
1	0	396	U	Sidechain
1	0	399	G	Sidechain
1	0	400	U	Sidechain
1	0	422	C	Sidechain
1	0	424	G	Sidechain
1	0	444	U	Sidechain
1	0	460	U	Sidechain
1	0	462	G	Sidechain
1	0	466	A	Sidechain

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Mol	Chain	Res	Type	Group
1	0	469	G	Sidechain
1	0	470	U	Sidechain
1	0	493	A	Sidechain
1	0	498	C	Sidechain
1	0	508	G	Sidechain
1	0	515	A	Sidechain
1	0	534	U	Sidechain
1	0	535	U	Sidechain
1	0	544	U	Sidechain
1	0	566	U	Sidechain
1	0	578	U	Sidechain
1	0	580	A	Sidechain
1	0	581	A	Sidechain
1	0	588	G	Sidechain
1	0	592	G	Sidechain
1	0	596	C	Sidechain
1	0	6	A	Sidechain
1	0	609	U	Sidechain
1	0	631	G	Sidechain
1	0	650	U	Sidechain
1	0	67	G	Sidechain
1	0	676	G	Sidechain
1	0	680	U	Sidechain
1	0	685	U	Sidechain
1	0	689	A	Sidechain
1	0	696	U	Sidechain
1	0	707	U	Sidechain
1	0	743	A	Sidechain
1	0	756	C	Sidechain
1	0	757	U	Sidechain
1	0	759	C	Sidechain
1	0	761	G	Sidechain
1	0	767	G	Sidechain
1	0	775	U	Sidechain
1	0	788	G	Sidechain
1	0	789	G	Sidechain
1	0	793	G	Sidechain
1	0	795	A	Sidechain
1	0	798	G	Sidechain
1	0	804	C	Sidechain
1	0	806	A	Sidechain
1	0	815	A	Sidechain

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Mol	Chain	Res	Type	Group
1	0	822	G	Sidechain
1	0	823	U	Sidechain
1	0	824	U	Sidechain
1	0	826	U	Sidechain
1	0	831	G	Sidechain
1	0	832	A	Sidechain
1	0	839	U	Sidechain
1	0	840	U	Sidechain
1	0	845	U	Sidechain
1	0	859	U	Sidechain
1	0	863	C	Sidechain
1	0	886	A	Sidechain
1	0	9	U	Sidechain
1	0	918	A	Sidechain
1	0	919	U	Sidechain
1	0	941	U	Sidechain
1	0	946	U	Sidechain
1	0	954	U	Sidechain
1	0	969	U	Sidechain
1	0	972	C	Sidechain
1	0	986	A	Sidechain
1	0	993	C	Sidechain
1	0	994	A	Sidechain

5.2 Too-close contacts (i)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	0	59359	0	29916	4247	0
2	9	2516	0	1286	144	0
3	A	270	0	0	2	0
4	B	205	0	0	3	0
5	C	197	0	0	0	0
6	D	178	0	0	0	0
7	E	177	0	0	1	0
8	F	52	0	0	0	0
9	G	143	0	0	0	0
10	H	143	0	0	1	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
11	I	132	0	0	2	0
12	J	141	0	0	0	0
13	K	124	0	0	1	0
14	L	114	0	0	3	0
15	M	111	0	0	0	0
16	N	125	0	0	0	0
17	O	117	0	0	0	0
18	P	100	0	0	0	0
19	Q	127	0	0	1	0
20	R	93	0	0	1	0
21	S	113	0	0	0	0
22	T	223	0	0	0	0
23	U	86	0	0	0	0
24	W	65	0	0	0	0
25	X	55	0	0	0	0
26	Y	73	0	0	0	0
27	Z	58	0	0	0	0
28	1	53	0	0	0	0
29	2	46	0	0	0	0
30	3	63	0	0	0	0
31	4	35	0	0	0	0
32	0	34	0	47	4	0
All	All	65328	0	31249	4383	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 46.

All (4383) 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)
1:0:584:A:H4'	1:0:2038:C:N4	1.53	1.23
1:0:1621:C:H4'	1:0:1626:A:N6	1.57	1.19
1:0:918:A:H2'	1:0:919:U:H5"	1.24	1.18
1:0:1339:U:H5"	1:0:1994:U:H1'	1.21	1.18
1:0:1938:U:O2'	1:0:1939:U:H5'	1.42	1.18
1:0:796:A:H5"	1:0:2568:A:OP1	1.44	1.16
1:0:1313:U:H4'	1:0:1314:A:O4'	1.46	1.15
1:0:635:C:H2'	1:0:636:G:H5"	1.27	1.15
1:0:104:C:H2'	1:0:105:G:H5"	1.26	1.14
1:0:1791:C:H2'	1:0:1792:C:H5"	1.25	1.13
1:0:1921:A:H2'	1:0:1922:U:H5"	1.18	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1572:C:H2'	1:0:1573:G:H5"	1.19	1.12
1:0:1463:A:H1'	1:0:1543:G:H22	1.14	1.12
1:0:1181:C:H2'	1:0:1182:U:H5"	1.33	1.11
1:0:2691:C:H3'	1:0:2692:A:H5"	1.25	1.11
1:0:922:A:H2'	1:0:923:A:H8	1.11	1.10
1:0:1572:C:C2'	1:0:1573:G:H5"	1.82	1.10
1:0:451:A:H2'	1:0:452:G:H8	1.12	1.09
1:0:1908:C:H2'	1:0:1909:U:H4'	1.30	1.09
1:0:2078:G:H22	1:0:2178:U:H1'	1.16	1.09
1:0:940:G:H3'	1:0:941:U:C5'	1.83	1.09
1:0:2414:A:H2'	1:0:2415:G:H5"	1.28	1.08
1:0:2548:G:H2'	1:0:2549:G:H5"	1.36	1.08
1:0:2447:G:O2'	1:0:2448:A:H5"	1.54	1.08
1:0:460:U:C4	1:0:592:G:H1'	1.90	1.06
1:0:2812:A:H2'	1:0:2813:G:C8	1.91	1.06
1:0:128:C:H2'	1:0:129:A:H5"	1.11	1.05
1:0:1636:G:H2'	1:0:1637:U:C6	1.91	1.05
1:0:1976:U:H2'	1:0:1977:C:H5'	1.37	1.05
1:0:2610:G:H5'	1:0:2866:A:H1'	1.38	1.04
1:0:616:U:H2'	1:0:617:U:H5"	1.39	1.03
1:0:1339:U:H5"	1:0:1994:U:C1'	1.88	1.03
1:0:2318:U:H2'	1:0:2319:G:H8	1.21	1.03
1:0:941:U:H2'	1:0:942:U:O4'	1.57	1.02
1:0:1198:C:H5"	1:0:1199:U:H4'	1.39	1.02
1:0:2484:G:H3'	1:0:2555:G:H22	1.23	1.02
1:0:2319:G:H2'	1:0:2320:G:C8	1.94	1.02
1:0:727:U:H2'	1:0:728:G:H5"	1.42	1.02
1:0:837:U:H2'	1:0:838:A:C8	1.94	1.01
1:0:103:U:H2'	1:0:104:C:H6	1.25	1.00
1:0:165:G:H2'	1:0:166:G:O4'	1.60	1.00
1:0:451:A:H2'	1:0:452:G:C8	1.95	1.00
1:0:772:G:H2'	1:0:773:G:H8	1.26	1.00
1:0:320:A:H2	1:0:340:G:HO2'	1.03	1.00
1:0:1202:U:H2'	1:0:1203:A:C8	1.97	1.00
1:0:128:C:C2'	1:0:129:A:H5"	1.92	1.00
1:0:1587:A:H2'	1:0:1588:A:H8	1.22	1.00
1:0:58:C:H3'	1:0:59:G:H5"	1.37	0.99
1:0:1587:A:H2'	1:0:1588:A:C8	1.97	0.99
1:0:2318:U:H2'	1:0:2319:G:C8	1.95	0.99
1:0:1016:C:C6	1:0:1154:A:H1'	1.96	0.99
1:0:490:A:O2'	1:0:491:A:H5'	1.62	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:820:U:H2'	1:0:821:A:H8	1.21	0.99
1:0:2051:U:H5'	1:0:2052:G:OP1	1.61	0.98
1:0:2607:C:H3'	1:0:2608:A:H5'	1.43	0.98
1:0:584:A:H4'	1:0:2038:C:H41	1.14	0.98
1:0:940:G:H3'	1:0:941:U:H5"	1.01	0.98
1:0:1924:C:H2'	1:0:1925:C:O4'	1.64	0.98
1:0:1094:C:H2'	1:0:1096:A:OP2	1.64	0.97
1:0:525:A:H2'	1:0:526:C:H5'	1.46	0.97
1:0:922:A:H2'	1:0:923:A:C8	1.98	0.97
1:0:1323:G:H1'	1:0:1627:C:C5'	1.94	0.97
1:0:2790:C:H2'	1:0:2791:C:H6	1.29	0.97
1:0:1252:C:O2'	1:0:1253:C:H5"	1.65	0.97
1:0:2509:A:H2'	1:0:2510:A:H5"	1.43	0.96
1:0:2306:A:H2'	1:0:2307:A:C8	2.00	0.96
1:0:847:C:H41	1:0:955:G:H21	1.12	0.96
1:0:940:G:C3'	1:0:941:U:H5"	1.93	0.95
1:0:1218:C:H2'	1:0:1219:C:C6	1.99	0.95
1:0:1911:A:H2'	1:0:1912:G:H5'	1.49	0.95
1:0:929:A:H3'	1:0:930:A:H5"	1.48	0.95
1:0:1066:G:H2'	1:0:1067:G:H4'	1.46	0.95
1:0:1304:U:O2'	1:0:1305:C:H5'	1.66	0.95
1:0:1826:U:O2'	1:0:1952:A:H2'	1.66	0.95
1:0:2437:G:C6	1:0:2469:G:H2'	2.01	0.95
1:0:34:U:H2'	1:0:35:G:H5'	1.50	0.94
1:0:50:G:H2'	1:0:117:A:C2	2.02	0.94
1:0:1212:U:H2'	1:0:1213:U:H6	1.29	0.94
1:0:984:A:H2	1:0:1200:G:H1	1.01	0.94
1:0:2437:G:N1	1:0:2469:G:H2'	1.83	0.94
1:0:525:A:C2'	1:0:526:C:H5'	1.97	0.93
1:0:1012:A:H2'	1:0:1013:G:H5'	1.50	0.93
1:0:71:A:H2	1:0:75:C:H1'	1.29	0.93
1:0:1698:C:O2'	1:0:1753:A:H2'	1.69	0.93
1:0:759:C:O2	1:0:2590:U:H4'	1.67	0.93
1:0:2369:U:H2'	1:0:2370:G:C8	2.04	0.93
1:0:2378:G:H22	1:0:2397:A:H1'	1.32	0.93
1:0:831:G:H21	1:0:1203:A:H62	1.11	0.93
1:0:773:G:H2'	1:0:774:A:H5'	1.50	0.93
1:0:2468:G:H2'	1:0:2469:G:H5'	1.51	0.93
1:0:195:A:H2'	1:0:196:A:O4'	1.69	0.93
1:0:689:A:C8	1:0:2422:C:H1'	2.04	0.93
1:0:1921:A:C2'	1:0:1922:U:H5"	1.99	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2199:C:H2'	1:0:2200:G:H8	1.32	0.93
1:0:1212:U:H2'	1:0:1213:U:C6	2.04	0.92
1:0:2713:A:H2'	1:0:2714:A:H8	1.33	0.92
1:0:1250:A:O2'	1:0:1251:G:H4'	1.70	0.92
1:0:612:G:O3'	1:0:613:A:H4'	1.69	0.92
1:0:1847:G:H2'	1:0:1848:U:H6	1.34	0.92
1:0:2691:C:H3'	1:0:2692:A:C5'	1.99	0.92
1:0:701:U:H4'	1:0:1771:A:H2	1.32	0.92
1:0:2824:C:H42	1:0:2842:C:H1'	1.33	0.92
1:0:2447:G:H22	1:0:2460:G:H2'	1.34	0.92
1:0:1065:A:H2'	1:0:1066:G:H8	1.33	0.92
1:0:1800:A:H2'	1:0:1802:A:N6	1.85	0.91
1:0:540:G:O2'	1:0:541:C:H4'	1.70	0.91
1:0:1198:C:H5"	1:0:1199:U:C4'	1.99	0.91
1:0:693:A:H2'	1:0:694:G:H8	1.35	0.91
1:0:652:C:N4	1:0:657:A:H61	1.68	0.91
1:0:71:A:C2	1:0:75:C:H1'	2.05	0.91
1:0:1339:U:C5'	1:0:1994:U:H1'	2.01	0.91
1:0:1781:C:H2'	1:0:1782:A:C8	2.05	0.91
1:0:1254:G:H2'	1:0:1255:A:H8	1.35	0.91
1:0:1323:G:H1'	1:0:1627:C:H5"	1.52	0.91
1:0:1686:A:C2'	1:0:1687:C:H5'	2.01	0.91
1:0:1181:C:C2'	1:0:1182:U:H5"	2.01	0.90
1:0:2811:G:H2'	1:0:2812:A:C8	2.05	0.90
2:9:102:A:O2'	2:9:103:A:H5'	1.69	0.90
1:0:652:C:H42	1:0:657:A:N6	1.69	0.90
1:0:2636:A:H62	1:0:2643:G:H21	1.20	0.90
2:9:25:G:H2'	2:9:26:G:O4'	1.70	0.90
1:0:942:U:O2'	1:0:943:U:H5'	1.70	0.90
1:0:1142:G:O6	1:0:2008:C:H1'	1.72	0.90
1:0:759:C:H42	1:0:2591:C:P	1.93	0.90
1:0:1391:A:H2'	1:0:1392:U:C5	2.06	0.90
1:0:1391:A:H2'	1:0:1392:U:H5	1.37	0.90
1:0:159:A:H2'	1:0:160:C:C6	2.06	0.90
1:0:1392:U:H2'	1:0:1393:G:H5'	1.53	0.89
1:0:688:A:H1'	1:0:2422:C:O2'	1.73	0.89
1:0:1453:A:H2'	1:0:1454:U:H5'	1.54	0.89
1:0:1640:C:H2'	1:0:1641:C:H6	1.36	0.89
1:0:635:C:C2'	1:0:636:G:H5"	2.03	0.89
1:0:918:A:H2'	1:0:919:U:C5'	2.02	0.89
1:0:2541:U:H2'	1:0:2542:U:O4'	1.72	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2686:C:H2'	1:0:2687:G:C8	2.08	0.89
1:0:2811:G:H2'	1:0:2812:A:H8	1.36	0.89
1:0:367:G:H2'	1:0:368:A:H5"	1.55	0.89
1:0:831:G:C2'	1:0:832:A:H5"	2.02	0.89
1:0:755:C:H2'	1:0:756:C:C6	2.08	0.89
1:0:2321:C:H2'	1:0:2322:U:O4'	1.72	0.88
1:0:681:A:H2'	1:0:683:A:N7	1.87	0.88
1:0:1953:A:H1'	1:0:1955:G:H1'	1.55	0.88
1:0:1057:A:O5'	1:0:1058:G:H5'	1.73	0.88
1:0:2414:A:C2'	1:0:2415:G:H5"	2.02	0.88
1:0:2759:U:H5"	1:0:2760:G:OP2	1.74	0.88
1:0:2812:A:H2'	1:0:2813:G:H8	1.36	0.88
1:0:1135:C:H2'	1:0:1136:G:H8	1.37	0.88
2:9:67:C:H2'	2:9:68:A:H5'	1.53	0.88
1:0:1541:G:N2	1:0:1562:G:H22	1.70	0.88
1:0:2397:A:H2'	1:0:2398:U:O4'	1.74	0.88
1:0:776:G:H3'	1:0:776:G:N3	1.90	0.87
1:0:1672:A:C2	1:0:1673:C:H1'	2.10	0.87
1:0:1674:C:H2'	1:0:1675:C:C6	2.09	0.87
2:9:92:G:H2'	2:9:93:G:H5'	1.56	0.87
1:0:958:G:H2'	1:0:959:C:C6	2.08	0.87
1:0:1463:A:H1'	1:0:1543:G:N2	1.89	0.87
1:0:2686:C:H2'	1:0:2687:G:H8	1.40	0.87
1:0:103:U:H2'	1:0:104:C:C6	2.10	0.86
1:0:1147:G:O2'	1:0:1148:G:H5'	1.76	0.86
1:0:853:C:H1'	1:0:950:G:H22	1.41	0.86
1:0:792:U:O2'	1:0:793:G:H5'	1.75	0.86
1:0:1459:U:OP1	1:0:1459:U:H3'	1.74	0.86
1:0:1683:G:H2'	1:0:1684:G:H5'	1.58	0.86
1:0:128:C:H2'	1:0:129:A:C5'	2.02	0.86
1:0:831:G:H21	1:0:1203:A:N6	1.74	0.86
1:0:1514:C:H2'	1:0:1515:U:O4'	1.76	0.86
1:0:2790:C:H2'	1:0:2791:C:C6	2.11	0.85
1:0:2697:G:O2'	1:0:2698:G:H5'	1.76	0.85
1:0:2769:C:H3'	1:0:2770:A:C8	2.11	0.85
1:0:1202:U:H2'	1:0:1203:A:H8	1.40	0.85
1:0:2040:A:H2'	1:0:2041:A:H8	1.40	0.85
1:0:1640:C:H2'	1:0:1641:C:C6	2.10	0.85
1:0:523:A:H2	1:0:591:G:H4'	1.40	0.85
1:0:964:A:H2'	1:0:965:G:C8	2.11	0.85
2:9:67:C:C2'	2:9:68:A:H5'	2.06	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:701:U:H4'	1:0:1771:A:C2	2.11	0.85
1:0:1807:A:H1'	1:0:1809:G:H1'	1.57	0.85
1:0:2329:C:O2'	1:0:2330:G:H5'	1.76	0.85
1:0:1686:A:H2'	1:0:1687:C:H5'	1.57	0.85
1:0:1765:C:H4'	1:0:1962:C:O2	1.77	0.85
1:0:2558:C:H2'	1:0:2559:U:H6	1.40	0.85
1:0:2813:G:H2'	1:0:2814:G:H8	1.41	0.85
1:0:186:C:H2'	1:0:187:U:H6	1.39	0.85
1:0:734:G:H2'	1:0:735:G:H8	1.40	0.85
1:0:1065:A:H2'	1:0:1066:G:C8	2.12	0.85
1:0:1917:C:H2'	1:0:1918:G:O4'	1.76	0.85
1:0:2162:C:H2'	1:0:2163:U:C6	2.12	0.85
1:0:1073:G:H2'	1:0:1074:G:H5"	1.58	0.84
1:0:584:A:C4'	1:0:2038:C:N4	2.39	0.84
1:0:2756:A:N6	1:0:2762:G:H1'	1.92	0.84
1:0:2820:C:H2'	1:0:2821:G:H8	1.38	0.84
1:0:104:C:C2'	1:0:105:G:H5"	2.07	0.84
1:0:159:A:H2'	1:0:160:C:H6	1.42	0.84
1:0:2241:U:H4'	1:0:2307:A:C2	2.13	0.84
1:0:58:C:H3'	1:0:59:G:C5'	2.07	0.84
1:0:1226:A:N1	1:0:1250:A:H1'	1.93	0.84
2:9:102:A:C2'	2:9:103:A:H5'	2.06	0.84
1:0:1454:U:H2'	1:0:1455:C:O4'	1.77	0.84
1:0:678:G:H2'	1:0:679:C:H6	1.43	0.84
1:0:1618:U:O5'	1:0:1618:U:H6	1.61	0.84
1:0:1682:A:H61	1:0:1977:C:H42	1.23	0.84
1:0:60:A:H61	1:0:91:A:N6	1.74	0.84
1:0:460:U:O4	1:0:592:G:H1'	1.77	0.84
1:0:773:G:C2'	1:0:774:A:H5'	2.08	0.84
1:0:799:C:H2'	1:0:800:U:C6	2.13	0.84
1:0:50:G:H2'	1:0:117:A:N1	1.93	0.83
1:0:1469:U:H5'	1:0:1470:G:N7	1.92	0.83
1:0:689:A:H8	1:0:2422:C:H1'	1.43	0.83
1:0:1664:G:H4'	1:0:1665:C:OP1	1.78	0.83
1:0:931:G:H22	1:0:2247:A:H3'	1.42	0.83
1:0:2764:U:H2'	1:0:2765:C:C6	2.13	0.83
1:0:2769:C:H3'	1:0:2770:A:H8	1.41	0.83
1:0:2820:C:H2'	1:0:2821:G:C8	2.13	0.83
1:0:853:C:H1'	1:0:950:G:N2	1.93	0.83
1:0:1621:C:C4'	1:0:1626:A:N6	2.41	0.83
1:0:2329:C:H2'	1:0:2330:G:O4'	1.77	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2787:A:H2'	1:0:2788:C:H6	1.43	0.83
1:0:1284:G:C4	1:0:1633:C:H5'	2.14	0.83
1:0:1807:A:C1'	1:0:1809:G:H1'	2.08	0.83
1:0:2494:C:H2'	1:0:2495:G:C8	2.13	0.83
1:0:677:G:H1'	1:0:951:G:H5"	1.59	0.83
1:0:2038:C:H42	1:0:2479:U:H4'	1.41	0.83
2:9:7:C:O2'	2:9:8:C:H5'	1.78	0.83
2:9:31:A:H2'	2:9:32:C:H6	1.43	0.83
1:0:175:C:H42	1:0:225:G:H1	1.26	0.83
1:0:1293:A:O2'	1:0:1294:G:H5'	1.78	0.83
1:0:1469:U:H5'	1:0:1470:G:C8	2.12	0.83
1:0:1900:U:O2'	1:0:1946:U:H5'	1.77	0.83
1:0:428:A:H2'	1:0:429:C:C6	2.14	0.83
1:0:550:C:H2'	1:0:551:A:C8	2.14	0.83
1:0:712:A:H2'	1:0:713:G:O4'	1.79	0.83
1:0:1645:U:H2'	1:0:1646:G:C8	2.13	0.83
1:0:1959:U:H2'	1:0:1960:A:C8	2.14	0.83
1:0:796:A:H4'	1:0:2567:G:O3'	1.78	0.83
1:0:1541:G:H22	1:0:1562:G:N2	1.77	0.83
1:0:1791:C:C2'	1:0:1792:C:H5"	2.08	0.83
1:0:2607:C:H3'	1:0:2608:A:C5'	2.09	0.82
1:0:867:G:H2'	1:0:868:U:C6	2.14	0.82
1:0:1010:U:H2'	1:0:1011:A:C8	2.14	0.82
1:0:1052:C:H2'	1:0:1053:G:C8	2.14	0.82
1:0:2628:C:H2'	1:0:2629:U:C6	2.14	0.82
1:0:1355:A:N7	1:0:1410:U:H1'	1.93	0.82
1:0:1665:C:O2'	1:0:1666:G:H5'	1.79	0.82
1:0:1976:U:C2'	1:0:1977:C:H5'	2.10	0.82
1:0:2266:A:H2'	1:0:2268:G:C8	2.13	0.82
1:0:483:A:H2'	1:0:484:G:H5"	1.60	0.82
1:0:1174:G:O2'	1:0:1175:A:H5'	1.78	0.82
1:0:538:A:O5'	1:0:538:A:H8	1.63	0.82
1:0:820:U:H2'	1:0:821:A:C8	2.13	0.82
1:0:841:G:H2'	1:0:842:A:C8	2.14	0.82
1:0:1883:A:H1'	1:0:1953:A:H62	1.43	0.82
1:0:2824:C:N4	1:0:2842:C:H1'	1.94	0.82
1:0:524:A:O2'	1:0:525:A:H5'	1.79	0.82
1:0:995:A:H5"	1:0:996:C:H5	1.43	0.82
1:0:1291:G:O2'	1:0:1292:A:H5'	1.80	0.82
1:0:2319:G:H2'	1:0:2320:G:H8	1.40	0.82
1:0:1198:C:C5'	1:0:1199:U:H4'	2.08	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1470:G:H22	1:0:2684:A:H1'	1.45	0.81
1:0:571:U:H2'	1:0:581:A:C8	2.15	0.81
1:0:1106:A:H2'	1:0:1107:A:C8	2.15	0.81
1:0:1655:C:OP1	1:0:2690:A:H5'	1.79	0.81
1:0:2012:A:N7	1:0:2014:A:H5'	1.94	0.81
1:0:2327:U:H2'	1:0:2328:G:H8	1.42	0.81
1:0:2396:C:O2'	1:0:2397:A:H5'	1.81	0.81
1:0:2658:A:O2'	1:0:2659:C:H5'	1.79	0.81
1:0:1252:C:C2'	1:0:1253:C:H5"	2.10	0.81
1:0:1925:C:H2'	1:0:1926:U:H5	1.46	0.81
1:0:2078:G:N2	1:0:2178:U:H1'	1.95	0.81
1:0:2642:G:O2'	1:0:2643:G:H5'	1.81	0.81
1:0:468:A:O2'	1:0:469:G:H4'	1.81	0.81
1:0:478:G:H2'	1:0:479:G:H8	1.43	0.81
1:0:584:A:C4'	1:0:2038:C:H41	1.92	0.81
1:0:2194:A:C2'	1:0:2195:C:H5"	2.11	0.81
1:0:2199:C:H2'	1:0:2200:G:C8	2.14	0.81
1:0:2499:C:H41	1:0:2521:A:H2	1.26	0.81
1:0:652:C:H42	1:0:657:A:H61	0.85	0.81
1:0:799:C:H2'	1:0:800:U:H6	1.44	0.81
1:0:2788:C:O2'	1:0:2789:U:H5'	1.80	0.81
1:0:494:A:H2'	1:0:495:C:O4'	1.81	0.81
1:0:2468:G:H2'	1:0:2469:G:C5'	2.11	0.81
1:0:918:A:C2'	1:0:919:U:H5"	2.10	0.81
1:0:1068:A:H2'	1:0:1069:G:C8	2.15	0.81
1:0:1935:A:H2	1:0:2539:C:O2	1.64	0.81
1:0:432:C:H2'	1:0:433:G:H8	1.46	0.80
1:0:1323:G:H1'	1:0:1627:C:H5'	1.63	0.80
1:0:1791:C:H2'	1:0:1792:C:C5'	2.11	0.80
1:0:1807:A:O2'	1:0:1808:C:H4'	1.81	0.80
1:0:1489:C:H3'	1:0:1490:U:H5'	1.61	0.80
1:0:2040:A:H2'	1:0:2041:A:C8	2.15	0.80
1:0:2433:G:H2'	1:0:2434:G:H8	1.44	0.80
1:0:313:U:H2'	1:0:314:G:C8	2.16	0.80
1:0:755:C:H2'	1:0:756:C:H6	1.43	0.80
1:0:867:G:H2'	1:0:868:U:H6	1.45	0.80
1:0:1479:G:H2'	1:0:1480:G:C8	2.16	0.80
1:0:2508:G:H5"	1:0:2509:A:H5"	1.62	0.80
2:9:92:G:C2'	2:9:93:G:H5'	2.10	0.80
1:0:1430:G:N2	1:0:1599:G:H1'	1.96	0.80
1:0:1727:C:H4'	1:0:2833:C:O2	1.81	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1414:G:H21	1:0:1484:G:H21	1.27	0.80
1:0:2185:U:H2'	1:0:2186:G:C8	2.16	0.80
1:0:58:C:H1'	1:0:72:A:C8	2.17	0.80
1:0:2669:C:H41	14:L:15:SER:CA	1.94	0.80
1:0:2856:U:H2'	1:0:2857:C:H6	1.47	0.80
1:0:2672:U:H2'	1:0:2673:G:H8	1.47	0.80
1:0:523:A:C2	1:0:591:G:H4'	2.16	0.79
1:0:2783:U:H2'	1:0:2784:A:H4'	1.64	0.79
1:0:170:U:O2'	1:0:171:G:H5'	1.82	0.79
1:0:693:A:H2'	1:0:694:G:C8	2.16	0.79
1:0:1621:C:H4'	1:0:1626:A:H62	1.44	0.79
1:0:1764:A:C5	1:0:1821:A:H1'	2.17	0.79
2:9:4:C:H2'	2:9:5:C:C6	2.17	0.79
1:0:870:C:H2'	1:0:871:U:H6	1.47	0.79
1:0:2758:A:H4'	1:0:2759:U:H5	1.47	0.79
1:0:512:A:H2'	1:0:513:A:H5'	1.64	0.79
1:0:969:U:N3	2:9:92:G:H4'	1.96	0.79
1:0:1719:G:H2'	1:0:1720:G:H8	1.47	0.79
1:0:2012:A:C5	1:0:2014:A:H5'	2.18	0.79
1:0:1655:C:H5"	1:0:2689:C:O2'	1.82	0.79
1:0:1222:G:H1'	1:0:1251:G:N2	1.98	0.79
1:0:1226:A:C2	1:0:1250:A:H1'	2.16	0.79
1:0:1692:C:H2'	1:0:1693:A:C5'	2.13	0.79
1:0:369:C:H2'	1:0:370:U:C6	2.18	0.79
1:0:1004:A:H2'	1:0:1005:U:H5'	1.63	0.79
1:0:218:A:O2'	1:0:219:G:H4'	1.82	0.79
1:0:317:U:H3	1:0:321:A:H62	1.28	0.79
1:0:1847:G:H2'	1:0:1848:U:C6	2.18	0.79
1:0:1888:C:H5"	1:0:1889:G:H5"	1.65	0.79
1:0:986:A:C8	1:0:987:G:C8	2.71	0.79
1:0:1004:A:H2'	1:0:1005:U:C5'	2.13	0.79
1:0:1486:A:H2'	1:0:1487:C:C6	2.17	0.79
1:0:2469:G:H4'	1:0:2470:U:H5	1.46	0.79
1:0:826:U:H2'	1:0:827:C:C6	2.18	0.78
1:0:2177:U:H2'	1:0:2178:U:C6	2.18	0.78
1:0:584:A:H2'	1:0:585:U:H6	1.48	0.78
1:0:927:C:C2'	1:0:928:G:H5'	2.13	0.78
1:0:1026:U:H2'	1:0:1027:C:C6	2.18	0.78
1:0:1407:G:H2'	1:0:1408:A:O4'	1.83	0.78
1:0:60:A:H61	1:0:91:A:H61	1.31	0.78
1:0:1474:A:H3'	1:0:1474:A:N3	1.98	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:11:G:H2'	1:0:12:U:O4'	1.84	0.78
1:0:2791:C:O2'	1:0:2792:C:H5'	1.83	0.78
1:0:956:A:C2	1:0:2427:A:O2'	2.37	0.78
1:0:1621:C:H4'	1:0:1626:A:H61	1.49	0.78
1:0:1218:C:H2'	1:0:1219:C:H6	1.43	0.78
1:0:1341:G:H2'	1:0:1343:C:C4	2.19	0.78
1:0:2817:A:C2	1:0:2851:G:C2	2.72	0.78
1:0:1409:U:H5"	1:0:1410:U:OP2	1.84	0.78
1:0:1453:A:C2'	1:0:1454:U:H5'	2.14	0.78
1:0:1989:C:O2'	1:0:1990:U:H5'	1.84	0.78
1:0:2448:A:H2'	1:0:2449:G:O4'	1.84	0.78
2:9:93:G:H2'	2:9:94:G:H8	1.49	0.78
1:0:677:G:C1'	1:0:951:G:H5"	2.13	0.77
1:0:1636:G:H2'	1:0:1637:U:H6	1.46	0.77
1:0:2468:G:C2'	1:0:2469:G:H5'	2.14	0.77
1:0:1674:C:H2'	1:0:1675:C:H6	1.48	0.77
2:9:58:G:H4'	2:9:59:A:H5'	1.65	0.77
1:0:343:A:H2'	1:0:345:U:OP2	1.84	0.77
1:0:2503:G:H2'	1:0:2504:G:H5"	1.65	0.77
1:0:922:A:C2'	1:0:923:A:H8	1.94	0.77
1:0:1254:G:H2'	1:0:1255:A:C8	2.18	0.77
1:0:1572:C:H2'	1:0:1573:G:C5'	2.10	0.77
1:0:932:G:H2'	1:0:933:G:C8	2.19	0.77
1:0:1183:C:H42	1:0:1190:C:H42	1.33	0.77
1:0:640:C:H2'	1:0:641:G:O4'	1.85	0.77
1:0:1685:A:H1'	1:0:1686:A:C2	2.20	0.77
1:0:1861:G:O2'	1:0:1862:C:H5'	1.85	0.77
1:0:1666:G:H2'	1:0:1667:A:H8	1.48	0.77
1:0:2005:U:H2'	1:0:2595:C:O2'	1.84	0.77
2:9:84:G:H2'	2:9:85:G:H8	1.48	0.77
1:0:456:C:O2'	1:0:457:C:H5'	1.85	0.77
1:0:632:A:H2'	1:0:633:G:H5'	1.66	0.77
1:0:776:G:H2'	1:0:778:G:H5"	1.67	0.77
1:0:1280:U:C2'	1:0:1281:A:H5'	2.15	0.77
1:0:1470:G:N2	1:0:2684:A:H1'	2.00	0.77
1:0:2201:G:H2'	1:0:2202:G:H8	1.50	0.77
1:0:1479:G:H2'	1:0:1480:G:H8	1.48	0.76
1:0:1700:C:H2'	1:0:1701:C:C6	2.20	0.76
1:0:1280:U:H2'	1:0:1281:A:H5'	1.67	0.76
1:0:2539:C:H42	1:0:2540:A:N6	1.84	0.76
1:0:958:G:H2'	1:0:959:C:H6	1.47	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1284:G:N3	1:0:1633:C:H5'	2.00	0.76
1:0:2233:C:H2'	1:0:2234:G:H8	1.49	0.76
1:0:1299:A:N6	1:0:1302:C:C4	2.53	0.76
1:0:1323:G:C1'	1:0:1627:C:H5"	2.14	0.76
1:0:1747:G:H4'	1:0:1749:G:H1'	1.68	0.76
1:0:2548:G:C2'	1:0:2549:G:H5"	2.15	0.76
1:0:79:G:H2'	1:0:80:A:H8	1.50	0.76
1:0:951:G:H2'	1:0:952:A:H5"	1.67	0.76
1:0:1911:A:C2'	1:0:1912:G:H5'	2.16	0.76
1:0:2770:A:H4'	1:0:2867:G:H22	1.48	0.76
1:0:186:C:H2'	1:0:187:U:C6	2.21	0.76
1:0:1383:C:H2'	1:0:1384:G:C8	2.21	0.76
1:0:195:A:H61	1:0:212:U:H4'	1.50	0.76
1:0:977:G:H5'	1:0:2251:U:O2	1.86	0.76
1:0:1355:A:C8	1:0:1410:U:H1'	2.21	0.76
1:0:2019:C:O2'	1:0:2020:G:H5'	1.84	0.76
1:0:2380:U:H2'	1:0:2381:A:H5'	1.66	0.76
1:0:2498:U:H2'	1:0:2520:A:N1	2.01	0.76
1:0:1715:A:H1'	1:0:1717:A:C4'	2.15	0.76
1:0:2209:G:H2'	1:0:2210:C:H6	1.51	0.76
1:0:590:C:H2'	1:0:591:G:C8	2.21	0.76
1:0:1586:A:H2'	1:0:1587:A:C8	2.21	0.76
1:0:81:C:H4'	1:0:307:C:H5'	1.68	0.76
1:0:560:G:H21	1:0:1233:A:H2	1.32	0.76
1:0:575:U:H2'	1:0:576:A:C8	2.21	0.76
1:0:2764:U:H2'	1:0:2765:C:H6	1.48	0.75
1:0:520:C:H2'	1:0:521:U:O4'	1.86	0.75
1:0:1363:C:O2'	1:0:1364:C:H5'	1.85	0.75
1:0:1373:G:H2'	1:0:1374:G:H5'	1.67	0.75
1:0:521:U:H5	1:0:522:G:N3	1.84	0.75
1:0:837:U:H2'	1:0:838:A:H8	1.48	0.75
1:0:1655:C:H4'	1:0:2689:C:O2	1.86	0.75
1:0:2194:A:H2'	1:0:2195:C:H5"	1.67	0.75
1:0:2241:U:H4'	1:0:2307:A:H2	1.48	0.75
1:0:1760:G:H1'	1:0:1941:C:OP1	1.86	0.75
1:0:2570:C:H2'	1:0:2571:G:C8	2.21	0.75
1:0:79:G:O2'	1:0:80:A:H5'	1.86	0.75
1:0:391:C:O2'	1:0:392:G:H5'	1.86	0.75
1:0:2756:A:C6	1:0:2762:G:H1'	2.21	0.75
1:0:543:G:H2'	1:0:544:U:C6	2.21	0.75
1:0:991:A:H62	1:0:992:A:N6	1.85	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1619:A:H2	1:0:1620:C:C4	2.04	0.75
1:0:2378:G:N2	1:0:2397:A:H1'	2.01	0.75
1:0:703:A:H2'	1:0:704:G:H8	1.49	0.75
1:0:2733:A:O2'	1:0:2734:U:H5'	1.87	0.75
1:0:2758:A:H4'	1:0:2759:U:C5	2.22	0.75
32:0:2881:MUL:H14	32:0:2881:MUL:H10	1.67	0.75
2:9:31:A:H2'	2:9:32:C:C6	2.22	0.75
1:0:785:U:H5'	1:0:1368:G:O2'	1.86	0.75
1:0:1348:C:H2'	1:0:1349:A:H8	1.52	0.75
1:0:1541:G:H22	1:0:1562:G:H22	1.30	0.75
1:0:442:A:H62	1:0:443:A:N6	1.85	0.74
1:0:488:A:H8	1:0:488:A:OP1	1.69	0.74
1:0:859:U:H4'	1:0:860:U:C5	2.21	0.74
2:9:12:C:H2'	2:9:13:C:O4'	1.87	0.74
1:0:796:A:C5'	1:0:2568:A:OP1	2.31	0.74
1:0:836:G:H2'	1:0:837:U:H6	1.52	0.74
1:0:1750:A:H1'	1:0:2690:A:C2	2.22	0.74
1:0:1362:A:O5'	1:0:1362:A:H8	1.70	0.74
1:0:1445:A:H2'	1:0:1446:U:O4'	1.86	0.74
1:0:1489:C:H3'	1:0:1490:U:C5'	2.18	0.74
2:9:6:C:H2'	2:9:7:C:C6	2.22	0.74
1:0:976:C:H5'	1:0:2252:A:H1'	1.69	0.74
1:0:2742:G:H2'	1:0:2743:G:C8	2.22	0.74
1:0:2829:A:H2'	1:0:2830:U:O4'	1.86	0.74
1:0:2832:G:N2	1:0:2835:A:OP2	2.21	0.74
1:0:107:G:C6	1:0:108:G:N7	2.55	0.74
1:0:1660:G:H2'	1:0:1661:C:O4'	1.87	0.74
1:0:1791:C:H1'	1:0:1793:A:H5'	1.68	0.74
1:0:88:G:H3'	1:0:89:A:H5"	1.70	0.74
1:0:392:G:N2	1:0:408:U:H3	1.86	0.74
1:0:633:G:O2'	1:0:634:G:H5'	1.88	0.74
1:0:1970:G:O2'	1:0:1971:C:H5'	1.87	0.74
1:0:2185:U:H2'	1:0:2186:G:H8	1.51	0.74
1:0:1941:C:O2'	1:0:1942:G:H5'	1.87	0.74
1:0:1999:U:H2'	1:0:2000:U:O4'	1.87	0.74
1:0:83:A:H2	1:0:98:U:H1'	1.50	0.74
1:0:167:A:H2'	1:0:168:A:C8	2.23	0.74
1:0:556:A:H2'	1:0:557:U:H5'	1.70	0.74
1:0:1271:C:H2'	1:0:1272:G:C8	2.23	0.74
1:0:1083:C:H42	1:0:1103:C:H41	1.36	0.74
1:0:1164:C:H2'	1:0:1165:G:C8	2.23	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:759:C:C2	1:0:2590:U:H4'	2.22	0.73
1:0:1503:G:H2'	1:0:1504:G:C8	2.23	0.73
1:0:1825:C:O2'	1:0:1826:U:H5'	1.88	0.73
2:9:36:A:H2'	2:9:46:G:O6	1.88	0.73
1:0:579:G:H2'	1:0:2013:A:N6	2.03	0.73
1:0:1125:G:H2'	1:0:1126:A:C8	2.22	0.73
1:0:1463:A:C1'	1:0:1543:G:H22	1.98	0.73
1:0:1222:G:C1'	1:0:1251:G:N2	2.52	0.73
1:0:1773:C:O5'	1:0:1773:C:H6	1.72	0.73
1:0:537:C:H1'	1:0:2759:U:O2	1.88	0.73
1:0:875:G:N2	1:0:928:G:H1'	2.03	0.73
1:0:1312:G:H5"	1:0:1313:U:H5"	1.70	0.73
1:0:1459:U:H2'	1:0:1475:U:O2'	1.88	0.73
1:0:1621:C:H2'	1:0:1622:G:O4'	1.89	0.73
1:0:2288:A:H2'	1:0:2289:A:O4'	1.88	0.73
1:0:2484:G:H3'	1:0:2555:G:N2	2.00	0.73
1:0:708:G:H1	1:0:780:U:H3	1.36	0.73
1:0:1619:A:H2	1:0:1620:C:C5	2.06	0.73
1:0:1135:C:H2'	1:0:1136:G:C8	2.22	0.73
1:0:2491:C:H2'	1:0:2492:G:O4'	1.88	0.73
1:0:1271:C:H2'	1:0:1272:G:H8	1.54	0.73
1:0:1692:C:H2'	1:0:1693:A:H5'	1.70	0.73
1:0:1938:U:C2'	1:0:1939:U:H5'	2.19	0.73
1:0:2059:U:P	1:0:2217:G:H1	2.12	0.73
1:0:2418:A:H2	1:0:2564:U:H4'	1.54	0.73
1:0:616:U:C2'	1:0:617:U:H5"	2.15	0.73
1:0:651:C:H2'	1:0:652:C:H5"	1.70	0.73
1:0:2177:U:H2'	1:0:2178:U:H6	1.51	0.73
1:0:2475:C:H2'	1:0:2476:A:H5'	1.70	0.73
1:0:759:C:N3	1:0:2590:U:O3'	2.22	0.73
1:0:831:G:H2'	1:0:832:A:H5"	1.70	0.73
1:0:2079:A:H2'	1:0:2080:U:C6	2.24	0.73
1:0:400:U:H4'	1:0:401:G:C5	2.24	0.72
1:0:649:G:H2'	1:0:650:U:H6	1.54	0.72
1:0:1110:G:H2'	1:0:1111:C:C6	2.24	0.72
1:0:2245:A:H4'	1:0:2246:A:C5	2.23	0.72
1:0:2847:G:C2	1:0:2848:A:N6	2.57	0.72
1:0:704:G:H2'	1:0:705:C:H6	1.53	0.72
1:0:808:C:H2'	1:0:809:C:C6	2.24	0.72
1:0:836:G:O2'	1:0:837:U:H5'	1.90	0.72
1:0:1653:C:H2'	1:0:1654:A:C8	2.24	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2052:G:H2'	1:0:2053:G:H5'	1.70	0.72
1:0:687:G:O2'	1:0:688:A:H5'	1.89	0.72
1:0:704:G:O2'	1:0:705:C:H5'	1.90	0.72
1:0:1691:G:H21	1:0:1694:A:H61	1.36	0.72
1:0:2515:G:H2'	1:0:2516:U:C6	2.24	0.72
1:0:79:G:H2'	1:0:80:A:C8	2.24	0.72
1:0:457:C:H2'	1:0:458:G:O4'	1.88	0.72
1:0:677:G:H4'	1:0:951:G:O3'	1.90	0.72
1:0:2639:A:H2'	1:0:2640:G:H8	1.54	0.72
2:9:78:A:H2'	2:9:79:U:C6	2.24	0.72
1:0:313:U:H2'	1:0:314:G:H8	1.51	0.72
1:0:1008:G:O2'	1:0:1009:C:H5'	1.89	0.72
1:0:2592:U:H3'	1:0:2592:U:H6	1.55	0.72
1:0:2656:G:C2	1:0:2711:G:C2	2.78	0.72
1:0:2672:U:H2'	1:0:2673:G:C8	2.24	0.72
1:0:1125:G:H2'	1:0:1126:A:H8	1.54	0.72
1:0:473:C:H2'	1:0:474:G:H8	1.54	0.72
1:0:2262:C:H2'	1:0:2263:C:H6	1.55	0.72
1:0:2466:G:O2'	1:0:2467:A:H5'	1.89	0.72
1:0:2639:A:H2'	1:0:2640:G:C8	2.24	0.72
1:0:2693:U:H5"	1:0:2694:G:OP2	1.90	0.72
1:0:1800:A:H2'	1:0:1802:A:H62	1.55	0.72
1:0:550:C:H2'	1:0:551:A:H8	1.55	0.72
1:0:698:A:HO2'	1:0:700:C:H5	1.37	0.72
1:0:976:C:H2'	1:0:977:G:C8	2.25	0.72
1:0:1190:C:H2'	1:0:1191:G:C8	2.24	0.72
1:0:2225:G:H2'	1:0:2226:A:C8	2.25	0.72
1:0:757:U:O2	1:0:767:G:N2	2.23	0.71
1:0:1140:A:C2	1:0:2549:G:O4'	2.43	0.71
1:0:2740:C:O2'	1:0:2741:G:H5'	1.90	0.71
1:0:357:A:H3'	1:0:358:C:H5'	1.71	0.71
1:0:167:A:H3'	1:0:181:A:C2	2.25	0.71
1:0:366:U:H2'	1:0:367:G:C8	2.25	0.71
1:0:498:C:C5	1:0:499:G:N7	2.58	0.71
1:0:930:A:C8	2:9:82:U:H4'	2.25	0.71
1:0:1287:A:C6	1:0:1315:A:C2	2.77	0.71
1:0:2162:C:H2'	1:0:2163:U:H6	1.50	0.71
1:0:2447:G:O2'	1:0:2448:A:C5'	2.37	0.71
1:0:2808:U:H3'	1:0:2809:A:H5'	1.70	0.71
1:0:1641:C:H3'	1:0:1642:G:H8	1.53	0.71
2:9:28:A:C2	2:9:29:C:H1'	2.26	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:29:C:H2'	2:9:30:C:C6	2.26	0.71
1:0:74:G:H2'	1:0:75:C:H6	1.55	0.71
1:0:1199:U:H3'	1:0:1200:G:H5"	1.72	0.71
1:0:1313:U:H4'	1:0:1314:A:C1'	2.20	0.71
1:0:2367:A:N7	1:0:2368:G:C6	2.58	0.71
1:0:2523:G:O2'	1:0:2524:G:H5'	1.90	0.71
1:0:471:A:C2	1:0:481:A:C4	2.78	0.71
1:0:876:A:H4'	2:9:103:A:N3	2.05	0.71
1:0:1223:G:N2	1:0:1225:G:H21	1.89	0.71
1:0:1248:G:O2'	1:0:1249:G:H5'	1.91	0.71
1:0:1679:U:H2'	1:0:1680:U:O4'	1.89	0.71
1:0:1780:A:H8	1:0:1780:A:O5'	1.72	0.71
1:0:1785:A:H4'	1:0:1883:A:C2	2.25	0.71
1:0:2650:G:O2'	1:0:2651:U:H5'	1.90	0.71
1:0:2824:C:H1'	1:0:2843:A:N1	2.05	0.71
1:0:236:C:H2'	1:0:237:G:H8	1.56	0.71
1:0:322:A:H1'	1:0:343:A:C5	2.26	0.71
1:0:1333:G:N2	1:0:1344:C:N4	2.38	0.71
1:0:1517:C:H2'	1:0:1518:C:C6	2.26	0.71
1:0:2052:G:C2'	1:0:2053:G:H5'	2.20	0.71
1:0:2327:U:H2'	1:0:2328:G:C8	2.25	0.71
2:9:40:C:H2'	2:9:41:A:O4'	1.90	0.71
1:0:852:U:H2'	1:0:853:C:C6	2.26	0.71
1:0:1497:C:O2'	1:0:1498:G:H5'	1.90	0.71
1:0:1572:C:C3'	1:0:1573:G:H5"	2.20	0.71
1:0:1855:G:H2'	1:0:1856:U:C6	2.25	0.71
2:9:4:C:H2'	2:9:5:C:H6	1.53	0.71
1:0:17:G:H2'	1:0:18:U:C6	2.26	0.71
1:0:181:A:H5"	1:0:182:G:OP1	1.90	0.71
1:0:1624:A:H2'	1:0:1625:A:H5"	1.72	0.71
1:0:2015:G:H22	1:0:2038:C:H1'	1.55	0.71
1:0:2633:A:H4'	1:0:2634:G:H4'	1.72	0.71
1:0:2739:G:O2'	1:0:2740:C:H5'	1.91	0.71
1:0:2785:A:H2'	1:0:2786:G:O4'	1.90	0.71
1:0:984:A:H2	1:0:1200:G:N1	1.83	0.70
1:0:1519:G:O2'	1:0:1520:G:H5'	1.91	0.70
1:0:1671:A:H2'	1:0:1672:A:H8	1.55	0.70
1:0:1975:G:N2	1:0:1978:U:H5	1.89	0.70
1:0:2627:G:H21	11:I:38:GLY:CA	2.04	0.70
1:0:2856:U:C6	1:0:2857:C:H5	2.09	0.70
1:0:1333:G:N2	1:0:1344:C:H41	1.89	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2532:G:C2	1:0:2533:U:H1'	2.25	0.70
1:0:139:A:H2'	1:0:140:G:H8	1.56	0.70
1:0:191:G:O2'	1:0:192:G:H5'	1.91	0.70
1:0:798:G:O2'	1:0:1770:U:H4'	1.91	0.70
1:0:2856:U:H2'	1:0:2857:C:C6	2.26	0.70
1:0:461:A:C2	1:0:462:G:C4	2.79	0.70
1:0:825:C:O2'	1:0:826:U:H5'	1.91	0.70
1:0:1800:A:H2'	1:0:1802:A:C6	2.27	0.70
1:0:545:C:O2'	1:0:546:A:H5'	1.92	0.70
1:0:743:A:C2	1:0:744:C:C2	2.80	0.70
1:0:772:G:H2'	1:0:773:G:C8	2.18	0.70
1:0:998:C:H2'	1:0:999:A:O4'	1.91	0.70
1:0:1816:G:O2'	1:0:1817:U:H5'	1.92	0.70
1:0:1939:U:H1'	1:0:2531:U:OP1	1.92	0.70
1:0:1990:U:C4	1:0:1991:C:N4	2.60	0.70
1:0:2216:G:O5'	1:0:2216:G:H8	1.74	0.70
1:0:2502:G:C8	1:0:2745:A:N7	2.59	0.70
1:0:81:C:H2'	1:0:82:G:O4'	1.91	0.70
1:0:369:C:H2'	1:0:370:U:H6	1.56	0.70
1:0:759:C:N4	1:0:2591:C:P	2.64	0.70
1:0:957:G:O2'	1:0:958:G:H5'	1.91	0.70
1:0:233:A:O2'	1:0:234:C:H5'	1.91	0.70
1:0:857:U:H2'	1:0:858:G:H5'	1.73	0.70
1:0:2474:G:H2'	1:0:2475:C:O4'	1.90	0.70
1:0:2527:G:H2'	1:0:2528:G:O4'	1.92	0.70
1:0:2563:U:H2'	1:0:2564:U:H5"	1.72	0.70
1:0:2839:G:H2'	1:0:2840:U:O4'	1.91	0.70
1:0:441:A:H2'	1:0:442:A:O4'	1.90	0.70
1:0:474:G:C2	1:0:478:G:C6	2.80	0.70
1:0:977:G:O2'	1:0:978:U:H5'	1.91	0.70
1:0:995:A:H5"	1:0:996:C:C5	2.26	0.70
1:0:1073:G:C2'	1:0:1074:G:H5"	2.21	0.70
1:0:1715:A:O2'	1:0:1716:G:H3'	1.91	0.70
1:0:2225:G:H2'	1:0:2226:A:H8	1.54	0.70
1:0:797:A:N6	1:0:2055:G:O2'	2.25	0.70
1:0:941:U:O2'	1:0:942:U:H5'	1.91	0.70
1:0:1135:C:O2'	1:0:1136:G:H5'	1.92	0.70
1:0:1514:C:H5'	1:0:1593:C:H4'	1.73	0.70
1:0:2583:U:C2'	1:0:2584:U:H5'	2.22	0.70
1:0:436:A:OP1	1:0:437:G:H5"	1.91	0.70
1:0:457:C:C2'	1:0:458:G:H5'	2.21	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:699:G:H2'	1:0:699:G:N3	2.07	0.70
1:0:708:G:H1'	1:0:1392:U:O2	1.92	0.69
1:0:1348:C:H2'	1:0:1349:A:C8	2.27	0.69
1:0:1656:U:O2'	1:0:1657:A:H5"	1.91	0.69
1:0:1682:A:N6	1:0:1977:C:H42	1.89	0.69
1:0:2587:G:H8	1:0:2587:G:O5'	1.75	0.69
2:9:42:U:H2'	2:9:45:C:H41	1.57	0.69
1:0:31:C:H2'	1:0:32:C:C6	2.27	0.69
1:0:60:A:N6	1:0:91:A:H61	1.89	0.69
1:0:317:U:H3	1:0:321:A:N6	1.91	0.69
1:0:1370:U:O2'	1:0:1371:G:H5'	1.92	0.69
1:0:1663:C:O5'	1:0:1663:C:H6	1.75	0.69
1:0:1740:G:O2'	1:0:1741:G:H5'	1.91	0.69
1:0:2212:U:H2'	1:0:2213:G:C8	2.28	0.69
1:0:912:A:H2'	1:0:913:A:H8	1.57	0.69
1:0:2585:C:H2'	1:0:2586:G:H8	1.57	0.69
1:0:83:A:C2	1:0:98:U:H1'	2.27	0.69
1:0:310:A:O2'	1:0:311:A:H5'	1.91	0.69
1:0:334:G:N3	1:0:344:G:H1'	2.07	0.69
1:0:1411:C:H2'	1:0:1412:C:H6	1.58	0.69
1:0:2372:A:H2'	1:0:2373:C:O4'	1.92	0.69
1:0:321:A:H2'	1:0:323:G:N7	2.08	0.69
1:0:330:C:H2'	1:0:331:U:C6	2.28	0.69
1:0:1095:A:H2'	1:0:1096:A:O4'	1.92	0.69
1:0:2450:A:H2'	1:0:2451:G:O4'	1.92	0.69
1:0:2660:C:O2'	1:0:2661:G:H5'	1.92	0.69
1:0:337:G:H2'	1:0:338:G:H8	1.57	0.69
1:0:638:A:O2'	1:0:639:G:H5'	1.92	0.69
1:0:792:U:C2'	1:0:793:G:H5'	2.22	0.69
1:0:1933:G:H8	1:0:1933:G:O5'	1.76	0.69
1:0:29:U:H2'	1:0:30:G:C8	2.28	0.69
1:0:763:A:C2	1:0:765:C:H1'	2.28	0.69
1:0:1151:U:H5"	1:0:1153:A:H5'	1.74	0.69
1:0:446:C:H2'	1:0:447:U:O4'	1.92	0.69
1:0:1040:A:H2'	1:0:1041:G:H5'	1.73	0.69
1:0:1531:C:H2'	1:0:1532:A:H5'	1.75	0.69
1:0:2508:G:C5'	1:0:2509:A:H5"	2.22	0.69
1:0:2558:C:H2'	1:0:2559:U:C6	2.27	0.69
1:0:1657:A:O2'	1:0:1658:A:H5'	1.91	0.68
1:0:143:A:H2'	1:0:144:U:O4'	1.93	0.68
1:0:495:C:H2'	1:0:496:C:C6	2.28	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:969:U:C4	2:9:92:G:H4'	2.27	0.68
1:0:1373:G:C2'	1:0:1374:G:H5'	2.23	0.68
1:0:1657:A:H2'	1:0:1658:A:O4'	1.93	0.68
1:0:239:A:C5'	1:0:620:G:H5'	2.23	0.68
1:0:322:A:N1	1:0:341:A:P	2.66	0.68
1:0:429:C:H2'	1:0:430:C:C6	2.29	0.68
1:0:833:A:N3	1:0:954:U:O2'	2.26	0.68
1:0:1203:A:H2'	1:0:1203:A:N3	2.08	0.68
1:0:1451:C:H2'	1:0:1452:U:H6	1.58	0.68
1:0:1457:A:O2'	1:0:1458:A:H5'	1.93	0.68
1:0:1700:C:H2'	1:0:1701:C:H6	1.56	0.68
1:0:2495:G:H2'	1:0:2496:C:O4'	1.93	0.68
1:0:2657:G:O2'	1:0:2658:A:H5'	1.93	0.68
1:0:1085:G:H2'	1:0:1086:C:C6	2.28	0.68
1:0:1144:U:O2'	1:0:1145:C:H5"	1.94	0.68
1:0:1281:A:C2	1:0:1996:A:C6	2.82	0.68
1:0:1858:C:H2'	1:0:1859:A:H8	1.58	0.68
1:0:2494:C:H2'	1:0:2495:G:H8	1.58	0.68
1:0:827:C:H2'	1:0:828:C:C6	2.28	0.68
1:0:1317:G:O2'	1:0:1318:A:H5'	1.92	0.68
1:0:1823:G:H2'	1:0:1824:C:C6	2.29	0.68
1:0:2299:A:H5"	1:0:2300:G:C4	2.28	0.68
1:0:239:A:H5"	1:0:620:G:H5'	1.75	0.68
1:0:314:G:H2'	1:0:315:G:C8	2.28	0.68
1:0:392:G:H22	1:0:408:U:H3	1.42	0.68
1:0:703:A:O2'	1:0:704:G:H5'	1.93	0.68
1:0:1182:U:H2'	1:0:1183:C:H5"	1.76	0.68
1:0:1598:C:H2'	1:0:1599:G:O4'	1.93	0.68
1:0:1605:A:O2'	1:0:1606:C:H5'	1.93	0.68
1:0:2006:G:N2	1:0:2024:U:H1'	2.08	0.68
1:0:394:U:O2'	1:0:395:G:H5'	1.94	0.68
1:0:1289:A:O2'	1:0:1290:A:H5'	1.93	0.68
1:0:2006:G:H2'	1:0:2007:G:H8	1.58	0.68
1:0:2642:G:H2'	1:0:2643:G:H8	1.59	0.68
1:0:1436:G:H2'	1:0:1437:A:C8	2.29	0.68
1:0:1692:C:H2'	1:0:1693:A:O5'	1.94	0.68
1:0:2040:A:O2'	1:0:2041:A:H5'	1.94	0.68
1:0:2245:A:H4'	1:0:2246:A:C6	2.29	0.68
1:0:698:A:C1'	1:0:700:C:H41	2.06	0.68
1:0:781:G:O2'	1:0:782:U:H5'	1.94	0.68
1:0:915:C:H2'	1:0:916:U:C6	2.29	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1017:C:O2'	1:0:1018:C:H5'	1.93	0.68
1:0:1926:U:O5'	1:0:1926:U:H6	1.76	0.68
1:0:68:C:H1'	1:0:72:A:H1'	1.74	0.67
1:0:853:C:C2	1:0:950:G:N1	2.62	0.67
1:0:1656:U:C2'	1:0:1657:A:H5"	2.23	0.67
1:0:216:U:O5'	1:0:216:U:H6	1.77	0.67
1:0:311:A:H2	1:0:334:G:N2	1.92	0.67
1:0:344:G:C2	1:0:345:U:C6	2.82	0.67
1:0:357:A:H3'	1:0:358:C:C5'	2.24	0.67
1:0:362:C:H2'	1:0:363:G:H4'	1.75	0.67
1:0:829:C:C2	1:0:1206:G:N2	2.63	0.67
1:0:1685:A:N7	1:0:1691:G:C5	2.62	0.67
1:0:1687:C:H1'	1:0:1976:U:O2	1.95	0.67
1:0:1715:A:H1'	1:0:1717:A:O4'	1.94	0.67
1:0:1769:U:N3	1:0:1775:A:H1'	2.09	0.67
1:0:1927:U:O2	1:0:1927:U:H2'	1.93	0.67
1:0:2585:C:H2'	1:0:2586:G:C8	2.30	0.67
1:0:2585:C:O2'	1:0:2586:G:H5'	1.94	0.67
1:0:2839:G:H2'	1:0:2840:U:C6	2.29	0.67
1:0:1076:U:H6	1:0:1076:U:O5'	1.78	0.67
1:0:2645:C:H2'	1:0:2646:C:H5'	1.76	0.67
1:0:297:A:H2'	1:0:298:C:C6	2.28	0.67
1:0:417:C:O5'	1:0:417:C:H6	1.76	0.67
1:0:571:U:N3	1:0:581:A:N6	2.43	0.67
1:0:1764:A:N7	1:0:1821:A:H1'	2.08	0.67
1:0:2475:C:C2'	1:0:2476:A:H5'	2.24	0.67
1:0:2499:C:H2'	1:0:2500:C:H6	1.59	0.67
1:0:861:G:H22	1:0:943:U:H4'	1.59	0.67
1:0:1000:G:P	1:0:1168:G:H4'	2.35	0.67
1:0:1212:U:C2	1:0:1213:U:C5	2.83	0.67
1:0:1654:A:H4'	1:0:2690:A:O2'	1.94	0.67
1:0:2502:G:H1'	1:0:2745:A:C8	2.29	0.67
1:0:2824:C:H42	1:0:2842:C:C1'	2.06	0.67
2:9:45:C:H42	2:9:47:A:H62	1.40	0.67
1:0:71:A:H2	1:0:75:C:C1'	2.07	0.67
1:0:235:C:H2'	1:0:236:C:H5'	1.77	0.67
1:0:425:A:N7	1:0:2390:A:H2	1.92	0.67
1:0:589:C:N4	1:0:590:C:N4	2.43	0.67
1:0:600:G:H3'	1:0:601:A:C5'	2.25	0.67
1:0:872:G:O2'	1:0:2247:A:C5	2.46	0.67
1:0:1068:A:H2'	1:0:1069:G:H8	1.58	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2159:A:H8	1:0:2159:A:O5'	1.78	0.67
1:0:2583:U:O2'	1:0:2584:U:H5'	1.95	0.67
2:9:30:C:O5'	2:9:30:C:H6	1.78	0.67
1:0:516:G:O2'	1:0:517:A:C8	2.47	0.67
1:0:915:C:H2'	1:0:916:U:H6	1.59	0.67
1:0:1012:A:C2'	1:0:1013:G:H5'	2.23	0.67
1:0:14:A:C2	1:0:2603:G:N2	2.63	0.67
1:0:322:A:N1	1:0:341:A:OP1	2.27	0.67
1:0:322:A:H8	1:0:322:A:OP1	1.77	0.67
1:0:633:G:H2'	1:0:634:G:O4'	1.94	0.67
1:0:1314:A:N6	1:0:1316:G:C4	2.63	0.67
1:0:1754:G:OP1	1:0:1754:G:H4'	1.95	0.67
1:0:1889:G:H1	1:0:1908:C:N4	1.93	0.67
1:0:622:U:C2'	1:0:623:G:H5'	2.25	0.67
1:0:716:U:H2'	1:0:717:G:O4'	1.95	0.67
1:0:1011:A:C2	1:0:1166:A:C6	2.83	0.67
1:0:2231:G:O2'	1:0:2232:G:H5'	1.94	0.67
1:0:575:U:H2'	1:0:576:A:H8	1.60	0.66
1:0:788:G:H2'	1:0:807:A:C5	2.29	0.66
1:0:877:G:O2'	1:0:878:C:H5'	1.93	0.66
1:0:1290:A:H2'	1:0:1291:G:C8	2.31	0.66
1:0:1715:A:H1'	1:0:1717:A:H4'	1.77	0.66
1:0:1727:C:H4'	1:0:2833:C:C2	2.30	0.66
1:0:1779:C:O2'	1:0:1780:A:H5'	1.96	0.66
1:0:1960:A:O2'	1:0:1961:A:H5'	1.95	0.66
1:0:42:G:N2	1:0:450:C:C2	2.63	0.66
1:0:457:C:O2'	1:0:458:G:H5'	1.95	0.66
1:0:473:C:H2'	1:0:474:G:C8	2.30	0.66
1:0:545:C:O2	1:0:568:G:N2	2.27	0.66
1:0:822:G:O2'	1:0:823:U:H5'	1.95	0.66
1:0:854:G:H2'	1:0:855:G:C8	2.31	0.66
1:0:1407:G:H4'	1:0:1620:C:OP1	1.94	0.66
1:0:1784:C:O2'	1:0:1785:A:H5'	1.95	0.66
1:0:2539:C:N4	1:0:2540:A:H62	1.93	0.66
1:0:1151:U:H5"	1:0:1153:A:C5'	2.24	0.66
1:0:1755:G:H2'	1:0:1756:C:C6	2.30	0.66
1:0:2262:C:H2'	1:0:2263:C:C6	2.30	0.66
1:0:2763:U:H2'	1:0:2764:U:C6	2.31	0.66
1:0:1579:G:O2'	1:0:1580:C:H5'	1.95	0.66
1:0:1678:G:O2'	1:0:1679:U:H5'	1.95	0.66
1:0:2173:G:H2'	1:0:2174:G:O4'	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2703:C:O2'	1:0:2704:U:H5'	1.95	0.66
2:9:77:G:H2'	2:9:78:A:O4'	1.96	0.66
1:0:704:G:H2'	1:0:705:C:C6	2.30	0.66
1:0:727:U:C2'	1:0:728:G:H5"	2.23	0.66
1:0:1262:U:H3'	1:0:1262:U:H6	1.59	0.66
1:0:1284:G:N2	1:0:1633:C:O4'	2.29	0.66
1:0:1641:C:H2'	1:0:1642:G:O4'	1.96	0.66
1:0:2093:G:H2'	1:0:2094:C:H6	1.60	0.66
1:0:2443:C:C2	1:0:2466:G:N2	2.63	0.66
1:0:2713:A:H2'	1:0:2714:A:C8	2.23	0.66
1:0:186:C:O2'	1:0:187:U:H5'	1.94	0.66
1:0:827:C:H2'	1:0:828:C:H6	1.60	0.66
1:0:1327:C:O5'	1:0:1327:C:H6	1.79	0.66
1:0:757:U:C2	1:0:767:G:N2	2.63	0.66
1:0:841:G:N2	1:0:2226:A:H4'	2.11	0.66
1:0:1466:C:H2'	1:0:1467:U:O4'	1.96	0.66
1:0:1585:A:H2'	1:0:1586:A:C8	2.30	0.66
1:0:2196:U:H2'	1:0:2197:U:C6	2.31	0.66
1:0:2198:U:C3'	1:0:2199:C:H5"	2.26	0.66
1:0:2687:G:O2'	1:0:2688:G:H5'	1.95	0.66
2:9:58:G:H4'	2:9:59:A:C5'	2.26	0.66
1:0:486:U:C2'	1:0:487:G:H5'	2.25	0.66
1:0:981:C:H2'	1:0:982:C:H6	1.61	0.66
1:0:1117:G:H2'	1:0:1118:G:H8	1.61	0.66
1:0:1577:G:O2'	1:0:1578:U:H5'	1.96	0.66
1:0:1658:A:C8	1:0:1659:G:N7	2.63	0.66
1:0:2660:C:N4	1:0:2704:U:C5	2.64	0.66
1:0:1436:G:H2'	1:0:1437:A:H8	1.59	0.66
1:0:1928:G:N2	1:0:1929:U:C2	2.64	0.66
1:0:2758:A:C4'	1:0:2759:U:H5	2.08	0.66
1:0:632:A:C2'	1:0:633:G:H5'	2.26	0.66
1:0:940:G:N7	1:0:941:U:C6	2.64	0.66
1:0:966:A:N6	1:0:967:G:C2	2.64	0.66
1:0:1231:A:C4	1:0:1245:G:N2	2.64	0.66
1:0:1429:A:H1'	1:0:1603:A:C6	2.31	0.66
1:0:1743:C:H5'	1:0:2836:U:O2'	1.96	0.66
1:0:176:A:C2	1:0:2413:A:C2	2.84	0.65
1:0:1831:G:H2'	1:0:1832:G:H5'	1.78	0.65
1:0:604:U:H2'	1:0:605:G:H8	1.61	0.65
1:0:876:A:O2'	1:0:877:G:H5'	1.96	0.65
1:0:991:A:C8	1:0:992:A:N7	2.64	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1486:A:H2'	1:0:1487:C:H6	1.58	0.65
1:0:1698:C:O2'	1:0:1753:A:C2'	2.44	0.65
1:0:2539:C:N4	1:0:2540:A:N6	2.43	0.65
2:9:65:A:H2'	2:9:66:G:C8	2.32	0.65
1:0:305:A:H2'	1:0:306:G:O4'	1.96	0.65
1:0:366:U:H2'	1:0:367:G:H8	1.61	0.65
1:0:927:C:O2'	1:0:928:G:H5'	1.95	0.65
1:0:2447:G:H22	1:0:2460:G:C2'	2.07	0.65
1:0:2708:U:C4	1:0:2709:C:N4	2.65	0.65
1:0:1436:G:H8	1:0:1436:G:O5'	1.80	0.65
1:0:1540:C:O2'	1:0:1541:G:H5'	1.95	0.65
1:0:1741:G:O2'	1:0:1742:G:H5'	1.96	0.65
1:0:2038:C:H5'	1:0:2039:G:H5"	1.77	0.65
1:0:443:A:O2'	1:0:444:U:H5'	1.97	0.65
1:0:490:A:N7	1:0:492:G:O4'	2.29	0.65
1:0:759:C:H5"	1:0:761:G:O4'	1.97	0.65
1:0:818:G:O6	1:0:2051:U:C5'	2.45	0.65
1:0:2082:C:C4	1:0:2174:G:N2	2.64	0.65
1:0:2491:C:H3'	1:0:2492:G:H5"	1.79	0.65
1:0:14:A:C2	1:0:2604:G:H1'	2.32	0.65
1:0:830:C:H2'	1:0:831:G:H8	1.61	0.65
1:0:871:U:O2	1:0:2247:A:H2'	1.97	0.65
1:0:1312:G:H4'	1:0:1314:A:N3	2.10	0.65
1:0:1581:C:N4	1:0:1583:A:H1'	2.11	0.65
1:0:1969:G:O2'	1:0:1970:G:H5'	1.97	0.65
1:0:2122:G:H2'	1:0:2123:G:C8	2.31	0.65
1:0:2810:A:H8	1:0:2810:A:O5'	1.79	0.65
1:0:847:C:H41	1:0:955:G:N2	1.91	0.65
1:0:2048:C:O2'	1:0:2049:C:H5'	1.97	0.65
1:0:2198:U:H3'	1:0:2199:C:H5"	1.79	0.65
1:0:2234:G:H2'	1:0:2235:G:O4'	1.97	0.65
1:0:2426:G:O5'	1:0:2480:C:H5	1.78	0.65
1:0:927:C:H2'	1:0:928:G:H5'	1.77	0.65
1:0:1161:U:H2'	1:0:1162:A:C8	2.31	0.65
1:0:1280:U:O2'	1:0:1281:A:H5'	1.96	0.65
1:0:1287:A:C5	1:0:1315:A:C2	2.85	0.65
1:0:2030:U:H2'	1:0:2031:A:H8	1.61	0.65
1:0:2278:A:H2'	1:0:2279:G:C8	2.31	0.65
1:0:429:C:H2'	1:0:430:C:H6	1.62	0.65
1:0:1271:C:O2'	1:0:1272:G:H5'	1.97	0.65
1:0:1288:A:H2'	1:0:1289:A:O4'	1.97	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1992:G:O2'	1:0:1993:G:H5'	1.97	0.65
1:0:2015:G:N2	1:0:2038:C:H1'	2.12	0.65
1:0:2024:U:O5'	1:0:2024:U:H6	1.78	0.65
1:0:2080:U:H2'	1:0:2081:U:C6	2.32	0.65
1:0:2266:A:C2	1:0:2268:G:H1'	2.32	0.65
1:0:76:C:H6	1:0:76:C:H5'	1.62	0.65
1:0:635:C:O2'	1:0:670:U:H5"	1.97	0.65
1:0:1299:A:N6	1:0:1302:C:C5	2.65	0.65
1:0:1644:G:O2'	1:0:1645:U:H5'	1.97	0.65
1:0:2755:A:O2'	1:0:2756:A:H5'	1.96	0.65
1:0:587:A:H2'	1:0:588:G:H5"	1.79	0.64
1:0:2511:G:H2'	1:0:2512:A:O4'	1.97	0.64
1:0:604:U:H2'	1:0:605:G:C8	2.32	0.64
1:0:681:A:N6	1:0:683:A:H2'	2.11	0.64
1:0:1268:U:H5'	1:0:1269:G:H5"	1.78	0.64
1:0:2442:C:C2	1:0:2467:A:C2	2.84	0.64
1:0:532:A:H2'	1:0:533:C:H6	1.60	0.64
1:0:804:C:O2	1:0:804:C:H2'	1.96	0.64
1:0:868:U:H2'	1:0:869:C:C6	2.33	0.64
1:0:936:A:O2'	1:0:937:C:H5'	1.97	0.64
1:0:1673:C:H42	1:0:1987:G:H1	1.44	0.64
1:0:2526:U:C5	1:0:2545:A:N7	2.65	0.64
1:0:2748:C:H2'	1:0:2749:A:C8	2.31	0.64
1:0:1514:C:H6	1:0:1514:C:O5'	1.80	0.64
1:0:335:A:H2'	1:0:336:A:H5'	1.79	0.64
1:0:574:C:H2'	1:0:575:U:H6	1.61	0.64
1:0:2404:A:H5'	1:0:2406:C:C5'	2.28	0.64
1:0:2691:C:OP2	1:0:2691:C:H4'	1.98	0.64
1:0:486:U:H2'	1:0:487:G:H5'	1.80	0.64
1:0:486:U:O2'	1:0:487:G:H5'	1.97	0.64
1:0:584:A:H5'	1:0:2038:C:C5	2.33	0.64
1:0:622:U:H2'	1:0:623:G:O4'	1.97	0.64
1:0:831:G:O2'	1:0:832:A:H5"	1.98	0.64
1:0:2618:A:H1'	1:0:2758:A:C2	2.33	0.64
1:0:2809:A:H62	1:0:2854:G:H1'	1.63	0.64
1:0:170:U:H2'	1:0:171:G:H8	1.62	0.64
1:0:239:A:H2'	1:0:240:U:O4'	1.98	0.64
1:0:755:C:C2	1:0:756:C:C5	2.86	0.64
1:0:944:A:H2'	1:0:945:G:H8	1.61	0.64
1:0:1319:C:H2'	1:0:1320:A:H8	1.63	0.64
1:0:1643:A:H1'	1:0:1657:A:C2	2.33	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2181:A:H2'	1:0:2182:A:H5'	1.78	0.64
1:0:2233:C:H2'	1:0:2234:G:C8	2.32	0.64
1:0:2862:G:N2	1:0:2863:U:C2	2.66	0.64
2:9:61:A:H8	2:9:61:A:O5'	1.81	0.64
1:0:429:C:O2'	1:0:430:C:H5'	1.96	0.64
1:0:487:G:H1'	1:0:515:A:C2	2.32	0.64
1:0:620:G:O2'	1:0:621:U:H5'	1.98	0.64
1:0:622:U:H2'	1:0:623:G:H5'	1.80	0.64
1:0:678:G:H2'	1:0:679:C:C6	2.31	0.64
1:0:962:C:N3	1:0:963:G:N7	2.45	0.64
1:0:972:C:N4	1:0:2014:A:N1	2.46	0.64
1:0:2447:G:H8	1:0:2447:G:O5'	1.79	0.64
1:0:28:A:H1'	1:0:523:A:N1	2.13	0.64
1:0:330:C:H2'	1:0:331:U:H6	1.61	0.64
1:0:595:A:H62	1:0:1264:C:H42	1.45	0.64
1:0:815:A:H2'	1:0:816:U:O4'	1.97	0.64
1:0:1004:A:C2'	1:0:1005:U:H5"	2.27	0.64
1:0:1004:A:C2'	1:0:1005:U:C5'	2.75	0.64
1:0:1193:G:H2'	1:0:1194:U:H6	1.60	0.64
1:0:1687:C:O2'	1:0:1977:C:H4'	1.98	0.64
1:0:2499:C:N4	1:0:2521:A:H2	1.96	0.64
1:0:163:A:H2'	1:0:164:G:H8	1.61	0.64
1:0:225:G:C5'	1:0:226:C:H5'	2.28	0.64
1:0:555:U:OP2	1:0:1233:A:N6	2.31	0.64
1:0:967:G:H21	1:0:970:A:H8	1.45	0.64
1:0:1105:U:H2'	1:0:1107:A:OP2	1.99	0.64
1:0:1287:A:C2	1:0:1662:G:O4'	2.51	0.64
1:0:1316:G:O2'	1:0:1317:G:H5'	1.98	0.64
1:0:1586:A:H2'	1:0:1587:A:H8	1.61	0.64
1:0:2201:G:H2'	1:0:2202:G:C8	2.32	0.64
1:0:225:G:OP2	1:0:226:C:C6	2.51	0.63
1:0:478:G:O2'	1:0:479:G:H5'	1.98	0.63
1:0:573:C:H2'	1:0:574:C:O4'	1.98	0.63
1:0:594:G:C6	1:0:1264:C:C5	2.87	0.63
1:0:1073:G:H2'	1:0:1074:G:C5'	2.28	0.63
1:0:1313:U:H1'	1:0:1642:G:N2	2.13	0.63
1:0:2104:G:H2'	1:0:2105:U:C6	2.33	0.63
1:0:982:C:H4'	1:0:994:A:O2'	1.97	0.63
1:0:1279:G:H1'	1:0:1995:G:O6	1.98	0.63
1:0:1706:A:C2	1:0:1707:A:C4	2.86	0.63
1:0:1900:U:H2'	1:0:1901:A:H5'	1.80	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2862:G:O2'	1:0:2863:U:H5'	1.98	0.63
1:0:953:G:C6	1:0:954:U:N3	2.66	0.63
1:0:1191:G:H2'	1:0:1192:A:C8	2.34	0.63
1:0:1458:A:H3'	1:0:1459:U:C5'	2.29	0.63
1:0:2563:U:O5'	1:0:2563:U:H6	1.82	0.63
1:0:798:G:N2	1:0:799:C:C1'	2.60	0.63
1:0:855:G:H2'	1:0:856:A:C8	2.34	0.63
1:0:1183:C:N4	1:0:1190:C:H42	1.95	0.63
1:0:1300:A:C2	1:0:1301:U:C2	2.86	0.63
1:0:1312:G:HO2'	1:0:1314:A:H2	1.45	0.63
1:0:1699:A:C5	1:0:1748:U:H1'	2.34	0.63
1:0:1888:C:H5"	1:0:1889:G:C5'	2.28	0.63
1:0:2431:C:O2'	1:0:2432:A:H5'	1.98	0.63
1:0:2813:G:O2'	1:0:2814:G:H5'	1.98	0.63
1:0:445:A:O2'	1:0:446:C:H5'	1.99	0.63
1:0:493:A:N3	1:0:516:G:N2	2.47	0.63
1:0:1618:U:O5'	1:0:1618:U:C6	2.48	0.63
1:0:120:G:O2'	1:0:121:G:H5'	1.99	0.63
1:0:139:A:H2'	1:0:140:G:C8	2.34	0.63
1:0:1358:C:H2'	1:0:1359:G:H5"	1.81	0.63
1:0:1564:U:O2'	1:0:1565:G:H5'	1.99	0.63
1:0:1724:C:H3'	1:0:1724:C:OP2	1.98	0.63
1:0:2005:U:H5"	1:0:2006:G:OP1	1.98	0.63
1:0:2049:C:H2'	1:0:2050:G:H5'	1.81	0.63
1:0:2567:G:O6	1:0:2586:G:C2	2.52	0.63
2:9:65:A:H2'	2:9:66:G:H8	1.64	0.63
1:0:342:G:C6	1:0:1222:G:N1	2.60	0.63
1:0:357:A:C3'	1:0:358:C:H5'	2.29	0.63
1:0:473:C:O2'	1:0:474:G:H5'	1.99	0.63
1:0:1591:U:H2'	1:0:1592:U:O4'	1.99	0.63
1:0:1737:G:H2'	1:0:1738:U:C6	2.33	0.63
1:0:2434:G:N1	1:0:2477:C:N4	2.47	0.63
2:9:7:C:H2'	2:9:8:C:H6	1.64	0.63
2:9:29:C:H2'	2:9:30:C:C5	2.34	0.63
1:0:929:A:H3'	1:0:930:A:C5'	2.26	0.63
1:0:955:G:H5'	1:0:956:A:H5"	1.79	0.63
1:0:1653:C:O2	1:0:1751:A:H2	1.82	0.63
1:0:1685:A:H61	1:0:1693:A:H61	1.47	0.63
1:0:1997:A:H2'	1:0:1998:A:C8	2.34	0.63
1:0:194:G:C6	1:0:444:U:O2	2.52	0.62
1:0:432:C:H2'	1:0:433:G:C8	2.31	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:665:A:H3'	1:0:666:U:C5'	2.29	0.62
1:0:798:G:H2'	1:0:798:G:N3	2.14	0.62
1:0:1347:C:O2'	1:0:1348:C:H5'	1.99	0.62
1:0:1764:A:O2'	1:0:1765:C:H5'	1.99	0.62
1:0:1800:A:C2	1:0:1802:A:N1	2.66	0.62
1:0:1982:C:H4'	1:0:2703:C:O2	1.99	0.62
1:0:1994:U:H2'	1:0:1995:G:H5'	1.80	0.62
1:0:2473:G:O2'	1:0:2474:G:H5'	1.98	0.62
1:0:2810:A:H4'	1:0:2811:G:C8	2.34	0.62
1:0:2822:U:C5	1:0:2823:G:C4	2.87	0.62
1:0:491:A:N3	1:0:491:A:H2'	2.14	0.62
1:0:699:G:H5'	1:0:700:C:OP2	1.98	0.62
1:0:2198:U:H2'	1:0:2199:C:H5"	1.82	0.62
1:0:2469:G:H5"	1:0:2470:U:OP1	1.99	0.62
1:0:2721:A:H2'	1:0:2722:C:O4'	1.98	0.62
1:0:2824:C:O2	1:0:2843:A:C4	2.51	0.62
1:0:636:G:H2'	1:0:637:G:H5'	1.80	0.62
1:0:1196:G:O2'	1:0:1197:U:H5'	1.98	0.62
1:0:1685:A:N3	1:0:1686:A:C2	2.68	0.62
1:0:2034:A:H5'	1:0:2557:G:O4'	2.00	0.62
1:0:168:A:H2'	1:0:169:C:C6	2.34	0.62
1:0:932:G:C6	1:0:933:G:C6	2.88	0.62
1:0:1474:A:N1	1:0:1476:G:C8	2.68	0.62
1:0:1532:A:H2'	1:0:1533:G:H8	1.64	0.62
1:0:1876:C:C5	1:0:1877:C:C5	2.87	0.62
1:0:2506:C:O2'	1:0:2507:U:H5'	1.99	0.62
1:0:2595:C:H2'	1:0:2596:C:O4'	1.99	0.62
1:0:2642:G:H2'	1:0:2643:G:C8	2.35	0.62
1:0:173:A:C4	1:0:818:G:N2	2.67	0.62
1:0:414:A:H2'	1:0:415:A:O4'	2.00	0.62
1:0:1541:G:N2	1:0:1562:G:N2	2.38	0.62
1:0:1697:U:N3	1:0:1755:G:OP2	2.32	0.62
1:0:2426:G:N1	1:0:2483:U:O4	2.31	0.62
1:0:2434:G:N2	1:0:2435:C:C2	2.68	0.62
1:0:2787:A:H2'	1:0:2788:C:C6	2.32	0.62
1:0:2876:C:O2'	1:0:2877:A:H5'	1.99	0.62
1:0:1281:A:C2	1:0:1996:A:N1	2.68	0.62
1:0:1392:U:C2'	1:0:1393:G:H5'	2.29	0.62
1:0:2046:C:C2'	1:0:2047:C:O5'	2.47	0.62
1:0:2057:U:H2'	1:0:2058:U:H6	1.64	0.62
2:9:14:C:H4'	2:9:17:A:H61	1.63	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:615:C:H1'	1:0:671:A:H4'	1.81	0.62
1:0:1276:U:H2'	1:0:1277:G:C8	2.34	0.62
1:0:2059:U:OP2	1:0:2217:G:N2	2.30	0.62
1:0:2306:A:H2'	1:0:2307:A:H8	1.63	0.62
1:0:2663:U:N3	1:0:2664:G:N7	2.48	0.62
1:0:2859:U:C5	1:0:2860:C:C2	2.87	0.62
1:0:311:A:C2	1:0:334:G:N2	2.67	0.62
1:0:1147:G:H2'	1:0:1148:G:H8	1.64	0.62
1:0:1760:G:O2'	1:0:1761:G:H5'	2.00	0.62
1:0:2758:A:C5'	1:0:2759:U:H5	2.13	0.62
1:0:115:G:C6	1:0:117:A:N6	2.68	0.62
1:0:333:A:O2'	1:0:350:U:H2'	2.00	0.62
1:0:581:A:C2	1:0:582:G:H1'	2.34	0.62
1:0:873:U:O5'	1:0:2247:A:C2	2.52	0.62
1:0:1610:A:O2'	1:0:1611:U:H5'	2.00	0.62
1:0:2534:U:C5	1:0:2535:C:C4	2.88	0.62
1:0:2748:C:H2'	1:0:2749:A:H8	1.64	0.62
1:0:2800:C:O2'	1:0:2801:A:H5'	2.00	0.62
1:0:1264:C:HO2'	1:0:1265:G:H8	1.47	0.62
1:0:1925:C:H2'	1:0:1926:U:C5	2.32	0.62
1:0:2046:C:H2'	1:0:2047:C:O5'	2.00	0.62
1:0:2606:G:O5'	1:0:2606:G:H8	1.83	0.62
1:0:2814:G:H1	1:0:2853:U:H3	1.48	0.62
1:0:482:A:O5'	1:0:482:A:H8	1.83	0.61
1:0:689:A:C2	1:0:690:A:C8	2.88	0.61
1:0:1073:G:C3'	1:0:1074:G:H5"	2.30	0.61
1:0:1273:G:H2'	1:0:1274:C:H6	1.65	0.61
1:0:1558:C:H2'	1:0:1559:G:H5'	1.82	0.61
1:0:200:A:C2	1:0:421:G:O4'	2.53	0.61
1:0:214:C:N4	1:0:215:G:O6	2.33	0.61
1:0:216:U:H2'	1:0:217:U:O4'	2.00	0.61
1:0:367:G:C2'	1:0:368:A:H5"	2.28	0.61
1:0:446:C:H2'	1:0:447:U:C6	2.34	0.61
1:0:583:C:H4'	1:0:2038:C:C5	2.35	0.61
1:0:584:A:H5'	1:0:2038:C:C4	2.35	0.61
1:0:619:A:H2'	1:0:620:G:C8	2.35	0.61
1:0:785:U:H5'	1:0:1368:G:HO2'	1.63	0.61
1:0:1688:U:O2	1:0:1690:U:C6	2.53	0.61
1:0:2043:A:N3	1:0:2481:G:C2	2.67	0.61
1:0:2418:A:C2	1:0:2564:U:H4'	2.35	0.61
1:0:500:G:C5	1:0:1297:A:C2	2.88	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:718:A:C8	1:0:740:A:C2	2.88	0.61
1:0:944:A:H2'	1:0:945:G:C8	2.35	0.61
1:0:985:G:H5"	1:0:985:G:N3	2.14	0.61
1:0:1719:G:H2'	1:0:1720:G:C8	2.32	0.61
1:0:29:U:O2'	1:0:30:G:H5'	2.00	0.61
1:0:797:A:H4'	1:0:798:G:N7	2.15	0.61
1:0:1141:U:OP2	1:0:2549:G:N2	2.34	0.61
1:0:1153:A:C2	1:0:1155:G:C6	2.88	0.61
1:0:1273:G:H2'	1:0:1274:C:C6	2.36	0.61
1:0:2663:U:C2	1:0:2664:G:C8	2.88	0.61
1:0:2682:C:C5	1:0:2683:C:C5	2.89	0.61
1:0:1299:A:C6	1:0:1302:C:C5	2.88	0.61
1:0:1302:C:O2'	1:0:1343:C:H4'	2.00	0.61
1:0:1499:A:H2'	1:0:1500:U:C6	2.36	0.61
1:0:2230:G:H1'	1:0:2429:A:O4'	2.01	0.61
1:0:51:A:OP2	1:0:117:A:N6	2.34	0.61
1:0:305:A:C2'	1:0:306:G:H5'	2.30	0.61
1:0:688:A:HO2'	1:0:2422:C:H4'	1.66	0.61
1:0:1441:A:H1'	1:0:1586:A:OP2	2.00	0.61
1:0:1685:A:H1'	1:0:1686:A:C4	2.36	0.61
1:0:1701:C:C2	1:0:1722:G:N2	2.68	0.61
1:0:1216:G:O2'	1:0:1217:U:H5'	1.99	0.61
1:0:1292:A:N6	1:0:1293:A:N6	2.48	0.61
1:0:1430:G:H22	1:0:1599:G:H1'	1.65	0.61
1:0:1457:A:C2	1:0:1565:G:C4	2.88	0.61
1:0:1479:G:C2	1:0:1480:G:C4	2.89	0.61
1:0:1711:C:O5'	1:0:1711:C:H6	1.84	0.61
1:0:1928:G:C2	1:0:1929:U:C2	2.88	0.61
1:0:2019:C:C2'	1:0:2020:G:H5'	2.30	0.61
1:0:2810:A:H4'	1:0:2811:G:N7	2.16	0.61
1:0:698:A:H1'	1:0:700:C:H41	1.66	0.61
1:0:781:G:H2'	1:0:782:U:C6	2.36	0.61
1:0:1270:C:N4	1:0:1271:C:H41	1.98	0.61
1:0:1280:U:H2'	1:0:1281:A:C5'	2.31	0.61
1:0:1680:U:O2	1:0:1981:A:C2	2.54	0.61
1:0:1827:G:H2'	1:0:1828:C:C6	2.36	0.61
1:0:2032:G:N2	1:0:2599:U:C2	2.69	0.61
1:0:2544:A:H2'	1:0:2545:A:C1'	2.31	0.61
1:0:2816:C:C2	1:0:2852:G:N2	2.69	0.61
1:0:2822:U:H5	1:0:2823:G:C4	2.19	0.61
1:0:579:G:H2'	1:0:2013:A:H62	1.64	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:792:U:H2'	1:0:793:G:O4'	2.00	0.61
1:0:1175:A:H8	1:0:1175:A:O5'	1.84	0.61
1:0:1658:A:C8	1:0:1659:G:C8	2.89	0.61
1:0:1764:A:C2'	1:0:1765:C:H5'	2.31	0.61
1:0:1994:U:O5'	1:0:1994:U:H6	1.83	0.61
1:0:2046:C:N3	1:0:2430:A:C2	2.69	0.61
1:0:2090:U:H2'	1:0:2091:C:H6	1.65	0.61
1:0:2611:A:C2	1:0:2767:C:C2	2.89	0.61
1:0:179:U:O2'	1:0:180:C:H5'	2.00	0.60
1:0:478:G:H2'	1:0:479:G:C8	2.32	0.60
1:0:584:A:C4	1:0:585:U:C5	2.88	0.60
1:0:1256:C:H2'	1:0:1257:U:O4'	2.01	0.60
1:0:1273:G:C2'	1:0:1274:C:O5'	2.49	0.60
1:0:1683:G:N7	1:0:1684:G:N2	2.48	0.60
1:0:1944:C:H2'	1:0:1945:C:O4'	2.01	0.60
1:0:1982:C:H4'	1:0:2665:G:H22	1.65	0.60
1:0:2573:C:H42	1:0:2578:G:H1	1.49	0.60
1:0:2586:G:H8	1:0:2586:G:O5'	1.84	0.60
1:0:322:A:H1'	1:0:343:A:C6	2.35	0.60
1:0:537:C:C1'	1:0:2759:U:HO2'	2.14	0.60
1:0:829:C:H2'	1:0:830:C:O4'	2.01	0.60
1:0:976:C:O2'	1:0:977:G:H5'	2.01	0.60
1:0:1383:C:H2'	1:0:1384:G:H8	1.65	0.60
1:0:2489:C:C4	1:0:2490:U:C5	2.89	0.60
1:0:2712:G:H5'	1:0:2713:A:C8	2.36	0.60
1:0:688:A:O2'	1:0:2422:C:H4'	2.00	0.60
1:0:701:U:H2'	1:0:702:A:O4'	2.01	0.60
1:0:936:A:H2'	1:0:937:C:C6	2.36	0.60
1:0:1521:U:H2'	1:0:1522:C:C6	2.36	0.60
1:0:1704:G:H8	1:0:1704:G:O5'	1.84	0.60
1:0:2250:G:O2'	1:0:2251:U:H5'	2.01	0.60
1:0:2637:C:O2'	1:0:2638:G:H5'	2.01	0.60
1:0:2742:G:O2'	1:0:2743:G:H5'	2.01	0.60
2:9:79:U:H2'	2:9:80:A:H5'	1.83	0.60
1:0:498:C:N4	1:0:499:G:C6	2.68	0.60
1:0:951:G:H2'	1:0:952:A:C5'	2.32	0.60
1:0:1312:G:H2'	1:0:1643:A:H61	1.65	0.60
1:0:1999:U:O2'	1:0:2000:U:H5'	2.02	0.60
1:0:2053:G:N1	1:0:2054:A:C2	2.70	0.60
1:0:2437:G:H2'	1:0:2469:G:N2	2.16	0.60
1:0:2602:G:C4	1:0:2603:G:C8	2.89	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2702:G:C5	1:0:2703:C:C4	2.90	0.60
1:0:173:A:H61	1:0:844:G:H21	1.50	0.60
1:0:669:G:H2'	1:0:670:U:C6	2.36	0.60
1:0:818:G:N1	1:0:2051:U:OP1	2.33	0.60
1:0:1213:U:C2	1:0:1260:A:H2	2.19	0.60
1:0:1370:U:H2'	1:0:1371:G:O4'	2.01	0.60
1:0:1436:G:O5'	1:0:1436:G:C8	2.54	0.60
1:0:1964:A:H3'	1:0:1965:U:H5'	1.83	0.60
1:0:2333:A:C2	1:0:2343:C:N3	2.69	0.60
1:0:2443:C:N3	1:0:2466:G:N2	2.50	0.60
1:0:2526:U:C6	1:0:2545:A:N6	2.70	0.60
1:0:342:G:H2'	1:0:343:A:H5'	1.82	0.60
1:0:473:C:C2	1:0:474:G:C8	2.90	0.60
1:0:591:G:H2'	1:0:592:G:H8	1.66	0.60
1:0:875:G:H22	1:0:928:G:H1'	1.67	0.60
1:0:1004:A:O2'	1:0:1005:U:H5"	2.01	0.60
1:0:1283:C:H5"	1:0:1284:G:O5'	2.02	0.60
1:0:1291:G:C2'	1:0:1292:A:H5'	2.32	0.60
1:0:1373:G:H2'	1:0:1374:G:C5'	2.31	0.60
1:0:1750:A:C4'	1:0:2694:G:H21	2.15	0.60
1:0:2044:G:C8	1:0:2482:A:H1'	2.36	0.60
1:0:2476:A:H5"	1:0:2477:C:OP1	2.01	0.60
1:0:788:G:N2	1:0:801:A:OP2	2.33	0.60
1:0:854:G:H2'	1:0:855:G:H8	1.65	0.60
1:0:1213:U:C2	1:0:1260:A:C2	2.89	0.60
1:0:1272:G:H2'	1:0:1273:G:H8	1.66	0.60
1:0:2522:G:H2'	1:0:2523:G:H8	1.66	0.60
1:0:2768:C:H4'	1:0:2785:A:H5'	1.83	0.60
1:0:177:U:OP2	1:0:177:U:C6	2.54	0.60
1:0:459:A:C2	1:0:466:A:C8	2.89	0.60
1:0:734:G:H2'	1:0:735:G:C8	2.31	0.60
1:0:889:C:O2'	1:0:890:U:H5'	2.01	0.60
1:0:1310:C:C2	1:0:1311:C:C5	2.90	0.60
1:0:1999:U:H2'	1:0:2000:U:H6	1.67	0.60
1:0:2442:C:O2'	1:0:2443:C:H5'	2.01	0.60
1:0:1141:U:O2'	1:0:1142:G:P	2.59	0.60
1:0:1273:G:O2'	1:0:1274:C:O5'	2.20	0.60
1:0:2872:U:H2'	1:0:2873:G:H8	1.65	0.60
1:0:337:G:H2'	1:0:338:G:C8	2.37	0.60
1:0:487:G:H1'	1:0:515:A:H2	1.67	0.60
1:0:727:U:H2'	1:0:728:G:C5'	2.27	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:790:A:C2	1:0:791:G:C4	2.90	0.60
1:0:1106:A:H2'	1:0:1107:A:H8	1.65	0.60
1:0:1323:G:C1'	1:0:1627:C:C5'	2.73	0.60
1:0:1378:A:H2'	1:0:1379:A:C8	2.37	0.60
1:0:1391:A:C2'	1:0:1392:U:H5	2.14	0.60
1:0:1937:G:N2	1:0:1969:G:OP1	2.35	0.60
1:0:2053:G:C2	1:0:2054:A:N3	2.70	0.60
1:0:2164:G:H2'	1:0:2165:A:H8	1.67	0.60
1:0:2612:G:N2	1:0:2766:U:O2	2.34	0.60
1:0:481:A:C6	1:0:482:A:C6	2.90	0.59
1:0:614:G:O2'	1:0:615:C:H5'	2.02	0.59
1:0:691:C:O2'	1:0:692:C:H5'	2.03	0.59
1:0:790:A:O2'	1:0:791:G:H5'	2.02	0.59
1:0:940:G:C8	1:0:941:U:H5"	2.37	0.59
1:0:976:C:H2'	1:0:977:G:H8	1.66	0.59
1:0:1294:G:C2	1:0:1303:U:O2	2.55	0.59
1:0:1667:A:N1	1:0:1668:G:C5	2.70	0.59
1:0:1856:U:O2'	1:0:1857:G:H5'	2.01	0.59
1:0:2560:G:H4'	1:0:2561:G:C8	2.37	0.59
2:9:35:C:H2'	2:9:36:A:O4'	2.00	0.59
2:9:78:A:H2'	2:9:79:U:H6	1.68	0.59
1:0:678:G:O2'	1:0:679:C:H5'	2.01	0.59
1:0:782:U:H2'	1:0:783:G:H8	1.66	0.59
1:0:991:A:N6	1:0:992:A:N6	2.49	0.59
1:0:1619:A:C2	1:0:1620:C:C4	2.89	0.59
1:0:2506:C:H2'	1:0:2507:U:C6	2.36	0.59
1:0:17:G:C5	1:0:18:U:O4	2.56	0.59
1:0:109:A:H3'	1:0:110:U:H5"	1.83	0.59
1:0:235:C:C2'	1:0:236:C:H5'	2.32	0.59
1:0:471:A:H2'	1:0:472:C:H5'	1.83	0.59
1:0:600:G:O6	1:0:602:C:C4	2.55	0.59
1:0:1241:G:O2'	1:0:1242:A:H5'	2.02	0.59
1:0:1399:C:O2'	1:0:1400:A:H5'	2.01	0.59
1:0:1491:C:H42	1:0:1532:A:H61	1.49	0.59
1:0:2246:A:H2'	1:0:2246:A:N3	2.18	0.59
1:0:2817:A:N1	1:0:2851:G:C6	2.70	0.59
1:0:7:G:N2	1:0:2870:C:O2	2.35	0.59
1:0:315:G:H8	1:0:315:G:O5'	1.85	0.59
1:0:565:A:C5	1:0:566:U:C4	2.90	0.59
1:0:751:G:H1'	1:0:772:G:N2	2.16	0.59
1:0:776:G:C2'	1:0:778:G:H5"	2.31	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1528:C:H2'	1:0:1529:C:H5"	1.84	0.59
1:0:1531:C:C2'	1:0:1532:A:H5'	2.31	0.59
1:0:1991:C:H2'	1:0:1992:G:H8	1.67	0.59
1:0:2034:A:C6	1:0:2593:A:N6	2.70	0.59
1:0:2064:U:H2'	1:0:2065:A:H8	1.67	0.59
1:0:2324:G:O2'	1:0:2325:A:H5"	2.02	0.59
1:0:2386:G:H2'	1:0:2387:U:C6	2.38	0.59
1:0:2535:C:H2'	1:0:2536:G:O4'	2.02	0.59
1:0:2555:G:H3'	1:0:2555:G:OP1	2.02	0.59
1:0:2558:C:H6	1:0:2558:C:O5'	1.85	0.59
1:0:2697:G:C2	1:0:2698:G:C8	2.91	0.59
1:0:2756:A:O2'	1:0:2758:A:H3'	2.03	0.59
1:0:91:A:H2'	1:0:92:U:C6	2.38	0.59
1:0:335:A:C2'	1:0:336:A:H5'	2.32	0.59
1:0:820:U:O2'	1:0:821:A:H5'	2.01	0.59
1:0:831:G:N2	1:0:1203:A:H62	1.92	0.59
1:0:1281:A:C2	1:0:1996:A:C2	2.90	0.59
1:0:1313:U:O2'	1:0:1314:A:O5'	2.20	0.59
1:0:2308:A:H2'	1:0:2309:G:C8	2.37	0.59
1:0:2370:G:O5'	1:0:2370:G:H8	1.85	0.59
1:0:2426:G:N2	1:0:2431:C:N4	2.50	0.59
1:0:2447:G:N2	1:0:2460:G:H2'	2.12	0.59
1:0:2621:G:O2'	1:0:2622:G:H5'	2.02	0.59
1:0:2769:C:H2'	1:0:2770:A:O4'	2.02	0.59
2:9:25:G:H2'	2:9:26:G:C1'	2.33	0.59
2:9:54:U:H2'	2:9:55:C:C6	2.38	0.59
1:0:487:G:H8	1:0:487:G:O5'	1.85	0.59
1:0:836:G:C4	1:0:837:U:C5	2.90	0.59
1:0:927:C:H2'	1:0:928:G:O4'	2.03	0.59
1:0:1213:U:N3	1:0:1260:A:C2	2.70	0.59
1:0:1783:G:O2'	1:0:1784:C:H5'	2.02	0.59
1:0:1922:U:H1'	1:0:2570:C:O2'	2.03	0.59
1:0:1966:C:C2	1:0:1967:U:C5	2.91	0.59
2:9:84:G:O2'	2:9:85:G:H5'	2.02	0.59
1:0:588:G:C2	1:0:1275:A:C6	2.91	0.59
1:0:929:A:O2'	2:9:101:A:H4'	2.02	0.59
1:0:1040:A:C8	1:0:1041:G:C8	2.90	0.59
1:0:1322:G:H2'	1:0:1323:G:C8	2.38	0.59
1:0:1672:A:C2	1:0:1673:C:C1'	2.86	0.59
1:0:1781:C:H2'	1:0:1782:A:H8	1.65	0.59
1:0:1979:C:H42	1:0:2706:U:H6	1.49	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2225:G:H2'	1:0:2226:A:O4'	2.02	0.59
1:0:2434:G:C2	1:0:2435:C:C2	2.90	0.59
1:0:2549:G:H2'	1:0:2550:C:H5'	1.85	0.59
1:0:2676:G:H2'	1:0:2677:U:H6	1.67	0.59
1:0:342:G:H2'	1:0:343:A:C5'	2.32	0.59
1:0:583:C:H4'	1:0:2038:C:C6	2.37	0.59
1:0:758:G:O2'	1:0:761:G:H1'	2.02	0.59
1:0:776:G:N3	1:0:776:G:C3'	2.63	0.59
1:0:863:C:O2'	1:0:864:C:H5'	2.03	0.59
1:0:1147:G:H2'	1:0:1148:G:C8	2.37	0.59
1:0:1196:G:H2'	1:0:1197:U:O4'	2.03	0.59
1:0:1299:A:H2'	1:0:1301:U:OP2	2.02	0.59
1:0:1851:A:H61	1:0:1867:A:H1'	1.67	0.59
1:0:2228:U:H4'	1:0:2254:C:C5	2.37	0.59
1:0:2658:A:H8	1:0:2658:A:O5'	1.85	0.59
2:9:71:G:N2	2:9:72:C:H1'	2.18	0.59
1:0:215:G:H2'	1:0:216:U:O4'	2.02	0.59
1:0:218:A:H1'	1:0:220:U:C5	2.37	0.59
1:0:1556:A:H2'	1:0:1557:G:C8	2.38	0.59
1:0:2843:A:O2'	1:0:2844:G:H5'	2.03	0.59
2:9:62:C:N4	2:9:63:A:H62	2.01	0.59
1:0:197:G:H1	1:0:440:U:H3'	1.68	0.59
1:0:682:G:O3'	1:0:816:U:OP1	2.21	0.59
1:0:2612:G:C2	1:0:2766:U:O2	2.55	0.59
1:0:2799:C:H2'	1:0:2800:C:O4'	2.03	0.59
2:9:7:C:H2'	2:9:8:C:C6	2.37	0.59
2:9:69:G:O2'	2:9:70:C:H5'	2.03	0.59
1:0:14:A:H2	1:0:2603:G:N2	1.99	0.58
1:0:306:G:H2'	1:0:307:C:H6	1.67	0.58
1:0:765:C:H5	1:0:1772:C:H1'	1.68	0.58
1:0:981:C:H2'	1:0:982:C:C6	2.38	0.58
1:0:1010:U:H2'	1:0:1011:A:H8	1.67	0.58
1:0:1131:G:C6	1:0:1132:C:C4	2.91	0.58
1:0:1181:C:C3'	1:0:1182:U:H5"	2.33	0.58
1:0:1267:A:OP2	1:0:1269:G:H8	1.85	0.58
1:0:1284:G:N3	1:0:1633:C:C4'	2.66	0.58
1:0:1284:G:N3	1:0:1633:C:C5'	2.66	0.58
1:0:1688:U:O2	1:0:1690:U:C5	2.56	0.58
1:0:1940:C:N4	1:0:1941:C:N4	2.51	0.58
1:0:853:C:O2	1:0:950:G:C2	2.57	0.58
1:0:971:A:H2'	1:0:973:U:OP1	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:979:A:C2	1:0:980:G:C4	2.91	0.58
1:0:1063:C:H2'	1:0:1064:C:C6	2.37	0.58
1:0:1287:A:C5	1:0:1315:A:N1	2.71	0.58
1:0:1474:A:C6	1:0:1476:G:C8	2.91	0.58
1:0:1665:C:C2	1:0:1666:G:C8	2.91	0.58
1:0:1809:G:P	1:0:1809:G:H8	2.25	0.58
1:0:2240:C:H2'	1:0:2241:U:H5'	1.84	0.58
1:0:641:G:N2	1:0:644:A:OP2	2.26	0.58
1:0:912:A:H2'	1:0:913:A:C8	2.37	0.58
1:0:1038:U:H2'	1:0:1039:A:C8	2.38	0.58
1:0:1187:A:H2'	1:0:1188:A:C8	2.39	0.58
1:0:1686:A:O2'	1:0:2528:G:OP1	2.21	0.58
1:0:1981:A:H4'	1:0:2704:U:O2'	2.03	0.58
1:0:2039:G:H2'	1:0:2039:G:N3	2.17	0.58
1:0:2382:C:H2'	1:0:2383:C:H6	1.68	0.58
1:0:173:A:N3	1:0:818:G:N2	2.51	0.58
1:0:208:C:H2'	1:0:209:G:H5'	1.84	0.58
1:0:209:G:N2	1:0:433:G:OP1	2.35	0.58
1:0:421:G:O2'	1:0:422:C:H5'	2.02	0.58
1:0:649:G:H2'	1:0:650:U:C6	2.37	0.58
1:0:750:C:C4	1:0:751:G:N7	2.71	0.58
1:0:1118:G:H2'	1:0:1119:U:C6	2.37	0.58
1:0:1223:G:H1'	1:0:1225:G:H1'	1.85	0.58
1:0:2333:A:H2'	1:0:2334:C:C6	2.38	0.58
1:0:2595:C:H2'	1:0:2596:C:C6	2.38	0.58
1:0:2847:G:C2	1:0:2848:A:C6	2.91	0.58
1:0:639:G:O2'	1:0:640:C:H5'	2.04	0.58
1:0:681:A:C4	1:0:683:A:N7	2.71	0.58
1:0:1012:A:H2'	1:0:1013:G:C5'	2.26	0.58
1:0:1223:G:C2	1:0:1250:A:N6	2.71	0.58
1:0:1254:G:O2'	1:0:1255:A:H5'	2.04	0.58
1:0:1468:A:C8	1:0:1468:A:OP2	2.56	0.58
1:0:1679:U:C4	1:0:1680:U:C5	2.91	0.58
1:0:2059:U:H2'	1:0:2060:A:H5"	1.84	0.58
1:0:2299:A:H5'	1:0:2300:G:C5	2.38	0.58
1:0:2397:A:C2'	1:0:2398:U:O4'	2.51	0.58
1:0:2409:A:H3'	1:0:2409:A:H8	1.68	0.58
1:0:2678:C:O2	1:0:2688:G:N2	2.36	0.58
2:9:6:C:H2'	2:9:7:C:H6	1.68	0.58
1:0:10:A:H2'	1:0:11:G:C8	2.38	0.58
1:0:171:G:N1	1:0:179:U:C4	2.71	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:304:A:H2'	1:0:305:A:H5"	1.84	0.58
1:0:483:A:H2'	1:0:484:G:C5'	2.33	0.58
1:0:1009:C:O5'	1:0:1009:C:H6	1.87	0.58
1:0:1662:G:O5'	1:0:1662:G:H8	1.86	0.58
1:0:2105:U:H2'	1:0:2106:G:C8	2.38	0.58
1:0:18:U:O2'	1:0:563:U:OP1	2.22	0.58
1:0:203:G:H5'	1:0:234:C:H4'	1.85	0.58
1:0:213:C:O2'	1:0:214:C:H5'	2.02	0.58
1:0:783:G:N3	1:0:1367:A:H2	2.01	0.58
1:0:2816:C:O2	1:0:2852:G:N2	2.37	0.58
1:0:2824:C:H1'	1:0:2843:A:C2	2.38	0.58
1:0:132:U:H2'	1:0:133:C:C6	2.38	0.58
1:0:625:A:O2'	1:0:626:A:H5'	2.04	0.58
1:0:677:G:O3'	1:0:952:A:OP1	2.21	0.58
1:0:717:G:C6	1:0:739:G:C2	2.91	0.58
1:0:830:C:O2	1:0:1205:G:N2	2.36	0.58
1:0:983:G:OP2	1:0:985:G:H5'	2.03	0.58
1:0:1003:C:H2'	1:0:1004:A:H8	1.68	0.58
1:0:1884:A:O2'	1:0:1885:C:H5'	2.02	0.58
1:0:2549:G:C2	1:0:2550:C:H1'	2.39	0.58
1:0:173:A:C2	1:0:818:G:N2	2.71	0.58
1:0:406:G:H2'	1:0:407:A:H8	1.68	0.58
1:0:574:C:H2'	1:0:575:U:C6	2.39	0.58
1:0:698:A:O2'	1:0:700:C:H5	1.87	0.58
1:0:742:G:O6	1:0:1765:C:N3	2.37	0.58
1:0:742:G:OP1	1:0:776:G:OP2	2.22	0.58
1:0:763:A:H2	1:0:765:C:H1'	1.67	0.58
1:0:944:A:H2'	1:0:945:G:O4'	2.04	0.58
1:0:944:A:O2'	1:0:945:G:H5'	2.04	0.58
1:0:974:U:O2'	1:0:975:C:H5'	2.03	0.58
1:0:1407:G:C6	1:0:1408:A:C6	2.91	0.58
1:0:1784:C:C2'	1:0:1785:A:H5'	2.33	0.58
1:0:2024:U:O2'	1:0:2025:A:H5'	2.03	0.58
1:0:2044:G:N2	1:0:2046:C:C4	2.71	0.58
1:0:2229:G:OP2	1:0:2229:G:H4'	2.03	0.58
1:0:2644:A:H2'	1:0:2645:C:C6	2.38	0.58
1:0:2713:A:C5	1:0:2714:A:N7	2.72	0.58
1:0:2787:A:O2'	1:0:2788:C:H5'	2.04	0.58
2:9:100:G:H2'	2:9:101:A:O4'	2.03	0.58
1:0:225:G:H5'	1:0:226:C:H5'	1.86	0.58
1:0:927:C:H2'	1:0:928:G:C5'	2.33	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1028:G:C6	1:0:1157:G:C6	2.92	0.58
1:0:1252:C:H2'	1:0:1253:C:H5"	1.84	0.58
1:0:1407:G:H4'	1:0:1620:C:P	2.43	0.58
1:0:1468:A:OP2	1:0:1468:A:H8	1.86	0.58
1:0:168:A:C2	1:0:169:C:N3	2.71	0.57
1:0:778:G:H2'	1:0:779:U:H6	1.68	0.57
1:0:1479:G:H2'	1:0:1480:G:O4'	2.03	0.57
1:0:1619:A:C2	1:0:1620:C:C5	2.90	0.57
1:0:1938:U:C4	1:0:2531:U:H1'	2.39	0.57
1:0:1975:G:H2'	1:0:1980:A:N6	2.18	0.57
1:0:2186:G:N1	1:0:2200:G:C6	2.72	0.57
2:9:48:A:O2'	2:9:49:C:H5'	2.04	0.57
1:0:533:C:N3	1:0:534:U:C2	2.71	0.57
1:0:568:G:O6	1:0:569:C:N3	2.38	0.57
1:0:1311:C:C2	1:0:1660:G:N2	2.72	0.57
1:0:1701:C:O2	1:0:1722:G:N2	2.37	0.57
1:0:2217:G:C2'	1:0:2217:G:N3	2.66	0.57
1:0:2436:U:O2'	1:0:2437:G:H5'	2.03	0.57
1:0:2649:A:O2'	1:0:2650:G:H5'	2.04	0.57
1:0:2829:A:N1	1:0:2839:G:C6	2.72	0.57
2:9:93:G:H2'	2:9:94:G:C8	2.36	0.57
1:0:229:G:H2'	1:0:230:C:H6	1.69	0.57
1:0:600:G:H3'	1:0:601:A:H5"	1.85	0.57
1:0:1843:U:H2'	1:0:1844:C:C6	2.38	0.57
1:0:2164:G:H2'	1:0:2165:A:C8	2.39	0.57
1:0:2514:G:H2'	1:0:2515:G:H8	1.69	0.57
1:0:2529:G:C5	1:0:2530:C:C5	2.92	0.57
2:9:92:G:C3'	2:9:93:G:H5'	2.33	0.57
1:0:218:A:H1'	1:0:220:U:C4	2.39	0.57
1:0:401:G:H1'	1:0:403:A:H62	1.69	0.57
1:0:815:A:O2'	1:0:816:U:H5'	2.05	0.57
1:0:1491:C:N4	1:0:1532:A:H61	2.02	0.57
1:0:1681:A:N1	1:0:1682:A:C4	2.73	0.57
1:0:1830:C:N4	1:0:1881:U:H3'	2.19	0.57
1:0:1928:G:C6	1:0:1929:U:C4	2.92	0.57
1:0:1975:G:H2'	1:0:1980:A:H62	1.69	0.57
1:0:2015:G:H4'	1:0:2016:A:OP1	2.02	0.57
1:0:2096:U:H2'	1:0:2097:A:H5"	1.87	0.57
1:0:2433:G:C4	1:0:2434:G:C8	2.92	0.57
1:0:2642:G:C4	1:0:2643:G:C8	2.92	0.57
1:0:109:A:H8	1:0:109:A:O5'	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:327:C:O2'	1:0:328:A:H5'	2.04	0.57
1:0:544:U:O5'	1:0:544:U:H6	1.87	0.57
1:0:636:G:C2'	1:0:637:G:H5'	2.34	0.57
1:0:965:G:C2'	1:0:966:A:H5'	2.34	0.57
1:0:983:G:OP2	1:0:985:G:C5'	2.53	0.57
1:0:1089:C:O5'	1:0:1089:C:H6	1.87	0.57
1:0:1293:A:C2	1:0:1304:U:C2	2.93	0.57
1:0:1764:A:H2'	1:0:1765:C:O4'	2.05	0.57
1:0:1787:U:H2'	1:0:1788:C:C6	2.39	0.57
1:0:2331:A:C2'	1:0:2332:G:H5'	2.35	0.57
1:0:2341:G:O2'	1:0:2342:U:H5'	2.04	0.57
1:0:2418:A:O2'	1:0:2566:A:H5'	2.04	0.57
1:0:2652:G:H2'	1:0:2653:A:H8	1.68	0.57
1:0:74:G:H2'	1:0:75:C:C6	2.39	0.57
1:0:442:A:N6	1:0:443:A:N6	2.53	0.57
1:0:614:G:H2'	1:0:615:C:H6	1.69	0.57
1:0:701:U:C4'	1:0:1771:A:H2	2.10	0.57
1:0:766:A:O2'	1:0:767:G:H5'	2.03	0.57
1:0:1358:C:C2'	1:0:1359:G:H5"	2.34	0.57
1:0:1726:C:O2'	1:0:1727:C:H5'	2.05	0.57
2:9:102:A:H2'	2:9:103:A:H5'	1.85	0.57
1:0:16:G:O2'	1:0:17:G:H5'	2.04	0.57
1:0:159:A:C8	1:0:160:C:C5	2.93	0.57
1:0:513:A:N3	1:0:515:A:N7	2.53	0.57
1:0:778:G:H2'	1:0:779:U:C6	2.40	0.57
1:0:805:G:H2'	1:0:2419:C:C2	2.39	0.57
1:0:859:U:H4'	1:0:860:U:H5	1.66	0.57
1:0:1248:G:C5	1:0:1249:G:N1	2.73	0.57
1:0:1690:U:H2'	1:0:1691:G:H5"	1.86	0.57
1:0:1900:U:C2'	1:0:1901:A:H5'	2.35	0.57
1:0:2455:A:C2	1:0:2460:G:N2	2.73	0.57
1:0:2592:U:C3'	1:0:2592:U:C6	2.88	0.57
1:0:2742:G:H2'	1:0:2743:G:H8	1.66	0.57
1:0:2815:C:O2'	1:0:2816:C:H5'	2.04	0.57
1:0:150:A:H8	1:0:150:A:O5'	1.87	0.57
1:0:179:U:C2'	1:0:180:C:H5'	2.35	0.57
1:0:180:C:N3	1:0:181:A:N6	2.50	0.57
1:0:471:A:C2'	1:0:472:C:H5'	2.34	0.57
1:0:622:U:H2'	1:0:623:G:C5'	2.34	0.57
1:0:761:G:O6	1:0:764:A:H5'	2.04	0.57
1:0:878:C:O2'	1:0:879:A:H8	1.88	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1313:U:H5'	1:0:1314:A:N3	2.20	0.57
1:0:1608:U:H2'	1:0:1609:G:C8	2.40	0.57
1:0:1777:A:H62	1:0:2585:C:H1'	1.68	0.57
1:0:2470:U:O2'	1:0:2471:U:H5'	2.05	0.57
1:0:2739:G:O5'	1:0:2739:G:H8	1.87	0.57
1:0:464:G:C2	1:0:465:C:C4	2.92	0.57
1:0:539:A:N6	1:0:2024:U:H3	2.01	0.57
1:0:679:C:H2'	1:0:680:U:H6	1.68	0.57
1:0:699:G:N3	1:0:699:G:C2'	2.68	0.57
1:0:870:C:C5	1:0:871:U:H5	2.22	0.57
1:0:1198:C:H5"	1:0:1199:U:C5'	2.34	0.57
1:0:2324:G:C4	1:0:2326:C:H5	2.22	0.57
1:0:2426:G:O5'	1:0:2480:C:C5	2.57	0.57
1:0:2434:G:H2'	1:0:2435:C:C6	2.38	0.57
1:0:2610:G:H5'	1:0:2866:A:C1'	2.25	0.57
1:0:533:C:H2'	1:0:534:U:O4'	2.05	0.57
1:0:619:A:H2'	1:0:620:G:H8	1.69	0.57
1:0:632:A:H2'	1:0:633:G:C5'	2.33	0.57
1:0:870:C:C6	1:0:871:U:H5	2.22	0.57
1:0:968:C:N4	1:0:2437:G:H5"	2.19	0.57
1:0:989:G:N2	1:0:997:C:C2	2.73	0.57
1:0:1208:A:H8	1:0:1208:A:O5'	1.87	0.57
1:0:1388:C:H2'	1:0:1389:C:H6	1.69	0.57
1:0:1407:G:C2'	1:0:1408:A:O4'	2.51	0.57
1:0:2533:U:H2'	1:0:2534:U:C6	2.40	0.57
1:0:2587:G:O5'	1:0:2587:G:C8	2.57	0.57
1:0:2817:A:O2'	1:0:2818:G:H5'	2.04	0.57
1:0:178:C:H2'	1:0:179:U:C6	2.40	0.56
1:0:608:G:O2'	1:0:609:U:H5'	2.05	0.56
1:0:874:A:H2'	1:0:874:A:N3	2.19	0.56
1:0:940:G:C8	1:0:941:U:O4'	2.58	0.56
1:0:1046:U:H2'	1:0:1047:G:H8	1.70	0.56
1:0:1499:A:H2'	1:0:1500:U:H6	1.70	0.56
1:0:2059:U:H5"	1:0:2217:G:C6	2.40	0.56
1:0:2091:C:H2'	1:0:2092:U:H5'	1.87	0.56
1:0:2093:G:H2'	1:0:2094:C:C6	2.40	0.56
1:0:2378:G:H22	1:0:2397:A:C1'	2.13	0.56
1:0:2535:C:O2'	1:0:2536:G:H5'	2.05	0.56
1:0:2782:G:H3'	1:0:2783:U:C5'	2.35	0.56
1:0:531:G:O6	1:0:532:A:N6	2.38	0.56
1:0:815:A:O4'	1:0:815:A:OP2	2.22	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1355:A:N7	1:0:1410:U:C1'	2.68	0.56
1:0:1503:G:H2'	1:0:1504:G:H8	1.70	0.56
1:0:306:G:H2'	1:0:307:C:C6	2.39	0.56
1:0:425:A:N7	1:0:2390:A:C2	2.73	0.56
1:0:540:G:C8	1:0:540:G:OP2	2.58	0.56
1:0:749:C:H2'	1:0:750:C:C6	2.41	0.56
1:0:853:C:O2	1:0:950:G:N1	2.39	0.56
1:0:914:C:O2'	1:0:915:C:H5'	2.05	0.56
1:0:967:G:N2	1:0:970:A:H8	2.03	0.56
1:0:995:A:C5'	1:0:996:C:H5	2.15	0.56
1:0:1014:G:N3	1:0:1021:A:C2	2.73	0.56
1:0:1200:G:O2'	1:0:1201:G:H5'	2.04	0.56
1:0:1279:G:H1	19:Q:37:LYS:CA	2.18	0.56
1:0:1310:C:H2'	1:0:1311:C:C6	2.40	0.56
1:0:1955:G:H2'	1:0:1956:G:H5'	1.87	0.56
1:0:2033:C:H2'	1:0:2034:A:O4'	2.05	0.56
1:0:2067:U:O5'	1:0:2067:U:H6	1.89	0.56
1:0:2429:A:OP1	1:0:2476:A:H2'	2.04	0.56
1:0:2695:C:C2	1:0:2696:A:C8	2.94	0.56
1:0:2724:G:C2	1:0:2725:C:C4	2.92	0.56
1:0:2837:G:O5'	1:0:2837:G:C8	2.58	0.56
1:0:4:C:H2'	1:0:5:A:H8	1.71	0.56
1:0:28:A:H5"	1:0:460:U:C5	2.41	0.56
1:0:560:G:C6	1:0:561:U:C4	2.94	0.56
1:0:689:A:H2	1:0:690:A:C8	2.23	0.56
1:0:704:G:C2	1:0:705:C:C2	2.92	0.56
1:0:743:A:OP2	1:0:744:C:OP2	2.23	0.56
1:0:930:A:H8	2:9:82:U:O2'	1.89	0.56
1:0:976:C:H5'	1:0:2252:A:C1'	2.34	0.56
1:0:1272:G:H2'	1:0:1273:G:C8	2.41	0.56
1:0:1459:U:C2'	1:0:1475:U:O2'	2.53	0.56
1:0:1473:U:H5"	1:0:1474:A:C4	2.41	0.56
1:0:1538:A:O2'	1:0:1539:U:H5'	2.05	0.56
1:0:2198:U:C2'	1:0:2199:C:H5"	2.36	0.56
1:0:2829:A:H2'	1:0:2830:U:H6	1.70	0.56
1:0:311:A:H2	1:0:334:G:H21	1.52	0.56
1:0:394:U:C2'	1:0:395:G:H5'	2.36	0.56
1:0:570:G:H2'	1:0:571:U:H5'	1.87	0.56
1:0:721:C:H2'	1:0:722:C:C6	2.40	0.56
1:0:1312:G:O2'	1:0:1314:A:H2	1.88	0.56
1:0:1543:G:H2'	1:0:1544:A:O4'	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1650:A:N7	1:0:1652:G:N7	2.53	0.56
1:0:2241:U:C4'	1:0:2307:A:C2	2.86	0.56
1:0:2326:C:N4	1:0:2350:G:N2	2.54	0.56
1:0:2544:A:H5"	1:0:2545:A:OP2	2.05	0.56
1:0:2753:C:H2'	1:0:2754:C:H6	1.70	0.56
1:0:109:A:C3'	1:0:110:U:H5"	2.35	0.56
1:0:687:G:C5	1:0:817:A:N1	2.74	0.56
1:0:1503:G:C6	1:0:1504:G:C6	2.93	0.56
1:0:1669:A:H2'	1:0:1670:G:H4'	1.87	0.56
1:0:1700:C:C6	1:0:1701:C:C5	2.93	0.56
1:0:1825:C:C2'	1:0:1826:U:H5'	2.34	0.56
1:0:1838:G:H2'	1:0:1839:A:H5'	1.87	0.56
1:0:2006:G:H2'	1:0:2007:G:C8	2.40	0.56
1:0:2436:U:O2	1:0:2474:G:N2	2.39	0.56
1:0:2437:G:C6	1:0:2469:G:C2'	2.85	0.56
1:0:2544:A:H2'	1:0:2545:A:H1'	1.86	0.56
1:0:2710:C:O2'	1:0:2711:G:H5'	2.06	0.56
1:0:2717:G:H2'	1:0:2718:A:H8	1.70	0.56
1:0:167:A:H3'	1:0:181:A:N1	2.21	0.56
1:0:322:A:C2	1:0:342:G:OP2	2.59	0.56
1:0:613:A:C2	1:0:614:G:C5	2.94	0.56
1:0:676:G:H8	1:0:676:G:O5'	1.89	0.56
1:0:741:G:C4	1:0:743:A:C8	2.94	0.56
1:0:951:G:C2'	1:0:952:A:H5"	2.36	0.56
1:0:1001:A:N3	1:0:1167:A:H2	2.03	0.56
1:0:1322:G:C6	1:0:1323:G:C6	2.94	0.56
1:0:1389:C:O2'	1:0:1390:G:H5'	2.05	0.56
1:0:1392:U:OP1	1:0:1392:U:H6	1.89	0.56
1:0:1615:C:H2'	1:0:1616:C:C6	2.41	0.56
1:0:1793:A:N6	1:0:1806:G:H2'	2.20	0.56
1:0:2217:G:N3	1:0:2217:G:H2'	2.19	0.56
1:0:2543:A:H8	1:0:2543:A:O5'	1.89	0.56
1:0:171:G:H2'	1:0:172:A:O4'	2.06	0.56
1:0:525:A:H2'	1:0:526:C:C5'	2.27	0.56
1:0:797:A:H4'	1:0:798:G:C8	2.40	0.56
1:0:834:A:N7	1:0:957:G:C5	2.74	0.56
1:0:836:G:H8	1:0:836:G:O5'	1.87	0.56
1:0:859:U:H3'	1:0:859:U:C6	2.41	0.56
1:0:971:A:C2'	1:0:973:U:OP1	2.53	0.56
1:0:1110:G:H2'	1:0:1111:C:O4'	2.06	0.56
1:0:1544:A:C6	1:0:1545:G:C6	2.94	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1715:A:HO2'	1:0:1716:G:H3'	1.70	0.56
1:0:2546:G:H2'	1:0:2547:C:C6	2.41	0.56
1:0:2612:G:H5'	1:0:2786:G:O2'	2.06	0.56
2:9:61:A:O5'	2:9:61:A:C8	2.58	0.56
1:0:78:C:O5'	1:0:78:C:H6	1.88	0.56
1:0:591:G:H2'	1:0:592:G:C8	2.40	0.56
1:0:820:U:C2	1:0:821:A:C8	2.93	0.56
1:0:1223:G:C4	1:0:1250:A:N6	2.74	0.56
1:0:1480:G:C2	1:0:1481:U:H1'	2.41	0.56
1:0:1514:C:H6	1:0:1514:C:P	2.29	0.56
1:0:1881:U:H2'	1:0:1882:G:H5'	1.88	0.56
1:0:2248:A:N7	1:0:2249:U:C4	2.74	0.56
1:0:2679:G:C2	1:0:2687:G:C2	2.94	0.56
1:0:2746:G:H2'	1:0:2746:G:N3	2.21	0.56
1:0:112:U:O2'	1:0:113:C:H5'	2.04	0.56
1:0:536:A:C2	1:0:2605:C:H1'	2.41	0.56
1:0:644:A:H2'	1:0:645:G:H5'	1.88	0.56
1:0:729:A:H2'	1:0:730:C:H6	1.71	0.56
1:0:942:U:C2'	1:0:943:U:H5'	2.36	0.56
1:0:1046:U:H2'	1:0:1047:G:C8	2.41	0.56
1:0:1288:A:H62	1:0:1309:G:C4'	2.18	0.56
1:0:1398:G:H2'	1:0:1399:C:C6	2.41	0.56
1:0:1664:G:C4'	1:0:1665:C:OP1	2.54	0.56
1:0:1707:A:N7	1:0:1714:A:C2	2.74	0.56
1:0:1777:A:N6	1:0:2585:C:O4'	2.39	0.56
1:0:1789:U:C4	1:0:1811:A:C2	2.94	0.56
1:0:211:U:O2'	1:0:212:U:H5'	2.06	0.55
1:0:756:C:O2'	1:0:757:U:H5'	2.06	0.55
1:0:788:G:H5"	1:0:790:A:H1'	1.88	0.55
1:0:805:G:H5"	1:0:806:A:O5'	2.06	0.55
1:0:1007:A:H2'	1:0:1008:G:H8	1.71	0.55
1:0:1014:G:O2'	1:0:1015:U:H5'	2.06	0.55
1:0:1040:A:N7	1:0:1041:G:C8	2.74	0.55
1:0:1452:U:C4	1:0:1568:A:C2	2.93	0.55
1:0:1635:G:H2'	1:0:1636:G:O4'	2.06	0.55
1:0:1686:A:O2'	1:0:1687:C:H5'	2.06	0.55
1:0:1692:C:C2'	1:0:1693:A:H5'	2.34	0.55
1:0:1938:U:O2'	1:0:1939:U:C5'	2.35	0.55
1:0:1972:G:C2'	1:0:1973:C:H5'	2.36	0.55
1:0:1984:A:H1'	1:0:2668:U:C4	2.41	0.55
1:0:2496:C:C2	1:0:2521:A:N6	2.73	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2640:G:H2'	1:0:2641:A:C8	2.41	0.55
1:0:2816:C:C2	1:0:2852:G:C2	2.94	0.55
1:0:2843:A:C6	1:0:2844:G:C2	2.94	0.55
2:9:62:C:N3	2:9:63:A:N7	2.54	0.55
1:0:947:C:N3	1:0:948:C:C4	2.73	0.55
1:0:2503:G:C2'	1:0:2504:G:H5"	2.33	0.55
1:0:2703:C:O5'	1:0:2703:C:H6	1.88	0.55
2:9:59:A:H2'	2:9:60:A:H5'	1.88	0.55
1:0:931:G:N2	1:0:2247:A:H3'	2.18	0.55
1:0:1011:A:C2	1:0:1012:A:C2	2.94	0.55
1:0:1151:U:C5'	1:0:1153:A:H5'	2.36	0.55
1:0:1329:U:H5'	1:0:1405:A:H1'	1.88	0.55
1:0:1517:C:H2'	1:0:1518:C:H6	1.70	0.55
1:0:2007:G:O2'	1:0:2008:C:H5'	2.06	0.55
1:0:2034:A:H2'	1:0:2035:G:C8	2.41	0.55
1:0:2044:G:C2	1:0:2046:C:C4	2.95	0.55
1:0:2472:U:C4	1:0:2473:G:N7	2.74	0.55
1:0:2518:C:O2'	1:0:2519:C:H5'	2.06	0.55
1:0:2641:A:H8	1:0:2641:A:O5'	1.89	0.55
1:0:2766:U:O2'	1:0:2767:C:H5'	2.07	0.55
2:9:114:C:O5'	2:9:114:C:H6	1.88	0.55
1:0:177:U:OP2	1:0:177:U:H6	1.90	0.55
1:0:459:A:N1	1:0:466:A:H3'	2.22	0.55
1:0:646:C:O2	1:0:650:U:H4'	2.06	0.55
1:0:811:G:O2'	1:0:812:G:H5'	2.06	0.55
1:0:1190:C:H6	1:0:1190:C:O5'	1.88	0.55
1:0:1312:G:H2'	1:0:1643:A:N6	2.22	0.55
1:0:2060:A:OP1	1:0:2061:C:OP2	2.25	0.55
1:0:2217:G:N3	1:0:2217:G:H3'	2.21	0.55
1:0:2458:U:C4	1:0:2459:C:C4	2.94	0.55
1:0:176:A:H1'	1:0:2221:G:H21	1.70	0.55
1:0:215:G:N2	1:0:632:A:C8	2.75	0.55
1:0:521:U:C5	1:0:522:G:N3	2.71	0.55
1:0:746:G:N7	1:0:774:A:C5	2.74	0.55
1:0:813:A:H2'	1:0:813:A:N3	2.22	0.55
1:0:976:C:O2'	1:0:977:G:C5'	2.54	0.55
1:0:2367:A:N7	1:0:2368:G:C5	2.75	0.55
1:0:2395:C:N4	1:0:2396:C:N4	2.54	0.55
1:0:2413:A:H8	1:0:2413:A:H3'	1.71	0.55
1:0:2459:C:C2'	1:0:2460:G:H5'	2.37	0.55
1:0:2656:G:H2'	1:0:2657:G:H8	1.71	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:33:C:H2'	2:9:34:C:C6	2.41	0.55
1:0:495:C:H2'	1:0:496:C:H6	1.69	0.55
1:0:576:A:H2	1:0:580:A:H62	1.54	0.55
1:0:584:A:H2'	1:0:585:U:C6	2.36	0.55
1:0:689:A:C2'	1:0:690:A:H5'	2.36	0.55
1:0:758:G:H2'	1:0:759:C:H5'	1.89	0.55
1:0:1431:U:H2'	1:0:1432:G:O4'	2.07	0.55
1:0:1485:U:H2'	1:0:1486:A:C8	2.41	0.55
1:0:1558:C:C2'	1:0:1559:G:H5'	2.36	0.55
1:0:1855:G:H2'	1:0:1856:U:H6	1.72	0.55
1:0:2051:U:H3	1:0:2409:A:H61	1.55	0.55
1:0:2622:G:H2'	1:0:2623:A:O4'	2.07	0.55
2:9:89:G:C2	2:9:93:G:C2	2.94	0.55
1:0:28:A:H5"	1:0:460:U:H5	1.71	0.55
1:0:515:A:H2'	1:0:516:G:H5'	1.89	0.55
1:0:575:U:C2	1:0:576:A:C8	2.94	0.55
1:0:697:G:H1	1:0:807:A:H2	1.51	0.55
1:0:2753:C:O2'	1:0:2754:C:H5'	2.07	0.55
1:0:2813:G:C4	1:0:2814:G:C8	2.94	0.55
1:0:2820:C:C2	1:0:2821:G:N7	2.75	0.55
2:9:79:U:C2'	2:9:80:A:H5'	2.37	0.55
1:0:62:U:H2'	1:0:63:A:C8	2.42	0.55
1:0:1171:A:O5'	1:0:1171:A:H8	1.88	0.55
1:0:1223:G:H1'	1:0:1225:G:C1'	2.37	0.55
1:0:1838:G:C2'	1:0:1839:A:H5'	2.37	0.55
1:0:1989:C:O5'	1:0:1989:C:H6	1.89	0.55
1:0:2181:A:C2'	1:0:2182:A:H5'	2.37	0.55
1:0:2197:U:H2'	1:0:2198:U:C6	2.42	0.55
1:0:2641:A:H2'	1:0:2642:G:H5'	1.89	0.55
2:9:18:G:H2'	2:9:19:C:C6	2.42	0.55
1:0:3:U:H6	1:0:3:U:O5'	1.90	0.55
1:0:198:A:O2'	1:0:199:A:P	2.64	0.55
1:0:347:C:H2'	1:0:348:U:O4'	2.07	0.55
1:0:435:A:O2'	1:0:436:A:H5'	2.06	0.55
1:0:805:G:N7	1:0:2419:C:H1'	2.21	0.55
1:0:872:G:O6	1:0:928:G:OP2	2.25	0.55
1:0:914:C:H2'	1:0:915:C:H6	1.72	0.55
1:0:933:G:O2'	1:0:934:G:H5'	2.07	0.55
1:0:962:C:C2	1:0:963:G:N7	2.75	0.55
1:0:1054:C:H2'	1:0:1055:A:H5'	1.89	0.55
1:0:1202:U:C2'	1:0:1203:A:H8	2.17	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1369:G:O2'	1:0:1370:U:H5'	2.06	0.55
1:0:1618:U:C5	1:0:1618:U:OP2	2.59	0.55
1:0:1625:A:H1'	1:0:1632:A:H4'	1.89	0.55
1:0:1757:C:O2	1:0:1970:G:C2	2.60	0.55
1:0:2025:A:O5'	1:0:2025:A:H8	1.90	0.55
1:0:2236:U:N3	1:0:2237:C:C5	2.75	0.55
1:0:2441:U:C2	1:0:2442:C:C6	2.94	0.55
1:0:2543:A:C6	1:0:2626:U:H4'	2.41	0.55
1:0:102:C:O2'	1:0:103:U:H5'	2.07	0.55
1:0:562:G:H2'	1:0:563:U:O4'	2.06	0.55
1:0:677:G:C2	1:0:678:G:C5	2.95	0.55
1:0:678:G:C4	1:0:679:C:C5	2.95	0.55
1:0:868:U:H2'	1:0:869:C:H6	1.71	0.55
1:0:951:G:H2'	1:0:952:A:C4'	2.37	0.55
1:0:977:G:H1'	1:0:2246:A:C5	2.42	0.55
1:0:1150:C:O2'	1:0:1153:A:H4'	2.06	0.55
1:0:1235:C:O2'	1:0:1236:G:H5'	2.07	0.55
1:0:1341:G:H2'	1:0:1343:C:N4	2.22	0.55
1:0:1552:C:C2'	1:0:1553:G:H5'	2.37	0.55
1:0:1769:U:H3	1:0:1775:A:H1'	1.72	0.55
1:0:2047:C:H6	1:0:2047:C:H3'	1.72	0.55
1:0:2051:U:H3	1:0:2409:A:N6	2.05	0.55
1:0:2409:A:H2'	1:0:2410:U:H5'	1.88	0.55
1:0:2610:G:C5'	1:0:2866:A:H1'	2.24	0.55
1:0:2665:G:C5	1:0:2666:U:C5	2.95	0.55
1:0:2792:C:C2	1:0:2805:G:N2	2.75	0.55
1:0:136:A:H2'	1:0:137:A:O4'	2.07	0.54
1:0:632:A:C2	1:0:633:G:C5	2.95	0.54
1:0:703:A:H2'	1:0:704:G:C8	2.37	0.54
1:0:870:C:H2'	1:0:871:U:C6	2.37	0.54
1:0:983:G:O6	1:0:984:A:N6	2.40	0.54
1:0:1017:C:O2	1:0:1018:C:C1'	2.54	0.54
1:0:2090:U:H2'	1:0:2091:C:C6	2.42	0.54
1:0:74:G:O2'	1:0:75:C:H5'	2.06	0.54
1:0:321:A:C2	1:0:323:G:H1'	2.42	0.54
1:0:569:C:O2'	1:0:570:G:H5'	2.08	0.54
1:0:798:G:N2	1:0:799:C:O4'	2.40	0.54
1:0:1141:U:O2'	1:0:1142:G:OP1	2.23	0.54
1:0:1197:U:O5'	1:0:1197:U:H6	1.91	0.54
1:0:1356:G:OP2	1:0:1357:U:OP2	2.26	0.54
1:0:1685:A:H2	1:0:1976:U:C2	2.25	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1735:G:H2'	1:0:1736:C:H6	1.71	0.54
1:0:1990:U:O4	1:0:1991:C:N4	2.41	0.54
1:0:2059:U:C3'	1:0:2217:G:O6	2.55	0.54
1:0:2174:G:H2'	1:0:2175:A:H8	1.73	0.54
1:0:2555:G:H2'	1:0:2555:G:N3	2.22	0.54
1:0:2583:U:H2'	1:0:2584:U:H5'	1.89	0.54
1:0:2641:A:C2'	1:0:2642:G:H5'	2.37	0.54
2:9:20:A:O2'	2:9:21:C:H5'	2.07	0.54
1:0:565:A:C6	1:0:566:U:C4	2.96	0.54
1:0:956:A:H2'	1:0:957:G:O5'	2.08	0.54
1:0:958:G:C6	1:0:982:C:N3	2.76	0.54
1:0:1077:U:H2'	1:0:1079:G:OP2	2.07	0.54
1:0:1755:G:C2	1:0:1756:C:C2	2.96	0.54
1:0:1797:C:H2'	1:0:1798:G:O4'	2.07	0.54
1:0:2404:A:P	1:0:2406:C:H5'	2.47	0.54
1:0:2554:C:H3'	1:0:2554:C:C6	2.43	0.54
1:0:2618:A:H2'	1:0:2619:G:O4'	2.08	0.54
1:0:2640:G:C6	1:0:2641:A:C6	2.95	0.54
1:0:2697:G:N2	1:0:2698:G:C4	2.75	0.54
1:0:2761:A:O5'	1:0:2761:A:H8	1.89	0.54
1:0:43:A:H2	1:0:448:C:N4	2.05	0.54
1:0:322:A:N1	1:0:341:A:OP2	2.41	0.54
1:0:533:C:H1'	1:0:563:U:O2'	2.07	0.54
1:0:584:A:C5'	1:0:2038:C:N4	2.70	0.54
1:0:759:C:N4	1:0:2591:C:OP1	2.34	0.54
1:0:874:A:C2	1:0:875:G:H1'	2.42	0.54
1:0:1002:C:C6	1:0:1198:C:N3	2.75	0.54
1:0:1090:C:O2'	1:0:1091:C:H5'	2.07	0.54
1:0:1411:C:O2'	1:0:1412:C:H5'	2.08	0.54
1:0:1787:U:O5'	1:0:1787:U:H6	1.89	0.54
1:0:1934:U:O2	1:0:1936:A:H8	1.90	0.54
1:0:2077:G:O2'	1:0:2078:G:H5'	2.07	0.54
1:0:2207:G:O2'	1:0:2208:U:H5'	2.07	0.54
1:0:2299:A:C5'	1:0:2300:G:C4	2.91	0.54
1:0:2540:A:H2'	1:0:2541:U:O5'	2.06	0.54
1:0:2600:A:C2'	1:0:2601:C:H5'	2.37	0.54
1:0:224:G:C8	1:0:226:C:H1'	2.42	0.54
1:0:485:G:O6	1:0:520:C:C4	2.61	0.54
1:0:494:A:OP2	1:0:495:C:H5	1.91	0.54
1:0:622:U:O2'	1:0:623:G:H5'	2.07	0.54
1:0:701:U:C5'	1:0:1771:A:H2	2.20	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:971:A:O2'	1:0:973:U:OP1	2.21	0.54
1:0:1262:U:H3'	1:0:1262:U:C6	2.41	0.54
1:0:1805:G:H1'	3:A:46:ARG:CA	2.38	0.54
1:0:2058:U:H3'	1:0:2217:G:N1	2.23	0.54
1:0:2441:U:H2'	1:0:2442:C:H6	1.72	0.54
1:0:2459:C:H2'	1:0:2460:G:H5'	1.90	0.54
1:0:31:C:H2'	1:0:32:C:H6	1.71	0.54
1:0:312:G:N2	1:0:328:A:C1'	2.71	0.54
1:0:512:A:C2'	1:0:513:A:H5'	2.35	0.54
1:0:580:A:N7	1:0:584:A:N6	2.56	0.54
1:0:729:A:O2'	1:0:730:C:H5'	2.08	0.54
1:0:798:G:N2	1:0:799:C:H1'	2.23	0.54
1:0:987:G:H4'	1:0:1167:A:N7	2.23	0.54
1:0:1049:C:C2	1:0:1129:A:C2	2.95	0.54
1:0:1072:U:O5'	1:0:1072:U:H6	1.91	0.54
1:0:1197:U:H2'	1:0:1198:C:O4'	2.08	0.54
1:0:1339:U:O2'	1:0:1993:G:H1'	2.06	0.54
1:0:1432:G:C2	1:0:1594:U:C5	2.95	0.54
1:0:1692:C:O2'	1:0:1693:A:H5'	2.08	0.54
1:0:1782:A:C2	1:0:1821:A:H4'	2.43	0.54
1:0:2359:U:N3	1:0:2360:C:C5	2.76	0.54
1:0:2404:A:H4'	1:0:2405:A:O5'	2.07	0.54
1:0:2709:C:C4	1:0:2710:C:N4	2.75	0.54
2:9:84:G:H2'	2:9:85:G:C8	2.36	0.54
1:0:140:G:H2'	1:0:141:G:H8	1.73	0.54
1:0:539:A:C6	1:0:2025:A:C2	2.95	0.54
1:0:677:G:N2	1:0:678:G:C4	2.75	0.54
1:0:968:C:C2	1:0:2438:A:H5'	2.43	0.54
1:0:1236:G:N2	1:0:1240:G:C4	2.76	0.54
1:0:1761:G:O2'	1:0:1762:C:H5'	2.08	0.54
1:0:1779:C:O5'	1:0:1779:C:H6	1.91	0.54
1:0:1972:G:H2'	1:0:1973:C:O4'	2.07	0.54
1:0:1976:U:H2'	1:0:1977:C:C5'	2.26	0.54
1:0:2474:G:O2'	1:0:2475:C:H5'	2.08	0.54
1:0:158:A:H2	1:0:447:U:H4'	1.72	0.54
1:0:748:A:N7	1:0:749:C:N3	2.56	0.54
1:0:931:G:O2'	1:0:932:G:H5'	2.07	0.54
1:0:1141:U:H3	1:0:2008:C:H5"	1.73	0.54
1:0:1276:U:H2'	1:0:1277:G:O4'	2.08	0.54
1:0:1312:G:H2'	1:0:1656:U:O4	2.08	0.54
1:0:1375:C:C4	1:0:1376:C:C5	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1645:U:H2'	1:0:1646:G:H8	1.69	0.54
1:0:1668:G:C2	1:0:1990:U:O2	2.61	0.54
1:0:1851:A:O5'	1:0:1851:A:H8	1.91	0.54
1:0:1886:G:H2'	1:0:1887:G:H8	1.73	0.54
1:0:2022:C:C4	1:0:2023:C:C4	2.96	0.54
1:0:2397:A:H2'	1:0:2398:U:C6	2.43	0.54
1:0:2409:A:H3'	1:0:2409:A:C8	2.42	0.54
1:0:2707:G:O2'	1:0:2708:U:H5'	2.07	0.54
2:9:100:G:C2	2:9:101:A:H1'	2.42	0.54
1:0:66:U:C2	1:0:67:G:N7	2.75	0.54
1:0:114:C:O2'	1:0:115:G:H5'	2.08	0.54
1:0:229:G:H2'	1:0:230:C:C6	2.43	0.54
1:0:532:A:H2'	1:0:533:C:C6	2.41	0.54
1:0:546:A:H2'	1:0:547:U:C6	2.43	0.54
1:0:784:U:O2'	1:0:785:U:H5'	2.08	0.54
1:0:931:G:H2'	1:0:932:G:O4'	2.07	0.54
1:0:1004:A:C6	1:0:1005:U:C5	2.95	0.54
1:0:1365:U:O2'	1:0:1366:A:H5'	2.08	0.54
1:0:1385:C:H2'	1:0:1386:A:H8	1.72	0.54
1:0:1459:U:O2	1:0:1475:U:O3'	2.25	0.54
1:0:1683:G:C2'	1:0:1684:G:H5'	2.32	0.54
1:0:1789:U:O2'	1:0:1793:A:H1'	2.07	0.54
1:0:2222:U:H2'	1:0:2223:U:C6	2.43	0.54
1:0:2266:A:H2'	1:0:2268:G:N7	2.22	0.54
1:0:2279:G:H2'	1:0:2280:A:C8	2.42	0.54
1:0:2331:A:H2'	1:0:2332:G:H5'	1.90	0.54
1:0:2371:A:H3'	1:0:2371:A:N3	2.22	0.54
1:0:2373:C:C5	1:0:2374:C:C5	2.96	0.54
1:0:2395:C:N4	1:0:2396:C:H41	2.05	0.54
1:0:2674:C:H2'	1:0:2675:U:C6	2.43	0.54
1:0:2709:C:N4	1:0:2710:C:N4	2.56	0.54
1:0:11:G:H8	1:0:11:G:O5'	1.90	0.54
1:0:128:C:C2'	1:0:129:A:C5'	2.74	0.54
1:0:475:U:O4	1:0:476:G:N1	2.41	0.54
1:0:1117:G:H2'	1:0:1118:G:C8	2.42	0.54
1:0:1193:G:O2'	1:0:1194:U:H5'	2.06	0.54
1:0:1532:A:H2'	1:0:1533:G:C8	2.43	0.54
1:0:1619:A:H2	1:0:1620:C:C6	2.26	0.54
1:0:1746:A:H2	1:0:2696:A:H1'	1.73	0.54
1:0:1767:G:N2	1:0:1768:U:H1'	2.22	0.54
1:0:1920:A:C2	1:0:1922:U:C5	2.96	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:815:A:H2'	1:0:816:U:C6	2.43	0.53
1:0:941:U:C2'	1:0:942:U:H5'	2.38	0.53
1:0:1140:A:H2	1:0:2548:G:HO2'	1.56	0.53
1:0:2623:A:N6	1:0:2624:G:N1	2.56	0.53
1:0:2713:A:N6	1:0:2714:A:N6	2.56	0.53
1:0:2739:G:H2'	1:0:2740:C:O4'	2.08	0.53
2:9:34:C:O2'	2:9:35:C:H5'	2.08	0.53
1:0:121:G:O2'	1:0:122:G:H5'	2.08	0.53
1:0:175:C:N3	1:0:225:G:N2	2.56	0.53
1:0:175:C:O2'	1:0:176:A:C8	2.53	0.53
1:0:845:U:P	1:0:955:G:O6	2.67	0.53
1:0:1438:G:C2	1:0:1591:U:C2	2.96	0.53
1:0:1496:G:H1	1:0:1527:G:H1	1.57	0.53
1:0:1948:C:C2	1:0:1949:A:N7	2.75	0.53
1:0:2318:U:C2'	1:0:2319:G:H8	2.08	0.53
1:0:2375:G:C2	1:0:2400:G:C2	2.96	0.53
1:0:2376:G:C6	1:0:2399:C:N3	2.76	0.53
1:0:2443:C:H2'	1:0:2444:C:O4'	2.09	0.53
1:0:2718:A:H2	1:0:2746:G:H1	1.57	0.53
1:0:2756:A:N7	1:0:2762:G:C8	2.77	0.53
1:0:2816:C:O2	1:0:2852:G:C2	2.61	0.53
1:0:58:C:C1'	1:0:72:A:C8	2.89	0.53
1:0:691:C:C2	1:0:692:C:C5	2.96	0.53
1:0:701:U:O2'	1:0:702:A:H5'	2.09	0.53
1:0:814:G:H3'	1:0:815:A:H5'	1.91	0.53
1:0:835:U:C4	1:0:849:G:C2	2.96	0.53
1:0:1379:A:H2'	1:0:1380:C:C6	2.44	0.53
1:0:1574:A:O4'	1:0:1574:A:OP1	2.25	0.53
1:0:1692:C:C2'	1:0:1693:A:O5'	2.56	0.53
1:0:1935:A:C2	1:0:1936:A:C2	2.97	0.53
1:0:1966:C:H2'	1:0:1967:U:H6	1.73	0.53
1:0:2266:A:N3	1:0:2268:G:H1'	2.22	0.53
1:0:2437:G:N7	1:0:2469:G:C5	2.76	0.53
1:0:2542:U:H2'	1:0:2544:A:OP2	2.09	0.53
1:0:2625:U:O5'	1:0:2625:U:H6	1.89	0.53
1:0:2661:G:C2	4:B:21:ILE:CA	2.91	0.53
1:0:315:G:N2	1:0:325:U:O2	2.41	0.53
1:0:353:G:H2'	1:0:354:C:H6	1.73	0.53
1:0:401:G:N3	1:0:403:A:N6	2.56	0.53
1:0:629:C:C2'	1:0:630:G:H5'	2.39	0.53
1:0:709:A:O2'	1:0:1639:U:H4'	2.07	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:829:C:N3	1:0:1206:G:N1	2.57	0.53
1:0:1098:G:C5	1:0:1114:A:C2	2.96	0.53
1:0:1451:C:O2'	1:0:1452:U:H5'	2.08	0.53
1:0:1656:U:H2'	1:0:1657:A:C5'	2.38	0.53
1:0:1678:G:C2	1:0:1983:G:N3	2.77	0.53
1:0:2052:G:H2'	1:0:2053:G:C5'	2.39	0.53
1:0:2199:C:O2'	1:0:2200:G:H5'	2.09	0.53
1:0:2856:U:C5	1:0:2857:C:H5	2.27	0.53
2:9:9:G:H2'	2:9:10:U:C6	2.43	0.53
2:9:18:G:H2'	2:9:19:C:H6	1.74	0.53
2:9:56:G:H2'	2:9:57:U:O4'	2.09	0.53
1:0:305:A:H2'	1:0:306:G:C5'	2.39	0.53
1:0:525:A:O2'	1:0:526:C:H5'	2.06	0.53
1:0:796:A:C2	1:0:1770:U:H5'	2.43	0.53
1:0:991:A:N7	1:0:992:A:N7	2.57	0.53
1:0:1055:A:C2	1:0:1121:G:H2'	2.44	0.53
1:0:1372:A:C8	1:0:1373:G:C8	2.97	0.53
1:0:1641:C:H3'	1:0:1642:G:C8	2.39	0.53
1:0:1811:A:H1'	1:0:1813:A:C4	2.44	0.53
1:0:1935:A:C2	1:0:2539:C:O2	2.55	0.53
1:0:2053:G:C2	1:0:2054:A:C4	2.97	0.53
1:0:2064:U:O4	1:0:2216:G:C2	2.60	0.53
1:0:2622:G:N2	1:0:2752:C:C2	2.77	0.53
1:0:2839:G:H2'	1:0:2840:U:H6	1.72	0.53
2:9:116:C:H2'	2:9:117:G:O4'	2.09	0.53
1:0:448:C:C5	1:0:449:C:C5	2.96	0.53
1:0:471:A:H2'	1:0:472:C:O4'	2.09	0.53
1:0:545:C:H2'	1:0:546:A:C8	2.44	0.53
1:0:873:U:C3'	1:0:874:A:H5'	2.39	0.53
1:0:1248:G:N7	1:0:1249:G:C6	2.77	0.53
1:0:2007:G:H2'	1:0:2008:C:C6	2.44	0.53
1:0:2047:C:H3'	1:0:2047:C:C6	2.43	0.53
1:0:2347:C:H41	1:0:2361:G:H1	1.57	0.53
1:0:2499:C:H2'	1:0:2500:C:C6	2.41	0.53
1:0:2701:A:N1	1:0:2848:A:C6	2.76	0.53
1:0:2748:C:H2'	1:0:2749:A:O4'	2.09	0.53
1:0:67:G:N3	1:0:73:A:C8	2.76	0.53
1:0:421:G:H2'	1:0:422:C:H6	1.72	0.53
1:0:689:A:O2'	1:0:690:A:H5'	2.07	0.53
1:0:1002:C:N3	1:0:1003:C:C5	2.77	0.53
1:0:1125:G:O2'	1:0:1126:A:H5'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1277:G:C6	1:0:1278:A:N6	2.77	0.53
1:0:1970:G:H2'	1:0:1971:C:C6	2.44	0.53
1:0:1976:U:H2'	1:0:1976:U:O2	2.09	0.53
1:0:1993:G:H2'	1:0:1994:U:C6	2.43	0.53
1:0:2107:G:H2'	1:0:2108:G:O4'	2.07	0.53
1:0:2663:U:N3	1:0:2664:G:C5	2.77	0.53
1:0:2763:U:O2'	1:0:2764:U:H5'	2.08	0.53
2:9:8:C:OP1	2:9:63:A:H5'	2.09	0.53
1:0:38:G:H1	1:0:453:U:H3	1.56	0.53
1:0:537:C:O2	1:0:2759:U:O2	2.27	0.53
1:0:543:G:H2'	1:0:544:U:C5	2.43	0.53
1:0:932:G:H2'	1:0:933:G:H8	1.70	0.53
1:0:1385:C:H1'	1:0:2192:U:C6	2.44	0.53
1:0:1756:C:O5'	1:0:1756:C:H6	1.91	0.53
1:0:2036:G:O2'	1:0:2037:A:H5'	2.08	0.53
1:0:2431:C:H2'	1:0:2432:A:O4'	2.08	0.53
1:0:2795:A:N3	1:0:2795:A:H2'	2.23	0.53
1:0:88:G:H3'	1:0:89:A:C5'	2.38	0.53
1:0:237:G:N2	1:0:238:G:H1'	2.24	0.53
1:0:565:A:C6	1:0:566:U:N3	2.77	0.53
1:0:763:A:H2'	1:0:764:A:H5"	1.90	0.53
1:0:965:G:O2'	1:0:966:A:H5'	2.08	0.53
1:0:1066:G:H3'	1:0:1067:G:H5"	1.90	0.53
1:0:1352:G:N1	1:0:1353:A:N6	2.57	0.53
1:0:1576:G:C2	1:0:1577:G:C4	2.97	0.53
1:0:1695:U:H2'	1:0:1696:C:O4'	2.09	0.53
1:0:2377:U:H4'	1:0:2378:G:OP1	2.09	0.53
1:0:2446:C:H2'	1:0:2447:G:O4'	2.08	0.53
1:0:2491:C:H2'	1:0:2492:G:C4'	2.39	0.53
1:0:2713:A:C4	1:0:2714:A:N7	2.77	0.53
2:9:42:U:O5'	2:9:42:U:H6	1.92	0.53
1:0:121:G:H2'	1:0:122:G:O4'	2.09	0.53
1:0:305:A:H2'	1:0:306:G:H5'	1.89	0.53
1:0:357:A:H2'	1:0:358:C:H5'	1.90	0.53
1:0:1256:C:H2'	1:0:1257:U:C6	2.44	0.53
1:0:1666:G:H2'	1:0:1667:A:C8	2.37	0.53
1:0:2030:U:H2'	1:0:2031:A:C8	2.43	0.53
1:0:2825:A:O2'	1:0:2826:C:H5'	2.09	0.53
1:0:163:A:H2'	1:0:164:G:C8	2.43	0.52
1:0:228:A:H8	1:0:228:A:O5'	1.92	0.52
1:0:749:C:O2'	1:0:750:C:H5'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1055:A:OP1	1:0:1057:A:H5'	2.09	0.52
1:0:1235:C:C2	1:0:1241:G:N2	2.77	0.52
1:0:1325:U:H5'	1:0:1326:U:C4	2.44	0.52
1:0:1721:G:O2'	1:0:1722:G:H5'	2.09	0.52
1:0:1952:A:O3'	1:0:1953:A:O4'	2.27	0.52
1:0:1974:U:H2'	1:0:1975:G:H5"	1.90	0.52
1:0:2679:G:N2	1:0:2687:G:C4	2.77	0.52
1:0:475:U:C4	1:0:476:G:C6	2.97	0.52
1:0:632:A:H3'	1:0:632:A:N3	2.24	0.52
1:0:745:C:H2'	1:0:746:G:H5'	1.90	0.52
1:0:748:A:N7	1:0:749:C:C2	2.77	0.52
1:0:966:A:N6	1:0:967:G:C4	2.77	0.52
1:0:1002:C:C5	1:0:1198:C:N3	2.78	0.52
1:0:1230:C:H2'	1:0:1231:A:H8	1.73	0.52
1:0:1302:C:C4	1:0:1303:U:C4	2.97	0.52
1:0:1333:G:N7	1:0:1342:U:H5'	2.25	0.52
1:0:1356:G:C4'	1:0:1613:G:H2'	2.40	0.52
1:0:1685:A:H1'	1:0:1686:A:N3	2.24	0.52
1:0:1727:C:H4'	1:0:2833:C:N3	2.24	0.52
1:0:2413:A:H3'	1:0:2413:A:C8	2.44	0.52
1:0:2442:C:N3	1:0:2467:A:C2	2.77	0.52
1:0:2497:A:OP2	1:0:2498:U:OP2	2.27	0.52
1:0:2594:U:C2	1:0:2595:C:C5	2.97	0.52
1:0:2686:C:O2'	1:0:2687:G:H5'	2.09	0.52
1:0:2725:C:H2'	1:0:2726:U:C6	2.43	0.52
1:0:161:U:C4	1:0:162:C:N4	2.77	0.52
1:0:502:A:H2'	1:0:503:G:H5'	1.90	0.52
1:0:688:A:H8	1:0:688:A:O5'	1.92	0.52
1:0:758:G:C2'	1:0:759:C:H5'	2.40	0.52
1:0:759:C:N3	1:0:2590:U:H4'	2.24	0.52
1:0:781:G:O5'	1:0:781:G:H8	1.92	0.52
1:0:848:A:O2'	1:0:849:G:H5'	2.09	0.52
1:0:929:A:H2	2:9:81:C:O2	1.92	0.52
1:0:1288:A:N6	1:0:1309:G:H5'	2.25	0.52
1:0:1655:C:H5"	1:0:2689:C:C2'	2.39	0.52
1:0:1656:U:H2'	1:0:1657:A:H5"	1.92	0.52
1:0:2324:G:H4'	1:0:2326:C:H5"	1.91	0.52
1:0:201:G:O2'	1:0:202:A:H5'	2.09	0.52
1:0:215:G:N2	1:0:632:A:H8	2.06	0.52
1:0:1131:G:O2'	1:0:1132:C:H5'	2.09	0.52
1:0:1222:G:H1'	1:0:1251:G:H21	1.75	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1440:G:H3'	1:0:1441:A:H5'	1.91	0.52
1:0:1456:C:O2'	1:0:1457:A:H5'	2.09	0.52
1:0:1888:C:C5'	1:0:1889:G:H5"	2.38	0.52
1:0:2026:C:O2'	1:0:2027:C:H5'	2.10	0.52
1:0:2062:U:H2'	1:0:2063:A:O4'	2.10	0.52
1:0:2441:U:N3	1:0:2442:C:C5	2.78	0.52
1:0:2623:A:H2'	1:0:2624:G:O4'	2.09	0.52
1:0:26:G:C6	1:0:27:G:N1	2.77	0.52
1:0:33:C:O2	1:0:34:U:C4	2.62	0.52
1:0:350:U:H6	1:0:350:U:O5'	1.92	0.52
1:0:575:U:N3	1:0:576:A:C5	2.78	0.52
1:0:808:C:H2'	1:0:809:C:H6	1.72	0.52
1:0:834:A:C8	1:0:957:G:N7	2.77	0.52
1:0:932:G:N2	1:0:2248:A:OP2	2.42	0.52
1:0:941:U:H2'	1:0:942:U:C4'	2.39	0.52
1:0:1017:C:O2'	1:0:1018:C:C5'	2.58	0.52
1:0:1780:A:O5'	1:0:1780:A:C8	2.57	0.52
1:0:2059:U:OP2	1:0:2217:G:N1	2.41	0.52
1:0:2642:G:C5	1:0:2643:G:C5	2.98	0.52
1:0:2669:C:N4	14:L:15:SER:CA	2.69	0.52
1:0:2760:G:C2'	1:0:2761:A:OP1	2.58	0.52
1:0:486:U:H2'	1:0:487:G:C5'	2.40	0.52
1:0:1162:A:O2'	1:0:1163:C:H5'	2.10	0.52
1:0:1304:U:C2'	1:0:1305:C:H5'	2.40	0.52
1:0:1318:A:C6	1:0:1319:C:C4	2.98	0.52
1:0:1339:U:P	1:0:1339:U:H6	2.33	0.52
1:0:1388:C:H2'	1:0:1389:C:C6	2.45	0.52
1:0:1409:U:H6	1:0:1409:U:OP1	1.91	0.52
1:0:1442:C:H2'	1:0:1443:G:OP1	2.08	0.52
1:0:1478:U:H2'	1:0:1479:G:H8	1.74	0.52
1:0:1530:U:O5'	1:0:1530:U:H6	1.92	0.52
1:0:1696:C:C6	1:0:1697:U:C5	2.97	0.52
1:0:1932:G:H2'	1:0:1933:G:C8	2.45	0.52
1:0:2467:A:H8	1:0:2467:A:O5'	1.93	0.52
1:0:2843:A:N1	1:0:2844:G:C2	2.77	0.52
2:9:77:G:O2'	2:9:78:A:H5'	2.10	0.52
1:0:691:C:C2	1:0:692:C:C6	2.98	0.52
1:0:930:A:OP1	1:0:930:A:H4'	2.08	0.52
1:0:1536:G:O2'	1:0:1537:U:H5'	2.10	0.52
1:0:2124:C:O2'	1:0:2125:C:H5'	2.10	0.52
1:0:2759:U:C5'	1:0:2760:G:OP2	2.54	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2872:U:H2'	1:0:2873:G:C8	2.43	0.52
1:0:25:U:H3	1:0:525:A:N6	2.08	0.52
1:0:171:G:O2'	1:0:172:A:H5'	2.09	0.52
1:0:174:A:H4'	1:0:2052:G:OP2	2.10	0.52
1:0:639:G:H8	1:0:639:G:O5'	1.93	0.52
1:0:702:A:N3	1:0:792:U:H1'	2.25	0.52
1:0:714:G:C6	1:0:715:U:C4	2.98	0.52
1:0:861:G:H21	1:0:944:A:C1'	2.22	0.52
1:0:873:U:C4	1:0:930:A:N6	2.78	0.52
1:0:944:A:C2	1:0:945:G:H1'	2.45	0.52
1:0:979:A:C6	1:0:980:G:C6	2.98	0.52
1:0:994:A:N7	1:0:995:A:N3	2.57	0.52
1:0:1007:A:H2'	1:0:1008:G:C8	2.45	0.52
1:0:1331:G:C6	1:0:1332:G:N7	2.78	0.52
1:0:1536:G:C8	1:0:1537:U:C5	2.98	0.52
1:0:1926:U:O5'	1:0:1926:U:C6	2.61	0.52
1:0:2493:U:O2'	1:0:2494:C:H5'	2.10	0.52
1:0:2511:G:C4	1:0:2512:A:C8	2.98	0.52
1:0:119:G:H1'	1:0:129:A:C2	2.45	0.52
1:0:309:G:HO2'	1:0:333:A:H2	1.58	0.52
1:0:349:G:H2'	1:0:350:U:C6	2.45	0.52
1:0:541:C:H3'	1:0:541:C:C6	2.44	0.52
1:0:741:G:C5	1:0:743:A:N7	2.78	0.52
1:0:843:G:N3	1:0:2427:A:N6	2.57	0.52
1:0:1089:C:O2	1:0:1099:A:H5'	2.10	0.52
1:0:1312:G:H4'	1:0:1313:U:H5'	1.91	0.52
1:0:1392:U:OP1	1:0:1392:U:C6	2.63	0.52
1:0:2589:C:O2'	1:0:2590:U:C5	2.56	0.52
1:0:2635:U:O5'	1:0:2635:U:H6	1.93	0.52
1:0:2705:A:O2'	1:0:2706:U:C5	2.58	0.52
1:0:15:G:H2'	1:0:16:G:C5'	2.40	0.52
1:0:56:C:O5'	1:0:56:C:H6	1.92	0.52
1:0:401:G:C4	1:0:403:A:N7	2.78	0.52
1:0:652:C:H2'	1:0:653:G:O4'	2.10	0.52
1:0:931:G:C2'	1:0:932:G:H5'	2.39	0.52
1:0:1997:A:C2	1:0:1998:A:C5	2.97	0.52
1:0:1999:U:H2'	1:0:2000:U:C6	2.45	0.52
1:0:2800:C:H2'	1:0:2801:A:O4'	2.09	0.52
1:0:2862:G:O2'	1:0:2863:U:C5'	2.57	0.52
1:0:28:A:H1'	1:0:523:A:C6	2.44	0.51
1:0:82:G:H21	1:0:102:C:N4	2.08	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:502:A:C2'	1:0:503:G:H5'	2.40	0.51
1:0:1029:C:H3'	1:0:1030:U:H5"	1.92	0.51
1:0:1375:C:N4	1:0:1376:C:C4	2.79	0.51
1:0:1458:A:H3'	1:0:1459:U:H5"	1.91	0.51
1:0:1544:A:N6	1:0:1545:G:C6	2.78	0.51
1:0:1683:G:N7	1:0:1684:G:C2	2.77	0.51
1:0:1766:U:H2'	1:0:1767:G:O4'	2.10	0.51
1:0:2249:U:O2'	1:0:2250:G:H5'	2.09	0.51
1:0:2436:U:H2'	1:0:2437:G:O4'	2.09	0.51
1:0:2442:C:C2	1:0:2467:A:H2	2.25	0.51
1:0:2571:G:C2	1:0:2582:G:N1	2.78	0.51
1:0:2601:C:H2'	1:0:2602:G:O5'	2.10	0.51
1:0:2618:A:C5	1:0:2619:G:H1'	2.45	0.51
1:0:2656:G:N3	1:0:2711:G:C2	2.78	0.51
1:0:2676:G:H2'	1:0:2677:U:C6	2.45	0.51
1:0:2713:A:O2'	1:0:2714:A:H5'	2.11	0.51
1:0:2728:A:C2	1:0:2736:U:H1'	2.45	0.51
1:0:494:A:H62	1:0:507:A:H2	1.54	0.51
1:0:700:C:O2'	1:0:701:U:H5'	2.09	0.51
1:0:1004:A:H2'	1:0:1005:U:H5"	1.85	0.51
1:0:1151:U:OP1	1:0:1153:A:P	2.69	0.51
1:0:1198:C:H5"	1:0:1199:U:H5"	1.92	0.51
1:0:1471:G:O6	1:0:1472:C:C4	2.64	0.51
1:0:1718:A:OP1	1:0:1754:G:N1	2.43	0.51
1:0:1856:U:OP1	1:0:2389:G:O2'	2.29	0.51
1:0:1858:C:H2'	1:0:1859:A:C8	2.42	0.51
1:0:2026:C:OP1	1:0:2757:G:O2'	2.27	0.51
1:0:2376:G:N1	1:0:2399:C:C2	2.78	0.51
1:0:2599:U:H6	1:0:2599:U:O5'	1.94	0.51
2:9:9:G:H2'	2:9:10:U:O4'	2.10	0.51
1:0:26:G:C5	1:0:27:G:C2	2.98	0.51
1:0:162:C:H2'	1:0:163:A:C8	2.45	0.51
1:0:451:A:O2'	1:0:452:G:H5'	2.09	0.51
1:0:585:U:H4'	1:0:2481:G:C8	2.46	0.51
1:0:861:G:N2	1:0:943:U:O2'	2.44	0.51
1:0:982:C:O2'	1:0:983:G:H5'	2.10	0.51
1:0:1066:G:C2'	1:0:1067:G:H4'	2.30	0.51
1:0:1278:A:O2'	1:0:1279:G:P	2.68	0.51
1:0:1293:A:C2	1:0:1304:U:N3	2.77	0.51
1:0:1566:G:O2'	1:0:1567:A:H5'	2.09	0.51
1:0:1581:C:H41	1:0:1583:A:H1'	1.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1708:C:O2'	1:0:1709:U:H5'	2.09	0.51
1:0:2665:G:C6	1:0:2666:U:C4	2.97	0.51
1:0:2813:G:H2'	1:0:2814:G:C8	2.33	0.51
1:0:2814:G:N2	1:0:2815:C:C2	2.78	0.51
1:0:224:G:N7	1:0:226:C:O2	2.44	0.51
1:0:393:U:N3	1:0:394:U:C4	2.78	0.51
1:0:460:U:N3	1:0:592:G:H1'	2.23	0.51
1:0:471:A:H2'	1:0:472:C:C5'	2.40	0.51
1:0:977:G:H1'	1:0:2246:A:C4	2.45	0.51
1:0:1270:C:N4	1:0:1271:C:N4	2.58	0.51
1:0:1353:A:N1	1:0:1619:A:N7	2.59	0.51
1:0:1364:C:O5'	1:0:1364:C:H6	1.92	0.51
1:0:1920:A:OP2	1:0:1921:A:OP2	2.29	0.51
1:0:2276:C:O2'	1:0:2277:A:H5'	2.11	0.51
1:0:2379:G:H2'	1:0:2380:U:O4'	2.10	0.51
1:0:2738:A:H2'	1:0:2739:G:H5'	1.92	0.51
1:0:538:A:O5'	1:0:538:A:C8	2.53	0.51
1:0:611:C:C6	1:0:611:C:H3'	2.46	0.51
1:0:633:G:HO2'	1:0:634:G:H5'	1.76	0.51
1:0:644:A:N6	1:0:651:C:OP1	2.43	0.51
1:0:828:C:C2	1:0:1207:G:N2	2.79	0.51
1:0:916:U:N3	1:0:917:U:C4	2.79	0.51
1:0:984:A:O2'	1:0:1201:G:H1'	2.10	0.51
1:0:1012:A:H62	1:0:1165:G:H21	1.59	0.51
1:0:1110:G:H2'	1:0:1111:C:H6	1.73	0.51
1:0:1972:G:O2'	1:0:1973:C:H5'	2.11	0.51
1:0:2033:C:C4	1:0:2034:A:C2	2.99	0.51
1:0:2623:A:C6	1:0:2624:G:C2	2.98	0.51
1:0:2764:U:H2'	1:0:2765:C:C5	2.46	0.51
1:0:91:A:H2'	1:0:92:U:H6	1.73	0.51
1:0:389:G:H2'	1:0:390:U:C6	2.45	0.51
1:0:471:A:C2	1:0:481:A:C5	2.99	0.51
1:0:719:A:H2'	1:0:720:A:O4'	2.10	0.51
1:0:737:C:O5'	1:0:737:C:H6	1.93	0.51
1:0:837:U:N3	1:0:838:A:C5	2.78	0.51
1:0:944:A:C4	1:0:945:G:C8	2.99	0.51
1:0:1141:U:O5'	1:0:1141:U:H6	1.93	0.51
1:0:1175:A:H2'	1:0:1176:U:C6	2.44	0.51
1:0:1368:G:O2'	1:0:1369:G:H5'	2.11	0.51
1:0:1500:U:O2'	1:0:1501:C:H5'	2.09	0.51
1:0:1684:G:H2'	1:0:1974:U:O4	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1697:U:O2	1:0:1754:G:C8	2.63	0.51
1:0:1800:A:C2	1:0:1802:A:C2	2.99	0.51
1:0:1922:U:O2'	1:0:2571:G:H1'	2.10	0.51
1:0:2227:C:H2'	1:0:2228:U:H5'	1.91	0.51
1:0:2837:G:O5'	1:0:2837:G:H8	1.94	0.51
2:9:30:C:C6	2:9:30:C:O5'	2.61	0.51
2:9:75:A:N6	2:9:106:U:C4	2.79	0.51
1:0:4:C:H2'	1:0:5:A:C8	2.46	0.51
1:0:15:G:O2'	1:0:16:G:H5'	2.11	0.51
1:0:50:G:C4	1:0:117:A:H2	2.29	0.51
1:0:55:A:C2	1:0:113:C:O2	2.64	0.51
1:0:71:A:N6	1:0:110:U:H1'	2.26	0.51
1:0:423:G:N3	1:0:431:G:N2	2.59	0.51
1:0:588:G:N3	1:0:1275:A:N1	2.59	0.51
1:0:705:C:OP1	3:A:57:GLY:CA	2.59	0.51
1:0:1287:A:N1	1:0:1661:C:O2'	2.24	0.51
1:0:1362:A:OP1	1:0:1363:C:H5"	2.10	0.51
1:0:1385:C:C2	1:0:1386:A:C8	2.98	0.51
1:0:1442:C:H3'	1:0:1442:C:H6	1.76	0.51
1:0:1471:G:O6	1:0:1472:C:N4	2.44	0.51
1:0:1625:A:O2'	1:0:1632:A:H5'	2.10	0.51
1:0:1827:G:H2'	1:0:1828:C:H6	1.74	0.51
1:0:2261:G:H5"	1:0:2262:C:O5'	2.10	0.51
1:0:541:C:H3'	1:0:541:C:H6	1.75	0.51
1:0:698:A:H61	1:0:786:U:H3'	1.74	0.51
1:0:755:C:C4	1:0:756:C:N4	2.79	0.51
1:0:782:U:H2'	1:0:783:G:C8	2.45	0.51
1:0:1083:C:H42	1:0:1103:C:N4	2.05	0.51
1:0:1147:G:C2	1:0:1148:G:C4	2.99	0.51
1:0:1500:U:H3	1:0:1520:G:H22	1.58	0.51
1:0:1780:A:H2'	1:0:1781:C:H6	1.76	0.51
1:0:1791:C:O2'	1:0:1793:A:H5'	2.11	0.51
1:0:1951:G:OP1	1:0:2571:G:OP1	2.28	0.51
1:0:2027:C:H2'	1:0:2028:C:O4'	2.11	0.51
1:0:2090:U:C2	1:0:2166:G:N1	2.79	0.51
1:0:2523:G:H2'	1:0:2524:G:O4'	2.11	0.51
1:0:2568:A:C2	1:0:2585:C:N3	2.79	0.51
1:0:2586:G:C8	1:0:2586:G:O5'	2.64	0.51
1:0:65:C:O5'	1:0:65:C:H6	1.94	0.51
1:0:501:G:H2'	1:0:502:A:C8	2.46	0.51
1:0:805:G:H2'	1:0:2419:C:O2	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:815:A:H2'	1:0:816:U:H6	1.75	0.51
1:0:972:C:N4	1:0:2014:A:C6	2.79	0.51
1:0:1548:U:H2'	1:0:1549:C:C6	2.45	0.51
1:0:1683:G:O6	1:0:1977:C:N4	2.44	0.51
1:0:1683:G:O2'	11:I:6:SER:CA	2.59	0.51
1:0:1690:U:C2'	1:0:1691:G:H5"	2.41	0.51
1:0:1852:G:N2	1:0:1853:C:C2	2.78	0.51
1:0:1892:C:H6	1:0:1892:C:O5'	1.94	0.51
1:0:2276:C:O5'	1:0:2276:C:H6	1.94	0.51
1:0:2309:G:H1	1:0:2364:C:H42	1.58	0.51
1:0:2394:G:O2'	1:0:2395:C:H5'	2.10	0.51
1:0:2760:G:H2'	1:0:2761:A:OP1	2.11	0.51
1:0:81:C:H4'	1:0:307:C:C5'	2.40	0.51
1:0:127:C:H5"	1:0:1615:C:O2'	2.11	0.51
1:0:300:C:P	1:0:300:C:H6	2.34	0.51
1:0:459:A:C2	1:0:466:A:H8	2.29	0.51
1:0:677:G:O4'	1:0:951:G:H5"	2.11	0.51
1:0:751:G:C6	1:0:772:G:O6	2.63	0.51
1:0:824:U:H2'	1:0:825:C:H5'	1.92	0.51
1:0:1350:G:H2'	1:0:1351:G:H8	1.75	0.51
1:0:1355:A:C8	1:0:1410:U:C1'	2.94	0.51
1:0:1658:A:N7	1:0:1659:G:C5	2.79	0.51
1:0:1735:G:H2'	1:0:1736:C:C6	2.45	0.51
1:0:2194:A:H2'	1:0:2195:C:C5'	2.40	0.51
1:0:2312:A:C2	1:0:2314:A:C6	2.99	0.51
1:0:2498:U:H5"	1:0:2499:C:OP1	2.11	0.51
1:0:2817:A:C2	1:0:2851:G:N3	2.79	0.51
2:9:72:C:O2'	2:9:73:C:H5'	2.10	0.51
1:0:617:U:H2'	1:0:618:A:O4'	2.11	0.50
1:0:790:A:C2	1:0:791:G:N9	2.79	0.50
1:0:962:C:H2'	1:0:963:G:H8	1.77	0.50
1:0:1256:C:C5	1:0:1257:U:C4	2.99	0.50
1:0:1656:U:C2'	1:0:1657:A:C5'	2.89	0.50
1:0:1678:G:N2	1:0:1983:G:H1'	2.26	0.50
1:0:1768:U:H2'	1:0:1769:U:H6	1.75	0.50
1:0:1791:C:C1'	1:0:1793:A:H5'	2.38	0.50
1:0:2475:C:C3'	1:0:2476:A:H5'	2.41	0.50
1:0:2535:C:C2'	1:0:2536:G:H5'	2.41	0.50
1:0:2593:A:H8	1:0:2593:A:H3'	1.76	0.50
1:0:2829:A:H2'	1:0:2830:U:C6	2.46	0.50
2:9:91:A:H8	2:9:91:A:O5'	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:115:G:O2'	2:9:116:C:H5'	2.11	0.50
1:0:167:A:C8	1:0:168:A:N7	2.80	0.50
1:0:193:A:N7	1:0:444:U:C4	2.79	0.50
1:0:409:G:O2'	1:0:410:A:H5'	2.11	0.50
1:0:846:A:H2'	1:0:847:C:C6	2.47	0.50
1:0:984:A:C2	1:0:1200:G:N1	2.68	0.50
1:0:1333:G:N2	1:0:1344:C:C5	2.79	0.50
1:0:1373:G:O2'	1:0:1374:G:H5'	2.11	0.50
1:0:1825:C:H2'	1:0:1826:U:O4'	2.12	0.50
1:0:2354:G:N2	1:0:2357:A:OP2	2.44	0.50
1:0:2404:A:H5'	1:0:2406:C:O5'	2.10	0.50
1:0:2520:A:H8	1:0:2520:A:O5'	1.94	0.50
1:0:2838:U:N3	1:0:2839:G:N7	2.58	0.50
1:0:2857:C:O2	1:0:2857:C:H2'	2.10	0.50
1:0:669:G:H2'	1:0:670:U:H6	1.75	0.50
1:0:765:C:O2'	1:0:766:A:O4'	2.28	0.50
1:0:861:G:H22	1:0:943:U:C4'	2.24	0.50
1:0:1271:C:C2	1:0:1272:G:N7	2.80	0.50
1:0:1471:G:C6	1:0:1472:C:C4	3.00	0.50
1:0:1541:G:H2'	1:0:1542:G:O4'	2.11	0.50
1:0:1913:G:N3	1:0:1951:G:O6	2.43	0.50
1:0:1937:G:N3	1:0:2530:C:H5"	2.26	0.50
1:0:2041:A:C6	1:0:2042:A:N1	2.79	0.50
1:0:2459:C:N4	1:0:2460:G:C2	2.80	0.50
1:0:2508:G:H5"	1:0:2509:A:C5'	2.39	0.50
1:0:2530:C:O2'	1:0:2531:U:H5'	2.12	0.50
1:0:2593:A:H3'	1:0:2593:A:C8	2.46	0.50
1:0:2611:A:H2	1:0:2767:C:C2	2.28	0.50
1:0:2617:G:N2	1:0:2755:A:H2'	2.26	0.50
1:0:2761:A:O5'	1:0:2761:A:C8	2.64	0.50
1:0:2836:U:H2'	1:0:2837:G:H8	1.75	0.50
1:0:41:G:N1	1:0:451:A:C6	2.80	0.50
1:0:117:A:OP1	1:0:118:U:H5	1.95	0.50
1:0:297:A:H2'	1:0:298:C:H6	1.73	0.50
1:0:551:A:N3	1:0:562:G:C2	2.79	0.50
1:0:702:A:N6	1:0:703:A:C6	2.80	0.50
1:0:755:C:C2	1:0:756:C:C6	2.99	0.50
1:0:874:A:C2	1:0:875:G:C1'	2.94	0.50
1:0:922:A:H62	13:K:17:ARG:CA	2.24	0.50
1:0:1216:G:H2'	1:0:1217:U:O4'	2.12	0.50
1:0:2043:A:C2	1:0:2481:G:C2	3.00	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2170:C:H2'	1:0:2171:U:O4'	2.12	0.50
1:0:2487:G:C2	1:0:2561:G:O6	2.63	0.50
1:0:2770:A:C4'	1:0:2867:G:H22	2.19	0.50
1:0:761:G:C2	1:0:763:A:C6	2.99	0.50
1:0:839:U:N3	1:0:841:G:H1'	2.26	0.50
1:0:929:A:H5"	1:0:929:A:H8	1.75	0.50
1:0:1287:A:N7	1:0:1315:A:N1	2.60	0.50
1:0:1366:A:C2	1:0:1391:A:N1	2.80	0.50
1:0:1386:A:H2'	1:0:1387:G:O4'	2.11	0.50
1:0:1662:G:OP1	1:0:1663:C:H5'	2.11	0.50
1:0:2618:A:C1'	1:0:2758:A:C2	2.95	0.50
2:9:62:C:C4	2:9:63:A:N7	2.80	0.50
1:0:8:A:O2'	1:0:9:U:H5'	2.12	0.50
1:0:9:U:O5'	1:0:9:U:H6	1.95	0.50
1:0:321:A:C2	1:0:341:A:C2	2.99	0.50
1:0:400:U:H4'	1:0:401:G:C4	2.47	0.50
1:0:445:A:C2'	1:0:446:C:H5'	2.41	0.50
1:0:1168:G:C6	1:0:1169:C:C4	2.99	0.50
1:0:1427:G:N7	1:0:1428:G:N3	2.59	0.50
1:0:1514:C:O5'	1:0:1514:C:C6	2.63	0.50
1:0:1577:G:H2'	1:0:1578:U:H6	1.76	0.50
1:0:1782:A:N6	1:0:1820:G:H2'	2.27	0.50
1:0:2073:A:C6	1:0:2074:U:O4	2.65	0.50
1:0:2232:G:C5	1:0:2233:C:C5	3.00	0.50
1:0:2329:C:C2'	1:0:2330:G:H5'	2.41	0.50
1:0:2363:G:H5"	1:0:2365:U:OP1	2.11	0.50
1:0:2445:C:C2	1:0:2464:G:N2	2.80	0.50
1:0:70:A:O2'	1:0:72:A:OP2	2.23	0.50
1:0:171:G:H21	1:0:228:A:H2	1.58	0.50
1:0:483:A:C2'	1:0:484:G:H5"	2.35	0.50
1:0:539:A:N1	1:0:2025:A:C2	2.79	0.50
1:0:585:U:H4'	1:0:2481:G:N7	2.26	0.50
1:0:633:G:H2'	1:0:634:G:C8	2.47	0.50
1:0:745:C:H2'	1:0:746:G:C5'	2.42	0.50
1:0:875:G:C6	1:0:928:G:N2	2.80	0.50
1:0:1242:A:O2'	1:0:1243:G:H5'	2.11	0.50
1:0:1672:A:O2'	4:B:115:GLY:CA	2.60	0.50
1:0:1680:U:C2	1:0:1981:A:C2	3.00	0.50
1:0:1920:A:H2'	1:0:1921:A:C8	2.46	0.50
1:0:2487:G:H4'	1:0:2533:U:O2'	2.10	0.50
1:0:2642:G:H2'	1:0:2643:G:O4'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2645:C:O5'	1:0:2645:C:H6	1.94	0.50
1:0:2795:A:OP2	1:0:2796:A:N6	2.40	0.50
2:9:23:G:H2'	2:9:24:U:C6	2.46	0.50
1:0:222:G:N2	1:0:231:G:H1'	2.27	0.50
1:0:541:C:C6	1:0:541:C:C3'	2.95	0.50
1:0:542:A:OP2	1:0:2003:A:H1'	2.12	0.50
1:0:636:G:H2'	1:0:637:G:C5'	2.40	0.50
1:0:845:U:O5'	1:0:955:G:O6	2.30	0.50
1:0:845:U:C5	1:0:955:G:C6	3.00	0.50
1:0:946:U:C2	1:0:947:C:C5	2.99	0.50
1:0:1380:C:H6	1:0:1380:C:O5'	1.95	0.50
1:0:1737:G:H8	1:0:1737:G:O5'	1.94	0.50
1:0:1777:A:N6	1:0:2585:C:C1'	2.75	0.50
1:0:1787:U:H2'	1:0:1788:C:H6	1.75	0.50
1:0:1990:U:H6	1:0:1990:U:O5'	1.93	0.50
1:0:2299:A:C5'	1:0:2300:G:C5	2.95	0.50
1:0:2586:G:H2'	1:0:2587:G:O4'	2.11	0.50
1:0:317:U:H3'	1:0:318:G:H5"	1.92	0.50
1:0:462:G:H2'	1:0:463:C:H5'	1.93	0.50
1:0:568:G:C6	1:0:569:C:N3	2.80	0.50
1:0:569:C:H2'	1:0:570:G:C8	2.47	0.50
1:0:742:G:H2'	1:0:1766:U:O2	2.12	0.50
1:0:1003:C:H2'	1:0:1004:A:C8	2.45	0.50
1:0:1016:C:C2	1:0:1154:A:N3	2.80	0.50
1:0:1466:C:O2'	1:0:1467:U:H5'	2.12	0.50
1:0:1579:G:H2'	1:0:1580:C:H6	1.77	0.50
1:0:2425:G:H2'	1:0:2480:C:C5	2.46	0.50
1:0:2470:U:O5'	1:0:2470:U:H6	1.95	0.50
1:0:2549:G:C2'	1:0:2550:C:H5'	2.41	0.50
1:0:2600:A:O2'	1:0:2601:C:H5'	2.12	0.50
1:0:2737:A:H2'	1:0:2738:A:H5'	1.93	0.50
2:9:104:A:C2	2:9:105:G:H1'	2.47	0.50
1:0:24:G:H2'	1:0:25:U:C6	2.46	0.49
1:0:39:C:O5'	1:0:39:C:H6	1.95	0.49
1:0:76:C:H5'	1:0:76:C:C6	2.44	0.49
1:0:406:G:H2'	1:0:407:A:C8	2.47	0.49
1:0:705:C:N4	1:0:706:A:N6	2.59	0.49
1:0:835:U:OP2	1:0:957:G:OP2	2.30	0.49
1:0:864:C:O2'	1:0:865:A:H5'	2.12	0.49
1:0:881:U:O2	1:0:924:C:H1'	2.10	0.49
1:0:1067:G:H21	1:0:1115:C:N4	2.10	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1209:G:O2'	1:0:1210:C:H5'	2.11	0.49
1:0:1331:G:C6	1:0:1332:G:C5	3.00	0.49
1:0:1338:G:OP2	1:0:1632:A:H2'	2.12	0.49
1:0:1476:G:N2	1:0:1477:C:H1'	2.27	0.49
1:0:1573:G:N7	1:0:1574:A:N7	2.60	0.49
1:0:1618:U:OP2	1:0:1618:U:H5	1.95	0.49
1:0:1628:C:C2	1:0:1636:G:N2	2.80	0.49
1:0:2338:C:H2'	1:0:2339:A:C8	2.47	0.49
1:0:2531:U:C6	1:0:2533:U:OP2	2.65	0.49
1:0:2571:G:N1	1:0:2582:G:C6	2.80	0.49
1:0:2693:U:C5	1:0:2695:C:OP2	2.65	0.49
1:0:2770:A:H4'	1:0:2867:G:N2	2.21	0.49
1:0:15:G:C2'	1:0:16:G:H5'	2.42	0.49
1:0:180:C:C4	1:0:181:A:N6	2.80	0.49
1:0:320:A:N7	1:0:341:A:N6	2.60	0.49
1:0:322:A:OP1	1:0:322:A:C8	2.63	0.49
1:0:344:G:N3	1:0:345:U:C6	2.80	0.49
1:0:576:A:N1	1:0:580:A:N7	2.60	0.49
1:0:695:G:N2	1:0:809:C:O2	2.45	0.49
1:0:992:A:H5"	1:0:993:C:OP2	2.12	0.49
1:0:1133:G:O2'	1:0:1134:C:H5'	2.12	0.49
1:0:1310:C:N3	1:0:1311:C:N4	2.59	0.49
1:0:1348:C:O2'	1:0:1349:A:H5'	2.11	0.49
1:0:1465:G:H2'	1:0:1466:C:O4'	2.12	0.49
1:0:1737:G:H2'	1:0:1738:U:H6	1.77	0.49
1:0:1767:G:N2	1:0:1768:U:C1'	2.75	0.49
1:0:2376:G:C2	1:0:2399:C:O2	2.65	0.49
1:0:2414:A:C3'	1:0:2415:G:H5"	2.41	0.49
1:0:113:C:N4	1:0:114:C:H41	2.11	0.49
1:0:158:A:OP2	1:0:159:A:OP2	2.30	0.49
1:0:317:U:O5'	1:0:317:U:H6	1.96	0.49
1:0:339:U:O4	1:0:342:G:OP1	2.31	0.49
1:0:839:U:H2'	1:0:841:G:O4'	2.13	0.49
1:0:845:U:OP2	1:0:955:G:O6	2.30	0.49
1:0:991:A:C2	1:0:1146:G:H4'	2.47	0.49
1:0:1003:C:O2'	1:0:1004:A:H5'	2.12	0.49
1:0:1339:U:H6	1:0:1339:U:OP2	1.95	0.49
1:0:1364:C:C2	1:0:1394:G:C2	3.00	0.49
1:0:1726:C:O2'	1:0:2834:A:N3	2.37	0.49
1:0:1937:G:N3	1:0:2530:C:C5'	2.75	0.49
1:0:1966:C:H2'	1:0:1967:U:C6	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2055:G:H2'	1:0:2056:C:O4'	2.12	0.49
1:0:2225:G:O2'	1:0:2226:A:H5'	2.13	0.49
1:0:2279:G:H8	1:0:2279:G:O5'	1.94	0.49
1:0:2818:G:O2'	1:0:2819:G:H5'	2.12	0.49
1:0:2847:G:N1	1:0:2848:A:N6	2.60	0.49
2:9:20:A:N1	2:9:69:G:O6	2.45	0.49
2:9:28:A:H3'	2:9:29:C:H6	1.77	0.49
2:9:69:G:H2'	2:9:70:C:O4'	2.12	0.49
1:0:639:G:H2'	1:0:640:C:H6	1.77	0.49
1:0:837:U:C2	1:0:838:A:C5	3.00	0.49
1:0:839:U:OP1	1:0:2408:G:OP2	2.30	0.49
1:0:931:G:H21	1:0:2247:A:H5"	1.77	0.49
1:0:1041:G:O2'	1:0:2445:C:H4'	2.12	0.49
1:0:1556:A:H2'	1:0:1557:G:H8	1.75	0.49
1:0:2007:G:O2'	1:0:2008:C:O4'	2.28	0.49
1:0:2182:A:H2'	1:0:2183:C:O4'	2.12	0.49
1:0:2203:G:O5'	1:0:2203:G:H8	1.94	0.49
1:0:2293:G:O2'	1:0:2294:U:H5'	2.12	0.49
1:0:2478:C:O5'	1:0:2478:C:H6	1.94	0.49
1:0:2484:G:O2'	1:0:2485:U:H5"	2.13	0.49
1:0:2592:U:H6	1:0:2592:U:C3'	2.18	0.49
1:0:2736:U:O2'	1:0:2737:A:H5'	2.11	0.49
1:0:2797:G:O5'	1:0:2797:G:H8	1.95	0.49
1:0:2812:A:C2	1:0:2813:G:C5	3.01	0.49
1:0:484:G:O2'	1:0:485:G:H5'	2.12	0.49
1:0:588:G:N2	1:0:589:C:C2	2.81	0.49
1:0:837:U:H1'	1:0:2337:A:N7	2.27	0.49
1:0:941:U:H2'	1:0:942:U:C5'	2.42	0.49
1:0:964:A:H2'	1:0:965:G:H8	1.70	0.49
1:0:1210:C:H1'	1:0:1239:A:C4	2.47	0.49
1:0:1288:A:N6	1:0:1309:G:C4'	2.75	0.49
1:0:1294:G:H1	1:0:1302:C:H42	1.60	0.49
1:0:1689:U:C4	1:0:1690:U:C4	3.00	0.49
1:0:1852:G:C2	1:0:1853:C:C2	3.00	0.49
1:0:2029:G:H2'	1:0:2030:U:H6	1.77	0.49
1:0:2083:G:H2'	1:0:2084:G:C8	2.48	0.49
1:0:2298:U:H3	2:9:15:A:N6	2.11	0.49
1:0:2476:A:O2'	1:0:2477:C:H5	1.96	0.49
1:0:2558:C:O2'	1:0:2559:U:H5'	2.12	0.49
1:0:2712:G:H3'	1:0:2713:A:H5'	1.93	0.49
2:9:67:C:C3'	2:9:68:A:H5'	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:314:G:O2'	1:0:315:G:H5'	2.12	0.49
1:0:889:C:C2'	1:0:890:U:H5'	2.42	0.49
1:0:940:G:H8	1:0:940:G:O5'	1.95	0.49
1:0:959:C:H5"	1:0:972:C:O2'	2.12	0.49
1:0:994:A:N7	1:0:995:A:C4	2.81	0.49
1:0:1356:G:O4'	1:0:1613:G:H2'	2.12	0.49
1:0:1359:G:H2'	1:0:1360:G:O4'	2.12	0.49
1:0:1476:G:O2'	1:0:2682:C:H1'	2.12	0.49
1:0:1842:G:H2'	1:0:1843:U:C6	2.48	0.49
1:0:1975:G:N2	1:0:1978:U:C5	2.77	0.49
1:0:2174:G:H2'	1:0:2175:A:C8	2.47	0.49
1:0:2467:A:C5	1:0:2468:G:N7	2.80	0.49
1:0:2474:G:N7	1:0:2475:C:C5	2.81	0.49
1:0:2670:C:H4'	1:0:2846:G:O2'	2.13	0.49
1:0:2856:U:O2'	1:0:2857:C:H5'	2.13	0.49
1:0:65:C:H2'	1:0:66:U:O4'	2.12	0.49
1:0:537:C:C2	1:0:2759:U:H2'	2.47	0.49
1:0:866:U:H6	1:0:866:U:O5'	1.95	0.49
1:0:873:U:H3'	1:0:874:A:C5'	2.43	0.49
1:0:1016:C:C5	1:0:1154:A:H1'	2.46	0.49
1:0:1484:G:O2'	1:0:1485:U:H5'	2.12	0.49
1:0:1674:C:C6	1:0:1987:G:N2	2.80	0.49
1:0:1760:G:H2'	1:0:1761:G:H8	1.77	0.49
1:0:2225:G:N2	1:0:2405:A:O2'	2.45	0.49
1:0:2401:A:H8	1:0:2401:A:O5'	1.95	0.49
1:0:2532:G:N2	1:0:2533:U:H1'	2.27	0.49
1:0:2665:G:C6	1:0:2666:U:N3	2.80	0.49
1:0:2674:C:C2	1:0:2675:U:C5	3.01	0.49
1:0:2800:C:C2'	1:0:2801:A:H5'	2.42	0.49
1:0:2867:G:H2'	1:0:2867:G:N3	2.26	0.49
1:0:753:U:H6	1:0:753:U:O5'	1.96	0.49
1:0:861:G:N3	1:0:944:A:H1'	2.28	0.49
1:0:1064:C:O5'	1:0:1064:C:H6	1.96	0.49
1:0:1333:G:C5	1:0:1342:U:H5'	2.48	0.49
1:0:1563:U:N3	1:0:1564:U:C4	2.80	0.49
1:0:1671:A:O2'	1:0:1672:A:H5'	2.12	0.49
1:0:1768:U:H2'	1:0:1769:U:C6	2.47	0.49
1:0:2261:G:H4'	1:0:2262:C:OP2	2.12	0.49
1:0:2326:C:N4	1:0:2350:G:C2	2.81	0.49
1:0:2419:C:C4	1:0:2420:C:H1'	2.48	0.49
1:0:2664:G:C2	1:0:2705:A:C2	3.01	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2713:A:C4	1:0:2714:A:C8	3.00	0.49
1:0:2861:A:H2'	1:0:2862:G:H8	1.78	0.49
1:0:20:C:C4	1:0:21:A:N7	2.80	0.49
1:0:313:U:O2'	1:0:314:G:H5'	2.12	0.49
1:0:338:G:O2'	1:0:339:U:H5'	2.12	0.49
1:0:357:A:C2'	1:0:358:C:H5'	2.42	0.49
1:0:403:A:H5"	1:0:404:A:OP1	2.12	0.49
1:0:691:C:N3	1:0:692:C:C5	2.81	0.49
1:0:704:G:N2	1:0:705:C:C2	2.81	0.49
1:0:858:G:H5"	1:0:859:U:H5'	1.94	0.49
1:0:956:A:H2	1:0:2427:A:O2'	1.90	0.49
1:0:1126:A:C6	1:0:1127:C:C4	3.01	0.49
1:0:1354:A:O2'	1:0:1355:A:OP1	2.27	0.49
1:0:1761:G:H8	1:0:1761:G:O5'	1.95	0.49
1:0:2270:U:O2'	1:0:2353:G:H1'	2.13	0.49
1:0:2468:G:O2'	1:0:2469:G:H5'	2.13	0.49
1:0:2490:U:C4	1:0:2491:C:C4	3.01	0.49
1:0:2567:G:C6	1:0:2586:G:C2	3.01	0.49
1:0:2644:A:H2'	1:0:2645:C:H6	1.77	0.49
1:0:2714:A:O2'	1:0:2715:C:H5'	2.13	0.49
1:0:7:G:H8	1:0:7:G:O5'	1.96	0.49
1:0:312:G:N2	1:0:328:A:H1'	2.27	0.49
1:0:523:A:O2'	1:0:524:A:H5'	2.13	0.49
1:0:1011:A:N1	1:0:1166:A:C5	2.81	0.49
1:0:1355:A:O4'	1:0:1410:U:H4'	2.13	0.49
1:0:1375:C:N4	1:0:1376:C:C5	2.80	0.49
1:0:1540:C:HO2'	1:0:1541:G:H5'	1.78	0.49
1:0:1645:U:O2'	1:0:2677:U:H5"	2.13	0.49
1:0:2396:C:H2'	1:0:2397:A:O4'	2.13	0.49
1:0:2622:G:C2	1:0:2752:C:N3	2.81	0.49
1:0:2737:A:H61	7:E:60:LYS:CA	2.26	0.49
1:0:2764:U:C2	1:0:2765:C:C5	3.01	0.49
1:0:2793:G:C4	1:0:2804:G:N1	2.80	0.49
2:9:92:G:H2'	2:9:93:G:C5'	2.37	0.49
1:0:15:G:H2'	1:0:16:G:H5'	1.94	0.48
1:0:26:G:H2'	1:0:27:G:O4'	2.13	0.48
1:0:150:A:H2'	1:0:151:G:O4'	2.13	0.48
1:0:720:A:N6	1:0:721:C:N4	2.61	0.48
1:0:742:G:C4	1:0:1766:U:C2	3.01	0.48
1:0:757:U:H2'	1:0:758:G:O4'	2.13	0.48
1:0:820:U:O2'	1:0:821:A:C5'	2.61	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:837:U:C4	1:0:838:A:N6	2.81	0.48
1:0:887:G:O2'	1:0:888:G:H5'	2.12	0.48
1:0:1260:A:N6	1:0:1262:U:H1'	2.27	0.48
1:0:1466:C:N4	1:0:1476:G:O6	2.34	0.48
1:0:1668:G:O2'	1:0:1669:A:H5'	2.13	0.48
1:0:1716:G:O4'	1:0:1716:G:OP1	2.31	0.48
1:0:2502:G:N9	1:0:2745:A:N7	2.61	0.48
1:0:343:A:N6	1:0:346:C:C5	2.81	0.48
1:0:404:A:C2	1:0:424:G:N2	2.80	0.48
1:0:765:C:O2'	1:0:766:A:C8	2.66	0.48
1:0:817:A:H2'	1:0:819:C:N4	2.27	0.48
1:0:840:U:C5	1:0:2405:A:H2	2.32	0.48
1:0:951:G:C3'	1:0:952:A:H5"	2.43	0.48
1:0:953:G:C5	1:0:954:U:N3	2.81	0.48
1:0:958:G:O6	1:0:982:C:N4	2.46	0.48
1:0:963:G:C6	1:0:977:G:N1	2.81	0.48
1:0:1282:A:H8	1:0:1282:A:O5'	1.96	0.48
1:0:1407:G:O2'	1:0:1408:A:H5'	2.14	0.48
1:0:1761:G:O5'	1:0:1761:G:C8	2.66	0.48
1:0:2163:U:H2'	1:0:2164:G:C8	2.48	0.48
1:0:2422:C:N3	1:0:2423:G:N7	2.61	0.48
1:0:2504:G:N1	1:0:2518:C:C4	2.81	0.48
1:0:2742:G:H2'	1:0:2743:G:O4'	2.13	0.48
2:9:34:C:C2'	2:9:35:C:H5'	2.43	0.48
1:0:138:G:H2'	1:0:139:A:C8	2.48	0.48
1:0:487:G:C5	1:0:489:A:OP2	2.67	0.48
1:0:875:G:H2'	1:0:876:A:O4'	2.13	0.48
1:0:1302:C:N4	1:0:1303:U:C4	2.82	0.48
1:0:1668:G:C6	1:0:1669:A:C6	3.01	0.48
1:0:1773:C:O5'	1:0:1773:C:C6	2.60	0.48
1:0:2231:G:N7	1:0:2232:G:N7	2.62	0.48
1:0:2613:A:O2'	1:0:2614:A:H5'	2.14	0.48
1:0:2645:C:C5	1:0:2646:C:C5	3.01	0.48
2:9:6:C:H2'	2:9:7:C:C5	2.48	0.48
2:9:58:G:O2'	2:9:59:A:OP2	2.25	0.48
2:9:101:A:C2	2:9:102:A:N6	2.82	0.48
1:0:26:G:N7	1:0:27:G:C6	2.81	0.48
1:0:207:U:H2'	1:0:208:C:H6	1.78	0.48
1:0:300:C:H6	1:0:300:C:O5'	1.97	0.48
1:0:513:A:C4	1:0:515:A:N7	2.81	0.48
1:0:635:C:H2'	1:0:636:G:C5'	2.19	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:640:C:O2'	1:0:641:G:H5'	2.13	0.48
1:0:692:C:C2'	1:0:693:A:O5'	2.62	0.48
1:0:923:A:H2'	1:0:923:A:N3	2.29	0.48
1:0:1000:G:OP1	1:0:1168:G:O3'	2.32	0.48
1:0:1038:U:H2'	1:0:1039:A:H8	1.77	0.48
1:0:1038:U:H5	1:0:1137:A:C2	2.31	0.48
1:0:1223:G:N3	1:0:1250:A:N6	2.61	0.48
1:0:1256:C:C5	1:0:1257:U:C5	3.01	0.48
1:0:1315:A:H5"	1:0:1316:G:OP1	2.14	0.48
1:0:1340:C:C6	1:0:1341:G:N7	2.81	0.48
1:0:1438:G:H2'	1:0:1439:G:O4'	2.13	0.48
1:0:1650:A:N7	1:0:1652:G:C5	2.81	0.48
1:0:1869:A:N7	1:0:1870:U:C4	2.81	0.48
1:0:2018:G:H8	1:0:2018:G:O5'	1.96	0.48
1:0:2030:U:C2	1:0:2031:A:C8	3.01	0.48
1:0:2039:G:C2	1:0:2040:A:C8	3.01	0.48
1:0:2173:G:C5	1:0:2174:G:C5	3.01	0.48
1:0:2205:C:C5	1:0:2206:C:C5	3.01	0.48
1:0:2587:G:H8	1:0:2587:G:P	2.36	0.48
1:0:2691:C:O5'	1:0:2694:G:H4'	2.14	0.48
1:0:2695:C:H2'	1:0:2696:A:H8	1.78	0.48
1:0:5:A:H2'	1:0:6:A:H8	1.78	0.48
1:0:191:G:O2'	1:0:194:G:OP1	2.31	0.48
1:0:488:A:OP1	1:0:488:A:C8	2.59	0.48
1:0:531:G:O2'	1:0:532:A:H5'	2.14	0.48
1:0:645:G:H2'	1:0:646:C:C6	2.48	0.48
1:0:742:G:H3'	1:0:742:G:N3	2.28	0.48
1:0:750:C:C2'	1:0:751:G:H5'	2.43	0.48
1:0:791:G:C6	1:0:792:U:C4	3.01	0.48
1:0:824:U:H2'	1:0:825:C:C5'	2.44	0.48
1:0:1001:A:N6	1:0:1200:G:O2'	2.45	0.48
1:0:1153:A:C2	1:0:1155:G:O6	2.65	0.48
1:0:1362:A:OP2	1:0:1363:C:C5	2.67	0.48
1:0:1381:G:N2	1:0:1382:G:C4	2.81	0.48
1:0:1474:A:N3	1:0:1474:A:C3'	2.75	0.48
1:0:1486:A:H2'	1:0:1487:C:C5	2.48	0.48
1:0:1552:C:H2'	1:0:1553:G:H5'	1.95	0.48
1:0:1730:G:H2'	1:0:1731:C:C6	2.49	0.48
1:0:1779:C:HO2'	1:0:1780:A:H5'	1.77	0.48
1:0:1780:A:C5	1:0:1781:C:C5	3.01	0.48
1:0:1818:G:H2'	1:0:1819:U:C6	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2054:A:H2'	1:0:2055:G:H8	1.77	0.48
1:0:2209:G:H2'	1:0:2210:C:C6	2.40	0.48
1:0:2229:G:H2'	1:0:2475:C:OP1	2.13	0.48
1:0:2241:U:H1'	1:0:2307:A:H1'	1.94	0.48
1:0:2347:C:H2'	1:0:2348:A:C8	2.49	0.48
1:0:2379:G:C2	1:0:2380:U:H1'	2.48	0.48
1:0:2529:G:C4	1:0:2530:C:C5	3.01	0.48
2:9:23:G:H2'	2:9:24:U:H6	1.78	0.48
1:0:17:G:H2'	1:0:18:U:C5	2.48	0.48
1:0:105:G:H2'	1:0:106:G:O4'	2.14	0.48
1:0:120:G:C2	1:0:121:G:C4	3.02	0.48
1:0:344:G:N2	1:0:345:U:N1	2.61	0.48
1:0:549:G:C6	1:0:550:C:C4	3.02	0.48
1:0:600:G:H2'	1:0:601:A:OP1	2.13	0.48
1:0:971:A:H1'	1:0:2435:C:O2'	2.13	0.48
1:0:977:G:H4'	1:0:2246:A:C2	2.48	0.48
1:0:1284:G:C2	1:0:1633:C:O4'	2.67	0.48
1:0:1429:A:H1'	1:0:1603:A:N6	2.29	0.48
1:0:1633:C:O5'	1:0:1633:C:H6	1.96	0.48
1:0:1767:G:N1	1:0:1768:U:C2	2.81	0.48
1:0:1934:U:O2	1:0:1936:A:C8	2.66	0.48
1:0:2020:G:H2'	1:0:2021:G:O4'	2.14	0.48
1:0:2025:A:H3'	1:0:2025:A:C8	2.48	0.48
1:0:2094:C:N4	1:0:2103:G:N3	2.61	0.48
1:0:2464:G:O2'	1:0:2465:G:H5'	2.13	0.48
1:0:2570:C:H2'	1:0:2571:G:H8	1.74	0.48
1:0:2642:G:C6	1:0:2643:G:C5	3.02	0.48
1:0:2696:A:C2	1:0:2697:G:C8	3.02	0.48
1:0:2824:C:C2'	1:0:2825:A:OP2	2.62	0.48
1:0:633:G:H8	1:0:633:G:O5'	1.97	0.48
1:0:957:G:H22	1:0:983:G:H1'	1.78	0.48
1:0:1073:G:H3'	1:0:1074:G:H5"	1.95	0.48
1:0:1131:G:C2	1:0:1132:C:C2	3.01	0.48
1:0:1355:A:H3'	1:0:1355:A:OP2	2.14	0.48
1:0:1416:A:O2'	1:0:1417:C:H5'	2.13	0.48
1:0:1469:U:OP2	1:0:1471:G:N7	2.47	0.48
1:0:2046:C:N3	1:0:2430:A:H2	2.12	0.48
1:0:2047:C:C6	1:0:2047:C:C3'	2.97	0.48
1:0:2207:G:C5	1:0:2208:U:C4	3.02	0.48
1:0:2245:A:O2'	1:0:2246:A:C4	2.67	0.48
1:0:2334:C:H6	1:0:2334:C:O5'	1.97	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2626:U:H2'	1:0:2627:G:C8	2.48	0.48
1:0:67:G:C5	1:0:72:A:C2	3.01	0.48
1:0:477:A:H8	1:0:477:A:O5'	1.96	0.48
1:0:635:C:C3'	1:0:636:G:H5"	2.43	0.48
1:0:666:U:O5'	1:0:666:U:H6	1.95	0.48
1:0:849:G:C8	1:0:850:C:C5	3.01	0.48
1:0:867:G:O2'	1:0:868:U:H5'	2.14	0.48
1:0:1038:U:H3	1:0:2466:G:HO2'	1.60	0.48
1:0:1262:U:C6	1:0:1262:U:C3'	2.96	0.48
1:0:1358:C:C3'	1:0:1359:G:H5"	2.44	0.48
1:0:1401:G:O2'	1:0:1541:G:H5'	2.13	0.48
1:0:1470:G:C2	1:0:2684:A:N3	2.82	0.48
1:0:1507:A:H4'	1:0:1510:A:OP1	2.13	0.48
1:0:1683:G:N2	1:0:1686:A:N7	2.61	0.48
1:0:1801:C:H1'	1:0:2208:U:H5'	1.95	0.48
1:0:2059:U:H5"	1:0:2217:G:N1	2.28	0.48
1:0:2193:C:C2	1:0:2194:A:C8	3.02	0.48
1:0:2243:C:H2'	1:0:2244:C:H5'	1.96	0.48
1:0:2326:C:H42	1:0:2349:G:H1	1.62	0.48
1:0:2442:C:H2'	1:0:2443:C:H6	1.77	0.48
1:0:2450:A:O2'	1:0:2451:G:H5'	2.13	0.48
1:0:2468:G:N3	1:0:2469:G:O4'	2.47	0.48
1:0:2673:G:C2	1:0:2674:C:C6	3.02	0.48
1:0:2822:U:H5	1:0:2823:G:C5	2.31	0.48
1:0:600:G:C2'	1:0:601:A:OP1	2.61	0.48
1:0:642:A:H2'	1:0:643:A:C8	2.49	0.48
1:0:1242:A:H8	1:0:1242:A:O5'	1.97	0.48
1:0:1250:A:C2'	1:0:1251:G:H4'	2.44	0.48
1:0:1373:G:H1	1:0:2192:U:H3	1.62	0.48
1:0:1660:G:H8	1:0:1660:G:O5'	1.97	0.48
1:0:333:A:HO2'	1:0:350:U:H2'	1.77	0.48
1:0:439:C:H2'	1:0:440:U:O4'	2.14	0.48
1:0:459:A:N6	1:0:466:A:H2'	2.28	0.48
1:0:606:A:C2	1:0:607:C:C2	3.02	0.48
1:0:685:U:C2	1:0:822:G:N2	2.81	0.48
1:0:714:G:O2'	1:0:715:U:H5'	2.14	0.48
1:0:762:A:C6	1:0:1634:A:C2	3.02	0.48
1:0:780:U:H2'	1:0:781:G:C8	2.48	0.48
1:0:815:A:P	1:0:815:A:H8	2.36	0.48
1:0:859:U:O5'	1:0:859:U:H6	1.97	0.48
1:0:918:A:C2'	1:0:919:U:C5'	2.83	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1117:G:C5	1:0:1118:G:N7	2.82	0.48
1:0:1270:C:C4	1:0:1271:C:N4	2.82	0.48
1:0:1313:U:O5'	1:0:1313:U:H6	1.97	0.48
1:0:1811:A:H1'	1:0:1813:A:C5	2.48	0.48
1:0:2036:G:OP1	4:B:144:ARG:CA	2.62	0.48
1:0:2217:G:N3	1:0:2217:G:C3'	2.77	0.48
1:0:2243:C:N4	1:0:2244:C:C4	2.82	0.48
1:0:2321:C:O2'	1:0:2353:G:H5"	2.14	0.48
1:0:2324:G:N7	1:0:2351:G:C2	2.82	0.48
1:0:2376:G:C2	1:0:2399:C:C2	3.02	0.48
1:0:2665:G:C5	1:0:2666:U:C4	3.01	0.48
1:0:167:A:C5'	1:0:181:A:H2	2.27	0.47
1:0:189:A:O2'	1:0:190:A:H5'	2.14	0.47
1:0:803:C:H5"	1:0:804:C:OP2	2.14	0.47
1:0:980:G:H8	1:0:980:G:O5'	1.97	0.47
1:0:1449:C:H2'	1:0:1450:G:H8	1.78	0.47
1:0:1473:U:C5'	1:0:1474:A:C5	2.97	0.47
1:0:1619:A:C2	1:0:1620:C:C6	3.02	0.47
1:0:2209:G:C5	1:0:2210:C:C5	3.02	0.47
1:0:2234:G:H3'	1:0:2235:G:H8	1.79	0.47
1:0:2236:U:N3	1:0:2237:C:C4	2.82	0.47
1:0:2292:C:C2	1:0:2293:G:C8	3.02	0.47
1:0:2443:C:O2'	1:0:2444:C:H5'	2.14	0.47
1:0:2657:G:H2'	1:0:2658:A:C8	2.49	0.47
1:0:2697:G:O2'	1:0:2698:G:C5'	2.54	0.47
1:0:51:A:H2'	1:0:52:A:O4'	2.14	0.47
1:0:513:A:H2'	1:0:516:G:N7	2.29	0.47
1:0:525:A:C8	1:0:526:C:C6	3.03	0.47
1:0:737:C:H2'	1:0:738:G:O4'	2.14	0.47
1:0:859:U:C6	1:0:859:U:C3'	2.96	0.47
1:0:1153:A:N3	1:0:1155:G:C6	2.82	0.47
1:0:1193:G:H2'	1:0:1194:U:C6	2.45	0.47
1:0:1263:G:O2'	1:0:1264:C:P	2.72	0.47
1:0:1287:A:C6	1:0:1315:A:H2	2.30	0.47
1:0:1302:C:N4	1:0:1303:U:O4	2.47	0.47
1:0:1355:A:C5	1:0:1410:U:O4'	2.67	0.47
1:0:1389:C:C2'	1:0:1390:G:H5'	2.44	0.47
1:0:1764:A:N7	1:0:1821:A:C1'	2.77	0.47
1:0:1997:A:N1	1:0:1998:A:C6	2.82	0.47
2:9:71:G:N2	2:9:72:C:C1'	2.77	0.47
1:0:689:A:C2	1:0:690:A:N9	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:831:G:OP2	1:0:1199:U:C5	2.68	0.47
1:0:1353:A:C6	1:0:1619:A:C8	3.02	0.47
1:0:1561:A:H2'	1:0:1562:G:O4'	2.15	0.47
1:0:1610:A:H2'	1:0:1611:U:H6	1.79	0.47
1:0:1685:A:O2'	1:0:1686:A:H3'	2.14	0.47
1:0:2493:U:O2	1:0:2549:G:O6	2.31	0.47
1:0:2554:C:C6	1:0:2554:C:C3'	2.97	0.47
1:0:2708:U:N3	1:0:2709:C:N3	2.62	0.47
1:0:2834:A:H8	1:0:2834:A:O5'	1.98	0.47
2:9:78:A:H2'	2:9:79:U:C5	2.48	0.47
1:0:168:A:O2'	1:0:169:C:O4'	2.26	0.47
1:0:202:A:H2'	1:0:203:G:O4'	2.14	0.47
1:0:311:A:H2'	1:0:345:U:O2'	2.15	0.47
1:0:314:G:N1	1:0:326:A:C6	2.83	0.47
1:0:711:C:H4'	1:0:748:A:C2	2.49	0.47
1:0:827:C:C2	1:0:828:C:C5	3.02	0.47
1:0:1215:A:O2'	1:0:1216:G:H5'	2.15	0.47
1:0:1412:C:C2	1:0:1413:U:C5	3.03	0.47
1:0:1674:C:C2	1:0:1675:C:C5	3.03	0.47
1:0:1681:A:N1	1:0:1682:A:N3	2.62	0.47
1:0:1748:U:N3	1:0:1753:A:H2	2.12	0.47
1:0:1800:A:N3	1:0:1802:A:N1	2.62	0.47
1:0:1823:G:H2'	1:0:1824:C:H6	1.74	0.47
1:0:2163:U:H2'	1:0:2164:G:H8	1.78	0.47
1:0:2279:G:O2'	1:0:2280:A:H5'	2.14	0.47
1:0:2298:U:O4	2:9:15:A:N6	2.47	0.47
1:0:2324:G:N2	1:0:2361:G:C4	2.82	0.47
1:0:2442:C:H42	1:0:2466:G:H1	1.61	0.47
1:0:2844:G:O2'	1:0:2845:C:H5'	2.14	0.47
1:0:2859:U:H5	1:0:2860:C:C2	2.33	0.47
1:0:93:A:O2'	1:0:94:C:H5'	2.14	0.47
1:0:225:G:N2	1:0:2410:U:H1'	2.28	0.47
1:0:246:C:H42	1:0:247:A:H62	1.63	0.47
1:0:336:A:H61	1:0:348:U:H3	1.62	0.47
1:0:551:A:C2	1:0:562:G:C2	3.02	0.47
1:0:722:C:N4	1:0:723:C:N4	2.62	0.47
1:0:1257:U:H2'	1:0:1258:G:C8	2.50	0.47
1:0:1333:G:N2	1:0:1344:C:C4	2.81	0.47
1:0:1666:G:N3	1:0:1667:A:C8	2.83	0.47
1:0:1984:A:C6	1:0:1985:G:C5	3.02	0.47
1:0:2221:G:C2'	1:0:2222:U:O5'	2.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2434:G:C6	1:0:2477:C:N4	2.80	0.47
1:0:2502:G:C1'	1:0:2745:A:C8	2.97	0.47
1:0:2702:G:C6	1:0:2703:C:C4	3.03	0.47
1:0:2817:A:C6	1:0:2851:G:C6	3.03	0.47
2:9:110:U:O2'	2:9:111:C:H5'	2.14	0.47
1:0:8:A:H2'	1:0:9:U:C6	2.50	0.47
1:0:58:C:C5	1:0:59:G:O4'	2.67	0.47
1:0:178:C:O2'	1:0:179:U:H5'	2.15	0.47
1:0:303:C:C2	1:0:360:A:C2	3.03	0.47
1:0:324:C:H2'	1:0:325:U:O4'	2.15	0.47
1:0:544:U:H2'	1:0:545:C:O4'	2.15	0.47
1:0:587:A:H2'	1:0:588:G:C5'	2.44	0.47
1:0:701:U:C4	1:0:702:A:C5	3.03	0.47
1:0:714:G:C5	1:0:715:U:C5	3.02	0.47
1:0:818:G:C6	1:0:2051:U:OP1	2.68	0.47
1:0:1035:G:O6	1:0:1036:G:O6	2.32	0.47
1:0:1331:G:C5	1:0:1332:G:N7	2.82	0.47
1:0:1347:C:C2'	1:0:1348:C:H5'	2.44	0.47
1:0:2177:U:O2'	1:0:2178:U:H5'	2.14	0.47
1:0:2227:C:C2'	1:0:2228:U:H5'	2.45	0.47
1:0:2409:A:C8	1:0:2409:A:C3'	2.97	0.47
1:0:2496:C:H2'	1:0:2521:A:H62	1.79	0.47
1:0:2633:A:H5"	1:0:2634:G:OP1	2.14	0.47
1:0:2717:G:H2'	1:0:2718:A:C8	2.49	0.47
1:0:2718:A:N1	1:0:2719:U:C5	2.83	0.47
1:0:2749:A:C6	1:0:2750:G:C6	3.03	0.47
1:0:2840:U:N3	1:0:2841:U:O4	2.48	0.47
2:9:31:A:H2'	2:9:32:C:O4'	2.15	0.47
1:0:69:G:H5"	1:0:70:A:OP1	2.15	0.47
1:0:79:G:HO2'	1:0:80:A:H5'	1.77	0.47
1:0:178:C:H2'	1:0:179:U:H6	1.77	0.47
1:0:192:G:H4'	1:0:193:A:O5'	2.15	0.47
1:0:225:G:O5'	1:0:226:C:H5'	2.15	0.47
1:0:481:A:N6	1:0:482:A:N6	2.62	0.47
1:0:807:A:C5	1:0:808:C:C4	3.02	0.47
1:0:941:U:C4	1:0:942:U:C2	3.03	0.47
1:0:974:U:H2'	1:0:975:C:H6	1.80	0.47
1:0:1151:U:OP1	1:0:1153:A:OP2	2.32	0.47
1:0:1323:G:H2'	1:0:1324:G:H4'	1.97	0.47
1:0:1408:A:C2	1:0:1411:C:C4	3.03	0.47
1:0:1415:C:O2'	1:0:1416:A:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1424:U:H2'	1:0:1425:G:C8	2.50	0.47
1:0:1434:U:O5'	1:0:1434:U:H6	1.97	0.47
1:0:1578:U:O4	1:0:1579:G:O6	2.32	0.47
1:0:1649:A:H8	1:0:1649:A:O5'	1.98	0.47
1:0:1650:A:C8	1:0:1652:G:N7	2.82	0.47
1:0:1771:A:C8	1:0:1772:C:H5	2.32	0.47
1:0:1933:G:O5'	1:0:1933:G:C8	2.63	0.47
1:0:2082:C:H2'	1:0:2083:G:O4'	2.15	0.47
1:0:2091:C:H2'	1:0:2092:U:C5'	2.45	0.47
1:0:2173:G:O2'	1:0:2174:G:H5'	2.15	0.47
1:0:2203:G:H4'	1:0:2204:A:H5'	1.96	0.47
1:0:2376:G:H2'	1:0:2377:U:C6	2.50	0.47
1:0:2721:A:C8	1:0:2722:C:C6	3.03	0.47
1:0:28:A:H61	1:0:522:G:H4'	1.80	0.47
1:0:167:A:H2'	1:0:168:A:H8	1.76	0.47
1:0:353:G:O2'	1:0:354:C:H5'	2.15	0.47
1:0:537:C:O4'	1:0:2759:U:O2'	2.32	0.47
1:0:611:C:C6	1:0:611:C:C3'	2.98	0.47
1:0:676:G:C6	1:0:677:G:N7	2.82	0.47
1:0:717:G:H1'	1:0:740:A:N6	2.30	0.47
1:0:755:C:N3	1:0:756:C:C4	2.83	0.47
1:0:810:U:O2'	1:0:811:G:H5'	2.15	0.47
1:0:1011:A:C2	1:0:1166:A:C5	3.02	0.47
1:0:1168:G:C2	1:0:1169:C:C2	3.03	0.47
1:0:1375:C:N4	1:0:1376:C:N4	2.63	0.47
1:0:1982:C:O2'	1:0:1983:G:H5'	2.14	0.47
1:0:2705:A:H8	1:0:2705:A:H5"	1.79	0.47
1:0:2721:A:C5	1:0:2722:C:C2	3.03	0.47
1:0:839:U:C4	1:0:841:G:H1'	2.50	0.47
1:0:992:A:C2	1:0:2011:U:O4'	2.67	0.47
1:0:1578:U:N3	1:0:1579:G:C5	2.83	0.47
1:0:1689:U:C4	1:0:1690:U:O4	2.68	0.47
1:0:1918:G:O5'	1:0:1918:G:H8	1.97	0.47
1:0:2762:G:C6	1:0:2763:U:C5	3.03	0.47
1:0:26:G:C5	1:0:27:G:N1	2.83	0.47
1:0:184:A:H2'	1:0:185:C:O4'	2.15	0.47
1:0:218:A:N1	1:0:232:A:H5"	2.30	0.47
1:0:318:G:H22	1:0:321:A:C5'	2.28	0.47
1:0:429:C:H2'	1:0:430:C:O4'	2.14	0.47
1:0:447:U:O2'	1:0:448:C:C6	2.66	0.47
1:0:570:G:H2'	1:0:571:U:C5'	2.45	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:698:A:C4	1:0:787:A:C2	3.03	0.47
1:0:861:G:H21	1:0:944:A:H1'	1.79	0.47
1:0:931:G:C6	1:0:932:G:C4	3.03	0.47
1:0:1102:G:H2'	1:0:1103:C:H6	1.80	0.47
1:0:1172:U:H2'	1:0:1173:G:H8	1.79	0.47
1:0:1629:G:C6	1:0:1633:C:N4	2.83	0.47
1:0:1744:G:H2'	1:0:1746:A:OP2	2.15	0.47
1:0:1778:U:O2'	1:0:1779:C:H5'	2.14	0.47
1:0:1831:G:C2'	1:0:1832:G:H5'	2.45	0.47
1:0:1833:U:H6	1:0:1833:U:O5'	1.98	0.47
1:0:1974:U:O5'	1:0:1974:U:H6	1.97	0.47
1:0:2347:C:N4	1:0:2361:G:H1	2.12	0.47
1:0:2440:C:N3	1:0:2441:U:C5	2.83	0.47
1:0:2539:C:C4	1:0:2540:A:N7	2.83	0.47
1:0:2540:A:C2'	1:0:2541:U:O5'	2.62	0.47
1:0:162:C:H2'	1:0:163:A:H8	1.79	0.46
1:0:208:C:C2'	1:0:209:G:H5'	2.45	0.46
1:0:556:A:C2'	1:0:557:U:H5'	2.42	0.46
1:0:581:A:N3	1:0:581:A:H2'	2.30	0.46
1:0:773:G:C3'	1:0:774:A:H5'	2.44	0.46
1:0:860:U:H3	1:0:945:G:N2	2.13	0.46
1:0:1039:A:C5	1:0:1136:G:N2	2.83	0.46
1:0:1231:A:H3'	1:0:1232:U:C6	2.49	0.46
1:0:1536:G:C8	1:0:1537:U:H5	2.33	0.46
1:0:1869:A:H2'	1:0:1870:U:C6	2.50	0.46
1:0:1876:C:H2'	1:0:1877:C:H5'	1.97	0.46
1:0:1959:U:C2'	1:0:1960:A:C8	2.93	0.46
1:0:2171:U:O5'	1:0:2171:U:H6	1.99	0.46
1:0:2469:G:H4'	1:0:2470:U:C5	2.37	0.46
1:0:2494:C:O2	1:0:2549:G:C5	2.68	0.46
1:0:2506:C:H2'	1:0:2507:U:H6	1.79	0.46
1:0:2825:A:H2'	1:0:2826:C:C6	2.51	0.46
1:0:29:U:H2'	1:0:30:G:H8	1.77	0.46
1:0:165:G:O6	1:0:166:G:C2	2.68	0.46
1:0:348:U:C5	1:0:349:G:C8	3.04	0.46
1:0:391:C:H2'	1:0:392:G:C8	2.51	0.46
1:0:509:U:H3'	1:0:510:G:H8	1.80	0.46
1:0:542:A:H2'	1:0:543:G:H5'	1.97	0.46
1:0:584:A:H5'	1:0:2038:C:N4	2.30	0.46
1:0:600:G:H3'	1:0:601:A:H5'	1.97	0.46
1:0:712:A:C8	1:0:713:G:C8	3.03	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:831:G:O2'	1:0:832:A:C4'	2.63	0.46
1:0:852:U:O2	1:0:951:G:C2	2.69	0.46
1:0:1292:A:H2'	1:0:1293:A:H8	1.81	0.46
1:0:1314:A:N7	1:0:1316:G:N7	2.63	0.46
1:0:1783:G:N2	1:0:1784:C:H1'	2.30	0.46
1:0:2002:A:N1	1:0:2003:A:C5	2.83	0.46
1:0:2007:G:C2	1:0:2023:C:O2	2.68	0.46
1:0:2044:G:N2	1:0:2046:C:C5	2.83	0.46
1:0:2078:G:N1	1:0:2178:U:C2	2.83	0.46
1:0:2125:C:O5'	1:0:2125:C:H6	1.98	0.46
1:0:2359:U:C4	1:0:2360:C:H5	2.33	0.46
1:0:2383:C:H2'	1:0:2384:G:O4'	2.15	0.46
1:0:2491:C:C3'	1:0:2492:G:H5"	2.45	0.46
1:0:314:G:H2'	1:0:315:G:H8	1.77	0.46
1:0:319:G:C2	1:0:511:A:C4	3.04	0.46
1:0:605:G:H2'	1:0:606:A:H8	1.81	0.46
1:0:809:C:H2'	1:0:810:U:C6	2.50	0.46
1:0:844:G:N1	1:0:845:U:C2	2.83	0.46
1:0:1031:C:H4'	1:0:1032:A:C8	2.50	0.46
1:0:1496:G:O5'	1:0:1496:G:H8	1.98	0.46
1:0:1657:A:N7	1:0:1658:A:C5	2.84	0.46
1:0:2030:U:C2	1:0:2031:A:N7	2.84	0.46
1:0:2276:C:H2'	1:0:2277:A:O4'	2.14	0.46
1:0:2678:C:O2'	1:0:2679:G:H5'	2.15	0.46
32:0:2881:MUL:H14	32:0:2881:MUL:C10	2.42	0.46
1:0:20:C:O2'	1:0:21:A:H5'	2.16	0.46
1:0:173:A:N3	1:0:173:A:H2'	2.30	0.46
1:0:318:G:N2	1:0:321:A:O4'	2.48	0.46
1:0:629:C:O2'	1:0:630:G:H5'	2.15	0.46
1:0:698:A:C6	1:0:786:U:C6	3.03	0.46
1:0:839:U:H5"	1:0:2408:G:OP2	2.15	0.46
1:0:981:C:C5	1:0:982:C:C5	3.03	0.46
1:0:1018:C:H3'	1:0:1018:C:C6	2.49	0.46
1:0:1281:A:H2	1:0:1996:A:C2	2.32	0.46
1:0:1379:A:N7	1:0:1380:C:N4	2.63	0.46
1:0:1457:A:C2'	1:0:1458:A:H5'	2.44	0.46
1:0:1569:A:H8	1:0:1569:A:O5'	1.97	0.46
1:0:1945:C:O2'	1:0:1946:U:H5	1.98	0.46
1:0:2554:C:O5'	1:0:2554:C:H6	1.99	0.46
1:0:2626:U:O5'	1:0:2626:U:H6	1.99	0.46
1:0:2651:U:H2'	1:0:2652:G:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2656:G:N3	1:0:2711:G:N2	2.63	0.46
1:0:2726:U:H2'	1:0:2727:G:O4'	2.15	0.46
2:9:94:G:H2'	2:9:94:G:N3	2.31	0.46
1:0:133:C:H2'	1:0:134:G:O4'	2.16	0.46
1:0:348:U:O4	1:0:349:G:C5	2.69	0.46
1:0:348:U:C4	1:0:349:G:C5	3.04	0.46
1:0:513:A:H4'	1:0:515:A:H5'	1.97	0.46
1:0:658:G:H1'	1:0:2330:G:H5"	1.98	0.46
1:0:740:A:N6	1:0:741:G:C2	2.84	0.46
1:0:836:G:H2'	1:0:837:U:C6	2.41	0.46
1:0:836:G:C2	1:0:837:U:C5	3.04	0.46
1:0:873:U:P	1:0:2247:A:C2	3.08	0.46
1:0:873:U:H2'	1:0:874:A:H5'	1.96	0.46
1:0:1429:A:O2'	1:0:1430:G:H4'	2.14	0.46
1:0:1996:A:O2'	1:0:1997:A:H5'	2.15	0.46
1:0:2012:A:C6	1:0:2014:A:H5'	2.50	0.46
1:0:2013:A:H1'	1:0:2478:C:H5'	1.97	0.46
1:0:2026:C:O2'	1:0:2027:C:C5'	2.64	0.46
1:0:2300:G:H3'	1:0:2300:G:N3	2.31	0.46
1:0:2309:G:H1	1:0:2364:C:N4	2.14	0.46
1:0:2617:G:H22	1:0:2755:A:H2'	1.80	0.46
1:0:2637:C:H2'	1:0:2638:G:C8	2.51	0.46
1:0:2726:U:O5'	1:0:2726:U:H6	1.99	0.46
1:0:314:G:C2	1:0:326:A:C2	3.03	0.46
1:0:792:U:C2'	1:0:793:G:C5'	2.92	0.46
1:0:951:G:H2'	1:0:952:A:O4'	2.15	0.46
1:0:1220:G:H2'	1:0:1221:C:H6	1.80	0.46
1:0:1289:A:N1	1:0:1290:A:C5	2.83	0.46
1:0:1309:G:C6	1:0:1310:C:C4	3.04	0.46
1:0:1468:A:H8	1:0:1468:A:P	2.37	0.46
1:0:1549:C:H6	1:0:1549:C:O5'	1.98	0.46
1:0:1683:G:N7	1:0:1684:G:N3	2.63	0.46
1:0:1690:U:H2'	1:0:1691:G:C5'	2.45	0.46
1:0:1979:C:H2'	1:0:1980:A:H4'	1.98	0.46
1:0:1997:A:C2	1:0:1998:A:C6	3.03	0.46
1:0:2106:G:H2'	1:0:2107:G:C8	2.51	0.46
1:0:2429:A:OP1	1:0:2476:A:C8	2.69	0.46
1:0:2549:G:N2	1:0:2550:C:H1'	2.31	0.46
1:0:2762:G:C5	1:0:2763:U:C5	3.03	0.46
1:0:470:U:O4	1:0:471:A:C6	2.69	0.46
1:0:681:A:C6	1:0:683:A:H2'	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:728:G:H2'	1:0:729:A:O4'	2.16	0.46
1:0:863:C:H2'	1:0:864:C:O4'	2.15	0.46
1:0:866:U:O2'	1:0:867:G:H5'	2.15	0.46
1:0:1090:C:C2'	1:0:1091:C:H5'	2.46	0.46
1:0:1161:U:H2'	1:0:1162:A:H8	1.76	0.46
1:0:1264:C:C2'	1:0:1265:G:O5'	2.63	0.46
1:0:1789:U:C4	1:0:1811:A:H2	2.32	0.46
1:0:1985:G:H2'	1:0:1986:G:H8	1.81	0.46
1:0:2086:U:H2'	1:0:2087:U:C6	2.50	0.46
1:0:2176:U:H2'	1:0:2177:U:O4'	2.15	0.46
1:0:2825:A:N7	1:0:2843:A:H2	2.14	0.46
2:9:89:G:N2	2:9:91:A:C8	2.84	0.46
1:0:65:C:C2	1:0:88:G:N2	2.84	0.46
1:0:299:C:H2'	1:0:300:C:C5	2.51	0.46
1:0:485:G:O6	1:0:520:C:N4	2.48	0.46
1:0:507:A:H2'	1:0:508:G:O4'	2.15	0.46
1:0:587:A:H5"	1:0:1268:U:O3'	2.16	0.46
1:0:621:U:H3	1:0:628:A:H61	1.64	0.46
1:0:646:C:H2'	1:0:647:G:H8	1.80	0.46
1:0:751:G:C4	1:0:772:G:N1	2.83	0.46
1:0:1398:G:N1	1:0:1416:A:C5	2.84	0.46
1:0:1668:G:O6	1:0:1669:A:N6	2.49	0.46
1:0:1748:U:N3	1:0:1753:A:C2	2.84	0.46
1:0:2756:A:N6	1:0:2762:G:C1'	2.73	0.46
1:0:2785:A:H2'	1:0:2786:G:C8	2.51	0.46
1:0:2815:C:C4	1:0:2816:C:C5	3.04	0.46
1:0:2815:C:C2'	1:0:2816:C:H5'	2.45	0.46
2:9:108:G:H8	2:9:108:G:O5'	1.99	0.46
1:0:34:U:C2'	1:0:35:G:H5'	2.34	0.46
1:0:54:G:O6	1:0:55:A:N6	2.49	0.46
1:0:66:U:O5'	1:0:66:U:H6	1.99	0.46
1:0:195:A:H61	1:0:212:U:C4'	2.23	0.46
1:0:220:U:O4	1:0:232:A:C8	2.69	0.46
1:0:394:U:O5'	1:0:394:U:H6	1.99	0.46
1:0:427:C:O2'	1:0:428:A:H5'	2.15	0.46
1:0:588:G:C8	1:0:2000:U:O4	2.69	0.46
1:0:598:U:H2'	1:0:599:A:C8	2.51	0.46
1:0:640:C:C2	1:0:641:G:C8	3.03	0.46
1:0:751:G:H2'	1:0:752:G:O4'	2.15	0.46
1:0:1311:C:N3	1:0:1660:G:C2	2.84	0.46
1:0:1398:G:C6	1:0:1416:A:C5	3.04	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1456:C:O2	1:0:1566:G:C2	2.69	0.46
1:0:1461:C:H2'	1:0:1462:C:H6	1.81	0.46
1:0:1479:G:C4	1:0:1480:G:C8	3.04	0.46
1:0:1708:C:H2'	1:0:1709:U:O4'	2.15	0.46
1:0:1768:U:H6	1:0:1768:U:O5'	1.99	0.46
1:0:1830:C:H42	1:0:1881:U:H3'	1.81	0.46
1:0:1837:G:O2'	1:0:1838:G:H5'	2.16	0.46
1:0:1945:C:O2'	1:0:1946:U:C5	2.68	0.46
1:0:2091:C:H2'	1:0:2092:U:O4'	2.16	0.46
1:0:2262:C:C2'	1:0:2263:C:H6	2.27	0.46
1:0:2356:A:O2'	1:0:2357:A:H5'	2.15	0.46
1:0:2384:G:H21	1:0:2391:A:H62	1.63	0.46
1:0:2628:C:H2'	1:0:2629:U:C5	2.48	0.46
2:9:5:C:H2'	2:9:6:C:O4'	2.16	0.46
2:9:95:U:H2'	2:9:96:C:H6	1.80	0.46
1:0:70:A:P	1:0:111:G:H4'	2.56	0.46
1:0:95:G:C2	1:0:96:C:C2	3.03	0.46
1:0:117:A:OP1	1:0:118:U:C5	2.69	0.46
1:0:294:U:H2'	1:0:295:C:H6	1.81	0.46
1:0:302:U:C2	1:0:361:G:N2	2.84	0.46
1:0:459:A:H1'	1:0:461:A:N6	2.31	0.46
1:0:464:G:H2'	1:0:465:C:C6	2.51	0.46
1:0:477:A:H2'	1:0:478:G:H5'	1.98	0.46
1:0:942:U:H2'	1:0:943:U:C5'	2.45	0.46
1:0:1145:C:C5	1:0:1147:G:OP2	2.69	0.46
1:0:1682:A:N6	1:0:1977:C:N4	2.62	0.46
1:0:1777:A:N6	1:0:2585:C:H1'	2.32	0.46
1:0:1975:G:C6	1:0:1980:A:C2	3.04	0.46
1:0:2543:A:C6	1:0:2544:A:N1	2.84	0.46
1:0:2549:G:H2'	1:0:2550:C:C5'	2.46	0.46
1:0:184:A:H2'	1:0:185:C:C6	2.51	0.45
1:0:472:C:N4	1:0:473:C:H41	2.13	0.45
1:0:533:C:C2	1:0:534:U:C2	3.04	0.45
1:0:809:C:H2'	1:0:810:U:H6	1.80	0.45
1:0:921:A:O2'	1:0:923:A:OP2	2.21	0.45
1:0:1020:A:H8	1:0:1020:A:O5'	1.99	0.45
1:0:1038:U:O2	1:0:2466:G:H4'	2.16	0.45
1:0:1111:C:C5	1:0:1112:U:H5	2.34	0.45
1:0:1213:U:H2'	1:0:1214:C:C6	2.51	0.45
1:0:1300:A:N1	1:0:1666:G:H1'	2.30	0.45
1:0:1402:G:H3'	1:0:1403:U:H6	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1715:A:C8	1:0:1717:A:H1'	2.50	0.45
1:0:1987:G:C5	1:0:1988:A:C8	3.04	0.45
1:0:2238:G:O2'	1:0:2239:C:H5'	2.16	0.45
1:0:2319:G:C2'	1:0:2320:G:H8	2.21	0.45
1:0:2472:U:C5	1:0:2473:G:N7	2.84	0.45
1:0:2474:G:C5	1:0:2475:C:C4	3.03	0.45
1:0:2856:U:C2	1:0:2857:C:C5	3.04	0.45
1:0:319:G:H8	1:0:319:G:O5'	2.00	0.45
1:0:387:A:N6	1:0:413:G:O2'	2.49	0.45
1:0:393:U:H2'	1:0:394:U:C6	2.52	0.45
1:0:404:A:N7	1:0:405:C:C4	2.85	0.45
1:0:693:A:O2'	1:0:694:G:H5'	2.17	0.45
1:0:751:G:C2	1:0:772:G:C6	3.04	0.45
1:0:941:U:C2'	1:0:942:U:C5'	2.93	0.45
1:0:978:U:H2'	1:0:979:A:C8	2.50	0.45
1:0:1174:G:C2'	1:0:1175:A:H5'	2.45	0.45
1:0:1425:G:H2'	1:0:1426:U:O4'	2.16	0.45
1:0:1453:A:C3'	1:0:1454:U:H5'	2.46	0.45
1:0:1488:G:C2	1:0:1536:G:C2	3.04	0.45
1:0:1574:A:C2	1:0:1576:G:C8	3.04	0.45
1:0:1625:A:H1'	1:0:1632:A:C4'	2.47	0.45
1:0:1681:A:C2	1:0:1682:A:C4	3.04	0.45
1:0:1715:A:O2'	1:0:1716:G:H8	1.99	0.45
1:0:1717:A:N7	1:0:1718:A:C5	2.84	0.45
1:0:2069:U:O5'	1:0:2069:U:H6	1.99	0.45
1:0:2079:A:H2'	1:0:2080:U:H6	1.77	0.45
1:0:2379:G:C2	1:0:2396:C:N3	2.84	0.45
1:0:2382:C:C4	1:0:2383:C:C5	3.05	0.45
1:0:2433:G:N1	1:0:2478:C:N4	2.65	0.45
1:0:2756:A:C6	1:0:2762:G:C1'	2.98	0.45
1:0:25:U:O4	1:0:26:G:C2	2.69	0.45
1:0:26:G:C6	1:0:27:G:C2	3.04	0.45
1:0:203:G:O2'	1:0:204:A:H5'	2.17	0.45
1:0:224:G:H4'	1:0:399:G:C6	2.50	0.45
1:0:392:G:H4'	1:0:2211:U:H5"	1.98	0.45
1:0:408:U:O4	1:0:409:G:O6	2.34	0.45
1:0:481:A:N6	1:0:482:A:C6	2.85	0.45
1:0:697:G:N1	1:0:807:A:C2	2.78	0.45
1:0:710:C:C4	1:0:711:C:N4	2.84	0.45
1:0:754:G:C6	1:0:755:C:C5	3.04	0.45
1:0:838:A:H4'	1:0:2407:G:C5	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:957:G:N2	1:0:983:G:H1'	2.32	0.45
1:0:974:U:H2'	1:0:975:C:C6	2.52	0.45
1:0:1396:C:O5'	1:0:1396:C:H6	1.99	0.45
1:0:1407:G:O2'	1:0:1408:A:O4'	2.33	0.45
1:0:1416:A:C2	1:0:1417:C:C2	3.04	0.45
1:0:1442:C:H3'	1:0:1442:C:C6	2.51	0.45
1:0:1449:C:O2'	1:0:1450:G:H5'	2.16	0.45
1:0:1735:G:O2'	1:0:1736:C:H5'	2.17	0.45
1:0:1769:U:O2	1:0:1770:U:C5	2.69	0.45
1:0:2318:U:O5'	1:0:2318:U:H6	1.98	0.45
1:0:2457:A:C8	1:0:2508:G:C6	3.05	0.45
1:0:2645:C:C6	1:0:2645:C:O5'	2.69	0.45
2:9:85:G:O2'	2:9:86:A:H5'	2.17	0.45
1:0:149:A:O2'	1:0:150:A:H5'	2.17	0.45
1:0:475:U:C2	1:0:801:A:C6	3.05	0.45
1:0:679:C:H2'	1:0:680:U:C6	2.48	0.45
1:0:813:A:O2'	1:0:814:G:C8	2.69	0.45
1:0:956:A:C2'	1:0:957:G:O5'	2.63	0.45
1:0:966:A:N7	1:0:967:G:N7	2.64	0.45
1:0:977:G:C5'	1:0:2251:U:O2	2.59	0.45
1:0:1398:G:C2	1:0:1416:A:C4	3.05	0.45
1:0:1483:G:H2'	1:0:1484:G:O5'	2.16	0.45
1:0:1631:C:C5	1:0:1633:C:C4	3.03	0.45
1:0:1672:A:C2	1:0:2032:G:H5"	2.51	0.45
1:0:1950:C:H2'	1:0:1951:G:O4'	2.17	0.45
1:0:2236:U:C2	1:0:2237:C:C6	3.05	0.45
1:0:2347:C:H2'	1:0:2348:A:H8	1.82	0.45
1:0:2391:A:O5'	1:0:2391:A:C8	2.70	0.45
1:0:2522:G:H2'	1:0:2523:G:C8	2.51	0.45
1:0:2705:A:N7	1:0:2707:G:N7	2.64	0.45
1:0:387:A:H1'	1:0:414:A:C6	2.51	0.45
1:0:482:A:C2'	1:0:483:A:H5'	2.46	0.45
1:0:603:C:H2'	1:0:604:U:C6	2.51	0.45
1:0:611:C:H3'	1:0:611:C:H6	1.81	0.45
1:0:649:G:O2'	1:0:650:U:H5'	2.16	0.45
1:0:840:U:C4	1:0:2405:A:H2	2.33	0.45
1:0:873:U:O5'	1:0:2247:A:H2	1.96	0.45
1:0:926:C:O5'	1:0:926:C:H6	2.00	0.45
1:0:1228:G:C6	1:0:1229:C:C4	3.05	0.45
1:0:1289:A:C2	1:0:1290:A:C5	3.04	0.45
1:0:1339:U:OP2	1:0:1339:U:C6	2.69	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1774:A:H2	1:0:2567:G:C8	2.34	0.45
1:0:1793:A:O2'	1:0:1794:A:H5'	2.17	0.45
1:0:1915:A:C2	1:0:1952:A:C2	3.04	0.45
1:0:2205:C:H5	1:0:2206:C:C5	2.33	0.45
1:0:2232:G:H2'	1:0:2233:C:H6	1.81	0.45
1:0:2266:A:C2'	1:0:2268:G:C8	2.94	0.45
1:0:2396:C:HO2'	1:0:2397:A:H5'	1.78	0.45
1:0:2432:A:H2	1:0:2483:U:O2	2.00	0.45
1:0:2490:U:O4	1:0:2553:G:O6	2.35	0.45
1:0:2514:G:H2'	1:0:2515:G:C8	2.51	0.45
1:0:2616:U:H2'	1:0:2617:G:O4'	2.16	0.45
1:0:146:C:N3	1:0:152:G:N2	2.65	0.45
1:0:321:A:N1	1:0:323:G:H1'	2.32	0.45
1:0:720:A:N1	1:0:738:G:H1'	2.32	0.45
1:0:865:A:H2'	1:0:866:U:O5'	2.16	0.45
1:0:873:U:C3'	1:0:874:A:C5'	2.95	0.45
1:0:1171:A:C5	1:0:1172:U:H5	2.34	0.45
1:0:1175:A:H2'	1:0:1176:U:H6	1.81	0.45
1:0:1199:U:C3'	1:0:1200:G:H5"	2.44	0.45
1:0:1358:C:H6	1:0:1358:C:O5'	1.99	0.45
1:0:1503:G:C2	1:0:1504:G:C4	3.05	0.45
1:0:1605:A:H2'	1:0:1606:C:H6	1.82	0.45
1:0:1692:C:C2'	1:0:1693:A:C5'	2.88	0.45
1:0:1694:A:H2'	1:0:1695:U:C5'	2.46	0.45
1:0:1791:C:O2	1:0:1793:A:O4'	2.34	0.45
1:0:1865:C:H2'	1:0:1866:G:O4'	2.16	0.45
1:0:1967:U:O2'	1:0:1968:G:H5'	2.17	0.45
1:0:1973:C:O5'	1:0:1973:C:H6	2.00	0.45
1:0:2059:U:H3'	1:0:2217:G:O6	2.17	0.45
1:0:2085:G:H1	1:0:2171:U:H1'	1.82	0.45
1:0:2091:C:C2'	1:0:2092:U:H5'	2.46	0.45
1:0:2689:C:N4	1:0:2690:A:N6	2.65	0.45
1:0:2825:A:H8	1:0:2825:A:O5'	2.00	0.45
2:9:38:C:O2'	2:9:39:C:H5'	2.17	0.45
2:9:50:U:H2'	2:9:51:G:C8	2.51	0.45
1:0:25:U:C4	1:0:26:G:C2	3.04	0.45
1:0:132:U:H2'	1:0:133:C:H6	1.80	0.45
1:0:174:A:O2'	1:0:2223:U:OP1	2.35	0.45
1:0:490:A:N7	1:0:492:G:C1'	2.80	0.45
1:0:548:G:C2	1:0:549:G:C5	3.04	0.45
1:0:580:A:C4	1:0:2013:A:C6	3.04	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:818:G:O6	1:0:2051:U:H5'	2.17	0.45
1:0:867:G:C6	1:0:936:A:N1	2.85	0.45
1:0:1020:A:O2'	1:0:1021:A:H5'	2.17	0.45
1:0:1280:U:C2'	1:0:1281:A:C5'	2.90	0.45
1:0:1291:G:C2'	1:0:1292:A:C5'	2.95	0.45
1:0:1295:U:H2'	1:0:1296:G:H5'	1.97	0.45
1:0:1457:A:N6	1:0:1458:A:N6	2.65	0.45
1:0:1460:G:C2	1:0:1461:C:C2	3.04	0.45
1:0:1634:A:O2'	1:0:1635:G:H5'	2.17	0.45
1:0:1818:G:H2'	1:0:1819:U:H6	1.82	0.45
1:0:2027:C:O2'	1:0:2028:C:H5'	2.17	0.45
1:0:2033:C:N3	1:0:2034:A:C2	2.85	0.45
1:0:2039:G:N2	1:0:2040:A:C1'	2.80	0.45
1:0:2359:U:C2	1:0:2360:C:C5	3.04	0.45
1:0:2538:C:O2'	1:0:2539:C:H5'	2.17	0.45
1:0:2674:C:H2'	1:0:2675:U:H6	1.81	0.45
1:0:2792:C:N3	1:0:2805:G:C2	2.85	0.45
1:0:459:A:C6	1:0:466:A:H2'	2.52	0.45
1:0:636:G:H2'	1:0:637:G:O4'	2.16	0.45
1:0:701:U:H5"	1:0:1771:A:H2	1.82	0.45
1:0:814:G:O5'	1:0:814:G:H8	2.00	0.45
1:0:835:U:C5	1:0:849:G:N2	2.85	0.45
1:0:1059:A:C6	1:0:1060:C:N4	2.85	0.45
1:0:1294:G:C2	1:0:1303:U:C2	3.05	0.45
1:0:1336:G:C2'	1:0:1337:G:H5'	2.47	0.45
1:0:1385:C:H2'	1:0:1386:A:C8	2.50	0.45
1:0:1429:A:H61	1:0:1602:G:H5'	1.82	0.45
1:0:1531:C:H2'	1:0:1532:A:C5'	2.46	0.45
1:0:1717:A:H2'	1:0:1718:A:O4'	2.17	0.45
1:0:1800:A:H2'	1:0:1802:A:C5	2.52	0.45
1:0:2132:G:H2'	1:0:2133:G:C8	2.52	0.45
1:0:2245:A:O2'	1:0:2246:A:N3	2.50	0.45
1:0:2279:G:H2'	1:0:2280:A:H8	1.81	0.45
1:0:2549:G:C2	1:0:2550:C:C1'	3.00	0.45
1:0:2608:A:O2'	1:0:2609:G:H5'	2.16	0.45
1:0:2849:C:C2	1:0:2850:U:C5	3.05	0.45
1:0:210:A:H62	1:0:442:A:H61	1.65	0.45
1:0:328:A:N1	1:0:329:C:C4	2.85	0.45
1:0:470:U:C5	1:0:480:G:N2	2.85	0.45
1:0:770:U:C2	1:0:771:C:C5	3.04	0.45
1:0:810:U:H6	1:0:810:U:O5'	2.00	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:813:A:O2'	1:0:814:G:H8	2.00	0.45
1:0:941:U:H4'	1:0:941:U:OP1	2.17	0.45
1:0:1034:U:H4'	1:0:1134:C:OP1	2.17	0.45
1:0:1164:C:H2'	1:0:1165:G:O4'	2.16	0.45
1:0:1226:A:N6	1:0:1249:G:H1'	2.32	0.45
1:0:1242:A:H2'	1:0:1243:G:C8	2.52	0.45
1:0:1560:A:H2'	1:0:1561:A:O4'	2.17	0.45
1:0:1755:G:H2'	1:0:1756:C:H6	1.76	0.45
1:0:1940:C:C4	1:0:1941:C:N4	2.84	0.45
1:0:2047:C:H1'	1:0:2429:A:C2	2.52	0.45
1:0:2071:G:H2'	1:0:2072:C:H6	1.82	0.45
1:0:2310:G:N2	1:0:2364:C:C4	2.83	0.45
1:0:2447:G:N2	1:0:2460:G:C2'	2.76	0.45
1:0:2596:C:C4	1:0:2597:G:N7	2.84	0.45
1:0:2843:A:H2'	1:0:2844:G:O4'	2.17	0.45
2:9:73:C:O2	2:9:109:G:C2	2.70	0.45
1:0:60:A:O2'	1:0:61:U:H5'	2.17	0.45
1:0:466:A:O2'	1:0:467:U:OP2	2.32	0.45
1:0:708:G:C2	1:0:781:G:C2	3.05	0.45
1:0:760:U:O2	1:0:1997:A:H1'	2.16	0.45
1:0:860:U:N3	1:0:945:G:N2	2.65	0.45
1:0:1075:C:H2'	1:0:1076:U:O4'	2.17	0.45
1:0:1163:C:H2'	1:0:1164:C:C6	2.52	0.45
1:0:1762:C:O2'	1:0:1777:A:H1'	2.17	0.45
1:0:1774:A:C2	1:0:2567:G:O4'	2.70	0.45
1:0:1859:A:C2	1:0:1860:A:C4	3.05	0.45
1:0:1930:C:C4	1:0:1931:G:N7	2.85	0.45
1:0:1934:U:C2	1:0:1937:G:N7	2.85	0.45
1:0:2318:U:C2'	1:0:2319:G:C8	2.82	0.45
1:0:2404:A:H5'	1:0:2406:C:O4'	2.16	0.45
1:0:2404:A:O4'	1:0:2406:C:C6	2.70	0.45
1:0:2487:G:C2	1:0:2561:G:C6	3.05	0.45
1:0:2520:A:C2	1:0:2745:A:N6	2.83	0.45
1:0:2528:G:C2	1:0:2529:G:N7	2.84	0.45
1:0:2544:A:C3'	1:0:2545:A:O4'	2.64	0.45
1:0:2546:G:C2	1:0:2547:C:C2	3.05	0.45
1:0:2800:C:H2'	1:0:2801:A:C5'	2.47	0.45
2:9:62:C:N4	2:9:63:A:N6	2.64	0.45
2:9:89:G:N1	2:9:93:G:C6	2.85	0.45
1:0:65:C:O2	1:0:88:G:N2	2.50	0.44
1:0:73:A:N6	1:0:87:G:C8	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:319:G:H1'	1:0:511:A:O4'	2.17	0.44
1:0:491:A:N6	1:0:510:G:H5'	2.32	0.44
1:0:548:G:N3	1:0:549:G:C8	2.86	0.44
1:0:574:C:N4	1:0:582:G:OP1	2.51	0.44
1:0:646:C:H2'	1:0:647:G:C8	2.52	0.44
1:0:789:G:O2'	1:0:790:A:OP2	2.31	0.44
1:0:792:U:H2'	1:0:793:G:C5'	2.46	0.44
1:0:834:A:H5'	1:0:835:U:C6	2.52	0.44
1:0:1000:G:OP1	1:0:1168:G:H4'	2.17	0.44
1:0:1207:G:C6	1:0:1208:A:C6	3.05	0.44
1:0:1248:G:N1	1:0:1249:G:N2	2.64	0.44
1:0:1400:A:H2'	1:0:1401:G:O4'	2.17	0.44
1:0:1920:A:C2	1:0:1922:U:O4	2.70	0.44
1:0:1975:G:C5	1:0:1980:A:C6	3.06	0.44
1:0:2042:A:N3	1:0:2482:A:N6	2.65	0.44
1:0:2496:C:C6	1:0:2521:A:N7	2.85	0.44
1:0:91:A:C6	1:0:92:U:C4	3.06	0.44
1:0:482:A:H2'	1:0:483:A:O4'	2.17	0.44
1:0:713:G:O6	1:0:746:G:C2	2.70	0.44
1:0:754:G:C2	1:0:755:C:C5	3.05	0.44
1:0:807:A:C5	1:0:808:C:C5	3.05	0.44
1:0:830:C:C4	1:0:831:G:N7	2.85	0.44
1:0:931:G:H2'	1:0:932:G:C5'	2.47	0.44
1:0:1171:A:C5	1:0:1172:U:C5	3.05	0.44
1:0:1248:G:C6	1:0:1249:G:N1	2.85	0.44
1:0:1391:A:H2'	1:0:1392:U:C6	2.49	0.44
1:0:1407:G:H4'	1:0:1619:A:O3'	2.17	0.44
1:0:1462:C:H1'	1:0:1561:A:H1'	2.00	0.44
1:0:1685:A:H2'	1:0:1686:A:OP2	2.17	0.44
1:0:1760:G:H2'	1:0:1761:G:C8	2.52	0.44
1:0:2071:G:H2'	1:0:2072:C:C6	2.51	0.44
1:0:2441:U:C2	1:0:2442:C:C5	3.06	0.44
1:0:2489:C:H2'	1:0:2490:U:H5'	1.98	0.44
1:0:2701:A:C2	1:0:2848:A:C6	3.06	0.44
2:9:98:C:C6	2:9:98:C:H3'	2.51	0.44
1:0:105:G:O6	1:0:106:G:C6	2.70	0.44
1:0:170:U:H4'	1:0:816:U:O2'	2.18	0.44
1:0:423:G:C2	1:0:431:G:C2	3.05	0.44
1:0:490:A:C2'	1:0:491:A:H5'	2.46	0.44
1:0:520:C:N3	1:0:521:U:C2	2.85	0.44
1:0:796:A:C5	1:0:798:G:C5	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:942:U:C2'	1:0:943:U:C5'	2.96	0.44
1:0:1460:G:N2	1:0:1461:C:O2	2.50	0.44
1:0:1673:C:C4	1:0:1674:C:C5	3.06	0.44
1:0:1801:C:H1'	1:0:2208:U:C5'	2.47	0.44
1:0:2026:C:O2'	1:0:2027:C:O5'	2.34	0.44
1:0:2056:C:H2'	1:0:2057:U:H6	1.81	0.44
1:0:2062:U:H3	1:0:2220:A:H61	1.66	0.44
1:0:2380:U:C2'	1:0:2381:A:H5'	2.40	0.44
1:0:2490:U:C4	1:0:2491:C:C5	3.05	0.44
1:0:2574:G:H8	1:0:2574:G:O5'	1.99	0.44
1:0:2843:A:N6	1:0:2844:G:N1	2.65	0.44
1:0:58:C:O2	1:0:72:A:H2'	2.17	0.44
1:0:478:G:O2'	1:0:479:G:C5'	2.64	0.44
1:0:564:U:H2'	1:0:565:A:C8	2.51	0.44
1:0:674:U:O2'	1:0:675:C:H5'	2.16	0.44
1:0:796:A:C8	1:0:798:G:N7	2.86	0.44
1:0:825:C:H2'	1:0:826:U:O5'	2.17	0.44
1:0:834:A:H5'	1:0:835:U:H6	1.82	0.44
1:0:1301:U:C5	1:0:1340:C:C2	3.05	0.44
1:0:1311:C:N3	1:0:1660:G:N2	2.65	0.44
1:0:1491:C:H42	1:0:1532:A:N6	2.13	0.44
1:0:1544:A:N6	1:0:1545:G:O6	2.49	0.44
1:0:1579:G:H2'	1:0:1580:C:C6	2.53	0.44
1:0:1655:C:C5'	1:0:2689:C:O2'	2.60	0.44
1:0:1676:U:C2	1:0:1985:G:N2	2.85	0.44
1:0:1724:C:N3	1:0:1747:G:C6	2.85	0.44
1:0:1869:A:H2'	1:0:1870:U:O4'	2.17	0.44
1:0:1948:C:N3	1:0:1949:A:N7	2.66	0.44
1:0:2363:G:C5'	1:0:2365:U:OP1	2.66	0.44
1:0:2839:G:C8	1:0:2840:U:C5	3.06	0.44
2:9:107:C:H3'	2:9:107:C:C6	2.52	0.44
1:0:197:G:N1	1:0:440:U:H3'	2.31	0.44
1:0:394:U:H2'	1:0:395:G:H5'	1.99	0.44
1:0:615:C:C1'	1:0:671:A:H4'	2.45	0.44
1:0:733:G:H2'	1:0:734:G:C8	2.53	0.44
1:0:854:G:C2	1:0:949:G:C2	3.06	0.44
1:0:947:C:O2'	1:0:948:C:H5'	2.17	0.44
1:0:1004:A:C2'	1:0:1005:U:H5'	2.38	0.44
1:0:1004:A:N6	1:0:1005:U:O4	2.50	0.44
1:0:1078:A:N6	1:0:1079:G:C6	2.85	0.44
1:0:1182:U:O4	1:0:1192:A:N1	2.50	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1220:G:N2	1:0:1221:C:C2	2.86	0.44
1:0:1263:G:O2'	1:0:1264:C:O5'	2.30	0.44
1:0:1271:C:O2'	1:0:1272:G:C5'	2.64	0.44
1:0:1546:C:H2'	1:0:1547:U:C6	2.52	0.44
1:0:1548:U:C4	1:0:1549:C:N4	2.86	0.44
1:0:1730:G:H8	1:0:1730:G:O5'	2.01	0.44
1:0:2270:U:H2'	1:0:2271:C:C6	2.53	0.44
1:0:2324:G:N3	1:0:2326:C:H5	2.16	0.44
1:0:2433:G:C5	1:0:2434:G:N7	2.85	0.44
1:0:2489:C:C2'	1:0:2490:U:H5'	2.47	0.44
1:0:2493:U:O5'	1:0:2493:U:H6	2.00	0.44
1:0:2656:G:H2'	1:0:2657:G:C8	2.52	0.44
1:0:2811:G:C6	1:0:2858:A:C6	3.05	0.44
1:0:24:G:H2'	1:0:25:U:H6	1.82	0.44
1:0:117:A:O3'	1:0:118:U:H3'	2.18	0.44
1:0:238:G:O4'	1:0:618:A:H2	2.00	0.44
1:0:305:A:H2'	1:0:306:G:C4'	2.47	0.44
1:0:692:C:H2'	1:0:693:A:H8	1.83	0.44
1:0:837:U:C2	1:0:838:A:N7	2.86	0.44
1:0:944:A:C6	1:0:945:G:C5	3.06	0.44
1:0:1014:G:N3	1:0:1021:A:H2	2.16	0.44
1:0:1222:G:C1'	1:0:1251:G:H22	2.26	0.44
1:0:1332:G:O2'	1:0:1333:G:H5'	2.16	0.44
1:0:1638:G:C2	1:0:1639:U:C2	3.06	0.44
1:0:1647:U:H2'	1:0:1649:A:OP2	2.18	0.44
1:0:1652:G:C5	1:0:1653:C:C4	3.05	0.44
1:0:1792:C:H6	1:0:1792:C:O5'	2.01	0.44
1:0:2193:C:H2'	1:0:2194:A:C8	2.52	0.44
1:0:2209:G:C4	1:0:2210:C:C5	3.05	0.44
1:0:2526:U:N3	1:0:2527:G:C5	2.86	0.44
1:0:2718:A:C2	1:0:2719:U:C6	3.06	0.44
1:0:2813:G:C5	1:0:2814:G:N7	2.86	0.44
1:0:26:G:H4'	1:0:1273:G:O2'	2.17	0.44
1:0:28:A:N3	1:0:523:A:C5	2.86	0.44
1:0:133:C:C4	1:0:134:G:C4	3.05	0.44
1:0:175:C:N4	1:0:225:G:H1	2.04	0.44
1:0:509:U:H6	1:0:509:U:O5'	2.01	0.44
1:0:542:A:H2	1:0:572:G:HO2'	1.64	0.44
1:0:588:G:O2'	1:0:2002:A:OP1	2.35	0.44
1:0:691:C:N3	1:0:692:C:C4	2.86	0.44
1:0:761:G:H2'	1:0:762:A:C8	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:805:G:H2'	1:0:2419:C:N3	2.33	0.44
1:0:829:C:C2	1:0:1206:G:C2	3.06	0.44
1:0:832:A:N6	1:0:833:A:C6	2.85	0.44
1:0:929:A:C2	2:9:81:C:O2	2.70	0.44
1:0:1153:A:O2'	1:0:1155:G:C8	2.64	0.44
1:0:1223:G:C8	1:0:1223:G:OP2	2.71	0.44
1:0:1560:A:H2'	1:0:1561:A:C8	2.53	0.44
1:0:1785:A:O2'	1:0:1786:C:H5'	2.18	0.44
1:0:1941:C:C2'	1:0:1942:G:H5'	2.47	0.44
1:0:2052:G:O2'	1:0:2053:G:H5'	2.18	0.44
1:0:2259:G:H4'	1:0:2306:A:H5'	1.99	0.44
1:0:2301:A:H8	1:0:2301:A:H5"	1.82	0.44
1:0:2864:C:N4	1:0:2865:G:C2	2.86	0.44
1:0:487:G:N2	1:0:490:A:C4	2.85	0.44
1:0:757:U:O2	1:0:767:G:C2	2.70	0.44
1:0:926:C:H2'	1:0:927:C:H5'	1.99	0.44
1:0:986:A:H2	1:0:1001:A:C8	2.35	0.44
1:0:1001:A:N3	1:0:1167:A:C2	2.85	0.44
1:0:1134:C:C2	1:0:1135:C:C5	3.06	0.44
1:0:1212:U:C2'	1:0:1213:U:H6	2.16	0.44
1:0:1411:C:H2'	1:0:1412:C:O4'	2.18	0.44
1:0:1446:U:C4	1:0:1447:U:C4	3.05	0.44
1:0:1542:G:H8	1:0:1542:G:O5'	2.01	0.44
1:0:1610:A:C5	1:0:1611:U:C5	3.06	0.44
1:0:1694:A:O2'	1:0:1695:U:H5'	2.17	0.44
1:0:1753:A:H3'	1:0:1753:A:C8	2.53	0.44
1:0:1807:A:H1'	1:0:1809:G:C1'	2.38	0.44
1:0:2029:G:H2'	1:0:2030:U:C6	2.53	0.44
1:0:2231:G:HO2'	1:0:2232:G:H5'	1.83	0.44
1:0:2452:U:C4	1:0:2453:C:C5	3.05	0.44
1:0:2636:A:H8	1:0:2636:A:O5'	2.01	0.44
1:0:178:C:H2'	1:0:179:U:C5	2.53	0.44
1:0:227:G:C2	1:0:228:A:C4	3.05	0.44
1:0:487:G:C1'	1:0:515:A:C2	3.01	0.44
1:0:548:G:H2'	1:0:549:G:H8	1.83	0.44
1:0:584:A:H4'	1:0:2038:C:H42	1.68	0.44
1:0:586:G:N2	1:0:1266:G:C2	2.86	0.44
1:0:597:U:N3	1:0:683:A:O2'	2.31	0.44
1:0:748:A:N6	1:0:749:C:O2	2.51	0.44
1:0:1002:C:C2	1:0:1003:C:C6	3.05	0.44
1:0:1332:G:N1	1:0:1333:G:C2	2.86	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1347:C:C6	1:0:1347:C:H3'	2.52	0.44
1:0:1587:A:C2	1:0:1588:A:C5	3.06	0.44
1:0:1685:A:N7	1:0:1691:G:C6	2.86	0.44
1:0:2238:G:H2'	1:0:2239:C:C6	2.53	0.44
1:0:5:A:H2'	1:0:6:A:C8	2.53	0.43
1:0:322:A:H2	1:0:342:G:P	2.41	0.43
1:0:662:G:O2'	1:0:663:G:H5'	2.17	0.43
1:0:689:A:H2'	1:0:690:A:O4'	2.17	0.43
1:0:839:U:C2	1:0:841:G:H1'	2.53	0.43
1:0:1080:A:C6	1:0:1084:A:N6	2.86	0.43
1:0:1170:U:O2'	1:0:1171:A:H5'	2.17	0.43
1:0:1398:G:C6	1:0:1416:A:C6	3.06	0.43
1:0:1984:A:C2	1:0:1985:G:C4	3.06	0.43
1:0:2006:G:C2	1:0:2024:U:O2	2.71	0.43
1:0:2103:G:O2'	1:0:2104:G:H5'	2.18	0.43
1:0:2335:U:O5'	1:0:2335:U:H6	2.01	0.43
1:0:2630:C:O2	1:0:2649:A:C2	2.71	0.43
1:0:2762:G:C6	1:0:2763:U:C4	3.06	0.43
2:9:63:A:O2'	2:9:64:C:H5'	2.18	0.43
1:0:341:A:H2	1:0:1223:G:N7	2.16	0.43
1:0:344:G:H21	1:0:345:U:H1'	1.82	0.43
1:0:445:A:H2'	1:0:446:C:O4'	2.18	0.43
1:0:761:G:N3	1:0:763:A:N6	2.67	0.43
1:0:861:G:H2'	1:0:862:A:C8	2.52	0.43
1:0:1140:A:C2	1:0:2549:G:C1'	3.01	0.43
1:0:1236:G:C2	1:0:1240:G:C2	3.06	0.43
1:0:1300:A:C2	1:0:1301:U:N3	2.86	0.43
1:0:1391:A:C2	1:0:1392:U:O4	2.72	0.43
1:0:1476:G:H21	1:0:1477:C:H1'	1.83	0.43
1:0:1731:C:O5'	1:0:1731:C:H6	2.01	0.43
1:0:1745:C:O2	1:0:1745:C:H2'	2.18	0.43
1:0:1821:A:H2'	1:0:1821:A:N3	2.32	0.43
1:0:1914:U:O2'	1:0:1915:A:H5'	2.17	0.43
1:0:2056:C:O2'	1:0:2057:U:H5'	2.18	0.43
1:0:2238:G:H2'	1:0:2239:C:H6	1.83	0.43
1:0:2249:U:C2'	1:0:2250:G:H5'	2.48	0.43
1:0:2281:C:O5'	1:0:2281:C:H6	2.01	0.43
1:0:2436:U:H1'	1:0:2474:G:N2	2.33	0.43
1:0:2695:C:N3	1:0:2696:A:N7	2.66	0.43
1:0:2787:A:C5	1:0:2788:C:C5	3.06	0.43
1:0:2819:G:C8	1:0:2820:C:C5	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:354:C:H2'	1:0:355:G:O4'	2.19	0.43
1:0:365:U:H2'	1:0:366:U:C6	2.53	0.43
1:0:836:G:O2'	1:0:837:U:C5'	2.64	0.43
1:0:968:C:N3	1:0:2438:A:OP1	2.50	0.43
1:0:1145:C:C6	1:0:1147:G:OP2	2.71	0.43
1:0:1284:G:N3	1:0:1633:C:O4'	2.52	0.43
1:0:1301:U:C5	1:0:1340:C:N3	2.86	0.43
1:0:1310:C:H2'	1:0:1311:C:H6	1.83	0.43
1:0:1358:C:H1'	1:0:1409:U:H3	1.82	0.43
1:0:1564:U:C2'	1:0:1565:G:H5'	2.48	0.43
1:0:1657:A:N6	1:0:1658:A:C2	2.87	0.43
1:0:1666:G:O2'	1:0:1667:A:H5'	2.18	0.43
1:0:2046:C:O2'	1:0:2047:C:H5'	2.17	0.43
1:0:2307:A:N1	1:0:2308:A:C6	2.87	0.43
1:0:2426:G:O4'	1:0:2480:C:C4	2.71	0.43
1:0:2651:U:O2'	1:0:2652:G:H5'	2.18	0.43
1:0:2793:G:C6	1:0:2804:G:O6	2.71	0.43
1:0:2794:G:C2	1:0:2803:C:C2	3.06	0.43
2:9:101:A:H2	2:9:102:A:N6	2.16	0.43
1:0:218:A:H4'	1:0:220:U:C1'	2.48	0.43
1:0:353:G:H2'	1:0:354:C:C6	2.53	0.43
1:0:428:A:H2'	1:0:429:C:H6	1.74	0.43
1:0:514:G:N3	1:0:514:G:H2'	2.33	0.43
1:0:567:G:O2'	1:0:568:G:H5'	2.18	0.43
1:0:600:G:C3'	1:0:601:A:C5'	2.95	0.43
1:0:603:C:H2'	1:0:604:U:H6	1.83	0.43
1:0:750:C:H2'	1:0:751:G:O4'	2.17	0.43
1:0:757:U:O2'	1:0:758:G:H5'	2.18	0.43
1:0:862:A:O2'	1:0:863:C:H5'	2.18	0.43
1:0:873:U:C2'	1:0:874:A:H5'	2.49	0.43
1:0:956:A:C6	1:0:2427:A:N3	2.86	0.43
1:0:959:C:H2'	1:0:960:U:C6	2.53	0.43
1:0:971:A:N1	1:0:2475:C:H1'	2.33	0.43
1:0:1342:U:H5"	1:0:1343:C:H5	1.84	0.43
1:0:1672:A:C6	1:0:1673:C:C2	3.07	0.43
1:0:1686:A:H5"	1:0:2529:G:OP1	2.18	0.43
1:0:1846:A:H2'	1:0:1847:G:C5'	2.49	0.43
1:0:2068:C:H2'	1:0:2069:U:O4'	2.17	0.43
1:0:2078:G:N1	1:0:2178:U:O2	2.51	0.43
1:0:2224:U:O2	1:0:2414:A:H3'	2.18	0.43
1:0:2657:G:C2	1:0:2658:A:C4	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2726:U:H3'	1:0:2727:G:H8	1.83	0.43
1:0:2736:U:H6	1:0:2736:U:H3'	1.83	0.43
1:0:2750:G:O5'	1:0:2750:G:H8	2.00	0.43
1:0:2815:C:O5'	1:0:2815:C:H6	2.02	0.43
1:0:2824:C:O2	1:0:2843:A:N3	2.51	0.43
1:0:34:U:H2'	1:0:35:G:C5'	2.35	0.43
1:0:110:U:C5	1:0:111:G:C4	3.05	0.43
1:0:112:U:H2'	1:0:113:C:O4'	2.19	0.43
1:0:195:A:N6	1:0:212:U:H4'	2.24	0.43
1:0:322:A:H2	1:0:342:G:OP1	2.00	0.43
1:0:411:C:H4'	1:0:2072:C:O2'	2.18	0.43
1:0:546:A:H2'	1:0:547:U:O4'	2.19	0.43
1:0:587:A:C6	1:0:2001:G:O4'	2.71	0.43
1:0:688:A:O2'	1:0:689:A:H5'	2.18	0.43
1:0:796:A:H2	1:0:1770:U:H5'	1.83	0.43
1:0:831:G:O2'	1:0:832:A:C5'	2.65	0.43
1:0:1002:C:N4	1:0:1003:C:N4	2.66	0.43
1:0:1236:G:N2	1:0:1240:G:N3	2.66	0.43
1:0:1244:U:H3'	1:0:1244:U:H6	1.84	0.43
1:0:1323:G:H8	1:0:1323:G:O5'	2.02	0.43
1:0:1379:A:C5	1:0:1380:C:C4	3.07	0.43
1:0:1389:C:N4	1:0:1390:G:C6	2.86	0.43
1:0:1652:G:C5	1:0:1653:C:C5	3.06	0.43
1:0:1776:A:N6	1:0:1778:U:H1'	2.33	0.43
1:0:1886:G:O2'	1:0:1887:G:H5'	2.19	0.43
1:0:1922:U:O2	1:0:2571:G:C4'	2.65	0.43
1:0:1924:C:C5	1:0:1925:C:C4	3.06	0.43
1:0:1959:U:H2'	1:0:1960:A:H8	1.77	0.43
1:0:2032:G:O2'	1:0:2033:C:H5'	2.19	0.43
1:0:2394:G:H2'	1:0:2395:C:C6	2.53	0.43
1:0:2532:G:C2	1:0:2533:U:C1'	2.99	0.43
1:0:2605:C:H2'	1:0:2606:G:C8	2.53	0.43
1:0:2705:A:N6	1:0:2707:G:C4	2.87	0.43
1:0:2721:A:N7	1:0:2722:C:C2	2.87	0.43
1:0:2754:C:N4	1:0:2755:A:C6	2.86	0.43
1:0:2756:A:N6	1:0:2762:G:N3	2.62	0.43
2:9:17:A:H1'	2:9:112:A:C8	2.53	0.43
1:0:217:U:H6	1:0:217:U:O5'	2.02	0.43
1:0:322:A:C2	1:0:342:G:P	3.12	0.43
1:0:491:A:N1	1:0:509:U:H2'	2.34	0.43
1:0:632:A:C2	1:0:633:G:C8	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:883:A:C6	1:0:920:G:C6	3.06	0.43
1:0:922:A:C4	1:0:923:A:C8	3.07	0.43
1:0:1215:A:N3	1:0:1258:G:C2	2.86	0.43
1:0:1226:A:C4	1:0:1250:A:N3	2.86	0.43
1:0:1289:A:C2	1:0:1290:A:C8	3.07	0.43
1:0:1291:G:H2'	1:0:1292:A:C5'	2.49	0.43
1:0:1391:A:C2'	1:0:1392:U:OP1	2.66	0.43
1:0:1426:U:O5'	1:0:1426:U:H6	2.02	0.43
1:0:1473:U:H5'	1:0:1474:A:C5	2.54	0.43
1:0:1652:G:C6	1:0:1653:C:C4	3.07	0.43
1:0:1783:G:H1'	1:0:1822:C:OP1	2.18	0.43
1:0:1855:G:H4'	1:0:2390:A:H4'	2.01	0.43
1:0:1995:G:H8	1:0:1995:G:O5'	2.02	0.43
1:0:2091:C:H3'	1:0:2092:U:H6	1.83	0.43
1:0:2404:A:O2'	1:0:2405:A:OP2	2.33	0.43
1:0:2600:A:C2	1:0:2601:C:C2	3.06	0.43
1:0:2601:C:C2'	1:0:2602:G:O5'	2.65	0.43
1:0:63:A:C8	1:0:64:C:H5	2.36	0.43
1:0:174:A:O4'	1:0:2051:U:H2'	2.18	0.43
1:0:437:G:O2'	1:0:438:G:H5'	2.18	0.43
1:0:460:U:O2'	1:0:461:A:OP1	2.30	0.43
1:0:466:A:C2'	1:0:467:U:OP2	2.66	0.43
1:0:492:G:H2'	1:0:517:A:C2	2.52	0.43
1:0:659:G:C6	1:0:660:G:C6	3.06	0.43
1:0:681:A:C5	1:0:683:A:C8	3.07	0.43
1:0:699:G:C5'	1:0:700:C:OP2	2.65	0.43
1:0:831:G:O6	1:0:1202:U:OP2	2.36	0.43
1:0:1010:U:C2	1:0:1168:G:N2	2.87	0.43
1:0:1435:G:H2'	1:0:1436:G:C8	2.53	0.43
1:0:1583:A:H8	1:0:1583:A:O5'	2.01	0.43
1:0:1711:C:O5'	1:0:1711:C:C6	2.69	0.43
1:0:1786:C:O4'	1:0:1884:A:OP2	2.37	0.43
1:0:2327:U:O5'	1:0:2327:U:H6	2.01	0.43
1:0:2391:A:O5'	1:0:2391:A:H8	2.01	0.43
1:0:2433:G:C6	1:0:2478:C:N4	2.86	0.43
1:0:2435:C:O2'	1:0:2436:U:H5'	2.19	0.43
1:0:2441:U:O2'	1:0:2442:C:H5'	2.19	0.43
1:0:14:A:H2	1:0:2603:G:H21	1.59	0.43
1:0:395:G:H2'	1:0:396:U:O4'	2.18	0.43
1:0:396:U:H3'	1:0:398:C:OP2	2.18	0.43
1:0:462:G:H2'	1:0:463:C:C5'	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:537:C:C6	1:0:2759:U:O2'	2.66	0.43
1:0:671:A:H2'	1:0:672:C:C6	2.54	0.43
1:0:672:C:O2'	1:0:673:G:H5'	2.19	0.43
1:0:771:C:O2'	1:0:772:G:H5'	2.19	0.43
1:0:813:A:HO2'	1:0:814:G:H8	1.64	0.43
1:0:866:U:H2'	1:0:867:G:C8	2.53	0.43
1:0:977:G:O2'	1:0:978:U:C5'	2.66	0.43
1:0:986:A:N7	1:0:987:G:C8	2.86	0.43
1:0:1077:U:C2	1:0:1079:G:OP2	2.72	0.43
1:0:1159:U:H2'	1:0:1160:C:C6	2.53	0.43
1:0:1402:G:H3'	1:0:1403:U:C6	2.54	0.43
1:0:1928:G:N1	1:0:1929:U:N3	2.67	0.43
1:0:1928:G:N1	1:0:1929:U:C4	2.86	0.43
1:0:1930:C:H42	1:0:1942:G:H1	1.66	0.43
1:0:1984:A:H2'	1:0:1985:G:C8	2.54	0.43
1:0:1994:U:O5'	1:0:1994:U:C6	2.69	0.43
1:0:2010:G:H2'	1:0:2011:U:C6	2.54	0.43
1:0:2216:G:O5'	1:0:2216:G:C8	2.63	0.43
1:0:2313:G:C2'	1:0:2314:A:OP1	2.66	0.43
1:0:2331:A:N7	1:0:2345:A:N1	2.66	0.43
1:0:2529:G:C5	1:0:2530:C:H5	2.36	0.43
1:0:2571:G:C5	1:0:2572:U:C4	3.06	0.43
1:0:2653:A:N6	1:0:2654:A:C6	2.87	0.43
1:0:2817:A:C2	1:0:2851:G:C4	3.07	0.43
1:0:2833:C:H6	1:0:2833:C:OP1	2.01	0.43
20:R:57:ASN:CA	20:R:76:LYS:CA	2.96	0.43
1:0:38:G:O2'	1:0:39:C:H5'	2.19	0.43
1:0:342:G:N7	1:0:1222:G:N2	2.62	0.43
1:0:346:C:O2'	1:0:347:C:H5'	2.18	0.43
1:0:548:G:C2	1:0:549:G:N7	2.87	0.43
1:0:669:G:H2'	1:0:670:U:O4'	2.19	0.43
1:0:681:A:N9	1:0:683:A:N7	2.67	0.43
1:0:940:G:N7	1:0:941:U:O4'	2.52	0.43
1:0:944:A:C6	1:0:945:G:C4	3.07	0.43
1:0:981:C:C5	1:0:982:C:H5	2.37	0.43
1:0:1095:A:H2	1:0:1116:U:H1'	1.84	0.43
1:0:1672:A:H2'	1:0:1673:C:O4'	2.19	0.43
1:0:1760:G:C2'	1:0:1761:G:H5'	2.48	0.43
1:0:1964:A:C3'	1:0:1965:U:H5'	2.47	0.43
1:0:2022:C:H2'	1:0:2023:C:C6	2.54	0.43
1:0:2024:U:O5'	1:0:2024:U:C6	2.65	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2031:A:H2'	1:0:2032:G:O4'	2.19	0.43
1:0:2527:G:C5	1:0:2528:G:C8	3.07	0.43
1:0:2676:G:C8	1:0:2677:U:C5	3.07	0.43
1:0:2701:A:C6	1:0:2848:A:N6	2.87	0.43
1:0:2835:A:H8	1:0:2835:A:O5'	2.01	0.43
1:0:65:C:C2'	1:0:66:U:H5'	2.48	0.43
1:0:140:G:H2'	1:0:141:G:C8	2.53	0.43
1:0:167:A:H5"	1:0:181:A:C2	2.54	0.43
1:0:200:A:OP2	1:0:434:C:H4'	2.19	0.43
1:0:220:U:O4	1:0:232:A:N7	2.51	0.43
1:0:931:G:C6	1:0:932:G:C5	3.06	0.43
1:0:966:A:C6	1:0:967:G:C4	3.07	0.43
1:0:1014:G:C2	1:0:1015:U:C6	3.06	0.43
1:0:1040:A:C2'	1:0:1041:G:H5'	2.47	0.43
1:0:1277:G:O6	1:0:1278:A:N6	2.52	0.43
1:0:1665:C:H2'	1:0:1666:G:H8	1.84	0.43
1:0:1675:C:H6	1:0:1675:C:O5'	2.01	0.43
1:0:1682:A:C5	1:0:1683:G:N7	2.87	0.43
1:0:1753:A:H3'	1:0:1753:A:H8	1.84	0.43
1:0:1814:G:H2'	1:0:1815:G:H8	1.83	0.43
1:0:1972:G:H2'	1:0:1973:C:C5'	2.49	0.43
1:0:2008:C:O5'	1:0:2008:C:H6	2.02	0.43
1:0:2015:G:H22	1:0:2038:C:C1'	2.27	0.43
1:0:2204:A:H4'	1:0:2205:C:C4	2.54	0.43
1:0:2314:A:N7	1:0:2316:G:C5	2.87	0.43
1:0:2404:A:C5'	1:0:2406:C:H5'	2.49	0.43
1:0:2523:G:O2'	1:0:2524:G:C5'	2.63	0.43
1:0:2610:G:O6	1:0:2611:A:C6	2.71	0.43
1:0:2642:G:C5	1:0:2643:G:N7	2.87	0.43
1:0:2649:A:H2'	1:0:2650:G:H8	1.84	0.43
1:0:2696:A:C2	1:0:2697:G:N7	2.87	0.43
1:0:2768:C:O5'	1:0:2768:C:H6	2.01	0.43
1:0:91:A:C6	1:0:92:U:O4	2.71	0.42
1:0:173:A:N6	1:0:844:G:H21	2.14	0.42
1:0:319:G:N2	1:0:511:A:C5	2.87	0.42
1:0:322:A:C6	1:0:341:A:OP2	2.72	0.42
1:0:344:G:C2	1:0:345:U:C5	3.07	0.42
1:0:426:C:H4'	1:0:1863:U:O2'	2.18	0.42
1:0:502:A:H2'	1:0:503:G:C5'	2.48	0.42
1:0:544:U:O2'	1:0:545:C:H5'	2.18	0.42
1:0:606:A:C6	1:0:607:C:C4	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:776:G:O2'	1:0:778:G:H5"	2.19	0.42
1:0:847:C:H2'	1:0:848:A:C8	2.54	0.42
1:0:944:A:C2'	1:0:945:G:H8	2.31	0.42
1:0:1030:U:C4	1:0:1153:A:N1	2.87	0.42
1:0:1040:A:C8	1:0:1040:A:H3'	2.53	0.42
1:0:1172:U:H2'	1:0:1173:G:C8	2.54	0.42
1:0:1332:G:C6	1:0:1333:G:C2	3.07	0.42
1:0:1686:A:HO2'	1:0:1687:C:H5'	1.83	0.42
1:0:1927:U:O2	1:0:1927:U:C2'	2.65	0.42
1:0:1982:C:OP1	1:0:2704:U:H5'	2.19	0.42
1:0:2106:G:C2	1:0:2159:A:C2	3.07	0.42
1:0:2434:G:N2	1:0:2435:C:O2	2.52	0.42
1:0:2434:G:C2	1:0:2477:C:N4	2.86	0.42
1:0:2703:C:HO2'	1:0:2704:U:H5'	1.82	0.42
1:0:2747:C:O2'	1:0:2748:C:H5'	2.19	0.42
2:9:76:U:O2'	2:9:77:G:H5'	2.19	0.42
1:0:433:G:N2	1:0:434:C:H1'	2.34	0.42
1:0:659:G:O2'	1:0:660:G:H5'	2.19	0.42
1:0:705:C:N4	1:0:706:A:H62	2.17	0.42
1:0:772:G:C4	1:0:773:G:C8	3.07	0.42
1:0:962:C:C2	1:0:963:G:C8	3.07	0.42
1:0:1008:G:N2	1:0:1009:C:C2	2.87	0.42
1:0:1199:U:C6	1:0:1200:G:N7	2.88	0.42
1:0:1362:A:O5'	1:0:1362:A:C8	2.61	0.42
1:0:1807:A:O4'	1:0:1809:G:H1'	2.19	0.42
1:0:2091:C:H3'	1:0:2092:U:C6	2.54	0.42
1:0:2384:G:N2	1:0:2390:A:N7	2.67	0.42
1:0:2396:C:C2'	1:0:2397:A:H5'	2.49	0.42
1:0:2811:G:C6	1:0:2812:A:N6	2.87	0.42
2:9:70:C:O5'	2:9:70:C:H6	2.01	0.42
2:9:77:G:C2'	2:9:78:A:H5'	2.50	0.42
1:0:119:G:H2'	1:0:120:G:H8	1.84	0.42
1:0:591:G:C2	1:0:1272:G:C2	3.07	0.42
1:0:709:A:C6	1:0:710:C:C4	3.07	0.42
1:0:796:A:H2'	1:0:797:A:H5'	2.01	0.42
1:0:931:G:H4'	2:9:83:C:H4'	2.01	0.42
1:0:984:A:C8	1:0:1202:U:C4	3.08	0.42
1:0:1130:U:H2'	1:0:1131:G:C8	2.54	0.42
1:0:1230:C:H2'	1:0:1231:A:C8	2.54	0.42
1:0:1312:G:C2'	1:0:1643:A:N6	2.82	0.42
1:0:1358:C:OP1	1:0:1358:C:C6	2.72	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1476:G:N2	1:0:1477:C:C2	2.88	0.42
1:0:1483:G:N1	1:0:1484:G:C5	2.87	0.42
1:0:1622:G:H4'	1:0:1624:A:C4	2.54	0.42
1:0:1766:U:C2'	1:0:1767:G:H5'	2.50	0.42
1:0:1795:C:O5'	1:0:1795:C:H6	2.02	0.42
1:0:1953:A:H2'	1:0:1954:A:OP2	2.19	0.42
1:0:2047:C:O2	1:0:2429:A:C6	2.72	0.42
1:0:2284:U:H5	1:0:2286:G:C5	2.37	0.42
1:0:2498:U:C4	1:0:2521:A:C8	3.08	0.42
1:0:2780:A:H2'	1:0:2781:G:C8	2.54	0.42
1:0:2793:G:C6	1:0:2804:G:C6	3.08	0.42
1:0:2801:A:N1	1:0:2802:C:O2	2.52	0.42
2:9:51:G:O2'	2:9:52:G:H5'	2.20	0.42
1:0:17:G:C5	1:0:18:U:C4	3.07	0.42
1:0:29:U:H3'	1:0:29:U:H6	1.83	0.42
1:0:446:C:H2'	1:0:447:U:H6	1.80	0.42
1:0:639:G:H2'	1:0:640:C:C6	2.55	0.42
1:0:690:A:C6	1:0:691:C:C5	3.08	0.42
1:0:692:C:O2'	1:0:693:A:H5'	2.20	0.42
1:0:736:G:C6	1:0:737:C:N3	2.87	0.42
1:0:738:G:H2'	1:0:739:G:O4'	2.18	0.42
1:0:873:U:H5"	1:0:874:A:C8	2.54	0.42
1:0:936:A:H2'	1:0:937:C:H6	1.81	0.42
1:0:968:C:H41	1:0:2437:G:H5"	1.83	0.42
1:0:1066:G:H3'	1:0:1067:G:C5'	2.49	0.42
1:0:1199:U:O5'	1:0:1200:G:H5"	2.19	0.42
1:0:1248:G:C2	1:0:1249:G:N2	2.88	0.42
1:0:1375:C:O2'	1:0:1802:A:H4'	2.19	0.42
1:0:1746:A:C8	1:0:1746:A:H3'	2.54	0.42
1:0:1764:A:H2'	1:0:1765:C:C5'	2.49	0.42
1:0:1889:G:OP2	1:0:1913:G:O6	2.37	0.42
1:0:1993:G:H2'	1:0:1994:U:H6	1.83	0.42
1:0:2337:A:H2'	1:0:2338:C:C6	2.55	0.42
1:0:2351:G:N2	1:0:2352:A:C4	2.87	0.42
1:0:2500:C:O2'	1:0:2543:A:H2'	2.20	0.42
1:0:2557:G:N2	1:0:2558:C:C2	2.88	0.42
1:0:2678:C:O2	1:0:2688:G:C2	2.72	0.42
1:0:2713:A:H8	1:0:2713:A:O5'	2.01	0.42
1:0:2725:C:H2'	1:0:2726:U:C5	2.54	0.42
1:0:2825:A:C2'	1:0:2826:C:O5'	2.67	0.42
1:0:2827:G:C2	1:0:2828:C:C2	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:42:U:H1'	2:9:48:A:N1	2.34	0.42
2:9:108:G:H2'	2:9:109:G:H8	1.83	0.42
1:0:8:A:H2'	1:0:9:U:O4'	2.20	0.42
1:0:50:G:C2'	1:0:117:A:C2	2.89	0.42
1:0:74:G:H3'	1:0:74:G:C8	2.54	0.42
1:0:197:G:H2'	1:0:440:U:O4	2.19	0.42
1:0:701:U:C2	1:0:702:A:C8	3.07	0.42
1:0:931:G:O6	1:0:932:G:C6	2.73	0.42
1:0:1087:C:N4	1:0:1088:A:C2	2.87	0.42
1:0:1102:G:H2'	1:0:1103:C:C6	2.54	0.42
1:0:1220:G:H2'	1:0:1221:C:C6	2.54	0.42
1:0:1266:G:H3'	1:0:1267:A:C5'	2.46	0.42
1:0:1339:U:H5"	1:0:1994:U:O4'	2.19	0.42
1:0:1348:C:H6	1:0:1348:C:O5'	2.02	0.42
1:0:1674:C:C2	1:0:1675:C:C6	3.08	0.42
1:0:2270:U:O2'	1:0:2353:G:N3	2.48	0.42
1:0:2696:A:N3	1:0:2697:G:C8	2.87	0.42
1:0:133:C:C4	1:0:134:G:C5	3.07	0.42
1:0:164:G:N1	1:0:165:G:C5	2.87	0.42
1:0:192:G:C1'	1:0:193:A:H4'	2.49	0.42
1:0:487:G:C1'	1:0:515:A:H2	2.32	0.42
1:0:498:C:N4	1:0:499:G:C5	2.87	0.42
1:0:545:C:H2'	1:0:546:A:H8	1.83	0.42
1:0:632:A:C2	1:0:633:G:N7	2.88	0.42
1:0:644:A:C2'	1:0:645:G:H5'	2.50	0.42
1:0:1260:A:C6	1:0:1262:U:H1'	2.55	0.42
1:0:1438:G:N2	1:0:1591:U:C2	2.87	0.42
1:0:1545:G:H2'	1:0:1546:C:O4'	2.19	0.42
1:0:1877:C:O2'	1:0:1878:C:H5'	2.19	0.42
1:0:1999:U:C2'	1:0:2000:U:H5'	2.49	0.42
1:0:2047:C:H1'	1:0:2429:A:N1	2.34	0.42
1:0:2203:G:C4'	1:0:2204:A:H5'	2.50	0.42
1:0:2301:A:H2'	1:0:2302:G:H5'	2.01	0.42
1:0:2321:C:H2'	1:0:2322:U:C4'	2.50	0.42
1:0:2390:A:H2'	1:0:2391:A:H8	1.85	0.42
1:0:2447:G:H8	1:0:2447:G:P	2.43	0.42
1:0:2494:C:O2'	1:0:2495:G:H5'	2.19	0.42
1:0:2627:G:C6	1:0:2628:C:C2	3.08	0.42
1:0:2718:A:C2	1:0:2719:U:C5	3.07	0.42
1:0:215:G:H2'	1:0:216:U:C6	2.54	0.42
1:0:409:G:H2'	1:0:410:A:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:690:A:C2	1:0:691:C:C6	3.08	0.42
1:0:705:C:H2'	1:0:706:A:C8	2.55	0.42
1:0:715:U:O5'	1:0:715:U:H6	2.02	0.42
1:0:748:A:C5	1:0:749:C:C2	3.07	0.42
1:0:755:C:C4	1:0:756:C:C4	3.08	0.42
1:0:777:A:N6	1:0:1767:G:H1'	2.34	0.42
1:0:1220:G:O2'	1:0:1221:C:H5'	2.20	0.42
1:0:1271:C:O2	1:0:1272:G:C8	2.73	0.42
1:0:1355:A:O2'	1:0:1357:U:OP2	2.31	0.42
1:0:1377:G:N1	1:0:1381:G:C6	2.87	0.42
1:0:1514:C:P	1:0:1514:C:C6	3.11	0.42
1:0:1566:G:C5'	1:0:1733:U:O4	2.67	0.42
1:0:1666:G:O2'	1:0:1667:A:C5'	2.67	0.42
1:0:1900:U:O2'	1:0:1946:U:OP1	2.36	0.42
1:0:1937:G:H1'	1:0:2530:C:C4'	2.49	0.42
1:0:2046:C:C2	1:0:2430:A:H2	2.38	0.42
1:0:2502:G:C2	1:0:2503:G:C8	3.07	0.42
1:0:2738:A:C8	1:0:2738:A:H3'	2.54	0.42
1:0:2758:A:H5"	1:0:2759:U:H5	1.83	0.42
32:0:2881:MUL:H252	32:0:2881:MUL:H231	1.75	0.42
2:9:80:A:H2'	2:9:81:C:O4'	2.20	0.42
1:0:88:G:H8	1:0:88:G:O5'	2.03	0.42
1:0:171:G:C6	1:0:179:U:C4	3.07	0.42
1:0:177:U:H6	1:0:177:U:P	2.43	0.42
1:0:224:G:H4'	1:0:399:G:C5	2.55	0.42
1:0:390:U:C4	1:0:391:C:C4	3.08	0.42
1:0:513:A:C2'	1:0:516:G:N7	2.82	0.42
1:0:594:G:C4	1:0:1264:C:N4	2.88	0.42
1:0:647:G:H1'	1:0:649:G:O2'	2.20	0.42
1:0:665:A:H3'	1:0:666:U:H5'	2.02	0.42
1:0:687:G:N7	1:0:817:A:N1	2.68	0.42
1:0:688:A:N6	1:0:816:U:H3	2.17	0.42
1:0:718:A:O2'	1:0:719:A:H5'	2.19	0.42
1:0:815:A:C2'	1:0:816:U:O4'	2.67	0.42
1:0:866:U:H2'	1:0:867:G:H8	1.85	0.42
1:0:1010:U:O2	1:0:1168:G:N2	2.53	0.42
1:0:1151:U:OP1	1:0:1153:A:OP1	2.38	0.42
1:0:1215:A:C2	1:0:1258:G:C6	3.08	0.42
1:0:1222:G:N9	1:0:1251:G:N2	2.68	0.42
1:0:1425:G:H2'	1:0:1426:U:C6	2.55	0.42
1:0:1577:G:C2'	1:0:1578:U:H5'	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1622:G:H4'	1:0:1624:A:N3	2.34	0.42
1:0:1674:C:O2	1:0:1675:C:C6	2.73	0.42
1:0:1702:C:N3	1:0:1703:C:C5	2.88	0.42
1:0:1767:G:N3	1:0:1767:G:H2'	2.35	0.42
1:0:2194:A:O2'	1:0:2195:C:H5"	2.19	0.42
1:0:2274:C:H2'	1:0:2275:U:H5'	2.02	0.42
1:0:2543:A:C6	1:0:2626:U:C4'	3.02	0.42
1:0:2633:A:H8	1:0:2633:A:OP1	2.02	0.42
1:0:2642:G:O2'	1:0:2643:G:C5'	2.62	0.42
1:0:2668:U:O2	1:0:2668:U:C2'	2.67	0.42
1:0:2696:A:H2'	1:0:2697:G:H8	1.84	0.42
1:0:2746:G:C6	1:0:2747:C:C4	3.07	0.42
1:0:2762:G:C2'	1:0:2763:U:H5'	2.49	0.42
1:0:2783:U:H3'	1:0:2783:U:C6	2.55	0.42
2:9:24:U:O2'	2:9:25:G:H5'	2.20	0.42
2:9:95:U:H2'	2:9:96:C:C6	2.55	0.42
1:0:115:G:N1	1:0:117:A:N6	2.67	0.42
1:0:399:G:H2'	1:0:399:G:N3	2.34	0.42
1:0:427:C:H42	1:0:2388:G:H1	1.68	0.42
1:0:457:C:H2'	1:0:458:G:C5'	2.50	0.42
1:0:461:A:C6	1:0:462:G:C6	3.08	0.42
1:0:604:U:C2	1:0:605:G:N7	2.88	0.42
1:0:837:U:N3	1:0:838:A:C6	2.87	0.42
1:0:852:U:O2	1:0:951:G:N2	2.53	0.42
1:0:1075:C:H3'	1:0:1076:U:C6	2.55	0.42
1:0:1226:A:H2	1:0:1250:A:HO2'	1.66	0.42
1:0:1435:G:H22	1:0:1512:A:H2	1.67	0.42
1:0:1459:U:P	1:0:1459:U:H6	2.42	0.42
1:0:1573:G:C8	1:0:1574:A:N7	2.88	0.42
1:0:1578:U:N3	1:0:1579:G:N7	2.68	0.42
1:0:1612:U:O5'	1:0:1612:U:H6	2.03	0.42
1:0:1618:U:H6	1:0:1618:U:P	2.42	0.42
1:0:1981:A:H2'	1:0:1982:C:O4'	2.20	0.42
1:0:2025:A:C8	1:0:2025:A:C3'	3.03	0.42
1:0:2252:A:H2'	1:0:2253:A:O4'	2.20	0.42
1:0:2267:A:C2	1:0:2304:G:O4'	2.72	0.42
1:0:2333:A:C2	1:0:2343:C:C2	3.08	0.42
1:0:2422:C:C2	1:0:2423:G:C8	3.08	0.42
1:0:2442:C:H2'	1:0:2443:C:C6	2.53	0.42
1:0:2565:C:H2'	1:0:2566:A:C8	2.55	0.42
1:0:2593:A:C8	1:0:2593:A:C3'	3.03	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:23:G:C6	2:9:24:U:C4	3.08	0.42
2:9:89:G:C2	2:9:93:G:N1	2.87	0.42
1:0:165:G:C5	1:0:166:G:C4	3.07	0.42
1:0:181:A:O4'	1:0:183:U:C2	2.72	0.42
1:0:344:G:N2	1:0:345:U:C2	2.88	0.42
1:0:459:A:N6	1:0:484:G:H1'	2.34	0.42
1:0:538:A:N6	1:0:2025:A:C2	2.88	0.42
1:0:572:G:OP2	1:0:581:A:C8	2.72	0.42
1:0:687:G:C6	1:0:820:U:O4	2.72	0.42
1:0:710:C:O2'	1:0:711:C:H5'	2.19	0.42
1:0:962:C:O5'	1:0:962:C:H6	2.03	0.42
1:0:1175:A:O5'	1:0:1175:A:C8	2.67	0.42
1:0:1319:C:H2'	1:0:1320:A:C8	2.48	0.42
1:0:1327:C:P	1:0:1345:G:H5'	2.60	0.42
1:0:1826:U:HO2'	1:0:1952:A:H2'	1.79	0.42
1:0:1942:G:C6	1:0:1943:A:C6	3.08	0.42
1:0:2138:U:H2'	1:0:2139:G:H5'	2.01	0.42
1:0:2203:G:H5"	1:0:2204:A:H5'	2.02	0.42
1:0:2316:G:C6	1:0:2317:G:C5	3.08	0.42
1:0:2359:U:C4	1:0:2360:C:C5	3.08	0.42
1:0:2489:C:H2'	1:0:2490:U:C5'	2.49	0.42
1:0:2684:A:C8	1:0:2685:A:C8	3.08	0.42
1:0:84:G:O2'	1:0:85:C:H5'	2.20	0.41
1:0:198:A:HO2'	1:0:199:A:P	2.43	0.41
1:0:627:A:N6	1:0:628:A:N6	2.67	0.41
1:0:687:G:HO2'	1:0:688:A:H5'	1.80	0.41
1:0:709:A:N6	1:0:710:C:N4	2.68	0.41
1:0:788:G:H2'	1:0:807:A:N7	2.34	0.41
1:0:822:G:H5'	1:0:1267:A:H4'	2.01	0.41
1:0:940:G:N7	1:0:941:U:H6	2.17	0.41
1:0:958:G:C6	1:0:982:C:C4	3.08	0.41
1:0:1001:A:OP2	1:0:1200:G:OP1	2.38	0.41
1:0:1471:G:N2	1:0:2683:C:C2	2.88	0.41
1:0:1502:G:O2'	1:0:1503:G:H5'	2.19	0.41
1:0:1671:A:C5	1:0:1672:A:N7	2.88	0.41
1:0:1685:A:H61	1:0:1693:A:N6	2.13	0.41
1:0:1791:C:C2'	1:0:1793:A:H5'	2.50	0.41
1:0:1871:G:H2'	1:0:1871:G:N3	2.35	0.41
1:0:2208:U:O2'	1:0:2209:G:H5'	2.20	0.41
1:0:2262:C:H2'	1:0:2263:C:O4'	2.20	0.41
1:0:2267:A:H2	1:0:2304:G:O4'	2.03	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2337:A:H2'	1:0:2338:C:H6	1.84	0.41
1:0:2687:G:H8	1:0:2687:G:O5'	2.03	0.41
1:0:2792:C:C2	1:0:2805:G:C2	3.08	0.41
1:0:2821:G:C6	1:0:2846:G:N1	2.88	0.41
1:0:2858:A:H3'	1:0:2859:U:H5'	2.02	0.41
2:9:71:G:H2'	2:9:71:G:N3	2.35	0.41
1:0:141:G:N2	1:0:142:U:C2	2.89	0.41
1:0:167:A:C2'	1:0:168:A:O5'	2.68	0.41
1:0:224:G:N7	1:0:226:C:H1'	2.35	0.41
1:0:224:G:H2'	1:0:226:C:O4'	2.20	0.41
1:0:243:G:OP2	1:0:243:G:O4'	2.39	0.41
1:0:362:C:C2'	1:0:363:G:H4'	2.47	0.41
1:0:618:A:N6	1:0:619:A:C2	2.88	0.41
1:0:658:G:C1'	1:0:2330:G:H5"	2.50	0.41
1:0:712:A:N7	1:0:713:G:C4	2.88	0.41
1:0:736:G:C6	1:0:737:C:C2	3.08	0.41
1:0:873:U:C6	1:0:874:A:O4'	2.73	0.41
1:0:941:U:C2	1:0:942:U:C1'	3.03	0.41
1:0:1012:A:C8	1:0:1013:G:O4'	2.73	0.41
1:0:1271:C:C2	1:0:1272:G:C8	3.09	0.41
1:0:1277:G:C8	1:0:1278:A:N7	2.88	0.41
1:0:1393:G:H8	1:0:1393:G:O5'	2.03	0.41
1:0:1655:C:C4	1:0:1656:U:C5	3.07	0.41
1:0:1667:A:C2	1:0:1668:G:C8	3.08	0.41
1:0:1770:U:O2	1:0:1774:A:C6	2.74	0.41
1:0:2469:G:C5'	1:0:2470:U:OP1	2.66	0.41
1:0:2701:A:H2'	1:0:2702:G:O4'	2.19	0.41
1:0:2847:G:N2	1:0:2848:A:N1	2.69	0.41
2:9:42:U:C2'	2:9:45:C:H41	2.28	0.41
1:0:183:U:O5'	1:0:183:U:H6	2.03	0.41
1:0:203:G:H5'	1:0:234:C:C4'	2.50	0.41
1:0:210:A:N6	1:0:442:A:H61	2.17	0.41
1:0:462:G:O5'	1:0:462:G:H8	2.03	0.41
1:0:540:G:HO2'	1:0:541:C:H4'	1.77	0.41
1:0:573:C:N4	1:0:582:G:OP1	2.53	0.41
1:0:1046:U:O2'	1:0:1047:G:H5'	2.19	0.41
1:0:1225:G:H2'	1:0:1249:G:N2	2.34	0.41
1:0:1252:C:HO2'	1:0:1253:C:H5"	1.80	0.41
1:0:1366:A:O2'	1:0:1367:A:H5'	2.20	0.41
1:0:1395:A:H3'	1:0:1396:C:C6	2.54	0.41
1:0:1414:G:H2'	1:0:1415:C:O4'	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1442:C:C6	1:0:1442:C:C3'	3.03	0.41
1:0:1451:C:H2'	1:0:1452:U:C6	2.47	0.41
1:0:1750:A:O2'	1:0:1751:A:H5'	2.20	0.41
1:0:1784:C:O5'	1:0:1784:C:H6	2.03	0.41
1:0:1928:G:H2'	1:0:1928:G:N3	2.35	0.41
1:0:2053:G:N2	1:0:2054:A:N3	2.68	0.41
1:0:2765:C:H2'	1:0:2766:U:C6	2.55	0.41
1:0:40:U:H2'	1:0:41:G:O4'	2.21	0.41
1:0:174:A:C2	1:0:2223:U:H4'	2.55	0.41
1:0:207:U:H2'	1:0:208:C:C6	2.55	0.41
1:0:231:G:H8	1:0:231:G:O5'	2.04	0.41
1:0:502:A:H2'	1:0:503:G:O4'	2.20	0.41
1:0:562:G:C6	1:0:563:U:N3	2.88	0.41
1:0:604:U:O2	1:0:605:G:C8	2.74	0.41
1:0:867:G:O2'	1:0:868:U:C5'	2.68	0.41
1:0:940:G:C8	1:0:941:U:C5'	3.03	0.41
1:0:1001:A:H4'	1:0:1168:G:P	2.60	0.41
1:0:1166:A:C3'	1:0:1167:A:H5"	2.49	0.41
1:0:1177:U:O4	1:0:1196:G:O6	2.38	0.41
1:0:1211:G:H8	1:0:1211:G:O5'	2.03	0.41
1:0:1715:A:N7	1:0:1717:A:N3	2.68	0.41
1:0:1773:C:H2'	1:0:2587:G:O2'	2.20	0.41
1:0:1940:C:N4	1:0:1941:C:H41	2.16	0.41
1:0:2081:U:H2'	1:0:2082:C:C5'	2.51	0.41
1:0:2245:A:O2'	1:0:2246:A:C2	2.74	0.41
1:0:2437:G:N7	1:0:2469:G:C4	2.88	0.41
1:0:2437:G:C8	1:0:2469:G:C2	3.08	0.41
1:0:2445:C:C2	1:0:2464:G:C2	3.08	0.41
1:0:2532:G:H2'	1:0:2533:U:O5'	2.20	0.41
1:0:2654:A:H8	1:0:2654:A:O5'	2.03	0.41
1:0:2676:G:H2'	1:0:2677:U:O4'	2.20	0.41
1:0:2771:C:C4	1:0:2782:G:N2	2.89	0.41
1:0:2812:A:C2	1:0:2813:G:C4	3.08	0.41
1:0:2815:C:H2'	1:0:2816:C:C5'	2.51	0.41
1:0:2838:U:C4	1:0:2839:G:N7	2.88	0.41
1:0:91:A:C5	1:0:92:U:C5	3.08	0.41
1:0:118:U:H1'	1:0:143:A:C8	2.55	0.41
1:0:230:C:N4	1:0:231:G:C6	2.88	0.41
1:0:391:C:H2'	1:0:392:G:H8	1.86	0.41
1:0:446:C:C2'	1:0:447:U:O4'	2.65	0.41
1:0:494:A:C8	1:0:495:C:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:601:A:H8	1:0:601:A:O5'	2.04	0.41
1:0:754:G:C5	1:0:755:C:H5	2.39	0.41
1:0:765:C:C5	1:0:1772:C:H1'	2.51	0.41
1:0:1278:A:HO2'	1:0:1279:G:P	2.42	0.41
1:0:1286:U:O2	1:0:2692:A:C2	2.74	0.41
1:0:1292:A:C6	1:0:1293:A:C5	3.08	0.41
1:0:1336:G:H2'	1:0:1337:G:H5'	2.02	0.41
1:0:1379:A:N7	1:0:1380:C:C4	2.88	0.41
1:0:1429:A:C2	1:0:1603:A:C8	3.08	0.41
1:0:1685:A:C2	1:0:1976:U:C2	3.06	0.41
1:0:1854:G:H1	1:0:1863:U:H3	1.68	0.41
1:0:2046:C:N3	1:0:2430:A:N1	2.68	0.41
1:0:2203:G:C5'	1:0:2204:A:H5'	2.50	0.41
1:0:2223:U:O5'	1:0:2223:U:H6	2.03	0.41
1:0:2241:U:C4'	1:0:2307:A:N3	2.83	0.41
1:0:2429:A:H5"	1:0:2476:A:C5	2.55	0.41
1:0:2592:U:H3'	1:0:2592:U:C6	2.42	0.41
1:0:2697:G:C2	1:0:2698:G:C4	3.08	0.41
1:0:2697:G:N1	1:0:2698:G:C5	2.89	0.41
1:0:2790:C:C2	1:0:2791:C:C5	3.08	0.41
2:9:113:G:H2'	2:9:114:C:C6	2.55	0.41
1:0:53:G:C6	1:0:54:G:C5	3.09	0.41
1:0:159:A:H2'	1:0:160:C:O4'	2.21	0.41
1:0:159:A:N1	1:0:192:G:N2	2.67	0.41
1:0:423:G:O5'	1:0:423:G:H8	2.03	0.41
1:0:588:G:H4'	1:0:2001:G:H5"	2.03	0.41
1:0:831:G:N2	1:0:1203:A:N6	2.55	0.41
1:0:1002:C:C4	1:0:1003:C:C5	3.08	0.41
1:0:1318:A:N6	1:0:1319:C:N4	2.68	0.41
1:0:1335:A:C2	1:0:1346:C:O2'	2.73	0.41
1:0:1644:G:HO2'	1:0:1645:U:H5'	1.85	0.41
1:0:1656:U:H2'	1:0:1657:A:H5'	2.02	0.41
1:0:1713:G:N2	1:0:1960:A:O2'	2.54	0.41
1:0:1965:U:C4	1:0:1966:C:C5	3.09	0.41
1:0:2052:G:N2	1:0:2422:C:C6	2.88	0.41
1:0:2059:U:C5'	1:0:2217:G:O6	2.69	0.41
1:0:2238:G:H4'	1:0:2407:G:OP2	2.19	0.41
1:0:2413:A:C8	1:0:2413:A:C3'	3.02	0.41
1:0:2437:G:O6	1:0:2469:G:H3'	2.20	0.41
1:0:2482:A:H2	32:0:2881:MUL:C20	2.33	0.41
1:0:2489:C:O2'	1:0:2490:U:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2645:C:C2'	1:0:2646:C:H5'	2.48	0.41
1:0:2665:G:C4	1:0:2666:U:C6	3.08	0.41
1:0:2819:G:N7	1:0:2820:C:C4	2.88	0.41
1:0:307:C:H2'	1:0:308:C:C6	2.56	0.41
1:0:425:A:H2'	1:0:426:C:O4'	2.21	0.41
1:0:625:A:H2'	1:0:626:A:O4'	2.20	0.41
1:0:750:C:O2'	1:0:751:G:H5'	2.20	0.41
1:0:789:G:C2'	1:0:790:A:OP2	2.69	0.41
1:0:836:G:N3	1:0:837:U:C5	2.89	0.41
1:0:1054:C:H2'	1:0:1055:A:C5'	2.51	0.41
1:0:1182:U:C2'	1:0:1183:C:H5"	2.46	0.41
1:0:1284:G:C2'	1:0:1633:C:H4'	2.50	0.41
1:0:1354:A:HO2'	1:0:1355:A:P	2.44	0.41
1:0:1407:G:H8	1:0:1407:G:O5'	2.04	0.41
1:0:1427:G:N7	1:0:1428:G:C2	2.89	0.41
1:0:1442:C:C2'	1:0:1443:G:OP1	2.68	0.41
1:0:1555:A:H8	1:0:1555:A:O5'	2.02	0.41
1:0:1594:U:O4	1:0:1595:A:N6	2.53	0.41
1:0:1666:G:N2	1:0:1667:A:C4	2.89	0.41
1:0:1697:U:H2'	1:0:1754:G:N7	2.36	0.41
1:0:1700:C:C5	1:0:1701:C:C5	3.09	0.41
1:0:1778:U:H4'	1:0:2568:A:H4'	2.03	0.41
1:0:1830:C:C6	1:0:1882:G:C6	3.09	0.41
1:0:1889:G:N1	1:0:1908:C:N4	2.66	0.41
1:0:1981:A:O2'	1:0:2704:U:H1'	2.21	0.41
1:0:2548:G:C2	1:0:2549:G:C8	3.08	0.41
1:0:2603:G:O6	1:0:2604:G:C6	2.74	0.41
1:0:2810:A:O5'	1:0:2810:A:C8	2.67	0.41
1:0:2844:G:C2'	1:0:2845:C:H5'	2.51	0.41
2:9:26:G:N7	2:9:58:G:C4	2.89	0.41
1:0:168:A:C6	1:0:169:C:N4	2.89	0.41
1:0:237:G:C6	1:0:238:G:C5	3.09	0.41
1:0:239:A:H4'	1:0:620:G:H5'	2.02	0.41
1:0:246:C:N3	1:0:247:A:N7	2.69	0.41
1:0:308:C:C2'	1:0:309:G:H5'	2.50	0.41
1:0:348:U:C5	1:0:349:G:N7	2.88	0.41
1:0:554:U:O2'	1:0:555:U:H4'	2.21	0.41
1:0:575:U:H2'	1:0:576:A:O4'	2.21	0.41
1:0:585:U:O2'	1:0:2481:G:O6	2.38	0.41
1:0:657:A:N3	1:0:2329:C:O2'	2.44	0.41
1:0:840:U:C5	1:0:2405:A:C2	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1038:U:H5	1:0:1137:A:C4	2.39	0.41
1:0:1089:C:O5'	1:0:1089:C:C6	2.69	0.41
1:0:1150:C:OP1	10:H:52:GLY:CA	2.69	0.41
1:0:1206:G:O2'	1:0:1207:G:H5'	2.20	0.41
1:0:1212:U:H2'	1:0:1213:U:C5	2.49	0.41
1:0:1248:G:C5	1:0:1249:G:C2	3.09	0.41
1:0:1351:G:O2'	1:0:1352:G:H5'	2.21	0.41
1:0:1483:G:C2'	1:0:1484:G:O5'	2.69	0.41
1:0:1640:C:O5'	1:0:1640:C:H6	2.03	0.41
1:0:1709:U:H6	1:0:1709:U:O5'	2.04	0.41
1:0:1972:G:H2'	1:0:1973:C:H5'	2.02	0.41
1:0:2082:C:N4	1:0:2174:G:N2	2.68	0.41
1:0:2243:C:C2'	1:0:2244:C:H5'	2.51	0.41
1:0:2270:U:H6	1:0:2270:U:O5'	2.04	0.41
1:0:2276:C:O5'	1:0:2276:C:C6	2.73	0.41
1:0:2316:G:OP2	1:0:2317:G:OP2	2.39	0.41
1:0:2336:G:O5'	1:0:2336:G:H8	2.04	0.41
1:0:2452:U:C4	1:0:2453:C:C4	3.09	0.41
1:0:2512:A:OP1	1:0:2644:A:H1'	2.20	0.41
1:0:2514:G:N3	1:0:2515:G:N7	2.69	0.41
1:0:2535:C:C6	1:0:2536:G:C8	3.08	0.41
1:0:2627:G:C2'	1:0:2628:C:H5'	2.51	0.41
1:0:2749:A:C2	1:0:2750:G:C4	3.08	0.41
2:9:111:C:H6	2:9:111:C:O5'	2.03	0.41
1:0:82:G:H21	1:0:102:C:H41	1.68	0.41
1:0:105:G:C6	1:0:106:G:C6	3.09	0.41
1:0:106:G:H2'	1:0:107:G:H8	1.85	0.41
1:0:177:U:H2'	1:0:178:C:O4'	2.20	0.41
1:0:198:A:O2'	1:0:199:A:OP2	2.37	0.41
1:0:246:C:C2	1:0:247:A:N7	2.89	0.41
1:0:369:C:H2'	1:0:370:U:O4'	2.21	0.41
1:0:454:G:C6	1:0:456:C:N4	2.89	0.41
1:0:461:A:N3	1:0:462:G:C8	2.89	0.41
1:0:473:C:N3	1:0:474:G:C5	2.89	0.41
1:0:488:A:C2	1:0:489:A:C2	3.09	0.41
1:0:594:G:C6	1:0:1264:C:C4	3.09	0.41
1:0:746:G:O6	1:0:774:A:C8	2.74	0.41
1:0:776:G:N3	1:0:776:G:C2'	2.84	0.41
1:0:830:C:C2	1:0:1205:G:N2	2.89	0.41
1:0:865:A:C5	1:0:866:U:C4	3.09	0.41
1:0:947:C:O2'	1:0:948:C:C5'	2.69	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:965:G:N2	1:0:975:C:O2	2.54	0.41
1:0:1008:G:H8	1:0:1008:G:O5'	2.04	0.41
1:0:1024:G:N1	1:0:1025:A:C6	2.88	0.41
1:0:1073:G:H2'	1:0:1074:G:C4'	2.51	0.41
1:0:1084:A:H4'	1:0:2454:C:OP1	2.21	0.41
1:0:1089:C:C2	1:0:1099:A:H4'	2.56	0.41
1:0:1251:G:C5	1:0:1252:C:C4	3.09	0.41
1:0:1251:G:C6	1:0:1252:C:N3	2.89	0.41
1:0:1352:G:C6	1:0:1353:A:N6	2.78	0.41
1:0:1377:G:N2	1:0:1381:G:C4	2.89	0.41
1:0:1746:A:C2	1:0:2696:A:H1'	2.54	0.41
1:0:1767:G:C6	1:0:1768:U:C4	3.09	0.41
1:0:1773:C:H2'	1:0:1774:A:H5'	2.03	0.41
1:0:1960:A:C2'	1:0:1961:A:H5'	2.51	0.41
1:0:1992:G:H1'	14:L:106:ASP:CA	2.50	0.41
1:0:2019:C:H2'	1:0:2020:G:C5'	2.51	0.41
1:0:2033:C:N4	1:0:2034:A:N1	2.69	0.41
1:0:2063:A:C2	1:0:2064:U:C2	3.09	0.41
1:0:2090:U:N3	1:0:2166:G:N1	2.68	0.41
1:0:2161:C:O5'	1:0:2161:C:H6	2.04	0.41
1:0:2436:U:C4	1:0:2437:G:C6	3.09	0.41
1:0:2454:C:H5"	1:0:2455:A:OP2	2.21	0.41
1:0:2572:U:H3'	1:0:2572:U:C6	2.56	0.41
1:0:2655:C:O2'	1:0:2656:G:H5'	2.20	0.41
1:0:2736:U:C2'	1:0:2737:A:H5'	2.51	0.41
1:0:2837:G:N2	1:0:2838:U:C2	2.89	0.41
1:0:2839:G:C2'	1:0:2840:U:C6	3.02	0.41
2:9:20:A:C2	2:9:69:G:C6	3.09	0.41
2:9:88:C:C2	2:9:89:G:C8	3.08	0.41
2:9:88:C:H2'	2:9:89:G:H8	1.85	0.41
2:9:98:C:C6	2:9:98:C:C3'	3.04	0.41
1:0:75:C:O2	1:0:109:A:C2	2.74	0.41
1:0:304:A:C2'	1:0:305:A:H5"	2.50	0.41
1:0:344:G:N3	1:0:344:G:H2'	2.35	0.41
1:0:500:G:C6	1:0:1297:A:C2	3.10	0.41
1:0:693:A:C6	1:0:811:G:C6	3.09	0.41
1:0:711:C:H4'	1:0:748:A:H2	1.85	0.41
1:0:831:G:O2'	1:0:832:A:O4'	2.35	0.41
1:0:1157:G:O6	1:0:1158:A:N6	2.54	0.41
1:0:1183:C:N3	1:0:1184:G:C6	2.89	0.41
1:0:1668:G:C6	1:0:1669:A:N6	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1682:A:N7	1:0:1684:G:N2	2.69	0.41
1:0:1699:A:N7	1:0:1700:C:N3	2.69	0.41
1:0:1712:G:H3'	1:0:1712:G:N3	2.36	0.41
1:0:1740:G:C2'	1:0:1741:G:H5'	2.51	0.41
1:0:1764:A:C5	1:0:1821:A:C1'	2.97	0.41
1:0:1888:C:H2'	1:0:1913:G:C2	2.56	0.41
1:0:2159:A:H2'	1:0:2160:C:O4'	2.21	0.41
1:0:2248:A:N7	1:0:2249:U:O4	2.53	0.41
1:0:2281:C:H2'	1:0:2282:G:H8	1.85	0.41
1:0:2355:A:N6	1:0:2356:A:C2	2.88	0.41
1:0:2392:G:H2'	1:0:2393:G:O4'	2.20	0.41
1:0:2408:G:O4'	1:0:2408:G:OP1	2.38	0.41
1:0:2419:C:H2'	1:0:2420:C:H4'	2.03	0.41
1:0:2807:U:H1'	1:0:2809:A:C2	2.56	0.41
1:0:165:G:C8	1:0:166:G:C8	3.09	0.40
1:0:221:A:C2	1:0:232:A:C6	3.09	0.40
1:0:390:U:O4	1:0:391:C:N4	2.54	0.40
1:0:476:G:N2	1:0:697:G:N2	2.69	0.40
1:0:704:G:H2'	1:0:705:C:O4'	2.21	0.40
1:0:778:G:O2'	1:0:779:U:H5'	2.22	0.40
1:0:828:C:H2'	1:0:829:C:C6	2.56	0.40
1:0:981:C:C6	1:0:982:C:C5	3.09	0.40
1:0:1012:A:H62	1:0:1165:G:N2	2.19	0.40
1:0:1254:G:C4	1:0:1255:A:N7	2.89	0.40
1:0:1256:C:C6	1:0:1257:U:C5	3.08	0.40
1:0:1404:C:N4	1:0:1407:G:N7	2.66	0.40
1:0:1491:C:H2'	1:0:1492:A:C5'	2.51	0.40
1:0:1657:A:N6	1:0:1658:A:N1	2.69	0.40
1:0:1673:C:N3	1:0:1674:C:C5	2.89	0.40
1:0:1718:A:P	1:0:1754:G:H1	2.44	0.40
1:0:1769:U:O2	1:0:1770:U:H5	2.04	0.40
1:0:2049:C:C2'	1:0:2050:G:H5'	2.50	0.40
1:0:2184:C:H2'	1:0:2185:U:C6	2.56	0.40
1:0:2241:U:H2'	1:0:2242:C:O4'	2.20	0.40
1:0:2243:C:N4	1:0:2244:C:N3	2.69	0.40
1:0:2455:A:C5	1:0:2456:U:C5	3.09	0.40
1:0:2503:G:C3'	1:0:2504:G:H5"	2.51	0.40
1:0:2529:G:C6	1:0:2530:C:C5	3.08	0.40
1:0:2652:G:O2'	1:0:2653:A:H5'	2.20	0.40
1:0:2686:C:O2'	1:0:2687:G:C5'	2.69	0.40
1:0:2707:G:O2'	1:0:2708:U:C5'	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2709:C:C4	1:0:2710:C:C4	3.09	0.40
1:0:2859:U:H5	1:0:2860:C:N3	2.19	0.40
2:9:60:A:H2'	2:9:61:A:H8	1.85	0.40
1:0:337:G:O2'	1:0:338:G:H5'	2.21	0.40
1:0:475:U:C4	1:0:476:G:N1	2.89	0.40
1:0:695:G:N2	1:0:809:C:C2	2.89	0.40
1:0:837:U:C4	1:0:838:A:C6	3.09	0.40
1:0:851:C:H2'	1:0:852:U:C6	2.57	0.40
1:0:876:A:O3'	2:9:103:A:C2	2.75	0.40
1:0:1038:U:C5	1:0:1137:A:C2	3.09	0.40
1:0:1183:C:H2'	1:0:1184:G:O4'	2.21	0.40
1:0:1249:G:O2'	1:0:1250:A:P	2.80	0.40
1:0:1253:C:H2'	1:0:1254:G:H5'	2.02	0.40
1:0:1365:U:H1'	1:0:1586:A:H2	1.86	0.40
1:0:1437:A:O2'	1:0:1438:G:H5'	2.21	0.40
1:0:1603:A:C2	1:0:1604:A:C4	3.09	0.40
1:0:1603:A:H2'	1:0:1604:A:C8	2.56	0.40
1:0:1662:G:H5"	1:0:1663:C:O4'	2.20	0.40
1:0:1786:C:N3	1:0:1787:U:C2	2.89	0.40
1:0:1846:A:H2'	1:0:1847:G:H5'	2.03	0.40
1:0:1846:A:N7	1:0:1847:G:C5	2.89	0.40
1:0:1980:A:C2'	1:0:1981:A:H5'	2.52	0.40
1:0:2221:G:H2'	1:0:2222:U:O5'	2.20	0.40
1:0:2236:U:H2'	1:0:2237:C:O4'	2.22	0.40
1:0:2241:U:H4'	1:0:2307:A:N3	2.34	0.40
1:0:2329:C:C2'	1:0:2330:G:C5'	2.99	0.40
1:0:2426:G:O4'	1:0:2480:C:N4	2.54	0.40
1:0:2447:G:O5'	1:0:2447:G:C8	2.67	0.40
1:0:2576:G:O2'	1:0:2577:A:H5'	2.22	0.40
1:0:2594:U:O2'	1:0:2595:C:H5'	2.21	0.40
1:0:2715:C:H2'	1:0:2716:G:O4'	2.21	0.40
1:0:2817:A:N1	1:0:2851:G:C5	2.89	0.40
1:0:210:A:N6	1:0:442:A:N6	2.69	0.40
1:0:296:A:N6	1:0:297:A:N6	2.70	0.40
1:0:545:C:N4	1:0:546:A:N6	2.70	0.40
1:0:613:A:C2	1:0:614:G:C6	3.09	0.40
1:0:616:U:C5	1:0:630:G:C2	3.10	0.40
1:0:946:U:H2'	1:0:947:C:H6	1.86	0.40
1:0:988:G:O2'	1:0:989:G:H5'	2.22	0.40
1:0:1094:C:C2	1:0:1096:A:OP2	2.74	0.40
1:0:1151:U:H5"	1:0:1153:A:OP1	2.22	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1407:G:H2'	1:0:1408:A:C8	2.57	0.40
1:0:1696:C:C5	1:0:1697:U:C4	3.10	0.40
1:0:1702:C:C2	1:0:1721:G:N2	2.89	0.40
1:0:1733:U:H5"	1:0:1733:U:H6	1.85	0.40
1:0:1970:G:O2'	1:0:1971:C:C5'	2.65	0.40
1:0:2321:C:O2'	1:0:2322:U:H5'	2.21	0.40
1:0:2445:C:N3	1:0:2464:G:C2	2.89	0.40
1:0:2470:U:O2'	1:0:2471:U:C5'	2.69	0.40
1:0:2484:G:H2'	1:0:2485:U:H5'	2.04	0.40
1:0:2537:C:H2'	1:0:2538:C:O4'	2.21	0.40
1:0:2571:G:C5	1:0:2572:U:O4	2.74	0.40
1:0:2641:A:H2'	1:0:2642:G:O4'	2.21	0.40
1:0:2644:A:C2	1:0:2645:C:C4	3.10	0.40
1:0:2762:G:H2'	1:0:2763:U:H5'	2.04	0.40
2:9:105:G:C2	2:9:106:U:C4	3.09	0.40
2:9:111:C:H5"	2:9:112:A:H4'	2.03	0.40
1:0:190:A:C2	1:0:191:G:C2	3.10	0.40
1:0:324:C:C4	1:0:325:U:C4	3.09	0.40
1:0:446:C:C4	1:0:447:U:C4	3.09	0.40
1:0:484:G:H2'	1:0:485:G:O4'	2.21	0.40
1:0:525:A:C8	1:0:526:C:C5	3.10	0.40
1:0:685:U:C2	1:0:822:G:C2	3.09	0.40
1:0:1010:U:C4	1:0:1011:A:N6	2.90	0.40
1:0:1283:C:H2'	1:0:1665:C:H5"	2.03	0.40
1:0:1386:A:N6	1:0:1387:G:C6	2.89	0.40
1:0:1402:G:H2'	1:0:1403:U:O4'	2.21	0.40
1:0:1411:C:C2'	1:0:1412:C:H5'	2.52	0.40
1:0:1459:U:C2	1:0:1475:U:O2'	2.69	0.40
1:0:1491:C:H2'	1:0:1492:A:H5'	2.03	0.40
1:0:1753:A:C8	1:0:1753:A:C3'	3.04	0.40
1:0:1979:C:H6	1:0:1979:C:H5"	1.87	0.40
1:0:1989:C:C2'	1:0:1990:U:H5'	2.51	0.40
1:0:2019:C:H2'	1:0:2020:G:H5'	2.00	0.40
1:0:2160:C:H6	1:0:2160:C:O5'	2.04	0.40
1:0:2243:C:O2	1:0:2256:G:C2	2.74	0.40
1:0:2307:A:C6	1:0:2308:A:C6	3.09	0.40
1:0:2371:A:C2'	1:0:2372:A:H5'	2.52	0.40
1:0:2441:U:H2'	1:0:2442:C:C6	2.55	0.40
1:0:2611:A:C2	1:0:2767:C:N3	2.89	0.40
1:0:2676:G:C5	1:0:2677:U:C5	3.09	0.40
1:0:2685:A:C2	1:0:2686:C:C2	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2788:C:H2'	1:0:2789:U:H6	1.87	0.40
1:0:2794:G:C2	1:0:2803:C:N3	2.89	0.40
1:0:2801:A:C6	1:0:2802:C:C2	3.09	0.40
1:0:2802:C:O2'	1:0:2803:C:H5'	2.20	0.40
2:9:8:C:O2'	2:9:9:G:H5'	2.21	0.40
1:0:116:A:OP2	1:0:117:A:H5"	2.21	0.40
1:0:160:C:H2'	1:0:161:U:H5'	2.04	0.40
1:0:352:G:H2'	1:0:353:G:O4'	2.21	0.40
1:0:395:G:O6	1:0:404:A:N6	2.54	0.40
1:0:503:G:H2'	1:0:504:G:O4'	2.22	0.40
1:0:521:U:H5"	1:0:522:G:OP2	2.22	0.40
1:0:568:G:C6	1:0:569:C:C2	3.09	0.40
1:0:721:C:N3	1:0:737:C:O2	2.53	0.40
1:0:738:G:O5'	1:0:738:G:H8	2.04	0.40
1:0:748:A:N7	1:0:749:C:C4	2.89	0.40
1:0:991:A:C4	1:0:1146:G:O4'	2.74	0.40
1:0:1355:A:C1'	1:0:1410:U:H4'	2.52	0.40
1:0:1452:U:H5'	1:0:1532:A:O2'	2.21	0.40
1:0:1476:G:N3	1:0:2681:A:C2	2.90	0.40
1:0:1998:A:O5'	1:0:1998:A:H8	2.04	0.40
1:0:2048:C:O5'	1:0:2048:C:H6	2.03	0.40
1:0:2185:U:O5'	1:0:2185:U:H6	2.04	0.40
1:0:2468:G:C2	1:0:2469:G:O4'	2.74	0.40
1:0:2718:A:N1	1:0:2746:G:O6	2.54	0.40
1:0:2732:C:C5	1:0:2733:A:N7	2.90	0.40
2:9:89:G:C6	2:9:93:G:C6	3.10	0.40

There are no symmetry-related clashes.

5.3 Torsion angles (i)

5.3.1 Protein backbone (i)

There are no protein backbone outliers to report in this entry.

5.3.2 Protein sidechains (i)

There are no protein residues with a non-rotameric sidechain to report in this entry.

5.3.3 RNA (i)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	0	2757/2880 (95%)	512 (18%)	39 (1%)
2	9	117/124 (94%)	17 (14%)	1 (0%)
All	All	2874/3004 (95%)	529 (18%)	40 (1%)

All (529) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	0	34	U
1	0	35	G
1	0	45	C
1	0	48	A
1	0	49	U
1	0	50	G
1	0	59	G
1	0	60	A
1	0	70	A
1	0	71	A
1	0	72	A
1	0	76	C
1	0	87	G
1	0	89	A
1	0	90	G
1	0	91	A
1	0	99	U
1	0	100	G
1	0	105	G
1	0	110	U
1	0	116	A
1	0	117	A
1	0	118	U
1	0	119	G
1	0	123	A
1	0	124	A
1	0	129	A
1	0	135	U
1	0	155	G
1	0	158	A
1	0	168	A
1	0	173	A
1	0	174	A
1	0	176	A

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Mol	Chain	Res	Type
1	0	177	U
1	0	181	A
1	0	182	G
1	0	193	A
1	0	199	A
1	0	200	A
1	0	205	A
1	0	206	U
1	0	210	A
1	0	218	A
1	0	219	G
1	0	225	G
1	0	227	G
1	0	242	A
1	0	243	G
1	0	305	A
1	0	318	G
1	0	321	A
1	0	322	A
1	0	334	G
1	0	335	A
1	0	340	G
1	0	343	A
1	0	358	C
1	0	363	G
1	0	368	A
1	0	373	A
1	0	399	G
1	0	401	G
1	0	404	A
1	0	409	G
1	0	414	A
1	0	418	C
1	0	424	G
1	0	443	A
1	0	455	A
1	0	456	C
1	0	460	U
1	0	461	A
1	0	463	C
1	0	467	U
1	0	486	U

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Mol	Chain	Res	Type
1	0	491	A
1	0	492	G
1	0	514	G
1	0	515	A
1	0	518	A
1	0	537	C
1	0	539	A
1	0	540	G
1	0	542	A
1	0	543	G
1	0	554	U
1	0	556	A
1	0	558	G
1	0	559	C
1	0	572	G
1	0	583	C
1	0	584	A
1	0	587	A
1	0	588	G
1	0	601	A
1	0	613	A
1	0	617	U
1	0	624	A
1	0	632	A
1	0	636	G
1	0	638	A
1	0	648	A
1	0	652	C
1	0	654	A
1	0	666	U
1	0	667	U
1	0	684	C
1	0	697	G
1	0	699	G
1	0	700	C
1	0	726	G
1	0	728	G
1	0	742	G
1	0	743	A
1	0	745	C
1	0	753	U
1	0	761	G

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Mol	Chain	Res	Type
1	0	765	C
1	0	766	A
1	0	775	U
1	0	776	G
1	0	778	G
1	0	789	G
1	0	790	A
1	0	794	A
1	0	796	A
1	0	797	A
1	0	798	G
1	0	801	A
1	0	802	A
1	0	803	C
1	0	804	C
1	0	806	A
1	0	807	A
1	0	813	A
1	0	815	A
1	0	818	G
1	0	819	C
1	0	825	C
1	0	832	A
1	0	834	A
1	0	840	U
1	0	841	G
1	0	843	G
1	0	844	G
1	0	860	U
1	0	869	C
1	0	873	U
1	0	919	U
1	0	922	A
1	0	926	C
1	0	930	A
1	0	931	G
1	0	941	U
1	0	943	U
1	0	944	A
1	0	952	A
1	0	955	G
1	0	957	G

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Mol	Chain	Res	Type
1	0	968	C
1	0	969	U
1	0	970	A
1	0	971	A
1	0	972	C
1	0	984	A
1	0	985	G
1	0	994	A
1	0	996	C
1	0	1002	C
1	0	1005	U
1	0	1006	C
1	0	1007	A
1	0	1016	C
1	0	1019	U
1	0	1022	A
1	0	1023	U
1	0	1024	G
1	0	1030	U
1	0	1032	A
1	0	1033	G
1	0	1036	G
1	0	1037	U
1	0	1044	U
1	0	1045	G
1	0	1055	A
1	0	1056	U
1	0	1057	A
1	0	1059	A
1	0	1067	G
1	0	1073	G
1	0	1074	G
1	0	1081	A
1	0	1082	G
1	0	1087	C
1	0	1090	C
1	0	1099	A
1	0	1130	U
1	0	1135	C
1	0	1137	A
1	0	1138	A
1	0	1141	U

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Mol	Chain	Res	Type
1	0	1142	G
1	0	1145	C
1	0	1146	G
1	0	1152	C
1	0	1155	G
1	0	1167	A
1	0	1168	G
1	0	1182	U
1	0	1183	C
1	0	1185	C
1	0	1199	U
1	0	1200	G
1	0	1223	G
1	0	1224	A
1	0	1234	C
1	0	1250	A
1	0	1251	G
1	0	1253	C
1	0	1262	U
1	0	1264	C
1	0	1265	G
1	0	1266	G
1	0	1267	A
1	0	1268	U
1	0	1269	G
1	0	1274	C
1	0	1278	A
1	0	1279	G
1	0	1280	U
1	0	1284	G
1	0	1285	A
1	0	1286	U
1	0	1288	A
1	0	1302	C
1	0	1313	U
1	0	1314	A
1	0	1316	G
1	0	1324	G
1	0	1326	U
1	0	1327	C
1	0	1334	A
1	0	1338	G

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Mol	Chain	Res	Type
1	0	1339	U
1	0	1342	U
1	0	1343	C
1	0	1353	A
1	0	1354	A
1	0	1355	A
1	0	1356	G
1	0	1359	G
1	0	1391	A
1	0	1392	U
1	0	1397	A
1	0	1398	G
1	0	1410	U
1	0	1411	C
1	0	1433	A
1	0	1441	A
1	0	1442	C
1	0	1443	G
1	0	1446	U
1	0	1459	U
1	0	1468	A
1	0	1469	U
1	0	1470	G
1	0	1475	U
1	0	1482	U
1	0	1489	C
1	0	1490	U
1	0	1505	U
1	0	1508	G
1	0	1509	A
1	0	1513	U
1	0	1524	C
1	0	1529	C
1	0	1552	C
1	0	1573	G
1	0	1574	A
1	0	1582	A
1	0	1583	A
1	0	1585	A
1	0	1602	G
1	0	1618	U
1	0	1623	C

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Mol	Chain	Res	Type
1	0	1624	A
1	0	1625	A
1	0	1626	A
1	0	1627	C
1	0	1634	A
1	0	1635	G
1	0	1636	G
1	0	1648	C
1	0	1652	G
1	0	1657	A
1	0	1664	G
1	0	1665	C
1	0	1670	G
1	0	1671	A
1	0	1680	U
1	0	1681	A
1	0	1685	A
1	0	1686	A
1	0	1688	U
1	0	1691	G
1	0	1693	A
1	0	1699	A
1	0	1711	C
1	0	1712	G
1	0	1715	A
1	0	1716	G
1	0	1717	A
1	0	1718	A
1	0	1724	C
1	0	1747	G
1	0	1748	U
1	0	1749	G
1	0	1750	A
1	0	1754	G
1	0	1755	G
1	0	1764	A
1	0	1771	A
1	0	1772	C
1	0	1773	C
1	0	1776	A
1	0	1778	U
1	0	1791	C

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Mol	Chain	Res	Type
1	0	1799	A
1	0	1801	C
1	0	1802	A
1	0	1807	A
1	0	1808	C
1	0	1811	A
1	0	1821	A
1	0	1826	U
1	0	1831	G
1	0	1840	A
1	0	1884	A
1	0	1889	G
1	0	1909	U
1	0	1920	A
1	0	1922	U
1	0	1927	U
1	0	1928	G
1	0	1930	C
1	0	1938	U
1	0	1939	U
1	0	1949	A
1	0	1950	C
1	0	1953	A
1	0	1954	A
1	0	1955	G
1	0	1956	G
1	0	1964	A
1	0	1974	U
1	0	1976	U
1	0	1979	C
1	0	1980	A
1	0	1989	C
1	0	2004	U
1	0	2006	G
1	0	2008	C
1	0	2015	G
1	0	2016	A
1	0	2019	C
1	0	2038	C
1	0	2044	G
1	0	2045	A
1	0	2047	C

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Mol	Chain	Res	Type
1	0	2051	U
1	0	2052	G
1	0	2060	A
1	0	2063	A
1	0	2075	U
1	0	2076	G
1	0	2082	C
1	0	2094	C
1	0	2096	U
1	0	2118	A
1	0	2119	A
1	0	2140	G
1	0	2162	C
1	0	2168	A
1	0	2181	A
1	0	2191	A
1	0	2195	C
1	0	2199	C
1	0	2204	A
1	0	2218	G
1	0	2229	G
1	0	2241	U
1	0	2245	A
1	0	2246	A
1	0	2247	A
1	0	2255	G
1	0	2262	C
1	0	2267	A
1	0	2268	G
1	0	2269	G
1	0	2285	U
1	0	2286	G
1	0	2287	G
1	0	2288	A
1	0	2297	G
1	0	2298	U
1	0	2299	A
1	0	2300	G
1	0	2301	A
1	0	2306	A
1	0	2314	A
1	0	2316	G

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Mol	Chain	Res	Type
1	0	2325	A
1	0	2326	C
1	0	2362	G
1	0	2364	C
1	0	2378	G
1	0	2385	U
1	0	2396	C
1	0	2403	C
1	0	2404	A
1	0	2405	A
1	0	2406	C
1	0	2407	G
1	0	2408	G
1	0	2409	A
1	0	2415	G
1	0	2420	C
1	0	2427	A
1	0	2428	U
1	0	2435	C
1	0	2448	A
1	0	2455	A
1	0	2469	G
1	0	2470	U
1	0	2471	U
1	0	2476	A
1	0	2477	C
1	0	2481	G
1	0	2482	A
1	0	2483	U
1	0	2484	G
1	0	2485	U
1	0	2492	G
1	0	2496	C
1	0	2499	C
1	0	2504	G
1	0	2508	G
1	0	2509	A
1	0	2521	A
1	0	2522	G
1	0	2528	G
1	0	2545	A
1	0	2546	G

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Mol	Chain	Res	Type
1	0	2549	G
1	0	2552	C
1	0	2561	G
1	0	2564	U
1	0	2565	C
1	0	2578	G
1	0	2581	A
1	0	2582	G
1	0	2588	U
1	0	2591	C
1	0	2593	A
1	0	2594	U
1	0	2608	A
1	0	2609	G
1	0	2625	U
1	0	2633	A
1	0	2634	G
1	0	2661	G
1	0	2668	U
1	0	2669	C
1	0	2670	C
1	0	2681	A
1	0	2692	A
1	0	2693	U
1	0	2699	G
1	0	2700	U
1	0	2707	G
1	0	2712	G
1	0	2713	A
1	0	2728	A
1	0	2730	A
1	0	2732	C
1	0	2737	A
1	0	2745	A
1	0	2758	A
1	0	2759	U
1	0	2760	G
1	0	2761	A
1	0	2771	C
1	0	2783	U
1	0	2784	A
1	0	2785	A

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Mol	Chain	Res	Type
1	0	2795	A
1	0	2805	G
1	0	2807	U
1	0	2808	U
1	0	2809	A
1	0	2811	G
1	0	2825	A
1	0	2841	U
1	0	2842	C
1	0	2844	G
1	0	2847	G
1	0	2849	C
1	0	2854	G
1	0	2855	C
1	0	2861	A
1	0	2868	G
2	9	14	C
2	9	15	A
2	9	17	A
2	9	18	G
2	9	27	A
2	9	46	G
2	9	47	A
2	9	48	A
2	9	59	A
2	9	61	A
2	9	63	A
2	9	68	A
2	9	69	G
2	9	71	G
2	9	93	G
2	9	102	A
2	9	112	A

All (40) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	0	173	A
1	0	192	G
1	0	198	A
1	0	460	U
1	0	466	A

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Mol	Chain	Res	Type
1	0	491	A
1	0	583	C
1	0	765	C
1	0	789	G
1	0	801	A
1	0	805	G
1	0	1141	U
1	0	1249	G
1	0	1263	G
1	0	1265	G
1	0	1278	A
1	0	1313	U
1	0	1354	A
1	0	1634	A
1	0	1651	U
1	0	1664	G
1	0	1685	A
1	0	1698	C
1	0	1820	G
1	0	1919	A
1	0	1938	U
1	0	1975	G
1	0	2015	G
1	0	2016	A
1	0	2044	G
1	0	2046	C
1	0	2093	G
1	0	2161	C
1	0	2261	G
1	0	2377	U
1	0	2404	A
1	0	2482	A
1	0	2810	A
1	0	2824	C
2	9	58	G

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

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

5.5 Carbohydrates (i)

There are no monosaccharides in this entry.

5.6 Ligand geometry (i)

1 ligand is modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\#\|Z\| > 2$	Counts	RMSZ	$\#\|Z\| > 2$
32	MUL	0	2881	-	36,36,36	1.35	4 (11%)	54,55,55	1.70	9 (16%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
32	MUL	0	2881	-	-	5/18/79/79	0/3/3/3

All (4) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
32	0	2881	MUL	C5-C14	4.47	1.59	1.56
32	0	2881	MUL	C12-C11	3.52	1.58	1.55
32	0	2881	MUL	O3-C14	2.37	1.50	1.46
32	0	2881	MUL	C10-C11	2.31	1.58	1.56

All (9) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
32	0	2881	MUL	C18-C12-C11	6.34	111.76	108.06
32	0	2881	MUL	O3-C21-C22	5.49	119.56	110.32
32	0	2881	MUL	C16-C6-C7	-2.92	105.97	110.37
32	0	2881	MUL	C9-C10-C11	2.86	115.19	112.56
32	0	2881	MUL	C17-C10-C11	-2.71	110.00	112.11

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Mol	Chain	Res	Type	Atoms	Z	Observed(^{o})	Ideal(^{o})
32	0	2881	MUL	O2-C11-C10	2.57	114.31	110.87
32	0	2881	MUL	O3-C14-C13	2.20	108.61	106.24
32	0	2881	MUL	C7-C8-C9	2.15	117.00	112.94
32	0	2881	MUL	O3-C14-C5	2.12	109.42	106.18

There are no chirality outliers.

All (5) torsion outliers are listed below:

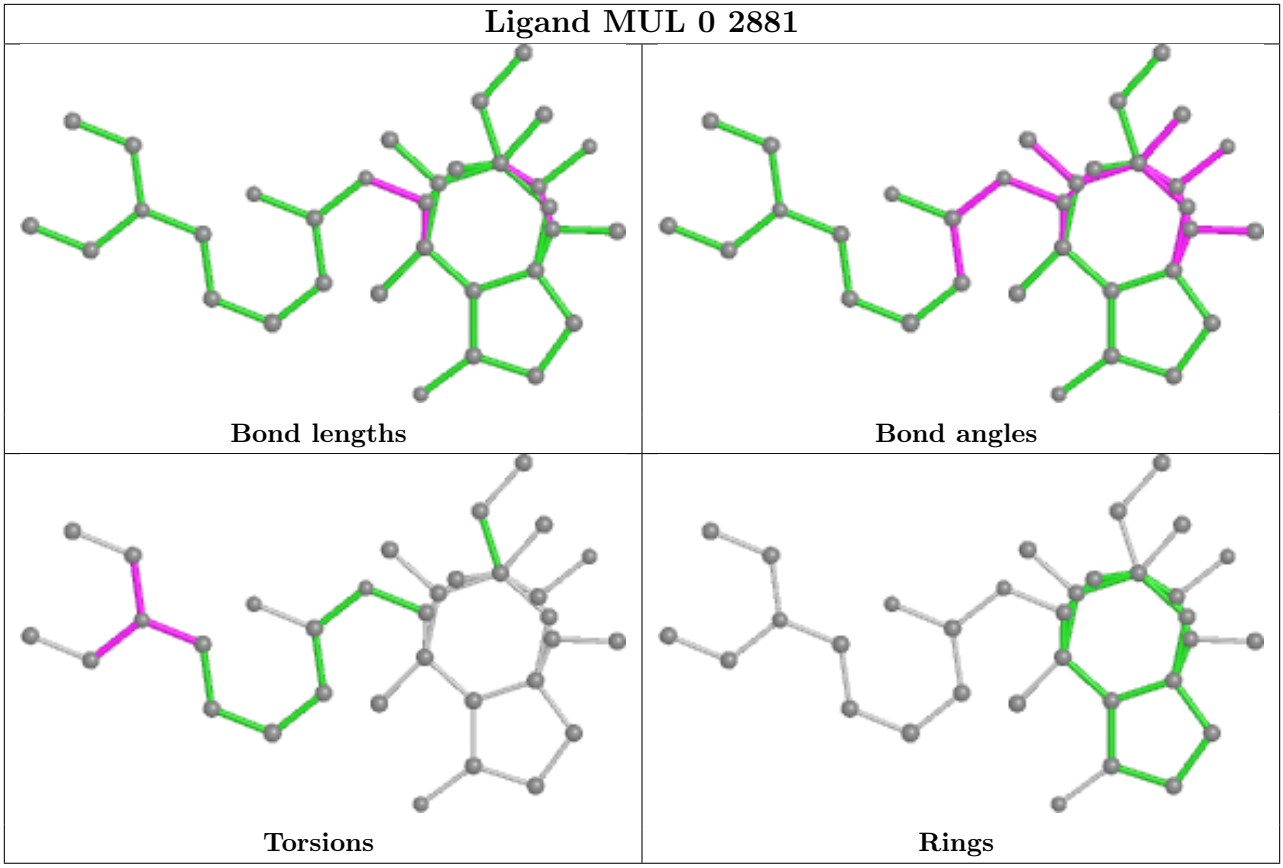
Mol	Chain	Res	Type	Atoms
32	0	2881	MUL	C28-C27-N1-C24
32	0	2881	MUL	C28-C27-N1-C25
32	0	2881	MUL	C26-C25-N1-C27
32	0	2881	MUL	C26-C25-N1-C24
32	0	2881	MUL	C23-C24-N1-C27

There are no ring outliers.

1 monomer is involved in 4 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
32	0	2881	MUL	4	0

The following is a two-dimensional graphical depiction of Mogul quality analysis of bond lengths, bond angles, torsion angles, and ring geometry for all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the validation Tables will also be included. For torsion angles, if less then 5% of the Mogul distribution of torsion angles is within 10 degrees of the torsion angle in question, then that torsion angle is considered an outlier. Any bond that is central to one or more torsion angles identified as an outlier by Mogul will be highlighted in the graph. For rings, the root-mean-square deviation (RMSD) between the ring in question and similar rings identified by Mogul is calculated over all ring torsion angles. If the average RMSD is greater than 60 degrees and the minimal RMSD between the ring in question and any Mogul-identified rings is also greater than 60 degrees, then that ring is considered an outlier. The outliers are highlighted in purple. The color gray indicates Mogul did not find sufficient equivalents in the CSD to analyse the geometry.



5.7 Other polymers (i)

There are no such residues in this entry.

5.8 Polymer linkage issues (i)

There are no chain breaks in this entry.

6 Fit of model and data (i)

6.1 Protein, DNA and RNA chains (i)

EDS was not executed - this section is therefore empty.

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

EDS was not executed - this section is therefore empty.

6.3 Carbohydrates (i)

EDS was not executed - this section is therefore empty.

6.4 Ligands (i)

EDS was not executed - this section is therefore empty.

6.5 Other polymers (i)

EDS was not executed - this section is therefore empty.