



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 10, 2026 – 04:33 AM UTC

PDB ID : 1XBP / pdb_00001xbp
Title : Inhibition of peptide bond formation by pleuromutilins: The structure of the 50S ribosomal subunit from *Deinococcus radiodurans* in complex with Tiamulin
Authors : Schlutzen, 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 ⓘ symbol.

The types of validation reports are described at

<http://www.wwpdb.org/validation/2017/FAQs#types>.

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

MolProbity	:	4-5-2 with Phenix2.0
Mogul	:	2022.3.0, CSD as543be (2022)
Xtrriage (Phenix)	:	NOT EXECUTED
EDS	:	NOT EXECUTED
Buster-report	:	wwPDB partial adaption of 1.1.7 (2018)
Percentile statistics	:	20250101.v01 (using entries in the PDB archive January 1st 2025)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.49

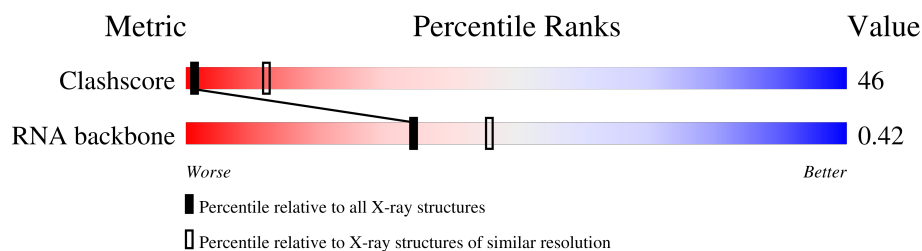
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

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	190562	1140 (3.54-3.46)
RNA backbone	3983	1010 (3.98-3.02)

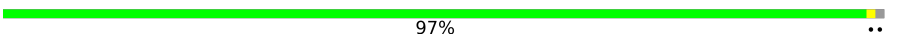
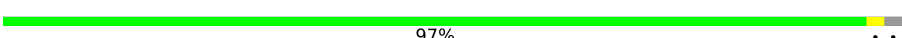
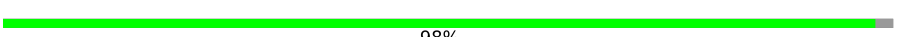
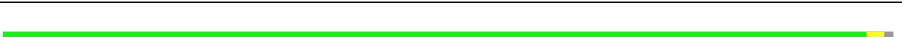
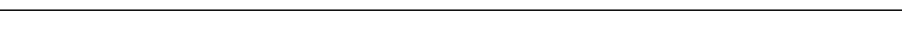
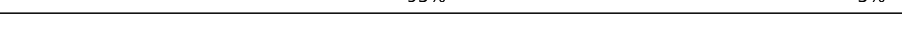
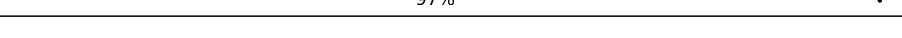
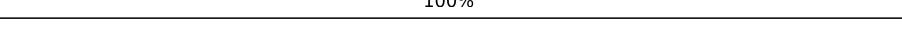
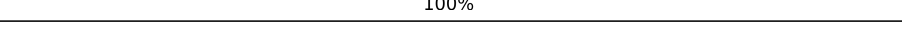
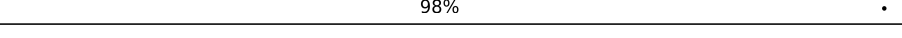
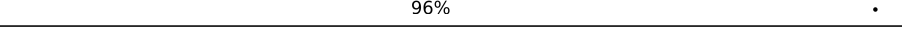
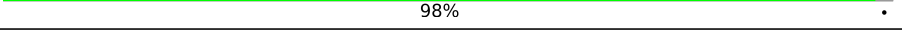
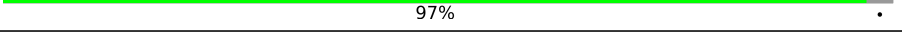
The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments of the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. 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 $\leq 5\%$

Note EDS was not executed.

Mol	Chain	Length	Quality of chain
1	0	2880	11% 62% 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	
11	I	134	
12	J	156	
13	K	141	
14	L	116	
15	M	113	
16	N	166	
17	O	118	
18	P	100	
19	Q	134	
20	R	94	
21	S	115	
22	T	237	
23	U	91	
24	W	67	
25	X	55	
26	Y	73	
27	Z	59	
28	1	55	
29	2	47	
30	3	65	
31	4	37	

2 Entry composition

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
1	0	2766	Total	C	N	O	P	0	0	0
			59359	26479	10949	19166	2765			

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- Molecule 13 is a protein called ribosomal protein L16.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
13	K	124	Total C 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	0	0	114
			114	114			

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

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

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

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

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

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

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

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

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

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

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

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

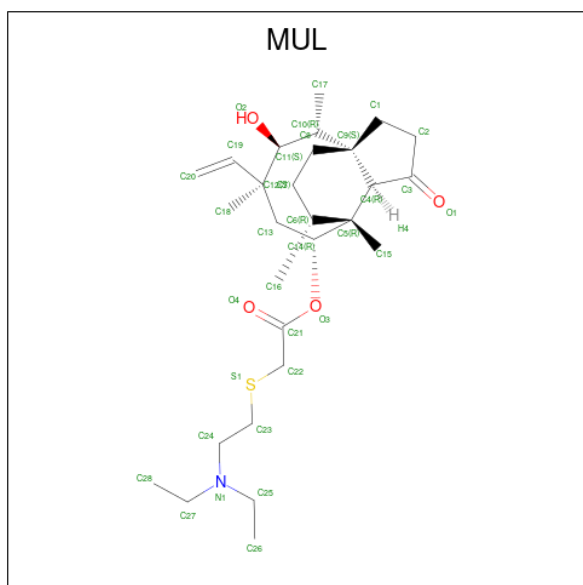
- Molecule 30 is a protein called 50S ribosomal protein L35.

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 (CCD ID: MUL) (formula: $C_{28}H_{47}NO_4S$).



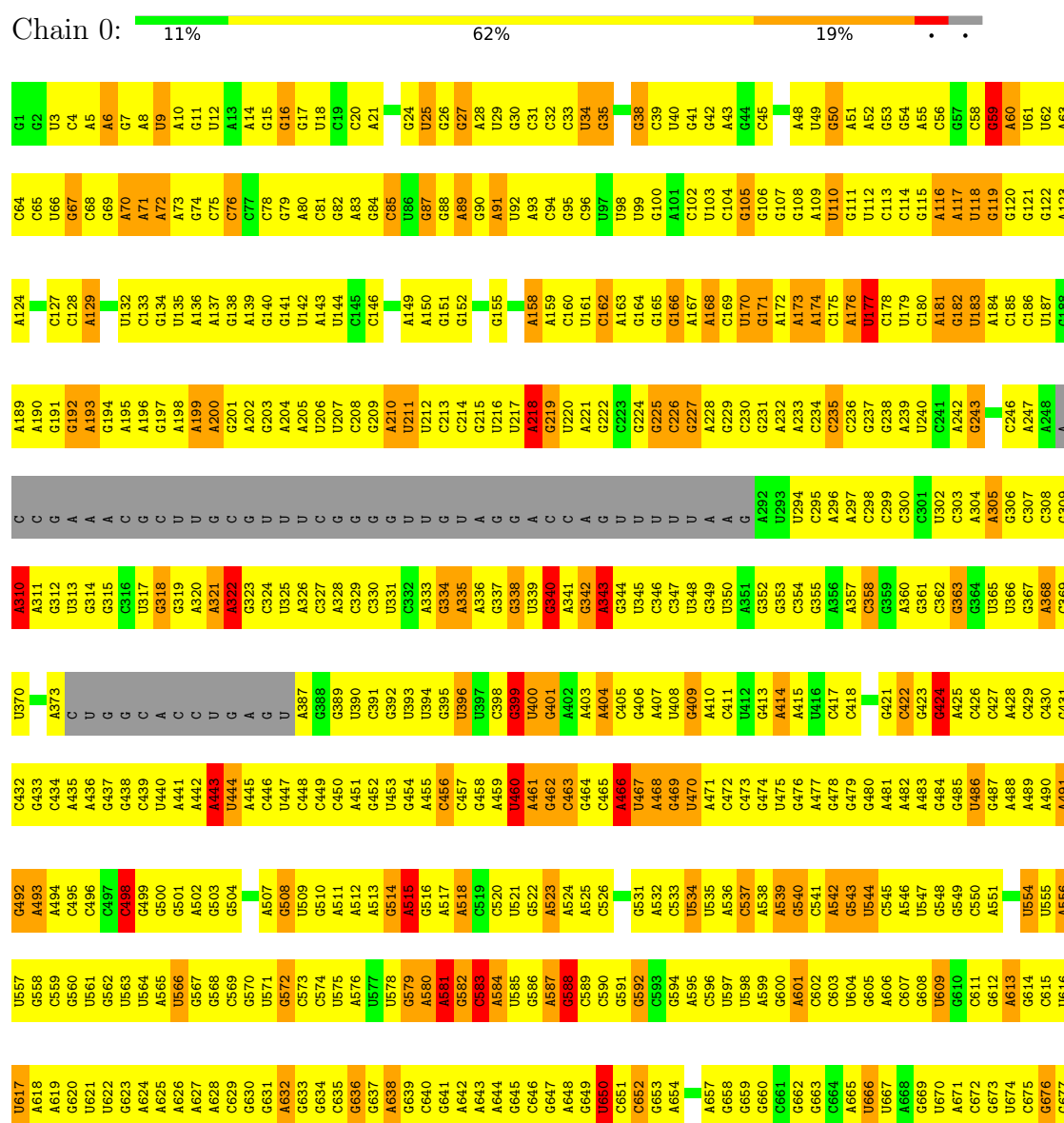
Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
32	0	1	Total	C	N	O	S	0	0
			34	28	1	4	1		

3 Residue-property plots

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.

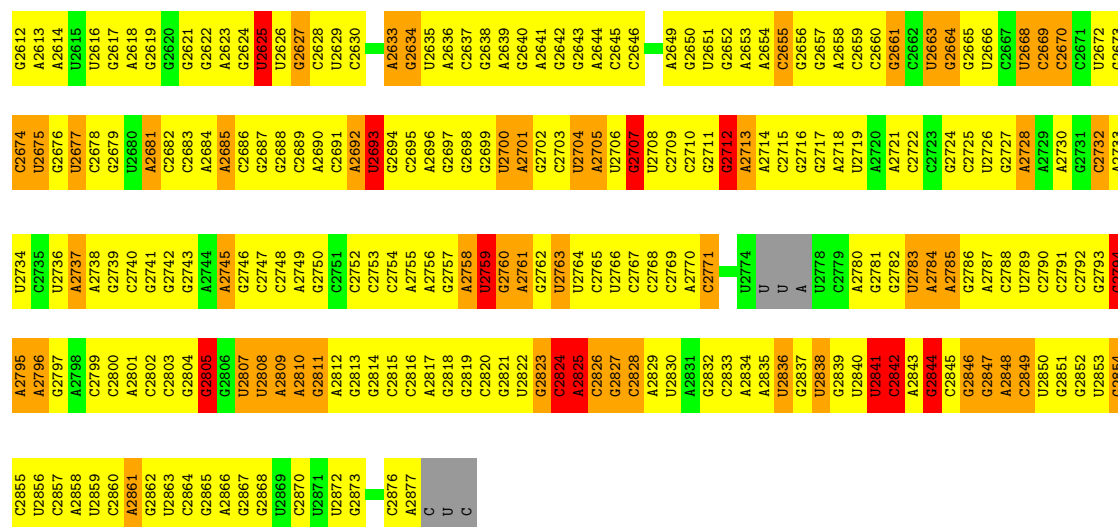
Note EDS was not executed.

• Molecule 1: 23S RIBOSOMAL RNA



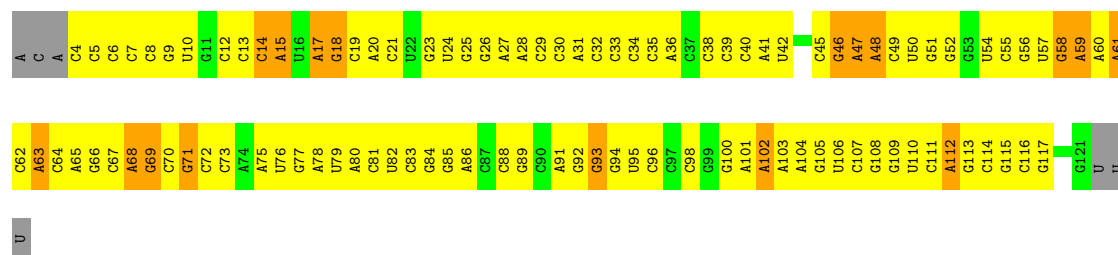
A1610	G1545	U1481	C1234	U1172	G1110	U1044	G983	A922	G861	A801	A740	G678
A1611	C1546	U1482	C1235	G1173	C1111	G1045	A984	A923	A862	A802	G741	C679
A1612	U1547	G1483	G1236	G1174	C1112	U1046	C985	C924	C863	C803	G742	U680
G1613	U1548	G1484	G1237	A1175	C1113	G1047	A986	U925	C864	C804	A743	A681
C1614	C1549	U1485	A1239	U1176	C1114	U1048	A987	C926	A865	G805	C744	G682
C1615	G1550	G1361	U1301	U1177	C1115	C1049	G988	G927	U866	A806	G745	A683
G1616	G1551	A1362	G1240	G1178	C1116	G1050	G989	G928	G867	A807	G746	C684
G1617	G1552	C1363	G1241	C1181	U1117	G1052	A990	A929	U868	C808	A747	U685
G1618	G1553	U1303	A1242	U1182	G1118	G1053	C991	A930	C869	C809	A748	C686
G1619	G1554	C1364	G1243	C1183	U1119	U1054	A992	G931	C870	C810	C749	G687
A1620	A1555	U1305	U1244	G1184	C1120	A1055	C993	G932	U871	G811	C750	A688
C1621	C1556	A1366	G1245	C1185	C1121	U1056	A994	G933	G872	A812	G751	A689
G1622	G1557	U1307	G1246	G1186	G1122	U1057	A995	G934	U873	G813	G752	A690
C1623	C1558	C1368	G1248	C1187	G1125	G1058	C996	C935	A874	G814	U753	C691
A1624	A1560	G1369	G1249	A1187	A1126	A1059	C997	A936	G875	G754	C755	C692
A1625	G1561	C1310	A1250	C1188	C1127	C1060	C998	C937	A876	U816	C756	A693
A1626	G1562	G1312	C1252	G1128	G1128	G1061	A999	G940	C877	A817	G757	G694
C1627	U1563	U1313	C1253	G1129	U1130	C1063	G1000	U941	C878	G818	G758	G695
G1628	C1564	G1314	G1254	U1131	G1131	U1064	A1001	U942	C879	C819	C759	U696
C1629	U1565	A1315	A1255	G1132	U1132	A1065	C1002	U943	C880	U820	G760	G697
A1630	G1566	G1316	C1256	U1133	G1133	G1066	G1003	U944	U881	U821	C761	A698
C1631	A1567	G1317	U1257	U1134	G1134	G1067	C882	U945	C882	U822	A762	C699
A1632	U1568	G1318	G1258	G1135	C1135	A1068	A1005	G946	A883	U823	A763	C700
C1633	C1569	C1319	A1259	U1136	G1136	G1069	C1006	U947	A886	C825	A764	U701
A1634	A1570	U1320	A1260	C1137	A1137	U1072	A1007	C947	C887	U826	C765	A702
G1635	G1572	G1381	G1261	U1138	A1138	G1073	G1008	C948	C888	U827	C766	A703
C1636	C1573	C1382	U1262	G1139	A1139	G1074	C1009	C949	G889	C828	A767	G704
G1637	U1574	G1383	G1263	U1140	C1140	C1075	U890	G951	U890	C829	G768	C705
G1638	C1575	U1384	C1264	U1141	U1141	U1076	A1012	A952	C891	C830	A769	A706
U1639	G1576	C1385	G1265	G1142	G1142	U1077	G1013	G953	G831	G831	U770	U707
C1640	G1577	U1386	G1266	A1143	A1143	A1078	G1014	U954	A832	C772	C771	G708
C1641	U1578	G1387	U1267	U1144	U1144	G1079	U1015	G955	A833	C773	C773	A709
C1642	U1579	C1388	G1268	C1145	C1145	G1080	A1016	A956	A834	A774	A774	C710
A1643	C1580	G1389	G1269	G1146	C1146	A1081	C1017	G957	U835	G775	G775	A712
G1644	U1581	U1390	C1270	G1147	A1153	C1082	G1018	G958	G836	G776	G776	G713
U1645	C1582	A1391	C1271	G1148	C1154	C1083	U1019	C959	U837	A777	A777	G714
G1646	A1583	U1392	G1272	G1149	G1155	A1084	A1020	U960	A838	G778	G778	U715
U1647	G1584	G1393	G1273	C1150	U1156	C1085	A1021	G961	A839	U779	U779	U716
C1648	A1585	G1394	C1274	U1151	C1157	C1086	A1022	C962	U840	U780	U780	G717
A1649	U1586	A1395	A1275	U1152	A1158	C1087	U1023	G963	G841	G781	A781	A718
C1650	A1587	G1396	U1276	C1153	C1152	A1088	G1024	A964	A842	U782	U782	A719
U1651	C1588	C1397	G1277	A1154	A1153	C1089	A1025	G965	G843	G783	A783	A720
G1652	G1589	G1398	A1278	G1155	C1155	C1090	U1026	A966	G844	U784	U784	C721
C1653	U1591	C1399	G1279	U1156	U1156	C1091	C1027	G967	U845	U785	C722	C723
A1654	U1592	A1400	U1280	C1157	U1157	C1094	G1028	C968	A846	U786	U786	C724
C1655	C1593	G1401	A1281	U1158	A1158	A1095	C1029	U969	A847	A787	A787	G726
U1656	U1594	U1342	A1282	C1159	U1159	A1096	U1030	A970	A848	G788	G788	U727
A1657	A1595	C1343	C1283	C1160	C1160	A1097	C1031	A971	G849	G789	G789	G728
A1658	G1596	G1344	G1284	U1161	U1161	A1098	A1032	C972	C850	A790	A790	A729
G1659	C1598	G1345	A1285	C1162	A1162	G1098	G1033	U973	C851	G791	G791	C730
C1660	U1599	C1346	U1286	U1163	C1163	A1099	U1034	U974	U852	U792	U792	A733
C1661	G1602	G1407	A1287	A1164	C1164	G1102	G1036	C975	C853	G793	G793	G733
C1662	A1603	A1408	A1288	G1165	G1165	G1103	G1037	C976	G854	A794	A794	G734
G1663	U1604	C1349	A1289	U1166	A1166	C1104	U1038	G977	G855	A795	A795	G735
C1664	A1605	G1350	A1290	C1167	A1167	G1104	U1039	U978	A856	A796	A796	G736
G1665	C1606	U1411	G1291	G1168	G1168	U1105	A1039	A979	U857	G797	G797	C737
C1666	U1607	C1412	A1292	C1169	C1169	A1106	G1040	G980	G858	G798	G798	C738
A1667	A1608	U1413	A1293	U1170	U1170	A1107	G1041	C982	U860	U800	U800	G739
G1668	U1609	G1414	G1294	A1171	A1171							
A1669		C1415	U1295									





• Molecule 2: 5S RIBOSOMAL RNA

Chain 9: 13% 69% 14% 5%



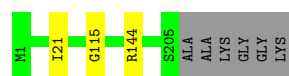
• Molecule 3: 50S ribosomal protein L2

Chain A: 98% ..



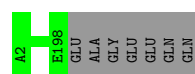
• Molecule 4: 50S ribosomal protein L3

Chain B: 96% ..

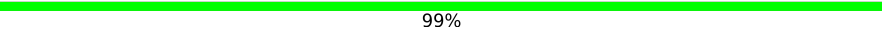


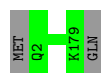
• Molecule 5: 50S ribosomal protein L4

Chain C: 97% .



• Molecule 6: 50S ribosomal protein L5

Chain D:  99%



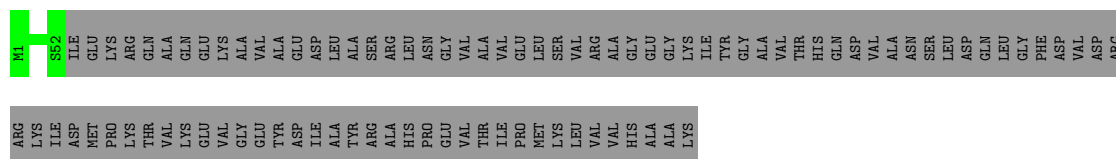
- Molecule 7: 50S ribosomal protein L6

Chain E:  95%

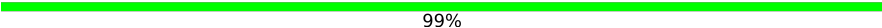


- Molecule 8: 50S ribosomal protein L9

Chain F:  36% 64%



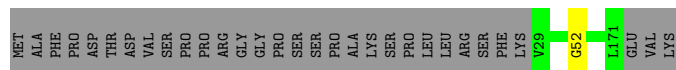
- Molecule 9: 50S ribosomal protein L11

Chain G:  99%



- Molecule 10: 50S ribosomal protein L13

Chain H:  82% 18%



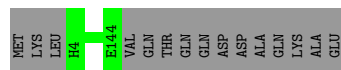
- Molecule 11: 50S ribosomal protein L14

Chain I:  97%



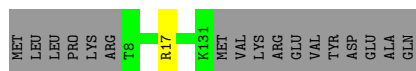
- Molecule 12: 50S ribosomal protein L15

Chain J:  90% 10%

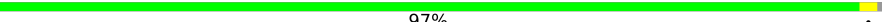


- Molecule 13: ribosomal protein L16

Chain K:  87% 12%

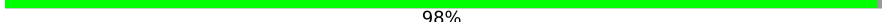


- Molecule 14: 50S ribosomal protein L17

Chain L:  97%



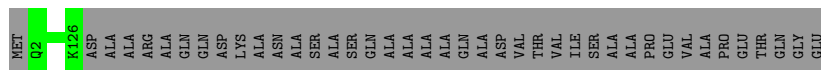
- Molecule 15: 50S ribosomal protein L18

Chain M:  98%

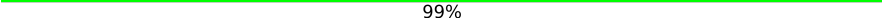


- Molecule 16: 50S ribosomal protein L19

Chain N:  75% 25%



- Molecule 17: 50S ribosomal protein L20

Chain O:  99%

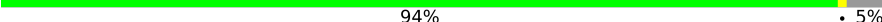


- Molecule 18: 50S ribosomal protein L21

Chain P:  100%

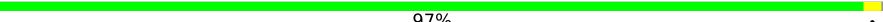
There are no outlier residues recorded for this chain.

- Molecule 19: 50S ribosomal protein L22

Chain Q:  94% 5%

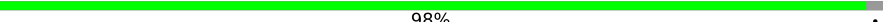


- Molecule 20: 50S ribosomal protein L23

Chain R:  97% ..



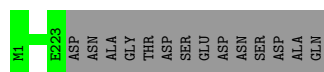
- Molecule 21: 50S ribosomal protein L24

Chain S:  98% .

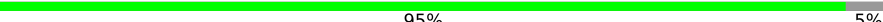


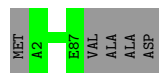
- Molecule 22: 50S ribosomal protein L25

Chain T:  94% 6%



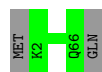
- Molecule 23: 50S ribosomal protein L27

Chain U:  95% 5%



- Molecule 24: 50S ribosomal protein L29

Chain W:  97% .

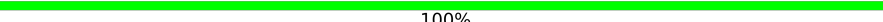


- Molecule 25: 50S ribosomal protein L30

Chain X:  100%

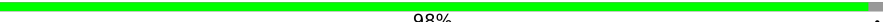
There are no outlier residues recorded for this chain.

- Molecule 26: 50S ribosomal protein L31

Chain Y:  100%

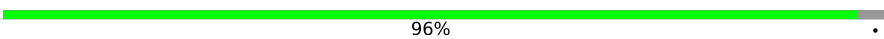
There are no outlier residues recorded for this chain.

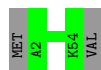
- Molecule 27: 50S ribosomal protein L32

Chain Z:  98% .

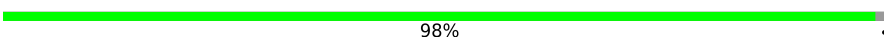


- Molecule 28: 50S ribosomal protein L33

Chain 1:  96% .

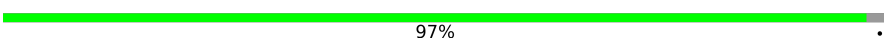


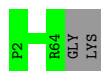
- Molecule 29: 50S ribosomal protein L34

Chain 2:  98% .

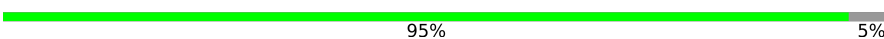


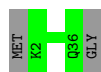
- Molecule 30: 50S ribosomal protein L35

Chain 3:  97% .



- Molecule 31: 50S ribosomal protein L36

Chain 4:  95% 5%



4 Data and refinement statistics

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	168.70 Å 405.00 Å 693.00 Å 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

5.1 Standard geometry

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	0.54	0/66467	0.90	145/103673 (0.1%)
2	9	0.37	0/2813	0.72	0/4384
All	All	0.54	0/69280	0.89	145/108057 (0.1%)

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

There are no bond length outliers.

All (145) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed($^{\circ}$)	Ideal($^{\circ}$)
1	0	2482	A	N9-C1'-C2'	8.91	125.37	112.00
1	0	192	G	C2'-C3'-O3'	8.37	122.06	109.50
1	0	1775	A	C4'-C3'-O3'	-8.06	100.91	113.00
1	0	1938	U	C2'-C3'-O3'	7.89	121.34	109.50
1	0	1710	U	N1-C1'-C2'	7.52	123.28	112.00
1	0	1278	A	C2'-C3'-O3'	7.37	120.56	109.50
1	0	466	A	C4'-C3'-O3'	-7.12	102.31	113.00
1	0	322	A	C4'-C3'-O3'	-7.04	102.44	113.00
1	0	1266	G	N9-C1'-C2'	6.95	122.43	112.00
1	0	583	C	C2'-C3'-O3'	6.91	119.86	109.50
1	0	1715	A	N9-C1'-C2'	6.85	122.27	112.00
1	0	2303	C	C4'-C3'-O3'	-6.84	102.74	113.00
1	0	2664	G	C4'-C3'-O3'	-6.83	102.75	113.00
1	0	581	A	C4'-C3'-O3'	-6.74	102.89	113.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	2496	C	C4'-C3'-O3'	-6.70	102.95	113.00
1	0	2825	A	C4'-C3'-O3'	-6.69	102.97	113.00
1	0	2426	G	C4'-C3'-O3'	-6.66	103.01	113.00
1	0	993	C	N1-C1'-C2'	6.63	121.94	112.00
1	0	468	A	N9-C1'-C2'	6.59	121.89	112.00
1	0	2428	U	C4'-C3'-O3'	-6.55	103.18	113.00
1	0	460	U	N1-C1'-C2'	6.48	123.72	114.00
1	0	2551	A	C4'-C3'-O3'	-6.47	103.29	113.00
1	0	751	G	C4'-C3'-O3'	-6.47	103.30	113.00
1	0	1337	G	N9-C1'-C2'	6.44	121.66	112.00
1	0	2521	A	N9-C1'-C2'	6.42	121.64	112.00
1	0	1775	A	N9-C1'-C2'	6.39	121.58	112.00
1	0	2427	A	O4'-C4'-C3'	-6.32	97.69	104.00
1	0	860	U	N1-C1'-C2'	6.30	121.45	112.00
1	0	869	C	N1-C1'-C2'	6.26	121.39	112.00
1	0	1289	A	C3'-C2'-O2'	6.26	120.09	110.70
1	0	1199	U	C4'-C3'-O3'	-6.21	103.69	113.00
1	0	443	A	C4'-C3'-O3'	-6.20	103.69	113.00
1	0	2482	A	C4'-C3'-O3'	-6.15	103.78	113.00
1	0	804	C	N1-C1'-C2'	6.12	121.18	112.00
1	0	2560	G	N9-C1'-C2'	6.11	121.16	112.00
1	0	1333	G	N9-C1'-C2'	6.09	121.14	112.00
1	0	1473	U	C4'-C3'-O3'	-6.07	103.90	113.00
1	0	805	G	C4'-C3'-O3'	6.05	118.48	109.40
1	0	1772	C	C4'-C3'-O3'	-6.05	103.93	113.00
1	0	2404	A	C2'-C3'-O3'	6.05	118.57	109.50
1	0	700	C	N1-C1'-C2'	6.04	121.05	112.00
1	0	1264	C	N1-C1'-C2'	6.02	121.04	112.00
1	0	1313	U	C2'-C3'-O3'	6.01	122.72	113.70
1	0	582	G	C4'-C3'-O3'	-5.98	104.03	113.00
1	0	579	G	C4'-C3'-O3'	-5.97	104.05	113.00
1	0	2805	G	C5'-C4'-C3'	-5.92	107.12	116.00
1	0	523	A	C4'-C3'-O3'	-5.85	104.22	113.00
1	0	1692	C	C1'-C2'-O2'	5.84	117.17	108.40
1	0	2712	G	C4'-C3'-O3'	-5.83	104.25	113.00
1	0	2707	G	C2'-C3'-O3'	-5.79	105.02	113.70
1	0	1137	A	N9-C1'-C2'	5.78	120.67	112.00
1	0	2794	G	C5'-C4'-C3'	-5.78	107.33	116.00
1	0	2004	U	C1'-C2'-O2'	5.76	117.04	108.40
1	0	801	A	C4'-C3'-O3'	-5.75	104.37	113.00
1	0	842	A	C4'-C3'-O3'	-5.74	104.39	113.00
1	0	1634	A	C2'-C3'-O3'	5.71	118.06	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	518	A	N9-C1'-C2'	5.70	120.55	112.00
1	0	2004	U	O3'-P-O5'	5.69	112.54	104.00
1	0	2093	G	C2'-C3'-O3'	5.69	122.23	113.70
1	0	1342	U	N1-C1'-C2'	5.62	120.43	112.00
1	0	1974	U	N1-C1'-C2'	5.62	120.43	112.00
1	0	1619	A	N9-C1'-C2'	5.61	120.42	112.00
1	0	218	A	N9-C1'-C2'	5.61	120.41	112.00
1	0	1690	U	C2'-C3'-O3'	-5.60	105.30	113.70
1	0	2549	G	N9-C1'-C2'	5.60	120.39	112.00
1	0	1811	A	C4'-C3'-O3'	-5.59	104.61	113.00
1	0	2481	G	C2'-C3'-O3'	-5.59	105.31	113.70
1	0	2254	C	C4'-C3'-O3'	-5.59	104.61	113.00
1	0	2759	U	C2'-C3'-O3'	-5.58	105.34	113.70
1	0	863	C	C4'-C3'-O3'	-5.56	104.66	113.00
1	0	340	G	N9-C1'-C2'	5.56	120.34	112.00
1	0	842	A	N9-C1'-C2'	5.55	120.33	112.00
1	0	711	C	C4'-C3'-O3'	-5.55	104.68	113.00
1	0	879	A	C2'-C3'-O3'	-5.50	105.45	113.70
1	0	956	A	C2'-C3'-O3'	-5.47	105.49	113.70
1	0	588	G	N9-C1'-C2'	5.47	120.20	112.00
1	0	1749	G	C2'-C3'-O3'	-5.46	105.51	113.70
1	0	2842	C	N1-C1'-C2'	5.45	120.18	112.00
1	0	859	U	N1-C1'-C2'	-5.45	103.83	112.00
1	0	2235	G	C4'-C3'-O3'	-5.45	104.83	113.00
1	0	1616	C	C3'-C2'-O2'	5.45	118.87	110.70
1	0	2009	U	C2'-C3'-O3'	-5.42	105.58	113.70
1	0	443	A	N9-C1'-C2'	5.41	120.11	112.00
1	0	1211	G	N9-C1'-C2'	5.38	120.08	112.00
1	0	2470	U	C4'-C3'-O3'	-5.37	104.94	113.00
1	0	1202	U	C4'-C3'-O3'	-5.37	104.94	113.00
1	0	1285	A	C2'-C3'-O3'	-5.36	105.67	113.70
1	0	1400	A	C4'-C3'-O3'	-5.36	104.96	113.00
1	0	2044	G	N9-C1'-C2'	5.36	122.04	114.00
1	0	1337	G	C4'-C3'-O3'	-5.35	104.97	113.00
1	0	2424	G	C4'-C3'-O3'	-5.34	104.99	113.00
1	0	955	G	C3'-C2'-O2'	5.33	118.70	110.70
1	0	2496	C	N1-C1'-C2'	5.33	120.00	112.00
1	0	2823	G	C4'-C3'-O3'	-5.33	105.00	113.00
1	0	226	C	C4'-C3'-O3'	-5.33	105.01	113.00
1	0	922	A	C4'-C3'-O3'	-5.33	105.01	113.00
1	0	1313	U	C4'-C3'-O3'	-5.30	105.05	113.00
1	0	2426	G	N9-C1'-C2'	5.29	119.93	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	59	G	C4'-C3'-O3'	-5.29	105.07	113.00
1	0	985	G	N9-C1'-C2'	5.28	119.92	112.00
1	0	1820	G	C2'-C3'-O3'	5.28	121.62	113.70
1	0	310	A	N9-C1'-C2'	5.25	119.88	112.00
1	0	2848	A	C4'-C3'-O3'	-5.24	105.14	113.00
1	0	468	A	C4'-C3'-O3'	-5.23	105.16	113.00
1	0	787	A	C4'-C3'-O3'	-5.21	105.19	113.00
1	0	1338	G	C2'-C3'-O3'	-5.21	105.89	113.70
1	0	2587	G	O4'-C1'-C2'	-5.21	102.39	107.60
1	0	2266	A	C4'-C3'-O3'	-5.20	105.20	113.00
1	0	840	U	N1-C1'-C2'	5.20	119.80	112.00
1	0	2501	U	C4'-C3'-O3'	-5.18	105.22	113.00
1	0	1935	A	N9-C1'-C2'	5.18	119.77	112.00
1	0	1634	A	N9-C1'-C2'	5.18	121.77	114.00
1	0	177	U	N1-C1'-C2'	5.17	119.76	112.00
1	0	1248	G	C4'-C3'-O3'	-5.16	105.26	113.00
1	0	1030	U	N1-C1'-C2'	5.16	119.73	112.00
1	0	162	C	C3'-C2'-O2'	5.15	118.43	110.70
1	0	2827	G	N9-C1'-C2'	5.15	119.72	112.00
1	0	2229	G	O4'-C4'-C3'	5.14	109.14	104.00
1	0	2663	U	C5'-C4'-C3'	-5.14	108.29	116.00
1	0	2551	A	N9-C1'-C2'	5.14	119.71	112.00
1	0	25	U	C2'-C3'-O3'	-5.12	106.01	113.70
1	0	1164	C	C4'-C3'-O3'	-5.11	105.34	113.00
1	0	1249	G	C4'-C3'-O3'	-5.10	105.34	113.00
1	0	171	G	C4'-C3'-O3'	-5.10	105.35	113.00
1	0	650	U	N1-C1'-C2'	5.10	119.65	112.00
1	0	2018	G	C4'-C3'-O3'	-5.10	105.35	113.00
1	0	1659	G	C2'-C3'-O3'	-5.08	106.07	113.70
1	0	1466	C	C4'-C3'-O3'	-5.08	105.38	113.00
1	0	1633	C	C2'-C3'-O3'	-5.08	106.08	113.70
1	0	789	G	C3'-C2'-O2'	5.07	118.31	110.70
1	0	2204	A	C4'-C3'-O3'	-5.07	105.40	113.00
1	0	2826	C	C4'-C3'-O3'	-5.07	105.40	113.00
1	0	988	G	C3'-C2'-O2'	5.06	118.29	110.70
1	0	1965	U	N1-C1'-C2'	5.06	119.59	112.00
1	0	85	C	C3'-C2'-O2'	5.06	118.29	110.70
1	0	820	U	C4'-C3'-O3'	-5.06	105.42	113.00
1	0	863	C	N1-C1'-C2'	5.05	119.57	112.00
1	0	2564	U	C4'-C3'-O3'	-5.04	105.44	113.00
1	0	1355	A	C4'-C3'-O3'	-5.03	105.45	113.00
1	0	2161	C	C2'-C3'-O3'	5.03	121.24	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	2546	G	C4'-C3'-O3'	-5.03	105.46	113.00
1	0	860	U	C4'-C3'-O3'	-5.02	105.47	113.00
1	0	498	C	C1'-C2'-O2'	5.02	115.93	108.40
1	0	38	G	C2'-C3'-O3'	-5.00	106.19	113.70
1	0	2405	A	C3'-C2'-O2'	5.00	118.20	110.70

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
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

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Mol	Chain	Res	Type	Group
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
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

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Mol	Chain	Res	Type	Group
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
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

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Mol	Chain	Res	Type	Group
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
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

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Mol	Chain	Res	Type	Group
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
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

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Mol	Chain	Res	Type	Group
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
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

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Mol	Chain	Res	Type	Group
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	4242	0
2	9	2516	0	1286	147	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
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

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
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	4380	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 (4380) 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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:698:A:HO2'	1:0:700:C:H5	1.17	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:597:U:H3	1:0:683:A:HO2'	1.20	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:930:A:H8	2:9:82:U:HO2'	1.26	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:976: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:1287:A:N1	1:0:1661:C:O2'	2.24	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:Cl'	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:1925: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
1:0:1688: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:2447:G:HO2'	1:0:2448:A:H5''	1.64	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
2:9:102:A:HO2'	2:9:103:A:H5'	1.66	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:742: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:971:A:O2'	1:0:973:U:OP1	2.21	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:976: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
1:0:2623: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:698:A:O2'	1:0:700:C:H5	1.87	0.53
1:0:709:A:O2'	1:0:1639:U:H4'	2.07	0.53
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:785:U:H5'	1:0:1368:G:HO2'	1.71	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:2007:G:O2'	1:0:2008:C:O4'	2.28	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
1:0:1540:C:HO2'	1:0:1541:G:H5'	1.75	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:173:A:O2'	1:0:174:A:OP1	2.26	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
1:0:644: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:1362: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:930:A:H8	2:9:82:U:O2'	1.89	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:1209:G:O2'	1:0:1210:C:H5'	2.11	0.49
1:0:1263:G:O2'	1:0:1264:C:O5'	2.30	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:1038:U:H3	1:0:2466:G:HO2'	1.60	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
1:0:2182: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
1:0:314:G:O2'	1:0:315:G:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:1634:A:O2'	1:0:1635:G:OP1	2.27	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
1:0:1645: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
1:0:837:U:C4	1:0:838:A:N6	2.81	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:640:C:O2'	1:0:641:G:H5'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:1780: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:1262: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
1:0:439: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:178: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:2045:A:O2'	1:0:2421:C:OP2	2.28	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:2432: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:2239:C:HO2'	1:0:2367:A:HO2'	1.65	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
1:0:2841:U:O2'	1:0:2843:A:O4'	2.32	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
1:0:1220:G:N2	1:0:1221:C:C2	2.86	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
2:9:75:A:HO2'	2:9:76:U:C5'	2.31	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
1:0:588: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:2452: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:2696: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:1435: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:1942: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
1:0:709: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:1810:U:HO2'	1:0:1811:A:H8	1.69	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
1:0:1366: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
1:0:1001:A:HO2'	1:0:1167:A:HO2'	1.62	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:1656: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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:992:A:N1	1:0:2010:G:O2'	2.52	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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%)	514 (18%)	5 (0%)
2	9	117/124 (94%)	17 (14%)	1 (0%)
All	All	2874/3004 (95%)	531 (18%)	6 (0%)

All (531) 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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
1	0	1840	A
1	0	1884	A
1	0	1889	G
1	0	1909	U
1	0	1919	A
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
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

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Mol	Chain	Res	Type
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
1	0	2795	A
1	0	2805	G
1	0	2807	U
1	0	2808	U
1	0	2809	A
1	0	2810	A
1	0	2811	G
1	0	2825	A

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Mol	Chain	Res	Type
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 (6) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
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 ⓘ

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

5.5 Carbohydrates [i](#)

There are no oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

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	1.33	5 (13%)	55,55,55	1.62	7 (12%)

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	-	-	4/18/79/79	0/3/3/3

All (5) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
32	0	2881	MUL	C5-C14	4.41	1.59	1.56
32	0	2881	MUL	C12-C11	3.24	1.58	1.55
32	0	2881	MUL	O3-C14	2.50	1.50	1.46
32	0	2881	MUL	C17-C10	2.08	1.57	1.53
32	0	2881	MUL	C10-C11	2.04	1.58	1.56

All (7) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	0	2881	MUL	O3-C21-C22	5.48	119.56	110.52
32	0	2881	MUL	C18-C12-C11	5.26	111.76	108.16
32	0	2881	MUL	C16-C6-C7	-2.99	105.97	110.33
32	0	2881	MUL	C9-C10-C11	2.92	115.19	112.46

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	0	2881	MUL	C17-C10-C11	-2.73	110.00	112.20
32	0	2881	MUL	O2-C11-C10	2.59	114.31	110.91
32	0	2881	MUL	C7-C8-C9	2.22	117.00	112.95

There are no chirality outliers.

All (4) torsion outliers are listed below:

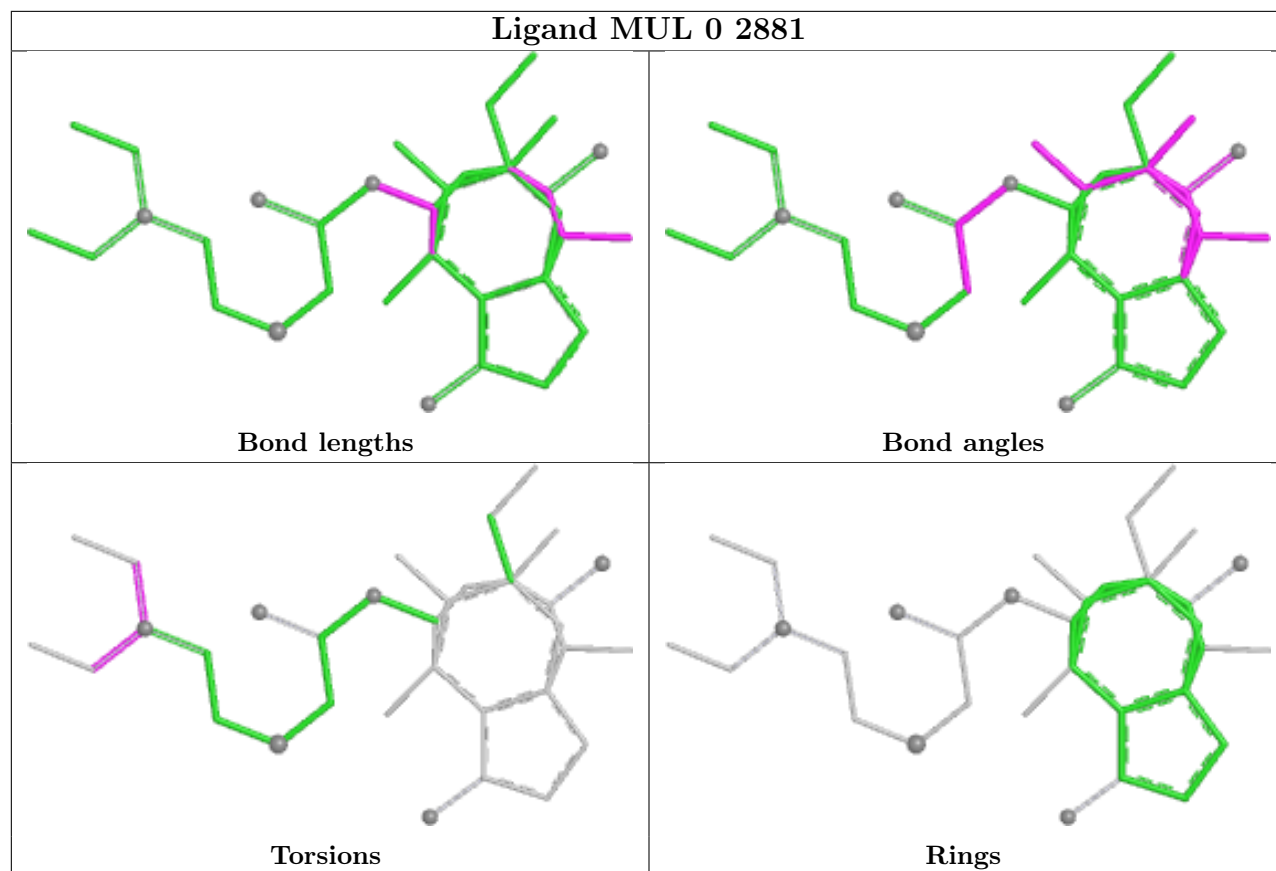
Mol	Chain	Res	Type	Atoms
32	0	2881	MUL	C28-C27-N1-C24
32	0	2881	MUL	C28-C27-N1-C25
32	0	2881	MUL	C26-C25-N1-C27
32	0	2881	MUL	C26-C25-N1-C24

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 than 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

6.1 Protein, DNA and RNA chains

EDS was not executed - this section is therefore empty.

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

EDS was not executed - this section is therefore empty.

6.3 Carbohydrates

EDS was not executed - this section is therefore empty.

6.4 Ligands

EDS was not executed - this section is therefore empty.

6.5 Other polymers

EDS was not executed - this section is therefore empty.