



Full wwPDB X-ray Structure Validation Report ⓘ

Feb 15, 2017 – 07:57 am GMT

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

<http://wwpdb.org/validation/2016/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

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

MolProbity : 4.02b-467
Mogul : 1.7.2 (RC1), CSD as538be (2017)
Xtriage (Phenix) : **NOT EXECUTED**
EDS : **NOT EXECUTED**
Percentile statistics : 20161228.v01 (using entries in the PDB archive December 28th 2016)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : recalc28949

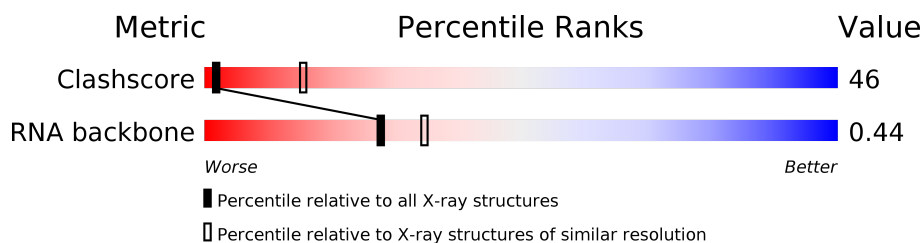
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.50 Å.


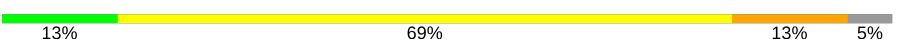
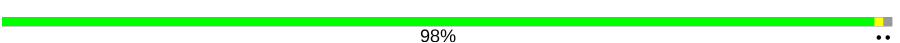
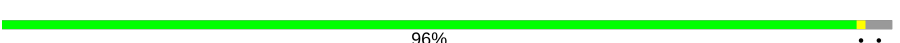

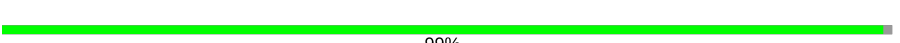
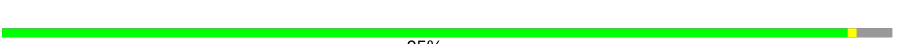

Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
Clashscore	112137	1322 (3.60-3.40)
RNA backbone	2435	1024 (4.10-2.86)

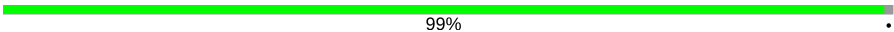

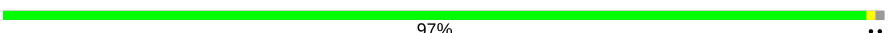











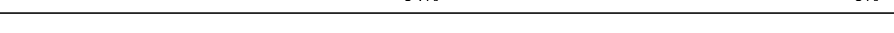
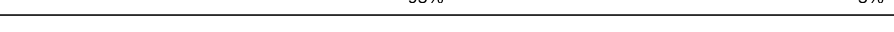
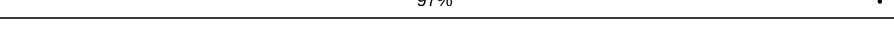
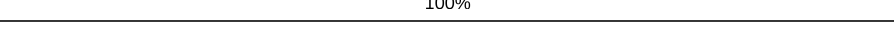
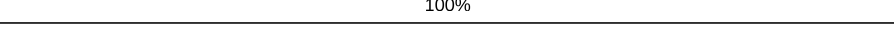
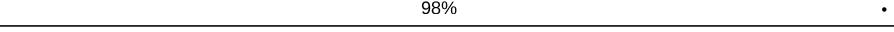
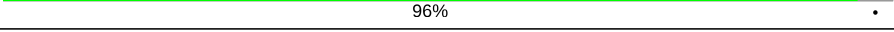
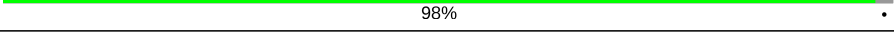
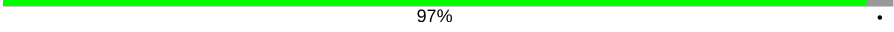
The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. A grey 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 $\leq 5\%$. The upper red bar (where present) indicates the fraction of residues that have poor fit to the electron density. The numeric value is given above the bar.

Note EDS was not executed.

Mol	Chain	Length	Quality of chain
1	0	2880	
2	9	124	
3	A	274	
4	B	211	
5	C	204	
6	D	180	
7	E	185	
8	F	146	

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Mol	Chain	Length	Quality of chain
9	G	144	
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	0	0	177
			177	177			

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

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

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

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

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

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

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

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

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

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

- Molecule 13 is a protein called ribosomal protein L16.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

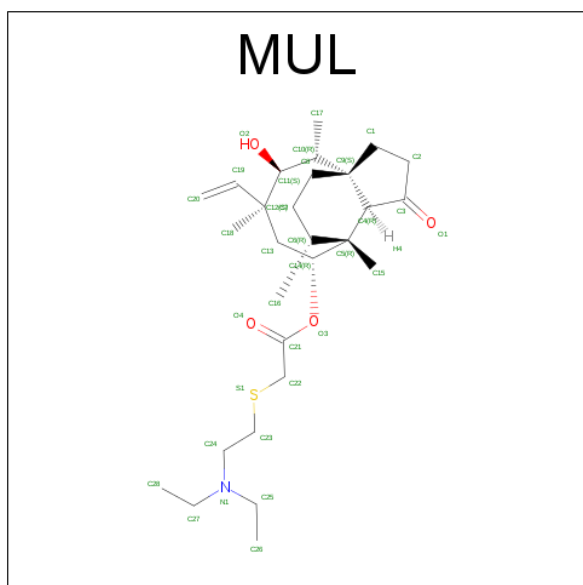
- Molecule 30 is a protein called 50S ribosomal protein L35.

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

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

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

- Molecule 32 is TIAMULIN (three-letter code: MUL) (formula: C₂₈H₄₇NO₄S).



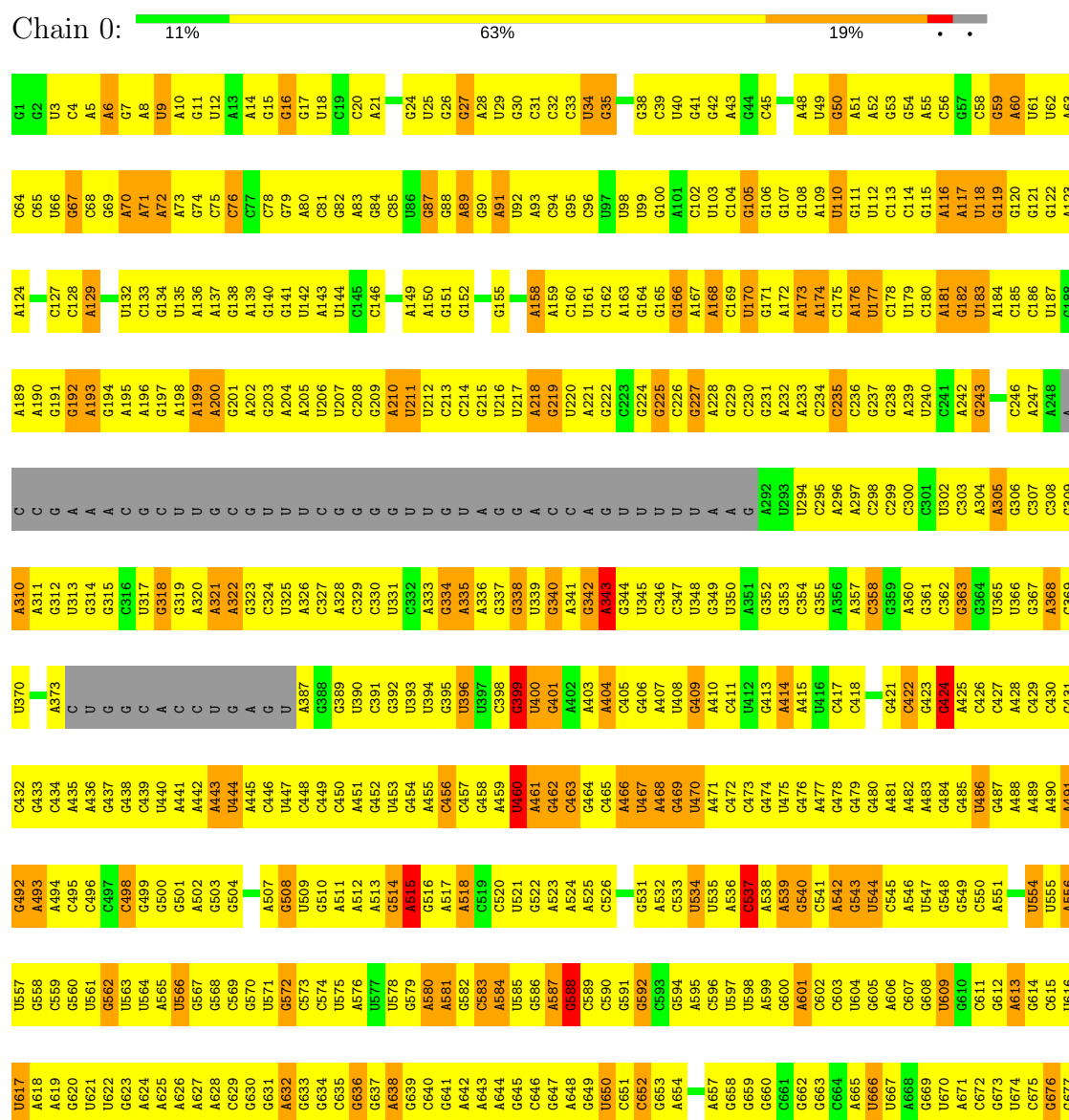
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
32	0	1	Total C N O S 34 28 1 4 1	0	0

3 Residue-property plots

These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. A red dot above a residue indicates a poor fit to the electron density ($RSRZ > 2$). 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.

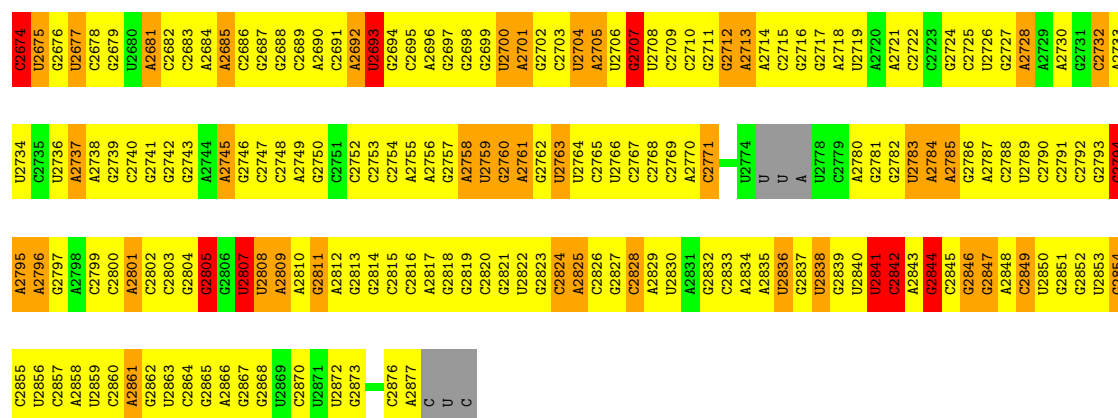
Note EDS was not executed.

• Molecule 1: 23S RIBOSOMAL RNA



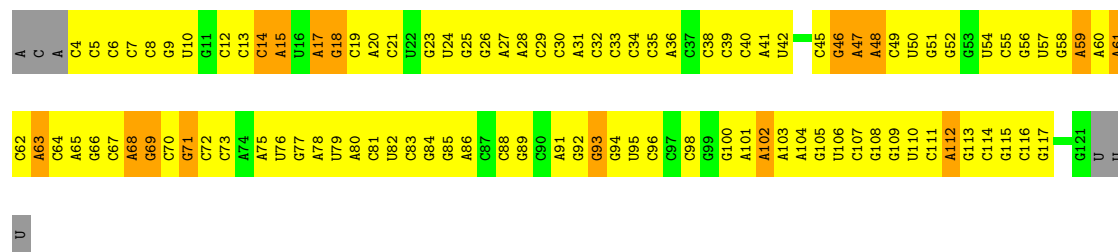
A1610	G1545	U1481	A1416	G1356	G1296	C1234	U1172	G1110	U1044	G983	A922	G861	A801	A740	G678
U1611	C1546	U1482	C1417	U1357	A1297	C1235	G1173	C1111	G1045	A984	A923	A862	A802	G741	C679
U1612	U1547	G1483	U1417	C1358	G1298	G1236	G1174	U1112	U1046	G985	C924	C863	C803	A742	U680
G1613	U1548	G1484	U1424	G1359	G1299	G1237	A1175	C1113	G1047	A986	U925	C864	C804	A743	A681
C1614	C1549	U1485	G1425	G1360	A1230	A1239	U1176	A1114	U1048	G987	C926	A865	G805	C744	G682
G1615	U1550	G1486	G1426	G1361	U1301	G1240	U1177	C1115	C1049	G988	C927	U866	A806	C745	A683
C1616	G1552	C1487	G1427	A1362	C1302	G1241	U1178	U1116	U1052	G989	C928	G867	A807	G746	C684
G1617	G1553	G1488	G1428	C1363	U1303	A1242	U1179	G1117	C1053	A990	A929	U868	C808	A747	U685
U1618	U1554	U1489	A1429	C1364	U1304	G1243	U1182	G1118	G1053	A991	A930	C869	C809	U748	C686
A1619	A1555	G1490	G1430	U1365	C1305	G1244	C1183	U1119	C1054	A992	C931	U870	U810	C749	G687
C1620	A1556	C1491	A1431	U1366	U1306	G1245	G1184	C1120	A1055	C993	C932	U871	G811	C750	A688
G1621	G1557	U1492	G1432	A1367	U1307	U1246	C1185	G1121	U1056	A994	C933	G872	G812	G751	A689
C1622	C1558	U1493	A1433	G1368	C1308	G1248	G1186	U1122	A1057	A995	C934	U873	A813	G752	A690
G1623	G1559	U1494	U1434	G1369	G1309	G1249	A1187	G1125	G1058	C996	C935	A874	G814	U753	C691
A1624	A1560	G1495	G1435	U1370	C1310	A1250	U1188	A1126	A1059	C997	A936	G875	A815	U754	C692
U1625	U1561	G1496	A1436	G1371	C1311	G1251	G1189	C1127	C1060	C998	C937	A876	U816	C755	A693
A1626	A1562	A1497	A1437	A1372	C1312	C1252	C1190	G1128	U1061	A999	U938	G877	A817	C756	G694
C1627	U1563	G1498	G1438	G1373	U1313	C1253	G1191	A1129	G1063	G1000	G940	U878	G818	U757	G695
G1628	U1564	C1501	G1439	G1374	A1314	G1254	A1192	U1130	C1064	A1001	U941	A879	C819	G758	U696
U1629	G1565	G1502	G1440	C1375	A1315	A1255	G1193	G1131	A1065	C1002	U942	G880	U820	C759	G697
A1630	G1566	G1503	A1441	C1376	G1316	C1256	U1194	G1132	U1066	C1003	U943	U881	A821	U760	A698
C1631	A1567	U1504	G1442	G1377	G1317	U1257	U1195	G1133	G1067	A1004	A944	C882	U822	A762	C700
A1632	A1568	U1505	G1443	A1378	A1318	G1258	G1196	C1134	A1068	U1005	C945	A883	U823	A763	U701
C1633	A1569	C1506	C1444	A1379	C1319	A1259	U1197	C1135	G1069	C1006	U946	U884	U824	A764	A702
A1634	U1507	U1445	A1445	C1380	A1320	A1260	C1198	G1136	U1072	A1007	C947	A886	C825	A765	A703
G1635	G1508	U1446	U1446	G1381	A1321	G1261	U1199	A1137	U1073	G1008	C948	G887	U826	C766	G704
U1636	U1509	U1447	U1447	G1382	G1322	U1262	G1200	A1138	G1074	C1009	C949	G888	C827	A766	C705
G1637	A1510	G1448	G1448	C1383	G1323	A1263	G1201	U1139	G1075	U1010	G950	G889	C828	G767	U706
C1638	G1499	A1449	C1449	G1384	G1324	C1264	U1202	A1011	C1076	A1012	C951	U890	C829	A770	A707
U1639	U1512	G1450	G1325	U1325	G1325	G1265	A1203	U1141	U1077	G1013	A952	A891	C830	U771	G708
G1640	U1513	C1451	U1326	C1326	U1326	G1266	G1204	G1142	A1077	G1014	U954	G	A832	C772	A709
C1641	C1514	A1452	G1327	G1327	A1267	A1267	G1205	A1143	U1078	U1015	C955	G	A833	C773	G710
G1642	U1515	U1453	C1328	C1328	U1268	U1268	G1206	U1144	A1080	C1016	G956	G	A834	A774	C711
A1643	A1516	G1454	U1329	G1389	G1269	G1270	U1207	C1145	G1082	C1017	C957	G	U835	U775	A712
G1644	C1517	C1455	G1390	C1390	G1330	C1270	A1208	U1146	A1083	C1018	C958	C	U836	G776	G713
U1645	U1518	G1456	G1331	G1331	G1332	C1271	G1209	G1147	C1083	U1019	C959	U	U837	A777	G714
A1646	A1583	A1457	A1457	A1391	G1332	G1272	C1210	G1148	C1084	A1020	U960	A	A838	G778	U715
U1647	G1584	U1458	A1458	G1393	G1333	G1273	G1211	G1149	U1084	A1021	G961	U	U839	U779	U716
C1648	U1585	U1459	U1459	G1394	A1334	C1274	U1212	C1150	G1085	A1022	C962	C	U840	U780	G717
A1649	A1586	G1460	G1460	A1395	A1335	A1275	U1213	U1151	C1086	U1023	C963	C	G841	G781	A718
U1650	A1587	C1461	C1461	C1396	G1336	U1276	C1214	C1152	C1087	U1024	A964	A	A842	U782	A719
C1651	C1524	A1462	A1462	A1397	G1337	G1277	A1215	A1153	A1088	G1025	G965	G	G843	G783	A720
G1652	U1588	U1463	A1463	G1398	G1338	A1278	C1216	A1154	C1089	U1026	A966	C	G844	U784	C721
C1653	U1591	A1464	A1464	C1399	U1339	G1279	U1217	G1155	C1090	U1027	C967	U	U845	U785	C722
U1592	C1528	G1465	G1465	A1400	C1340	U1280	C1218	U1156	C1091	C1028	C968	U	A846	U786	G723
C1593	U1529	C1466	G1466	G1401	G1341	A1281	C1219	G1157	C1094	G1029	C969	A	C847	U787	U727
U1594	U1530	U1467	U1467	G1402	U1342	A1282	G1220	U1158	A1095	U1030	A970	C	A848	G788	G728
A1595	A1595	A1468	A1468	U1403	C1343	C1283	C1221	U1159	A1096	C1031	A971	C	G849	A790	A729
C1598	G1533	U1469	U1469	C1404	C1344	G1284	G1222	C1160	A1097	A1032	C972	A911	C850	U791	G730
G1599	G1533	G1470	G1470	A1405	G1345	A1285	U1223	U1161	G1098	G1033	U973	A912	C851	U792	U728
U1600	U1536	A1471	A1471	A1406	U1346	U1286	A1224	A1162	U1099	U1034	C974	A913	U852	G793	A733
C1661	G1537	G1472	G1472	G1407	C1347	A1287	G1225	C1163	U1102	G1036	C975	C914	C853	A794	G734
G1662	U1537	U1473	U1473	A1408	C1348	A1288	A1226	C1164	U1037	C915	C976	C915	G854	U795	G735
A1603	A1538	A1474	A1474	U1409	A1349	A1289	A1227	G1165	G1103	U1037	G977	U916	G855	A796	G736
G1664	U1539	U1475	U1475	U1410	G1350	A1290	G1228	A1166	G1104	U1038	U978	U917	A856	U797	G737
A1605	C1540	C1411	C1411	C1411	G1351	G1291	C1229	A1167	U1105	A1039	A979	A918	U857	G798	G738
C1666	G1541	C1412	C1412	C1412	G1352	A1292	C1230	G1168	U1106	A1040	C980	U919	G858	G799	G739
A1667	A1607	U1478	U1478	U1413	A1353	A1293	A1231	C1169	A1107	G1041	C982	G920	U859	U800	G739
G1668	G1543	G1479	G1479	G1414	G1294	G1294	U1232	U1170	U1107	U1107	U1107	U1107	U1107	U1107	U1107
A1669	G1609	A1544	G1480	C1415	A1355	U1295	A1233	A1171	U1107	U1107	U1107	U1107	U1107	U1107	U1107

G2612	A2429	C2491	G2368	C2243	U2178	G	G2053	G1983	U1856	G1792	G1731	G1670
A2613	A2430	G2492	U2369	C2244	U2181	C	A2054	U1994	G1857	A1793	U1732	A1671
A2614	G2431	G2493	G2310	A2245	A2182	G	G2055	U1995	A1858	A1794	C1733	C1672
A2615	A2432	C2494	U2311	A2246	A2187	A2117	C2056	A1996	A1859	C1795	C1734	C1673
A2616	G2433	G2495	A2312	A2247	C2183	A2118	U2057	A1997	A1860	A1796	G1735	C1674
G2617	G2434	C2496	G2313	A2248	C2184	A2119	U2058	G1937	G1861	G1797	G1736	C1675
A2618	C2435	A2497	A2314	U2249	C2185	A2120	U2059	U1998	C1862	G1798	U1676	U1677
G2619	U2436	G2498	G2315	G2250	G2186	G2122	A2060	U2000	U1863	A1799	U1739	G1677
G2620	G2437	C2499	G2316	U2251	A2191	G2123	C2061	G2001	G1864	A1800	G1738	G1678
G2621	U2438	G2500	G2317	A2252	C2124	C2124	U2062	A2002	C1941	C1801	G1740	U1679
G2622	U2439	U2501	U2318	A2253	C2125	C2125	A2063	A2003	G1865	C1802	G1741	U1680
A2623	G2440	G2502	G2319	A2254	C2126	U	U2064	A1943	A1867	G1742	G1742	A1681
G2624	U2441	G2503	G2320	G2255	C2127	U	A2065	U2005	A1868	G1743	G1743	A1682
U2625	C2442	G2504	C2321	G2256	C2128	U	G2066	G2006	A1869	G1744	G1744	G1683
U2626	G2443	G2505	U2322	G2257	U2196	U	U2067	G2007	U1870	A1806	G1806	A1684
G2627	C2444	C2506	U2323	G2258	U2197	G	C2068	C2008	U1871	C1745	A1807	A1685
G2628	U2445	G2507	G2324	G2259	U2198	G	U2069	U2009	G1947	A1746	C1808	A1686
U2629	C2446	U2508	A2325	G2260	C2199	G2132	G2070	G2010	A1949	U1747	G1809	C1687
G2630	G2447	A2509	C2326	C2262	G2200	G2133	G2071	U2011	C1950	U1748	U1811	U1688
A2631	U2448	G2510	U2327	C2263	G2201	A2012	C2072	A2012	C1951	G1749	A1812	U1689
G2632	G2449	G2511	G2328	G2264	G2202	U2138	A2073	A2013	A1952	U1750	U1813	U1690
G2633	U2450	A2512	C2329	A2265	G2203	G2139	U2074	A2014	A1953	A1751	A1751	C1691
U2634	A2451	G2513	G2330	A2266	A2204	G2140	U2075	G2015	A1954	U1752	U1752	G1692
A2635	U2452	G2514	A2331	A2267	C2205	A	G2076	A2016	A1883	G1753	G1815	A1693
G2636	C2453	U2515	G2332	G2268	C2206	G	G2077	U2017	A1884	G1754	G1816	A1694
G2637	G2454	G2516	A2333	U2270	G2207	G	G2078	G2018	C1885	G1755	U1817	U1695
G2638	A2455	G2517	C2334	C2271	U2208	C	A2079	C2019	G1886	C1756	G1818	U1696
U2639	G2456	C2518	U2335	G2272	U2209	A	U2080	G2020	U1887	G1757	U1819	C1696
G2640	A2457	G2519	G2336	C2273	C2210	G	U2081	G2021	A1888	G1760	G1820	U1697
A2641	U2458	C2520	A2337	U2274	C2211	C	C2082	C2022	C1889	G1761	A1821	C1698
G2642	G2459	U2521	G2338	C2275	U2212	G	G2083	C2023	C1890	G1762	C1822	A1699
G2643	U2460	G2522	A2339	A2276	G2213	U	G2084	U2024	G1892	C1763	G1823	C1700
A2644	G2461	G2523	C2340	C2277	U2214	G	G2085	A2025	A1965	A1764	C1824	C1701
G2645	U2462	U2524	G2341	U2278	G2215	U	U2086	A2026	C1966	A1765	C1825	C1702
G2646	A2463	G2525	U2342	A2280	C2217	G	U2087	C2027	U1900	G1766	U1826	C1703
A2647	G2464	U2526	G2343	C2281	U2218	A	U2088	C2028	A1901	C1767	C1827	G1704
U2648	A2465	G2527	A2344	G2282	U2219	A	G2089	G2029	G1969	U1705	C1828	U1705
G2649	G2466	U2528	G2345	U2283	U2220	U	C2091	U2030	C1908	A1706	C1829	A1706
U2651	U2467	G2529	A2346	U2284	G2221	A	U2092	A2031	U1909	A1707	C1830	A1707
G2652	U2470	G2530	G2347	U2285	U2222	C2157	G2093	G2032	A1910	U1768	G1831	C1708
A2653	U2471	U2531	A2348	G2286	U2223	C2158	C2094	C2033	A1911	U1770	G1832	C1709
G2654	U2472	G2532	G2349	G2287	U2224	A2159	G2095	A2034	G1912	C1772	C1772	U1710
G2655	G2473	U2533	G2350	A2288	U2225	C2160	U2096	G2035	G1913	C1773	C1773	C1711
G2656	U2474	G2534	G2351	A2289	A2226	C2161	A2097	G2036	U1914	A1774	A1774	G1712
G2657	C2475	U2535	A2352	U2290	C2227	C2162	G	A2037	A1915	G1775	G1775	G1713
A2658	A2476	G2536	G2353	C2292	U2228	U2163	U2098	C2038	G1916	A1776	A1776	A1714
G2659	U2477	C2537	G2354	C2293	G2229	G2164	A	G2039	C1917	U1777	U1777	A1715
G2660	G2478	U2538	A2355	U2294	G2230	A2165	U	A2040	G1918	U1778	A1778	G1716
U2661	U2479	G2539	A2356	G2295	G2231	G2166	A	A2041	A1919	C1779	A1780	A1718
G2662	A2480	U2540	A2357	U2296	G2232	A2167	G2103	A2042	A1921	C1781	G1781	G1719
G2663	G2481	U2541	C2358	G2297	G2233	A2168	C2104	A2043	U1922	A1782	A1782	G1720
G2664	A2482	U2542	U2359	U2298	G2234	A2169	U2105	G2044	U1923	G1783	G1783	G1721
G2665	U2483	G2543	C2360	A2299	G2235	A2170	G2106	A2045	C1924	C1784	C1784	U1722
G2666	C2484	A2544	G2361	G2300	U2236	C2171	G2107	C2046	G1925	U1785	U1785	U1723
G2667	U2485	U2545	G2362	A2301	U2237	U2171	G2108	C2047	G1926	G1786	C1786	C1724
G2668	G2486	G2546	G2363	G2302	G2238	G2173	A2109	C2048	U1927	U1787	U1787	G1725
G2669	U2487	U2547	C2364	U2303	G2239	G2174	C2110	C2049	G1928	C1788	C1788	C1726
G2670	G2488	G2548	U2365	C2304	C2240	A2175	C	U2050	U1929	U1789	U1789	C1727
G2671	U2489	U2549	U2366	C2305	U2241	C	U2051	U2051	C1930	G1790	G1790	G1730
A2611	U2490	G2550	A2367	A2307	C2242	U2177	G2052	G2052	G1931	C1791	C1791	G1730



• Molecule 2: 5S RIBOSOMAL RNA

Chain 9: 13% 69% 13% 5%



• Molecule 3: 50S ribosomal protein L2

Chain A: 98% ..



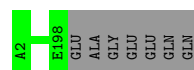
• Molecule 4: 50S ribosomal protein L3

Chain B: 96% ..



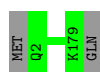
• Molecule 5: 50S ribosomal protein L4

Chain C: 97% .



• Molecule 6: 50S ribosomal protein L5

Chain D: 99% .



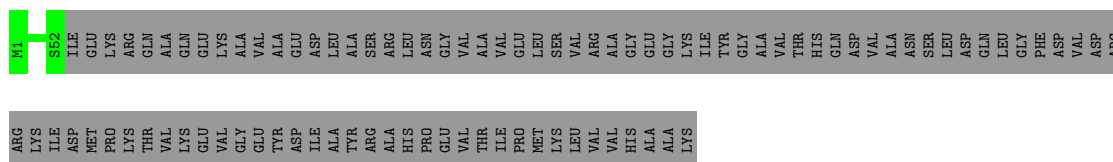
- Molecule 7: 50S ribosomal protein L6

Chain E:  95% ..



- Molecule 8: 50S ribosomal protein L9

Chain F:  36% 64%



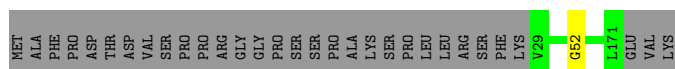
- Molecule 9: 50S ribosomal protein L11

Chain G:  99%



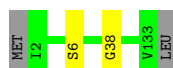
- Molecule 10: 50S ribosomal protein L13

Chain H:  82% 18%



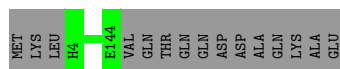
- Molecule 11: 50S ribosomal protein L14

Chain I: 97%



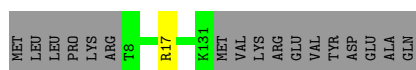
- Molecule 12: 50S ribosomal protein L15

Chain J:  90% 10%



- Molecule 13: ribosomal protein L16

Chain K:  87% • 12%



- Molecule 14: 50S ribosomal protein L17

Chain L: 97%



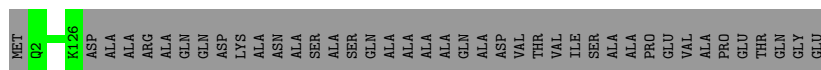
- Molecule 15: 50S ribosomal protein L18

Chain M: 98%



- Molecule 16: 50S ribosomal protein L19

Chain N: 75%



- 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%



- Molecule 20: 50S ribosomal protein L23

Chain R: 97%



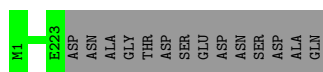
- Molecule 21: 50S ribosomal protein L24

Chain S:  98% .



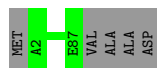
- Molecule 22: 50S ribosomal protein L25

Chain T:  94% 6%



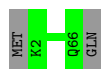
- Molecule 23: 50S ribosomal protein L27

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% .



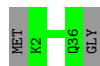
- Molecule 30: 50S ribosomal protein L35

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 1.0	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	0.79	21/66467 (0.0%)	0.82	43/103673 (0.0%)
2	9	0.44	0/2813	0.73	0/4384
All	All	0.78	21/69280 (0.0%)	0.82	43/108057 (0.0%)

Chiral center outliers are detected by calculating the chiral volume of a chiral center and verifying if the center is modelled as a planar moiety or with the opposite hand. A planarity outlier is detected by checking planarity of atoms in a peptide group, atoms in a mainchain group or atoms of a sidechain that are expected to be planar.

Mol	Chain	#Chirality outliers	#Planarity outliers
1	0	0	260

All (21) bond length outliers are listed below:

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

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

All (43) bond angle outliers are listed below:

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

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

There are no chirality outliers.

All (260) planarity outliers are listed below:

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

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

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

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

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

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

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

5.2 Too-close contacts

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

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

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

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 46.

All (4383) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:584:A:H4'	1:0:2038:C:N4	1.53	1.23
1:0:1621:C:H4'	1:0:1626:A:N6	1.57	1.19
1:0:918:A:H2'	1:0:919:U:H5''	1.24	1.18
1:0:1339:U:H5''	1:0:1994:U:H1'	1.21	1.18
1:0:1938:U:O2'	1:0:1939:U:H5'	1.42	1.18
1:0:796:A:H5''	1:0:2568:A:OP1	1.44	1.16
1:0:1313:U:H4'	1:0:1314:A:O4'	1.46	1.15
1:0:635:C:H2'	1:0:636:G:H5''	1.27	1.15
1:0:104:C:H2'	1:0:105:G:H5''	1.26	1.14
1:0:1791:C:H2'	1:0:1792:C:H5''	1.25	1.13
1:0:1921:A:H2'	1:0:1922:U:H5''	1.18	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1572:C:H2'	1:0:1573:G:H5''	1.19	1.12
1:0:1463:A:H1'	1:0:1543:G:H22	1.14	1.12
1:0:1181:C:H2'	1:0:1182:U:H5''	1.33	1.11
1:0:2691:C:H3'	1:0:2692:A:H5''	1.25	1.11
1:0:1572:C:C2'	1:0:1573:G:H5''	1.82	1.10
1:0:922:A:H2'	1:0:923:A:H8	1.11	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
1:0:1636:G:H2'	1:0:1637:U:C6	1.91	1.05
1:0:128:C:H2'	1:0:129:A:H5''	1.11	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
1:0:1198: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
1:0:941:U:H2'	1:0:942:U:O4'	1.57	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
1:0:1587:A:H2'	1:0:1588:A:C8	1.97	0.99
1:0:58:C:H3'	1:0:59:G:H5''	1.37	0.99
1:0:2318:U:H2'	1:0:2319:G:C8	1.95	0.99
1:0:1016:C:C6	1:0:1154:A:H1'	1.96	0.99
1:0:490:A:O2'	1:0:491:A:H5'	1.62	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:820:U:H2'	1:0:821:A:H8	1.21	0.99
1:0:2051:U:H5'	1:0:2052:G:OP1	1.61	0.98
1:0:2607:C:H3'	1:0:2608:A:H5'	1.43	0.98
1:0:584:A:H4'	1:0:2038:C:H41	1.14	0.98
1:0:940:G:H3'	1:0:941:U:H5''	1.01	0.98
1:0:1924:C:H2'	1:0:1925:C:O4'	1.64	0.98
1:0:1094:C:H2'	1:0:1096:A:OP2	1.64	0.97
1:0:525:A:H2'	1:0:526:C:H5'	1.46	0.97
1:0:922:A:H2'	1:0:923:A:C8	1.98	0.97
1:0:1323:G:H1'	1:0:1627:C:C5'	1.94	0.97
1:0:2790:C:H2'	1:0:2791:C:H6	1.29	0.97
1:0:1252:C:O2'	1:0:1253:C:H5''	1.65	0.97
1:0:2509:A:H2'	1:0:2510:A:H5''	1.43	0.96
1:0:2306:A:H2'	1:0:2307:A:C8	2.00	0.96
1:0:847:C:H41	1:0:955:G:H21	1.12	0.96
1:0:940:G:C3'	1:0:941:U:H5''	1.93	0.95
1:0:1218:C:H2'	1:0:1219:C:C6	1.99	0.95
1:0:1911:A:H2'	1:0:1912:G:H5'	1.49	0.95
1:0:929:A:H3'	1:0:930:A:H5''	1.48	0.95
1:0:1066:G:H2'	1:0:1067:G:H4'	1.46	0.95
1:0:1304:U:O2'	1:0:1305:C:H5'	1.66	0.95
1:0:1826:U:O2'	1:0:1952:A:H2'	1.66	0.95
1:0:2437:G:C6	1:0:2469:G:H2'	2.01	0.95
1:0:34:U:H2'	1:0:35:G:H5'	1.50	0.94
1:0:1212:U:H2'	1:0:1213:U:H6	1.29	0.94
1:0:50:G:H2'	1:0:117:A:C2	2.02	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
1:0:1012:A:H2'	1:0:1013:G:H5'	1.50	0.93
1:0:525:A:C2'	1:0:526:C:H5'	1.97	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
1:0:2468:G:H2'	1:0:2469:G:H5'	1.51	0.93
1:0:773:G:H2'	1:0:774:A:H5'	1.50	0.93
1:0:1921:A:C2'	1:0:1922:U:H5''	1.99	0.93
1:0:195:A:H2'	1:0:196:A:O4'	1.69	0.93
1:0:2199:C:H2'	1:0:2200:G:H8	1.32	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:689:A:C8	1:0:2422:C:H1'	2.04	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
1:0:1847:G:H2'	1:0:1848:U:H6	1.34	0.92
1:0:612:G:O3'	1:0:613:A:H4'	1.69	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
1:0:1198:C:H5''	1:0:1199:U:C4'	1.99	0.91
1:0:540:G:O2'	1:0:541:C:H4'	1.70	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
1:0:1339: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
1:0:71:A:C2	1:0:75:C:H1'	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
1:0:1391: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
1:0:759:C:H42	1:0:2591:C:P	1.93	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
1:0:1453: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
1:0:688:A:H1'	1:0:2422:C:O2'	1.73	0.89
1:0:635:C:C2'	1:0:636:G:H5''	2.03	0.89
1:0:918:A:H2'	1:0:919:U:C5'	2.02	0.89
1:0:2541:U:H2'	1:0:2542:U:O4'	1.72	0.89

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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1807:A:H1'	1:0:1809:G:H1'	1.57	0.85
1:0:2329:C:O2'	1:0:2330:G:H5'	1.76	0.85
1:0:701:U:H4'	1:0:1771:A:C2	2.11	0.85
1:0:1686:A:H2'	1:0:1687:C:H5'	1.57	0.85
1:0:1765:C:H4'	1:0:1962:C:O2	1.77	0.85
1:0:2558:C:H2'	1:0:2559:U:H6	1.40	0.85
1:0:2813:G:H2'	1:0:2814:G:H8	1.41	0.85
1:0:1065:A:H2'	1:0:1066:G:C8	2.12	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
1:0:1917: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
1:0:1226:A:N1	1:0:1250:A:H1'	1.93	0.84
1:0:58:C:H3'	1:0:59:G:C5'	2.07	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
1:0:1618:U:H6	1:0:1618:U:O5'	1.61	0.84
1:0:678:G:H2'	1:0:679:C:H6	1.43	0.84
1:0:1682:A:H61	1:0:1977:C:H42	1.23	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
1:0:60:A:H61	1:0:91:A:N6	1.74	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
1:0:1664:G:H4'	1:0:1665:C:OP1	1.78	0.83
1:0:689:A:H8	1:0:2422:C:H1'	1.43	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
1:0:1621: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:853:C:H1'	1:0:950:G:N2	1.93	0.83
1:0:1284:G:C4	1:0:1633:C:H5'	2.14	0.83
1:0:1807:A:C1'	1:0:1809:G:H1'	2.08	0.83
1:0:2494:C:H2'	1:0:2495:G:C8	2.13	0.83
1:0:2038:C:H42	1:0:2479:U:H4'	1.41	0.83
1:0:677:G:H1'	1:0:951:G:H5''	1.59	0.83
2:9:31:A:H2'	2:9:32:C:H6	1.43	0.83
2:9:7:C:O2'	2:9:8:C:H5'	1.78	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
1:0:175:C:H42	1:0:225:G:H1	1.26	0.83
1:0:1900:U:O2'	1:0:1946:U:H5'	1.77	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
1:0:428: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
1:0:1541: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
1:0:796:A:H4'	1:0:2567:G:O3'	1.78	0.83
1:0:2607:C:H3'	1:0:2608:A:C5'	2.09	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
1:0:867:G:H2'	1:0:868: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
1:0:1174:G:O2'	1:0:1175:A:H5'	1.78	0.82
1:0:483:A:H2'	1:0:484:G:H5''	1.60	0.82
1:0:538:A:O5'	1:0:538:A:H8	1.63	0.82
1:0:820:U:H2'	1:0:821:A:C8	2.13	0.82
1:0:841:G:H2'	1:0:842:A:C8	2.14	0.82
1:0:1883:A:H1'	1:0:1953:A:H62	1.43	0.82
1:0:2824:C:N4	1:0:2842:C:H1'	1.94	0.82
1:0:1291: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
1:0:524: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
1:0:1198:C:C5'	1:0:1199:U:H4'	2.08	0.81

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1470:G:H22	1:0:2684:A:H1'	1.45	0.81
1:0:1106:A:H2'	1:0:1107:A:C8	2.15	0.81
1:0:571:U:H2'	1:0:581:A:C8	2.15	0.81
1:0:2012:A:N7	1:0:2014:A:H5'	1.94	0.81
1:0:2658:A:O2'	1:0:2659:C:H5'	1.79	0.81
1:0:1655:C:OP1	1:0:2690:A:H5'	1.79	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
1:0:1252: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
1:0:584: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
1:0:468: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
1:0:2499:C:H41	1:0:2521:A:H2	1.26	0.81
1:0:2788:C:O2'	1:0:2789:U:H5'	1.80	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
1:0:2468:G:H2'	1:0:2469:G:C5'	2.11	0.81
1:0:494:A:H2'	1:0:495:C:O4'	1.81	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
1:0:918:A:C2'	1:0:919:U:H5''	2.10	0.81
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
1:0:432:C:H2'	1:0:433:G:H8	1.46	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
1:0:1479: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
1:0:867:G:H2'	1:0:868:U:H6	1.45	0.80
2:9:92:G:C2'	2:9:93:G:H5'	2.10	0.80
1:0:1430:G:N2	1:0:1599:G:H1'	1.96	0.80
1:0:1727:C:H4'	1:0:2833:C:O2	1.81	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1414:G:H21	1:0:1484:G:H21	1.27	0.80
1:0:2185:U:H2'	1:0:2186:G:C8	2.16	0.80
1:0:2669: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
1:0:58:C:H1'	1:0:72:A:C8	2.17	0.80
1:0:2672:U:H2'	1:0:2673:G:H8	1.47	0.80
1:0:2783:U:H2'	1:0:2784:A:H4'	1.64	0.79
1:0:523:A:C2	1:0:591:G:H4'	2.16	0.79
1:0:1621:C:H4'	1:0:1626:A:H62	1.44	0.79
1:0:170:U:O2'	1:0:171:G:H5'	1.82	0.79
1:0:1764:A:C5	1:0:1821:A:H1'	2.17	0.79
1:0:693:A:H2'	1:0:694:G:C8	2.16	0.79
2:9:4:C:H2'	2:9:5:C:C6	2.17	0.79
1:0:2758:A:H4'	1:0:2759:U:H5	1.47	0.79
1:0:870:C:H2'	1:0:871:U:H6	1.47	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
1:0:512: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
1:0:1655:C:H5''	1:0:2689:C:O2'	1.82	0.79
1:0:1226:A:C2	1:0:1250:A:H1'	2.16	0.79
1:0:1222:G:H1'	1:0:1251:G:N2	1.98	0.79
1:0:1692:C:H2'	1:0:1693:A:C5'	2.13	0.79
1:0:1004:A:H2'	1:0:1005:U:H5'	1.63	0.79
1:0:369:C:H2'	1:0:370:U:C6	2.18	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
1:0:218: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
1:0:1004: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
1:0:986:A:C8	1:0:987:G:C8	2.71	0.79
1:0:2177:U:H2'	1:0:2178:U:C6	2.18	0.78
1:0:826:U:H2'	1:0:827:C:C6	2.18	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
1:0:584: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
1:0:1474:A:H3'	1:0:1474:A:N3	1.98	0.78
1:0:60:A:H61	1:0:91:A:H61	1.31	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:11:G:H2'	1:0:12:U:O4'	1.84	0.78
1:0:2791:C:O2'	1:0:2792:C:H5'	1.83	0.78
1:0:1621:C:H4'	1:0:1626:A:H61	1.49	0.78
1:0:956:A:C2	1:0:2427:A:O2'	2.37	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
1:0:1636: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
1:0:677:G:C1'	1:0:951:G:H5''	2.13	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
1:0:2503:G:H2'	1:0:2504:G:H5''	1.65	0.77
1:0:343:A:H2'	1:0:345:U:OP2	1.84	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
1:0:1183:C:H42	1:0:1190:C:H42	1.33	0.77
1:0:932:G:H2'	1:0:933:G:C8	2.19	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
1:0:640:C:H2'	1:0:641:G:O4'	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
1:0:1280:U:C2'	1:0:1281:A:H5'	2.15	0.77
1:0:2201:G:H2'	1:0:2202:G:H8	1.50	0.77
1:0:1470:G:N2	1:0:2684:A:H1'	2.00	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
1:0:1479: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
1:0:1284:G:N3	1:0:1633:C:H5'	2.00	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2233:C:H2'	1:0:2234:G:H8	1.49	0.76
1:0:958:G:H2'	1:0:959:C:H6	1.47	0.76
1:0:1299:A:N6	1:0:1302:C:C4	2.53	0.76
1:0:1323:G:C1'	1:0:1627:C:H5''	2.14	0.76
1:0:1747:G:H4'	1:0:1749:G:H1'	1.68	0.76
1:0:2548:G:C2'	1:0:2549:G:H5''	2.15	0.76
1:0:1911: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
1:0:79: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
1:0:1383:C:H2'	1:0:1384:G:C8	2.21	0.76
1:0:186:C:H2'	1:0:187:U:C6	2.21	0.76
1:0:1355:A:C8	1:0:1410:U:H1'	2.21	0.76
1:0:195:A:H61	1:0:212:U:H4'	1.50	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
1:0:977:G:H5'	1:0:2251:U:O2	1.86	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
1:0:1586:A:H2'	1:0:1587:A:C8	2.21	0.76
1:0:590:C:H2'	1:0:591:G:C8	2.21	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
1:0:81:C:H4'	1:0:307:C:H5'	1.68	0.76
1:0:2764:U:H2'	1:0:2765:C:H6	1.48	0.75
1:0:1363:C:O2'	1:0:1364:C:H5'	1.85	0.75
1:0:520:C:H2'	1:0:521:U:O4'	1.86	0.75
1:0:1373:G:H2'	1:0:1374:G:H5'	1.67	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
1:0:521: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
1:0:1760: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
1:0:2756:A:C6	1:0:2762:G:H1'	2.21	0.75
1:0:391:C:O2'	1:0:392:G:H5'	1.86	0.75
1:0:79:G:O2'	1:0:80:A:H5'	1.86	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)
1:0:543: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
1:0:2733: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
1:0:703:A:H2'	1:0:704:G:H8	1.49	0.75
2:9:31:A:H2'	2:9:32:C:C6	2.22	0.75
1:0:1348:C:H2'	1:0:1349:A:H8	1.52	0.75
1:0:785:U:H5'	1:0:1368:G:O2'	1.86	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:OP1	1:0:488:A:H8	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
1:0:1750:A:H1'	1:0:2690:A:C2	2.22	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
1:0:1362:A:H8	1:0:1362:A:O5'	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
1:0:1970: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
1:0:392: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
1:0:88:G:H3'	1:0:89:A:H5''	1.70	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
1:0:1271:C:H2'	1:0:1272:G:C8	2.23	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
1:0:83:A:H2	1:0:98:U:H1'	1.50	0.74
1:0:1083:C:H42	1:0:1103:C:H41	1.36	0.74
1:0:1164:C:H2'	1:0:1165:G:C8	2.23	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1503:G:H2'	1:0:1504:G:C8	2.23	0.73
1:0:1825:C:O2'	1:0:1826:U:H5'	1.88	0.73
1:0:759:C:C2	1:0:2590:U:H4'	2.22	0.73
2:9:36:A:H2'	2:9:46:G:O6	1.88	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
1:0:579:G:H2'	1:0:2013:A:N6	2.03	0.73
1:0:1222:G:C1'	1:0:1251:G:N2	2.52	0.73
1:0:1773:C:H6	1:0:1773:C:O5'	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
1:0:1619:A:H2	1:0:1620:C:C5	2.06	0.73
1:0:708:G:H1	1:0:780:U:H3	1.36	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
1:0:2177: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
1:0:616: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
1:0:2079:A:H2'	1:0:2080:U:C6	2.24	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
1:0:1110: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
1:0:400: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
1:0:1653: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
1:0:704: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:836:G:O2'	1:0:837:U: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
1:0:687:G:O2'	1:0:688:A:H5'	1.89	0.72
1:0:704:G:O2'	1:0:705:C:H5'	1.90	0.72
1:0:2639:A:H2'	1:0:2640:G:H8	1.54	0.72
1:0:457:C:H2'	1:0:458:G:O4'	1.88	0.72
1:0:79:G:H2'	1:0:80:A:C8	2.24	0.72
1:0:677:G:H4'	1:0:951:G:O3'	1.90	0.72
2:9:78:A:H2'	2:9:79:U:C6	2.24	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
1:0:313:U:H2'	1:0:314:G:H8	1.51	0.72
1:0:1125:G:H2'	1:0:1126:A: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
1:0:473:C:H2'	1:0:474:G:H8	1.54	0.72
1:0:1800:A:H2'	1:0:1802:A:H62	1.55	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
1:0:550:C:H2'	1:0:551:A:H8	1.55	0.72
1:0:698:A:HO2'	1:0:700:C:H5	1.37	0.72
1:0:976:C:H2'	1:0:977:G:C8	2.25	0.72
1:0:1140: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
1:0:757:U:O2	1:0:767:G:N2	2.23	0.71
1:0:357:A:H3'	1:0:358:C:H5'	1.71	0.71
1:0:1287:A:C6	1:0:1315:A:C2	2.77	0.71
1:0:167:A:H3'	1:0:181:A:C2	2.25	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
1:0:366: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
1:0:1641:C:H3'	1:0:1642:G:H8	1.53	0.71
2:9:28:A:C2	2:9:29:C:H1'	2.26	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:29:C:H2'	2:9:30:C:C6	2.26	0.71
1:0:1199:U:H3'	1:0:1200:G:H5''	1.72	0.71
1:0:1313:U:H4'	1:0:1314:A:C1'	2.20	0.71
1:0:2367:A:N7	1:0:2368:G:C6	2.58	0.71
1:0:2523:G:O2'	1:0:2524:G:H5'	1.90	0.71
1:0:74:G:H2'	1:0:75:C:H6	1.55	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:O5'	1:0:1780:A:H8	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
1:0:471: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
1:0:1333: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
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
2:9:40:C:H2'	2:9:41:A:O4'	1.90	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
1:0:852:U:H2'	1:0:853:C:C6	2.26	0.71
2:9:4:C:H2'	2:9:5:C:H6	1.53	0.71
1:0:1624:A:H2'	1:0:1625:A:H5''	1.72	0.71
1:0:181:A:H5''	1:0:182:G:OP1	1.90	0.71
1:0:17:G:H2'	1:0:18:U:C6	2.26	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
1:0:1519: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
1:0:984:A:H2	1:0:1200:G:N1	1.83	0.70
1:0:1333:G:N2	1:0:1344:C:H41	1.89	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2532:G:C2	1:0:2533:U:H1'	2.25	0.70
1:0:139:A:H2'	1:0:140:G:H8	1.56	0.70
1:0:798:G:O2'	1:0:1770:U:H4'	1.91	0.70
1:0:191:G:O2'	1:0:192:G:H5'	1.91	0.70
1:0:2856:U:H2'	1:0:2857:C:C6	2.26	0.70
1:0:1800:A:H2'	1:0:1802:A:C6	2.27	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
1:0:1816:G:O2'	1:0:1817:U:H5'	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
1:0:1939:U:H1'	1:0:2531:U:OP1	1.92	0.70
1:0:2502:G:C8	1:0:2745:A:N7	2.59	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
1:0:369: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
1:0:81:C:H2'	1:0:82:G:O4'	1.91	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
1:0:2474: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
1:0:857:U:H2'	1:0:858:G:H5'	1.73	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
1:0:441: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
1:0:1135: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
1:0:797: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
1:0:436:A:OP1	1:0:437:G:H5''	1.91	0.70
1:0:457:C:C2'	1:0:458:G:H5'	2.21	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:699:G:H2'	1:0:699:G:N3	2.07	0.70
1:0:1348:C:H2'	1:0:1349:A:C8	2.27	0.69
1:0:1656:U:O2'	1:0:1657:A:H5''	1.91	0.69
1:0:1682:A:N6	1:0:1977:C:H42	1.89	0.69
1:0:708:G:H1'	1:0:1392:U:O2	1.92	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
1:0:1370:U:O2'	1:0:1371:G:H5'	1.92	0.69
1:0:1663:C:H6	1:0:1663:C:O5'	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
1:0:317:U:H3	1:0:321:A:N6	1.91	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
1:0:2585:C:H2'	1:0:2586:G:H8	1.57	0.69
1:0:912:A:H2'	1:0:913:A:H8	1.57	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
1:0:310: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
1:0:83:A:C2	1:0:98:U:H1'	2.27	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
1:0:321: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
1:0:337:G:H2'	1:0:338:G:H8	1.57	0.69
1:0:638:A:O2'	1:0:639:G:H5'	1.92	0.69
1:0:792:U:C2'	1:0:793:G:H5'	2.22	0.69
1:0:1933:G:O5'	1:0:1933:G:H8	1.76	0.69
1:0:1151:U:H5''	1:0:1153:A:H5'	1.74	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
1:0:1040: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
1:0:446:C:H2'	1:0:447:U:O4'	1.92	0.69
1:0:1657:A:O2'	1:0:1658:A:H5'	1.91	0.68
1:0:1373:G:C2'	1:0:1374:G:H5'	2.23	0.68
1:0:143:A:H2'	1:0:144:U:O4'	1.93	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
1:0:495: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
1:0:1203:A:N3	1:0:1203:A:H2'	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
1:0:239:A:C5'	1:0:620:G:H5'	2.23	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
1:0:322: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
1:0:1085: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
1:0:1858:C:H2'	1:0:1859:A:H8	1.58	0.68
1:0:1281:A:C2	1:0:1996:A:C6	2.82	0.68
1:0:2494:C:H2'	1:0:2495:G:H8	1.58	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
1:0:827:C:H2'	1:0:828:C:C6	2.28	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
1:0:239: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
1:0:1289: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
1:0:394:U:O2'	1:0:395:G:H5'	1.94	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
1:0:1017:C:O2'	1:0:1018:C:H5'	1.93	0.68
1:0:1926:U:O5'	1:0:1926:U:H6	1.76	0.68
1:0:698:A:Cl'	1:0:700:C:H41	2.06	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:1656:U:C2'	1:0:1657:A:H5''	2.23	0.67
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
1:0:216: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
1:0:829: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:O2'	1:0:2586:G:H5'	1.94	0.67
1:0:2585:C:H2'	1:0:2586:G:C8	2.30	0.67
1:0:2839:G:H2'	1:0:2840:U:C6	2.29	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
1:0:1076: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
1:0:1764: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
1:0:297: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
1:0:1000: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
1:0:861:G:H22	1:0:943:U:H4'	1.59	0.67
2:9:45:C:H42	2:9:47:A:H62	1.40	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
1:0:235:C:H2'	1:0:236:C:H5'	1.77	0.67
1:0:2583:U:O2'	1:0:2584:U:H5'	1.95	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:71:A:H2	1:0:75:C:C1'	2.07	0.67
1:0:872:G:O2'	1:0:2247:A:C5	2.46	0.67
2:9:30:C:H6	2:9:30:C:O5'	1.78	0.67
1:0:1012:A:C2'	1:0:1013:G:H5'	2.23	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
1:0:1314:A:N6	1:0:1316:G:C4	2.63	0.67
1:0:1754:G:H4'	1:0:1754:G:OP1	1.95	0.67
1:0:1889:G:H1	1:0:1908:C:N4	1.93	0.67
1:0:14:A:C2	1:0:2603:G:N2	2.63	0.67
1:0:322:A:OP1	1:0:322:A:H8	1.77	0.67
1:0:322:A:N1	1:0:341:A:OP1	2.27	0.67
1:0:633:G:H2'	1:0:634:G:O4'	1.94	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
1:0:622: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
1:0:1290: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
1:0:1779: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
1:0:1727:C:H4'	1:0:2833:C:C2	2.30	0.66
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
1:0:1407: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
1:0:42: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
1:0:1151:U:H5''	1:0:1153:A:C5'	2.24	0.66
1:0:1755:G:H2'	1:0:1756:C:C6	2.30	0.66
1:0:2262:C:H2'	1:0:2263:C:C6	2.30	0.66
1:0:2763:U:H2'	1:0:2764:U:C6	2.31	0.66
1:0:1579:G:O2'	1:0:1580:C:H5'	1.95	0.66
1:0:1678:G:O2'	1:0:1679:U:H5'	1.95	0.66
1:0:2173:G:H2'	1:0:2174:G:O4'	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2703:C:O2'	1:0:2704:U:H5'	1.95	0.66
2:9:77:G:H2'	2:9:78:A:O4'	1.96	0.66
1:0:1262:U:H6	1:0:1262:U:H3'	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
1:0:704: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
1:0:1327:C:H6	1:0:1327:C:O5'	1.79	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
1:0:1466: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
1:0:841:G:N2	1:0:2226:A:H4'	2.11	0.66
1:0:2687:G:O2'	1:0:2688:G:H5'	1.95	0.66
1:0:757:U:C2	1:0:767:G:N2	2.63	0.66
2:9:58:G:H4'	2:9:59:A:C5'	2.26	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
1:0:486: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
1:0:1436: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
1:0:1231: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
1:0:632: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
1:0:1831:G:H2'	1:0:1832:G:H5'	1.78	0.65
1:0:176:A:C2	1:0:2413:A:C2	2.84	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
1:0:2539:C:N4	1:0:2540:A:N6	2.43	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
2:9:65:A:H2'	2:9:66:G:C8	2.32	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
1:0:305: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
1:0:1436: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
1:0:818: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
1:0:443: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
1:0:1312:G:H4'	1:0:1314:A:N3	2.10	0.65
1:0:14:A:C2	1:0:2604:G:H1'	2.32	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
1:0:871:U:O2	1:0:2247:A:H2'	1.97	0.65
1:0:2810:A:O5'	1:0:2810:A:H8	1.79	0.65
1:0:830:C:H2'	1:0:831:G:H8	1.61	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
1:0:847:C:H41	1:0:955:G:N2	1.91	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
1:0:927:C:H2'	1:0:928:G:H5'	1.77	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2015:G:N2	1:0:2038:C:H1'	2.12	0.65
1:0:2024:U:H6	1:0:2024:U:O5'	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
1:0:429:C:H2'	1:0:430:C:H6	1.62	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
1:0:635:C:O2'	1:0:670:U:H5''	1.97	0.65
1:0:76:C:H6	1:0:76:C:H5'	1.62	0.65
1:0:2511:G:H2'	1:0:2512:A:O4'	1.97	0.64
1:0:587:A:H2'	1:0:588:G:H5''	1.79	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
1:0:604: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
1:0:1673: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
1:0:532: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
1:0:1514:C:O5'	1:0:1514:C:H6	1.80	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
1:0:335: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
1:0:584:A:H5'	1:0:2038:C:C5	2.33	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
1:0:486: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
1:0:622: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
1:0:1319: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
1:0:170:U:H2'	1:0:171:G:H8	1.62	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
1:0:239:A:H2'	1:0:240:U:O4'	1.98	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
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
2:9:61:A:O5'	2:9:61:A:H8	1.81	0.64
1:0:2447:G:O5'	1:0:2447:G:H8	1.79	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
1:0:1004: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
1:0:28: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
1:0:1105: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
1:0:163:A:H2'	1:0:164:G:H8	1.61	0.64
1:0:2201:G:H2'	1:0:2202:G:C8	2.32	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
1:0:1073:G:H2'	1:0:1074:G:C5'	2.28	0.63
1:0:594:G:C6	1:0:1264:C:C5	2.87	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
1:0:225: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
1:0:1706: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
1:0:1279:G:H1'	1:0:1995:G:O6	1.98	0.63
1:0:2862:G:O2'	1:0:2863:U:H5'	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:982:C:H4'	1:0:994:A:O2'	1.97	0.63
1:0:1191:G:H2'	1:0:1192:A:C8	2.34	0.63
1:0:1458:A:H3'	1:0:1459:U:C5'	2.29	0.63
1:0:2563:U:O5'	1:0:2563:U:H6	1.82	0.63
1:0:953:G:C6	1:0:954:U:N3	2.66	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
1:0:798: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
1:0:2813:G:O2'	1:0:2814:G:H5'	1.98	0.63
1:0:1618:U:O5'	1:0:1618:U:C6	2.48	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
1:0:120:G:O2'	1:0:121:G:H5'	1.99	0.63
1:0:1358:C:H2'	1:0:1359:G:H5''	1.81	0.63
1:0:139:A:H2'	1:0:140:G:C8	2.34	0.63
1:0:1564:U:O2'	1:0:1565:G:H5'	1.99	0.63
1:0:1724:C:OP2	1:0:1724:C:H3'	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
1:0:1591: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
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
2:9:29:C:H2'	2:9:30:C:C5	2.34	0.63
2:9:7:C:H2'	2:9:8:C:H6	1.64	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
1:0:929: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
1:0:1347: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1800:A:C2	1:0:1802:A:N1	2.66	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
1:0:1982:C:H4'	1:0:2703:C:O2	1.99	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
1:0:432:C:H2'	1:0:433:G:C8	2.31	0.62
1:0:194:G:C6	1:0:444:U:O2	2.52	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
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
1:0:491: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
1:0:1196: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
1:0:636:G:H2'	1:0:637:G:H5'	1.80	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
1:0:168:A:H2'	1:0:169:C:C6	2.34	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
1:0:932:G:C6	1:0:933:G:C6	2.88	0.62
1:0:1541:G:N2	1:0:1562:G:N2	2.38	0.62
1:0:173:A:C4	1:0:818:G:N2	2.67	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
1:0:414:A:H2'	1:0:415:A:O4'	2.00	0.62
1:0:1281:A:C2	1:0:1996:A:N1	2.68	0.62
1:0:1392:U:C2'	1:0:1393:G:H5'	2.29	0.62
1:0:2046:C:C2'	1:0:2047:C:O5'	2.47	0.62
1:0:2057:U:H2'	1:0:2058:U:H6	1.64	0.62
2:9:14:C:H4'	2:9:17:A:H61	1.63	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1276:U:H2'	1:0:1277:G:C8	2.34	0.62
1:0:2059:U:OP2	1:0:2217:G:N2	2.30	0.62
1:0:2306:A:H2'	1:0:2307:A:H8	1.63	0.62
1:0:2663:U:N3	1:0:2664:G:N7	2.48	0.62
1:0:2859:U:C5	1:0:2860:C:C2	2.87	0.62
1:0:615:C:H1'	1:0:671:A:H4'	1.81	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
1:0:311:A:C2	1:0:334:G:N2	2.67	0.62
1:0:115:G:C6	1:0:117:A:N6	2.68	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
1:0:333: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
1:0:1264:C:HO2'	1:0:1265:G:H8	1.47	0.62
1:0:1925:C:H2'	1:0:1926:U:C5	2.32	0.62
1:0:2046:C:H2'	1:0:2047:C:O5'	2.00	0.62
1:0:2606:G:H8	1:0:2606:G:O5'	1.83	0.62
1:0:2814:G:H1	1:0:2853:U:H3	1.48	0.62
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
1:0:482:A:H8	1:0:482:A:O5'	1.83	0.61
1:0:689:A:C2	1:0:690:A:C8	2.88	0.61
1:0:1688:U:O2	1:0:1690:U:C6	2.53	0.61
1:0:200:A:C2	1:0:421:G:O4'	2.53	0.61
1:0:584:A:H5'	1:0:2038:C:C4	2.35	0.61
1:0:583:C:H4'	1:0:2038:C:C5	2.35	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
1:0:2043: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
1:0:367: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
1:0:619:A:H2'	1:0:620:G:C8	2.35	0.61
1:0:785:U:H5'	1:0:1368:G:HO2'	1.63	0.61
1:0:1719: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)
1:0:500: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:N3	1:0:985:G:H5''	2.14	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
1:0:1141:U:OP2	1:0:2549:G:N2	2.34	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
1:0:29: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
1:0:1299: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
1:0:1441: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
1:0:305:A:C2'	1:0:306:G:H5'	2.30	0.61
1:0:51:A:OP2	1:0:117:A:N6	2.34	0.61
1:0:688:A:HO2'	1:0:2422:C:H4'	1.66	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
1:0:1479:G:C2	1:0:1480:G:C4	2.89	0.61
1:0:1457:A:C2	1:0:1565:G:C4	2.88	0.61
1:0:1430:G:H22	1:0:1599:G:H1'	1.65	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
1:0:1270: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
1:0:1827:G:H2'	1:0:1828:C:C6	2.36	0.61
1:0:1680:U:O2	1:0:1981:A:C2	2.54	0.61
1:0:2544:A:H2'	1:0:2545:A:C1'	2.31	0.61
1:0:2032:G:N2	1:0:2599:U:C2	2.69	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
1:0:698: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
1:0:1175:A:O5'	1:0:1175:A:H8	1.84	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1658:A:C8	1:0:1659:G:C8	2.89	0.61
1:0:1764:A:C2'	1:0:1765:C:H5'	2.31	0.61
1:0:1994:U:H6	1:0:1994:U:O5'	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
1:0:579: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
1:0:1256: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
1:0:179:U:O2'	1:0:180:C:H5'	2.00	0.60
1:0:1944:C:H2'	1:0:1945:C:O4'	2.01	0.60
1:0:2573:C:H42	1:0:2578:G:H1	1.49	0.60
1:0:2586:G:O5'	1:0:2586:G:H8	1.84	0.60
1:0:1982:C:H4'	1:0:2665:G:H22	1.65	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
1:0:1383: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
1:0:537:C:C1'	1:0:2759:U:HO2'	2.14	0.60
1:0:322:A:H1'	1:0:343:A:C6	2.35	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
1:0:1521:U:H2'	1:0:1522:C:C6	2.36	0.60
1:0:1704:G:O5'	1:0:1704:G:H8	1.84	0.60
1:0:2250:G:O2'	1:0:2251:U:H5'	2.01	0.60
1:0:688:A:O2'	1:0:2422:C:H4'	2.00	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
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
2:9:79:U:H2'	2:9:80:A:H5'	1.83	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
1:0:498:C:N4	1:0:499:G:C6	2.68	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:951:G:H2'	1:0:952:A:C5'	2.32	0.60
1:0:1213:U:C2	1:0:1260:A:H2	2.19	0.60
1:0:1370:U:H2'	1:0:1371:G:O4'	2.01	0.60
1:0:1436:G:C8	1:0:1436:G:O5'	2.54	0.60
1:0:1964:A:H3'	1:0:1965:U:H5'	1.83	0.60
1:0:818:G:N1	1:0:2051:U:OP1	2.33	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
1:0:669:G:H2'	1:0:670:U:C6	2.36	0.60
1:0:173:A:H61	1:0:844:G:H21	1.50	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
1:0:2476:A:H5''	1:0:2477:C:OP1	2.01	0.60
1:0:2044:G:C8	1:0:2482:A:H1'	2.36	0.60
1:0:1750:A:C4'	1:0:2694:G:H21	2.15	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
1:0:1213: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
1:0:788: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
1:0:1310:C:C2	1:0:1311:C:C5	2.90	0.60
1:0:177:U:OP2	1:0:177:U:C6	2.54	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
1:0:459: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
1:0:1141: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
1:0:1106: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
1:0:2612:G:N2	1:0:2766:U:O2	2.34	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
1:0:1294: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
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
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
1:0:1619: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
1:0:678: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
1:0:109:A:H3'	1:0:110:U:H5''	1.83	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
1:0:17:G:C5	1:0:18:U:O4	2.56	0.59
1:0:2246:A:N3	1:0:2246:A:H2'	2.18	0.59
1:0:235:C:C2'	1:0:236:C:H5'	2.32	0.59
1:0:2817:A:N1	1:0:2851:G:C6	2.70	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
1:0:1528:C:H2'	1:0:1529:C:H5''	1.84	0.59
1:0:1531:C:C2'	1:0:1532:A:H5'	2.31	0.59
1:0:1991:C:H2'	1:0:1992:G:H8	1.67	0.59
1:0:2034:A:C6	1:0:2593:A:N6	2.70	0.59
1:0:2064:U:H2'	1:0:2065:A:H8	1.67	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:315:G:O5'	1:0:315:G:H8	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
1:0:7:G:N2	1:0:2870:C:O2	2.35	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:H8	1:0:2370:G:O5'	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
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
1:0:91:A:H2'	1:0:92:U:C6	2.38	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
1:0:1213: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
1:0:487:G:O5'	1:0:487:G:H8	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
2:9:84:G:O2'	2:9:85:G:H5'	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2549:G:H2'	1:0:2550:C:H5'	1.85	0.59
1:0:2676:G:H2'	1:0:2677:U:H6	1.67	0.59
1:0:588: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
1:0:1147: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:O5'	1:0:2658:A:H8	1.85	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
2:9:71:G:N2	2:9:72:C:H1'	2.18	0.59
1:0:1556:A:H2'	1:0:1557:G:C8	2.38	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
1:0:2843: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
1:0:2612: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
1:0:682:G:O3'	1:0:816:U:OP1	2.21	0.59
2:9:69:G:O2'	2:9:70:C:H5'	2.03	0.59
2:9:7:C:H2'	2:9:8:C:C6	2.37	0.59
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
1:0:765:C:H5	1:0:1772:C:H1'	1.68	0.58
1:0:1940:C:N4	1:0:1941:C:N4	2.51	0.58
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
1:0:981:C:H2'	1:0:982:C:C6	2.38	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
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
1:0:1038: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
1:0:1981:A:H4'	1:0:2704:U:O2'	2.03	0.58
1:0:2039:G:N3	1:0:2039:G:H2'	2.17	0.58
1:0:2382:C:H2'	1:0:2383:C:H6	1.68	0.58
1:0:1686:A:O2'	1:0:2528:G:OP1	2.21	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
1:0:1118: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
1:0:208:C:H2'	1:0:209:G:H5'	1.84	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
1:0:421:G:O2'	1:0:422:C:H5'	2.02	0.58
1:0:209:G:N2	1:0:433:G:OP1	2.35	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
1:0:173:A:N3	1:0:818:G:N2	2.51	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:H8	1:0:2409:A:H3'	1.68	0.58
1:0:2678:C:O2	1:0:2688:G:N2	2.36	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
2:9:6:C:H2'	2:9:7:C:H6	1.68	0.58
1:0:1009:C:O5'	1:0:1009:C:H6	1.87	0.58
1:0:10:A:H2'	1:0:11:G:C8	2.38	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1662:G:O5'	1:0:1662:G:H8	1.86	0.58
1:0:171:G:N1	1:0:179:U:C4	2.71	0.58
1:0:2105:U:H2'	1:0:2106:G:C8	2.38	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
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
1:0:2824:C:H1'	1:0:2843:A:C2	2.38	0.58
1:0:2816:C:O2	1:0:2852:G:N2	2.37	0.58
1:0:18:U:O2'	1:0:563:U:OP1	2.22	0.58
1:0:783:G:N3	1:0:1367:A:H2	2.01	0.58
1:0:1003:C:H2'	1:0:1004:A:H8	1.68	0.58
1:0:830:C:O2	1:0:1205:G:N2	2.36	0.58
1:0:132:U:H2'	1:0:133:C:C6	2.38	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
1:0:625:A:O2'	1:0:626:A:H5'	2.04	0.58
1:0:717:G:C6	1:0:739:G:C2	2.91	0.58
1:0:677:G:O3'	1:0:952:A:OP1	2.21	0.58
1:0:983:G:OP2	1:0:985:G: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:H4'	1:0:2229:G:OP2	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
1:0:406:G:H2'	1:0:407:A:H8	1.68	0.58
1:0:574:C:H2'	1:0:575:U:C6	2.39	0.58
1:0:698:A:O2'	1:0:700:C:H5	1.87	0.58
1:0:742:G:O6	1:0:1765:C:N3	2.37	0.58
1:0:763:A:H2	1:0:765:C:H1'	1.67	0.58
1:0:742:G:OP1	1:0:776:G:OP2	2.22	0.58
1:0:173:A:C2	1:0:818:G:N2	2.71	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
2:9:100:G:H2'	2:9:101:A:O4'	2.03	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1468:A:H8	1:0:1468:A:OP2	1.86	0.58
1:0:1407:G:H4'	1:0:1620:C:P	2.43	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
1:0:1479: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
1:0:168:A:C2	1:0:169:C:N3	2.71	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
1:0:778:G:H2'	1:0:779:U:H6	1.68	0.57
2:9:48:A:O2'	2:9:49:C:H5'	2.04	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
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
2:9:93:G:H2'	2:9:94:G:C8	2.36	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
1:0:229:G:H2'	1:0:230:C:H6	1.69	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
1:0:600:G:H3'	1:0:601:A:H5''	1.85	0.57
2:9:92:G:C3'	2:9:93:G:H5'	2.33	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
1:0:218:A:H1'	1:0:220:U:C4	2.39	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
1:0:401: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
1:0:1089:C:O5'	1:0:1089:C:H6	1.87	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:109:A:O5'	1:0:109:A:H8	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
1:0:327:C:O2'	1:0:328:A:H5'	2.04	0.57
1:0:544:U:H6	1:0:544:U:O5'	1.87	0.57
1:0:636:G:C2'	1:0:637:G:H5'	2.34	0.57
1:0:965:G:C2'	1:0:966:A:H5'	2.34	0.57
1:0:983:G:OP2	1:0:985:G:C5'	2.53	0.57
1:0:1358: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
1:0:701:U:C4'	1:0:1771:A:H2	2.10	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
1:0:74:G:H2'	1:0:75:C:C6	2.39	0.57
1:0:766:A:O2'	1:0:767:G:H5'	2.03	0.57
2:9:102:A:H2'	2:9:103:A:H5'	1.85	0.57
1:0:1248:G:C5	1:0:1249:G:N1	2.73	0.57
1:0:159:A:C8	1:0:160:C:C5	2.93	0.57
1:0:1690:U:H2'	1:0:1691:G:H5''	1.86	0.57
1:0:16:G:O2'	1:0:17:G:H5'	2.04	0.57
1:0:1900:U:C2'	1:0:1901:A:H5'	2.35	0.57
1:0:805:G:H2'	1:0:2419:C:C2	2.39	0.57
1:0:2455:A:C2	1:0:2460:G:N2	2.73	0.57
1:0:2592:U:C6	1:0:2592:U:C3'	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
1:0:513: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
1:0:859:U:H4'	1:0:860:U:H5	1.66	0.57
1:0:1313:U:H5'	1:0:1314:A:N3	2.20	0.57
1:0:150:A:H8	1:0:150:A:O5'	1.87	0.57
1:0:1608:U:H2'	1:0:1609:G:C8	2.40	0.57
1:0:1777:A:H62	1:0:2585:C:H1'	1.68	0.57
1:0:179: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
1:0:2470:U:O2'	1:0:2471:U:H5'	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2739:G:H8	1:0:2739:G:O5'	1.87	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
1:0:1198: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
1:0:464: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
1:0:1208:A:O5'	1:0:1208:A:H8	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
1:0:968:C:N4	1:0:2437:G:H5''	2.19	0.57
1:0:2533:U:H2'	1:0:2534:U:C6	2.40	0.57
1:0:2587:G:C8	1:0:2587:G:O5'	2.57	0.57
1:0:2817:A:O2'	1:0:2818:G:H5'	2.04	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
1:0:989:G:N2	1:0:997:C:C2	2.73	0.57
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
1:0:178:C:H2'	1:0:179:U:C6	2.40	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
1:0:608: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
1:0:1355: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)
1:0:531: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
1:0:1014: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
1:0:1955: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
1:0:2429:A:OP1	1:0:2476:A:H2'	2.04	0.56
1:0:306:G:H2'	1:0:307:C:C6	2.39	0.56
1:0:425:A:N7	1:0:2390:A:C2	2.73	0.56
1:0:749:C:H2'	1:0:750:C:C6	2.41	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
1:0:1310:C:H2'	1:0:1311:C:C6	2.40	0.56
1:0:2067:U:O5'	1:0:2067:U:H6	1.89	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:C8	1:0:2837:G:O5'	2.58	0.56
1:0:540:G:OP2	1:0:540:G:C8	2.58	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
1:0:1272:G:H2'	1:0:1273:G:C8	2.41	0.56
1:0:1473:U:H5''	1:0:1474:A:C4	2.41	0.56
1:0:1459:U:C2'	1:0:1475:U:O2'	2.53	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
1:0:28: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
1:0:4:C:H2'	1:0:5:A:H8	1.71	0.56
1:0:689:A:H2	1:0:690:A:C8	2.23	0.56
1:0:704:G:C2	1:0:705:C:C2	2.92	0.56
1:0:743:A:OP2	1:0:744:C:OP2	2.23	0.56
1:0:930:A:H8	2:9:82:U:O2'	1.89	0.56
1:0:976:C:H5'	1:0:2252:A:C1'	2.34	0.56
1:0:1312: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
1:0:2544:A:H5''	1:0:2545:A:OP2	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2753:C:H2'	1:0:2754:C: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
1:0:109:A:C3'	1:0:110:U:H5''	2.35	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
1:0:2437:G:C6	1:0:2469:G:C2'	2.85	0.56
1:0:2436:U:O2	1:0:2474:G:N2	2.39	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
1:0:687:G:C5	1:0:817:A:N1	2.74	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
1:0:167:A:H3'	1:0:181:A:N1	2.21	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:O5'	1:0:2543:A:H8	1.89	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:O5'	1:0:676:G:H8	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
1:0:1110: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
1:0:1715:A:HO2'	1:0:1716:G:H3'	1.70	0.56
1:0:171:G:H2'	1:0:172:A:O4'	2.06	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
2:9:61:A:C8	2:9:61:A:O5'	2.58	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:P	1:0:1514:C:H6	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
1:0:591:G:H2'	1:0:592:G:C8	2.40	0.56
1:0:78:C:H6	1:0:78:C:O5'	1.88	0.56
1:0:820:U:C2	1:0:821:A:C8	2.93	0.56
1:0:1046:U:H2'	1:0:1047:G:C8	2.41	0.56
1:0:112:U:O2'	1:0:113:C:H5'	2.04	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
1:0:1789:U:C4	1:0:1811:A:C2	2.94	0.56
1:0:1777:A:N6	1:0:2585:C:O4'	2.39	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
1:0:1007: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
1:0:211:U:O2'	1:0:212:U:H5'	2.06	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
1:0:1984:A:H1'	1:0:2668:U:C4	2.41	0.55
1:0:2843:A:C6	1:0:2844:G:C2	2.94	0.55
1:0:2816:C:C2	1:0:2852:G:C2	2.94	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
2:9:62:C:N3	2:9:63:A:N7	2.54	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
1:0:947:C:N3	1:0:948:C:C4	2.73	0.55
2:9:59:A:H2'	2:9:60:A:H5'	1.88	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
1:0:931:G:N2	1:0:2247:A:H3'	2.18	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:O5'	1:0:2641:A:H8	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
1:0:1190:C:O5'	1:0:1190:C:H6	1.88	0.55
1:0:1312:G:H2'	1:0:1643:A:N6	2.22	0.55
1:0:177:U:OP2	1:0:177:U:H6	1.90	0.55
1:0:2060:A:OP1	1:0:2061:C:OP2	2.25	0.55
1:0:2217:G:H3'	1:0:2217:G:N3	2.21	0.55
1:0:2458:U:C4	1:0:2459:C:C4	2.94	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
1:0:176:A:H1'	1:0:2221:G:H21	1.70	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:H3'	1:0:2413:A:H8	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
1:0:521:U:C5	1:0:522:G:N3	2.71	0.55
1:0:215:G:N2	1:0:632:A:C8	2.75	0.55
1:0:746:G:N7	1:0:774:A:C5	2.74	0.55
1:0:813:A:N3	1:0:813:A:H2'	2.22	0.55
1:0:976:C:O2'	1:0:977:G:C5'	2.54	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:33:C:H2'	2:9:34:C:C6	2.41	0.55
1:0:1431: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
1:0:495:C:H2'	1:0:496:C:H6	1.69	0.55
1:0:576:A:H2	1:0:580:A:H62	1.54	0.55
1:0:584:A:H2'	1:0:585:U:C6	2.36	0.55
1:0:689:A:C2'	1:0:690:A:H5'	2.36	0.55
1:0:758:G:H2'	1:0:759:C:H5'	1.89	0.55
2:9:89:G:C2	2:9:93:G:C2	2.94	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
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
2:9:79:U:C2'	2:9:80:A:H5'	2.37	0.55
1:0:1171:A:H8	1:0:1171:A:O5'	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
1:0:62:U:H2'	1:0:63:A:C8	2.42	0.55
2:9:18:G:H2'	2:9:19:C:C6	2.42	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:OP2	1:0:1618:U:C5	2.59	0.55
1:0:1625:A:H1'	1:0:1632:A:H4'	1.89	0.55
1:0:1757:C:O2	1:0:1970:G:C2	2.60	0.55
1:0:198:A:O2'	1:0:199:A:P	2.64	0.55
1:0:2025:A:H8	1:0:2025:A:O5'	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:347:C:H2'	1:0:348:U:O4'	2.07	0.55
1:0:3:U:O5'	1:0:3:U:H6	1.90	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
1:0:102:C:O2'	1:0:103:U:H5'	2.07	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:H3'	1:0:2047:C:H6	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
1:0:2665: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
1:0:2610:G:C5'	1:0:2866:A:H1'	2.24	0.55
1:0:562:G:H2'	1:0:563:U:O4'	2.06	0.55
1:0:678:G:C4	1:0:679:C:C5	2.95	0.55
1:0:677:G:C2	1:0:678:G: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
1:0:1017:C:O2	1:0:1018:C:C1'	2.54	0.54
1:0:136:A:H2'	1:0:137:A:O4'	2.07	0.54
1:0:2090:U:H2'	1:0:2091:C:C6	2.42	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
1:0:1141: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
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
1:0:74:G:O2'	1:0:75:C:H5'	2.06	0.54
1:0:798:G:N2	1:0:799:C:O4'	2.40	0.54
2:9:20:A:O2'	2:9:21:C:H5'	2.07	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:C6	1:0:2554:C:H3'	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:H8	1:0:2761:A:O5'	1.89	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
1:0:1090:C:O2'	1:0:1091:C:H5'	2.07	0.54
1:0:1002:C:C6	1:0:1198:C:N3	2.75	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
1:0:759:C:N4	1:0:2591:C:OP1	2.34	0.54
1:0:2600:A:C2'	1:0:2601:C:H5'	2.37	0.54
1:0:322:A:N1	1:0:341:A:OP2	2.41	0.54
1:0:43:A:H2	1:0:448:C:N4	2.05	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
1:0:874:A:C2	1:0:875:G:H1'	2.42	0.54
1:0:1262:U:H3'	1:0:1262:U:C6	2.41	0.54
1:0:701:U:C5'	1:0:1771:A:H2	2.20	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
1:0:224:G:C8	1:0:226:C:H1'	2.42	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2441:U:H2'	1:0:2442:C:H6	1.72	0.54
1:0:2459:C:H2'	1:0:2460:G:H5'	1.90	0.54
1:0:485: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
1:0:971:A:O2'	1:0:973:U:OP1	2.21	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
1:0:987:G:H4'	1:0:1167:A:N7	2.23	0.54
1:0:1197:U:H2'	1:0:1198:C:O4'	2.08	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
1:0:1339:U:O2'	1:0:1993:G:H1'	2.06	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
1:0:312:G:N2	1:0:328:A:C1'	2.71	0.54
1:0:31:C:H2'	1:0:32:C:H6	1.71	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
2:9:84:G:H2'	2:9:85:G:C8	2.36	0.54
1:0:1236:G:N2	1:0:1240:G:C4	2.76	0.54
1:0:140:G:H2'	1:0:141:G:H8	1.73	0.54
1:0:1761:G:O2'	1:0:1762:C:H5'	2.08	0.54
1:0:1779:C:H6	1:0:1779:C:O5'	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
1:0:539: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
1:0:1141: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
1:0:1851: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1668:G:C2	1:0:1990:U:O2	2.61	0.54
1:0:2022:C:C4	1:0:2023:C:C4	2.96	0.54
1:0:2397:A:H2'	1:0:2398:U:C6	2.43	0.54
1:0:2409:A:C8	1:0:2409:A:H3'	2.42	0.54
1:0:2707:G:O2'	1:0:2708:U:H5'	2.07	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
2:9:100:G:C2	2:9:101:A:H1'	2.42	0.54
1:0:1004:A:C6	1:0:1005:U:C5	2.95	0.54
1:0:114:C:O2'	1:0:115:G:H5'	2.08	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
1:0:229:G:H2'	1:0:230:C:C6	2.43	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
1:0:532: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
1:0:66:U:C2	1:0:67:G:N7	2.75	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
1:0:1117: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
1:0:11: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
1:0:1532: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
1:0:1767: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
1:0:1746:A:H2	1:0:2696:A:H1'	1.73	0.54
1:0:475:U:O4	1:0:476:G:N1	2.41	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1140:A:H2	1:0:2548:G:HO2'	1.56	0.53
1:0:2623:A:N6	1:0:2624:G:N1	2.56	0.53
1:0:2713:A:N6	1:0:2714:A:N6	2.56	0.53
1:0:2739:G:H2'	1:0:2740:C:O4'	2.08	0.53
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
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
1:0:1438: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
1:0:175: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
1:0:1948: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
1:0:845:U:P	1:0:955:G:O6	2.67	0.53
1:0:1379:A:H2'	1:0:1380:C:C6	2.44	0.53
1:0:1574:A:OP1	1:0:1574:A:O4'	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:H6	1:0:2625:U:O5'	1.89	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
1:0:58:C:C1'	1:0:72:A:C8	2.89	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
1:0:2661:G:C2	4:B:21:ILE:CA	2.91	0.53
1:0:1098:G:C5	1:0:1114:A:C2	2.96	0.53
1:0:1451:C:O2'	1:0:1452:U:H5'	2.08	0.53
1:0:1656:U:H2'	1:0:1657:A:C5'	2.38	0.53
1:0:1678:G:C2	1:0:1983:G:N3	2.77	0.53
1:0:2052:G:H2'	1:0:2053:G:C5'	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:315:G:N2	1:0:325:U:O2	2.41	0.53
1:0:353:G:H2'	1:0:354:C:H6	1.73	0.53
1:0:401:G:N3	1:0:403:A:N6	2.56	0.53
1:0:629:C:C2'	1:0:630:G:H5'	2.39	0.53
1:0:709:A:O2'	1:0:1639:U:H4'	2.07	0.53
1:0:829:C:N3	1:0:1206:G:N1	2.57	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
1:0:1055: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
1:0:2053: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
1:0:1935:A:C2	1:0:2539:C:O2	2.55	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
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
2:9:116:C:H2'	2:9:117:G:O4'	2.09	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:C6	1:0:2047:C:H3'	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
1:0:2748:C:H2'	1:0:2749:A:O4'	2.09	0.53
1:0:2701:A:N1	1:0:2848:A:C6	2.76	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
1:0:1002: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1993:G:H2'	1:0:1994:U:C6	2.43	0.53
1:0:2107:G:H2'	1:0:2108:G:O4'	2.07	0.53
1:0:2663:U:N3	1:0:2664:G:C5	2.77	0.53
1:0:2763:U:O2'	1:0:2764:U:H5'	2.08	0.53
1:0:421:G:H2'	1:0:422:C:H6	1.72	0.53
1:0:67:G:N3	1:0:73:A:C8	2.76	0.53
1:0:689:A:O2'	1:0:690:A:H5'	2.07	0.53
2:9:8:C:OP1	2:9:63:A:H5'	2.09	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
1:0:1385:C:H1'	1:0:2192:U:C6	2.44	0.53
1:0:2431:C:H2'	1:0:2432:A:O4'	2.08	0.53
1:0:2795:A:H2'	1:0:2795:A:N3	2.23	0.53
1:0:38:G:H1	1:0:453:U:H3	1.56	0.53
1:0:537:C:O2	1:0:2759:U:O2	2.27	0.53
1:0:543:G:H2'	1:0:544:U:C5	2.43	0.53
1:0:932:G:H2'	1:0:933:G:H8	1.70	0.53
1:0:1066: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
1:0:237:G:N2	1:0:238:G:H1'	2.24	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
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
1:0:88:G:H3'	1:0:89:A:C5'	2.38	0.53
1:0:965:G:O2'	1:0:966:A:H5'	2.08	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
1:0:1256: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
1:0:305: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
1:0:1055: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:163:A:H2'	1:0:164:G:C8	2.43	0.52
1:0:1721:G:O2'	1:0:1722:G:H5'	2.09	0.52
1:0:1952:A:O3'	1:0:1953:A:O4'	2.27	0.52
1:0:1974:U:H2'	1:0:1975:G:H5''	1.90	0.52
1:0:228:A:O5'	1:0:228:A:H8	1.92	0.52
1:0:2679:G:N2	1:0:2687:G:C4	2.77	0.52
1:0:749:C:O2'	1:0:750:C:H5'	2.09	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:C8	1:0:2413:A:H3'	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
1:0:475: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
1:0:1288:A:N6	1:0:1309:G:H5'	2.25	0.52
1:0:161:U:C4	1:0:162:C:N4	2.77	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
1:0:759:C:N3	1:0:2590:U:H4'	2.24	0.52
1:0:1655:C:H5''	1:0:2689:C:C2'	2.39	0.52
1:0:502:A:H2'	1:0:503:G:H5'	1.90	0.52
1:0:688:A:O5'	1:0:688:A:H8	1.92	0.52
1:0:758:G:C2'	1:0:759:C:H5'	2.40	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
1:0:1131: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1888:C:C5'	1:0:1889:G:H5''	2.38	0.52
1:0:2026:C:O2'	1:0:2027:C:H5'	2.10	0.52
1:0:201:G:O2'	1:0:202:A:H5'	2.09	0.52
1:0:2062:U:H2'	1:0:2063:A:O4'	2.10	0.52
1:0:2441:U:N3	1:0:2442:C:C5	2.78	0.52
1:0:2623:A:H2'	1:0:2624:G:O4'	2.09	0.52
1:0:215:G:N2	1:0:632:A:H8	2.06	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
1:0:26:G:C6	1:0:27:G:N1	2.77	0.52
1:0:2760:G:C2'	1:0:2761:A:OP1	2.58	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
1:0:932: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
1:0:834:A:C8	1:0:957:G:N7	2.77	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:H6	1:0:1339:U:P	2.33	0.52
1:0:1388:C:H2'	1:0:1389:C:C6	2.45	0.52
1:0:1409:U:OP1	1:0:1409:U:H6	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:H6	1:0:1530:U:O5'	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
1:0:486:U:H2'	1:0:487:G:C5'	2.40	0.52
2:9:77:G:O2'	2:9:78:A:H5'	2.10	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
1:0:691:C:C2	1:0:692:C:C6	2.98	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:930:A:H4'	1:0:930:A:OP1	2.08	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
1:0:171:G:O2'	1:0:172:A:H5'	2.09	0.52
1:0:174:A:H4'	1:0:2052:G:OP2	2.10	0.52
1:0:1926: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
1:0:25:U:H3	1:0:525:A:N6	2.08	0.52
1:0:639:G:O5'	1:0:639:G:H8	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
1:0:1089:C:O2	1:0:1099:A:H5'	2.10	0.52
1:0:119:G:H1'	1:0:129:A:C2	2.45	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:H6	1:0:2635:U:O5'	1.93	0.52
1:0:2705:A:O2'	1:0:2706:U:C5	2.58	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:C6	1:0:541:C:H3'	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
1:0:15:G:H2'	1:0:16:G:C5'	2.40	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
1:0:401:G:C4	1:0:403:A:N7	2.78	0.52
1:0:56:C:H6	1:0:56:C:O5'	1.92	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
1:0:1029:C:H3'	1:0:1030:U:H5''	1.92	0.51
1:0:82:G:H21	1:0:102:C:N4	2.08	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1375:C:N4	1:0:1376:C:C4	2.79	0.51
1:0:1458:A:H3'	1:0:1459:U:H5''	1.91	0.51
1:0:1544:A:N6	1:0:1545:G:C6	2.78	0.51
1:0:1683:G:N7	1:0:1684:G:C2	2.77	0.51
1:0:1766:U:H2'	1:0:1767:G:O4'	2.10	0.51
1:0:2249:U:O2'	1:0:2250:G:H5'	2.09	0.51
1:0:2436:U:H2'	1:0:2437:G:O4'	2.09	0.51
1:0:2442:C:C2	1:0:2467:A:H2	2.25	0.51
1:0:2571:G:C2	1:0:2582:G:N1	2.78	0.51
1:0:2601:C:H2'	1:0:2602:G:O5'	2.10	0.51
1:0:2618:A:C5	1:0:2619:G:H1'	2.45	0.51
1:0:2656:G:N3	1:0:2711:G:C2	2.78	0.51
1:0:2676:G:H2'	1:0:2677:U:C6	2.45	0.51
1:0:2713:A:O2'	1:0:2714:A:H5'	2.11	0.51
1:0:2728:A:C2	1:0:2736:U:H1'	2.45	0.51
1:0:502:A:C2'	1:0:503:G:H5'	2.40	0.51
1:0:28:A:H1'	1:0:523:A:C6	2.44	0.51
1:0:1004:A:H2'	1:0:1005:U:H5''	1.85	0.51
1:0:1151:U:OP1	1:0:1153:A:P	2.69	0.51
1:0:1198:C:H5''	1:0:1199:U:H5''	1.92	0.51
1:0:1471:G:O6	1:0:1472:C:C4	2.64	0.51
1:0:1718:A:OP1	1:0:1754:G:N1	2.43	0.51
1:0:1856:U:OP1	1:0:2389:G:O2'	2.29	0.51
1:0:1858:C:H2'	1:0:1859:A:C8	2.42	0.51
1:0:2026:C:OP1	1:0:2757:G:O2'	2.27	0.51
1:0:2376:G:N1	1:0:2399:C:C2	2.78	0.51
1:0:2599:U:H6	1:0:2599:U:O5'	1.94	0.51
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
2:9:9:G:H2'	2:9:10:U:O4'	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
1:0:162:C:H2'	1:0:163:A:C8	2.45	0.51
1:0:1708:C:O2'	1:0:1709:U:H5'	2.09	0.51
1:0:585:U:H4'	1:0:2481:G:C8	2.46	0.51
1:0:2665:G:C6	1:0:2666:U:C4	2.97	0.51
1:0:26:G:C5	1:0:27:G:C2	2.98	0.51
1:0:2813:G:H2'	1:0:2814:G:C8	2.33	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2814:G:N2	1:0:2815:C:C2	2.78	0.51
1:0:451:A:O2'	1:0:452:G:H5'	2.09	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
1:0:1270: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
1:0:224:G:N7	1:0:226:C:O2	2.44	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
1:0:393:U:N3	1:0:394:U:C4	2.78	0.51
1:0:471:A:H2'	1:0:472:C:C5'	2.40	0.51
1:0:460:U:N3	1:0:592:G:H1'	2.23	0.51
1:0:977:G:H1'	1:0:2246:A:C4	2.45	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
1:0:828:C:C2	1:0:1207:G:N2	2.79	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
1:0:538:A:O5'	1:0:538:A:C8	2.53	0.51
1:0:611:C:C6	1:0:611:C:H3'	2.46	0.51
1:0:633:G:HO2'	1:0:634:G:H5'	1.76	0.51
1:0:644:A:N6	1:0:651:C:OP1	2.43	0.51
1:0:916: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
1:0:1141: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
1:0:1697:U:O2	1:0:1754:G:C8	2.63	0.51
1:0:1800:A:C2	1:0:1802:A:C2	2.99	0.51
1:0:1922:U:O2'	1:0:2571:G:H1'	2.10	0.51
1:0:1684:G:H2'	1:0:1974:U:O4	2.10	0.51
1:0:2227:C:H2'	1:0:2228:U:H5'	1.91	0.51
1:0:2837:G:H8	1:0:2837:G:O5'	1.94	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:91:A:H2'	1:0:92:U:H6	1.73	0.51
1:0:944:A:C4	1:0:945:G:C8	2.99	0.51
2:9:75:A:N6	2:9:106:U:C4	2.79	0.51
2:9:30:C:O5'	2:9:30:C:C6	2.61	0.51
1:0:1287:A:N1	1:0:1661:C:O2'	2.24	0.51
1:0:1362:A:OP1	1:0:1363:C:H5''	2.10	0.51
1:0:1385:C:C2	1:0:1386:A:C8	2.98	0.51
1:0:1442:C:H6	1:0:1442:C:H3'	1.76	0.51
1:0:1471:G:O6	1:0:1472:C:N4	2.44	0.51
1:0:15:G:O2'	1:0:16:G:H5'	2.11	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
1:0:423:G:N3	1:0:431:G:N2	2.59	0.51
1:0:4:C:H2'	1:0:5:A:C8	2.46	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
1:0:588:G:N3	1:0:1275:A:N1	2.59	0.51
1:0:71:A:N6	1:0:110:U:H1'	2.26	0.51
1:0:705:C:OP1	3:A:57:GLY:CA	2.59	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:O5'	1:0:2586:G:C8	2.64	0.51
1:0:541:C:H6	1:0:541:C:H3'	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
1:0:1548:U:H2'	1:0:1549:C:C6	2.45	0.51
1:0:1683:G:O6	1:0:1977:C:N4	2.44	0.51
1:0:1690:U:C2'	1:0:1691:G:H5''	2.41	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:H6	1:0:2276:C:O5'	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
1:0:501:G:H2'	1:0:502:A:C8	2.46	0.51
1:0:65:C:O5'	1:0:65:C:H6	1.94	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
1:0:1683:G:O2'	11:I:6:SER:CA	2.59	0.51
1:0:127:C:H5''	1:0:1615:C:O2'	2.11	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
1:0:300:C:H6	1:0:300:C:P	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
1:0:81:C:H4'	1:0:307:C:C5'	2.40	0.51
1:0:824:U:H2'	1:0:825:C:H5'	1.92	0.51
2:9:72:C:O2'	2:9:73:C:H5'	2.10	0.51
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
1:0:1768: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
1:0:1678:G:N2	1:0:1983:G:H1'	2.26	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:H3'	1:0:2593:A:H8	1.76	0.50
1:0:2829:A:H2'	1:0:2830:U:C6	2.46	0.50
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
2:9:115:G:O2'	2:9:116:C:H5'	2.11	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:91:A:H8	2:9:91:A:O5'	1.94	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
1:0:167:A:C8	1:0:168:A:N7	2.80	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:O5'	1:0:2520:A:H8	1.94	0.50
1:0:2838:U:N3	1:0:2839:G:N7	2.58	0.50
1:0:2857:C:H2'	1:0:2857:C:O2	2.10	0.50
1:0:409:G:O2'	1:0:410:A:H5'	2.11	0.50
1:0:193:A:N7	1:0:444:U:C4	2.79	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
1:0:1271: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:C8	1:0:2593:A:H3'	2.46	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
1:0:2611:A:H2	1:0:2767:C:C2	2.28	0.50
1:0:2836:U:H2'	1:0:2837:G:H8	1.75	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
1:0:117:A:OP1	1:0:118:U:H5	1.95	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
1:0:297:A:H2'	1:0:298:C:H6	1.73	0.50
1:0:41:G:N1	1:0:451:A:C6	2.80	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:1287:A:N7	1:0:1315:A:N1	2.60	0.50
1:0:1386:A:H2'	1:0:1387:G:O4'	2.11	0.50
1:0:1366:A:C2	1:0:1391:A:N1	2.80	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
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:H8	1:0:929:A:H5''	1.75	0.50
2:9:62:C:C4	2:9:63:A:N7	2.80	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:C6	1:0:1514:C:O5'	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
1:0:321: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
1:0:8: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
1:0:1242:A:O2'	1:0:1243:G:H5'	2.11	0.50
1:0:171:G:H21	1:0:228:A:H2	1.58	0.50
1:0:1920:A:H2'	1:0:1921:A:C8	2.46	0.50
1:0:1680:U:C2	1:0:1981:A:C2	3.00	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:H6	1:0:2645:C:O5'	1.94	0.50
1:0:2795:A:OP2	1:0:2796:A:N6	2.40	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
1:0:70:A:O2'	1:0:72:A:OP2	2.23	0.50
1:0:745:C:H2'	1:0:746:G:C5'	2.42	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:875:G:C6	1:0:928:G:N2	2.80	0.50
2:9:23:G:H2'	2:9:24:U:C6	2.46	0.50
1:0:1672:A:O2'	4:B:115:GLY:CA	2.60	0.50
1:0:1380:C:H6	1:0:1380:C:O5'	1.95	0.50
1:0:1737:G:O5'	1:0:1737:G:H8	1.94	0.50
1:0:1787:U:H2'	1:0:1788:C:H6	1.75	0.50
1:0:1990:U:O5'	1:0:1990:U:H6	1.93	0.50
1:0:542:A:OP2	1:0:2003:A:H1'	2.12	0.50
1:0:2299:A:C5'	1:0:2300:G:C5	2.95	0.50
1:0:222:G:N2	1:0:231:G:H1'	2.27	0.50
1:0:1777:A:N6	1:0:2585:C:C1'	2.75	0.50
1:0:2586:G:H2'	1:0:2587:G:O4'	2.11	0.50
1:0:541:C:C3'	1:0:541:C:C6	2.95	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
1:0:946:U:C2	1:0:947:C:C5	2.99	0.50
1:0:845:U:C5	1:0:955:G:C6	3.00	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
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
2:9:104:A:C2	2:9:105:G:H1'	2.47	0.50
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
1:0:1331:G:C6	1:0:1332:G:C5	3.00	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:H5	1:0:1618:U:OP2	1.95	0.49
1:0:1338:G:OP2	1:0:1632:A:H2'	2.12	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:24:G:H2'	1:0:25:U:C6	2.46	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
1:0:39:C:H6	1:0:39:C:O5'	1.95	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
1:0:76:C:C6	1:0:76:C:H5'	2.44	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
1:0:835:U:OP2	1:0:957:G:OP2	2.30	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
1:0:15:G:C2'	1:0:16:G:H5'	2.42	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
1:0:180:C:C4	1:0:181:A:N6	2.80	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
1:0:320: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
1:0:1003:C:O2'	1:0:1004:A:H5'	2.12	0.49
1:0:113:C:N4	1:0:114:C:H41	2.11	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
1:0:158:A:OP2	1:0:159:A:OP2	2.30	0.49
1:0:1966:C:H2'	1:0:1967:U:C6	2.47	0.49
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
1:0:1937:G:N3	1:0:2530:C:C5'	2.75	0.49
1:0:2818:G:O2'	1:0:2819:G:H5'	2.12	0.49
1:0:1726:C:O2'	1:0:2834:A:N3	2.37	0.49
1:0:2847:G:N1	1:0:2848:A:N6	2.60	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
2:9:28:A:H3'	2:9:29:C:H6	1.77	0.49
2:9:20:A:N1	2:9:69:G:O6	2.45	0.49
2:9:69:G:H2'	2:9:70:C:O4'	2.12	0.49
1:0:1041:G:O2'	1:0:2445:C:H4'	2.12	0.49
1:0:1556:A:H2'	1:0:1557:G:H8	1.75	0.49
1:0:2007:G:O2'	1:0:2008:C:O4'	2.28	0.49
1:0:2182:A:H2'	1:0:2183:C:O4'	2.12	0.49
1:0:2203:G:O5'	1:0:2203:G:H8	1.94	0.49
1:0:931:G:H21	1:0:2247:A:H5''	1.77	0.49
1:0:2293:G:O2'	1:0:2294:U:H5'	2.12	0.49
1:0:2478:C:H6	1:0:2478:C:O5'	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
1:0:639: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
1:0:1210: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
1:0:837:U:H1'	1:0:2337:A:N7	2.27	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
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
1:0:941: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
2:9:67:C:C3'	2:9:68:A:H5'	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1356: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
1:0:314:G:O2'	1:0:315:G:H5'	2.12	0.49
1:0:889:C:C2'	1:0:890:U:H5'	2.42	0.49
1:0:940:G:H8	1:0:940:G:O5'	1.95	0.49
1:0:959:C:H5''	1:0:972:C:O2'	2.12	0.49
1:0:994:A:N7	1:0:995:A:C4	2.81	0.49
1:0:1016: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
1:0:1760:G:H2'	1:0:1761:G:H8	1.77	0.49
1:0:1674:C:C6	1:0:1987:G:N2	2.80	0.49
1:0:2401:A:H8	1:0:2401:A:O5'	1.95	0.49
1:0:2225:G:N2	1:0:2405:A:O2'	2.45	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:N3	1:0:2867:G:H2'	2.26	0.49
1:0:537:C:C2	1:0:2759:U:H2'	2.47	0.49
1:0:65:C:H2'	1:0:66:U:O4'	2.12	0.49
1:0:866:U:O5'	1:0:866:U:H6	1.95	0.49
1:0:873:U:H3'	1:0:874:A:C5'	2.43	0.49
1:0:1064:C:H6	1:0:1064:C:O5'	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:1126: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:O5'	1:0:1761:G:H8	1.95	0.49
1:0:20:C:C4	1:0:21:A:N7	2.80	0.49
1:0:2270:U:O2'	1:0:2353:G:H1'	2.13	0.49
1:0:956:A:H2	1:0:2427:A:O2'	1.90	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
1:0:313: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
1:0:1011:A:N1	1:0:1166:A:C5	2.81	0.49
1:0:1375:C:N4	1:0:1376:C:C5	2.80	0.49
1:0:1355:A:O4'	1:0:1410:U:H4'	2.13	0.49
1:0:1540:C:HO2'	1:0:1541:G:H5'	1.78	0.49
1:0:1645:U:O2'	1:0:2677:U:H5''	2.13	0.49
1:0:2396:C:H2'	1:0:2397:A:O4'	2.13	0.49
1:0:2737:A:H61	7:E:60:LYS:CA	2.26	0.49
1:0:2622:G:C2	1:0:2752:C:N3	2.81	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
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
1:0:7:G:H8	1:0:7:G:O5'	1.96	0.49
2:9:92:G:H2'	2:9:93:G:C5'	2.37	0.49
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
1:0:150:A:H2'	1:0:151:G:O4'	2.13	0.48
1:0:15:G:H2'	1:0:16:G:H5'	1.94	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
1:0:742:G:C4	1:0:1766:U:C2	3.01	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2502:G:N9	1:0:2745:A:N7	2.61	0.48
1:0:26:G:H2'	1:0:27:G:O4'	2.13	0.48
1:0:720:A:N6	1:0:721:C:N4	2.61	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
1:0:887:G:O2'	1:0:888:G:H5'	2.12	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
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
1:0:963:G:C6	1:0:977:G:N1	2.81	0.48
1:0:958:G:O6	1:0:982:C:N4	2.46	0.48
2:9:34:C:C2'	2:9:35:C:H5'	2.43	0.48
1:0:1302:C:N4	1:0:1303:U:C4	2.82	0.48
1:0:138:G:H2'	1:0:139:A:C8	2.48	0.48
1:0:1668:G:C6	1:0:1669:A:C6	3.01	0.48
1:0:1773:C:C6	1:0:1773:C:O5'	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
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
2:9:101:A:C2	2:9:102:A:N6	2.82	0.48
2:9:58:G:O2'	2:9:59:A:OP2	2.25	0.48
2:9:6:C:H2'	2:9:7:C:C5	2.48	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
1:0:1000:G:OP1	1:0:1168:G:O3'	2.32	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:O5'	1:0:2018:G:H8	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
1:0:207:U:H2'	1:0:208:C:H6	1.78	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
1:0:26:G:N7	1:0:27:G:C6	2.81	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
1:0:692:C:C2'	1:0:693:A:O5'	2.62	0.48
1:0:923:A:N3	1:0:923:A:H2'	2.29	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
1:0:1779:C:HO2'	1:0:1780:A:H5'	1.77	0.48
1:0:1818:G:H2'	1:0:1819:U:C6	2.49	0.48
1:0:191:G:O2'	1:0:194:G:OP1	2.31	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
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
1:0:488:A:OP1	1:0:488:A:C8	2.59	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:5:A:H2'	1:0:6:A:H8	1.78	0.48
1:0:742:G:N3	1:0:742:G:H3'	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
2:9:23:G:H2'	2:9:24:U:H6	1.78	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
1:0:1284: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:H6	1:0:1633:C:O5'	1.96	0.48
1:0:1767:G:N1	1:0:1768:U:C2	2.81	0.48
1:0:17:G:H2'	1:0:18:U:C5	2.48	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:C8	1:0:2025:A:H3'	2.48	0.48
1:0:2094:C:N4	1:0:2103:G:N3	2.61	0.48
1:0:977:G:H4'	1:0:2246:A:C2	2.48	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
1:0:344: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
1:0:1073: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:OP2	1:0:1355:A:H3'	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
1:0:633:G:H8	1:0:633:G:O5'	1.97	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:957:G:H22	1:0:983:G:H1'	1.78	0.48
1:0:1038:U:H3	1:0:2466:G:HO2'	1.60	0.48
1:0:1262:U:C6	1:0:1262:U:C3'	2.96	0.48
1:0:1358:C:C3'	1:0:1359:G:H5''	2.44	0.48
1:0:1507:A:H4'	1:0:1510:A:OP1	2.13	0.48
1:0:1401:G:O2'	1:0:1541:G:H5'	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
1:0:2193:C:C2	1:0:2194:A:C8	3.02	0.48
1:0:2059:U:H5''	1:0:2217:G:N1	2.28	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
1:0:1470:G:C2	1:0:2684:A:N3	2.82	0.48
1:0:2822:U:H5	1:0:2823:G:C5	2.31	0.48
1:0:477:A:O5'	1:0:477:A:H8	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
1:0:67:G:C5	1:0:72:A:C2	3.01	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
1:0:1242: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
1:0:1660:G:H8	1:0:1660:G:O5'	1.97	0.48
1:0:1373:G:H1	1:0:2192:U:H3	1.62	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
1:0:1117: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:H6	1:0:1313:U:O5'	1.97	0.48
1:0:762:A:C6	1:0:1634:A:C2	3.02	0.48
1:0:1811:A:H1'	1:0:1813:A:C5	2.48	0.48
1:0:2036:G:OP1	4:B:144:ARG:CA	2.62	0.48
1:0:2217:G:C3'	1:0:2217:G:N3	2.77	0.48
1:0:2243:C:N4	1:0:2244:C:C4	2.82	0.48
1:0:2324:G:N7	1:0:2351:G:C2	2.82	0.48
1:0:2321:C:O2'	1:0:2353:G:H5''	2.14	0.48
1:0:2376:G:C2	1:0:2399:C:C2	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2665:G:C5	1:0:2666:U:C4	3.01	0.48
1:0:333:A:HO2'	1:0:350:U:H2'	1.77	0.48
1:0:439:C:H2'	1:0:440:U:O4'	2.14	0.48
1:0:459:A:N6	1:0:466:A:H2'	2.28	0.48
1:0:606:A:C2	1:0:607:C:C2	3.02	0.48
1:0:714:G:O2'	1:0:715:U:H5'	2.14	0.48
1:0:780:U:H2'	1:0:781:G:C8	2.48	0.48
1:0:815:A:H8	1:0:815:A:P	2.36	0.48
1:0:685:U:C2	1:0:822:G:N2	2.81	0.48
1:0:859:U:H6	1:0:859:U:O5'	1.97	0.48
1:0:918:A:C2'	1:0:919:U:C5'	2.83	0.48
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
1:0:167: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
1:0:2209: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
1:0:803: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
1:0:1153: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
1:0:1302:C:N4	1:0:1303:U:O4	2.47	0.47
1:0:1287:A:C6	1:0:1315:A:H2	2.30	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
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
1:0:51:A:H2'	1:0:52:A:O4'	2.14	0.47
1:0:737:C:H2'	1:0:738:G:O4'	2.14	0.47
1:0:859:U:C3'	1:0:859:U:C6	2.96	0.47
2:9:71:G:N2	2:9:72:C:C1'	2.77	0.47
1:0:831:G:OP2	1:0:1199:U:C5	2.68	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1353:A:C6	1:0:1619:A:C8	3.02	0.47
1:0:1561:A:H2'	1:0:1562:G:O4'	2.15	0.47
1:0:1610:A:H2'	1:0:1611:U:H6	1.79	0.47
1:0:1685:A:O2'	1:0:1686:A:H3'	2.14	0.47
1:0:2493:U:O2	1:0:2549:G:O6	2.31	0.47
1:0:2554:C:C6	1:0:2554:C:C3'	2.97	0.47
1:0:2708:U:N3	1:0:2709:C:N3	2.62	0.47
1:0:2834:A:H8	1:0:2834:A:O5'	1.98	0.47
1:0:689:A:C2	1:0:690:A:N9	2.83	0.47
2:9:78:A:H2'	2:9:79:U:C5	2.48	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
1:0:168:A:O2'	1:0:169:C:O4'	2.26	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
1:0:202:A:H2'	1:0:203:G:O4'	2.14	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
1:0:2324: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
1:0:311: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
1:0:2298:U:O4	2:9:15:A:N6	2.47	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
1:0:225:G:N2	1:0:2410:U:H1'	2.28	0.47
1:0:2434:G:C6	1:0:2477:C:N4	2.80	0.47
1:0:246:C:H42	1:0:247:A:H62	1.63	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)
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
1:0:93:A:O2'	1:0:94:C:H5'	2.14	0.47
2:9:110:U:O2'	2:9:111:C:H5'	2.14	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
1:0:178:C:O2'	1:0:179:U:H5'	2.15	0.47
1:0:818:G:C6	1:0:2051:U:OP1	2.68	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
1:0:324:C:H2'	1:0:325:U:O4'	2.15	0.47
1:0:303:C:C2	1:0:360:A:C2	3.03	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
1:0:58:C:C5	1:0:59:G:O4'	2.67	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
1:0:8:A:H2'	1:0:9:U:C6	2.50	0.47
2:9:31:A:H2'	2:9:32:C:O4'	2.15	0.47
1:0:1151:U:OP1	1:0:1153:A:OP2	2.32	0.47
1:0:1434:U:H6	1:0:1434:U:O5'	1.97	0.47
1:0:1578:U:O4	1:0:1579:G:O6	2.32	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
1:0:1933:G:C8	1:0:1933:G:O5'	2.63	0.47
1:0:2082:C:H2'	1:0:2083:G:O4'	2.15	0.47
1:0:2203:G:H4'	1:0:2204:A:H5'	1.96	0.47
1:0:225:G:O5'	1:0:226:C:H5'	2.15	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
1:0:941: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:1649:A:H8	1:0:1649:A:O5'	1.98	0.47
1:0:1650:A:C8	1:0:1652:G:N7	2.82	0.47
1:0:1771:A:C8	1:0:1772:C:H5	2.32	0.47
1:0:2091: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
1:0:481:A:N6	1:0:482:A:N6	2.62	0.47
1:0:69:G:H5''	1:0:70:A:OP1	2.15	0.47
1:0:807:A:C5	1:0:808:C:C4	3.02	0.47
1:0:79:G:HO2'	1:0:80:A:H5'	1.77	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
1:0:167:A:H2'	1:0:168:A:H8	1.76	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
1:0:353:G:O2'	1:0:354:C:H5'	2.15	0.47
1:0:28:A:H61	1:0:522:G:H4'	1.80	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
1:0:1578: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
1:0:992:A:C2	1:0:2011:U:O4'	2.67	0.47
1:0:2762:G:C6	1:0:2763:U:C5	3.03	0.47
1:0:839:U:C4	1:0:841:G:H1'	2.50	0.47
1:0:1102:G:H2'	1:0:1103:C:H6	1.80	0.47
1:0:1172:U:H2'	1:0:1173:G:H8	1.79	0.47
1:0:1629:G:C6	1:0:1633:C:N4	2.83	0.47
1:0:1744:G:H2'	1:0:1746:A:OP2	2.15	0.47
1:0:1778:U:O2'	1:0:1779:C:H5'	2.14	0.47
1:0:1831:G:C2'	1:0:1832:G:H5'	2.45	0.47
1:0:1833:U:H6	1:0:1833:U:O5'	1.98	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:184:A:H2'	1:0:185:C:O4'	2.15	0.47
1:0:1974:U:O5'	1:0:1974:U:H6	1.97	0.47
1:0:218:A:N1	1:0:232:A:H5''	2.30	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
1:0:26:G:C5	1:0:27:G:N1	2.83	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
1:0:1039: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
1:0:162:C:H2'	1:0:163:A:H8	1.79	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
1:0:208:C:C2'	1:0:209:G:H5'	2.45	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
1:0:2506:C:H2'	1:0:2507:U:H6	1.79	0.46
1:0:2494:C:O2	1:0:2549:G:C5	2.68	0.46
1:0:2825:A:H2'	1:0:2826:C:C6	2.51	0.46
1:0:556:A:C2'	1:0:557:U:H5'	2.42	0.46
1:0:581:A:H2'	1:0:581:A:N3	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
1:0:1292:A:H2'	1:0:1293:A:H8	1.81	0.46
1:0:1314:A:N7	1:0:1316:G:N7	2.63	0.46
1:0:165:G:O6	1:0:166:G:C2	2.68	0.46
1:0:1783:G:N2	1:0:1784:C:H1'	2.30	0.46
1:0:2002:A:N1	1:0:2003:A:C5	2.83	0.46
1:0:2007:G:C2	1:0:2023:C:O2	2.68	0.46
1:0:2044:G:N2	1:0:2046:C:C5	2.83	0.46
1:0:2078:G:N1	1:0:2178:U:C2	2.83	0.46
1:0:2125:C:O5'	1:0:2125:C:H6	1.98	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:29:U:H2'	1:0:30:G:H8	1.77	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
1:0:1031: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
1:0:314: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
1:0:1018: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
1:0:173:A:N3	1:0:173:A:H2'	2.30	0.46
1:0:1945:C:O2'	1:0:1946:U:H5	1.98	0.46
1:0:20:C:O2'	1:0:21:A:H5'	2.16	0.46
1:0:839:U:H5''	1:0:2408:G:OP2	2.15	0.46
1:0:2554:C:H6	1:0:2554:C:O5'	1.99	0.46
1:0:2626:U:H6	1:0:2626:U:O5'	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:698:A:C6	1:0:786:U:C6	3.03	0.46
1:0:981:C:C5	1:0:982:C:C5	3.03	0.46
2:9:94:G:N3	2:9:94:G:H2'	2.31	0.46
1:0:133:C:H2'	1:0:134:G:O4'	2.16	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
1:0:2026:C:O2'	1:0:2027:C:C5'	2.64	0.46
1:0:2300:G:N3	1:0:2300:G:H3'	2.31	0.46
1:0:2309:G:H1	1:0:2364:C:N4	2.14	0.46
1:0:2013:A:H1'	1:0:2478:C:H5'	1.97	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:H6	1:0:2726:U:O5'	1.99	0.46
1:0:348:U:O4	1:0:349:G:C5	2.69	0.46
1:0:348:U:C4	1:0:349:G:C5	3.04	0.46
1:0:513:A:H4'	1:0:515:A:H5'	1.97	0.46
1:0:658:G:H1'	1:0:2330:G:H5''	1.98	0.46
1:0:740:A:N6	1:0:741:G:C2	2.84	0.46
1:0:836:G:H2'	1:0:837:U:C6	2.41	0.46
1:0:836:G:C2	1:0:837:U:C5	3.04	0.46
1:0:873:U:P	1:0:2247:A:C2	3.08	0.46
1:0:873:U:H2'	1:0:874:A:H5'	1.96	0.46
1:0:1220: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
1:0:314: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
1:0:1090:C:C2'	1:0:1091:C:H5'	2.46	0.46
1:0:1161:U:H2'	1:0:1162:A:H8	1.76	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
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
2:9:89:G:N2	2:9:91:A:C8	2.84	0.46
1:0:587:A:H5''	1:0:1268:U:O3'	2.16	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
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
1:0:621: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
1:0:65:C:C2	1:0:88:G:N2	2.84	0.46
1:0:751:G:C4	1:0:772:G:N1	2.83	0.46
2:9:108:G:H8	2:9:108:G:O5'	1.99	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
1:0:1311:C:N3	1:0:1660:G:C2	2.84	0.46
1:0:1708:C:H2'	1:0:1709:U:O4'	2.15	0.46
1:0:1768:U:O5'	1:0:1768:U:H6	1.99	0.46
1:0:1837:G:O2'	1:0:1838:G:H5'	2.16	0.46
1:0:1830:C:H42	1:0:1881:U:H3'	1.81	0.46
1:0:1945:C:O2'	1:0:1946:U:C5	2.68	0.46
1:0:195:A:H61	1:0:212:U:C4'	2.23	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:220:U:O4	1:0:232:A:C8	2.69	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
1:0:34:U:C2'	1:0:35:G:H5'	2.34	0.46
1:0:394:U:H6	1:0:394:U:O5'	1.99	0.46
1:0:427:C:O2'	1:0:428:A:H5'	2.15	0.46
1:0:54:G:O6	1:0:55:A:N6	2.49	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
1:0:66:U:H6	1:0:66:U:O5'	1.99	0.46
1:0:751:G:H2'	1:0:752:G:O4'	2.15	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
1:0:1145:C:C5	1:0:1147:G:OP2	2.69	0.46
1:0:117:A:OP1	1:0:118:U:C5	2.69	0.46
1:0:1682:A:N6	1:0:1977:C:N4	2.62	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
1:0:1777:A:N6	1:0:2585:C:H1'	2.32	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
1:0:70:A:P	1:0:111:G:H4'	2.56	0.46
1:0:942:U:H2'	1:0:943:U:C5'	2.45	0.46
1:0:95:G:C2	1:0:96:C:C2	3.03	0.46
1:0:1020:A:O5'	1:0:1020:A:H8	1.99	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
1:0:184:A:H2'	1:0:185:C:C6	2.51	0.45
1:0:1987:G:C5	1:0:1988:A:C8	3.04	0.45
1:0:2238:G:O2'	1:0:2239:C:H5'	2.16	0.45
1:0:2319:G:C2'	1:0:2320:G:H8	2.21	0.45
1:0:1038:U:O2	1:0:2466:G:H4'	2.16	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
1:0:472: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
1:0:1174: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:H6	1:0:2069:U:O5'	1.99	0.45
1:0:2079:A:H2'	1:0:2080:U:H6	1.77	0.45
1:0:2382:C:C4	1:0:2383:C:C5	3.05	0.45
1:0:2379:G:C2	1:0:2396:C:N3	2.84	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
1:0:319:G:O5'	1:0:319:G:H8	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
1:0:1396:C:H6	1:0:1396:C:O5'	1.99	0.45
1:0:1407:G:O2'	1:0:1408:A:O4'	2.33	0.45
1:0:1416:A:C2	1:0:1417:C:C2	3.04	0.45
1:0:1442:C:C6	1:0:1442:C:H3'	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
1:0:203: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
1:0:2318: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:25:U:O4	1:0:26:G:C2	2.69	0.45
1:0:2645:C:O5'	1:0:2645:C:C6	2.69	0.45
1:0:26:G:C6	1:0:27:G:C2	3.04	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
1:0:710: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
1:0:697:G:N1	1:0:807:A:C2	2.78	0.45
1:0:838:A:H4'	1:0:2407:G:C5	2.51	0.45
1:0:974:U:H2'	1:0:975:C:C6	2.52	0.45
1:0:957:G:N2	1:0:983:G:H1'	2.32	0.45
2:9:85:G:O2'	2:9:86:A:H5'	2.17	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
1:0:149:A:O2'	1:0:150:A:H5'	2.17	0.45
1:0:1631:C:C5	1:0:1633:C:C4	3.03	0.45
1:0:1950:C:H2'	1:0:1951:G:O4'	2.17	0.45
1:0:1672:A:C2	1:0:2032:G:H5''	2.51	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:C8	1:0:2391:A:O5'	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
1:0:679:C:H2'	1:0:680:U:C6	2.48	0.45
1:0:475:U:C2	1:0:801:A:C6	3.05	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
1:0:1228: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:C6	1:0:1339:U:OP2	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
1:0:2232:G:H2'	1:0:2233:C:H6	1.81	0.45
1:0:873:U:O5'	1:0:2247:A:H2	1.96	0.45
1:0:2266:A:C2'	1:0:2268:G:C8	2.94	0.45
1:0:2396:C:HO2'	1:0:2397:A:H5'	1.78	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:840:U:C4	1:0:2405:A:H2	2.33	0.45
1:0:2432:A:H2	1:0:2483:U:O2	2.00	0.45
1:0:2514:G:H2'	1:0:2515:G:C8	2.51	0.45
1:0:2490:U:O4	1:0:2553:G:O6	2.35	0.45
1:0:2616:U:H2'	1:0:2617:G:O4'	2.16	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:H6	1:0:611:C:H3'	1.81	0.45
1:0:649:G:O2'	1:0:650:U:H5'	2.16	0.45
1:0:926:C:H6	1:0:926:C:O5'	2.00	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
1:0:146:C:N3	1:0:152:G:N2	2.65	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:H6	1:0:1973:C:O5'	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:O5'	1:0:2825:A:H8	2.00	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
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
1:0:1020:A:O2'	1:0:1021:A:H5'	2.17	0.45
1:0:1280:U:C2'	1:0:1281:A:C5'	2.90	0.45
1:0:1291:G:C2'	1:0:1292:A:C5'	2.95	0.45
1:0:1295:U:H2'	1:0:1296:G:H5'	1.97	0.45
1:0:132:U:H2'	1:0:133:C:H6	1.80	0.45
1:0:1457:A:N6	1:0:1458:A:N6	2.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:174:A:O2'	1:0:2223:U:OP1	2.35	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
1:0:25:U:C4	1:0:26:G:C2	3.04	0.45
1:0:2792:C:N3	1:0:2805:G:C2	2.85	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
1:0:1059: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
1:0:459: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:H8	1:0:814:G:O5'	2.00	0.45
1:0:835:U:C5	1:0:849:G:N2	2.85	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
1:0:1242:A:H2'	1:0:1243:G:C8	2.52	0.45
1:0:1226:A:N6	1:0:1249:G:H1'	2.32	0.45
1:0:1560:A:H2'	1:0:1561:A:O4'	2.17	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:210:A:H62	1:0:442:A:H61	1.65	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
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:O5'	1:0:810:U:H6	2.00	0.45
1:0:813:A:O2'	1:0:814:G:H8	2.00	0.45
1:0:941:U:OP1	1:0:941:U:H4'	2.17	0.45
2:9:73:C:O2	2:9:109:G:C2	2.70	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
1:0:1774:A:C2	1:0:2567:G:O4'	2.70	0.45
1:0:1762:C:O2'	1:0:1777:A:H1'	2.17	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
1:0:760:U:O2	1:0:1997:A:H1'	2.16	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
1:0:2520: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
1:0:2487:G:C2	1:0:2561:G:C6	3.05	0.45
1:0:2800:C:H2'	1:0:2801:A:C5'	2.47	0.45
1:0:466:A:O2'	1:0:467:U:OP2	2.32	0.45
1:0:60:A:O2'	1:0:61:U:H5'	2.17	0.45
1:0:708:G:C2	1:0:781:G:C2	3.05	0.45
1:0:860:U:N3	1:0:945:G:N2	2.65	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
1:0:1000: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:491:A:N6	1:0:510:G:H5'	2.32	0.44
1:0:319:G:H1'	1:0:511:A:O4'	2.17	0.44
1:0:548:G:N3	1:0:549:G:C8	2.86	0.44
1:0:574:C:N4	1:0:582:G:OP1	2.51	0.44
1:0:646:C:H2'	1:0:647:G:C8	2.52	0.44
1:0:65: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
1:0:789: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
1:0:1171: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
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
1:0:91:A:C6	1:0:92:U:C4	3.06	0.44
1:0:931:G:H2'	1:0:932:G:C5'	2.47	0.44
2:9:98:C:H3'	2:9:98:C:C6	2.51	0.44
1:0:105:G:O6	1:0:106:G:C6	2.70	0.44
1:0:1460:G:N2	1:0:1461:C:O2	2.50	0.44
1:0:1673:C:C4	1:0:1674:C:C5	3.06	0.44
1:0:1801:C:H1'	1:0:2208:U:C5'	2.47	0.44
1:0:2026:C:O2'	1:0:2027:C:O5'	2.34	0.44
1:0:2056:C:H2'	1:0:2057:U:H6	1.81	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2062:U:H3	1:0:2220:A:H61	1.66	0.44
1:0:2380:U:C2'	1:0:2381:A:H5'	2.40	0.44
1:0:2490:U:C4	1:0:2491:C:C5	3.05	0.44
1:0:2574:G:H8	1:0:2574:G:O5'	1.99	0.44
1:0:2843:A:N6	1:0:2844:G:N1	2.65	0.44
1:0:423: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
1:0:170:U:H4'	1:0:816:U:O2'	2.18	0.44
1:0:942:U:C2'	1:0:943:U:C5'	2.96	0.44
1:0:1311:C:N3	1:0:1660:G:N2	2.65	0.44
1:0:1301:U:C5	1:0:1340:C:C2	3.05	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
1:0:1724: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
1:0:1676:U:C2	1:0:1985:G:N2	2.85	0.44
1:0:2363:G:C5'	1:0:2365:U:OP1	2.66	0.44
1:0:1655:C:C5'	1:0:2689:C:O2'	2.60	0.44
1:0:2839:G:C8	1:0:2840:U:C5	3.06	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
1:0:58:C:O2	1:0:72:A:H2'	2.17	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
2:9:107:C:H3'	2:9:107:C:C6	2.52	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
1:0:1263:G:O2'	1:0:1264:C:O5'	2.30	0.44
1:0:1271:C:O2'	1:0:1272:G:C5'	2.64	0.44
1:0:1546:C:H2'	1:0:1547:U:C6	2.52	0.44
1:0:1548:U:C4	1:0:1549:C:N4	2.86	0.44
1:0:1730:G:O5'	1:0:1730:G:H8	2.01	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:394:U:H2'	1:0:395:G:H5'	1.99	0.44
1:0:197:G:N1	1:0:440:U:H3'	2.31	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
1:0:1014:G:N3	1:0:1021:A:H2	2.16	0.44
1:0:117:A:O3'	1:0:118:U:H3'	2.18	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:O5'	1:0:1792:C:H6	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
1:0:238:G:O4'	1:0:618:A:H2	2.00	0.44
1:0:24:G:H2'	1:0:25:U:H6	1.82	0.44
1:0:2526:U:N3	1:0:2527:G:C5	2.86	0.44
1:0:2718:A:C2	1:0:2719:U:C6	3.06	0.44
1:0:2813:G:C5	1:0:2814:G:N7	2.86	0.44
1:0:305: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
1:0:1153:A:O2'	1:0:1155:G:C8	2.64	0.44
1:0:829:C:C2	1:0:1206:G:C2	3.06	0.44
1:0:1223:G:OP2	1:0:1223:G:C8	2.71	0.44
1:0:26:G:H4'	1:0:1273:G:O2'	2.17	0.44
1:0:133:C:C4	1:0:134:G:C4	3.05	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
1:0:588:G:O2'	1:0:2002:A:OP1	2.35	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:175:C:N4	1:0:225:G:H1	2.04	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
1:0:509:U:H6	1:0:509:U:O5'	2.01	0.44
1:0:28:A:N3	1:0:523:A:C5	2.86	0.44
1:0:542:A:H2	1:0:572:G:HO2'	1.64	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
1:0:832:A:N6	1:0:833:A:C6	2.85	0.44
1:0:929:A:C2	2:9:81:C:O2	2.70	0.44
1:0:986:A:H2	1:0:1001:A:C8	2.35	0.44
1:0:1001:A:N3	1:0:1167:A:C2	2.85	0.44
1:0:1134:C:C2	1:0:1135:C:C5	3.06	0.44
1:0:1212:U:C2'	1:0:1213:U:H6	2.16	0.44
1:0:1411:C:H2'	1:0:1412:C:O4'	2.18	0.44
1:0:1446:U:C4	1:0:1447:U:C4	3.05	0.44
1:0:1542:G:H8	1:0:1542:G:O5'	2.01	0.44
1:0:1610:A:C5	1:0:1611:U:C5	3.06	0.44
1:0:1694:A:O2'	1:0:1695:U:H5'	2.17	0.44
1:0:1753:A:H3'	1:0:1753:A:C8	2.53	0.44
1:0:1807:A:H1'	1:0:1809:G:C1'	2.38	0.44
1:0:2029:G:H2'	1:0:2030:U:C6	2.53	0.44
1:0:2231:G:HO2'	1:0:2232:G:H5'	1.83	0.44
1:0:2452:U:C4	1:0:2453:C:C5	3.05	0.44
1:0:2636:A:O5'	1:0:2636:A:H8	2.01	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
1:0:1002: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
1:0:178:C:H2'	1:0:179:U:C5	2.53	0.44
1:0:2238:G:H2'	1:0:2239:C:C6	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:1080: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:H6	1:0:2335:U:O5'	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
1:0:322:A:H2	1:0:342:G:P	2.41	0.43
1:0:5:A:H2'	1:0:6:A:C8	2.53	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
2:9:63:A:O2'	2:9:64:C:H5'	2.18	0.43
1:0:1140:A:C2	1:0:2549:G:C1'	3.01	0.43
1:0:341:A:H2	1:0:1223:G:N7	2.16	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:H6	1:0:1731:C:O5'	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
1:0:344: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1145:C:C6	1:0:1147:G:OP2	2.71	0.43
1:0:1310:C:H2'	1:0:1311:C:H6	1.83	0.43
1:0:1301:U:C5	1:0:1340:C:N3	2.86	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
1:0:1284:G:N3	1:0:1633:C:O4'	2.52	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
1:0:968:C:N3	1:0:2438:A:OP1	2.50	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
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
2:9:101:A:H2	2:9:102:A:N6	2.16	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
1:0:218:A:H4'	1:0:220:U:C1'	2.48	0.43
1:0:2224:U:O2	1:0:2414:A:H3'	2.18	0.43
1:0:956:A:C6	1:0:2427:A:N3	2.86	0.43
1:0:971:A:N1	1:0:2475:C:H1'	2.33	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:H3'	1:0:2736:U:H6	1.83	0.43
1:0:2750:G:O5'	1:0:2750:G:H8	2.00	0.43
1:0:2815:C:O5'	1:0:2815:C:H6	2.02	0.43
1:0:2824:C:O2	1:0:2843:A:N3	2.51	0.43
1:0:353: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:H2'	1:0:514:G:N3	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:959:C:H2'	1:0:960:U:C6	2.53	0.43
1:0:1002:C:N4	1:0:1003:C:N4	2.66	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
1:0:1236: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:O5'	1:0:1323:G:H8	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
1:0:796:A:H2	1:0:1770:U:H5'	1.83	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
1:0:587:A:C6	1:0:2001:G:O4'	2.71	0.43
1:0:2032:G:O2'	1:0:2033:C:H5'	2.19	0.43
1:0:411:C:H4'	1:0:2072:C:O2'	2.18	0.43
1:0:195:A:N6	1:0:212:U:H4'	2.24	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
1:0:322:A:H2	1:0:342:G:OP1	2.00	0.43
1:0:34:U:H2'	1:0:35:G:C5'	2.35	0.43
1:0:546:A:H2'	1:0:547:U:O4'	2.19	0.43
1:0:688:A:O2'	1:0:689:A:H5'	2.18	0.43
1:0:831:G:O2'	1:0:832:A:C5'	2.65	0.43
2:9:17:A:H1'	2:9:112:A:C8	2.53	0.43
1:0:1226:A:C4	1:0:1250:A:N3	2.86	0.43
1:0:1215:A:N3	1:0:1258:G:C2	2.86	0.43
1:0:1289:A:C2	1:0:1290:A:C8	3.07	0.43
1:0:1291:G:H2'	1:0:1292:A:C5'	2.49	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1391:A:C2'	1:0:1392:U:OP1	2.66	0.43
1:0:1426:U:H6	1:0:1426:U:O5'	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:O5'	1:0:1995:G:H8	2.02	0.43
1:0:2091:C:H3'	1:0:2092:U:H6	1.83	0.43
1:0:217:U:H6	1:0:217:U:O5'	2.02	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
1:0:322: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
1:0:1010: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:C6	1:0:1711:C:O5'	2.69	0.43
1:0:174:A:O4'	1:0:2051:U:H2'	2.18	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:H8	1:0:2391:A:O5'	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
1:0:437: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
1:0:63:A:C8	1:0:64:C:H5	2.36	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
1:0:1077: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:C6	1:0:1994:U:O5'	2.69	0.43
1:0:2010:G:H2'	1:0:2011:U:C6	2.54	0.43
1:0:2216:G:C8	1:0:2216:G:O5'	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
1:0:14:A:H2	1:0:2603:G:H21	1.59	0.43
1:0:2653:A:N6	1:0:2654:A:C6	2.87	0.43
1:0:2833:C:OP1	1:0:2833:C:H6	2.01	0.43
1:0:2817:A:C2	1:0:2851:G:C4	3.07	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
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
20:R:57:ASN:CA	20:R:76:LYS:CA	2.96	0.43
1:0:1095:A:H2	1:0:1116:U:H1'	1.84	0.43
1:0:342:G:N7	1:0:1222:G:N2	2.62	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:C6	1:0:2024:U:O5'	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
1:0:2835:A:O5'	1:0:2835:A:H8	2.01	0.43
1:0:2701:A:C6	1:0:2848:A:N6	2.87	0.43
1:0:346:C:O2'	1:0:347:C:H5'	2.18	0.43
1:0:38:G:O2'	1:0:39:C:H5'	2.19	0.43
1:0:548:G:C2	1:0:549:G:N7	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:1014: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
1:0:140:G:H2'	1:0:141:G:C8	2.53	0.43
1:0:1665:C:H2'	1:0:1666:G:H8	1.84	0.43
1:0:1675:C:O5'	1:0:1675:C:H6	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
1:0:167:A:H5''	1:0:181:A:C2	2.54	0.43
1:0:1972:G:H2'	1:0:1973:C:C5'	2.49	0.43
1:0:2008:C:H6	1:0:2008:C:O5'	2.02	0.43
1:0:200:A:OP2	1:0:434:C:H4'	2.19	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
1:0:220:U:O4	1:0:232:A:N7	2.51	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:H6	1:0:2768:C:O5'	2.01	0.43
1:0:65:C:C2'	1:0:66:U:H5'	2.48	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
1:0:1040:A:C8	1:0:1040:A:H3'	2.53	0.42
1:0:1030:U:C4	1:0:1153:A:N1	2.87	0.42
1:0:1172:U:H2'	1:0:1173:G:C8	2.54	0.42
1:0:1332:G:C6	1:0:1333:G:C2	3.07	0.42
1:0:1686:A:HO2'	1:0:1687:C:H5'	1.83	0.42
1:0:426:C:H4'	1:0:1863:U:O2'	2.18	0.42
1:0:1927:U:C2'	1:0:1927:U:O2	2.65	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2434:G:C2	1:0:2477:C:N4	2.86	0.42
1:0:1982:C:OP1	1:0:2704:U:H5'	2.19	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
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
1:0:502: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
1:0:173:A:N6	1:0:844:G:H21	2.14	0.42
1:0:847:C:H2'	1:0:848:A:C8	2.54	0.42
1:0:91:A:C6	1:0:92:U:O4	2.71	0.42
1:0:944:A:C2'	1:0:945:G:H8	2.31	0.42
2:9:76:U:O2'	2:9:77:G:H5'	2.19	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:C8	1:0:1362:A:O5'	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
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
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
1:0:1130:U:H2'	1:0:1131:G:C8	2.54	0.42
1:0:984:A:C8	1:0:1202:U:C4	3.08	0.42
1:0:119:G:H2'	1:0:120:G:H8	1.84	0.42
1:0:1230:C:H2'	1:0:1231:A:C8	2.54	0.42
1:0:591:G:C2	1:0:1272:G:C2	3.07	0.42
1:0:1358:C:C6	1:0:1358:C:OP1	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
1:0:1312:G:C2'	1:0:1643:A:N6	2.82	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1766:U:C2'	1:0:1767:G:H5'	2.50	0.42
1:0:1795:C:O5'	1:0:1795:C:H6	2.02	0.42
1:0:1953:A:H2'	1:0:1954:A:OP2	2.19	0.42
1:0:2284:U:H5	1:0:2286:G:C5	2.37	0.42
1:0:2047:C:O2	1:0:2429:A:C6	2.72	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
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
2:9:51:G:O2'	2:9:52:G:H5'	2.20	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
1:0:17:G:C5	1:0:18:U:C4	3.07	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
1:0:968:C:H41	1:0:2437:G:H5''	1.83	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:108:G:H2'	2:9:109:G:H8	1.83	0.42
2:9:42:U:H1'	2:9:48:A:N1	2.34	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
1:0:50:G:C2'	1:0:117:A:C2	2.89	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
1:0:197:G:H2'	1:0:440:U:O4	2.19	0.42
1:0:2270:U:O2'	1:0:2353:G:N3	2.48	0.42
1:0:2696:A:N3	1:0:2697:G:C8	2.87	0.42
1:0:701:U:C2	1:0:702:A:C8	3.07	0.42
1:0:74:G:C8	1:0:74:G:H3'	2.54	0.42
1:0:931:G:O6	1:0:932:G:C6	2.73	0.42
1:0:8:A:H2'	1:0:9:U:O4'	2.20	0.42
1:0:1260:A:C6	1:0:1262:U:H1'	2.55	0.42
1:0:133:C:C4	1:0:134:G:C5	3.07	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
1:0:164:G:N1	1:0:165:G:C5	2.87	0.42
1:0:1877:C:O2'	1:0:1878:C:H5'	2.19	0.42
1:0:192:G:C1'	1:0:193:A:H4'	2.49	0.42
1:0:1999:U:C2'	1:0:2000:U:H5'	2.49	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
1:0:2047:C:H1'	1:0:2429:A:N1	2.34	0.42
1:0:2447:G:P	1:0:2447:G:H8	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
1:0:498:C:N4	1:0:499:G:C5	2.87	0.42
1:0:487:G:C1'	1:0:515:A:H2	2.32	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
1:0:1220: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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:C6	1:0:1514:C:P	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
1:0:2046:C:C2	1:0:2430:A:H2	2.38	0.42
1:0:215:G:H2'	1:0:216:U:C6	2.54	0.42
1:0:2502:G:C2	1:0:2503:G:C8	3.07	0.42
1:0:1937:G:H1'	1:0:2530:C:C4'	2.49	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:H231	32:0:2881:MUL:H252	1.75	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
2:9:80:A:H2'	2:9:81:C:O4'	2.20	0.42
1:0:1151:U:OP1	1:0:1153:A:OP1	2.38	0.42
1:0:1010:U:O2	1:0:1168:G:N2	2.53	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:H2'	1:0:1767:G:N3	2.35	0.42
1:0:177:U:P	1:0:177:U:H6	2.43	0.42
1:0:171:G:C6	1:0:179:U:C4	3.07	0.42
1:0:2194:A:O2'	1:0:2195:C:H5''	2.19	0.42
1:0:2274:C:H2'	1:0:2275:U:H5'	2.02	0.42
1:0:2543:A:C6	1:0:2626:U:C4'	3.02	0.42
1:0:2633:A:H8	1:0:2633:A:OP1	2.02	0.42
1:0:2642:G:O2'	1:0:2643:G:C5'	2.62	0.42
1:0:2668:U:O2	1:0:2668:U:C2'	2.67	0.42
1:0:2696:A:H2'	1:0:2697:G:H8	1.84	0.42
1:0:2746:G:C6	1:0:2747:C:C4	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2762:G:C2'	1:0:2763:U:H5'	2.49	0.42
1:0:2783:U:C6	1:0:2783:U:H3'	2.55	0.42
1:0:390:U:C4	1:0:391:C:C4	3.08	0.42
1:0:224:G:H4'	1:0:399:G:C5	2.55	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
1:0:688: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
1:0:687:G:N7	1:0:817:A:N1	2.68	0.42
1:0:866:U:H2'	1:0:867:G:H8	1.85	0.42
1:0:88:G:H8	1:0:88:G:O5'	2.03	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
1:0:1075:C:H3'	1:0:1076:U:C6	2.55	0.42
1:0:115:G:N1	1:0:117:A:N6	2.67	0.42
1:0:1226:A:H2	1:0:1250:A:HO2'	1.66	0.42
1:0:1459:U:H6	1:0:1459:U:P	2.42	0.42
1:0:1435:G:H22	1:0:1512:A:H2	1.67	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:P	1:0:1618:U:H6	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
1:0:427:C:H42	1:0:2388:G:H1	1.68	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
1:0:399:G:N3	1:0:399:G:H2'	2.34	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:23:G:C6	2:9:24:U:C4	3.08	0.42
2:9:89:G:C2	2:9:93:G:N1	2.87	0.42
1:0:1175: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
1:0:165: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
1:0:1942:G:C6	1:0:1943:A:C6	3.08	0.42
1:0:1826:U:HO2'	1:0:1952:A:H2'	1.79	0.42
1:0:538:A:N6	1:0:2025:A:C2	2.88	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
1:0:344: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
1:0:572:G:OP2	1:0:581:A:C8	2.72	0.42
1:0:710:C:O2'	1:0:711:C:H5'	2.19	0.42
1:0:687:G:C6	1:0:820:U:O4	2.72	0.42
1:0:962:C:H6	1:0:962:C:O5'	2.03	0.42
1:0:1001:A:OP2	1:0:1200:G:OP1	2.38	0.41
1:0:822:G:H5'	1:0:1267:A:H4'	2.01	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
1:0:198:A:HO2'	1:0:199:A:P	2.43	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
1:0:627:A:N6	1:0:628:A:N6	2.67	0.41
1:0:687:G:HO2'	1:0:688:A:H5'	1.80	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
1:0:84:G:O2'	1:0:85:C:H5'	2.20	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
2:9:71:G:N3	2:9:71:G:H2'	2.35	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
1:0:141:G:N2	1:0:142:U:C2	2.89	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
1:0:167:A:C2'	1:0:168:A:O5'	2.68	0.41
1:0:1770:U:O2	1:0:1774:A:C6	2.74	0.41
1:0:224:G:H2'	1:0:226:C:O4'	2.20	0.41
1:0:224:G:N7	1:0:226:C:H1'	2.35	0.41
1:0:658:G:C1'	1:0:2330:G:H5''	2.50	0.41
1:0:243:G:OP2	1:0:243:G:O4'	2.39	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
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
1:0:712: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
2:9:42:U:C2'	2:9:45:C:H41	2.28	0.41
1:0:1046:U:O2'	1:0:1047:G:H5'	2.19	0.41
1:0:1225:G:H2'	1:0:1249:G:N2	2.34	0.41
1:0:1252:C:HO2'	1:0:1253:C:H5''	1.80	0.41
1:0:1366:A:O2'	1:0:1367:A:H5'	2.20	0.41
1:0:1395:A:H3'	1:0:1396:C:C6	2.54	0.41
1:0:1414:G:H2'	1:0:1415:C:O4'	2.20	0.41
1:0:1442:C:C3'	1:0:1442:C:C6	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
1:0:183:U:H6	1:0:183:U:O5'	2.03	0.41
1:0:1928:G:N3	1:0:1928:G:H2'	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:203:G:H5'	1:0:234:C:C4'	2.50	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
1:0:210: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
1:0:1166:A:C3'	1:0:1167:A:H5''	2.49	0.41
1:0:1001:A:H4'	1:0:1168:G:P	2.60	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
1:0:174:A:C2	1:0:2223:U:H4'	2.55	0.41
1:0:1940:C:N4	1:0:1941:C:H41	2.16	0.41
1:0:207:U:H2'	1:0:208:C:C6	2.55	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
1:0:231:G:O5'	1:0:231:G:H8	2.04	0.41
1:0:2437:G:C8	1:0:2469:G:C2	3.08	0.41
1:0:2437:G:N7	1:0:2469:G:C4	2.88	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
1:0:1773:C:H2'	1:0:2587:G:O2'	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
1:0:40:U:H2'	1:0:41:G:O4'	2.21	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
1:0:1278:A:HO2'	1:0:1279:G:P	2.42	0.41
1:0:1292:A:C6	1:0:1293:A:C5	3.08	0.41
1:0:1336:G:H2'	1:0:1337:G:H5'	2.02	0.41
1:0:1379:A:N7	1:0:1380:C:C4	2.88	0.41
1:0:118:U:H1'	1:0:143:A:C8	2.55	0.41
1:0:1429:A:C2	1:0:1603:A:C8	3.08	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:765:C:C5	1:0:1772:C:H1'	2.51	0.41
1:0:1854:G:H1	1:0:1863:U:H3	1.68	0.41
1:0:1685:A:C2	1:0:1976:U:C2	3.06	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
1:0:230:C:N4	1:0:231:G:C6	2.88	0.41
1:0:2046:C:N3	1:0:2430:A:N1	2.68	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
1:0:1286:U:O2	1:0:2692:A:C2	2.74	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
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
1:0:91:A:C5	1:0:92:U:C5	3.08	0.41
2:9:113:G:H2'	2:9:114:C:C6	2.55	0.41
1:0:1002:C:C4	1:0:1003:C:C5	3.08	0.41
1:0:831:G:N2	1:0:1203:A:N6	2.55	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
1:0:159:A:N1	1:0:192:G:N2	2.67	0.41
1:0:159:A:H2'	1:0:160:C:O4'	2.21	0.41
1:0:1644:G:HO2'	1:0:1645:U:H5'	1.85	0.41
1:0:1656:U:H2'	1:0:1657:A:H5'	2.02	0.41
1:0:1713:G:N2	1:0:1960:A:O2'	2.54	0.41
1:0:1965:U:C4	1:0:1966:C:C5	3.09	0.41
1:0:588:G:H4'	1:0:2001:G:H5''	2.03	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
1:0:2052:G:N2	1:0:2422:C:C6	2.88	0.41
1:0:2437:G:O6	1:0:2469:G:H3'	2.20	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2482:A:H2	32:0:2881:MUL:C20	2.33	0.41
1:0:423:G:O5'	1:0:423:G:H8	2.03	0.41
1:0:53:G:C6	1:0:54:G:C5	3.09	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
1:0:1354:A:HO2'	1:0:1355:A:P	2.44	0.41
1:0:1407:G:O5'	1:0:1407:G:H8	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
1:0:1284:G:C2'	1:0:1633:C:H4'	2.50	0.41
1:0:1666:G:N2	1:0:1667:A:C4	2.89	0.41
1:0:1700:C:C5	1:0:1701:C:C5	3.09	0.41
1:0:1697:U:H2'	1:0:1754:G:N7	2.36	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
1:0:2548: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
1:0:1981:A:O2'	1:0:2704:U:H1'	2.21	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
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
2:9:26:G:N7	2:9:58:G:C4	2.89	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
1:0:1206:G:O2'	1:0:1207:G:H5'	2.20	0.41
1:0:1212:U:H2'	1:0:1213:U:C5	2.49	0.41
1:0:1248:G:C5	1:0:1249:G:C2	3.09	0.41
1:0:1351:G:O2'	1:0:1352:G:H5'	2.21	0.41
1:0:1483:G:C2'	1:0:1484:G:O5'	2.69	0.41
1:0:1640:C:H6	1:0:1640:C:O5'	2.03	0.41
1:0:168:A:C6	1:0:169:C:N4	2.89	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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:O5'	1:0:2270:U:H6	2.04	0.41
1:0:2276:C:C6	1:0:2276:C:O5'	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
1:0:237:G:C6	1:0:238:G:C5	3.09	0.41
1:0:840:U:C5	1:0:2405:A:C2	3.08	0.41
1:0:2452:U:C4	1:0:2453:C:C4	3.09	0.41
1:0:246:C:N3	1:0:247:A:N7	2.69	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
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
1:0:239:A:H4'	1:0:620:G:H5'	2.02	0.41
1:0:657:A:N3	1:0:2329:C:O2'	2.44	0.41
2:9:111:C:O5'	2:9:111:C:H6	2.03	0.41
1:0:1150:C:OP1	10:H:52:GLY:CA	2.69	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
1:0:106:G:H2'	1:0:107:G:H8	1.85	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
1:0:594:G:C6	1:0:1264:C:C4	3.09	0.41
1:0:1352:G:C6	1:0:1353:A:N6	2.78	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
1:0:198:A:O2'	1:0:199:A:OP2	2.37	0.41
1:0:2019:C:H2'	1:0:2020:G:C5'	2.51	0.41
1:0:246:C:C2	1:0:247:A:N7	2.89	0.41
1:0:2572:U:H3'	1:0:2572:U:C6	2.56	0.41
1:0:1746:A:C2	1:0:2696:A:H1'	2.54	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2839:G:C2'	1:0:2840:U:C6	3.02	0.41
1:0:369:C:H2'	1:0:370:U:O4'	2.21	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
1:0:82:G:H21	1:0:102:C:H41	1.68	0.41
1:0:965:G:N2	1:0:975:C:O2	2.54	0.41
2:9:88:C:C2	2:9:89:G:C8	3.08	0.41
2:9:98:C:C3'	2:9:98:C:C6	3.04	0.41
1:0:1008:G:O5'	1:0:1008:G:H8	2.04	0.41
1:0:105:G:C6	1:0:106:G:C6	3.09	0.41
1:0:1084:A:H4'	1:0:2454:C:OP1	2.21	0.41
1:0:1251:G:C6	1:0:1252:C:N3	2.89	0.41
1:0:1377:G:N2	1:0:1381:G:C4	2.89	0.41
1:0:177:U:H2'	1:0:178:C:O4'	2.20	0.41
1:0:1992:G:H1'	14:L:106:ASP:CA	2.50	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
1:0:2161:C:O5'	1:0:2161:C:H6	2.04	0.41
1:0:2090:U:N3	1:0:2166:G:N1	2.68	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
1:0:2655:C:O2'	1:0:2656:G:H5'	2.20	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
1:0:746: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
2:9:20:A:C2	2:9:69:G:C6	3.09	0.41
2:9:88:C:H2'	2:9:89:G:H8	1.85	0.41
1:0:75:C:O2	1:0:109:A:C2	2.74	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2159:A:H2'	1:0:2160:C:O4'	2.21	0.41
1:0:2248:A:N7	1:0:2249:U:O4	2.53	0.41
1:0:2281:C:H2'	1:0:2282:G:H8	1.85	0.41
1:0:2355:A:N6	1:0:2356:A:C2	2.88	0.41
1:0:2392:G:H2'	1:0:2393:G:O4'	2.20	0.41
1:0:2408:G:O4'	1:0:2408:G:OP1	2.38	0.41
1:0:2419:C:H2'	1:0:2420:C:H4'	2.03	0.41
1:0:2807:U:H1'	1:0:2809:A:C2	2.56	0.41
1:0:304: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
1:0:1012: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
1:0:165:G:C8	1:0:166:G:C8	3.09	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
1:0:221:A:C2	1:0:232:A:C6	3.09	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
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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
2:9:60:A:H2'	2:9:61:A:H8	1.85	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:N7	1:0:1847:G:C5	2.89	0.40
1:0:1846:A:H2'	1:0:1847:G:H5'	2.03	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
1:0:337:G:O2'	1:0:338:G:H5'	2.21	0.40
1:0:475:U:C4	1:0:476:G:N1	2.89	0.40
1:0:695:G:N2	1:0:809:C:C2	2.89	0.40
1:0:837:U:C4	1:0:838:A:C6	3.09	0.40
1:0:851:C:H2'	1:0:852:U:C6	2.57	0.40
1:0:876:A:O3'	2:9:103:A:C2	2.75	0.40
1:0:1094: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
1:0:210:A:N6	1:0:442:A:N6	2.69	0.40
1:0:2321:C:O2'	1:0:2322:U:H5'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2445:C:N3	1:0:2464:G:C2	2.89	0.40
1:0:2470:U:O2'	1:0:2471:U:C5'	2.69	0.40
1:0:2484:G:H2'	1:0:2485:U:H5'	2.04	0.40
1:0:2537:C:H2'	1:0:2538:C:O4'	2.21	0.40
1:0:2571:G:C5	1:0:2572:U:O4	2.74	0.40
1:0:2641:A:H2'	1:0:2642:G:O4'	2.21	0.40
1:0:2644:A:C2	1:0:2645:C:C4	3.10	0.40
1:0:2762:G:H2'	1:0:2763:U:H5'	2.04	0.40
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
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
1:0:1010:U:C4	1:0:1011:A:N6	2.90	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
1:0:1283:C:H2'	1:0:1665:C:H5''	2.03	0.40
1:0:1753:A:C8	1:0:1753:A:C3'	3.04	0.40
1:0:190:A:C2	1:0:191:G:C2	3.10	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:O5'	1:0:2160:C:H6	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
1:0:2676: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
1:0:2611:A:C2	1:0:2767:C:N3	2.89	0.40
1:0:2788:C:H2'	1:0:2789:U:H6	1.87	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
1:0:2794:G:C2	1:0:2803:C:N3	2.89	0.40
1:0:324:C:C4	1:0:325:U:C4	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
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
2:9:8:C:O2'	2:9:9:G:H5'	2.21	0.40
1:0:991:A:C4	1:0:1146:G:O4'	2.74	0.40
1:0:116:A:OP2	1:0:117:A:H5''	2.21	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
1:0:160:C:H2'	1:0:161:U:H5'	2.04	0.40
1:0:1998:A:O5'	1:0:1998:A:H8	2.04	0.40
1:0:2048:C:H6	1:0:2048:C:O5'	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
1:0:1476:G:N3	1:0:2681:A:C2	2.90	0.40
1:0:2732:C:C5	1:0:2733:A:N7	2.90	0.40
1:0:2718:A:N1	1:0:2746:G:O6	2.54	0.40
1:0:352:G:H2'	1:0:353:G:O4'	2.21	0.40
1:0:395:G:O6	1:0:404:A:N6	2.54	0.40
1:0:503:G:H2'	1:0:504:G:O4'	2.22	0.40
1:0:521:U:H5''	1:0:522:G:OP2	2.22	0.40
1:0:568:G:C6	1:0:569:C:C2	3.09	0.40
1:0:721:C:N3	1:0:737:C:O2	2.53	0.40
1:0:738:G:O5'	1:0:738:G:H8	2.04	0.40
1:0:748:A:N7	1:0:749:C:C4	2.89	0.40
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 ⓘ

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

All (529) RNA backbone outliers are listed below:

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

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

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

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

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

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

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

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

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

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

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

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

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

There are no RNA pucker outliers to report.

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 carbohydrates 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	-	31,36,36	0.96	2 (6%)	28,55,55	1.08	2 (7%)

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	-	-	0/17/79/79	0/1/3/3

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
32	0	2881	MUL	O3-C14	2.28	1.50	1.46
32	0	2881	MUL	C5-C14	2.53	1.59	1.56

All (2) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	0	2881	MUL	C16-C6-C7	-2.83	105.97	110.41
32	0	2881	MUL	C7-C8-C9	2.06	117.00	112.90

There are no chirality outliers.

There are no torsion outliers.

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

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.