



Full wwPDB X-ray Structure Validation Report ⓘ

Jan 31, 2016 – 09:15 PM GMT

PDB ID : 1NWX
Title : COMPLEX OF THE LARGE RIBOSOMAL SUBUNIT FROM DEINOCOC-
CUS RADIODURANS WITH ABT-773
Authors : Schlutzen, F.; Harms, J.; Franceschi, F.; Hansen, H.A.S.; Bartels, H.; Zari-
vach, R.; Yonath, A.
Deposited on : 2003-02-07
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 (RC4), CSD as536be (2015)
Xtriage (Phenix) : **NOT EXECUTED**
EDS : **NOT EXECUTED**
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : trunk26865

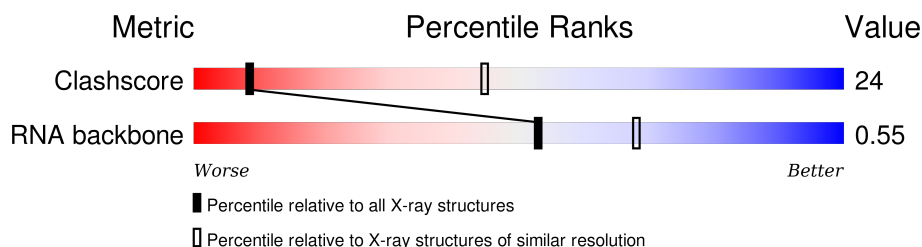
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.50 Å.

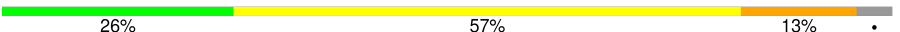
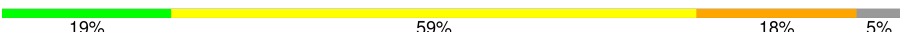
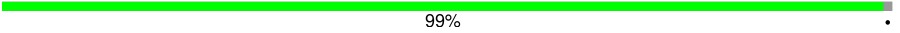
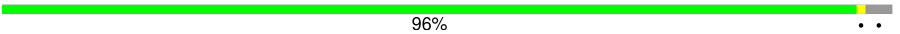
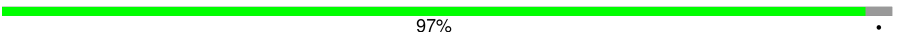
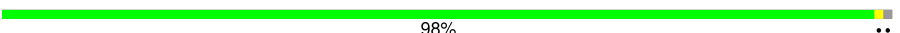


Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
Clashscore	102246	1157 (3.60-3.40)
RNA backbone	2183	1050 (4.20-2.80)



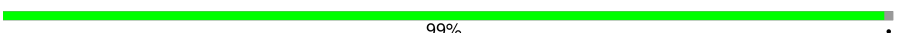









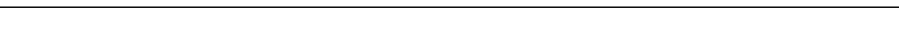

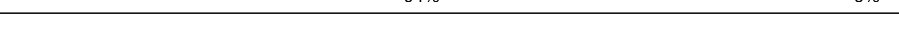
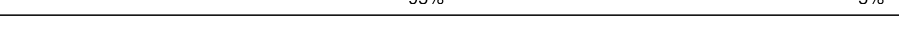
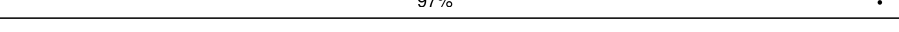
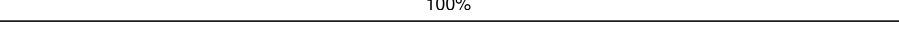
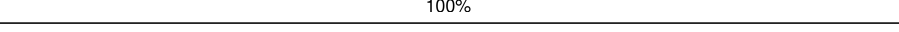
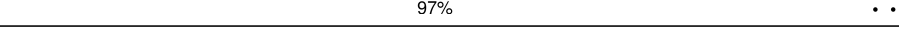
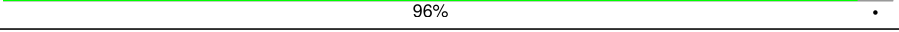
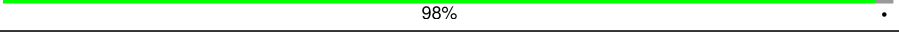
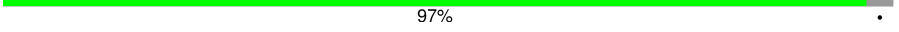
The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria. A grey 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	 26% 57% 13% .
2	9	124	 19% 59% 18% 5%
3	A	274	 99% .
4	B	211	 96% . .
5	C	204	 97% .
6	D	180	 98% . .
7	E	185	 95% . .
8	F	146	 34% . 64%

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Mol	Chain	Length	Quality of chain
9	G	144	 99% .
10	H	174	 82% 18%
11	I	134	 99% .
12	J	156	 90% 10%
13	K	141	 87% . 12%
14	L	116	 97% ..
15	M	113	 97% ..
16	N	166	 75% . 25%
17	O	118	 99% .
18	P	100	 100%
19	Q	134	 97% .
20	R	94	 99% .
21	S	115	 98% .
22	T	237	 94% 6%
23	U	91	 95% 5%
24	W	67	 97% .
25	X	55	 100%
26	Y	73	 100%
27	Z	59	 97% ..
28	1	55	 96% .
29	2	47	 98% .
30	3	65	 97% .
31	4	37	 95% 5%

2 Entry composition

There are 32 unique types of molecules in this entry. The entry contains 65355 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
			2519	1124	464	813	118			

- Molecule 3 is a protein called 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 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 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 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 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 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 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 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 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 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 ribosomal protein L17.

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

- Molecule 15 is a protein called ribosomal protein L18.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
15	M	111	Total	C	8	0	111
			111	111			

- Molecule 16 is a protein called ribosomal protein L19.

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

- Molecule 17 is a protein called ribosomal protein L20.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
17	O	117	Total	C	16	0	117
			117	117			

- Molecule 18 is a protein called ribosomal protein L21.

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

- Molecule 19 is a protein called ribosomal protein L22.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
19	Q	130	Total	C	0	0	130
			130	130			

- Molecule 20 is a protein called ribosomal protein L23.

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

- Molecule 21 is a protein called 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 general stress protein Ctc.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
22	T	223	Total C 223 223	43	0	223

- Molecule 23 is a protein called 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 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 ribosomal protein L30.

Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
25	X	55	Total C 55 55	4	0	55

- Molecule 26 is a protein called 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 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 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 ribosomal protein L34.

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

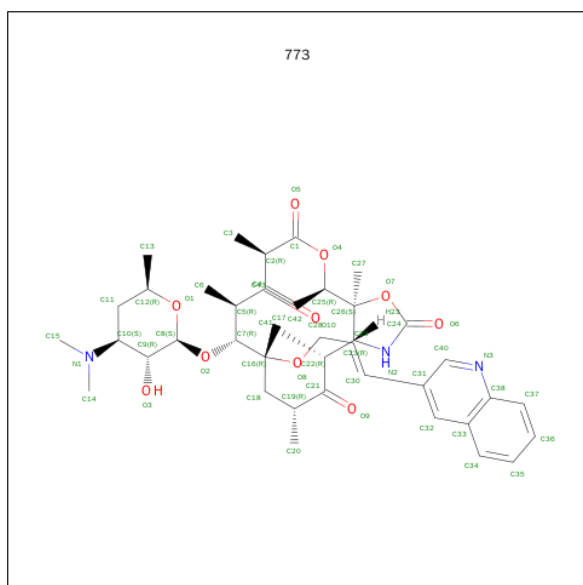
- Molecule 30 is a protein called ribosomal protein L35.

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

- Molecule 31 is a protein called ribosomal protein L36.

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

- Molecule 32 is CETHROMYCIN (three-letter code: 773) (formula: $C_{42}H_{59}N_3O_{10}$).



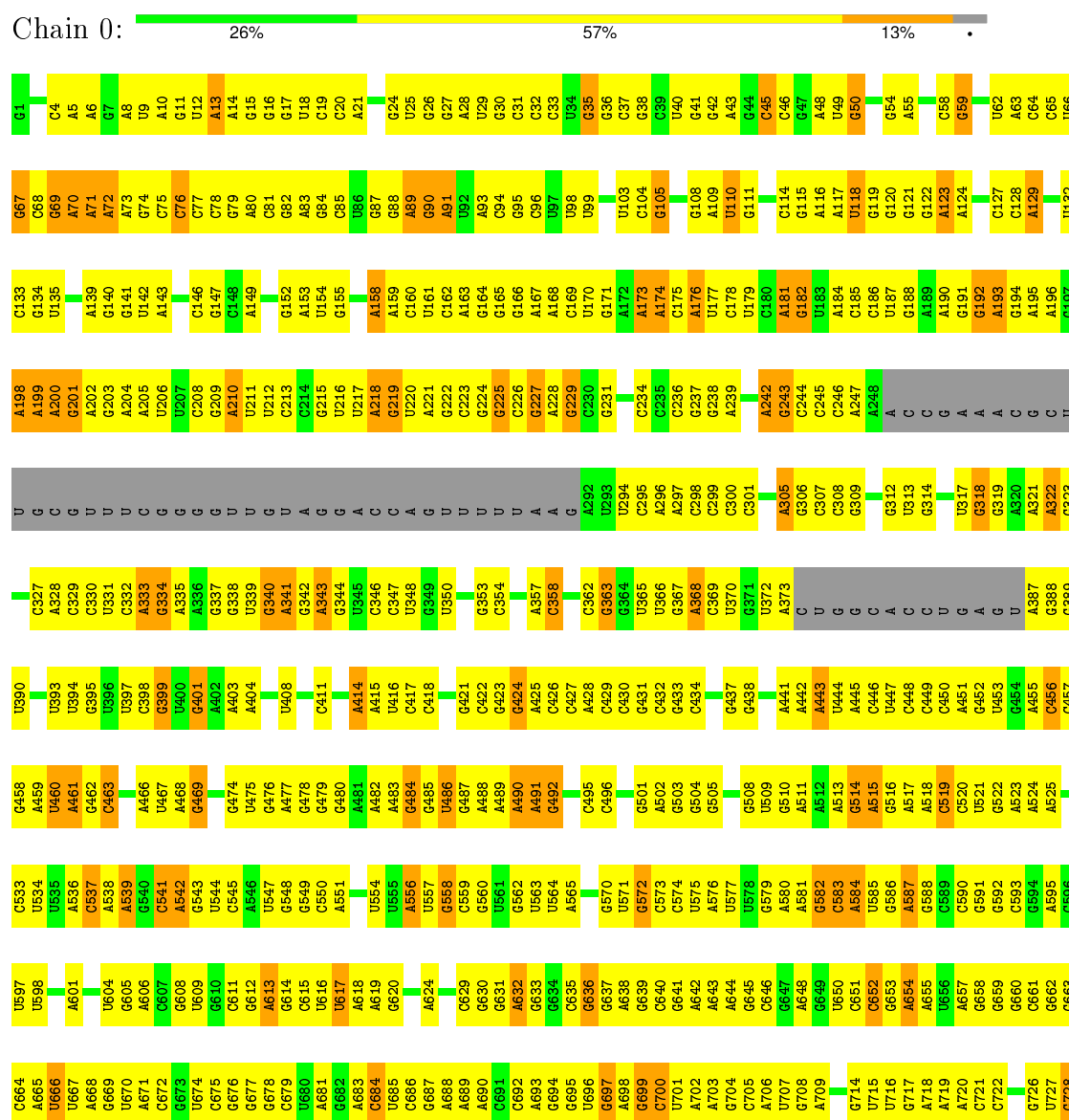
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
32	0	1	Total C N O 55 42 3 10	0	0

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 errors 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.

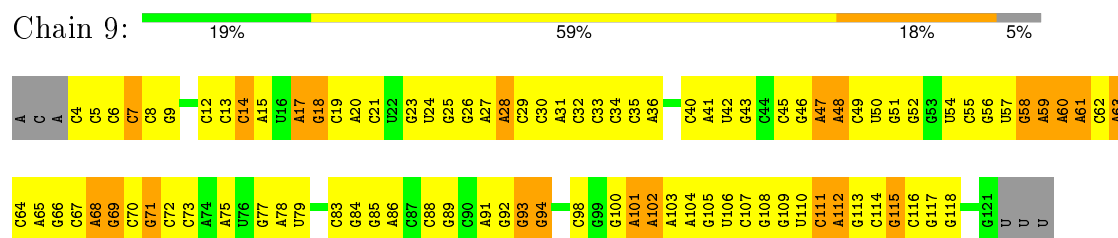
• Molecule 1: 23S RIBOSOMAL RNA



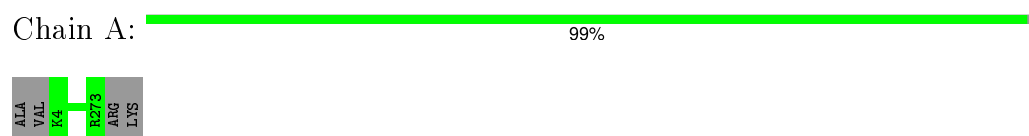
G1760	G1691	C1621	C1558	G1488	U1426	U1357	G1296	G1230	G1155	G1082	C1002	G993	C864	A794	G732
G1761	C1692	G1622	G1559	C1489	G1427	C1358	A1297	A1233	U1156	C1083	C1003	A936	C865	A795	G733
G1762	A1693	C1623	A1560	C1490	G1428	G1359	A1298	A1234	A1162	C1086	U1005	C937	U866	A796	G734
G1763	C1694	A1624	A1561	C1491	A1429	C1363	A1300	C1235	C1163	C1087	A1007	G938	U868	A797	G735
G1764	C1695	A1625	G1562	A1492	G1430	C1364	U1301	A1238	G1165	A1088	A1007	C939	U869	C799	G736
C1765	C1696	A1626	G1566	A1493	G1431	U1365	C1302	A1238	A1166	C1089	G1008	C940	C869	U800	C737
U1766	C1697	C1627	A1567	G1494	G1432	U1365	U1303	A1238	A1167	C1090	C1009	U941	A801	A801	G738
G1767	C1698	A1630	G1568	G1495	A1433	G1368	U1304	G1241	G1168	U1091	U1010	U942	C803	A740	G739
U1768	C1699	C1631	A1569	G1496	A1434	G1368	C1305	G1242	C1169	U1092	A1011	U943	C804	G741	G740
C1703	C1703	A1632	C1570	U1500	A1437	G1371	U1306	G1243	U1170	A1095	C1016	U944	G805	A742	G741
U1770	C1704	C1633	C1571	C1501	G1438	A1372	U1307	U1244	A1171	A1096	C1017	U945	G806	A743	G742
U1771	U1705	A1634	C1572	G1502	G1439	G1373	C1308	G1245	A1172	A1097	U1019	U946	A807	C744	G743
C1772	A1706	G1635	G1573	G1503	G1440	G1374	G1309	G1246	U1172	A1098	A1012	U947	C807	C745	G744
C1773	C1707	G1636	A1574	G1504	A1441	C1375	C1310	U1247	U1173	A1099	C1018	U948	C808	C746	G745
U1775	C1708	G1637	C1575	U1505	C1442	C1376	C1311	G1248	A1179	A1099	U1019	U949	C809	C746	G746
A1776	U1710	C1641	G1576	U1506	G1443	C1377	C1312	G1249	A1180	A1100	A1020	U950	U810	G750	G750
U1777	C1711	G1642	U1577	U1507	C1444	A1378	U1313	G1250	A1181	G1101	A1021	U951	G811	G751	G751
U1778	G1712	A1643	G1578	U1508	G1445	C1379	A1314	G1251	U1182	C1103	A1022	U952	G812	G752	G752
C1781	G1713	G1644	G1579	A1512	U1446	C1380	A1315	C1252	G1183	G1110	G1023	U953	A813	G753	G753
A1782	U1714	U1645	C1581	C1514	U1447	C1381	G1316	C1253	C1184	C1111	A1025	U954	A814	G754	G754
G1783	A1715	U1646	A1582	U1515	C1449	C1382	G1317	A1254	C1185	U1112	U1026	U955	A815	G755	G755
C1784	G1716	C1648	A1583	A1516	G1450	G1384	C1319	G1256	G1190	C1113	G1027	U956	A816	G756	G756
A1785	A1717	U1651	G1584	C1517	C1451	C1385	A1320	U1257	G1191	A1114	G1028	U957	A817	G757	G757
C1786	U1718	U1652	A1585	C1518	U1452	A1386	A1321	G1258	A1192	C1115	C1029	U958	A818	G758	G758
G1787	G1719	G1653	A1586	G1519	C1453	C1387	G1322	A1259	G1193	G1117	U1030	U959	A819	C759	G759
C1788	C1720	C1654	C1587	G1520	U1454	C1388	G1323	A1260	U1194	C1031	A1032	U960	A820	U760	U760
U1789	G1721	A1654	A1588	C1521	C1455	C1389	G1324	G1261	U1195	G1121	A1033	U961	U824	A762	A762
G1790	C1722	C1655	G1589	U1522	A1456	C1390	U1325	U1262	G1196	A1122	U1034	U962	C825	A763	A763
C1791	U1723	U1656	C1590	U1523	A1457	C1391	U1326	G1263	U1197	G1123	G1035	U963	U826	A764	A764
G1792	C1724	A1657	U1591	G1524	U1458	U1392	G1327	C1264	C1198	G1232	G1036	U964	A832	C765	C765
C1793	C1725	C1661	U1592	C1525	G1460	C1393	U1329	G1265	U1199	U1124	U1037	U965	A833	C766	C766
A1794	C1726	G1662	C1593	U1526	C1461	A1397	G1332	A1267	G1201	A1126	U1038	U966	C830	A767	A767
C1797	C1727	C1663	A1594	C1527	C1462	A1400	A1334	U1268	U1202	G1233	A1039	U967	C831	U768	U768
G1798	A1728	G1664	A1595	A1532	A1464	C1399	G1335	G1269	A1203	U1130	A1040	U968	A832	C769	C769
C1799	C1729	C1665	G1596	G1533	G1465	A1401	A1335	G1270	G1204	G1131	G1041	U969	A833	C770	C770
A1800	G1730	G1666	C1597	G1534	C1466	A1402	A1336	C1271	G1205	C1132	U1044	U970	U837	C771	C771
C1801	C1731	A1667	G1599	C1535	U1467	G1403	G1337	G1272	G1206	C1133	C1054	U971	A838	C772	C772
C1802	G1736	G1668	U1600	G1536	U1468	A1404	G1338	G1273	U1207	C1134	C1055	U972	U839	C773	C773
G1803	C1737	A1669	U1601	U1537	U1469	C1405	U1339	G1277	U1212	C1135	A1056	U973	U840	A774	A774
U1804	U1738	G1670	A1538	A1538	G1470	A1406	G1340	A1278	U1213	G1136	U1057	U974	G841	U775	U775
U1805	G1739	A1671	A1603	G1539	G1471	A1407	C1341	G1279	C1214	A1137	C1058	U975	A842	C776	C776
G1806	G1740	A1672	A1604	C1540	C1472	G1407	U1342	U1280	A1215	A1138	A1059	U976	G843	A777	A777
A1807	G1742	C1673	G1541	G1541	U1473	U1408	U1343	A1281	G1216	A1140	G1058	U977	G844	C778	C778
C1808	C1743	C1674	G1542	G1542	U1474	U1409	C1344	U1282	U1217	U1141	C1064	U978	C847	G781	G781
G1809	U1744	G1675	A1543	A1543	U1475	U1410	C1345	G1284	U1218	G1142	A1065	U979	A848	U782	U782
U1810	U1745	U1676	G1544	C1545	G1476	C1411	C1346	A1285	C1219	G1143	G1066	U980	U852	C783	C783
A1811	U1746	U1677	U1611	C1546	U1477	C1412	C1347	U1286	G1220	C1145	A1067	U981	C853	U784	U784
U1812	G1749	A1681	U1612	U1547	G1479	A1416	C1348	A1287	G1221	G1146	A1068	U982	C854	U785	U785
A1813	A1750	C1682	G1613	U1548	G1480	C1417	A1349	A1288	G1222	G1147	G1069	U983	G855	A786	A786
G1814	C1751	G1683	C1614	U1549	U1481	C1418	G1350	A1289	G1223	G1148	C1070	U984	A856	C788	C788
U1815	U1752	G1684	C1615	U1550	U1482	G1419	G1351	A1290	A1224	G1149	G1073	U985	A857	G789	G789
G1816	A1753	A1685	G1616	C1552	U1483	G1420	G1352	G1291	G1225	C1150	C1074	U986	G858	A790	A790
U1817	G1754	A1686	G1617	G1553	G1484	C1422	G1353	A1292	A1226	U151	C1075	U987	G859	G791	G791
G1818	U1755	C1687	U1618	G1554	U1485	A1423	A1354	A1293	G1227	C1152	U1076	U988	U859	U792	U792
U1819	C1756	A1688	A1619	U1555	U1486	U1424	A1355	A1294	A1228	A153	G1000	U989	G861	G793	G793
G1820	C1757	U1690	C1620	G1557	C1487	G1425	G1356	U1295	C1229	A1154	A1081	U990	A932	G794	G794

C2857	U2783	A2721	A2654	C2585	A2509	C2444	G2375	G2300	A2220	C2157	C2094	G2029	G1962	U1900	A1821
A2858	A2784	C2722	C2655	C2588	A2510	C2445	G2376	A2301	G2225	C2158	G2095	U2030	G1963	U1901	C1822
U2859	A2785	C2723	G2656	U2589	G2511	G2446	U2377	C2302	A2226	C2159	U2096	A2031	A1964	A1902	G1823
C2860	G2786	C2724	G2657	C2590	A2512	G2447	U2378	C2303	U2227	C2160	A2097	G2032	U1965	A1903	C1824
A2861	C2787	C2725	A2658	U2591	U2516	G2448	G2379	A2306	C2227	C2161	G	A2033	C1966	G1903	C1825
C2862	C2788	U2726	C2659	G2592	C2517	G2449	G2380	A2307	U2228	C2162	A	G2035	G1969	G1904	U1826
U2863	U2789	G2727	C2660	U2593	C2518	A2450	A2381	A2308	G2229	U2163	U	G2036	G1970	G1905	G1827
C2864	G2793	A2728	C2662	U2594	C2519	C2454	C2382	G2309	G2230	G2164	A	A2037	G1971	U1906	C1830
G2865	G2794	U2730	G2665	C2595	A2521	A2455	C2383	G2310	C2233	A2165	G	G2038	C1972	C1907	G1831
A2866	U2795	C2731	U2666	C2596	G2522	U2456	C2384	U2311	C2234	G2166	U	C2039	G1973	U1908	C1832
G2868	G2798	C2732	U2667	G2597	G2523	A2457	U2385	A2312	G2235	A2168	U	A2040	U1974	A1910	G1835
U2869	U2799	A2733	C2669	U2599	G2524	U2458	U2386	G2313	G2236	G2175	C	A2041	G1975	A1911	C1836
C2870	C2800	U2734	C2670	A2600	C2530	C2459	A2391	A2314	U2237	C2170	C	A2042	U1976	G1912	G1837
U2871	G2801	C2735	C2671	G2604	U2531	G2460	U2391	A2315	U2241	U2171	C	A2043	C1977	U1913	G1838
U2872	U2736	U2736	G2672	G2605	G2532	G2461	G2394	G2316	C2242	G2173	C	G2044	U1978	G1914	A1839
G2873	C2802	A2738	G2673	C2606	U2533	G2462	C2395	U2317	C2243	G2174	C	A2045	C1979	A1915	A1840
C2874	G2803	G2738	C2674	G2607	U2534	G2463	C2396	G2318	C2244	G2175	U	C2046	A1980	G1916	G1841
A2876	G2804	C2739	U2675	C2608	C2535	G2464	C2397	G2319	U2245	A2176	G	C2047	A1981	C1917	G1842
U2807	U2807	G2740	G2676	C2609	G2536	G2465	A2397	G2320	A2246	U2177	C	C2048	C1982	G1918	U1843
U2808	U2808	G2741	U2677	G2610	C2537	G2466	U2398	C2321	A2247	U2178	G	C2049	C1983	A1919	C1844
A2809	A2809	G2742	C2678	G2611	U2538	G2467	C2399	U2322	A2248	U2179	C	G2050	U1989	A1920	A1845
A2810	A2810	U2743	G2679	G2612	C2539	G2468	U2402	G2323	U2249	U2180	A	U2051	C1990	A1921	A1846
G2811	U2680	A2744	U2680	A2613	C2540	U2470	U2403	G2324	U2250	A2181	C	G2052	C1991	U1922	G1847
A2812	A2681	U2745	C2682	A2614	U2541	U2471	A2404	C2325	U2251	A2182	C	A2053	G1992	U1923	U1848
G2813	U2615	C2746	U2683	U2616	U2542	G2474	A2405	C2326	A2252	C2183	C	G2054	C1993	C1924	G1849
G2814	G2617	A2749	C2684	G2618	A2543	C2475	C2406	U2327	A2253	C2184	C	G2055	U1994	G1925	G1850
C2820	C2686	G2750	C2685	G2619	A2544	C2476	G2407	C2328	C2254	G2185	C	G2056	G1995	A1851	C1854
G2821	G2687	C2752	G2687	G2620	U2545	C2477	G2408	C2329	G2255	U2186	C	U2057	A1996	U1927	G1855
C2824	U2688	C2753	G2688	G2621	C2547	C2478	U2409	G2330	C2256	C1986	C	U2058	A1997	G1928	U1856
A2825	G2689	G2754	C2689	G2622	G2548	U2479	U2410	U2335	G2261	U2191	U	A2060	U1998	G1933	G1857
C2826	A2690	A2755	A2690	G2623	G2549	C2480	A2413	C2336	C2262	C2193	U	U2064	U2000	U1934	G1857
G2829	A2692	C2757	C2692	G2624	A2551	U2482	A2414	A2337	C2263	C2194	U	A2065	G2001	A1935	C1858
U2830	U2693	U2758	G2693	U2625	C2559	U2483	U2417	U2341	C2264	C2195	C	G2066	A2002	A1936	A1859
U2831	G2694	G2759	G2694	U2626	G2560	G2484	A2418	U2342	A2265	C2196	C	U2067	U2004	G1937	A1860
G2832	C2695	A2760	C2695	G2627	U2561	G2487	C2419	C2343	A2266	U2197	C	G2070	U2005	U1938	G1861
C2833	A2696	C2762	A2696	U2628	G2562	C2488	C2420	G2344	A2267	U2198	C	G2071	G2006	C1940	C1862
U2836	U2700	G2763	U2700	U2629	G2563	C2489	C2421	A2345	U2270	G2200	C	C2072	G2007	G1942	G1863
G2837	A2701	C2765	G2702	C2631	U2564	U2490	C2422	G2346	C2273	G2201	C	A2073	G2010	A1943	C1865
U2838	G2703	C2766	C2703	U2632	C2565	C2491	G2423	C2347	C2274	G2202	C	U2074	U2011	C1944	G1866
G2839	U2704	C2768	U2704	A2633	A2566	G2492	G2424	A2348	U2275	G2203	C	G2075	A2012	C1945	A1867
U2840	A2705	U2769	A2705	G2634	C2569	U2493	A2425	U2349	C2276	A2204	C	G2076	A2013	U1946	A1868
C2841	U2706	A2770	U2706	U2635	A2569	C2494	A2426	G2351	A2277	C2205	C	A2077	A2014	G1947	A1869
U2842	G2707	C2771	G2707	C2636	G2570	U2495	U2427	A2352	A2278	C2206	C	G2078	C2015	C1948	G1871
A2843	U2708	U2772	U2708	G2640	G2571	C2496	A2428	G2353	C2279	G2207	C	U2080	A2016	A1949	A1872
G2846	C2709	G2773	C2709	A2641	U2572	U2497	A2429	G2354	A2280	U2208	C	U2081	U2017	C1950	A1873
U2847	C2710	U2774	C2710	U2642	C2573	U2498	C2431	G2361	U2285	C2210	C	C2082	G2018	G1951	U1881
A2848	G2711	U	G2711	G2643	U2574	C2499	A2432	G2362	U2286	U2211	C	G2083	C2019	A1952	G1882
C2849	G2712	U	G2712	U2501	G2575	C2500	G2433	C2363	G2287	U2212	C	G2084	G2020	A1953	G1883
U2853	A2713	A	C2645	G2502	A2577	G2502	G2434	G2364	G2288	G2213	C	G2085	C2022	A1954	A1884
G2854	U2714	U2778	U2714	G2503	G2578	U2504	U2436	U2365	A2289	C2214	C	U2086	U2024	G1956	C1885
G2855	G2717	C2779	U2651	U2507	A2581	G2504	G2437	U2369	A2290	G2215	C	U2090	A2025	C1957	G1886
U2856	A2718	U2780	G2652	U2507	G2582	U2507	A2438	G2370	U2298	G2216	C	C2091	C2026	G1958	G1887
	G2782	C2782	A2653	G2508			C2443	A2372	A2299	U2219	A	G2093	C2028	U1960	G1888

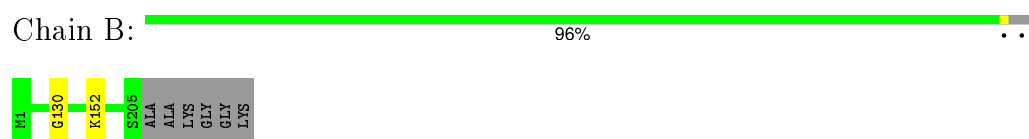
- Molecule 2: 5S RIBOSOMAL RNA



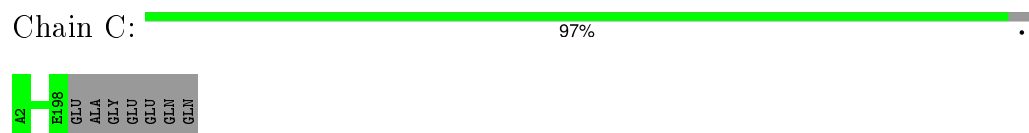
- Molecule 3: ribosomal protein L2



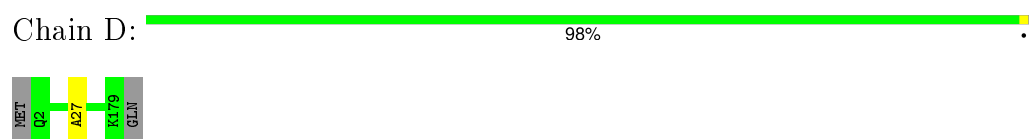
- Molecule 4: ribosomal protein L3



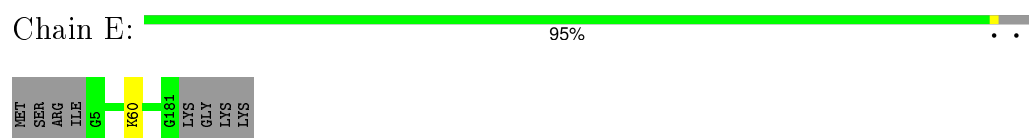
- Molecule 5: ribosomal protein L4



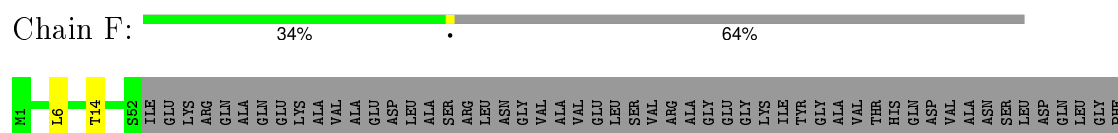
- Molecule 6: ribosomal protein L5



- Molecule 7: ribosomal protein L6



- Molecule 8: ribosomal protein L9




ASP VAL ASP ARG ARG LYS ASP MET PRO LYS THR VAL LYS GLU VAL GLY TYR ASP ILE ALA TYR ARG ALA HIS PRO GLU VAL THR ILE PRO MET LYS LEU VAL VAL HIS ALA ALA LYS

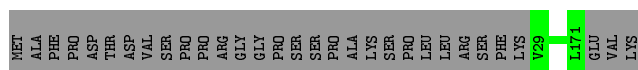
- Molecule 9: ribosomal protein L11

Chain G:  99%

 H1 H43 ALA

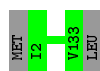
- Molecule 10: ribosomal protein L13

Chain H:  82% 18%


 MET ALA PHE PRO ASP THR ASP VAL SER PRO ARG GLY PRO SER PRO ALA LYS SER PRO LEU LEU ARG SER PHE LYS V29 L171 GLU VAL LYS

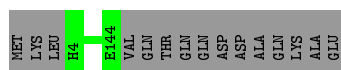
- Molecule 11: ribosomal protein L14

Chain I:  99%


 MET I2 V133 LEU

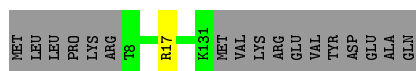
- Molecule 12: ribosomal protein L15

Chain J:  90% 10%

 MET LYS LEU H4 F144 VAL GLN THR GLN ASP ALA GLN LYS ALA GLU

- Molecule 13: ribosomal protein L16

Chain K:  87% 12%

 MET LEU LEU PRO LYS ARG T8 R17 K131 MET VAL LYS ARG GLU VAL TYR ASP GLU ALA GLN

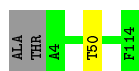
- Molecule 14: ribosomal protein L17

Chain L:  97%

 MET ARG R3 S15 V116

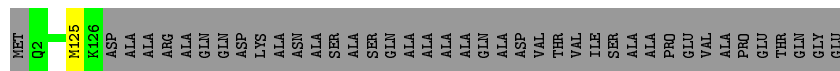
- Molecule 15: ribosomal protein L18

Chain M:  97%

 ALA THR A4 T50 F114

- Molecule 16: ribosomal protein L19

Chain N:  75% 25%



- Molecule 17: ribosomal protein L20

Chain O:  99%



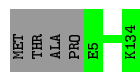
- Molecule 18: ribosomal protein L21

Chain P:  100%

There are no outlier residues recorded for this chain.

- Molecule 19: ribosomal protein L22

Chain Q:  97%



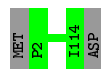
- Molecule 20: ribosomal protein L23

Chain R:  99%



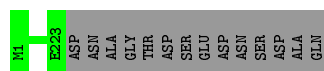
- Molecule 21: ribosomal protein L24

Chain S:  98%



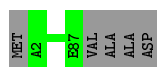
- Molecule 22: general stress protein Ctc

Chain T:  94% 6%



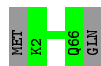
- Molecule 23: ribosomal protein L27

Chain U:  95% 5%



- Molecule 24: ribosomal protein L29

Chain W: 97% .



- Molecule 25: ribosomal protein L30

Chain X: 100%

There are no outlier residues recorded for this chain.

- Molecule 26: ribosomal protein L31

Chain Y: 100%

There are no outlier residues recorded for this chain.

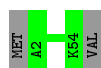
- Molecule 27: ribosomal protein L32

Chain Z: 97% ..



- Molecule 28: ribosomal protein L33

Chain 1: 96% .



- Molecule 29: ribosomal protein L34

Chain 2: 98% .



- Molecule 30: ribosomal protein L35

Chain 3: 97% .



- Molecule 31: ribosomal protein L36

Chain 4:  95% 5%



4 Data and refinement statistics

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

Property	Value	Source
Space group	I 2 2 2	Depositor
Cell constants a, b, c, α , β , γ	171.00 Å 409.50 Å 695.70 Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	15.00 – 3.50	Depositor
% Data completeness (in resolution range)	(Not available) (15.00-3.50)	Depositor
R_{merge}	(Not available)	Depositor
R_{sym}	0.13	Depositor
Refinement program	CNS 1.0	Depositor
R, R_{free}	0.285 , 0.313	Depositor
Estimated twinning fraction	No twinning to report.	Xtriage
Total number of atoms	65355	wwPDB-VP
Average B, all atoms (Å ²)	54.0	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: 773

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	0.23	0/66467	0.67	0/103673
2	9	0.59	0/2816	0.81	1/4388 (0.0%)
All	All	0.25	0/69283	0.67	1/108061 (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	1

There are no bond length outliers.

All (1) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed($^{\circ}$)	Ideal($^{\circ}$)
2	9	94	G	N9-C1'-C2'	-6.58	104.76	112.00

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	0	1342	U	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	29917	2141	0
2	9	2519	0	1285	147	0
3	A	270	0	0	0	0
4	B	205	0	0	2	0
5	C	197	0	0	0	0
6	D	178	0	0	1	0
7	E	177	0	0	1	0
8	F	52	0	0	1	0
9	G	143	0	0	0	0
10	H	143	0	0	0	0
11	I	132	0	0	0	0
12	J	141	0	0	0	0
13	K	124	0	0	1	0
14	L	114	0	0	1	0
15	M	111	0	0	1	0
16	N	125	0	0	1	0
17	O	117	0	0	0	0
18	P	100	0	0	0	0
19	Q	130	0	0	0	0
20	R	93	0	0	0	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	1	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	55	0	59	9	0
All	All	65355	0	31261	2286	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 24.

All (2286) 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)
1:0:2041:A:N6	32:0:2881:773:H143	1.54	1.19
1:0:2548:G:H2'	1:0:2549:G:H5''	1.21	1.17
1:0:1679:U:H2'	1:0:1680:U:H5''	1.27	1.16
1:0:2041:A:H61	32:0:2881:773:C14	1.58	1.16
1:0:2058:U:H1'	1:0:2576:G:H21	1.11	1.14
1:0:1966:C:H4'	1:0:2585:C:H4'	1.22	1.14
1:0:1908:C:H2'	1:0:1909:U:H4'	1.30	1.09
1:0:940:G:H3'	1:0:941:U:H5''	1.08	1.08
1:0:1747:G:H4'	1:0:1749:G:H1'	1.34	1.05
1:0:362:C:H2'	1:0:363:G:H4'	1.39	1.05
1:0:104:C:H2'	1:0:105:G:H5''	1.35	1.03
1:0:940:G:H3'	1:0:941:U:C5'	1.89	1.03
1:0:918:A:H2'	1:0:919:U:H5''	1.35	1.02
1:0:1458:A:H3'	1:0:1459:U:C5'	1.91	1.01
1:0:1976:U:H2'	1:0:1977:C:H5'	1.37	0.99
1:0:929:A:H3'	1:0:930:A:H5''	1.44	0.99
1:0:1073:G:H2'	1:0:1074:G:H4'	1.43	0.98
1:0:1280:U:H3	1:0:1996:A:H62	1.06	0.97
1:0:1182:U:H2'	1:0:1183:C:H5''	1.43	0.97
1:0:1900:U:O2'	1:0:1946:U:H5'	1.64	0.97
1:0:2299:A:H5'	1:0:2300:G:C4	2.00	0.96
1:0:2081:U:H2'	1:0:2082:C:H5''	1.44	0.96
1:0:688:A:H62	1:0:816:U:H3	1.05	0.95
1:0:2548:G:C2'	1:0:2549:G:H5''	1.95	0.95
1:0:2266:A:N6	1:0:2323:U:H1'	1.81	0.95
1:0:1679:U:C2'	1:0:1680:U:H5''	1.96	0.94
2:9:54:U:H2'	2:9:55:C:C6	2.03	0.94
1:0:75:C:H2'	1:0:76:C:H5''	1.49	0.94
1:0:1432:G:H21	1:0:1596:A:H62	1.13	0.94
1:0:1656:U:H2'	1:0:1657:A:H5''	1.50	0.94
1:0:941:U:H2'	1:0:942:U:O4'	1.69	0.93
1:0:2380:U:H2'	1:0:2381:A:H5'	1.49	0.92
1:0:58:C:H3'	1:0:59:G:H5''	1.50	0.92
2:9:25:G:H2'	2:9:26:G:O4'	1.69	0.92
1:0:2476:A:HO2'	1:0:2477:C:H5	0.97	0.92
2:9:84:G:H2'	2:9:85:G:H8	1.34	0.92
1:0:2599:U:H2'	1:0:2600:A:H5''	1.51	0.92
1:0:508:G:H1	1:0:516:G:H22	1.19	0.91
1:0:847:C:H41	1:0:955:G:H21	1.16	0.91
1:0:317:U:H2'	1:0:318:G:H5''	1.51	0.91
1:0:2014:A:H62	1:0:2477:C:H1'	1.34	0.90
1:0:2198:U:H3'	1:0:2199:C:H5''	1.53	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2266:A:H61	1:0:2323:U:H1'	1.32	0.90
1:0:716:U:H2'	1:0:717:G:O4'	1.71	0.90
1:0:28:A:H61	1:0:522:G:H4'	1.37	0.89
2:9:100:G:H2'	2:9:101:A:O4'	1.72	0.89
2:9:67:C:H2'	2:9:68:A:H5'	1.54	0.88
2:9:42:U:H2'	2:9:45:C:H41	1.35	0.88
1:0:1791:C:H2'	1:0:1792:C:H5''	1.54	0.88
1:0:317:U:H3	1:0:321:A:H62	1.20	0.88
2:9:4:C:H2'	2:9:5:C:C6	2.08	0.88
1:0:2059:U:H2'	1:0:2060:A:H5''	1.54	0.87
1:0:2096:U:H2'	1:0:2097:A:H5''	1.54	0.87
1:0:367:G:H2'	1:0:368:A:H5''	1.57	0.87
1:0:651:C:H2'	1:0:652:C:H5''	1.57	0.87
1:0:1312:G:H5'	1:0:1314:A:H1'	1.56	0.87
1:0:2691:C:H3'	1:0:2692:A:H5''	1.57	0.86
1:0:2737:A:H61	7:E:60:LYS:CA	1.88	0.86
1:0:1748:U:H3	1:0:1753:A:H2	1.23	0.86
1:0:2014:A:N6	1:0:2477:C:H1'	1.90	0.86
1:0:857:U:H2'	1:0:858:G:H5'	1.57	0.86
1:0:2636:A:H62	1:0:2643:G:H21	1.23	0.86
2:9:102:A:C2'	2:9:103:A:H5'	2.06	0.85
1:0:1252:C:C2'	1:0:1253:C:H5''	2.06	0.85
1:0:2432:A:H4'	1:0:2551:A:O2'	1.75	0.85
1:0:1621:C:H4'	1:0:1626:A:C6	2.12	0.85
1:0:1252:C:H2'	1:0:1253:C:H5''	1.59	0.85
1:0:2510:A:H61	1:0:2641:A:H61	1.24	0.85
1:0:1900:U:H2'	1:0:1901:A:O4'	1.77	0.85
1:0:2509:A:H2'	1:0:2510:A:H5''	1.59	0.85
1:0:763:A:H2	1:0:765:C:H1'	1.40	0.85
1:0:976:C:H5'	1:0:2252:A:H1'	1.58	0.84
1:0:658:G:H4'	1:0:2331:A:H5'	1.60	0.84
2:9:67:C:C2'	2:9:68:A:H5'	2.07	0.84
1:0:2324:G:H4'	1:0:2326:C:H5''	1.60	0.84
1:0:2623:A:H2'	1:0:2624:G:O4'	1.76	0.83
1:0:1463:A:H1'	1:0:1543:G:H22	1.40	0.83
1:0:616:U:H2'	1:0:617:U:H5''	1.58	0.83
1:0:1922:U:H1'	1:0:2570:C:O2'	1.79	0.83
1:0:1458:A:H3'	1:0:1459:U:H5''	1.60	0.83
2:9:102:A:O2'	2:9:103:A:H5'	1.77	0.83
1:0:88:G:H3'	1:0:89:A:H5''	1.61	0.83
1:0:1976:U:C2'	1:0:1977:C:H5'	2.07	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:762:A:H2'	1:0:763:A:H8	1.43	0.82
2:9:93:G:H2'	2:9:94:G:H8	1.42	0.82
1:0:2598:C:H4'	4:B:152:LYS:CA	2.10	0.82
1:0:641:G:H4'	1:0:651:C:O2'	1.79	0.82
1:0:681:A:H2'	1:0:683:A:N7	1.95	0.81
1:0:929:A:H2'	1:0:930:A:H4'	1.62	0.81
1:0:2498:U:H5''	1:0:2499:C:OP1	1.80	0.81
1:0:1181:C:H3'	1:0:1182:U:H5''	1.59	0.81
1:0:1900:U:H3'	1:0:1901:A:H8	1.43	0.81
2:9:92:G:H2'	2:9:93:G:H5'	1.62	0.81
1:0:1438:G:H2'	1:0:1439:G:O4'	1.81	0.81
1:0:2058:U:H1'	1:0:2576:G:N2	1.94	0.81
1:0:1922:U:O2	1:0:2571:G:H5'	1.79	0.81
1:0:1974:U:H2'	1:0:1975:G:H5''	1.63	0.81
2:9:12:C:H2'	2:9:13:C:O4'	1.81	0.81
2:9:7:C:O2'	2:9:8:C:H5'	1.80	0.81
1:0:922:A:H2'	1:0:923:A:H8	1.46	0.81
1:0:1463:A:H1'	1:0:1543:G:N2	1.95	0.81
1:0:556:A:H2'	1:0:557:U:H5'	1.62	0.80
1:0:542:A:H2'	1:0:543:G:H5'	1.63	0.80
1:0:70:A:O3'	1:0:71:A:H3'	1.80	0.80
1:0:2755:A:O2'	1:0:2756:A:H5'	1.80	0.80
1:0:2006:G:H4'	1:0:2596:C:O2'	1.82	0.80
1:0:1804:U:H2'	1:0:1805:G:H8	1.46	0.80
1:0:1791:C:H1'	1:0:1793:A:H5'	1.64	0.80
1:0:2499:C:H41	1:0:2521:A:H2	1.26	0.80
1:0:699:G:H21	1:0:700:C:H5''	1.47	0.80
1:0:1223:G:H21	1:0:1225:G:H21	1.30	0.80
1:0:1715:A:O2'	1:0:1716:G:H3'	1.82	0.80
1:0:1182:U:C2'	1:0:1183:C:H5''	2.13	0.79
1:0:2041:A:H61	32:0:2881:773:H143	0.68	0.79
1:0:930:A:H3'	1:0:931:G:H8	1.46	0.79
2:9:28:A:C2	2:9:29:C:H1'	2.18	0.79
1:0:1656:U:C2'	1:0:1657:A:H5''	2.12	0.79
1:0:558:G:H5''	1:0:559:C:C5	2.16	0.79
1:0:547:U:H2'	1:0:548:G:C8	2.17	0.79
1:0:2599:U:C2'	1:0:2600:A:H5''	2.11	0.79
2:9:65:A:H2'	2:9:66:G:C8	2.17	0.79
1:0:873:U:C2	1:0:2246:A:H5''	2.17	0.79
1:0:1886:G:H2'	1:0:1887:G:H8	1.46	0.79
1:0:2872:U:H2'	1:0:2873:G:C8	2.18	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1811:A:H1'	1:0:1813:A:C5	2.18	0.79
1:0:590:C:H2'	1:0:591:G:C8	2.17	0.79
1:0:752:G:H5'	1:0:1775:A:H61	1.47	0.79
1:0:652:C:H42	1:0:657:A:H61	1.27	0.79
1:0:873:U:H1'	1:0:2246:A:OP1	1.83	0.79
1:0:635:C:H2'	1:0:636:G:H5''	1.64	0.78
1:0:792:U:H2'	1:0:793:G:H5'	1.65	0.78
1:0:357:A:H2'	1:0:358:C:H5'	1.63	0.78
1:0:2672:U:H2'	1:0:2673:G:H8	1.47	0.78
1:0:1900:U:H3'	1:0:1901:A:C8	2.19	0.78
1:0:416:U:H5''	1:0:417:C:H5'	1.65	0.78
2:9:78:A:H2'	2:9:79:U:C6	2.19	0.78
1:0:1807:A:O2'	1:0:1808:C:H4'	1.83	0.78
1:0:1088:A:H2'	1:0:1089:C:O4'	1.83	0.78
2:9:92:G:C2'	2:9:93:G:H5'	2.14	0.78
1:0:1299:A:H2'	1:0:1301:U:OP2	1.83	0.78
1:0:1195:U:H2'	1:0:1196:G:C8	2.19	0.78
2:9:58:G:H4'	2:9:59:A:H5'	1.64	0.78
1:0:1319:C:H2'	1:0:1320:A:H8	1.47	0.78
1:0:762:A:H2'	1:0:763:A:C8	2.19	0.77
1:0:187:U:H2'	1:0:188:G:H8	1.49	0.77
1:0:218:A:O2'	1:0:219:G:H4'	1.84	0.77
1:0:1697:U:H2'	1:0:1698:C:O4'	1.84	0.77
1:0:2861:A:H2'	1:0:2862:G:H8	1.49	0.77
1:0:689:A:H8	1:0:2052:G:H21	1.32	0.77
1:0:1086:C:H2'	1:0:1087:C:H5''	1.65	0.77
1:0:168:A:H2'	1:0:169:C:C6	2.20	0.77
1:0:2447:G:H22	1:0:2460:G:H2'	1.49	0.77
1:0:613:A:H2'	1:0:614:G:H8	1.49	0.77
2:9:69:G:H2'	2:9:70:C:O4'	1.84	0.77
1:0:1032:A:H2'	1:0:1033:G:H4'	1.63	0.77
1:0:2437:G:N1	1:0:2469:G:H2'	2.00	0.77
1:0:1825:C:O2'	1:0:1826:U:H5'	1.85	0.77
1:0:918:A:C2'	1:0:919:U:H5''	2.11	0.77
2:9:65:A:H2'	2:9:66:G:H8	1.50	0.77
1:0:1066:G:H2'	1:0:1067:G:H4'	1.67	0.77
1:0:951:G:H2'	1:0:952:A:H5''	1.65	0.77
1:0:2474:G:H2'	1:0:2475:C:O4'	1.85	0.77
1:0:2262:C:H2'	1:0:2263:C:O4'	1.85	0.77
1:0:75:C:C2'	1:0:76:C:H5''	2.15	0.76
1:0:2770:A:H4'	1:0:2867:G:H22	1.49	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1459:U:H2'	1:0:1475:U:O2'	1.84	0.76
1:0:1911:A:H2'	1:0:1912:G:H5'	1.67	0.76
1:0:2320:G:H2'	1:0:2321:C:O4'	1.85	0.76
1:0:103:U:H2'	1:0:104:C:C6	2.20	0.76
1:0:1608:U:H2'	1:0:1609:G:H8	1.51	0.76
1:0:1242:A:H2'	1:0:1243:G:C8	2.21	0.76
2:9:77:G:H2'	2:9:78:A:O4'	1.84	0.76
1:0:37:C:H2'	1:0:38:G:C8	2.20	0.76
1:0:2633:A:H61	1:0:2646:C:N4	1.83	0.75
1:0:1763:G:H2'	1:0:1764:A:H4'	1.67	0.75
1:0:37:C:H2'	1:0:38:G:H8	1.51	0.75
1:0:468:A:O2'	1:0:469:G:H4'	1.86	0.75
1:0:2436:U:H2'	1:0:2437:G:O4'	1.86	0.75
1:0:215:G:H21	1:0:632:A:H8	1.31	0.75
1:0:547:U:H2'	1:0:548:G:H8	1.51	0.75
1:0:1036:G:H1'	1:0:1145:C:C4'	2.16	0.75
1:0:930:A:H3'	1:0:931:G:C8	2.22	0.75
1:0:2861:A:H2'	1:0:2862:G:C8	2.21	0.75
1:0:1036:G:H1'	1:0:1145:C:H4'	1.68	0.75
1:0:404:A:H1'	1:0:424:G:O2'	1.85	0.75
1:0:1440:G:H1'	1:0:1588:A:N6	2.01	0.75
1:0:1587:A:H2'	1:0:1588:A:C8	2.22	0.75
1:0:1035:G:H21	1:0:1155:G:H4'	1.50	0.75
1:0:1055:A:C2	1:0:1121:G:H2'	2.22	0.75
1:0:755:C:H5'	1:0:1692:C:O2'	1.86	0.75
1:0:2652:G:H2'	1:0:2653:A:H8	1.50	0.74
1:0:727:U:H2'	1:0:728:G:H5''	1.69	0.74
1:0:104:C:C2'	1:0:105:G:H5''	2.13	0.74
1:0:2498:U:OP1	1:0:2498:U:H3'	1.87	0.74
1:0:1463:A:C1'	1:0:1543:G:H22	2.01	0.74
1:0:2616:U:H2'	1:0:2617:G:O4'	1.87	0.74
1:0:2270:U:O2'	1:0:2353:G:H1'	1.88	0.74
1:0:114:C:H4'	1:0:124:A:O2'	1.88	0.74
1:0:1223:G:N2	1:0:1225:G:H21	1.85	0.74
1:0:922:A:H2'	1:0:923:A:C8	2.22	0.74
1:0:2329:C:H2'	1:0:2330:G:O4'	1.87	0.74
1:0:28:A:N6	1:0:522:G:H4'	2.02	0.74
1:0:1348:C:H2'	1:0:1349:A:C8	2.22	0.74
1:0:1681:A:C2	1:0:2706:U:H1'	2.23	0.73
1:0:1284:G:C4	1:0:1633:C:H5'	2.23	0.73
1:0:1750:A:H1'	1:0:2690:A:C2	2.23	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:31:A:H2'	2:9:32:C:O4'	1.89	0.73
1:0:2299:A:H5'	1:0:2300:G:C5	2.23	0.73
1:0:2318:U:H2'	1:0:2319:G:H8	1.51	0.73
1:0:1608:U:H2'	1:0:1609:G:C8	2.24	0.73
1:0:169:C:H2'	1:0:170:U:H5'	1.71	0.73
1:0:940:G:C3'	1:0:941:U:H5''	2.04	0.73
1:0:1747:G:H4'	1:0:1749:G:C1'	2.18	0.73
1:0:2268:G:H5''	1:0:2363:G:O2'	1.89	0.73
1:0:612:G:O3'	1:0:613:A:H4'	1.89	0.73
1:0:821:A:O2'	1:0:1267:A:H4'	1.89	0.73
1:0:1471:G:H1	1:0:2682:C:H42	1.35	0.73
2:9:48:A:O2'	2:9:49:C:H5'	1.88	0.72
1:0:1982:C:H4'	1:0:2703:C:O2	1.88	0.72
1:0:763:A:C2	1:0:765:C:H1'	2.23	0.72
1:0:1202:U:H2'	1:0:1203:A:H8	1.52	0.72
1:0:841:G:H2'	1:0:842:A:C8	2.25	0.72
1:0:792:U:C2'	1:0:793:G:H5'	2.19	0.72
1:0:2456:U:H1'	1:0:2460:G:H22	1.53	0.72
1:0:162:C:H2'	1:0:163:A:C8	2.23	0.72
1:0:2669:C:H41	14:L:15:SER:CA	2.03	0.72
1:0:81:C:H2'	1:0:82:G:O4'	1.89	0.72
1:0:1267:A:H5''	1:0:1268:U:O5'	1.88	0.72
1:0:1295:U:H2'	1:0:1296:G:H5'	1.71	0.71
1:0:2670:C:H4'	1:0:2846:G:O2'	1.90	0.71
1:0:2599:U:C3'	1:0:2600:A:H5''	2.20	0.71
1:0:208:C:H2'	1:0:209:G:H5'	1.70	0.71
1:0:1225:G:H2'	1:0:1249:G:H22	1.53	0.71
1:0:1040:A:H2'	1:0:1041:G:H5'	1.70	0.71
1:0:1445:A:H2'	1:0:1446:U:O4'	1.90	0.71
2:9:61:A:O5'	2:9:61:A:H8	1.73	0.71
1:0:2674:C:H2'	1:0:2675:U:H6	1.54	0.71
1:0:1654:A:H4'	1:0:2690:A:O2'	1.89	0.71
1:0:2503:G:H2'	1:0:2504:G:H5''	1.70	0.71
1:0:1429:A:H62	1:0:1601:U:H5''	1.55	0.71
1:0:651:C:C2'	1:0:652:C:H5''	2.20	0.71
1:0:331:U:H2'	1:0:332:C:H5''	1.71	0.71
1:0:58:C:H3'	1:0:59:G:C5'	2.19	0.71
1:0:1976:U:H2'	1:0:1977:C:C5'	2.17	0.71
2:9:28:A:H3'	2:9:29:C:H6	1.55	0.71
2:9:36:A:H2'	2:9:46:G:O6	1.90	0.71
1:0:19:C:H5'	1:0:563:U:OP1	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2198:U:C3'	1:0:2199:C:H5''	2.21	0.71
1:0:2324:G:O2'	1:0:2325:A:H5''	1.90	0.71
1:0:2176:U:H2'	1:0:2177:U:O4'	1.91	0.71
1:0:1466:C:H2'	1:0:1467:U:O4'	1.89	0.71
1:0:2185:U:H2'	1:0:2186:G:C8	2.26	0.70
1:0:618:A:H2'	1:0:619:A:O4'	1.89	0.70
1:0:1479:G:H2'	1:0:1480:G:H8	1.55	0.70
1:0:2321:C:H2'	1:0:2322:U:O4'	1.91	0.70
1:0:2315:A:O2'	1:0:2364:C:H5''	1.91	0.70
1:0:460:U:N3	1:0:592:G:H1'	2.06	0.70
1:0:162:C:H4'	1:0:195:A:H4'	1.71	0.70
1:0:1762:C:O2'	1:0:1777:A:H1'	1.91	0.70
1:0:613:A:H2'	1:0:614:G:C8	2.26	0.70
1:0:523:A:H4'	1:0:1230:C:H5'	1.74	0.70
2:9:71:G:N2	2:9:72:C:H1'	2.07	0.70
1:0:1479:G:H2'	1:0:1480:G:C8	2.27	0.70
1:0:953:G:H1'	1:0:1203:A:H2	1.55	0.70
1:0:1598:C:H2'	1:0:1599:G:O4'	1.91	0.70
1:0:1068:A:H2'	1:0:1069:G:C8	2.27	0.70
1:0:1854:G:H1	1:0:1863:U:H3	1.37	0.70
1:0:1280:U:H3	1:0:1996:A:N6	1.85	0.70
1:0:814:G:H3'	1:0:815:A:H5'	1.73	0.70
2:9:84:G:O2'	2:9:85:G:H5'	1.91	0.70
1:0:245:C:H5'	1:0:372:U:O2'	1.91	0.70
1:0:1617:G:H2'	1:0:1618:U:H5'	1.72	0.70
1:0:1789:U:H2'	1:0:1790:G:H5'	1.74	0.70
1:0:1284:G:N3	1:0:1633:C:H5'	2.07	0.70
1:0:236:C:H2'	1:0:237:G:H8	1.57	0.70
1:0:734:G:H2'	1:0:735:G:H8	1.57	0.70
1:0:1436:G:H21	1:0:1514:C:H1'	1.57	0.69
1:0:2469:G:H5''	1:0:2470:U:OP1	1.91	0.69
1:0:2841:U:H1'	1:0:2843:A:H1'	1.72	0.69
1:0:2202:G:H2'	1:0:2203:G:O4'	1.92	0.69
2:9:4:C:H2'	2:9:5:C:H6	1.57	0.69
1:0:109:A:C3'	1:0:110:U:H5''	2.22	0.69
1:0:2836:U:H2'	1:0:2837:G:C8	2.26	0.69
1:0:486:U:H4'	1:0:520:C:H5'	1.74	0.69
1:0:652:C:H42	1:0:657:A:N6	1.89	0.69
1:0:541:C:H42	1:0:572:G:H8	1.40	0.69
1:0:109:A:H2'	1:0:110:U:H5''	1.72	0.69
1:0:964:A:H2'	1:0:965:G:H8	1.57	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1869:A:H2'	1:0:1870:U:O4'	1.92	0.69
1:0:1091:C:H2'	1:0:1092:U:C6	2.27	0.69
1:0:760:U:O2	1:0:1997:A:H1'	1.92	0.69
1:0:2510:A:N6	1:0:2641:A:H61	1.89	0.69
1:0:931:G:N2	1:0:2247:A:H5''	2.08	0.69
2:9:6:C:H2'	2:9:7:C:C6	2.26	0.69
1:0:616:U:C2'	1:0:617:U:H5''	2.23	0.69
1:0:798:G:H2'	1:0:799:C:H5'	1.75	0.69
1:0:1653:C:H2'	1:0:1654:A:C8	2.28	0.69
1:0:2836:U:H2'	1:0:2837:G:H8	1.57	0.69
1:0:50:G:H2'	1:0:117:A:C2	2.28	0.69
1:0:939:C:H2'	1:0:940:G:C8	2.28	0.69
1:0:69:G:H5''	1:0:70:A:OP1	1.93	0.69
1:0:462:G:H2'	1:0:463:C:C5'	2.22	0.69
1:0:1695:U:H2'	1:0:1696:C:O4'	1.93	0.69
1:0:2308:A:H2'	1:0:2309:G:C8	2.28	0.68
2:9:84:G:H2'	2:9:85:G:C8	2.22	0.68
1:0:2466:G:H2'	1:0:2467:A:C8	2.28	0.68
1:0:1194:U:H2'	1:0:1195:U:C6	2.28	0.68
1:0:216:U:H5''	1:0:601:A:N6	2.08	0.68
1:0:1467:U:H3'	1:0:1468:A:C5'	2.23	0.68
1:0:77:C:H2'	1:0:78:C:C6	2.29	0.68
1:0:317:U:C2'	1:0:318:G:H5''	2.24	0.68
1:0:2041:A:N1	32:0:2881:773:H9	2.07	0.68
1:0:187:U:H2'	1:0:188:G:C8	2.28	0.68
1:0:459:A:H1'	1:0:461:A:N6	2.08	0.68
1:0:1953:A:H1'	1:0:1955:G:C1'	2.23	0.68
1:0:490:A:O2'	1:0:491:A:H5'	1.93	0.68
1:0:1325:U:H4'	1:0:1326:U:C6	2.29	0.68
1:0:2757:G:H5'	1:0:2761:A:H1'	1.76	0.68
1:0:475:U:H2'	1:0:476:G:O4'	1.94	0.68
1:0:71:A:N6	1:0:110:U:H4'	2.09	0.68
1:0:239:A:H4'	1:0:620:G:H5'	1.75	0.68
1:0:1474:A:N3	1:0:1474:A:H3'	2.09	0.68
1:0:1727:C:H4'	1:0:2833:C:N3	2.09	0.67
1:0:2199:C:H2'	1:0:2200:G:C8	2.29	0.67
1:0:1197:U:H2'	1:0:1198:C:O4'	1.94	0.67
1:0:2469:G:H4'	1:0:2470:U:C5	2.30	0.67
1:0:2829:A:H2'	1:0:2830:U:O4'	1.94	0.67
1:0:2491:C:H3'	1:0:2492:G:H5''	1.77	0.67
1:0:1791:C:O2'	1:0:1793:A:H5'	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2761:A:H5''	1:0:2762:G:H5'	1.77	0.67
1:0:2532:G:C2	1:0:2533:U:H1'	2.30	0.67
1:0:13:A:H1'	1:0:536:A:N6	2.09	0.67
1:0:1949:A:O2'	1:0:2572:U:H5'	1.95	0.67
1:0:951:G:C2'	1:0:952:A:H5''	2.24	0.67
1:0:1312:G:H5''	1:0:1313:U:C5'	2.25	0.67
1:0:652:C:N4	1:0:657:A:H61	1.92	0.67
1:0:2781:G:H2'	1:0:2782:G:O4'	1.94	0.67
1:0:1588:A:H2'	1:0:1589:G:H8	1.60	0.67
1:0:1271:C:H2'	1:0:1272:G:C8	2.30	0.67
1:0:2691:C:H3'	1:0:2692:A:C5'	2.24	0.67
1:0:2708:U:H2'	1:0:2709:C:C6	2.30	0.67
1:0:1302:C:O2'	1:0:1343:C:H4'	1.94	0.66
1:0:313:U:H2'	1:0:314:G:C8	2.29	0.66
1:0:175:C:H1'	1:0:2413:A:H61	1.59	0.66
2:9:29:C:H2'	2:9:30:C:C6	2.31	0.66
1:0:170:U:H2'	1:0:171:G:H8	1.60	0.66
1:0:2274:C:H2'	1:0:2275:U:H5''	1.75	0.66
1:0:951:G:C3'	1:0:952:A:H5''	2.25	0.66
1:0:1763:G:N2	1:0:1765:C:H5''	2.10	0.66
1:0:1325:U:H4'	1:0:1326:U:C5	2.30	0.66
1:0:1029:C:H3'	1:0:1030:U:H5''	1.76	0.66
1:0:427:C:H2'	1:0:428:A:H8	1.59	0.66
1:0:1547:U:H2'	1:0:1548:U:C6	2.30	0.66
1:0:999:A:H4'	1:0:1166:A:N1	2.11	0.66
1:0:2785:A:H2'	1:0:2786:G:O4'	1.96	0.66
2:9:40:C:H2'	2:9:41:A:O4'	1.96	0.66
1:0:1371:G:H1'	1:0:1386:A:N6	2.10	0.66
1:0:88:G:H3'	1:0:89:A:C5'	2.24	0.66
1:0:2523:G:H1'	1:0:2625:U:H5'	1.77	0.66
1:0:9:U:H3	1:0:2608:A:N6	1.93	0.66
1:0:1440:G:H1'	1:0:1588:A:H61	1.60	0.66
1:0:118:U:H1'	1:0:143:A:C8	2.31	0.66
1:0:2674:C:H2'	1:0:2675:U:C6	2.31	0.66
1:0:2390:A:H2'	1:0:2391:A:H8	1.60	0.66
1:0:734:G:H2'	1:0:735:G:C8	2.30	0.66
1:0:1452:U:H5''	1:0:1533:G:H5'	1.78	0.66
1:0:930:A:H5'	1:0:931:G:N7	2.10	0.66
1:0:174:A:C4'	1:0:2051:U:H2'	2.26	0.66
1:0:109:A:C2'	1:0:110:U:H5''	2.26	0.66
1:0:2308:A:H2'	1:0:2309:G:H8	1.59	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2491:C:H2'	1:0:2492:G:C4'	2.26	0.66
1:0:2783:U:O2'	1:0:2784:A:H4'	1.95	0.66
1:0:942:U:C2'	1:0:943:U:H5'	2.26	0.66
1:0:2081:U:C2'	1:0:2082:C:H5''	2.21	0.66
1:0:1851:A:H61	1:0:1867:A:H1'	1.60	0.66
1:0:2811:G:H2'	1:0:2812:A:C8	2.31	0.66
1:0:705:C:H2'	1:0:706:A:C8	2.31	0.66
2:9:62:C:N4	2:9:63:A:H62	1.93	0.66
1:0:1055:A:H2	1:0:1121:G:H2'	1.60	0.66
1:0:367:G:C2'	1:0:368:A:H5''	2.26	0.65
1:0:2375:G:H2'	1:0:2376:G:H8	1.60	0.65
1:0:2522:G:H21	1:0:2625:U:H5''	1.60	0.65
1:0:1301:U:H2'	1:0:1664:G:H21	1.61	0.65
1:0:632:A:H2'	1:0:633:G:O4'	1.96	0.65
1:0:2158:C:H2'	1:0:2159:A:H8	1.61	0.65
1:0:1811:A:H1'	1:0:1813:A:C4	2.30	0.65
1:0:2605:C:H2'	1:0:2606:G:O4'	1.95	0.65
1:0:564:U:H2'	1:0:565:A:C8	2.31	0.65
1:0:2483:U:H3'	1:0:2484:G:C5'	2.26	0.65
1:0:2510:A:H61	1:0:2641:A:N6	1.95	0.65
1:0:1958:G:H2'	1:0:1959:U:C6	2.31	0.65
1:0:2199:C:H2'	1:0:2200:G:H8	1.61	0.65
1:0:2240:C:H2'	1:0:2241:U:H5'	1.78	0.65
1:0:2279:G:H2'	1:0:2280:A:H8	1.61	0.65
1:0:1480:G:H2'	1:0:1481:U:H5'	1.78	0.65
1:0:1529:C:H2'	1:0:1530:U:O4'	1.97	0.65
1:0:509:U:H2'	1:0:510:G:H5'	1.77	0.65
1:0:804:C:O2'	1:0:806:A:H4'	1.97	0.65
1:0:2480:C:H4'	1:0:2482:A:O4'	1.97	0.65
1:0:190:A:H2'	1:0:191:G:C8	2.32	0.65
1:0:492:G:H22	1:0:519:C:H42	1.43	0.65
1:0:1388:C:H2'	1:0:1389:C:H6	1.62	0.65
2:9:115:G:O2'	2:9:116:C:H5'	1.97	0.65
1:0:2122:G:H2'	1:0:2123:G:C8	2.32	0.65
1:0:459:A:N6	1:0:484:G:H1'	2.12	0.64
1:0:669:G:H2'	1:0:670:U:C6	2.32	0.64
1:0:995:A:H5''	1:0:996:C:H5	1.62	0.64
1:0:2045:A:N6	32:0:2881:773:H131	2.12	0.64
1:0:2476:A:O2'	1:0:2477:C:H5	1.74	0.64
1:0:17:G:H2'	1:0:18:U:C6	2.33	0.64
1:0:2437:G:H2'	1:0:2469:G:N1	2.12	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2609:G:H21	1:0:2866:A:H2	1.46	0.64
1:0:1181:C:C3'	1:0:1182:U:H5''	2.28	0.64
1:0:1838:G:H2'	1:0:1839:A:H5'	1.80	0.64
1:0:1561:A:H2'	1:0:1562:G:O4'	1.98	0.64
1:0:1680:U:O2'	1:0:2665:G:H4'	1.97	0.64
2:9:42:U:C2'	2:9:45:C:H41	2.08	0.64
1:0:1804:U:H2'	1:0:1805:G:C8	2.31	0.64
1:0:2261:G:H4'	1:0:2262:C:OP2	1.95	0.64
1:0:414:A:H2'	1:0:415:A:O4'	1.97	0.64
1:0:2057:U:H2'	1:0:2058:U:C6	2.33	0.64
1:0:114:C:O2'	1:0:124:A:H1'	1.96	0.64
1:0:2273:C:H2'	1:0:2274:C:C6	2.32	0.64
1:0:509:U:H3	1:0:513:A:H62	1.43	0.64
1:0:840:U:H4'	1:0:841:G:C2	2.33	0.64
1:0:929:A:C3'	1:0:930:A:H5''	2.26	0.64
2:9:63:A:H2'	2:9:64:C:H6	1.63	0.64
1:0:764:A:H2'	1:0:764:A:N3	2.12	0.64
1:0:890:U:H2'	1:0:891:A:C8	2.32	0.64
1:0:2158:C:H2'	1:0:2159:A:C8	2.33	0.64
1:0:1591:U:H2'	1:0:1592:U:O4'	1.98	0.64
1:0:2490:U:H2'	1:0:2491:C:C6	2.33	0.64
1:0:109:A:H3'	1:0:110:U:H5''	1.78	0.64
1:0:987:G:H5'	1:0:1167:A:N6	2.13	0.64
1:0:1495:G:H2'	1:0:1496:G:C8	2.32	0.64
1:0:1502:G:O2'	1:0:1503:G:H5'	1.98	0.64
1:0:2082:C:H2'	1:0:2083:G:O4'	1.98	0.63
1:0:1029:C:C3'	1:0:1030:U:H5''	2.28	0.63
1:0:2395:C:H2'	1:0:2396:C:H5''	1.79	0.63
1:0:1073:G:H3'	1:0:1074:G:H5''	1.81	0.63
1:0:2507:U:O2'	1:0:2508:G:H3'	1.98	0.63
1:0:820:U:H2'	1:0:821:A:H8	1.63	0.63
1:0:2491:C:H2'	1:0:2492:G:O4'	1.99	0.63
1:0:520:C:O2'	1:0:1249:G:H5'	1.99	0.63
1:0:208:C:C2'	1:0:209:G:H5'	2.28	0.63
1:0:968:C:H41	1:0:970:A:H1'	1.63	0.63
1:0:824:U:H4'	1:0:1264:C:H1'	1.80	0.63
1:0:2770:A:C4'	1:0:2867:G:H22	2.12	0.63
1:0:427:C:H2'	1:0:428:A:C8	2.33	0.63
1:0:1139:A:O2'	1:0:2495:G:H4'	1.98	0.63
1:0:2866:A:H2'	1:0:2867:G:O4'	1.99	0.63
1:0:1587:A:H2'	1:0:1588:A:H8	1.63	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:165:G:H2'	1:0:166:G:O4'	1.99	0.63
1:0:2380:U:C2'	1:0:2381:A:H5'	2.26	0.63
1:0:752:G:H5'	1:0:1775:A:N6	2.14	0.63
1:0:1911:A:C2'	1:0:1912:G:H5'	2.29	0.63
1:0:139:A:H2'	1:0:140:G:H8	1.64	0.63
1:0:1974:U:C2'	1:0:1975:G:H5''	2.29	0.63
1:0:163:A:H2'	1:0:164:G:H8	1.63	0.63
1:0:2781:G:H2'	1:0:2782:G:C1'	2.29	0.63
1:0:1004:A:H2'	1:0:1005:U:H5''	1.80	0.63
1:0:441:A:H2'	1:0:442:A:O4'	1.99	0.63
1:0:2787:A:O2'	1:0:2788:C:H5'	1.99	0.63
1:0:1641:C:H2'	1:0:1642:G:O4'	1.99	0.63
1:0:1918:G:H1'	1:0:1947:G:C2	2.33	0.63
1:0:792:U:H2'	1:0:793:G:C5'	2.27	0.63
1:0:2456:U:H1'	1:0:2460:G:N2	2.13	0.63
1:0:2633:A:H2	1:0:2644:A:H5''	1.64	0.63
1:0:1376:C:H2'	1:0:1377:G:O4'	1.99	0.63
1:0:1690:U:H2'	1:0:1691:G:H5'	1.80	0.62
1:0:1268:U:H5'	1:0:1269:G:H5''	1.81	0.62
1:0:2839:G:H2'	1:0:2840:U:C6	2.33	0.62
1:0:401:G:H2'	1:0:403:A:N7	2.15	0.62
1:0:1473:U:H4'	1:0:1474:A:C5	2.34	0.62
1:0:1770:U:H2'	1:0:1774:A:H62	1.64	0.62
1:0:1972:G:H2'	1:0:1973:C:O4'	1.99	0.62
1:0:2085:G:H2'	1:0:2086:U:C6	2.34	0.62
2:9:30:C:O5'	2:9:30:C:H6	1.80	0.62
2:9:18:G:H2'	2:9:19:C:H6	1.63	0.62
1:0:1789:U:O2'	1:0:1793:A:H1'	2.00	0.62
1:0:1743:C:H41	16:N:125:MET:CA	2.11	0.62
1:0:1329:U:H5'	1:0:1405:A:H1'	1.79	0.62
1:0:2012:A:C5	1:0:2014:A:H5'	2.35	0.62
1:0:2507:U:HO2'	1:0:2508:G:H8	1.47	0.62
1:0:2521:A:H5'	1:0:2522:G:OP1	1.99	0.62
1:0:1054:C:H2'	1:0:1055:A:H5'	1.81	0.62
1:0:2495:G:H2'	1:0:2496:C:C6	2.35	0.62
1:0:5:A:H2'	1:0:6:A:H8	1.63	0.62
1:0:1313:U:H1'	1:0:1642:G:N2	2.14	0.62
1:0:1204:G:H2'	1:0:1205:G:C8	2.34	0.62
1:0:2273:C:H2'	1:0:2274:C:H6	1.65	0.62
1:0:644:A:H2'	1:0:645:G:H5'	1.81	0.62
1:0:683:A:H5''	1:0:684:C:OP1	2.00	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2672:U:H2'	1:0:2673:G:C8	2.33	0.62
1:0:1319:C:H2'	1:0:1320:A:C8	2.32	0.62
1:0:223:C:H4'	1:0:398:C:H1'	1.81	0.62
1:0:338:G:C2'	1:0:339:U:H5'	2.29	0.62
1:0:1257:U:H2'	1:0:1258:G:C8	2.35	0.62
1:0:1707:A:N7	1:0:1714:A:H2	1.98	0.62
1:0:1560:A:H2'	1:0:1561:A:O4'	2.00	0.62
1:0:2770:A:C5'	1:0:2867:G:H1	2.13	0.62
1:0:927:C:H2'	1:0:928:G:O4'	1.99	0.62
1:0:2377:U:H2'	1:0:2378:G:C8	2.34	0.62
1:0:782:U:H2'	1:0:783:G:C8	2.35	0.62
1:0:2011:U:H2'	1:0:2012:A:C8	2.35	0.62
1:0:1528:C:H2'	1:0:1529:C:H5''	1.82	0.62
1:0:888:G:H2'	1:0:889:C:O4'	2.00	0.62
2:9:114:C:O5'	2:9:114:C:H6	1.82	0.62
1:0:2001:G:H2'	1:0:2002:A:C8	2.35	0.62
1:0:942:U:O2'	1:0:943:U:H5'	2.00	0.61
1:0:460:U:H3	1:0:592:G:H1'	1.64	0.61
1:0:1429:A:N6	1:0:1602:G:H5'	2.15	0.61
1:0:210:A:N6	1:0:442:A:H61	1.97	0.61
1:0:1191:G:H2'	1:0:1192:A:H8	1.65	0.61
1:0:2426:G:O6	1:0:2479:U:H2'	2.00	0.61
2:9:56:G:H2'	2:9:57:U:O4'	1.99	0.61
1:0:1352:G:H2'	1:0:1353:A:C8	2.35	0.61
1:0:550:C:H2'	1:0:551:A:C8	2.36	0.61
1:0:2045:A:H61	32:0:2881:773:H131	1.63	0.61
1:0:1730:G:H2'	1:0:1731:C:C6	2.35	0.61
1:0:321:A:H2'	1:0:323:G:N7	2.15	0.61
1:0:483:A:H2'	1:0:484:G:H5'	1.82	0.61
1:0:1057:A:H3'	1:0:1058:G:C5'	2.31	0.61
1:0:929:A:H2'	1:0:930:A:C4'	2.31	0.61
1:0:614:G:H2'	1:0:615:C:H6	1.64	0.61
1:0:2764:U:H2'	1:0:2765:C:C6	2.36	0.61
1:0:141:G:H2'	1:0:142:U:C6	2.36	0.61
1:0:870:C:H2'	1:0:871:U:C6	2.36	0.61
1:0:857:U:C2'	1:0:858:G:H5'	2.31	0.61
1:0:1717:A:H2'	1:0:1718:A:H5'	1.81	0.61
1:0:1196:G:C2'	1:0:1197:U:H5'	2.30	0.61
1:0:1760:G:O2'	1:0:1761:G:H5'	2.01	0.61
1:0:2686:C:H2'	1:0:2687:G:C8	2.35	0.61
2:9:62:C:N4	2:9:63:A:N6	2.48	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2713:A:H2'	1:0:2714:A:C8	2.36	0.61
1:0:2872:U:H2'	1:0:2873:G:H8	1.63	0.61
1:0:2437:G:H1	1:0:2469:G:H2'	1.64	0.61
1:0:2721:A:H2'	1:0:2722:C:O4'	2.01	0.61
2:9:14:C:H4'	2:9:17:A:H61	1.65	0.61
1:0:1937:G:N3	1:0:2530:C:H5'	2.16	0.61
1:0:657:A:H2'	1:0:658:G:C8	2.36	0.61
1:0:1514:C:H5'	1:0:1593:C:C5'	2.31	0.61
1:0:1194:U:H2'	1:0:1195:U:C5	2.35	0.61
1:0:1710:U:H3	1:0:1821:A:H61	1.48	0.61
1:0:1588:A:H2'	1:0:1589:G:C8	2.36	0.61
1:0:775:U:O2	1:0:1445:A:H5''	2.00	0.61
1:0:202:A:H2'	1:0:203:G:O4'	2.01	0.61
2:9:58:G:H4'	2:9:59:A:C5'	2.29	0.60
1:0:1225:G:H2'	1:0:1249:G:N2	2.16	0.60
1:0:146:C:H2'	1:0:147:G:C8	2.36	0.60
1:0:2633:A:H5''	1:0:2634:G:OP1	2.02	0.60
1:0:2463:G:O2'	1:0:2464:G:H5'	2.01	0.60
1:0:574:C:H4'	1:0:1266:G:O6	2.01	0.60
1:0:639:G:H2'	1:0:640:C:C6	2.36	0.60
1:0:62:U:H2'	1:0:63:A:C8	2.36	0.60
1:0:2177:U:H2'	1:0:2178:U:C6	2.35	0.60
2:9:113:G:H2'	2:9:114:C:C6	2.36	0.60
1:0:976:C:H5'	1:0:2252:A:C1'	2.31	0.60
1:0:330:C:O2'	1:0:331:U:H5'	2.00	0.60
1:0:1889:G:H2'	1:0:1890:G:C8	2.37	0.60
1:0:2713:A:H2'	1:0:2714:A:H8	1.67	0.60
1:0:2617:G:H21	1:0:2758:A:H62	1.48	0.60
1:0:2770:A:H5'	1:0:2867:G:H1	1.67	0.60
1:0:1672:A:C2	1:0:2032:G:H4'	2.36	0.60
1:0:174:A:O4'	1:0:2051:U:H2'	2.01	0.60
2:9:42:U:O5'	2:9:42:U:H6	1.83	0.60
1:0:2005:U:H5''	1:0:2006:G:OP1	2.00	0.60
1:0:1295:U:C2'	1:0:1296:G:H5'	2.31	0.60
1:0:2194:A:C2'	1:0:2195:C:H5''	2.32	0.60
1:0:542:A:C2'	1:0:543:G:H5'	2.32	0.60
1:0:2754:C:H2'	1:0:2755:A:C8	2.36	0.60
1:0:538:A:H2'	1:0:539:A:H5''	1.82	0.60
1:0:2398:U:H2'	1:0:2399:C:C6	2.36	0.60
1:0:108:G:H2'	1:0:109:A:C8	2.37	0.60
1:0:1086:C:C2'	1:0:1087:C:H5''	2.29	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2768:C:H1'	1:0:2784:A:N7	2.17	0.60
1:0:2173:G:H2'	1:0:2174:G:O4'	2.01	0.60
1:0:2429:A:OP1	1:0:2476:A:H2'	2.02	0.60
1:0:2691:C:C3'	1:0:2692:A:H5''	2.31	0.60
1:0:1782:A:H62	1:0:1820:G:H2'	1.67	0.60
1:0:2307:A:H2'	1:0:2308:A:C8	2.36	0.60
1:0:1184:G:H2'	1:0:1185:C:H5''	1.83	0.60
1:0:2096:U:C2'	1:0:2097:A:H5''	2.28	0.59
1:0:2240:C:H2'	1:0:2241:U:C5'	2.31	0.59
1:0:411:C:OP1	1:0:2073:A:H1'	2.02	0.59
1:0:2029:G:H2'	1:0:2030:U:C6	2.36	0.59
2:9:102:A:H2'	2:9:103:A:H5'	1.84	0.59
1:0:2549:G:N2	1:0:2550:C:H1'	2.17	0.59
1:0:2736:U:O2'	1:0:2737:A:H5'	2.02	0.59
1:0:1540:C:H2'	1:0:1541:G:O4'	2.02	0.59
1:0:1517:C:H2'	1:0:1518:C:C6	2.37	0.59
1:0:1312:G:H4'	1:0:1314:A:C4	2.37	0.59
1:0:1067:G:H21	1:0:1115:C:N4	2.00	0.59
1:0:2800:C:H2'	1:0:2801:A:O4'	2.02	0.59
1:0:2083:G:H2'	1:0:2084:G:C8	2.37	0.59
1:0:1790:G:H4'	1:0:1791:C:C5	2.38	0.59
1:0:761:G:O6	1:0:764:A:H4'	2.01	0.59
1:0:2274:C:H2'	1:0:2275:U:C5'	2.32	0.59
1:0:1604:A:H2'	1:0:1605:A:O4'	2.02	0.59
1:0:837:U:H1'	1:0:2337:A:N7	2.18	0.59
1:0:2119:A:O2'	1:0:2120:C:H5'	2.02	0.59
1:0:451:A:H2'	1:0:452:G:C8	2.38	0.59
1:0:1055:A:OP1	1:0:1057:A:H5'	2.03	0.59
2:9:55:C:O5'	2:9:55:C:H6	1.85	0.59
1:0:1921:A:H2'	1:0:1922:U:H5''	1.83	0.59
1:0:681:A:C6	1:0:683:A:H2'	2.38	0.59
1:0:2299:A:H5''	1:0:2300:G:O5'	2.02	0.59
1:0:581:A:C2	1:0:582:G:H1'	2.38	0.59
2:9:78:A:H2'	2:9:79:U:C5	2.38	0.59
1:0:1837:G:H2'	1:0:1838:G:H8	1.67	0.59
1:0:1259:A:O2'	1:0:1260:A:H5'	2.03	0.59
1:0:2678:C:H2'	1:0:2679:G:C8	2.38	0.59
1:0:973:U:H4'	1:0:2475:C:O2'	2.03	0.59
1:0:1707:A:H2'	1:0:1708:C:H5'	1.85	0.59
1:0:775:U:H4'	1:0:776:G:C8	2.38	0.59
1:0:1259:A:C2'	1:0:1260:A:H5'	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2163:U:H2'	1:0:2164:G:C8	2.38	0.59
1:0:1245:G:H2'	1:0:1246:G:H8	1.67	0.59
1:0:340:G:H1'	1:0:488:A:H1'	1.84	0.59
1:0:1312:G:C5'	1:0:1314:A:H1'	2.30	0.58
1:0:313:U:H2'	1:0:314:G:H8	1.68	0.58
1:0:646:C:O2	1:0:650:U:H4'	2.03	0.58
1:0:1679:U:C3'	1:0:1680:U:H5''	2.33	0.58
2:9:111:C:H5''	2:9:112:A:O5'	2.03	0.58
1:0:1644:G:O2'	1:0:1645:U:H5'	2.04	0.58
1:0:979:A:H2'	1:0:980:G:O4'	2.04	0.58
1:0:982:C:H4'	1:0:994:A:O2'	2.02	0.58
1:0:1691:G:H21	1:0:1694:A:H61	1.51	0.58
1:0:66:U:H2'	1:0:67:G:C8	2.38	0.58
1:0:1065:A:H2'	1:0:1066:G:H8	1.68	0.58
1:0:462:G:H2'	1:0:463:C:H5''	1.83	0.58
1:0:1949:A:H1'	1:0:2572:U:H4'	1.86	0.58
1:0:2492:G:H1	1:0:2550:C:H42	1.49	0.58
1:0:76:C:H6	1:0:76:C:H5'	1.68	0.58
1:0:1252:C:O2'	1:0:1253:C:H5''	2.03	0.58
1:0:168:A:H2'	1:0:169:C:H6	1.68	0.58
1:0:705:C:H2'	1:0:706:A:H8	1.69	0.58
1:0:1004:A:H2'	1:0:1005:U:C5'	2.32	0.58
2:9:20:A:O2'	2:9:21:C:H5'	2.03	0.58
1:0:1217:U:H2'	1:0:1218:C:C6	2.37	0.58
1:0:425:A:H2'	1:0:426:C:O4'	2.02	0.58
1:0:2660:C:O2'	1:0:2661:G:H5'	2.04	0.58
1:0:1436:G:N2	1:0:1514:C:H1'	2.19	0.58
1:0:799:C:O2'	1:0:800:U:H5'	2.03	0.58
1:0:114:C:H2'	1:0:115:G:C8	2.39	0.58
1:0:2466:G:H2'	1:0:2467:A:H8	1.67	0.58
2:9:18:G:H2'	2:9:19:C:C6	2.38	0.58
1:0:2779:C:H2'	1:0:2780:A:C8	2.39	0.58
1:0:1304:U:O2'	1:0:1305:C:H5'	2.03	0.58
1:0:2053:G:H2'	1:0:2054:A:C8	2.39	0.58
1:0:1253:C:H2'	1:0:1254:G:O4'	2.03	0.58
1:0:1975:G:N2	1:0:1978:U:H5	2.00	0.58
1:0:357:A:H3'	1:0:358:C:O4'	2.04	0.58
1:0:2437:G:H2'	1:0:2469:G:H1	1.68	0.58
1:0:595:A:H62	1:0:1264:C:H42	1.52	0.58
1:0:133:C:H2'	1:0:134:G:O4'	2.03	0.58
1:0:1537:U:H2'	1:0:1538:A:C8	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1278:A:H4'	1:0:1279:G:O5'	2.04	0.58
1:0:1336:G:H2'	1:0:1337:G:H5'	1.86	0.58
1:0:616:U:C3'	1:0:617:U:H5''	2.34	0.58
1:0:2470:U:H2'	1:0:2471:U:H6	1.68	0.58
1:0:445:A:O2'	1:0:446:C:H5'	2.04	0.58
1:0:1699:A:N6	1:0:1723:U:H3	2.02	0.58
1:0:2318:U:H2'	1:0:2319:G:C8	2.36	0.58
1:0:1763:G:H2'	1:0:1764:A:C4'	2.34	0.58
1:0:1991:C:H2'	1:0:1992:G:H8	1.68	0.58
1:0:1994:U:H2'	1:0:1995:G:H5'	1.86	0.58
1:0:312:G:OP1	1:0:312:G:H4'	2.03	0.58
1:0:871:U:H1'	1:0:2248:A:H5''	1.85	0.58
1:0:487:G:H1'	1:0:515:A:C2	2.39	0.58
1:0:789:G:H21	1:0:806:A:H62	1.52	0.58
1:0:1196:G:H2'	1:0:1197:U:O4'	2.04	0.58
1:0:1057:A:H3'	1:0:1058:G:H5''	1.85	0.58
1:0:2164:G:H2'	1:0:2165:A:H8	1.69	0.58
1:0:226:C:H4'	1:0:227:G:C8	2.38	0.58
1:0:663:G:H2'	1:0:664:C:O4'	2.03	0.58
1:0:459:A:H1'	1:0:461:A:H62	1.67	0.57
1:0:1791:C:H1'	1:0:1793:A:C5'	2.33	0.57
1:0:2194:A:H2'	1:0:2195:C:H5''	1.86	0.57
1:0:944:A:H2'	1:0:945:G:O4'	2.04	0.57
1:0:692:C:H2'	1:0:693:A:H8	1.69	0.57
1:0:1346:C:P	1:0:1346:C:H6	2.27	0.57
1:0:1281:A:H4'	1:0:2592:U:O2	2.04	0.57
1:0:770:U:O2'	1:0:771:C:H5'	2.03	0.57
1:0:2727:G:C2'	1:0:2728:A:H5''	2.34	0.57
1:0:2737:A:H2'	1:0:2738:A:H5'	1.85	0.57
1:0:1195:U:H2'	1:0:1196:G:H8	1.69	0.57
1:0:2788:C:O2'	1:0:2789:U:H5'	2.04	0.57
1:0:1333:G:C6	1:0:1342:U:H5'	2.38	0.57
1:0:2020:G:H2'	1:0:2021:G:C8	2.39	0.57
1:0:1830:C:H42	1:0:1881:U:H3'	1.69	0.57
1:0:1621:C:H2'	1:0:1622:G:O4'	2.05	0.57
1:0:2390:A:H2'	1:0:2391:A:C8	2.39	0.57
1:0:2782:G:H3'	1:0:2783:U:H5''	1.86	0.57
1:0:1785:A:H2'	1:0:1786:C:C6	2.39	0.57
1:0:369:C:H2'	1:0:370:U:O4'	2.04	0.57
1:0:758:G:H2'	1:0:759:C:H5'	1.85	0.57
1:0:1480:G:C2'	1:0:1481:U:H5'	2.34	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1583:A:H8	1:0:1583:A:O5'	1.87	0.57
1:0:1418:C:H2'	1:0:1419:G:H8	1.69	0.57
1:0:1816:G:O2'	1:0:1817:U:H5'	2.05	0.57
1:0:1558:C:C2'	1:0:1559:G:H5'	2.34	0.57
1:0:1313:U:C4	1:0:1651:U:H5'	2.40	0.57
1:0:203:G:O2'	1:0:204:A:H5'	2.04	0.57
1:0:2799:C:H2'	1:0:2800:C:O4'	2.04	0.57
1:0:2243:C:H2'	1:0:2244:C:O4'	2.04	0.57
1:0:1664:G:O5'	1:0:1665:C:OP1	2.22	0.57
1:0:958:G:H2'	1:0:959:C:C6	2.39	0.57
1:0:1290:A:H2'	1:0:1291:G:C8	2.40	0.57
1:0:941:U:OP1	1:0:941:U:H4'	2.04	0.57
1:0:54:G:H2'	1:0:55:A:H8	1.70	0.57
1:0:2492:G:H2'	1:0:2493:U:H6	1.70	0.57
1:0:2633:A:C2	1:0:2644:A:H5''	2.39	0.57
1:0:185:C:O2'	1:0:186:C:H5'	2.04	0.57
1:0:36:G:H1'	1:0:462:G:H21	1.69	0.57
1:0:2503:G:C2'	1:0:2504:G:H5''	2.34	0.57
1:0:1271:C:H2'	1:0:1272:G:H8	1.68	0.57
1:0:165:G:H4'	1:0:1378:A:C2	2.39	0.57
1:0:659:G:H2'	1:0:660:G:C8	2.40	0.57
1:0:1736:C:H2'	1:0:1737:G:C8	2.39	0.57
1:0:936:A:H2'	1:0:937:C:C6	2.40	0.57
1:0:1312:G:H4'	1:0:1314:A:N3	2.20	0.57
1:0:2607:C:H3'	1:0:2608:A:H5'	1.86	0.57
1:0:2841:U:H1'	1:0:2843:A:C1'	2.35	0.57
1:0:1729:C:H2'	1:0:1730:G:C8	2.40	0.57
2:9:102:A:OP2	2:9:102:A:H8	1.88	0.57
1:0:2426:G:H22	1:0:2431:C:N4	2.03	0.57
1:0:2756:A:C6	1:0:2762:G:H1'	2.39	0.57
1:0:1727:C:H4'	1:0:2833:C:C2	2.40	0.57
1:0:1392:U:H2'	1:0:1393:G:H5'	1.87	0.57
1:0:929:A:O2'	2:9:101:A:H4'	2.05	0.56
1:0:1336:G:C2'	1:0:1337:G:H5'	2.35	0.56
1:0:1825:C:C2'	1:0:1826:U:H5'	2.35	0.56
1:0:1958:G:H2'	1:0:1959:U:H6	1.70	0.56
1:0:1311:C:H5'	1:0:1315:A:N6	2.20	0.56
1:0:334:G:N3	1:0:344:G:H1'	2.20	0.56
1:0:2769:C:H2'	1:0:2770:A:H5'	1.86	0.56
1:0:195:A:N1	1:0:212:U:H4'	2.20	0.56
2:9:34:C:C2'	2:9:35:C:H5'	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:692:C:H2'	1:0:693:A:C8	2.40	0.56
1:0:2266:A:C2	1:0:2268:G:H1'	2.40	0.56
1:0:1698:C:O2'	1:0:1753:A:H2'	2.06	0.56
1:0:2642:G:O2'	1:0:2643:G:H5'	2.05	0.56
2:9:93:G:H2'	2:9:94:G:C8	2.32	0.56
1:0:572:G:OP2	1:0:581:A:H5'	2.06	0.56
1:0:1196:G:H2'	1:0:1197:U:H5'	1.86	0.56
1:0:2261:G:H5''	1:0:2262:C:O5'	2.04	0.56
1:0:1441:A:N3	1:0:1441:A:H2'	2.21	0.56
1:0:1039:A:H61	1:0:1136:G:H2'	1.70	0.56
1:0:978:U:H2'	1:0:979:A:C8	2.40	0.56
1:0:128:C:H2'	1:0:129:A:C4'	2.35	0.56
1:0:1677:C:O2'	1:0:1678:G:H5'	2.04	0.56
1:0:1322:G:H21	1:0:1627:C:H5'	1.70	0.56
1:0:604:U:H2'	1:0:605:G:C8	2.40	0.56
1:0:585:U:H2'	1:0:586:G:C8	2.40	0.56
1:0:1182:U:C3'	1:0:1183:C:H5''	2.35	0.56
1:0:1763:G:H21	1:0:1765:C:H5''	1.71	0.56
1:0:2686:C:H2'	1:0:2687:G:H8	1.70	0.56
1:0:1374:G:O2'	1:0:2193:C:H1'	2.05	0.56
1:0:2538:C:O2'	1:0:2539:C:H5'	2.06	0.56
1:0:1313:U:H4'	1:0:1314:A:O5'	2.05	0.56
1:0:452:G:H2'	1:0:453:U:O4'	2.06	0.56
2:9:34:C:H2'	2:9:35:C:O4'	2.05	0.56
1:0:2495:G:H2'	1:0:2496:C:O4'	2.05	0.56
1:0:831:G:C2'	1:0:832:A:H5''	2.36	0.56
1:0:308:C:H2'	1:0:309:G:O4'	2.05	0.56
1:0:703:A:O2'	1:0:704:G:H5'	2.06	0.56
1:0:178:C:H2'	1:0:179:U:C6	2.40	0.56
1:0:847:C:H2'	1:0:848:A:C8	2.40	0.56
1:0:1683:G:C2'	1:0:1684:G:H5'	2.35	0.56
1:0:1826:U:O2'	1:0:1952:A:H2'	2.05	0.56
1:0:12:U:H2'	1:0:13:A:O4'	2.06	0.56
1:0:1430:G:H22	1:0:1599:G:H1'	1.71	0.56
1:0:653:G:H2'	1:0:654:A:H4'	1.86	0.56
1:0:1356:G:H5''	1:0:1614:C:OP2	2.05	0.56
1:0:1095:A:H2'	1:0:1096:A:O4'	2.06	0.56
2:9:59:A:H2'	2:9:60:A:H5'	1.87	0.56
1:0:1790:G:HO2'	1:0:1791:C:H5	1.52	0.56
2:9:62:C:C4	2:9:63:A:N7	2.74	0.56
1:0:2633:A:N6	1:0:2646:C:H42	2.04	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1300:A:C2	1:0:1666:G:H4'	2.41	0.56
1:0:1770:U:H5''	1:0:1771:A:H4'	1.86	0.56
1:0:1333:G:N2	1:0:1344:C:H41	2.04	0.56
1:0:777:A:H62	1:0:1767:G:H1'	1.70	0.56
1:0:1288:A:H62	1:0:1309:G:C4'	2.19	0.56
1:0:2105:U:H2'	1:0:2106:G:C8	2.41	0.56
1:0:931:G:O2'	1:0:932:G:H5'	2.06	0.56
1:0:346:C:O2'	1:0:347:C:H5'	2.05	0.56
1:0:191:G:O2'	1:0:192:G:H5'	2.06	0.56
1:0:2162:C:H2'	1:0:2163:U:C6	2.41	0.56
1:0:746:G:O6	1:0:774:A:H2'	2.05	0.56
1:0:24:G:H2'	1:0:25:U:C6	2.40	0.56
1:0:2080:U:H2'	1:0:2081:U:C6	2.41	0.56
1:0:2475:C:H2'	1:0:2476:A:O4'	2.06	0.56
1:0:1312:G:H5''	1:0:1313:U:H5'	1.86	0.56
1:0:1953:A:H1'	1:0:1955:G:H1'	1.87	0.56
1:0:953:G:H2'	1:0:954:U:C6	2.41	0.56
1:0:2678:C:H2'	1:0:2679:G:H8	1.69	0.56
1:0:1594:U:H2'	1:0:1595:A:H8	1.71	0.56
1:0:1162:A:H2'	1:0:1163:C:O4'	2.06	0.56
1:0:719:A:H2'	1:0:720:A:O4'	2.06	0.56
1:0:1843:U:H2'	1:0:1844:C:C6	2.41	0.56
1:0:871:U:H1'	1:0:2248:A:C5'	2.36	0.56
2:9:101:A:H2'	2:9:102:A:C8	2.41	0.56
1:0:1439:G:N2	1:0:1590:C:H42	2.04	0.56
1:0:223:C:O2'	1:0:398:C:H4'	2.06	0.56
1:0:1467:U:H3'	1:0:1468:A:H5'	1.88	0.56
1:0:738:G:H2'	1:0:739:G:O4'	2.06	0.56
1:0:337:G:H2'	1:0:338:G:H8	1.71	0.56
2:9:17:A:H1'	2:9:112:A:C8	2.40	0.56
1:0:1245:G:H2'	1:0:1246:G:C8	2.40	0.56
1:0:1323:G:H1'	1:0:1627:C:H5''	1.87	0.56
1:0:1865:C:H2'	1:0:1866:G:O4'	2.06	0.56
1:0:2870:C:H2'	1:0:2871:U:H6	1.71	0.56
1:0:2210:C:H2'	1:0:2211:U:O4'	2.06	0.56
1:0:1226:A:C2	1:0:1250:A:H1'	2.41	0.55
1:0:1348:C:H2'	1:0:1349:A:H8	1.68	0.55
1:0:1949:A:H1'	1:0:2572:U:C4'	2.36	0.55
1:0:2811:G:H2'	1:0:2812:A:H8	1.72	0.55
1:0:1333:G:HO2'	1:0:1334:A:H8	1.52	0.55
1:0:1021:A:H1'	1:0:1164:C:H1'	1.88	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:32:C:H4'	2:9:60:A:H2	1.70	0.55
1:0:1010:U:H2'	1:0:1011:A:C8	2.41	0.55
1:0:868:U:H2'	1:0:869:C:C6	2.41	0.55
1:0:2052:G:O2'	1:0:2053:G:H5'	2.07	0.55
1:0:1920:A:C4	1:0:1922:U:H5	2.25	0.55
1:0:2618:A:C6	1:0:2619:G:H1'	2.41	0.55
1:0:1764:A:C2'	1:0:1765:C:H5'	2.36	0.55
1:0:216:U:H2'	1:0:217:U:O4'	2.06	0.55
1:0:1038:U:H2'	1:0:1039:A:H8	1.70	0.55
1:0:1785:A:H2'	1:0:1786:C:H6	1.71	0.55
1:0:2803:C:O2'	1:0:2804:G:H5'	2.06	0.55
1:0:10:A:H2'	1:0:11:G:C8	2.42	0.55
1:0:1966:C:C4'	1:0:2585:C:H4'	2.15	0.55
1:0:929:A:H3'	1:0:930:A:C5'	2.30	0.55
1:0:826:U:O2'	1:0:1238:A:H1'	2.06	0.55
1:0:153:A:H2'	1:0:154:U:C6	2.41	0.55
1:0:687:G:O2'	1:0:688:A:H5'	2.06	0.55
1:0:843:G:O2'	1:0:844:G:OP1	2.20	0.55
1:0:1436:G:H2'	1:0:1437:A:C8	2.42	0.55
1:0:1782:A:N6	1:0:1820:G:H2'	2.21	0.55
1:0:839:U:C4	1:0:841:G:H1'	2.42	0.55
1:0:1164:C:H2'	1:0:1165:G:O4'	2.07	0.55
1:0:990:A:H3'	1:0:991:A:C5'	2.37	0.55
1:0:2177:U:H2'	1:0:2178:U:H6	1.71	0.55
1:0:831:G:H2'	1:0:832:A:H5''	1.87	0.55
1:0:1789:U:C2'	1:0:1790:G:H5'	2.37	0.55
1:0:2636:A:H62	1:0:2643:G:N2	1.99	0.55
1:0:1821:A:H3'	1:0:1822:C:H6	1.72	0.55
1:0:243:G:H2'	1:0:244:C:O4'	2.07	0.55
1:0:2404:A:P	1:0:2406:C:H5'	2.47	0.55
1:0:677:G:H4'	1:0:952:A:P	2.46	0.55
1:0:820:U:H2'	1:0:821:A:C8	2.41	0.55
1:0:2276:C:O2'	1:0:2277:A:H5'	2.05	0.55
1:0:2642:G:H2'	1:0:2643:G:O4'	2.05	0.55
1:0:2770:A:H4'	1:0:2867:G:N2	2.21	0.55
1:0:38:G:H1	1:0:453:U:H3	1.53	0.55
1:0:824:U:H2'	1:0:825:C:H5''	1.89	0.55
1:0:591:G:H2'	1:0:592:G:H8	1.71	0.55
2:9:42:U:H2'	2:9:45:C:N4	2.16	0.55
1:0:162:C:H2'	1:0:163:A:H8	1.69	0.55
1:0:192:G:C1'	1:0:193:A:H4'	2.37	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:330:C:C2'	1:0:331:U:H5'	2.36	0.55
1:0:1943:A:H2'	1:0:1944:C:H5'	1.88	0.55
1:0:514:G:N3	1:0:514:G:H2'	2.22	0.55
1:0:2083:G:H2'	1:0:2084:G:H8	1.73	0.54
1:0:1251:G:H2'	1:0:1252:C:O4'	2.07	0.54
1:0:1040:A:C2'	1:0:1041:G:H5'	2.36	0.54
1:0:1352:G:H2'	1:0:1353:A:H8	1.70	0.54
1:0:1101:U:N3	1:0:1113:C:H1'	2.23	0.54
1:0:1861:G:O2'	1:0:1862:C:H5'	2.07	0.54
1:0:1500:U:H3	1:0:1520:G:H22	1.55	0.54
1:0:929:A:HO2'	2:9:101:A:H4'	1.73	0.54
1:0:932:G:H2'	1:0:933:G:C8	2.42	0.54
1:0:213:C:H42	1:0:238:G:H1	1.54	0.54
1:0:2841:U:O2	1:0:2843:A:H1'	2.06	0.54
1:0:2195:C:H2'	1:0:2196:U:H5'	1.87	0.54
1:0:225:G:C5'	1:0:226:C:H5'	2.37	0.54
1:0:2544:A:H2'	1:0:2545:A:H1'	1.89	0.54
1:0:437:G:O2'	1:0:438:G:H5'	2.06	0.54
1:0:2058:U:H4'	1:0:2575:U:O2	2.08	0.54
1:0:174:A:H4'	1:0:2051:U:H2'	1.89	0.54
1:0:2478:C:H2'	1:0:2479:U:H5'	1.90	0.54
1:0:1312:G:H5''	1:0:1313:U:H5''	1.88	0.54
1:0:2408:G:H3'	1:0:2409:A:C5'	2.37	0.54
1:0:2315:A:HO2'	1:0:2364:C:H5''	1.72	0.54
1:0:2830:U:H2'	1:0:2831:A:H8	1.73	0.54
1:0:1116:U:H2'	1:0:1117:G:C8	2.42	0.54
1:0:785:U:H5'	1:0:1368:G:O2'	2.07	0.54
1:0:2855:C:O2'	1:0:2856:U:H5'	2.07	0.54
1:0:1250:A:O2'	1:0:1251:G:H4'	2.07	0.54
1:0:2633:A:H61	1:0:2646:C:H42	1.55	0.54
1:0:2756:A:N6	1:0:2762:G:H1'	2.22	0.54
1:0:964:A:H2'	1:0:965:G:C8	2.40	0.54
1:0:1065:A:H2'	1:0:1066:G:C8	2.42	0.54
1:0:536:A:C2	1:0:2605:C:H1'	2.42	0.54
1:0:1837:G:H2'	1:0:1838:G:C8	2.42	0.54
1:0:1291:G:O2'	1:0:1292:A:H5'	2.07	0.54
1:0:2369:U:H2'	1:0:2370:G:C8	2.43	0.54
1:0:1531:C:H2'	1:0:1532:A:H5'	1.89	0.54
2:9:62:C:N3	2:9:63:A:N7	2.55	0.54
1:0:790:A:O2'	1:0:791:G:H5'	2.06	0.54
1:0:36:G:C1'	1:0:462:G:H21	2.20	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:71:G:N2	2:9:72:C:C1'	2.70	0.54
1:0:1124:U:H2'	1:0:1125:G:H8	1.73	0.54
1:0:575:U:H2'	1:0:576:A:C8	2.43	0.54
1:0:804:C:O2	1:0:807:A:H5'	2.08	0.54
1:0:671:A:H2'	1:0:672:C:C6	2.43	0.54
1:0:1242:A:H2'	1:0:1243:G:H8	1.72	0.54
1:0:1125:G:O2'	1:0:1126:A:H5'	2.07	0.54
1:0:2535:C:H2'	1:0:2536:G:O4'	2.08	0.54
1:0:1685:A:H1'	1:0:1686:A:C2	2.43	0.54
1:0:2618:A:C2	1:0:2619:G:H1'	2.43	0.54
1:0:2447:G:N2	1:0:2460:G:H2'	2.20	0.54
1:0:1451:C:H2'	1:0:1452:U:C6	2.43	0.54
1:0:338:G:O2'	1:0:339:U:H5'	2.08	0.54
1:0:659:G:H2'	1:0:660:G:H8	1.72	0.54
1:0:319:G:H1'	1:0:511:A:O4'	2.07	0.54
1:0:1998:A:H2'	1:0:1999:U:H5'	1.88	0.54
1:0:2759:U:O5'	1:0:2759:U:H6	1.90	0.54
1:0:577:U:H2'	1:0:579:G:OP2	2.08	0.54
1:0:1854:G:H2'	1:0:1855:G:H8	1.72	0.54
1:0:2783:U:H2'	1:0:2784:A:O4'	2.08	0.54
1:0:1672:A:C2	1:0:1673:C:H1'	2.43	0.54
1:0:1374:G:N2	1:0:1384:G:H1'	2.23	0.54
1:0:504:G:O2'	1:0:505:G:H5'	2.08	0.54
1:0:616:U:H2'	1:0:617:U:C5'	2.34	0.54
1:0:1440:G:H3'	1:0:1441:A:H5'	1.90	0.54
1:0:2685:A:H4'	1:0:2826:C:H4'	1.90	0.54
1:0:2034:A:N6	1:0:2593:A:H62	2.06	0.54
1:0:328:A:O2'	1:0:329:C:H5'	2.07	0.54
1:0:1482:U:H2'	1:0:1483:G:H8	1.73	0.54
1:0:1392:U:C2'	1:0:1393:G:H5'	2.38	0.54
1:0:2562:G:H2'	1:0:2563:U:O4'	2.08	0.54
1:0:1223:G:H21	1:0:1225:G:N2	2.04	0.53
1:0:1602:G:O3'	1:0:1603:A:H8	1.91	0.53
1:0:968:C:N4	1:0:970:A:H1'	2.24	0.53
1:0:2041:A:N6	32:0:2881:773:C14	2.38	0.53
1:0:2640:G:H2'	1:0:2641:A:C8	2.44	0.53
1:0:2487:G:O3'	1:0:2534:U:H5'	2.07	0.53
1:0:584:A:O2'	1:0:585:U:H5'	2.07	0.53
1:0:1962:C:O2'	1:0:1963:G:H5'	2.07	0.53
1:0:635:C:C2'	1:0:636:G:H5''	2.36	0.53
1:0:2321:C:C2'	1:0:2322:U:H5'	2.38	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:215:G:N2	1:0:632:A:H8	2.04	0.53
1:0:242:A:O2'	1:0:243:G:O4'	2.27	0.53
1:0:153:A:H2'	1:0:154:U:C5	2.44	0.53
1:0:1669:A:N6	1:0:1670:G:H21	2.05	0.53
1:0:1748:U:N3	1:0:1753:A:H2	2.01	0.53
1:0:1684:G:H2'	1:0:1974:U:O4	2.07	0.53
1:0:1915:A:H2'	1:0:1916:G:O4'	2.09	0.53
1:0:239:A:C2	1:0:443:A:H1'	2.43	0.53
1:0:2395:C:C2'	1:0:2396:C:H5''	2.39	0.53
1:0:139:A:H2'	1:0:140:G:C8	2.43	0.53
1:0:1739:G:H2'	1:0:1740:G:H8	1.74	0.53
1:0:94:C:H2'	1:0:95:G:O4'	2.09	0.53
1:0:1075:C:H2'	1:0:1076:U:O4'	2.09	0.53
1:0:66:U:H2'	1:0:67:G:H8	1.73	0.53
1:0:1337:G:H1'	1:0:1632:A:N6	2.24	0.53
1:0:1683:G:H2'	1:0:1684:G:H5'	1.90	0.53
1:0:2607:C:H3'	1:0:2608:A:C5'	2.38	0.53
1:0:202:A:O2'	1:0:234:C:H4'	2.09	0.53
1:0:2343:C:H2'	1:0:2344:G:O4'	2.09	0.53
1:0:2546:G:H2'	1:0:2547:C:C6	2.43	0.53
1:0:1196:G:H2'	1:0:1197:U:C4'	2.38	0.53
1:0:2026:C:H2'	1:0:2027:C:H6	1.73	0.53
1:0:1333:G:C5	1:0:1342:U:H5'	2.44	0.53
1:0:159:A:O2'	1:0:160:C:H5'	2.08	0.53
1:0:1871:G:H2'	1:0:1871:G:N3	2.24	0.53
1:0:651:C:C3'	1:0:652:C:H5''	2.39	0.53
1:0:2634:G:H2'	1:0:2643:G:O6	2.09	0.53
1:0:1196:G:H2'	1:0:1197:U:C5'	2.38	0.53
1:0:13:A:H1'	1:0:536:A:H62	1.72	0.53
1:0:1137:A:H5''	1:0:1138:A:OP1	2.09	0.53
1:0:2461:G:H2'	1:0:2462:C:O4'	2.08	0.53
1:0:2035:G:H2'	1:0:2036:G:H8	1.73	0.53
2:9:85:G:C2'	2:9:86:A:H5'	2.38	0.53
1:0:1914:U:O2'	1:0:1915:A:H5'	2.09	0.53
1:0:15:G:N2	1:0:2027:C:O2'	2.41	0.53
1:0:1323:G:H1'	1:0:1627:C:C5'	2.39	0.53
1:0:1373:G:H1	1:0:2192:U:H3	1.56	0.53
1:0:1999:U:H2'	1:0:2000:U:O4'	2.08	0.53
1:0:2324:G:C4'	1:0:2326:C:H5''	2.37	0.53
1:0:2383:C:H2'	1:0:2384:G:O4'	2.09	0.53
1:0:2038:C:H5'	1:0:2039:G:H5''	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1418:C:H2'	1:0:1419:G:C8	2.43	0.53
1:0:1943:A:C2'	1:0:1944:C:H5'	2.39	0.53
1:0:1741:G:O2'	1:0:1742:G:H5'	2.09	0.53
1:0:2733:A:O2'	1:0:2734:U:H5'	2.09	0.53
1:0:1823:G:H2'	1:0:1824:C:C6	2.44	0.53
1:0:1459:U:O5'	1:0:1459:U:H6	1.91	0.53
1:0:1811:A:O2'	1:0:1812:U:H5''	2.09	0.53
1:0:1917:C:H2'	1:0:1918:G:O4'	2.09	0.53
1:0:1514:C:H5'	1:0:1593:C:H5''	1.91	0.53
1:0:1429:A:N6	1:0:1601:U:H5''	2.23	0.53
1:0:1830:C:N4	1:0:1881:U:H3'	2.24	0.53
1:0:1872:A:H1'	1:0:2070:G:H5'	1.90	0.53
1:0:1380:C:C2'	1:0:1381:G:H5'	2.39	0.53
1:0:477:A:H2'	1:0:478:G:H5'	1.92	0.53
1:0:2662:C:H42	1:0:2707:G:H21	1.56	0.53
1:0:1102:G:H2'	1:0:1103:C:H6	1.74	0.53
2:9:23:G:C6	2:9:24:U:C4	2.98	0.52
1:0:726:G:H2'	1:0:727:U:O4'	2.08	0.52
1:0:2407:G:H5'	1:0:2408:G:C2	2.44	0.52
1:0:193:A:H2'	1:0:194:G:O4'	2.09	0.52
1:0:2026:C:H2'	1:0:2027:C:C6	2.45	0.52
1:0:2377:U:H2'	1:0:2378:G:H8	1.74	0.52
1:0:1558:C:H2'	1:0:1559:G:H5'	1.90	0.52
1:0:294:U:H2'	1:0:295:C:C6	2.44	0.52
1:0:876:A:H4'	2:9:103:A:N3	2.24	0.52
1:0:932:G:H2'	1:0:933:G:O4'	2.08	0.52
1:0:76:C:H2'	1:0:77:C:C6	2.43	0.52
1:0:2617:G:HO2'	1:0:2618:A:H8	1.54	0.52
1:0:1886:G:H2'	1:0:1887:G:C8	2.36	0.52
2:9:72:C:H2'	2:9:73:C:O4'	2.10	0.52
1:0:2021:G:H2'	1:0:2022:C:C6	2.43	0.52
1:0:852:U:H6	1:0:852:U:O5'	1.92	0.52
1:0:2627:G:H2'	1:0:2628:C:O4'	2.10	0.52
1:0:1571:G:OP2	1:0:1571:G:H3'	2.08	0.52
1:0:1814:G:H2'	1:0:1815:G:C8	2.45	0.52
1:0:1313:U:H5'	1:0:1314:A:N3	2.25	0.52
1:0:543:G:H2'	1:0:544:U:C6	2.45	0.52
1:0:9:U:H3	1:0:2608:A:H62	1.57	0.52
1:0:1371:G:H1'	1:0:1386:A:H62	1.74	0.52
1:0:2825:A:H2'	1:0:2826:C:C6	2.45	0.52
1:0:246:C:H42	1:0:247:A:H62	1.56	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1680:U:O2'	1:0:1681:A:H5''	2.09	0.52
1:0:2633:A:N6	1:0:2646:C:N4	2.55	0.52
1:0:1166:A:C3'	1:0:1167:A:H5''	2.40	0.52
1:0:1994:U:C2'	1:0:1995:G:H5'	2.40	0.52
1:0:2363:G:H5''	1:0:2365:U:OP1	2.10	0.52
1:0:2327:U:H2'	1:0:2328:G:H8	1.74	0.52
2:9:41:A:H8	2:9:41:A:O5'	1.93	0.52
1:0:837:U:H2'	1:0:838:A:C8	2.45	0.52
1:0:1316:G:OP2	1:0:1316:G:H8	1.93	0.52
1:0:1835:C:H2'	1:0:1836:C:C6	2.45	0.52
1:0:956:A:C6	1:0:2427:A:H1'	2.45	0.52
1:0:482:A:O2'	1:0:483:A:H5'	2.10	0.52
1:0:1204:G:H2'	1:0:1205:G:H8	1.74	0.52
1:0:8:A:H2'	1:0:9:U:C6	2.44	0.52
1:0:887:G:O2'	1:0:888:G:H5'	2.10	0.52
1:0:10:A:H2'	1:0:11:G:H8	1.74	0.52
1:0:93:A:O2'	1:0:94:C:H5'	2.09	0.52
1:0:1661:C:H2'	1:0:1662:G:C8	2.44	0.52
1:0:2633:A:H4'	1:0:2634:G:O5'	2.09	0.52
1:0:758:G:O2'	1:0:761:G:H1'	2.10	0.52
1:0:2756:A:H4'	1:0:2758:A:OP1	2.09	0.52
1:0:2375:G:H2'	1:0:2376:G:C8	2.44	0.52
1:0:5:A:H2'	1:0:6:A:C8	2.43	0.52
1:0:1556:A:H2'	1:0:1557:G:H8	1.75	0.52
1:0:929:A:H8	1:0:2247:A:H61	1.56	0.52
1:0:847:C:H2'	1:0:848:A:H8	1.73	0.52
1:0:2324:G:N2	1:0:2361:G:C4	2.78	0.52
1:0:2487:G:H2'	1:0:2488:G:H8	1.74	0.52
1:0:152:G:H2'	1:0:153:A:O4'	2.09	0.52
1:0:2035:G:H2'	1:0:2036:G:C8	2.44	0.52
1:0:2169:A:O2'	1:0:2170:C:H5'	2.10	0.52
1:0:2705:A:O2'	1:0:2706:U:C6	2.60	0.52
1:0:2599:U:H2'	1:0:2600:A:C5'	2.33	0.52
1:0:1036:G:H1'	1:0:1145:C:O4'	2.09	0.52
1:0:2560:G:N3	1:0:2560:G:H3'	2.25	0.52
1:0:1288:A:H62	1:0:1309:G:H4'	1.75	0.52
1:0:2169:A:C2'	1:0:2170:C:H5'	2.40	0.52
1:0:2324:G:N3	1:0:2326:C:H5	2.08	0.52
1:0:474:G:N2	1:0:476:G:H3'	2.24	0.52
1:0:1912:G:H3'	1:0:1912:G:N3	2.25	0.52
1:0:1039:A:N6	1:0:1136:G:H2'	2.25	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2394:G:H2'	1:0:2395:C:C6	2.45	0.52
1:0:202:A:C2	1:0:203:G:H1'	2.45	0.52
1:0:579:G:H2'	1:0:2013:A:N7	2.24	0.52
1:0:1491:C:H2'	1:0:1492:A:H8	1.75	0.52
1:0:2809:A:O2'	1:0:2810:A:H5'	2.10	0.52
1:0:608:G:H2'	1:0:609:U:C6	2.45	0.52
1:0:362:C:C4	1:0:363:G:H1'	2.45	0.51
1:0:1996:A:O2'	1:0:1997:A:H5'	2.09	0.51
1:0:2265:A:H5''	1:0:2266:A:O4'	2.10	0.51
1:0:35:G:O4'	1:0:466:A:H1'	2.10	0.51
1:0:1272:G:H2'	1:0:1273:G:H8	1.76	0.51
1:0:1083:C:H42	1:0:1103:C:H41	1.56	0.51
1:0:1416:A:O2'	1:0:1417:C:H5'	2.10	0.51
1:0:1151:U:H5''	1:0:1153:A:OP1	2.10	0.51
1:0:41:G:H2'	1:0:42:G:H8	1.75	0.51
1:0:389:G:H2'	1:0:390:U:C6	2.44	0.51
1:0:764:A:C2	1:0:802:A:C2	2.98	0.51
1:0:922:A:H62	13:K:17:ARG:CA	2.24	0.51
1:0:2353:G:H2'	1:0:2354:G:C8	2.46	0.51
2:9:116:C:H2'	2:9:117:G:O4'	2.10	0.51
1:0:978:U:H2'	1:0:979:A:H8	1.76	0.51
1:0:1843:U:H2'	1:0:1844:C:H6	1.74	0.51
1:0:1485:U:H2'	1:0:1486:A:C8	2.45	0.51
1:0:1621:C:H4'	1:0:1626:A:N6	2.24	0.51
1:0:604:U:H2'	1:0:605:G:H8	1.74	0.51
1:0:2541:U:H2'	1:0:2542:U:O4'	2.10	0.51
1:0:1293:A:O2'	1:0:1294:G:H5'	2.10	0.51
1:0:782:U:H2'	1:0:783:G:H8	1.72	0.51
1:0:1944:C:H2'	1:0:1945:C:O4'	2.10	0.51
1:0:95:G:H2'	1:0:96:C:C6	2.46	0.51
1:0:1662:G:H5''	1:0:1663:C:O4'	2.11	0.51
1:0:2717:G:H2'	1:0:2718:A:H8	1.75	0.51
1:0:484:G:O2'	1:0:485:G:H5'	2.11	0.51
2:9:78:A:H2'	2:9:79:U:H6	1.73	0.51
1:0:984:A:H2	1:0:1200:G:H1	1.57	0.51
1:0:15:G:H2'	1:0:16:G:H5'	1.93	0.51
1:0:430:C:H2'	1:0:431:G:C8	2.45	0.51
1:0:119:G:H1'	1:0:129:A:C2	2.45	0.51
1:0:1010:U:H2'	1:0:1011:A:H8	1.76	0.51
1:0:300:C:H2'	1:0:301:C:H5'	1.92	0.51
1:0:2301:A:H2'	1:0:2302:G:O4'	2.11	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:859:U:H4'	1:0:860:U:C5	2.46	0.51
1:0:2633:A:H5'	1:0:2635:U:O4'	2.11	0.51
1:0:1241:G:O2'	1:0:1242:A:H5'	2.10	0.51
1:0:2503:G:C3'	1:0:2504:G:H5''	2.40	0.51
1:0:706:A:H2'	1:0:707:U:C6	2.46	0.51
1:0:837:U:H2'	1:0:838:A:O4'	2.10	0.51
1:0:830:C:H2'	1:0:831:G:H8	1.76	0.51
1:0:773:G:C2'	1:0:774:A:H5'	2.41	0.51
1:0:1579:G:H2'	1:0:1580:C:C6	2.45	0.51
1:0:678:G:O2'	1:0:679:C:H5'	2.11	0.51
1:0:2613:A:O2'	1:0:2614:A:H5'	2.10	0.51
1:0:2658:A:O2'	1:0:2659:C:H5'	2.11	0.51
1:0:2490:U:H2'	1:0:2491:C:H6	1.76	0.51
1:0:103:U:H2'	1:0:104:C:H6	1.72	0.51
1:0:931:G:C2'	1:0:932:G:H5'	2.40	0.51
2:9:42:U:C2	2:9:45:C:C5	2.99	0.51
1:0:1714:A:H3'	1:0:1715:A:C8	2.45	0.51
1:0:1540:C:O2'	1:0:1541:G:H5'	2.10	0.51
1:0:886:A:H2'	1:0:887:G:O4'	2.11	0.51
1:0:583:C:O2'	1:0:584:A:OP2	2.27	0.51
1:0:1856:U:H2'	1:0:1857:G:O4'	2.11	0.51
1:0:1818:G:H2'	1:0:1819:U:C6	2.46	0.51
1:0:174:A:C2	1:0:2413:A:N6	2.79	0.51
1:0:800:U:H3'	1:0:804:C:H41	1.74	0.51
1:0:781:G:H5'	1:0:1638:G:H4'	1.93	0.51
1:0:1218:C:H2'	1:0:1219:C:O4'	2.10	0.51
1:0:29:U:H2'	1:0:30:G:C8	2.46	0.51
2:9:26:G:N7	2:9:58:G:C4	2.78	0.51
1:0:1227:A:H4'	1:0:1252:C:H4'	1.93	0.51
1:0:1790:G:C8	1:0:1811:A:N6	2.79	0.51
2:9:6:C:H2'	2:9:7:C:H6	1.72	0.51
1:0:1590:C:H6	1:0:1590:C:O5'	1.94	0.51
1:0:952:A:O2'	1:0:1204:G:H4'	2.11	0.51
2:9:71:G:C2'	2:9:72:C:H5'	2.41	0.51
1:0:1838:G:C2'	1:0:1839:A:H5'	2.39	0.51
1:0:1424:U:H2'	1:0:1425:G:C8	2.45	0.51
1:0:1611:U:H2'	1:0:1612:U:O4'	2.10	0.51
1:0:2076:G:H2'	1:0:2077:G:C8	2.46	0.51
1:0:1457:A:O2'	1:0:1458:A:H5'	2.11	0.51
2:9:4:C:H2'	2:9:5:C:C5	2.43	0.51
1:0:765:C:O2'	1:0:766:A:O4'	2.29	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:789:G:H4'	1:0:790:A:C8	2.46	0.51
1:0:2246:A:H2'	1:0:2246:A:N3	2.26	0.51
1:0:612:G:H4'	1:0:613:A:O2'	2.10	0.51
1:0:1000:G:P	1:0:1168:G:H4'	2.51	0.51
1:0:37:C:H4'	1:0:463:C:OP1	2.11	0.51
1:0:1592:U:O5'	1:0:1592:U:H6	1.94	0.51
1:0:754:G:N2	1:0:770:U:H1'	2.26	0.51
1:0:2870:C:H2'	1:0:2871:U:C6	2.46	0.51
1:0:520:C:H2'	1:0:521:U:O4'	2.11	0.50
1:0:1179:A:H2'	1:0:1180:A:C8	2.45	0.50
1:0:1066:G:H3'	1:0:1067:G:H5''	1.93	0.50
1:0:685:U:O2'	1:0:686:C:H5'	2.11	0.50
1:0:1132:C:H2'	1:0:1133:G:O4'	2.10	0.50
1:0:2565:C:O2'	1:0:2566:A:H5'	2.11	0.50
1:0:1226:A:H2'	1:0:1227:A:C8	2.46	0.50
1:0:534:U:H4'	1:0:564:U:H4'	1.92	0.50
1:0:2422:C:H2'	1:0:2423:G:C8	2.46	0.50
2:9:50:U:H2'	2:9:51:G:C8	2.45	0.50
1:0:322:A:H2'	1:0:322:A:N3	2.26	0.50
1:0:636:G:H2'	1:0:637:G:H5'	1.94	0.50
1:0:357:A:C2'	1:0:358:C:H5'	2.37	0.50
1:0:2487:G:H2'	1:0:2488:G:C8	2.47	0.50
1:0:2160:C:H2'	1:0:2161:C:C6	2.47	0.50
1:0:2751:C:H2'	1:0:2752:C:H6	1.75	0.50
1:0:2772:U:O2'	1:0:2773:G:H5'	2.11	0.50
1:0:1625:A:C8	1:0:1632:A:H1'	2.46	0.50
1:0:2770:A:C5'	1:0:2867:G:H22	2.25	0.50
1:0:644:A:C2'	1:0:645:G:H5'	2.41	0.50
1:0:2104:G:H2'	1:0:2105:U:C6	2.47	0.50
1:0:2238:G:H1'	1:0:2406:C:C2	2.46	0.50
1:0:502:A:H2'	1:0:503:G:H5'	1.93	0.50
1:0:1411:C:H2'	1:0:1412:C:H6	1.75	0.50
1:0:860:U:O2	1:0:860:U:H2'	2.10	0.50
1:0:1624:A:H2'	1:0:1625:A:H5'	1.94	0.50
1:0:630:G:H8	1:0:630:G:O5'	1.94	0.50
1:0:2651:U:O2'	1:0:2652:G:H5'	2.12	0.50
2:9:111:C:H5''	2:9:112:A:H4'	1.93	0.50
1:0:1101:U:H3	1:0:1113:C:H1'	1.77	0.50
1:0:2546:G:H2'	1:0:2547:C:H6	1.76	0.50
1:0:2458:U:OP1	1:0:2516:U:H1'	2.11	0.50
1:0:1848:U:H2'	1:0:1849:G:O4'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1572:C:H2'	1:0:1573:G:C5'	2.42	0.50
1:0:923:A:N3	1:0:923:A:H2'	2.26	0.50
2:9:29:C:H2'	2:9:30:C:C5	2.45	0.50
1:0:1090:C:O2'	1:0:1091:C:H5'	2.11	0.50
1:0:2559:U:H2'	1:0:2560:G:H5'	1.94	0.50
1:0:2717:G:H2'	1:0:2718:A:C8	2.46	0.50
1:0:1411:C:H2'	1:0:1412:C:C6	2.47	0.50
1:0:456:C:H2'	1:0:457:C:H6	1.77	0.50
1:0:1313:U:H4'	1:0:1314:A:O4'	2.11	0.50
1:0:1514:C:H2'	1:0:1515:U:O4'	2.11	0.50
1:0:697:G:H1	1:0:807:A:H2	1.55	0.50
1:0:788:G:H5''	1:0:790:A:H1'	1.94	0.50
1:0:2609:G:N2	1:0:2866:A:H2	2.09	0.50
1:0:14:A:C2	1:0:2604:G:O2'	2.65	0.50
1:0:1430:G:H2'	1:0:1431:U:C6	2.47	0.50
1:0:1594:U:H2'	1:0:1595:A:C8	2.47	0.50
1:0:1287:A:N1	1:0:1661:C:O2'	2.40	0.50
1:0:41:G:O2'	1:0:42:G:H5'	2.12	0.50
1:0:597:U:H2'	1:0:598:U:C6	2.46	0.50
1:0:2341:G:O2'	1:0:2342:U:H5'	2.12	0.50
1:0:1199:U:H3'	1:0:1200:G:H5''	1.93	0.50
1:0:221:A:H2'	1:0:222:G:H5'	1.94	0.50
1:0:1440:G:H3'	1:0:1441:A:C5'	2.41	0.50
1:0:1038:U:N3	1:0:2467:A:H5'	2.25	0.50
1:0:1429:A:H1'	1:0:1603:A:C6	2.46	0.50
1:0:1229:C:H2'	1:0:1230:C:H6	1.77	0.50
1:0:509:U:H3	1:0:513:A:N6	2.09	0.50
1:0:1026:U:H2'	1:0:1027:C:C6	2.47	0.50
1:0:73:A:N3	1:0:73:A:H5''	2.26	0.50
2:9:105:G:C2	2:9:106:U:C4	2.99	0.50
1:0:813:A:O2'	1:0:815:A:H5'	2.12	0.50
1:0:75:C:H2'	1:0:76:C:C5'	2.33	0.50
1:0:1982:C:H5''	1:0:2703:C:O2'	2.12	0.50
1:0:18:U:O2'	1:0:563:U:H5''	2.12	0.50
1:0:1333:G:O2'	1:0:1334:A:H8	1.95	0.50
1:0:2170:C:H2'	1:0:2171:U:O4'	2.12	0.50
1:0:611:C:O2'	1:0:614:G:H5''	2.12	0.49
1:0:820:U:H1'	1:0:2424:G:OP1	2.12	0.49
1:0:2709:C:H2'	1:0:2710:C:C6	2.47	0.49
1:0:2396:C:C2'	1:0:2397:A:H5'	2.41	0.49
1:0:337:G:H2'	1:0:338:G:C8	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1353:A:H5''	1:0:1354:A:N7	2.26	0.49
1:0:1872:A:H2'	1:0:1873:A:H8	1.77	0.49
1:0:1399:C:H2'	1:0:1400:A:C8	2.47	0.49
1:0:2230:G:H1'	1:0:2429:A:O4'	2.12	0.49
1:0:2608:A:O2'	1:0:2609:G:H5'	2.11	0.49
1:0:1058:G:H2'	1:0:1121:G:H1	1.77	0.49
1:0:2195:C:C2'	1:0:2196:U:H5'	2.42	0.49
1:0:2028:C:O2'	1:0:2029:G:H5'	2.12	0.49
1:0:1315:A:H5''	1:0:1316:G:OP1	2.11	0.49
1:0:2544:A:H5''	1:0:2545:A:OP2	2.12	0.49
2:9:104:A:C2	2:9:105:G:H1'	2.47	0.49
1:0:541:C:N4	1:0:572:G:H8	2.06	0.49
1:0:1001:A:C3'	1:0:1002:C:H5''	2.42	0.49
1:0:329:C:O2'	1:0:330:C:H5'	2.11	0.49
1:0:1310:C:OP1	1:0:2689:C:H4'	2.11	0.49
1:0:2680:U:H3'	1:0:2681:A:H5'	1.95	0.49
1:0:2733:A:H2'	1:0:2734:U:O4'	2.11	0.49
1:0:478:G:O2'	1:0:479:G:H5'	2.13	0.49
1:0:2599:U:H3'	1:0:2600:A:H5''	1.93	0.49
1:0:1807:A:H1'	1:0:1809:G:N7	2.26	0.49
1:0:2395:C:H2'	1:0:2396:C:C5'	2.43	0.49
2:9:111:C:H5''	2:9:112:A:C5'	2.42	0.49
1:0:2764:U:H2'	1:0:2765:C:H6	1.75	0.49
1:0:751:G:H1'	1:0:772:G:N2	2.28	0.49
1:0:2212:U:H2'	1:0:2213:G:C8	2.47	0.49
1:0:1073:G:H2'	1:0:1074:G:C4'	2.29	0.49
1:0:212:U:O2'	1:0:213:C:H5'	2.13	0.49
1:0:242:A:N6	1:0:441:A:N7	2.60	0.49
1:0:338:G:H2'	1:0:339:U:H5'	1.94	0.49
1:0:2196:U:H2'	1:0:2197:U:C6	2.47	0.49
1:0:1345:G:H5''	1:0:1346:C:OP1	2.12	0.49
1:0:2544:A:H2'	1:0:2545:A:C1'	2.42	0.49
1:0:298:C:H2'	1:0:299:C:H6	1.78	0.49
1:0:1703:C:H2'	1:0:1704:G:O4'	2.12	0.49
1:0:1534:A:O2'	1:0:1535:C:H5'	2.12	0.49
1:0:1979:C:H6	1:0:1979:C:OP1	1.95	0.49
1:0:843:G:H8	1:0:843:G:OP1	1.95	0.49
1:0:1479:G:N2	1:0:1543:G:H21	2.11	0.49
1:0:1166:A:C2'	1:0:1167:A:H5''	2.42	0.49
1:0:298:C:H2'	1:0:299:C:C6	2.46	0.49
1:0:228:A:C5	1:0:229:G:H1'	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2655:C:O2'	1:0:2656:G:H5'	2.11	0.49
1:0:45:C:H2'	1:0:46:C:C6	2.48	0.49
1:0:2523:G:H1'	1:0:2625:U:C5'	2.42	0.49
1:0:1821:A:H5''	1:0:1822:C:C5	2.47	0.49
1:0:79:G:H2'	1:0:80:A:C8	2.46	0.49
1:0:443:A:O2'	1:0:444:U:H5'	2.12	0.49
1:0:1730:G:H2'	1:0:1731:C:H6	1.76	0.49
1:0:1936:A:O2'	1:0:2538:C:H1'	2.13	0.49
1:0:1380:C:H2'	1:0:1381:G:H5'	1.95	0.49
1:0:29:U:O5'	1:0:29:U:H6	1.96	0.49
1:0:2054:A:H2'	1:0:2055:G:H8	1.77	0.49
2:9:59:A:C4	6:D:27:ALA:CA	2.95	0.49
1:0:2754:C:H2'	1:0:2755:A:H8	1.77	0.49
2:9:28:A:OP2	2:9:29:C:H5	1.95	0.49
2:9:116:C:O2'	15:M:50:THR:CA	2.60	0.49
1:0:2122:G:H2'	1:0:2123:G:H8	1.77	0.49
1:0:1212:U:H2'	1:0:1213:U:C6	2.48	0.49
1:0:1980:A:O2'	1:0:1981:A:H5'	2.13	0.49
1:0:1687:C:H1'	1:0:1976:U:O2	2.13	0.49
1:0:931:G:C5'	2:9:83:C:H1'	2.43	0.49
1:0:1073:G:C2'	1:0:1074:G:H4'	2.30	0.49
2:9:23:G:C2	2:9:24:U:C2	3.01	0.49
1:0:1284:G:C2	1:0:1633:C:H5'	2.48	0.49
2:9:28:A:H3'	2:9:29:C:C6	2.43	0.49
1:0:1341:G:H2'	1:0:1343:C:C5	2.48	0.49
1:0:1429:A:H61	1:0:1602:G:H5'	1.78	0.49
1:0:2039:G:OP2	1:0:2483:U:H4'	2.13	0.49
1:0:782:U:HO2'	1:0:1392:U:H5	1.60	0.49
1:0:132:U:H2'	1:0:133:C:C6	2.48	0.49
1:0:1288:A:H2'	1:0:1289:A:O4'	2.13	0.49
1:0:1888:C:H2'	1:0:1913:G:C5	2.48	0.49
1:0:2742:G:O2'	1:0:2743:G:H5'	2.13	0.49
1:0:333:A:O2'	1:0:350:U:H2'	2.12	0.49
1:0:870:C:H2'	1:0:871:U:H6	1.77	0.49
1:0:1811:A:N3	1:0:1811:A:H2'	2.27	0.49
2:9:36:A:H8	2:9:36:A:O5'	1.96	0.49
1:0:446:C:H2'	1:0:447:U:O4'	2.13	0.49
1:0:605:G:H2'	1:0:606:A:C8	2.48	0.49
1:0:2371:A:H2'	1:0:2372:A:O4'	2.12	0.49
1:0:2010:G:H2'	1:0:2011:U:C6	2.48	0.48
1:0:2426:G:N2	1:0:2430:A:H62	2.11	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:67:C:C3'	2:9:68:A:H5'	2.43	0.48
1:0:1947:G:H2'	1:0:1950:C:OP1	2.13	0.48
2:9:92:G:C3'	2:9:93:G:H5'	2.42	0.48
1:0:805:G:H5''	1:0:806:A:O5'	2.13	0.48
1:0:1347:C:O2'	1:0:1348:C:H5'	2.12	0.48
1:0:681:A:N6	1:0:683:A:H2'	2.28	0.48
1:0:220:U:H2'	1:0:221:A:H8	1.79	0.48
2:9:71:G:H2'	2:9:72:C:H5'	1.95	0.48
1:0:1482:U:H2'	1:0:1483:G:C8	2.48	0.48
2:9:89:G:N2	2:9:91:A:C8	2.81	0.48
1:0:1686:A:H2'	1:0:1687:C:H5'	1.96	0.48
1:0:65:C:H2'	1:0:66:U:O4'	2.13	0.48
1:0:843:G:HO2'	1:0:844:G:P	2.35	0.48
1:0:1791:C:H2'	1:0:1792:C:C5'	2.37	0.48
1:0:702:A:N3	1:0:792:U:H1'	2.27	0.48
1:0:1087:C:H2'	1:0:1088:A:O4'	2.13	0.48
1:0:612:G:H4'	1:0:613:A:H4'	1.94	0.48
1:0:837:U:H2'	1:0:838:A:H8	1.77	0.48
1:0:1940:C:H2'	1:0:1941:C:C6	2.48	0.48
1:0:974:U:H2'	1:0:975:C:C6	2.48	0.48
2:9:63:A:H2'	2:9:64:C:C6	2.47	0.48
1:0:1622:G:H4'	1:0:1624:A:N3	2.29	0.48
1:0:2761:A:C5'	1:0:2762:G:H5'	2.44	0.48
1:0:807:A:H2'	1:0:808:C:C6	2.48	0.48
1:0:2671:C:O2'	1:0:2672:U:H5'	2.13	0.48
1:0:80:A:H2'	1:0:81:C:C6	2.47	0.48
1:0:583:C:O2'	1:0:584:A:P	2.72	0.48
1:0:2225:G:H2'	1:0:2226:A:H8	1.79	0.48
1:0:388:G:O2'	1:0:389:G:H5'	2.13	0.48
1:0:2117:A:H62	1:0:2139:G:H21	1.61	0.48
2:9:107:C:C6	2:9:107:C:H3'	2.47	0.48
1:0:2217:G:H3'	1:0:2217:G:N3	2.28	0.48
1:0:1141:U:OP2	1:0:2549:G:N2	2.47	0.48
1:0:347:C:H2'	1:0:348:U:O4'	2.14	0.48
1:0:2508:G:H5''	1:0:2509:A:H5''	1.95	0.48
1:0:475:U:H1'	1:0:801:A:N1	2.28	0.48
1:0:1339:U:O4	1:0:1664:G:H1'	2.14	0.48
1:0:2459:C:H2'	1:0:2460:G:H5'	1.95	0.48
1:0:2469:G:H4'	1:0:2470:U:H5	1.77	0.48
1:0:1955:G:H2'	1:0:1956:G:H5'	1.94	0.48
1:0:1692:C:H2'	1:0:1693:A:H5'	1.95	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1424:U:H2'	1:0:1425:G:H8	1.78	0.48
1:0:1023:U:H1'	1:0:1154:A:C8	2.48	0.48
2:9:85:G:O2'	2:9:86:A:H5'	2.13	0.48
1:0:2059:U:H2'	1:0:2060:A:C5'	2.36	0.48
1:0:1626:A:OP2	1:0:1626:A:C8	2.66	0.48
1:0:2712:G:H5'	1:0:2713:A:C8	2.49	0.48
1:0:2468:G:H2'	1:0:2469:G:O4'	2.14	0.48
1:0:117:A:H5'	1:0:118:U:O5'	2.14	0.48
1:0:2480:C:H5''	1:0:2482:A:H5'	1.95	0.48
1:0:839:U:H5'	1:0:2407:G:H2'	1.95	0.48
1:0:195:A:H2'	1:0:196:A:O4'	2.13	0.48
1:0:1038:U:H2'	1:0:1039:A:C8	2.47	0.48
1:0:2488:G:N2	1:0:2559:U:H1'	2.28	0.48
1:0:1461:C:H2'	1:0:1462:C:C6	2.49	0.48
1:0:781:G:H2'	1:0:782:U:O4'	2.13	0.48
1:0:957:G:O2'	1:0:958:G:H5'	2.14	0.48
1:0:1402:G:H2'	1:0:1403:U:O4'	2.13	0.48
1:0:2093:G:H2'	1:0:2094:C:C6	2.49	0.48
1:0:2795:A:N3	1:0:2795:A:H2'	2.28	0.48
1:0:696:U:H6	1:0:696:U:O5'	1.97	0.48
1:0:2048:C:H2'	1:0:2049:C:C6	2.48	0.48
1:0:1432:G:N2	1:0:1596:A:H62	1.95	0.48
2:9:32:C:H4'	2:9:60:A:C2	2.47	0.48
1:0:2478:C:C2'	1:0:2479:U:H5'	2.44	0.48
1:0:322:A:H1'	1:0:343:A:C5	2.49	0.48
1:0:717:G:H1'	1:0:740:A:H61	1.79	0.48
1:0:1001:A:H62	1:0:1200:G:H1'	1.79	0.48
1:0:1307:U:H2'	1:0:1308:C:O4'	2.13	0.48
2:9:91:A:O5'	2:9:91:A:H8	1.97	0.48
1:0:1442:C:N4	1:0:1585:A:C8	2.82	0.48
1:0:942:U:H2'	1:0:943:U:O4'	2.14	0.48
1:0:2011:U:H2'	1:0:2012:A:H8	1.79	0.48
1:0:486:U:C4'	1:0:520:C:H5'	2.43	0.48
1:0:657:A:H8	1:0:657:A:O5'	1.96	0.48
1:0:2447:G:O5'	1:0:2447:G:H8	1.97	0.48
1:0:539:A:H62	1:0:2024:U:H3	1.61	0.48
1:0:1541:G:H22	1:0:1561:A:N6	2.11	0.48
1:0:242:A:O2'	1:0:243:G:P	2.72	0.48
1:0:1327:C:OP1	1:0:1345:G:H5'	2.14	0.48
1:0:777:A:N6	1:0:1767:G:H1'	2.28	0.48
1:0:990:A:H3'	1:0:991:A:H5''	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2820:C:H2'	1:0:2821:G:H8	1.78	0.48
1:0:1756:C:H2'	1:0:1757:C:C6	2.49	0.48
1:0:1458:A:C3'	1:0:1459:U:H5''	2.38	0.48
1:0:2053:G:H2'	1:0:2054:A:H8	1.76	0.48
1:0:1226:A:N1	1:0:1250:A:H1'	2.29	0.48
1:0:614:G:H2'	1:0:615:C:C6	2.47	0.48
1:0:1066:G:H3'	1:0:1067:G:C5'	2.44	0.48
1:0:13:A:O2'	1:0:14:A:C2	2.67	0.48
1:0:15:G:C2'	1:0:16:G:H5'	2.44	0.48
1:0:995:A:H5''	1:0:996:C:C5	2.47	0.48
1:0:2810:A:H2	1:0:2853:U:C5	2.31	0.48
1:0:2117:A:N6	1:0:2139:G:H21	2.11	0.48
1:0:1969:G:O2'	1:0:1970:G:H5'	2.14	0.48
1:0:2665:G:H2'	1:0:2666:U:O4'	2.14	0.48
1:0:860:U:H2'	1:0:861:G:H5'	1.95	0.48
2:9:42:U:H3'	2:9:43:G:H5''	1.96	0.48
1:0:581:A:N3	1:0:582:G:H1'	2.28	0.48
1:0:736:G:H2'	1:0:737:C:C6	2.49	0.48
1:0:824:U:H2'	1:0:825:C:C5'	2.43	0.48
1:0:1740:G:O2'	1:0:1741:G:H5'	2.14	0.48
1:0:1858:C:H2'	1:0:1859:A:H8	1.79	0.48
1:0:1721:G:O2'	1:0:1722:G:H5'	2.13	0.48
1:0:2311:U:HO2'	1:0:2312:A:H8	1.60	0.48
1:0:521:U:H5''	1:0:1248:G:H4'	1.96	0.47
1:0:788:G:H5''	1:0:789:G:OP1	2.13	0.47
1:0:953:G:H1'	1:0:1203:A:C2	2.43	0.47
1:0:633:G:H8	1:0:633:G:O5'	1.97	0.47
1:0:195:A:C2'	1:0:196:A:H5'	2.44	0.47
1:0:562:G:H2'	1:0:563:U:O4'	2.14	0.47
1:0:735:G:O2'	1:0:736:G:H5'	2.14	0.47
1:0:968:C:C2	1:0:2438:A:H5'	2.49	0.47
1:0:1139:A:H1'	1:0:2496:C:H5'	1.96	0.47
1:0:2800:C:O2'	1:0:2801:A:H5'	2.14	0.47
1:0:1425:G:H2'	1:0:1426:U:C6	2.49	0.47
1:0:1162:A:O2'	1:0:1163:C:H5'	2.13	0.47
1:0:2070:G:H2'	1:0:2071:G:O4'	2.14	0.47
1:0:353:G:H2'	1:0:354:C:C6	2.48	0.47
1:0:1906:U:H2'	1:0:1907:C:C6	2.49	0.47
1:0:915:C:H2'	1:0:916:U:C6	2.49	0.47
1:0:1141:U:O5'	1:0:1141:U:H6	1.97	0.47
1:0:699:G:H5'	1:0:700:C:OP2	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:964:A:H1'	1:0:2245:A:OP2	2.14	0.47
1:0:1301:U:H5''	1:0:1302:C:OP1	2.14	0.47
1:0:1666:G:H2'	1:0:1667:A:H8	1.77	0.47
1:0:1783:G:O6	1:0:1820:G:H1'	2.14	0.47
1:0:1750:A:H4'	1:0:2695:C:O4'	2.14	0.47
1:0:524:A:O2'	1:0:525:A:H5'	2.13	0.47
1:0:2396:C:O2'	1:0:2397:A:H5'	2.14	0.47
1:0:1257:U:H2'	1:0:1258:G:H8	1.77	0.47
1:0:147:G:O5'	1:0:147:G:H8	1.97	0.47
1:0:537:C:C6	1:0:2759:U:H2'	2.48	0.47
1:0:1007:A:H2'	1:0:1008:G:H8	1.79	0.47
1:0:365:U:H2'	1:0:366:U:C6	2.49	0.47
1:0:956:A:N3	1:0:956:A:H2'	2.29	0.47
1:0:788:G:H5'	1:0:790:A:N3	2.29	0.47
1:0:1032:A:C2'	1:0:1033:G:H4'	2.39	0.47
1:0:2424:G:H2'	1:0:2425:G:O4'	2.13	0.47
2:9:35:C:H2'	2:9:36:A:O4'	2.14	0.47
1:0:926:C:H2'	1:0:927:C:H5'	1.96	0.47
1:0:297:A:H2'	1:0:298:C:C6	2.49	0.47
1:0:2182:A:H2'	1:0:2183:C:O4'	2.14	0.47
1:0:1630:A:H8	1:0:1630:A:OP2	1.97	0.47
1:0:2426:G:N2	1:0:2431:C:H41	2.12	0.47
1:0:592:G:H2'	1:0:593:C:C6	2.49	0.47
2:9:8:C:O2'	2:9:9:G:H5'	2.14	0.47
1:0:2459:C:C2'	1:0:2460:G:H5'	2.45	0.47
1:0:2425:G:H2'	1:0:2480:C:N4	2.29	0.47
1:0:236:C:H2'	1:0:237:G:C8	2.43	0.47
2:9:117:G:O2'	2:9:118:G:H5'	2.14	0.47
1:0:2396:C:H2'	1:0:2397:A:H5'	1.96	0.47
1:0:2658:A:H2'	1:0:2659:C:O4'	2.14	0.47
1:0:305:A:H2'	1:0:306:G:O4'	2.14	0.47
1:0:1456:C:O2'	1:0:1457:A:H5'	2.14	0.47
1:0:1277:G:H2'	1:0:1997:A:N6	2.30	0.47
1:0:974:U:H5'	1:0:2476:A:OP1	2.14	0.47
1:0:167:A:N6	1:0:812:G:O2'	2.45	0.47
1:0:1956:G:H2'	1:0:1957:C:C6	2.49	0.47
1:0:1959:U:H2'	1:0:1960:A:C8	2.49	0.47
1:0:1166:A:H2'	1:0:1167:A:H5''	1.95	0.47
1:0:1764:A:H2'	1:0:1765:C:H5'	1.95	0.47
1:0:192:G:H4'	1:0:193:A:O5'	2.14	0.47
2:9:34:C:H6	2:9:34:C:O5'	1.98	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1407:G:H2'	1:0:1408:A:C8	2.49	0.47
1:0:1141:U:O2'	1:0:1142:G:OP1	2.27	0.47
1:0:457:C:O2'	1:0:458:G:H5'	2.13	0.47
1:0:2727:G:H2'	1:0:2728:A:H5''	1.95	0.47
1:0:701:U:O2'	1:0:702:A:H5'	2.14	0.47
1:0:1915:A:N1	1:0:1956:G:H1'	2.29	0.47
1:0:1957:C:O2'	1:0:1958:G:H5'	2.14	0.47
1:0:1102:G:H2'	1:0:1103:C:C6	2.48	0.47
1:0:2814:G:H1	1:0:2853:U:H3	1.62	0.47
1:0:1487:C:H2'	1:0:1488:G:H8	1.80	0.47
1:0:1857:G:H2'	1:0:1859:A:OP2	2.14	0.47
1:0:2094:C:C4	1:0:2103:G:H1'	2.50	0.47
1:0:1719:G:O2'	1:0:1720:G:H5'	2.14	0.47
1:0:1253:C:H2'	1:0:1254:G:H5'	1.96	0.47
1:0:482:A:C2'	1:0:483:A:H5'	2.45	0.47
1:0:657:A:H2'	1:0:658:G:H8	1.78	0.47
1:0:1437:A:O2'	1:0:1438:G:H5'	2.14	0.47
1:0:2617:G:O2'	1:0:2618:A:H8	1.97	0.47
1:0:2245:A:C2'	1:0:2246:A:OP2	2.62	0.47
1:0:2862:G:O2'	1:0:2863:U:H5'	2.15	0.47
2:9:108:G:H2'	2:9:109:G:H8	1.79	0.47
1:0:2384:G:H2'	1:0:2390:A:H62	1.80	0.47
1:0:640:C:H5''	1:0:660:G:O2'	2.13	0.47
1:0:1184:G:C2'	1:0:1185:C:H5''	2.44	0.47
1:0:957:G:N2	1:0:983:G:H1'	2.29	0.47
1:0:1373:G:H2'	1:0:1374:G:H5'	1.97	0.47
2:9:88:C:H2'	2:9:89:G:O4'	2.15	0.47
1:0:2048:C:H2'	1:0:2049:C:H6	1.80	0.47
1:0:1365:U:H1'	1:0:1586:A:H2	1.79	0.47
1:0:587:A:OP2	1:0:587:A:H8	1.98	0.47
1:0:2433:G:H2'	1:0:2434:G:H8	1.80	0.47
1:0:1787:U:H2'	1:0:1788:C:C6	2.50	0.47
1:0:174:A:H4'	1:0:2052:G:OP2	2.15	0.47
2:9:24:U:H2'	2:9:25:G:O5'	2.14	0.47
1:0:1253:C:C2'	1:0:1254:G:H5'	2.44	0.47
1:0:2470:U:H2'	1:0:2471:U:C6	2.50	0.47
1:0:397:U:H2'	1:0:398:C:H6	1.79	0.47
1:0:428:A:H2'	1:0:429:C:H6	1.79	0.47
1:0:1322:G:N2	1:0:1627:C:H5'	2.28	0.47
1:0:605:G:H2'	1:0:606:A:H8	1.80	0.47
1:0:1668:G:O2'	1:0:1669:A:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:305:A:C2'	1:0:306:G:H5'	2.45	0.47
1:0:1317:G:O2'	1:0:1318:A:H5'	2.14	0.47
1:0:2739:G:H2'	1:0:2740:C:O4'	2.15	0.47
1:0:1066:G:C2'	1:0:1067:G:H4'	2.43	0.47
1:0:4:C:H2'	1:0:5:A:C8	2.50	0.47
1:0:550:C:H2'	1:0:551:A:H8	1.80	0.47
1:0:1802:A:H2'	1:0:1803:G:O4'	2.15	0.47
1:0:181:A:H5''	1:0:182:G:OP1	2.14	0.47
1:0:2204:A:H1'	1:0:2205:C:C5	2.49	0.47
1:0:2045:A:H4'	1:0:2421:C:OP2	2.13	0.47
1:0:1680:U:H6	1:0:1680:U:H5'	1.80	0.47
1:0:461:A:N3	1:0:461:A:H2'	2.30	0.47
2:9:42:U:O4	2:9:45:C:OP2	2.33	0.47
1:0:2446:C:H2'	1:0:2447:G:C8	2.50	0.47
1:0:450:C:H2'	1:0:451:A:C8	2.51	0.47
1:0:211:U:O2'	1:0:212:U:H5'	2.15	0.47
1:0:2404:A:O2'	1:0:2405:A:OP2	2.28	0.47
1:0:1940:C:H2'	1:0:1941:C:H6	1.80	0.47
1:0:422:C:H2'	1:0:423:G:O4'	2.15	0.47
1:0:2227:C:H2'	1:0:2228:U:H5'	1.96	0.47
1:0:912:A:H2'	1:0:913:A:H8	1.80	0.47
1:0:2492:G:H1	1:0:2550:C:N4	2.13	0.46
1:0:2598:C:H2'	1:0:2599:U:C6	2.50	0.46
2:9:68:A:C2	2:9:110:U:C4	3.03	0.46
1:0:1621:C:O2'	1:0:1626:A:N7	2.45	0.46
1:0:2617:G:N2	1:0:2755:A:H2'	2.30	0.46
1:0:538:A:C2'	1:0:539:A:H5''	2.44	0.46
1:0:2396:C:H6	1:0:2396:C:H5'	1.80	0.46
1:0:786:U:H2'	1:0:787:A:H5'	1.97	0.46
1:0:1871:G:C2'	1:0:1871:G:N3	2.78	0.46
1:0:1970:G:O2'	1:0:1971:C:H5'	2.15	0.46
1:0:2204:A:O2'	1:0:2205:C:OP2	2.30	0.46
1:0:433:G:N2	1:0:434:C:H1'	2.30	0.46
1:0:2286:G:H21	1:0:2290:A:H62	1.63	0.46
1:0:487:G:H1'	1:0:515:A:H2	1.79	0.46
2:9:45:C:H42	2:9:47:A:H62	1.63	0.46
1:0:1793:A:H2'	1:0:1794:A:C8	2.50	0.46
1:0:2624:G:H4'	1:0:2712:G:O2'	2.15	0.46
1:0:538:A:C3'	1:0:539:A:H5''	2.45	0.46
1:0:2830:U:H2'	1:0:2831:A:C8	2.51	0.46
1:0:2785:A:H62	1:0:2865:G:H21	1.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1139:A:H1'	1:0:2495:G:O2'	2.15	0.46
1:0:785:U:O2'	1:0:786:U:H5'	2.15	0.46
1:0:246:C:N4	1:0:247:A:H62	2.13	0.46
1:0:1442:C:N4	1:0:1585:A:H8	2.13	0.46
1:0:83:A:N1	1:0:98:U:H1'	2.31	0.46
1:0:31:C:H5''	1:0:1252:C:OP1	2.14	0.46
1:0:1715:A:H1'	1:0:1717:A:O4'	2.14	0.46
1:0:631:G:H5''	1:0:632:A:OP1	2.16	0.46
1:0:429:C:H2'	1:0:430:C:O4'	2.15	0.46
1:0:515:A:C2'	1:0:516:G:H5'	2.46	0.46
2:9:5:C:H2'	2:9:6:C:O4'	2.15	0.46
2:9:30:C:O5'	2:9:30:C:C6	2.64	0.46
1:0:612:G:O3'	1:0:613:A:C4'	2.59	0.46
1:0:984:A:H1'	1:0:1202:U:C5	2.51	0.46
1:0:225:G:H5'	1:0:226:C:H5'	1.97	0.46
1:0:2225:G:C2	1:0:2405:A:H1'	2.50	0.46
1:0:2402:U:H5'	1:0:2404:A:C5	2.51	0.46
1:0:514:G:C2'	1:0:514:G:N3	2.78	0.46
1:0:1206:G:H2'	1:0:1207:G:H8	1.80	0.46
1:0:1964:A:OP1	1:0:1965:U:OP2	2.33	0.46
1:0:2055:G:O2'	1:0:2056:C:H5'	2.15	0.46
1:0:65:C:C2'	1:0:66:U:H5'	2.45	0.46
1:0:1337:G:H4'	1:0:1632:A:N7	2.31	0.46
1:0:2523:G:H2'	1:0:2524:G:O4'	2.16	0.46
1:0:69:G:H4'	1:0:70:A:O5'	2.16	0.46
1:0:474:G:H22	1:0:476:G:H3'	1.80	0.46
1:0:1472:C:HO2'	1:0:1474:A:H8	1.62	0.46
1:0:619:A:H2'	1:0:620:G:C8	2.50	0.46
1:0:2858:A:H3'	1:0:2859:U:H5'	1.97	0.46
1:0:732:G:O5'	1:0:732:G:H8	1.99	0.46
1:0:393:U:H2'	1:0:394:U:H6	1.80	0.46
1:0:482:A:H2'	1:0:483:A:O4'	2.16	0.46
1:0:591:G:H2'	1:0:592:G:C8	2.49	0.46
1:0:699:G:H3'	1:0:699:G:N3	2.30	0.46
1:0:2407:G:H5''	1:0:2408:G:OP1	2.15	0.46
1:0:1496:G:H1	1:0:1527:G:H1	1.64	0.46
1:0:1669:A:H2'	1:0:1670:G:H4'	1.98	0.46
1:0:1221:C:H6	1:0:1221:C:O5'	1.99	0.46
1:0:810:U:H2'	1:0:811:G:C8	2.51	0.46
2:9:23:G:H2'	2:9:24:U:C6	2.51	0.46
1:0:762:A:O2'	1:0:1633:C:H1'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1714:A:C5	1:0:1715:A:N6	2.79	0.46
1:0:1827:G:H1'	1:0:1914:U:N3	2.31	0.46
1:0:1002:C:O5'	1:0:1002:C:H6	1.99	0.46
1:0:221:A:N6	1:0:231:G:H21	2.14	0.46
1:0:488:A:H2'	1:0:489:A:C8	2.51	0.46
1:0:646:C:O2'	1:0:650:U:H5''	2.16	0.46
1:0:1216:G:H2'	1:0:1217:U:O4'	2.16	0.46
2:9:51:G:O2'	2:9:52:G:H5'	2.15	0.46
1:0:84:G:O2'	1:0:85:C:H5'	2.15	0.46
1:0:1671:A:O4'	1:0:2798:A:H5'	2.16	0.46
1:0:1447:U:H1'	1:0:1577:G:H22	1.79	0.46
1:0:931:G:H2'	1:0:932:G:C5'	2.46	0.46
1:0:458:G:H4'	1:0:461:A:C4	2.51	0.46
1:0:1624:A:C2'	1:0:1625:A:H5'	2.45	0.46
1:0:1478:U:H2'	1:0:1479:G:C8	2.51	0.46
1:0:635:C:O2	1:0:670:U:H4'	2.16	0.46
1:0:170:U:H2'	1:0:171:G:C8	2.46	0.46
1:0:1034:U:H4'	1:0:1134:C:OP1	2.15	0.46
1:0:839:U:H5''	1:0:2408:G:P	2.55	0.46
1:0:2015:G:O2'	1:0:2016:A:OP1	2.28	0.46
1:0:40:U:H2'	1:0:41:G:C8	2.50	0.46
1:0:299:C:H2'	1:0:300:C:C5	2.51	0.46
1:0:394:U:O2'	1:0:395:G:H5'	2.16	0.46
1:0:872:G:O2'	1:0:2247:A:C4	2.69	0.46
1:0:974:U:H2'	1:0:975:C:O4'	2.16	0.46
1:0:2511:G:N2	1:0:2642:G:O2'	2.49	0.46
1:0:764:A:N3	1:0:764:A:C2'	2.77	0.46
1:0:1918:G:H4'	1:0:1920:A:C2	2.51	0.46
1:0:115:G:C6	1:0:117:A:N6	2.84	0.46
1:0:1494:G:H2'	1:0:1495:G:O4'	2.16	0.46
1:0:2397:A:H2'	1:0:2398:U:O4'	2.16	0.46
1:0:642:A:H2'	1:0:643:A:C8	2.51	0.46
1:0:643:A:O2'	1:0:644:A:H5'	2.15	0.46
1:0:1784:C:O2'	1:0:1785:A:H5'	2.16	0.46
1:0:1356:G:H1'	1:0:1613:G:C2	2.51	0.46
1:0:2225:G:O2'	1:0:2226:A:H5'	2.16	0.46
1:0:2751:C:H2'	1:0:2752:C:C6	2.50	0.46
1:0:2093:G:H2'	1:0:2094:C:H6	1.80	0.46
1:0:2264:C:H2'	1:0:2265:A:H5'	1.98	0.46
1:0:1790:G:O3'	1:0:1791:C:H6	1.99	0.46
1:0:367:G:C3'	1:0:368:A:H5''	2.46	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1923:U:H2'	1:0:1923:U:O2	2.16	0.46
2:9:94:G:N3	2:9:94:G:H2'	2.30	0.46
1:0:1715:A:HO2'	1:0:1716:G:H8	1.64	0.46
1:0:2245:A:H2'	1:0:2246:A:OP2	2.16	0.46
1:0:1952:A:O2'	1:0:1955:G:N2	2.49	0.46
1:0:1001:A:H3'	1:0:1002:C:H5''	1.98	0.46
1:0:2321:C:O2'	1:0:2353:G:H5''	2.16	0.46
1:0:490:A:N7	1:0:492:G:H1'	2.31	0.46
1:0:2687:G:O2'	1:0:2688:G:H5'	2.17	0.46
1:0:1322:G:O2'	1:0:1323:G:H5'	2.16	0.46
1:0:2045:A:H3'	1:0:2046:C:C5'	2.46	0.45
1:0:1226:A:H2'	1:0:1227:A:H8	1.80	0.45
1:0:2753:C:H2'	1:0:2754:C:H6	1.79	0.45
1:0:674:U:H2'	1:0:675:C:C6	2.52	0.45
1:0:677:G:H4'	1:0:951:G:O3'	2.16	0.45
1:0:840:U:H4'	1:0:841:G:N2	2.31	0.45
1:0:1855:G:H4'	1:0:2390:A:H4'	1.98	0.45
1:0:141:G:H2'	1:0:142:U:H6	1.81	0.45
1:0:1356:G:H4'	1:0:1613:G:H2'	1.98	0.45
1:0:20:C:H2'	1:0:21:A:H8	1.81	0.45
1:0:942:U:H2'	1:0:943:U:C4'	2.46	0.45
1:0:2307:A:H2'	1:0:2308:A:H8	1.79	0.45
1:0:718:A:O2'	1:0:719:A:H5'	2.14	0.45
1:0:1739:G:H2'	1:0:1740:G:C8	2.51	0.45
1:0:1787:U:H2'	1:0:1788:C:H6	1.81	0.45
1:0:455:A:H4'	1:0:1214:C:O2'	2.15	0.45
1:0:1147:G:O2'	1:0:1148:G:H5'	2.16	0.45
1:0:1171:A:H2'	1:0:1172:U:C6	2.51	0.45
1:0:871:U:O2	1:0:2247:A:H2'	2.16	0.45
1:0:2511:G:H2'	1:0:2512:A:O4'	2.17	0.45
1:0:2324:G:HO2'	1:0:2325:A:H5''	1.81	0.45
2:9:92:G:H2'	2:9:93:G:C5'	2.39	0.45
1:0:544:U:H2'	1:0:545:C:O4'	2.16	0.45
1:0:1715:A:HO2'	1:0:1716:G:H3'	1.81	0.45
1:0:1001:A:H5'	1:0:1168:G:OP1	2.17	0.45
1:0:190:A:H2'	1:0:191:G:H8	1.81	0.45
1:0:195:A:H2'	1:0:196:A:H5'	1.98	0.45
1:0:239:A:C5'	1:0:620:G:H5'	2.46	0.45
2:9:112:A:H2'	2:9:113:G:C8	2.51	0.45
1:0:981:C:H2'	1:0:982:C:C6	2.52	0.45
1:0:1281:A:C4'	1:0:2592:U:O2	2.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1333:G:N2	1:0:1344:C:N4	2.64	0.45
1:0:1685:A:N6	1:0:1691:G:N3	2.64	0.45
1:0:2617:G:H22	1:0:2755:A:H2'	1.82	0.45
1:0:697:G:O2'	1:0:698:A:H5'	2.15	0.45
1:0:669:G:H2'	1:0:670:U:H6	1.80	0.45
1:0:675:C:H2'	1:0:676:G:H8	1.82	0.45
1:0:986:A:H2'	1:0:987:G:H5'	1.98	0.45
1:0:2652:G:H2'	1:0:2653:A:C8	2.40	0.45
1:0:50:G:H2'	1:0:117:A:N1	2.30	0.45
1:0:2504:G:O4'	1:0:2721:A:H2	1.99	0.45
1:0:2396:C:H2'	1:0:2397:A:C5'	2.46	0.45
1:0:305:A:H2'	1:0:306:G:H5'	1.97	0.45
1:0:2019:C:H5'	1:0:2019:C:H6	1.82	0.45
1:0:2713:A:O2'	1:0:2714:A:H5'	2.16	0.45
1:0:2459:C:H2'	1:0:2460:G:O4'	2.17	0.45
1:0:462:G:H2'	1:0:463:C:H5'	1.99	0.45
1:0:733:G:O2'	1:0:734:G:H5'	2.17	0.45
1:0:2104:G:H2'	1:0:2105:U:H6	1.81	0.45
1:0:1479:G:N2	1:0:1543:G:N2	2.64	0.45
1:0:1821:A:H3'	1:0:1822:C:C6	2.52	0.45
1:0:1473:U:H4'	1:0:1474:A:C8	2.52	0.45
1:0:1854:G:O2'	1:0:1855:G:H5'	2.16	0.45
1:0:2274:C:C2'	1:0:2275:U:H5''	2.46	0.45
1:0:1482:U:H1'	1:0:1562:G:N2	2.31	0.45
1:0:1538:A:O2'	1:0:1539:U:H5'	2.17	0.45
1:0:745:C:C2'	1:0:746:G:H5'	2.47	0.45
1:0:2249:U:H2'	1:0:2250:G:H5'	1.99	0.45
1:0:721:C:H2'	1:0:722:C:C6	2.52	0.45
1:0:362:C:C2'	1:0:363:G:H4'	2.27	0.45
1:0:930:A:OP1	1:0:930:A:H4'	2.15	0.45
1:0:1789:U:O2	1:0:1793:A:H2	1.99	0.45
1:0:1947:G:H5''	1:0:1948:C:OP1	2.16	0.45
1:0:2523:G:H2'	1:0:2524:G:H8	1.82	0.45
1:0:1666:G:H2'	1:0:1667:A:C8	2.52	0.45
1:0:1388:C:H2'	1:0:1389:C:C6	2.47	0.45
1:0:889:C:O2'	1:0:890:U:H5'	2.17	0.45
2:9:114:C:O5'	2:9:114:C:C6	2.67	0.45
1:0:1849:G:O5'	1:0:1849:G:H8	2.00	0.45
1:0:393:U:O2'	1:0:394:U:H5'	2.17	0.45
1:0:20:C:O2'	1:0:21:A:H5'	2.15	0.45
1:0:665:A:H3'	1:0:666:U:H5''	1.97	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1227:A:C4'	1:0:1252:C:H4'	2.47	0.45
1:0:341:A:H1'	1:0:1223:G:O6	2.17	0.45
1:0:1699:A:C6	1:0:1748:U:H1'	2.52	0.45
1:0:70:A:OP2	1:0:111:G:O5'	2.34	0.45
1:0:403:A:H5''	1:0:404:A:OP1	2.17	0.45
1:0:1429:A:C6	1:0:1602:G:H5'	2.50	0.45
1:0:824:U:O2'	1:0:1264:C:O4'	2.34	0.45
1:0:1356:G:C4'	1:0:1613:G:H2'	2.47	0.45
1:0:1933:G:H8	1:0:1933:G:O5'	2.00	0.45
1:0:1846:A:H2'	1:0:1847:G:O4'	2.17	0.45
1:0:931:G:H2'	1:0:932:G:H5'	1.99	0.45
2:9:104:A:C8	2:9:105:G:N7	2.85	0.45
1:0:2230:G:C8	1:0:2476:A:N6	2.85	0.45
1:0:486:U:H2'	1:0:487:G:H5'	1.99	0.45
1:0:322:A:H2	1:0:342:G:OP2	2.00	0.45
1:0:1706:A:N6	1:0:1714:A:H2'	2.32	0.45
1:0:1278:A:O2'	1:0:1279:G:P	2.75	0.45
1:0:745:C:H2'	1:0:746:G:C5'	2.47	0.45
1:0:1950:C:H2'	1:0:1951:G:O4'	2.16	0.45
1:0:2407:G:H4'	1:0:2408:G:C5	2.52	0.45
1:0:839:U:OP1	1:0:2408:G:OP2	2.35	0.45
1:0:2533:U:H2'	1:0:2534:U:C6	2.52	0.45
1:0:2483:U:H3'	1:0:2484:G:H5''	1.97	0.45
1:0:745:C:H2'	1:0:746:G:H5'	1.99	0.45
1:0:1449:C:O2'	1:0:1450:G:H5'	2.17	0.45
1:0:930:A:H5'	1:0:931:G:C8	2.52	0.44
1:0:343:A:N6	1:0:346:C:C5	2.85	0.44
1:0:2633:A:H4'	1:0:2634:G:H4'	1.98	0.44
1:0:2454:C:H42	1:0:2508:G:H22	1.65	0.44
1:0:115:G:H8	1:0:115:G:O5'	2.00	0.44
1:0:81:C:H4'	1:0:307:C:H5'	1.98	0.44
1:0:2841:U:O2'	1:0:2842:C:H5'	2.17	0.44
1:0:1540:C:H2'	1:0:1541:G:H8	1.83	0.44
1:0:1008:G:O2'	1:0:1009:C:H5'	2.17	0.44
1:0:127:C:H5''	1:0:1615:C:O2'	2.16	0.44
1:0:2347:C:H2'	1:0:2348:A:C8	2.52	0.44
1:0:1363:C:H2'	1:0:1364:C:O4'	2.17	0.44
1:0:757:U:O2'	1:0:758:G:H5'	2.18	0.44
1:0:1064:C:H2'	1:0:1065:A:C8	2.52	0.44
1:0:2024:U:H2'	1:0:2025:A:C8	2.52	0.44
1:0:538:A:N1	1:0:2026:C:H5''	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2572:U:H2'	1:0:2573:C:H6	1.83	0.44
1:0:2002:A:C2	1:0:2003:A:H1'	2.53	0.44
1:0:2163:U:H2'	1:0:2164:G:H8	1.82	0.44
1:0:225:G:H3'	1:0:226:C:H5'	2.00	0.44
1:0:1802:A:O2'	1:0:1803:G:H5'	2.16	0.44
1:0:1884:A:O2'	1:0:1885:C:H5'	2.17	0.44
1:0:2748:C:H2'	1:0:2749:A:O4'	2.18	0.44
1:0:1685:A:H2	1:0:1687:C:C2	2.35	0.44
1:0:815:A:H2'	1:0:816:U:O4'	2.17	0.44
2:9:64:C:N4	2:9:65:A:C6	2.86	0.44
1:0:416:U:C5'	1:0:417:C:H5'	2.42	0.44
2:9:33:C:H2'	2:9:34:C:C6	2.52	0.44
2:9:73:C:O2	2:9:109:G:C2	2.70	0.44
1:0:2784:A:H3'	1:0:2785:A:H8	1.82	0.44
1:0:1541:G:N2	1:0:1562:G:N2	2.65	0.44
1:0:1937:G:H21	1:0:2530:C:H5''	1.82	0.44
1:0:1426:U:H2'	1:0:1427:G:O4'	2.17	0.44
1:0:1132:C:O2'	1:0:1133:G:H5'	2.17	0.44
1:0:960:U:H2'	1:0:961:G:C8	2.51	0.44
1:0:560:G:H21	1:0:1233:A:H2	1.65	0.44
1:0:1512:A:O5'	1:0:1512:A:H8	1.99	0.44
1:0:1840:A:H2'	1:0:1841:G:H5'	1.99	0.44
1:0:859:U:H4'	1:0:860:U:H5	1.82	0.44
1:0:1459:U:H2'	1:0:1475:U:HO2'	1.80	0.44
1:0:424:G:N7	1:0:2385:U:N3	2.65	0.44
1:0:1462:C:O2'	1:0:1560:A:H1'	2.17	0.44
1:0:83:A:H8	1:0:83:A:O5'	2.00	0.44
1:0:1748:U:N3	1:0:1753:A:C2	2.75	0.44
1:0:699:G:N1	1:0:801:A:C2	2.83	0.44
1:0:805:G:H4'	1:0:806:A:OP2	2.14	0.44
1:0:118:U:H5''	1:0:120:G:OP2	2.17	0.44
1:0:1750:A:C8	1:0:2675:U:H1'	2.53	0.44
1:0:1040:A:H2'	1:0:1041:G:C5'	2.43	0.44
2:9:61:A:O5'	2:9:61:A:C8	2.60	0.44
1:0:2177:U:O2'	1:0:2178:U:H5'	2.18	0.44
1:0:2202:G:H3'	1:0:2203:G:C8	2.53	0.44
1:0:1669:A:H61	1:0:1670:G:H21	1.66	0.44
1:0:1872:A:H2'	1:0:1873:A:C8	2.52	0.44
1:0:608:G:O2'	1:0:609:U:H5'	2.18	0.44
1:0:768:U:H5'	1:0:1285:A:N1	2.33	0.44
1:0:2136:G:H2'	1:0:2137:G:C8	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2215:C:H2'	1:0:2216:G:O4'	2.18	0.44
1:0:1938:U:O2'	1:0:1939:U:H5'	2.18	0.44
2:9:104:A:C4	2:9:105:G:C8	3.06	0.44
1:0:1223:G:N1	1:0:1250:A:N7	2.66	0.44
1:0:2426:G:H22	1:0:2431:C:H41	1.64	0.44
1:0:323:G:OP2	1:0:343:A:H5'	2.18	0.44
1:0:1792:C:O5'	1:0:1792:C:H6	2.00	0.44
1:0:187:U:H1'	1:0:1379:A:C2	2.53	0.44
1:0:221:A:C2'	1:0:222:G:H5'	2.47	0.44
1:0:2409:A:C2'	1:0:2410:U:H5'	2.47	0.44
1:0:161:U:H5'	1:0:193:A:N1	2.33	0.44
1:0:1295:U:H2'	1:0:1296:G:C5'	2.43	0.44
1:0:2488:G:H2'	1:0:2489:C:C6	2.53	0.44
1:0:533:C:H2'	1:0:534:U:O4'	2.18	0.44
1:0:128:C:H2'	1:0:129:A:H5''	2.00	0.44
1:0:1849:G:H21	1:0:1868:A:H62	1.65	0.44
1:0:484:G:H2'	1:0:485:G:O4'	2.17	0.44
1:0:1947:G:P	1:0:1947:G:H8	2.40	0.44
1:0:1707:A:C2'	1:0:1708:C:H5'	2.48	0.44
1:0:2770:A:H5''	1:0:2867:G:H1	1.81	0.44
1:0:2695:C:H2'	1:0:2696:A:C8	2.52	0.44
1:0:2535:C:C2'	1:0:2536:G:H5'	2.47	0.44
1:0:1363:C:H2'	1:0:1364:C:C6	2.53	0.44
1:0:2166:G:O2'	1:0:2167:A:H5'	2.17	0.44
1:0:570:G:C2'	1:0:571:U:H5''	2.48	0.44
1:0:940:G:C3'	1:0:941:U:C5'	2.79	0.44
1:0:1685:A:C2	1:0:1976:U:C2	3.06	0.44
1:0:2474:G:O5'	1:0:2474:G:H8	2.01	0.44
1:0:2321:C:H2'	1:0:2322:U:H5'	1.99	0.44
1:0:1710:U:O5'	1:0:1710:U:H6	2.00	0.44
1:0:1135:C:H2'	1:0:1136:G:H8	1.83	0.44
1:0:2783:U:H2'	1:0:2784:A:C4'	2.47	0.44
1:0:2685:A:H5''	1:0:2826:C:H5''	2.00	0.44
1:0:158:A:H2'	1:0:159:A:C8	2.52	0.44
1:0:2070:G:H2'	1:0:2071:G:C8	2.52	0.44
1:0:2182:A:H3'	1:0:2183:C:C6	2.53	0.44
1:0:2064:U:H2'	1:0:2065:A:H8	1.83	0.44
1:0:2725:C:H2'	1:0:2726:U:C6	2.53	0.44
1:0:2090:U:H2'	1:0:2091:C:H6	1.83	0.44
1:0:1680:U:HO2'	1:0:2665:G:H4'	1.82	0.44
1:0:1724:C:H1'	1:0:1747:G:C4	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:486:U:C2'	1:0:487:G:H5'	2.48	0.44
1:0:2327:U:H2'	1:0:2328:G:C8	2.53	0.44
1:0:1654:A:H4'	1:0:2690:A:HO2'	1.80	0.44
1:0:26:G:H1'	1:0:525:A:H61	1.83	0.44
1:0:1012:A:H61	1:0:1165:G:H1'	1.82	0.44
1:0:32:C:H2'	1:0:33:C:C6	2.53	0.44
1:0:2712:G:H3'	1:0:2713:A:H5'	1.99	0.43
1:0:1000:G:OP1	1:0:1168:G:H4'	2.18	0.43
1:0:2610:G:H5'	1:0:2866:A:H4'	1.99	0.43
1:0:222:G:O2'	1:0:223:C:H5'	2.18	0.43
1:0:1229:C:H2'	1:0:1230:C:C6	2.53	0.43
1:0:1962:C:C2'	1:0:1963:G:H5'	2.47	0.43
1:0:2070:G:H2'	1:0:2071:G:H8	1.83	0.43
1:0:83:A:H5''	1:0:84:G:OP1	2.18	0.43
1:0:929:A:C3'	1:0:930:A:C5'	2.95	0.43
1:0:2079:A:H2'	1:0:2080:U:C6	2.53	0.43
1:0:508:G:H22	1:0:516:G:N2	2.16	0.43
1:0:27:G:HO2'	1:0:28:A:H8	1.65	0.43
1:0:2633:A:OP1	1:0:2635:U:H1'	2.18	0.43
1:0:1622:G:H5''	1:0:1624:A:O4'	2.18	0.43
1:0:541:C:H2'	1:0:541:C:O2	2.18	0.43
1:0:630:G:H5''	1:0:631:G:OP2	2.18	0.43
1:0:632:A:H3'	1:0:632:A:N3	2.33	0.43
1:0:2695:C:H2'	1:0:2696:A:H8	1.83	0.43
1:0:1528:C:C2'	1:0:1529:C:H5''	2.47	0.43
1:0:1263:G:O2'	1:0:1264:C:P	2.76	0.43
1:0:1672:A:C2	1:0:2032:G:H5''	2.53	0.43
1:0:1310:C:P	1:0:2689:C:H4'	2.58	0.43
1:0:1485:U:H2'	1:0:1486:A:H8	1.82	0.43
1:0:2214:G:O2'	1:0:2215:C:H5'	2.18	0.43
1:0:1801:C:H1'	1:0:2207:G:O2'	2.17	0.43
1:0:1908:C:H2'	1:0:1909:U:C4'	2.22	0.43
1:0:951:G:H3'	1:0:952:A:H5''	1.99	0.43
1:0:1764:A:H62	1:0:1821:A:H1'	1.83	0.43
1:0:1781:C:H2'	1:0:1782:A:C8	2.53	0.43
1:0:163:A:H2'	1:0:164:G:C8	2.50	0.43
1:0:968:C:H41	1:0:970:A:C1'	2.31	0.43
1:0:2106:G:H2'	1:0:2107:G:C8	2.53	0.43
1:0:1011:A:N6	1:0:1165:G:H2'	2.33	0.43
1:0:1572:C:H2'	1:0:1573:G:H5''	1.99	0.43
1:0:2219:U:O2'	1:0:2220:A:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2324:G:N7	1:0:2351:G:C2	2.86	0.43
1:0:1300:A:H2	1:0:1666:G:H4'	1.81	0.43
1:0:1783:G:H1'	1:0:1822:C:P	2.59	0.43
1:0:629:C:C2'	1:0:630:G:H5'	2.48	0.43
2:9:48:A:C5	2:9:49:C:C5	3.06	0.43
1:0:2433:G:O2'	1:0:2434:G:H5'	2.19	0.43
1:0:1226:A:C4	1:0:1250:A:N3	2.86	0.43
1:0:2426:G:N2	1:0:2431:C:N4	2.67	0.43
1:0:2252:A:H2'	1:0:2253:A:C8	2.54	0.43
1:0:1974:U:H2'	1:0:1975:G:C5'	2.42	0.43
1:0:698:A:C1'	1:0:700:C:H41	2.31	0.43
1:0:2863:U:H2'	1:0:2864:C:H6	1.84	0.43
1:0:2319:G:H2'	1:0:2320:G:C8	2.54	0.43
1:0:192:G:O2'	1:0:193:A:OP2	2.33	0.43
1:0:737:C:H2'	1:0:738:G:O4'	2.18	0.43
1:0:2488:G:H2'	1:0:2489:C:H6	1.83	0.43
1:0:431:G:H2'	1:0:432:C:C6	2.54	0.43
1:0:1558:C:H2'	1:0:1559:G:C5'	2.49	0.43
1:0:784:U:H2'	1:0:785:U:C6	2.54	0.43
1:0:1572:C:C2'	1:0:1573:G:H5''	2.48	0.43
2:9:88:C:H2'	2:9:89:G:C8	2.53	0.43
1:0:2335:U:H2'	1:0:2336:G:O4'	2.19	0.43
1:0:688:A:N6	1:0:816:U:H3	1.90	0.43
2:9:59:A:H2'	2:9:60:A:C5'	2.48	0.43
1:0:456:C:O2'	1:0:457:C:H5'	2.18	0.43
1:0:1625:A:H2'	1:0:1625:A:N3	2.33	0.43
1:0:2448:A:H2'	1:0:2449:G:O4'	2.19	0.43
1:0:1155:G:H2'	1:0:1156:U:O4'	2.19	0.43
1:0:1256:C:H2'	1:0:1257:U:C6	2.54	0.43
1:0:1558:C:H2'	1:0:1559:G:O4'	2.19	0.43
1:0:158:A:H2'	1:0:159:A:O4'	2.19	0.43
1:0:295:C:N4	1:0:296:A:N6	2.67	0.43
1:0:305:A:H2'	1:0:306:G:C5'	2.48	0.43
1:0:2345:A:H2'	1:0:2346:G:H5'	2.01	0.43
1:0:1422:C:H2'	1:0:1423:A:C8	2.54	0.43
1:0:714:G:O2'	1:0:715:U:H5'	2.18	0.43
1:0:1554:G:H2'	1:0:1555:A:C8	2.53	0.43
1:0:65:C:O2'	1:0:66:U:H5'	2.19	0.43
1:0:2095:G:H2'	1:0:2096:U:H5''	2.01	0.43
1:0:2727:G:O2'	1:0:2728:A:H5''	2.19	0.43
1:0:1699:A:H61	1:0:1723:U:H3	1.65	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2618:A:N1	1:0:2619:G:H1'	2.34	0.43
1:0:873:U:N3	1:0:2246:A:H5''	2.34	0.43
1:0:1820:G:H4'	1:0:1821:A:OP1	2.18	0.43
1:0:1296:G:H2'	1:0:1298:G:OP2	2.19	0.43
1:0:203:G:H4'	1:0:234:C:O2'	2.18	0.43
1:0:746:G:N7	1:0:774:A:C5	2.86	0.43
1:0:41:G:H2'	1:0:42:G:C8	2.53	0.43
1:0:2655:C:H2'	1:0:2656:G:O4'	2.19	0.43
1:0:1981:A:H4'	1:0:2704:U:O2'	2.18	0.43
1:0:2066:G:H2'	1:0:2067:U:O4'	2.19	0.43
1:0:2876:C:H2'	1:0:2877:A:O4'	2.19	0.43
1:0:1455:C:H2'	1:0:1456:C:C6	2.54	0.43
1:0:2621:G:O2'	1:0:2622:G:H5'	2.19	0.43
1:0:580:A:N3	1:0:582:G:N7	2.66	0.43
1:0:426:C:H6	1:0:426:C:O5'	2.00	0.43
1:0:2205:C:O2'	1:0:2206:C:H5'	2.17	0.43
1:0:1086:C:C3'	1:0:1087:C:H5''	2.48	0.43
1:0:952:A:H2'	1:0:953:G:O4'	2.19	0.43
1:0:2306:A:H2'	1:0:2307:A:C8	2.54	0.43
1:0:2800:C:O5'	1:0:2800:C:H6	2.02	0.43
1:0:1021:A:O5'	1:0:1021:A:H8	2.02	0.43
1:0:353:G:H2'	1:0:354:C:H6	1.83	0.43
1:0:1448:A:H2'	1:0:1449:C:C6	2.54	0.43
1:0:2054:A:H61	1:0:2417:U:H3	1.65	0.43
1:0:758:G:C2'	1:0:759:C:H5'	2.49	0.43
1:0:2449:G:H2'	1:0:2450:A:H8	1.83	0.43
1:0:2651:U:H2'	1:0:2652:G:O4'	2.19	0.43
1:0:1474:A:H2'	1:0:1476:G:OP1	2.19	0.43
1:0:192:G:O2'	1:0:193:A:C5'	2.67	0.43
1:0:81:C:H4'	1:0:307:C:C5'	2.48	0.43
2:9:108:G:H8	2:9:108:G:O5'	2.01	0.43
1:0:1091:C:H2'	1:0:1092:U:H6	1.79	0.43
1:0:2783:U:OP1	1:0:2783:U:O4'	2.37	0.43
1:0:1766:U:H2'	1:0:1767:G:O4'	2.19	0.43
1:0:1020:A:H2'	1:0:1021:A:C8	2.54	0.43
1:0:708:G:H2'	1:0:709:A:H8	1.84	0.43
1:0:1350:G:H2'	1:0:1351:G:H8	1.84	0.43
1:0:2124:C:O2'	1:0:2125:C:H5'	2.18	0.43
2:9:7:C:H2'	2:9:8:C:C6	2.54	0.42
1:0:1543:G:H2'	1:0:1544:A:C5'	2.49	0.42
1:0:556:A:C2'	1:0:557:U:H5'	2.40	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:475:U:C1'	1:0:801:A:N1	2.82	0.42
1:0:789:G:N2	1:0:806:A:H62	2.15	0.42
1:0:14:A:N6	1:0:15:G:C2	2.87	0.42
2:9:72:C:O2'	2:9:73:C:H5'	2.19	0.42
1:0:428:A:H2'	1:0:429:C:C6	2.54	0.42
1:0:586:G:OP1	1:0:2481:G:H2'	2.19	0.42
1:0:2475:C:C2'	1:0:2476:A:H5'	2.48	0.42
1:0:975:C:O5'	1:0:975:C:H6	2.02	0.42
1:0:515:A:H2'	1:0:516:G:H5'	2.01	0.42
1:0:977:G:H5''	1:0:2251:U:O2	2.19	0.42
1:0:1302:C:C6	1:0:1302:C:OP1	2.71	0.42
2:9:108:G:H2'	2:9:109:G:C8	2.55	0.42
1:0:781:G:H5'	1:0:1638:G:C4'	2.49	0.42
1:0:2759:U:H4'	1:0:2760:G:O5'	2.18	0.42
1:0:2302:G:N2	1:0:2314:A:H2	2.16	0.42
1:0:1776:A:H4'	1:0:1965:U:O2'	2.18	0.42
1:0:708:G:H2'	1:0:709:A:C8	2.54	0.42
1:0:864:C:O2'	1:0:865:A:H5'	2.19	0.42
1:0:1790:G:O2'	1:0:1791:C:H5	2.01	0.42
1:0:548:G:O2'	1:0:549:G:H5'	2.19	0.42
1:0:1302:C:P	1:0:1302:C:H6	2.41	0.42
1:0:1168:G:H2'	1:0:1169:C:C6	2.54	0.42
1:0:2770:A:H5'	1:0:2867:G:H22	1.84	0.42
1:0:1258:G:H2'	1:0:1259:A:C8	2.54	0.42
1:0:1934:U:O2	1:0:1936:A:H8	2.02	0.42
1:0:2205:C:C2'	1:0:2206:C:H5'	2.50	0.42
1:0:1801:C:H1'	1:0:2208:U:H5'	2.02	0.42
1:0:1769:U:H3	1:0:1778:U:H3	1.66	0.42
1:0:2501:U:O2'	1:0:2626:U:H5''	2.19	0.42
1:0:1725:C:O2'	1:0:1726:C:H5'	2.20	0.42
1:0:27:G:O2'	1:0:28:A:O4'	2.35	0.42
1:0:460:U:H5'	1:0:461:A:OP2	2.19	0.42
1:0:26:G:O3'	1:0:1273:G:H4'	2.19	0.42
1:0:1028:G:H2'	1:0:1029:C:O4'	2.19	0.42
1:0:2788:C:H2'	1:0:2789:U:H6	1.84	0.42
1:0:63:A:O2'	1:0:64:C:H5'	2.19	0.42
1:0:1123:G:O2'	1:0:1124:U:H5'	2.20	0.42
1:0:1859:A:H2'	1:0:1860:A:C8	2.53	0.42
1:0:1398:G:O2'	1:0:1399:C:H5'	2.19	0.42
1:0:2075:U:H1'	1:0:2204:A:C2	2.54	0.42
1:0:421:G:O2'	1:0:422:C:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1110:G:H2'	1:0:1111:C:C6	2.53	0.42
1:0:2517:C:O2'	1:0:2518:C:H5'	2.19	0.42
1:0:694:G:H2'	1:0:695:G:H8	1.85	0.42
1:0:1552:C:H2'	1:0:1553:G:O4'	2.20	0.42
1:0:661:C:O2'	1:0:662:G:H5'	2.20	0.42
1:0:1455:C:H2'	1:0:1456:C:H6	1.85	0.42
1:0:2229:G:H2'	1:0:2475:C:OP1	2.20	0.42
1:0:2427:A:OP2	1:0:2478:C:OP2	2.38	0.42
1:0:1920:A:N6	1:0:1923:U:C6	2.87	0.42
1:0:1135:C:H2'	1:0:1136:G:C8	2.54	0.42
1:0:825:C:O2'	1:0:826:U:H5'	2.20	0.42
1:0:537:C:N1	1:0:2759:U:H2'	2.35	0.42
1:0:2662:C:N4	1:0:2707:G:H21	2.16	0.42
2:9:107:C:C6	2:9:107:C:C3'	3.03	0.42
1:0:1938:U:O2'	1:0:1939:U:OP1	2.30	0.42
1:0:2233:C:O2'	1:0:2234:G:H5'	2.19	0.42
1:0:1679:U:H2'	1:0:1680:U:C5'	2.20	0.42
2:9:104:A:C8	2:9:105:G:C8	3.07	0.42
1:0:843:G:H5'	1:0:956:A:H1'	2.02	0.42
1:0:698:A:H1'	1:0:700:C:H41	1.85	0.42
1:0:1001:A:N6	1:0:1200:G:H1'	2.34	0.42
1:0:1821:A:H5''	1:0:1822:C:H5	1.82	0.42
1:0:192:G:C4'	1:0:193:A:H4'	2.49	0.42
1:0:2710:C:O2'	1:0:2711:G:H5'	2.20	0.42
1:0:1972:G:O2'	1:0:1973:C:H5'	2.19	0.42
1:0:2677:U:O2'	1:0:2678:C:H5'	2.20	0.42
1:0:1310:C:O2'	1:0:1315:A:N1	2.49	0.42
1:0:1308:C:H2'	1:0:1309:G:C8	2.54	0.42
1:0:421:G:H2'	1:0:422:C:C6	2.55	0.42
1:0:2724:G:O2'	1:0:2725:C:H5'	2.20	0.42
8:F:6:LEU:CA	8:F:14:THR:CA	2.98	0.42
1:0:1566:G:O2'	1:0:1567:A:H5'	2.20	0.42
1:0:176:A:H3'	1:0:177:U:C5	2.55	0.42
1:0:1223:G:O2'	1:0:1224:A:OP2	2.35	0.42
1:0:2059:U:C2'	1:0:2060:A:H5''	2.39	0.42
1:0:475:U:C2	1:0:801:A:C6	3.07	0.42
1:0:1806:G:C5	1:0:1807:A:N7	2.88	0.42
1:0:186:C:H2'	1:0:187:U:O4'	2.20	0.42
1:0:1259:A:H2'	1:0:1260:A:H5'	2.00	0.42
1:0:1937:G:N3	1:0:2530:C:C5'	2.80	0.42
1:0:445:A:C2'	1:0:446:C:H5'	2.49	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2402:U:H5'	1:0:2404:A:N7	2.34	0.42
1:0:2422:C:H2'	1:0:2423:G:H8	1.84	0.42
1:0:597:U:H2'	1:0:598:U:H6	1.82	0.42
1:0:333:A:HO2'	1:0:350:U:H2'	1.83	0.42
1:0:2630:C:H2'	1:0:2631:C:C6	2.55	0.42
1:0:173:A:H2'	1:0:173:A:N3	2.35	0.42
1:0:670:U:O2'	1:0:671:A:H5'	2.20	0.42
1:0:2321:C:H2'	1:0:2322:U:C5'	2.50	0.42
1:0:1653:C:O2	1:0:1751:A:H2	2.03	0.42
1:0:573:C:O2'	1:0:574:C:H5'	2.19	0.42
1:0:226:C:H4'	1:0:227:G:H8	1.83	0.42
1:0:1619:A:N3	1:0:1619:A:O5'	2.52	0.42
1:0:459:A:C4	1:0:466:A:N7	2.88	0.42
1:0:651:C:C3'	1:0:652:C:C5'	2.98	0.42
1:0:1714:A:H5''	1:0:1715:A:H8	1.85	0.42
1:0:1870:U:O5'	1:0:1870:U:H6	2.02	0.42
1:0:1851:A:N6	1:0:1867:A:H1'	2.31	0.42
1:0:573:C:H2'	1:0:574:C:O4'	2.20	0.42
1:0:1491:C:H2'	1:0:1492:A:C8	2.53	0.42
1:0:2302:G:C2'	1:0:2303:C:H5'	2.50	0.42
2:9:88:C:H2'	2:9:89:G:H8	1.84	0.42
1:0:90:G:H3'	1:0:91:A:C5'	2.50	0.42
1:0:2491:C:H2'	1:0:2492:G:H4'	1.98	0.42
2:9:42:U:H3'	2:9:43:G:C5'	2.50	0.42
1:0:1791:C:C1'	1:0:1793:A:H5'	2.43	0.42
1:0:792:U:O2'	1:0:793:G:H5'	2.20	0.42
1:0:167:A:H2'	1:0:168:A:O4'	2.18	0.42
1:0:1167:A:H5'	1:0:1168:G:N7	2.34	0.42
1:0:1029:C:H2'	1:0:1030:U:H5''	2.02	0.42
1:0:1332:G:O2'	1:0:1333:G:H5'	2.20	0.42
1:0:777:A:N6	1:0:1766:U:N3	2.68	0.42
1:0:2627:G:O2'	1:0:2628:C:H5'	2.20	0.42
1:0:1814:G:H2'	1:0:1815:G:H8	1.84	0.42
1:0:1023:U:H1'	1:0:1154:A:N7	2.35	0.42
1:0:1545:G:O2'	1:0:1546:C:H5'	2.19	0.42
1:0:1773:C:H1'	1:0:2588:U:O4'	2.19	0.42
32:0:2881:773:H171	32:0:2881:773:H19	1.90	0.41
1:0:1459:U:H3'	1:0:1459:U:OP1	2.19	0.41
1:0:1253:C:H2'	1:0:1254:G:C5'	2.50	0.41
1:0:658:G:H4'	1:0:2331:A:C5'	2.39	0.41
1:0:1921:A:C3'	1:0:1922:U:H5''	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:750:C:H2'	1:0:751:G:C8	2.55	0.41
1:0:1025:A:O2'	1:0:1026:U:H5'	2.20	0.41
1:0:393:U:H2'	1:0:394:U:O4'	2.19	0.41
1:0:570:G:H2'	1:0:571:U:H5''	2.02	0.41
1:0:1725:C:H2'	1:0:1726:C:H6	1.85	0.41
1:0:495:C:H2'	1:0:496:C:C6	2.55	0.41
1:0:224:G:H4'	1:0:399:G:C5	2.55	0.41
1:0:198:A:O2'	1:0:199:A:OP2	2.36	0.41
32:0:2881:773:H272	32:0:2881:773:H433	2.02	0.41
1:0:1976:U:H2'	1:0:1976:U:O2	2.19	0.41
1:0:66:U:C2	1:0:67:G:N7	2.89	0.41
1:0:58:C:H1'	1:0:72:A:C8	2.55	0.41
1:0:2475:C:H2'	1:0:2476:A:C4'	2.50	0.41
1:0:717:G:H1'	1:0:740:A:N6	2.35	0.41
1:0:2245:A:C4	1:0:2251:U:O4	2.73	0.41
1:0:953:G:H2'	1:0:954:U:H6	1.85	0.41
1:0:161:U:H2'	1:0:162:C:C6	2.54	0.41
1:0:2559:U:C2'	1:0:2560:G:H5'	2.50	0.41
1:0:750:C:H2'	1:0:751:G:H8	1.85	0.41
1:0:1904:G:O2'	1:0:1905:G:H5'	2.19	0.41
1:0:1960:A:H2'	1:0:1961:A:C8	2.55	0.41
1:0:327:C:O2'	1:0:328:A:H5'	2.20	0.41
1:0:2178:U:H2'	1:0:2179:C:C6	2.55	0.41
1:0:1727:C:H4'	1:0:2833:C:O2	2.20	0.41
1:0:430:C:H2'	1:0:431:G:O4'	2.20	0.41
1:0:1003:C:O2'	1:0:1004:A:H5'	2.20	0.41
1:0:1991:C:H2'	1:0:1992:G:C8	2.51	0.41
1:0:1581:C:N4	1:0:1583:A:H1'	2.36	0.41
1:0:1487:C:H2'	1:0:1488:G:C8	2.54	0.41
1:0:2630:C:H2'	1:0:2631:C:H6	1.85	0.41
1:0:2700:U:H2'	1:0:2701:A:H8	1.85	0.41
1:0:1797:C:H2'	1:0:1798:G:O4'	2.20	0.41
1:0:2362:G:C2'	1:0:2363:G:O5'	2.69	0.41
1:0:1699:A:C5	1:0:1748:U:H1'	2.55	0.41
1:0:2039:G:N2	27:Z:5:PRO:CA	2.83	0.41
1:0:646:C:HO2'	1:0:650:U:H5''	1.84	0.41
1:0:1009:C:O5'	1:0:1009:C:H6	2.02	0.41
1:0:666:U:H2'	1:0:668:A:P	2.60	0.41
1:0:854:G:H2'	1:0:855:G:C8	2.55	0.41
2:9:63:A:O2'	2:9:64:C:H5'	2.19	0.41
1:0:612:G:C4'	1:0:613:A:H4'	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:128:C:H2'	1:0:129:A:C5'	2.50	0.41
1:0:1612:U:H2'	1:0:1613:G:C8	2.55	0.41
1:0:2824:C:C2'	1:0:2825:A:OP2	2.68	0.41
1:0:1721:G:H2'	1:0:1722:G:O4'	2.21	0.41
1:0:365:U:H2'	1:0:366:U:H6	1.85	0.41
1:0:181:A:H4'	1:0:182:G:OP1	2.18	0.41
1:0:929:A:C2	1:0:930:A:H1'	2.56	0.41
2:9:100:G:C2'	2:9:101:A:H5'	2.51	0.41
1:0:688:A:O2'	1:0:689:A:H5'	2.21	0.41
2:9:8:C:OP1	2:9:63:A:H5'	2.21	0.41
1:0:2569:A:H2'	1:0:2570:C:C6	2.54	0.41
1:0:541:C:HO2'	1:0:542:A:P	2.44	0.41
2:9:28:A:N3	2:9:28:A:H2'	2.35	0.41
1:0:357:A:H2'	1:0:357:A:N3	2.34	0.41
1:0:2447:G:C8	1:0:2455:A:N6	2.81	0.41
1:0:1783:G:C6	1:0:1820:G:H1'	2.56	0.41
1:0:221:A:H2'	1:0:222:G:C5'	2.50	0.41
1:0:1471:G:H1	1:0:2682:C:N4	2.10	0.41
1:0:2162:C:H2'	1:0:2163:U:H6	1.85	0.41
1:0:2778:U:O2'	1:0:2779:C:H5'	2.21	0.41
1:0:583:C:C4	1:0:2016:A:H4'	2.56	0.41
1:0:480:G:O5'	1:0:480:G:H8	2.04	0.41
1:0:1989:C:O5'	1:0:1989:C:H6	2.04	0.41
1:0:1016:C:H2'	1:0:1017:C:C6	2.56	0.41
2:9:75:A:N6	2:9:106:U:C4	2.88	0.41
1:0:35:G:O4'	1:0:466:A:C1'	2.69	0.41
2:9:6:C:C4	2:9:7:C:N4	2.88	0.41
1:0:2636:A:N6	1:0:2643:G:H21	2.04	0.41
1:0:2006:G:H2'	1:0:2007:G:H8	1.86	0.41
1:0:1664:G:OP2	1:0:1664:G:H3'	2.20	0.41
1:0:1034:U:H2'	1:0:1035:G:O4'	2.20	0.41
1:0:492:G:H2'	1:0:517:A:C2	2.56	0.41
1:0:1572:C:H2'	1:0:1573:G:H5'	2.03	0.41
1:0:1756:C:H2'	1:0:1757:C:H6	1.85	0.41
1:0:2443:C:H2'	1:0:2444:C:C6	2.56	0.41
1:0:2058:U:H5'	1:0:2576:G:H1'	2.03	0.41
1:0:843:G:H3'	1:0:843:G:OP1	2.20	0.41
1:0:1665:C:H2'	1:0:1666:G:O4'	2.21	0.41
1:0:1883:A:C2	1:0:1953:A:N6	2.89	0.41
1:0:1751:A:H2'	1:0:1752:U:O4'	2.21	0.41
1:0:16:G:O2'	1:0:17:G:H5'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2024:U:H6	1:0:2024:U:O5'	2.04	0.41
1:0:2279:G:H2'	1:0:2280:A:C8	2.48	0.41
1:0:1328:C:O2'	1:0:1329:U:H5'	2.21	0.41
1:0:4:C:O2'	1:0:5:A:H5'	2.20	0.41
1:0:1556:A:H2'	1:0:1557:G:C8	2.54	0.41
1:0:42:G:H2'	1:0:43:A:O4'	2.20	0.41
1:0:2204:A:O2'	1:0:2205:C:P	2.79	0.41
1:0:2574:G:N2	1:0:2577:A:OP2	2.54	0.41
1:0:1459:U:P	1:0:1459:U:H6	2.44	0.41
2:9:103:A:N7	2:9:104:A:N7	2.69	0.41
1:0:67:G:C6	1:0:72:A:C2	3.08	0.41
2:9:23:G:H2'	2:9:24:U:O4'	2.21	0.41
1:0:955:G:H5'	1:0:956:A:C5'	2.50	0.41
1:0:2728:A:C2	1:0:2736:U:H1'	2.55	0.41
1:0:1923:U:H4'	1:0:1948:C:N4	2.36	0.41
1:0:1714:A:H5'	1:0:1715:A:O5'	2.21	0.41
1:0:218:A:O2'	1:0:219:G:C4'	2.64	0.41
1:0:2455:A:C2'	1:0:2456:U:H5'	2.50	0.41
1:0:676:G:O2'	1:0:951:G:H4'	2.20	0.41
1:0:629:C:O2'	1:0:630:G:H5'	2.21	0.41
1:0:1440:G:C3'	1:0:1441:A:C5'	2.99	0.41
1:0:1471:G:O2'	1:0:1472:C:H5'	2.21	0.41
1:0:2409:A:O2'	1:0:2410:U:H5'	2.21	0.41
1:0:80:A:O2'	1:0:81:C:H5'	2.21	0.41
1:0:2784:A:H3'	1:0:2785:A:C8	2.56	0.41
1:0:996:C:H2'	1:0:997:C:C6	2.56	0.41
1:0:639:G:H2'	1:0:640:C:H6	1.82	0.41
1:0:1990:U:H4'	1:0:2799:C:H4'	2.02	0.41
1:0:754:G:H22	1:0:770:U:H1'	1.84	0.41
1:0:744:C:N4	1:0:745:C:H41	2.19	0.41
1:0:1661:C:H2'	1:0:1662:G:H8	1.86	0.41
1:0:1486:A:H2'	1:0:1487:C:C6	2.55	0.41
1:0:2302:G:H2'	1:0:2303:C:H5'	2.02	0.41
1:0:353:G:O2'	1:0:354:C:H5'	2.21	0.41
1:0:2227:C:C2'	1:0:2228:U:H5'	2.51	0.41
1:0:2249:U:C2'	1:0:2250:G:H5'	2.51	0.41
1:0:1903:C:H2'	1:0:1904:G:C8	2.55	0.41
1:0:448:C:H2'	1:0:449:C:H5'	2.02	0.41
1:0:1234:C:O2'	1:0:1235:C:H5'	2.20	0.41
1:0:689:A:C2'	1:0:690:A:H5'	2.51	0.41
1:0:1625:A:N3	1:0:1625:A:C2'	2.84	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2622:G:O2'	1:0:2623:A:H5'	2.20	0.41
1:0:2569:A:H2'	1:0:2570:C:O4'	2.21	0.41
1:0:184:A:H4'	1:0:812:G:H4'	2.03	0.41
1:0:2449:G:O6	1:0:2455:A:H2	2.04	0.41
1:0:727:U:C2'	1:0:728:G:H5''	2.46	0.41
1:0:2559:U:H5''	4:B:130:GLY:CA	2.51	0.41
1:0:1645:U:O2	1:0:2677:U:H4'	2.21	0.41
1:0:2313:G:H2'	1:0:2314:A:H5'	2.03	0.41
1:0:2181:A:H2'	1:0:2182:A:H5'	2.02	0.41
1:0:1921:A:C2'	1:0:1922:U:H5''	2.48	0.40
1:0:699:G:N2	1:0:801:A:C2	2.86	0.40
1:0:1714:A:H3'	1:0:1715:A:N7	2.36	0.40
1:0:867:G:H2'	1:0:868:U:C6	2.56	0.40
1:0:2813:G:O2'	1:0:2814:G:H5'	2.21	0.40
1:0:2869:U:O5'	1:0:2869:U:H6	2.05	0.40
1:0:1789:U:HO2'	1:0:1793:A:H1'	1.84	0.40
1:0:1791:C:H1'	1:0:1793:A:O4'	2.21	0.40
1:0:2569:A:H2'	1:0:2570:C:H6	1.86	0.40
1:0:805:G:C6	1:0:2419:C:H1'	2.55	0.40
1:0:2409:A:H2'	1:0:2410:U:H5'	2.02	0.40
1:0:2841:U:O2'	1:0:2842:C:C5'	2.69	0.40
1:0:509:U:C2'	1:0:510:G:H5'	2.50	0.40
1:0:121:G:O3'	1:0:1389:C:H4'	2.21	0.40
1:0:2394:G:H2'	1:0:2395:C:H6	1.84	0.40
1:0:829:C:O2'	1:0:830:C:H5'	2.21	0.40
1:0:1569:A:C6	1:0:1571:G:H1'	2.56	0.40
1:0:2204:A:H4'	1:0:2205:C:O4'	2.21	0.40
1:0:1576:G:H2'	1:0:1577:G:O4'	2.22	0.40
1:0:861:G:N2	1:0:943:U:O2'	2.54	0.40
1:0:1073:G:H3'	1:0:1074:G:C5'	2.51	0.40
1:0:68:C:C2	1:0:72:A:N3	2.90	0.40
1:0:1715:A:C2	1:0:1717:A:C8	3.09	0.40
1:0:451:A:H2'	1:0:452:G:H8	1.83	0.40
1:0:1528:C:C3'	1:0:1529:C:H5''	2.51	0.40
1:0:340:G:C1'	1:0:488:A:H1'	2.51	0.40
1:0:1383:C:O2'	1:0:1384:G:H5'	2.21	0.40
1:0:2542:U:H2'	1:0:2544:A:OP2	2.22	0.40
1:0:73:A:H4'	1:0:74:G:C1'	2.51	0.40
1:0:1221:C:H2'	1:0:1222:G:C8	2.57	0.40
1:0:122:G:C2'	1:0:123:A:H5''	2.52	0.40
1:0:931:G:H5'	2:9:83:C:H1'	2.03	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:690:A:H4'	1:0:2053:G:O2'	2.22	0.40
1:0:68:C:O2	1:0:68:C:H2'	2.21	0.40
1:0:317:U:C3'	1:0:318:G:H5''	2.51	0.40
1:0:1791:C:C2'	1:0:1792:C:H5''	2.39	0.40
1:0:616:U:H3'	1:0:617:U:H5''	2.03	0.40
1:0:398:C:O2'	1:0:401:G:N2	2.54	0.40
1:0:2047:C:H42	1:0:2425:G:H1	1.70	0.40
1:0:1473:U:H4'	1:0:1474:A:C4	2.56	0.40
1:0:201:G:C2	1:0:202:A:C4	3.10	0.40
1:0:831:G:H5'	1:0:852:U:OP1	2.22	0.40
1:0:1519:G:O2'	1:0:1520:G:H5'	2.21	0.40
1:0:1981:A:O3'	1:0:2704:U:H4'	2.22	0.40
1:0:200:A:N6	1:0:387:A:O2'	2.54	0.40
1:0:28:A:O3'	1:0:460:U:O4	2.40	0.40
1:0:2570:C:H2'	1:0:2571:G:C8	2.57	0.40
2:9:12:C:H3'	2:9:13:C:H6	1.85	0.40
1:0:215:G:H2'	1:0:216:U:C6	2.57	0.40
1:0:2240:C:C2'	1:0:2241:U:C5'	2.97	0.40
1:0:2494:C:H2'	1:0:2495:G:C8	2.56	0.40
1:0:1190:C:H2'	1:0:1191:G:C8	2.57	0.40
1:0:771:C:O2'	1:0:772:G:H5'	2.21	0.40
1:0:1323:G:C1'	1:0:1627:C:H5''	2.52	0.40
1:0:501:G:H2'	1:0:502:A:H8	1.87	0.40
1:0:503:G:H2'	1:0:504:G:C8	2.56	0.40
1:0:2138:U:H2'	1:0:2139:G:H5'	2.04	0.40
1:0:1403:U:O2	1:0:1408:A:N6	2.54	0.40
1:0:2857:C:H2'	1:0:2858:A:O5'	2.21	0.40
1:0:1148:G:H2'	1:0:1149:G:O4'	2.22	0.40
1:0:665:A:H3'	1:0:666:U:C5'	2.51	0.40
1:0:1358:C:H2'	1:0:1359:G:H5'	2.03	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

5.3.2 Protein sidechains [i](#)

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

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	0	2757/2880 (95%)	482 (17%)	41 (1%)
2	9	117/124 (94%)	23 (19%)	1 (0%)
All	All	2874/3004 (95%)	505 (17%)	42 (1%)

All (505) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	0	13	A
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	67	G
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	105	G
1	0	110	U
1	0	116	A
1	0	118	U
1	0	123	A
1	0	129	A
1	0	135	U
1	0	149	A
1	0	155	G
1	0	158	A
1	0	173	A
1	0	174	A

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Mol	Chain	Res	Type
1	0	176	A
1	0	181	A
1	0	182	G
1	0	193	A
1	0	199	A
1	0	200	A
1	0	201	G
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	229	G
1	0	242	A
1	0	243	G
1	0	305	A
1	0	318	G
1	0	322	A
1	0	333	A
1	0	334	G
1	0	335	A
1	0	340	G
1	0	341	A
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	408	U
1	0	414	A
1	0	418	C
1	0	424	G
1	0	443	A
1	0	456	C
1	0	460	U
1	0	461	A
1	0	463	C
1	0	467	U

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Mol	Chain	Res	Type
1	0	469	G
1	0	484	G
1	0	486	U
1	0	490	A
1	0	491	A
1	0	492	G
1	0	514	G
1	0	515	A
1	0	518	A
1	0	519	C
1	0	537	C
1	0	539	A
1	0	541	C
1	0	542	A
1	0	554	U
1	0	556	A
1	0	558	G
1	0	572	G
1	0	582	G
1	0	583	C
1	0	584	A
1	0	587	A
1	0	588	G
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	655	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	728	G
1	0	740	A
1	0	742	G

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Mol	Chain	Res	Type
1	0	743	A
1	0	760	U
1	0	765	C
1	0	766	A
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	804	C
1	0	806	A
1	0	813	A
1	0	815	A
1	0	818	G
1	0	825	C
1	0	832	A
1	0	840	U
1	0	841	G
1	0	843	G
1	0	844	G
1	0	859	U
1	0	873	U
1	0	874	A
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	957	G
1	0	968	C
1	0	969	U
1	0	970	A
1	0	972	C
1	0	973	U

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Mol	Chain	Res	Type
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	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	1055	A
1	0	1056	U
1	0	1057	A
1	0	1067	G
1	0	1073	G
1	0	1074	G
1	0	1075	C
1	0	1081	A
1	0	1082	G
1	0	1083	C
1	0	1087	C
1	0	1090	C
1	0	1099	A
1	0	1130	U
1	0	1137	A
1	0	1138	A
1	0	1142	G
1	0	1145	C
1	0	1146	G
1	0	1155	G
1	0	1166	A
1	0	1167	A
1	0	1168	G
1	0	1182	U
1	0	1183	C

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Mol	Chain	Res	Type
1	0	1185	C
1	0	1194	U
1	0	1195	U
1	0	1199	U
1	0	1200	G
1	0	1224	A
1	0	1225	G
1	0	1234	C
1	0	1253	C
1	0	1261	G
1	0	1262	U
1	0	1264	C
1	0	1266	G
1	0	1267	A
1	0	1268	U
1	0	1269	G
1	0	1278	A
1	0	1279	G
1	0	1284	G
1	0	1285	A
1	0	1286	U
1	0	1288	A
1	0	1289	A
1	0	1302	C
1	0	1314	A
1	0	1316	G
1	0	1324	G
1	0	1327	C
1	0	1334	A
1	0	1338	G
1	0	1339	U
1	0	1342	U
1	0	1343	C
1	0	1346	C
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

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Mol	Chain	Res	Type
1	0	1411	C
1	0	1430	G
1	0	1433	A
1	0	1441	A
1	0	1442	C
1	0	1443	G
1	0	1459	U
1	0	1465	G
1	0	1466	C
1	0	1468	A
1	0	1469	U
1	0	1470	G
1	0	1473	U
1	0	1474	A
1	0	1475	U
1	0	1476	G
1	0	1482	U
1	0	1490	U
1	0	1496	G
1	0	1505	U
1	0	1509	A
1	0	1513	U
1	0	1524	C
1	0	1529	C
1	0	1544	A
1	0	1552	C
1	0	1571	G
1	0	1573	G
1	0	1574	A
1	0	1583	A
1	0	1585	A
1	0	1618	U
1	0	1623	C
1	0	1624	A
1	0	1625	A
1	0	1626	A
1	0	1631	C
1	0	1635	G
1	0	1648	C
1	0	1652	G
1	0	1657	A
1	0	1664	G

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Mol	Chain	Res	Type
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	1691	G
1	0	1692	C
1	0	1699	A
1	0	1710	U
1	0	1712	G
1	0	1713	G
1	0	1715	A
1	0	1717	A
1	0	1718	A
1	0	1724	C
1	0	1748	U
1	0	1749	G
1	0	1750	A
1	0	1754	G
1	0	1755	G
1	0	1764	A
1	0	1771	A
1	0	1772	C
1	0	1773	C
1	0	1776	A
1	0	1778	U
1	0	1791	C
1	0	1792	C
1	0	1800	A
1	0	1801	C
1	0	1802	A
1	0	1807	A
1	0	1808	C
1	0	1811	A
1	0	1813	A
1	0	1821	A
1	0	1831	G
1	0	1840	A
1	0	1884	A
1	0	1889	G

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Mol	Chain	Res	Type
1	0	1909	U
1	0	1920	A
1	0	1922	U
1	0	1924	C
1	0	1926	U
1	0	1927	U
1	0	1928	G
1	0	1938	U
1	0	1939	U
1	0	1948	C
1	0	1949	A
1	0	1950	C
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	2003	A
1	0	2004	U
1	0	2006	G
1	0	2014	A
1	0	2015	G
1	0	2016	A
1	0	2019	C
1	0	2035	G
1	0	2038	C
1	0	2043	A
1	0	2044	G
1	0	2045	A
1	0	2046	C
1	0	2051	U
1	0	2052	G
1	0	2060	A
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

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Mol	Chain	Res	Type
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	2205	C
1	0	2218	G
1	0	2229	G
1	0	2238	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	2265	A
1	0	2268	G
1	0	2285	U
1	0	2286	G
1	0	2287	G
1	0	2288	A
1	0	2298	U
1	0	2299	A
1	0	2300	G
1	0	2301	A
1	0	2313	G
1	0	2314	A
1	0	2315	A
1	0	2316	G
1	0	2325	A
1	0	2326	C
1	0	2362	G
1	0	2364	C
1	0	2369	U
1	0	2378	G
1	0	2385	U
1	0	2396	C
1	0	2402	U
1	0	2403	C
1	0	2405	A
1	0	2406	C

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Mol	Chain	Res	Type
1	0	2407	G
1	0	2408	G
1	0	2409	A
1	0	2414	A
1	0	2427	A
1	0	2428	U
1	0	2438	A
1	0	2448	A
1	0	2455	A
1	0	2457	A
1	0	2470	U
1	0	2476	A
1	0	2477	C
1	0	2482	A
1	0	2483	U
1	0	2492	G
1	0	2499	C
1	0	2504	G
1	0	2508	G
1	0	2522	G
1	0	2533	U
1	0	2545	A
1	0	2546	G
1	0	2549	G
1	0	2578	G
1	0	2581	A
1	0	2582	G
1	0	2588	U
1	0	2589	C
1	0	2591	C
1	0	2594	U
1	0	2600	A
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	2670	C
1	0	2681	A
1	0	2692	A
1	0	2693	U

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Mol	Chain	Res	Type
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	2756	A
1	0	2757	G
1	0	2758	A
1	0	2760	G
1	0	2770	A
1	0	2771	C
1	0	2774	U
1	0	2782	G
1	0	2783	U
1	0	2785	A
1	0	2793	G
1	0	2795	A
1	0	2807	U
1	0	2808	U
1	0	2809	A
1	0	2810	A
1	0	2825	A
1	0	2841	U
1	0	2842	C
1	0	2847	G
1	0	2849	C
1	0	2854	G
1	0	2855	C
1	0	2867	G
1	0	2868	G
2	9	7	C
2	9	14	C
2	9	15	A
2	9	17	A
2	9	18	G
2	9	27	A
2	9	28	A
2	9	47	A
2	9	48	A

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Mol	Chain	Res	Type
2	9	59	A
2	9	60	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	98	C
2	9	101	A
2	9	102	A
2	9	111	C
2	9	112	A
2	9	115	G

All (42) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	0	69	G
1	0	71	A
1	0	173	A
1	0	181	A
1	0	192	G
1	0	198	A
1	0	242	A
1	0	541	C
1	0	583	C
1	0	765	C
1	0	805	G
1	0	843	G
1	0	1141	U
1	0	1193	G
1	0	1194	U
1	0	1223	G
1	0	1263	G
1	0	1278	A
1	0	1313	U
1	0	1354	A
1	0	1410	U
1	0	1495	G
1	0	1634	A
1	0	1651	U

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Mol	Chain	Res	Type
1	0	1664	G
1	0	1685	A
1	0	1820	G
1	0	1938	U
1	0	1975	G
1	0	2015	G
1	0	2018	G
1	0	2093	G
1	0	2161	C
1	0	2204	A
1	0	2245	A
1	0	2261	G
1	0	2377	U
1	0	2404	A
1	0	2633	A
1	0	2759	U
1	0	2824	C
2	9	58	G

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

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

5.5 Carbohydrates [i](#)

There are no 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	773	0	2881	-	57,59,59	1.74	11 (19%)	72,88,88	1.36	12 (16%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
32	773	0	2881	-	-	0/67/98/98	0/4/5/5

All (11) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
32	0	2881	773	C35-C34	-5.26	1.24	1.36
32	0	2881	773	C5-C4	-5.09	1.44	1.52
32	0	2881	773	C37-C38	-4.86	1.33	1.41
32	0	2881	773	C22-C21	-2.91	1.47	1.52
32	0	2881	773	C6-C5	-2.49	1.47	1.53
32	0	2881	773	O9-C21	-2.24	1.17	1.21
32	0	2881	773	C30-C29	-2.03	1.24	1.31
32	0	2881	773	C24-N2	2.04	1.36	1.33
32	0	2881	773	C19-C21	2.12	1.59	1.52
32	0	2881	773	O8-C16	2.74	1.48	1.45
32	0	2881	773	C2-C4	4.23	1.58	1.52

All (12) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	0	2881	773	C41-C22-C21	-2.28	104.05	108.21
32	0	2881	773	C26-C23-N2	-2.26	96.79	101.59
32	0	2881	773	O8-C16-C7	-2.15	103.28	107.76
32	0	2881	773	C43-C42-C25	2.33	119.58	113.22
32	0	2881	773	C32-C31-C30	2.37	123.53	119.70
32	0	2881	773	C18-C16-C7	2.49	113.00	110.03
32	0	2881	773	C6-C5-C7	2.54	116.34	112.88
32	0	2881	773	C42-C25-C26	2.62	119.11	115.25
32	0	2881	773	O9-C21-C22	2.85	124.85	120.52
32	0	2881	773	C23-N2-C24	3.08	116.29	112.55
32	0	2881	773	C26-O7-C24	3.10	111.86	109.28

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	0	2881	773	O6-C24-N2	4.02	134.05	129.16

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

1 monomer is involved in 9 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
32	0	2881	773	9	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 will therefore be empty.

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

EDS was not executed - this section will therefore be empty.

6.3 Carbohydrates ⓘ

EDS was not executed - this section will therefore be empty.

6.4 Ligands ⓘ

EDS was not executed - this section will therefore be empty.

6.5 Other polymers ⓘ

EDS was not executed - this section will therefore be empty.