



# Full wwPDB X-ray Structure Validation Report ⓘ

Dec 16, 2023 – 01:45 PM EST

PDB ID : 2OGO  
Title : The crystal structure of the large ribosomal subunit from *Deinococcus radiodurans* complexed with the pleuromutilin derivative retapamulin (SB-275833)  
Authors : Davidovich, C.; Bashan, A.; Auerbach-Nevo, T.; Yonath, A.  
Deposited on : 2007-01-07  
Resolution : 3.66 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](mailto:validation@mail.wwpdb.org)

A user guide is available at

<https://www.wwpdb.org/validation/2017/XrayValidationReportHelp>

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

MolProbity : 4.02b-467  
Mogul : 1.8.5 (274361), CSD as541be (2020)  
Xtriage (Phenix) : 1.13  
EDS : 2.36  
buster-report : 1.1.7 (2018)  
Percentile statistics : 20191225.v01 (using entries in the PDB archive December 25th 2019)  
Refmac : 5.8.0158  
CCP4 : 7.0.044 (Gargrove)  
Ideal geometry (proteins) : Engh & Huber (2001)  
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)  
Validation Pipeline (wwPDB-VP) : 2.36

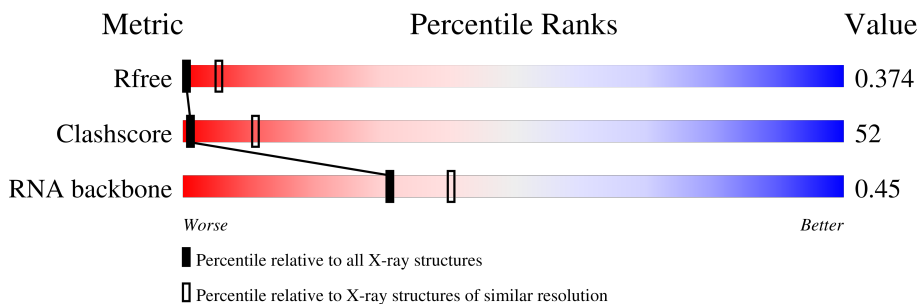
# 1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

*X-RAY DIFFRACTION*

The reported resolution of this entry is 3.66 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))
$R_{free}$	130704	1557 (3.82-3.50)
Clashscore	141614	1037 (3.80-3.52)
RNA backbone	3102	1024 (4.30-3.00)

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

Mol	Chain	Length	Quality of chain
1	0	2880	 12% 57% 22% . .
2	B	211	 97% .

## 2 Entry composition [i](#)

There are 3 unique types of molecules in this entry. The entry contains 59577 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

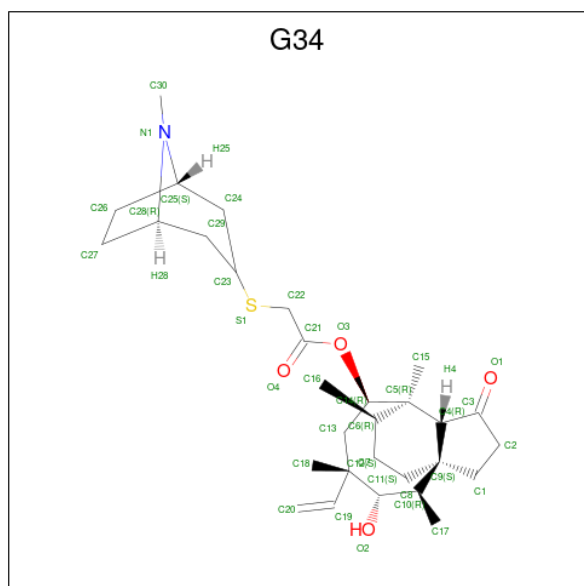
- Molecule 1 is a RNA chain called 23S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
1	0	2765	59336	26469	10944	19159	2764	0	0	0

- Molecule 2 is a protein called 50S ribosomal protein L3.

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

- Molecule 3 is Retapamulin (three-letter code: G34) (formula: C<sub>30</sub>H<sub>47</sub>NO<sub>4</sub>S).

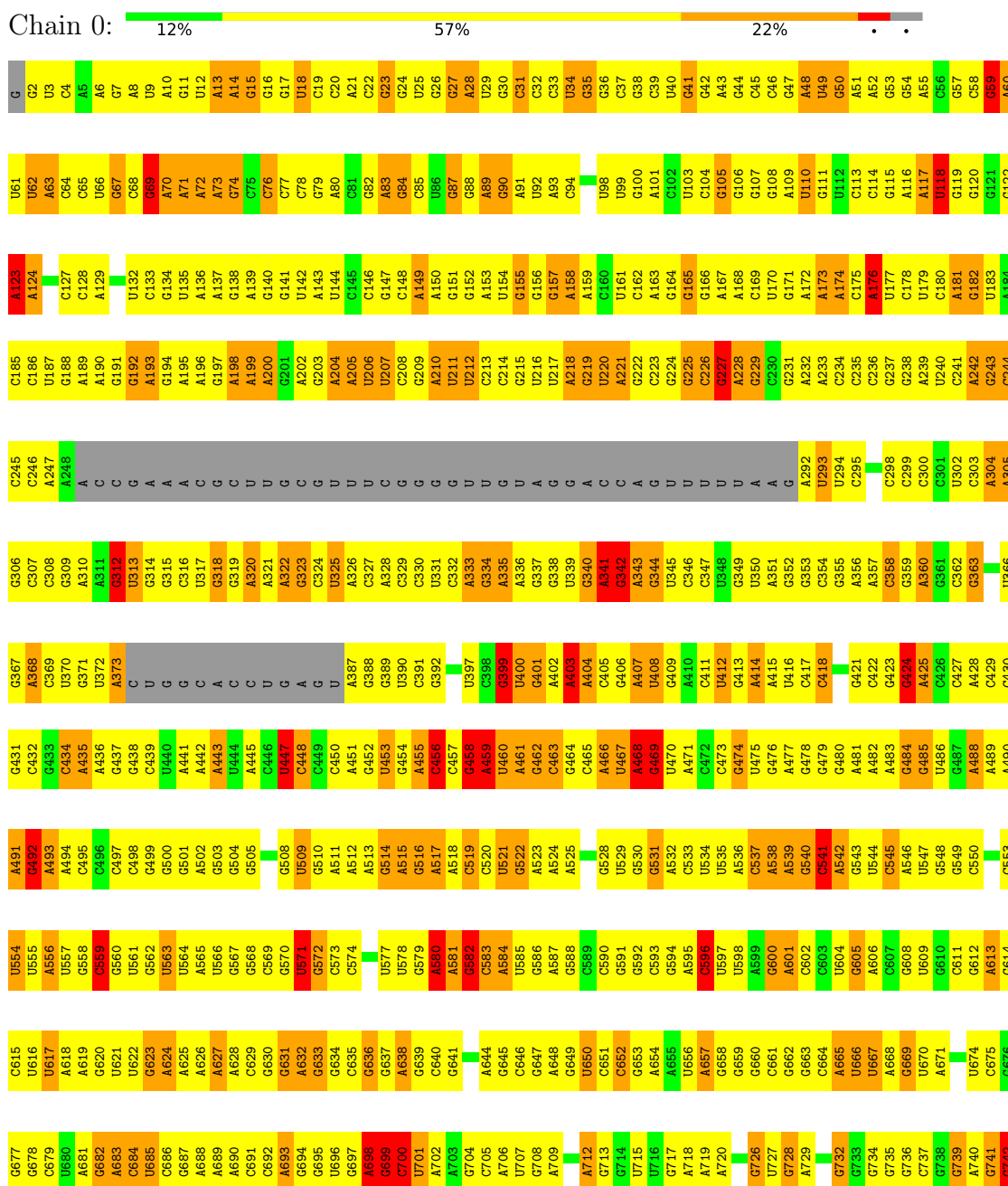


Mol	Chain	Residues	Atoms					ZeroOcc	AltConf
			Total	C	N	O	S		
3	0	1	36	30	1	4	1	0	0

### 3 Residue-property plots

These plots are drawn for all protein, RNA, DNA and oligosaccharide chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

- Molecule 1: 23S ribosomal RNA



U1676	C1616	U1551	C1491	A1429	U1365	C1305	U1244	U1119	G1058	A994	A929	A865	C8605	A743
C1677	G1617	C1552	A1492	G1430	A1366	U1306	G1245	C1120	A1059	A995	A950	U866	A806	C744
U1678	A1618	G1553	A1493	U1431	A1387	U1307	G1246	C1185	C1060	C996	G951	G867	A807	C745
U1679	G1620	A1555	G1494	G1432	G1368	C1308	U1247	A1122	A1061	C997	G952	U868	C808	G746
A1680	C1621	G1495	G1496	A1433	G1371	G1309	G1248	A1187	G1062	C998	G953	C869	C809	G750
A1681	G1622	G1496	C1497	U1434	A1372	C1310	G1249	U1124	G1063	A999	G954	G870	U810	G751
A1682	C1623	G1497	G1498	G1435	A1373	C1311	A1250	G1128	C1064	U871	C955	U871	G811	G752
G1683	A1624	A1498	A1499	G1436	G1373	G1312	G1251	G1129	A1065	A1001	A956	A872	G812	G753
A1684	G1625	G1499	G1500	A1437	C1374	U1313	C1252	A1129	G1066	U873	U873	A813	A813	U753
A1685	A1626	A1500	G1501	G1438	C1375	A1314	C1253	G1130	G1067	A874	G958	G874	G814	G754
A1686	C1627	G1501	C1376	A1439	C1376	A1315	G1254	G1131	A1068	G875	G959	G875	A815	C755
C1687	G1628	G1502	G1377	G1440	C1377	C1316	A1255	G1132	G1069	A876	G940	A876	U816	C756
U1688	A1629	G1503	A1378	A1441	G1378	G1317	C1256	G1133	G1070	U877	U941	G877	U817	G757
U1689	G1629	G1504	A1379	C1442	A1379	A1318	U1257	C1134	U1071	C878	U942	C878	G818	G758
G1690	C1630	U1505	C1380	G1443	G1380	C1319	G1258	G1197	G1072	A879	U943	A879	C819	C759
G1691	A1631	C1506	G1381	C1444	G1381	A1320	A1259	G1198	U1073	C880	U944	C880	U820	U760
C1692	A1632	A1507	G1382	U1445	G1382	G1322	G1260	A1199	G1074	U881	G945	U881	A821	G761
A1693	C1633	G1508	C1383	U1446	C1383	G1323	A1261	G1200	C1075	U882	U946	C882	G822	A762
A1694	A1634	A1509	G1384	U1447	A1384	G1323	U1262	G1201	A1012	C883	C947	C883	U823	A763
U1695	G1635	A1510	C1385	A1448	C1385	G1324	G1263	A1140	U1076	C884	C948	C884	U824	A764
C1696	G1636	A1511	A1386	C1449	A1386	U1325	C1264	U1141	G1079	A885	A856	C856	C825	C765
G1697	A1637	C1512	G1387	G1450	G1387	U1326	G1265	G1142	A1080	U886	A952	U826	U826	A766
C1698	G1638	G1513	G1388	C1451	G1387	C1327	G1266	A1143	C1016	G953	G953	C827	C827	G767
A1699	U1639	U1514	A1390	C1452	A1390	C1328	A1267	G1144	C1017	U889	U954	C859	C828	U768
C1700	C1640	U1515	A1391	A1453	U1392	C1329	U1268	G1145	C1018	U890	G955	C829	C829	C769
C1701	A1641	A1516	U1392	U1454	U1392	G1330	G1269	G1146	U1019	A891	A856	C830	C830	U770
C1702	G1642	C1517	G1393	C1455	G1393	G1331	C1270	G1147	A1020	G	G957	G851	G851	C771
A1703	A1643	C1518	G1394	G1456	A1400	U1332	C1271	G1148	A1081	C	G958	C	A832	G772
G1704	G1644	G1519	A1395	A1457	G1401	G1333	G1272	G1149	A1082	U	C959	C	A833	G773
U1705	U1645	U1520	C1396	U1459	G1402	C1340	U1280	G1150	C1023	C	C962	C	A834	A774
A1706	G1646	U1521	A1397	G1460	U1403	A1335	G1274	U1151	A1088	C	G962	C	U835	U775
A1707	U1647	C1522	G1398	C1461	C1404	G1336	A1275	C1152	C1089	C	G963	C	U836	G776
C1708	G1648	A1523	C1399	A1463	A1405	G1337	A1276	A1153	C1090	C	A964	C	U837	A777
A1649	A1650	C1524	G1401	A1464	A1405	U1338	G1278	A1154	U1092	U	G965	C	U838	G778
U1710	C1651	A1525	G1402	A1465	G1401	U1339	G1279	A1155	U1093	A	G966	C	U839	U779
C1711	G1652	U1591	U1526	A1466	U1403	C1340	U1281	U1156	C1094	C	C968	C	U840	U780
G1652	C1653	U1592	G1527	U1467	U1403	C1341	A1281	G1157	A1095	C	A970	C	G841	G781
C1653	A1654	C1528	C1528	U1468	C1404	U1342	A1282	G1158	A1096	A	A971	C	A842	U782
C1654	C1655	U1594	C1529	U1469	A1405	C1343	G1283	U1161	A1097	G	A972	C	G843	G783
C1655	U1656	A1595	U1530	G1470	A1406	C1344	G1284	C1162	G1098	C	C972	C	G844	U784
U1656	A1657	A1596	A1531	G1471	G1407	G1345	A1285	C1163	A1099	C	U973	C	U845	U785
A1657	C1657	A1597	A1532	C1472	A1408	C1346	U1286	C1164	G1100	U	U974	U	U846	U786
A1658	C1658	C1598	G1533	U1473	U1409	C1347	A1287	G1165	A1039	A	C975	A	C847	A787
U1659	G1659	A1599	A1534	A1474	U1410	C1348	A1288	A1166	A1040	C	G976	C	A848	G788
G1660	C1660	U1600	C1535	U1475	C1411	A1349	A1289	A1167	G1041	C	G977	C	G849	G789
C1661	C1662	G1601	G1536	G1476	C1412	G1350	A1290	G1168	U978	A911	A911	C850	C850	A790
C1662	G1663	G1602	U1537	C1477	G1413	G1351	G1291	C1169	A1043	A912	A912	C851	C851	G791
G1664	C1664	A1603	A1538	U1478	C1414	G1352	A1292	U1170	U1044	U	G980	U	U852	U792
C1665	A1666	A1604	U1539	G1479	A1416	A1353	A1293	A1171	G1045	U	C981	U	C853	G793
G1666	C1667	C1605	C1540	G1480	C1417	A1354	G1294	U1172	A1108	U	C982	U	G854	A794
A1667	A1667	G1606	G1541	U1481	C1418	A1355	U1295	G1173	A1109	C	C983	C	G855	A795
C1668	C1668	A1607	G1542	U1482	G1419	G1356	G1296	G1174	U1048	U	G920	U	A856	A796
A1669	A1669	U1608	A1543	G1483	A1420	U1357	A1297	A1175	C1111	A921	G920	A921	U857	A797
G1670	C1670	G1609	G1544	G1484	U1421	C1358	G1298	U1176	U1051	A	A922	A	G858	G798
A1671	C1671	A1610	A1545	G1485	A1422	G1359	A1299	C1177	G1052	U	C923	U	C859	C799
A1672	A1672	U1611	C1546	A1486	A1423	G1360	A1300	U1178	A1113	U	C924	U	U860	U800
C1673	C1673	U1612	U1547	C1487	U1424	G1361	U1301	A1179	C1053	U	U925	U	U861	A801
U1673	A1673	G1613	G1548	G1488	U1427	A1362	C1302	A1180	A1055	C	C926	C	A862	A802
C1674	C1674	C1614	U1549	G1489	C1427	C1363	U1303	C1181	U1056	U	A991	U	C863	C803
C1675	C1675	C1615	C1550	U1490	G1428	C1364	U1304	U1182	A1057	U	C993	U	C864	C804

A2552	G2495	A2432	U2366	G2300	G2238	U2177	G2055	G1995	C1862	C1801	G1741
G2553	C2496	G2433	A2367	A2301	C2239	U2178	C2056	A1996	U1863	A1802	G1742
C2554	U2497	G2434	G2368	G2302	C2240	C2179	U2057	A1997	G1866	G1803	C1743
U2498	U2498	G2435	G2369	C2303	U2241	A2119	U2058	A1998	G1867	U1804	G1744
C2499	C2499	U2436	G2370	G2304	C2242	C2120	U2059	U1999	A1868	G1805	C1745
U2501	U2501	A2371	A2371	A2306	C2243	A2121	A2060	U2000	A1869	A1746	G1746
G2502	G2502	A2438	A2372	A2307	C2244	C2122	C2061	G2001	A1870	G1807	G1747
U2503	G2375	U2439	G2375	A2308	A2245	C2123	U2062	U1998	U1871	C1808	U1748
G2504	G2376	U2440	G2376	G2309	A2246	C2124	A2063	U1939	U1872	G1809	G1749
G2505	U2441	U2441	U2441	G2311	A2247	C2125	U2064	C1940	A1872	U1810	A1750
C2506	G2378	C2444	G2378	A2312	U2251	U	G2065	U1941	U1873	A1811	A1751
U2507	G2379	C2445	G2379	A2313	A2252	U	G2066	G1942	C1876	U1812	U1752
G2508	U2381	C2446	A2381	A2314	A2253	U	C2067	C1943	C1877	A1813	G1753
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G2510	C2383	A2448	C2383	G2316	C2255	G	U2069	C1945	G1879	G1815	C1755
G2511	C2384	G2449	C2384	G2317	G2256	U	G2070	U1946	U1880	G1816	G1756
A2512	U2385	G2450	U2385	G2319	G2257	G2132	G2071	G1947	U1881	U1817	C1757
A2513	U2386	U2452	G2386	G2320	G2258	A2257	G2072	C1948	G1882	G1818	C1758
G2514	G2387	C2453	U2387	C2321	G2259	U2134	A2073	A1949	A1883	U1819	A1759
U2515	G2388	C2454	U2388	C2322	C2260	C2135	U2074	C1950	A1884	G1820	G1760
U2516	G2389	A2455	G2389	U2323	G2261	G	U2075	G1951	U1885	A1821	G1761
C2517	A2390	U2456	A2390	G2324	C2262	U2137	G2076	A1952	G1886	C1822	C1762
C2518	G2391	A2457	G2391	A2325	C2263	U2138	G2077	A1953	G1887	G1823	G1763
C2519	G2392	G2458	G2392	A2326	C2264	G2140	A2078	A1954	C1888	A1824	A1764
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A2521	G2394	C2461	G2394	C2329	A2266	G	U2081	G1956	G1890	U1826	U1766
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G2523	C2396	G2463	C2396	G2331	G2268	U1894	G1958	G1958	U1894	C1828	G1768
U2524	A2397	G2464	A2397	A2331	G2269	C	G2083	U1959	C2023	C1829	U1769
U2525	U2398	G2465	U2398	U2335	U2270	C	G2084	A1896	A1896	U1770	U1770
U2526	G2399	G2466	G2399	U2336	U2271	A	G2085	A1961	C1897	G1831	A1771
G2527	U2402	G2466	U2402	C2336	C2271	C	U2086	C2026	U1898	C1832	C1772
G2528	C2403	G2468	C2403	A2337	A2272	G	U2089	C2027	G1899	U1893	C1773
G2529	A2404	G2469	A2404	C2338	C2273	U	U2090	C2028	A1899	C1774	A1774
C2530	U2405	U2470	U2405	A2339	C2274	G	C2091	G2029	U1900	G1834	A1775
U2531	C2406	U2471	C2406	C2340	U2275	C	G2092	U2030	C1835	C1836	A1776
G2532	G2407	U2472	G2407	U2342	C2276	A	G	A2031	G1904	C1837	A1777
U2533	G2408	C2473	G2408	U2343	A2277	A	C2093	G2032	G1905	U1778	U1778
G2534	A2409	G2474	A2409	C2344	A2278	U	G2094	C2033	U1906	A1840	C1779
U2535	U2410	C2475	U2410	A2345	G2279	U	G2095	A2034	C1907	G1841	U1780
U2536	G2411	A2476	G2411	A2346	A2280	A	U2096	G2035	C1908	G1842	C1781
C2537	A2412	C2477	A2412	C2347	C2281	A	A2097	G2036	U1909	U1843	A1782
C2538	A2413	G2478	A2413	C2347	G2282	A	G	A2037	U1975	U1844	G1783
A2540	U2417	U2479	U2417	G2350	U2283	A	A	C2038	C1977	A1845	C1784
U2541	A2418	C2480	A2418	G2351	U2284	C2160	A	G2039	U1978	A1846	A1785
U2542	C2419	G2481	C2419	G2352	U2285	C2161	U	A2040	C1979	G1847	C1786
A2544	G2420	A2482	G2420	A2353	G2286	C2162	A	A2041	C1979	U1848	U1787
A2545	C2421	U2483	C2421	G2354	G2287	U2163	G2103	A2042	A1981	G1849	C1788
G2546	C2422	G2484	C2422	A2355	A2288	G2164	G2104	A2043	C1982	G1850	U1789
C2547	G2423	U2485	G2423	A2356	A2289	A2165	U2105	G2044	G1983	A1851	G1790
G2548	G2424	C2486	G2424	A2357	U2291	G2166	G2106	A2045	A1984	C1852	C1791
G2549	G2425	G2487	G2425	A2357	C2292	A2167	G2107	C2046	U1919	C1853	C1792
C2550	G2426	U2488	G2426	C2358	G2293	A2168	G2108	C2047	A1920	G1854	A1793
A2551	U2490	U2489	U2490	U2359	G2294	A2169	A2109	C2048	A1921	G1855	A1794
A2552	A2497	C2492	A2497	G2361	U2295	G2170	C	G2049	C1989	U1856	C1795
C2553	U2428	U2428	U2428	G2362	U2286	G2173	C	U2051	U1990	G1857	C1797
U2554	A2429	A2429	A2429	G2363	U2297	G2174	U	G2052	C1991	A1859	G1798
C2555	U2430	U2430	U2430	G2364	U2298	A2175	G	G2053	G1992	A1860	G1799
G2555	C2431	C2431	C2431	U2365	A2299	U2176	C	A2054	U1994	G1861	A1800

C2686	C2746	U2807	G2868
G2687	C2747	U2808	U2869
G2688	A2748	A2809	C2870
A2690	A2749	A2810	U2871
C2691	C2752	G2811	U2872
A2692	C2753	A2812	G2873
U2693	C2754	G2813	A2874
G2694	C2755	G2814	C2875
C2695	A2756	C2815	A2876
A2696	G2757	C2816	C
G2697	A2758	G2819	U
G2698	U2759	C2820	C
G2699	G2760	G2821	
U2700	A2761	U2822	
A2701	G2762	G2823	
G2702	U2763	A2824	
C2703	U2764	A2825	
U2704	C2765	C2826	
A2705	U2766	G2827	
U2706	C2767	C2828	
G2707	C2768	A2829	
U2708	C2769	U2830	
C2709	A2770	A2831	
G2710	C2771	G2832	
G2711	U2772	C2833	
G2712	G2773	A2834	
A2713	U2774	A2835	
A2714	U	U2836	
C2715	U	G2837	
G2716	A	U2838	
G2717		G2839	
A2718		U2840	
U2719		U2841	
U2720		C2842	
A2721		A2843	
C2722		G2844	
C2723		C2845	
G2724		G2846	
C2725		G2847	
U2726		A2848	
U2727		C2849	
A2728		U2850	
A2729		G2851	
A2730		G2852	
G2731		U2853	
C2732		G2854	
U2733		C2855	
A2734		U2856	
U2735		C2857	
C2736		A2858	
A2737		U2859	
A2738		C2860	
G2739		A2861	
C2740		G2862	
G2741		U2863	
G2742		C2864	
G2743		G2865	
A2744		A2866	
A2745		G2867	

- Molecule 2: 50S ribosomal protein L3

Chain B:  97%

H1
G110
S205
ALA
ALA
LYS
GLY
GLY
LYS

## 4 Data and refinement statistics

Property	Value	Source
Space group	I 2 2 2	Depositor
Cell constants a, b, c, $\alpha$ , $\beta$ , $\gamma$	170.12Å 405.87Å 695.24Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	29.96 – 3.66 29.96 – 3.66	Depositor EDS
% Data completeness (in resolution range)	93.0 (29.96-3.66) 93.1 (29.96-3.66)	Depositor EDS
$R_{merge}$	0.19	Depositor
$R_{sym}$	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ <sup>1</sup>	2.21 (at 3.65Å)	Xtrriage
Refinement program	CNS 1.1	Depositor
R, $R_{free}$	0.260 , 0.334 0.354 , 0.374	Depositor DCC
$R_{free}$ test set	12167 reflections (5.00%)	wwPDB-VP
Wilson B-factor (Å <sup>2</sup> )	135.2	Xtrriage
Anisotropy	0.524	Xtrriage
Bulk solvent $k_{sol}$ (e/Å <sup>3</sup> ), $B_{sol}$ (Å <sup>2</sup> )	0.18 , 80.8	EDS
L-test for twinning <sup>2</sup>	$\langle  L  \rangle = 0.46$ , $\langle L^2 \rangle = 0.28$	Xtrriage
Estimated twinning fraction	No twinning to report.	Xtrriage
$F_o, F_c$ correlation	0.84	EDS
Total number of atoms	59577	wwPDB-VP
Average B, all atoms (Å <sup>2</sup> )	122.0	wwPDB-VP

Xtrriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 1.92% of the height of the origin peak. No significant pseudotranslation is detected.*

<sup>1</sup>Intensities estimated from amplitudes.

<sup>2</sup>Theoretical values of  $\langle |L| \rangle$ ,  $\langle L^2 \rangle$  for acentric reflections are 0.5, 0.333 respectively for untwinned datasets, and 0.375, 0.2 for perfectly twinned datasets.



## 5 Model quality i

### 5.1 Standard geometry i

Bond lengths and bond angles in the following residue types are not validated in this section: G34

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	0.63	13/66441 (0.0%)	0.82	109/103632 (0.1%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	0	0	145

All (13) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	0	700	C	N1-C2	6.31	1.46	1.40
1	0	538	A	C5-C6	-6.22	1.35	1.41
1	0	2485	U	C1'-N1	-6.20	1.38	1.46
1	0	1711	C	N1-C2	6.13	1.46	1.40
1	0	2000	U	N1-C2	-6.11	1.33	1.38
1	0	2485	U	N1-C2	-5.98	1.33	1.38
1	0	774	A	C5-C6	-5.86	1.35	1.41
1	0	2485	U	C2-N3	-5.74	1.33	1.37
1	0	788	G	N9-C4	5.34	1.42	1.38
1	0	2485	U	C2'-C1'	-5.32	1.47	1.53
1	0	758	G	C5-C6	5.30	1.47	1.42
1	0	2560	G	C5-C6	5.22	1.47	1.42
1	0	462	G	C6-O6	5.11	1.28	1.24

All (109) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	2485	U	C5'-C4'-O4'	-10.78	96.16	109.10
1	0	2426	G	N9-C1'-C2'	9.36	126.16	114.00
1	0	1749	G	N9-C1'-C2'	8.80	125.44	114.00
1	0	843	G	N9-C1'-C2'	8.64	125.23	114.00
1	0	2426	G	O4'-C1'-N9	8.58	115.06	108.20
1	0	818	G	N9-C1'-C2'	8.32	124.82	114.00
1	0	699	G	N9-C1'-C2'	8.25	124.73	114.00
1	0	1264	C	N1-C1'-C2'	8.16	124.61	114.00
1	0	571	U	N1-C1'-C2'	8.12	124.56	114.00
1	0	1342	U	N1-C1'-C2'	7.90	124.27	114.00
1	0	2427	A	N9-C1'-C2'	7.84	124.19	114.00
1	0	788	G	N9-C1'-C2'	7.75	124.08	114.00
1	0	2237	C	N1-C1'-C2'	7.55	123.82	114.00
1	0	2426	G	C1'-O4'-C4'	-7.25	104.10	109.90
1	0	1777	A	N9-C1'-C2'	7.19	123.34	114.00
1	0	596	C	N1-C1'-C2'	7.07	123.19	114.00
1	0	2660	C	N1-C1'-C2'	7.05	123.17	114.00
1	0	804	C	O4'-C1'-N1	7.00	113.80	108.20
1	0	2848	A	N9-C1'-C2'	6.95	123.04	114.00
1	0	1410	U	N1-C1'-C2'	6.92	123.00	114.00
1	0	2485	U	C5-C6-N1	-6.88	119.26	122.70
1	0	2810	A	N9-C1'-C2'	6.86	122.92	114.00
1	0	1975	G	N9-C1'-C2'	6.83	122.88	114.00
1	0	468	A	N9-C1'-C2'	6.71	122.73	114.00
1	0	2496	C	N1-C1'-C2'	6.70	122.70	114.00
1	0	2485	U	OP2-P-O3'	6.68	119.90	105.20
1	0	2560	G	N9-C1'-C2'	6.68	122.68	114.00
1	0	1410	U	O4'-C1'-N1	6.59	113.47	108.20
1	0	559	C	N1-C1'-C2'	-6.48	104.87	112.00
1	0	2668	U	N1-C1'-C2'	6.48	122.42	114.00
1	0	1474	A	N9-C1'-C2'	6.42	122.34	114.00
1	0	176	A	N9-C1'-C2'	6.41	122.34	114.00
1	0	1278	A	N9-C1'-C2'	6.41	122.34	114.00
1	0	1357	U	N1-C1'-C2'	6.36	122.27	114.00
1	0	1033	G	O4'-C1'-N9	6.36	113.29	108.20
1	0	1684	G	N9-C1'-C2'	6.27	122.15	114.00
1	0	801	A	N9-C1'-C2'	6.26	122.14	114.00
1	0	1285	A	N9-C1'-C2'	6.26	122.14	114.00
1	0	458	G	C2'-C3'-O3'	6.21	123.64	113.70
1	0	2545	A	N9-C1'-C2'	6.19	122.04	114.00
1	0	541	C	C1'-O4'-C4'	-6.17	104.97	109.90
1	0	1684	G	O4'-C1'-N9	-6.16	103.27	108.20
1	0	2036	G	N9-C1'-C2'	-6.16	105.22	112.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	813	A	N9-C1'-C2'	6.11	121.94	114.00
1	0	804	C	C1'-O4'-C4'	-6.06	105.05	109.90
1	0	1398	G	N9-C1'-C2'	6.05	121.87	114.00
1	0	1723	U	N1-C1'-C2'	6.03	121.84	114.00
1	0	447	U	N1-C1'-C2'	6.03	121.83	114.00
1	0	69	G	N9-C1'-C2'	6.02	121.83	114.00
1	0	871	U	N1-C1'-C2'	6.02	121.83	114.00
1	0	2485	U	N1-C1'-C2'	-6.01	105.39	112.00
1	0	796	A	N9-C1'-C2'	-5.99	105.41	112.00
1	0	2034	A	N9-C1'-C2'	5.98	121.77	114.00
1	0	582	G	N9-C1'-C2'	5.95	121.73	114.00
1	0	2330	G	N9-C1'-C2'	5.92	121.70	114.00
1	0	804	C	N1-C1'-C2'	5.92	121.69	114.00
1	0	2485	U	OP1-P-O3'	-5.91	92.20	105.20
1	0	580	A	N9-C1'-C2'	5.88	121.65	114.00
1	0	698	A	N9-C1'-C2'	5.84	121.59	114.00
1	0	399	G	N9-C1'-C2'	5.80	121.54	114.00
1	0	424	G	N9-C1'-C2'	5.80	121.54	114.00
1	0	1355	A	N9-C1'-C2'	5.74	121.46	114.00
1	0	2756	A	N9-C1'-C2'	5.70	121.41	114.00
1	0	2634	G	N9-C1'-C2'	5.69	121.39	114.00
1	0	31	C	N1-C1'-C2'	-5.68	105.75	112.00
1	0	312	G	N9-C1'-C2'	5.67	121.36	114.00
1	0	1624	A	N9-C1'-C2'	5.63	121.32	114.00
1	0	1314	A	N9-C1'-C2'	5.62	121.30	114.00
1	0	777	A	N9-C1'-C2'	5.61	121.30	114.00
1	0	1261	G	N9-C1'-C2'	5.61	121.30	114.00
1	0	1664	G	N9-C1'-C2'	5.59	121.27	114.00
1	0	1250	A	N9-C1'-C2'	5.52	121.18	114.00
1	0	2016	A	N9-C1'-C2'	5.50	121.15	114.00
1	0	2521	A	N9-C1'-C2'	5.49	121.13	114.00
1	0	118	U	N1-C1'-C2'	5.47	121.11	114.00
1	0	765	C	O4'-C1'-N1	5.47	112.58	108.20
1	0	545	C	N1-C1'-C2'	-5.46	106.00	112.00
1	0	1337	G	N9-C1'-C2'	5.45	121.08	114.00
1	0	59	G	N9-C1'-C2'	5.39	121.01	114.00
1	0	1664	G	O5'-P-OP1	-5.38	100.86	105.70
1	0	1581	C	N1-C1'-C2'	5.37	120.98	114.00
1	0	1684	G	O5'-P-OP1	-5.31	100.92	105.70
1	0	2485	U	C2-N3-C4	-5.31	123.81	127.00
1	0	123	A	N9-C1'-C2'	5.30	120.89	114.00
1	0	459	A	O4'-C1'-N9	5.29	112.44	108.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	469	G	N9-C1'-C2'	5.28	120.87	114.00
1	0	1033	G	N9-C1'-C2'	5.27	120.85	114.00
1	0	2044	G	N9-C1'-C2'	5.27	120.85	114.00
1	0	541	C	O4'-C1'-N1	5.26	112.41	108.20
1	0	759	C	N1-C1'-C2'	5.23	120.80	114.00
1	0	1926	U	N1-C1'-C2'	5.20	120.76	114.00
1	0	860	U	N1-C1'-C2'	5.20	120.76	114.00
1	0	1033	G	C1'-O4'-C4'	-5.19	105.75	109.90
1	0	2603	G	N9-C1'-C2'	-5.18	106.30	112.00
1	0	1339	U	OP2-P-O3'	5.17	116.57	105.20
1	0	2485	U	C4'-C3'-O3'	5.17	123.33	113.00
1	0	751	G	N9-C1'-C2'	5.17	120.72	114.00
1	0	2666	U	N1-C1'-C2'	5.16	120.71	114.00
1	0	699	G	O4'-C1'-N9	5.15	112.32	108.20
1	0	1812	U	N1-C1'-C2'	5.15	120.69	114.00
1	0	2557	G	O4'-C1'-N9	5.15	112.32	108.20
1	0	1398	G	O4'-C1'-N9	5.14	112.31	108.20
1	0	795	A	N9-C1'-C2'	5.13	120.67	114.00
1	0	1749	G	C2'-C3'-O3'	5.13	121.90	113.70
1	0	1032	A	N9-C1'-C2'	-5.09	106.40	112.00
1	0	1006	C	N1-C1'-C2'	5.05	120.56	114.00
1	0	2556	A	N9-C1'-C2'	-5.05	106.45	112.00
1	0	1937	G	N9-C1'-C2'	5.04	120.55	114.00
1	0	538	A	N9-C1'-C2'	-5.00	106.50	112.00

There are no chirality outliers.

All (145) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	0	1033	G	Sidechain
1	0	1036	G	Sidechain
1	0	1138	A	Sidechain
1	0	1142	G	Sidechain
1	0	118	U	Sidechain
1	0	1199	U	Sidechain
1	0	1202	U	Sidechain
1	0	1206	G	Sidechain
1	0	1224	A	Sidechain
1	0	123	A	Sidechain
1	0	1250	A	Sidechain
1	0	1251	G	Sidechain
1	0	1256	C	Sidechain

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>Group</b>
1	0	1261	G	Sidechain
1	0	1262	U	Sidechain
1	0	1270	C	Sidechain
1	0	1280	U	Sidechain
1	0	1281	A	Sidechain
1	0	1288	A	Sidechain
1	0	1295	U	Sidechain
1	0	1314	A	Sidechain
1	0	1324	G	Sidechain
1	0	1342	U	Sidechain
1	0	1353	A	Sidechain
1	0	1357	U	Sidechain
1	0	1358	C	Sidechain
1	0	1373	G	Sidechain
1	0	1410	U	Sidechain
1	0	1458	A	Sidechain
1	0	1474	A	Sidechain
1	0	1478	U	Sidechain
1	0	15	G	Sidechain
1	0	1539	U	Sidechain
1	0	1574	A	Sidechain
1	0	1618	U	Sidechain
1	0	1624	A	Sidechain
1	0	1634	A	Sidechain
1	0	1635	G	Sidechain
1	0	1645	U	Sidechain
1	0	165	G	Sidechain
1	0	1669	A	Sidechain
1	0	1670	G	Sidechain
1	0	1683	G	Sidechain
1	0	1694	A	Sidechain
1	0	1695	U	Sidechain
1	0	1710	U	Sidechain
1	0	1723	U	Sidechain
1	0	1746	A	Sidechain
1	0	1749	G	Sidechain
1	0	1771	A	Sidechain
1	0	1783	G	Sidechain
1	0	1787	U	Sidechain
1	0	18	U	Sidechain
1	0	1811	A	Sidechain
1	0	1819	U	Sidechain

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>Group</b>
1	0	1926	U	Sidechain
1	0	1975	G	Sidechain
1	0	1987	G	Sidechain
1	0	1992	G	Sidechain
1	0	1993	G	Sidechain
1	0	2010	G	Sidechain
1	0	2011	U	Sidechain
1	0	2017	U	Sidechain
1	0	2038	C	Sidechain
1	0	211	U	Sidechain
1	0	212	U	Sidechain
1	0	221	A	Sidechain
1	0	2217	G	Sidechain
1	0	2237	C	Sidechain
1	0	2252	A	Sidechain
1	0	2253	A	Sidechain
1	0	2254	C	Sidechain
1	0	227	G	Sidechain
1	0	2331	A	Sidechain
1	0	2335	U	Sidechain
1	0	2411	A	Sidechain
1	0	2417	U	Sidechain
1	0	2427	A	Sidechain
1	0	2451	G	Sidechain
1	0	2463	G	Sidechain
1	0	2491	C	Sidechain
1	0	2492	G	Sidechain
1	0	2496	C	Sidechain
1	0	2548	G	Sidechain
1	0	2553	G	Sidechain
1	0	2556	A	Sidechain
1	0	2590	U	Sidechain
1	0	2599	U	Sidechain
1	0	2613	A	Sidechain
1	0	2615	U	Sidechain
1	0	2626	U	Sidechain
1	0	2660	C	Sidechain
1	0	2666	U	Sidechain
1	0	2677	U	Sidechain
1	0	2700	U	Sidechain
1	0	2769	C	Sidechain
1	0	2806	G	Sidechain

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>	<b>Group</b>
1	0	2813	G	Sidechain
1	0	2824	C	Sidechain
1	0	2836	U	Sidechain
1	0	341	A	Sidechain
1	0	342	G	Sidechain
1	0	399	G	Sidechain
1	0	403	A	Sidechain
1	0	407	A	Sidechain
1	0	41	G	Sidechain
1	0	443	A	Sidechain
1	0	456	C	Sidechain
1	0	469	G	Sidechain
1	0	474	G	Sidechain
1	0	492	G	Sidechain
1	0	508	G	Sidechain
1	0	509	U	Sidechain
1	0	521	U	Sidechain
1	0	522	G	Sidechain
1	0	531	G	Sidechain
1	0	541	C	Sidechain
1	0	559	C	Sidechain
1	0	563	U	Sidechain
1	0	582	G	Sidechain
1	0	596	C	Sidechain
1	0	650	U	Sidechain
1	0	67	G	Sidechain
1	0	69	G	Sidechain
1	0	693	A	Sidechain
1	0	701	U	Sidechain
1	0	742	G	Sidechain
1	0	759	C	Sidechain
1	0	765	C	Sidechain
1	0	794	A	Sidechain
1	0	801	A	Sidechain
1	0	804	C	Sidechain
1	0	805	G	Sidechain
1	0	814	G	Sidechain
1	0	816	U	Sidechain
1	0	823	U	Sidechain
1	0	843	G	Sidechain
1	0	868	U	Sidechain
1	0	873	U	Sidechain

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Mol	Chain	Res	Type	Group
1	0	922	A	Sidechain
1	0	940	G	Sidechain
1	0	944	A	Sidechain
1	0	953	G	Sidechain
1	0	954	U	Sidechain
1	0	956	A	Sidechain

## 5.2 Too-close contacts [i](#)

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	0	59336	0	29905	4618	0
2	B	205	0	0	1	0
3	0	36	0	47	12	0
All	All	59577	0	29952	4621	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 52.

All (4621) 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)
1:0:984:A:H1'	1:0:1202:U:C6	1.63	1.33
1:0:2691:C:H2'	1:0:2692:A:C5'	1.60	1.29
1:0:2691:C:C2'	1:0:2692:A:H5''	1.64	1.25
1:0:983:G:OP2	1:0:985:G:H5''	1.34	1.25
1:0:1279:G:O2'	1:0:1280:U:OP2	1.53	1.23
1:0:1279:G:H1'	1:0:1280:U:C5	1.73	1.22
1:0:788:G:H22	1:0:801:A:P	1.62	1.22
1:0:13:A:O2'	1:0:14:A:O5'	1.58	1.21
1:0:984:A:H1'	1:0:1202:U:C5	1.78	1.19
1:0:539:A:N6	1:0:2024:U:H3	1.43	1.17
1:0:2483:U:H2'	1:0:2484:G:H5'	1.27	1.16
1:0:976:C:H5'	1:0:2252:A:H1'	1.28	1.16
1:0:2198:U:C3'	1:0:2199:C:H4'	1.77	1.14
1:0:631:G:H4'	1:0:632:A:H5''	1.21	1.13

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1440:G:H3'	1:0:1441:A:C5'	1.77	1.13
1:0:1715:A:O2'	1:0:1716:G:H3'	1.49	1.13
1:0:1440:G:C3'	1:0:1441:A:H5''	1.79	1.13
1:0:88:G:H3'	1:0:89:A:H5''	1.14	1.12
1:0:219:G:N2	1:0:232:A:OP2	1.82	1.12
1:0:1279:G:H1'	1:0:1280:U:H5	0.95	1.11
1:0:940:G:H3'	1:0:941:U:H5''	1.33	1.10
1:0:13:A:H1'	1:0:14:A:C2	1.83	1.10
1:0:69:G:H4'	1:0:70:A:OP1	1.47	1.10
1:0:751:G:H21	1:0:752:G:H1'	0.99	1.09
1:0:577:U:H5'	1:0:956:A:H62	1.18	1.08
1:0:985:G:H8	1:0:1001:A:N6	1.51	1.07
1:0:2498:U:H4'	1:0:2499:C:OP1	1.53	1.07
1:0:58:C:H3'	1:0:59:G:H5''	1.28	1.07
1:0:751:G:N2	1:0:752:G:H1'	1.67	1.07
1:0:1278:A:O2'	1:0:1279:G:O5'	1.71	1.07
1:0:168:A:H2'	1:0:169:C:C6	1.91	1.06
1:0:2516:U:H2'	1:0:2517:C:H6	1.18	1.06
1:0:918:A:H2'	1:0:919:U:H5''	1.35	1.06
1:0:1938:U:O2'	1:0:1939:U:H5'	1.57	1.05
1:0:2672:U:H2'	1:0:2673:G:H8	1.22	1.05
1:0:2198:U:H3'	1:0:2199:C:C4'	1.87	1.04
1:0:2693:U:C6	1:0:2695:C:OP2	2.10	1.04
1:0:2693:U:C5	1:0:2695:C:OP2	2.11	1.04
1:0:2782:G:H3'	1:0:2783:U:C5'	1.87	1.04
1:0:983:G:OP2	1:0:985:G:C5'	2.06	1.03
1:0:1624:A:O2'	1:0:1625:A:H5'	1.58	1.03
1:0:614:G:H22	1:0:634:G:N2	1.56	1.02
1:0:841:G:H2'	1:0:842:A:C8	1.95	1.02
1:0:1682:A:C2'	1:0:1683:G:H5''	1.89	1.02
1:0:590:C:H2'	1:0:591:G:H8	1.21	1.02
1:0:1674:C:H2'	1:0:1675:C:H6	1.24	1.02
1:0:1572:C:H2'	1:0:1573:G:H5''	1.41	1.01
1:0:2782:G:H3'	1:0:2783:U:H5''	1.39	1.01
1:0:813:A:O2'	1:0:814:G:H5''	1.60	1.01
1:0:2042:A:N3	1:0:2482:A:N6	2.08	1.00
1:0:66:U:H2'	1:0:67:G:C8	1.96	1.00
1:0:2047:C:N4	1:0:2425:G:N1	2.08	1.00
1:0:788:G:H5'	1:0:790:A:H1'	1.41	1.00
1:0:788:G:N2	1:0:801:A:P	2.35	0.99
1:0:1682:A:H2'	1:0:1683:G:H5''	1.43	0.99

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:219:G:H1'	1:0:220:U:H5	1.23	0.99
1:0:788:G:N2	1:0:800:U:H2'	1.78	0.99
1:0:68:C:O2	1:0:72:A:H1'	1.61	0.99
1:0:1586:A:H2'	1:0:1587:A:H8	1.28	0.99
1:0:1625:A:H1'	1:0:1632:A:O2'	1.61	0.99
1:0:2483:U:C2'	1:0:2484:G:H5'	1.93	0.98
1:0:173:A:H61	1:0:844:G:H21	1.04	0.98
1:0:1690:U:H2'	1:0:1691:G:H5'	1.44	0.97
1:0:1947:G:H4'	1:0:1948:C:OP2	1.64	0.97
1:0:2047:C:N4	1:0:2425:G:H1	1.61	0.97
1:0:2689:C:O2'	1:0:2690:A:H5'	1.63	0.97
1:0:1279:G:O2'	1:0:1280:U:P	2.22	0.96
1:0:2505:G:H22	1:0:2517:C:H1'	1.26	0.96
1:0:71:A:H4'	1:0:72:A:OP1	1.65	0.96
1:0:2636:A:H2'	1:0:2637:C:H5'	1.48	0.96
1:0:2876:C:H2'	1:0:2877:A:H8	1.29	0.96
1:0:13:A:N6	1:0:535:U:C5	2.33	0.95
1:0:13:A:H1'	1:0:14:A:H2	1.24	0.95
1:0:751:G:H21	1:0:752:G:C1'	1.79	0.95
1:0:1679:U:H2'	1:0:1680:U:H5''	1.47	0.95
1:0:2505:G:N2	1:0:2517:C:H1'	1.82	0.95
1:0:218:A:O2'	1:0:219:G:O5'	1.84	0.95
1:0:2408:G:H5'	1:0:2409:A:OP2	1.66	0.95
1:0:922:A:H2'	1:0:923:A:C8	2.01	0.94
1:0:1299:A:H2'	1:0:1301:U:OP2	1.67	0.94
1:0:1871:G:H3'	1:0:1871:G:N3	1.81	0.94
1:0:2781:G:H2'	1:0:2782:G:H1'	1.46	0.94
1:0:1383:C:H2'	1:0:1384:G:H8	1.33	0.94
1:0:1775:A:H4'	1:0:1776:A:O5'	1.67	0.94
1:0:539:A:N6	1:0:2024:U:N3	2.16	0.94
1:0:631:G:H4'	1:0:632:A:C5'	1.97	0.94
1:0:1279:G:N2	1:0:1995:G:H2'	1.83	0.94
1:0:2047:C:H42	1:0:2425:G:H1	0.94	0.94
1:0:8:A:H2'	1:0:9:U:O4'	1.68	0.94
1:0:590:C:H2'	1:0:591:G:C8	2.03	0.94
1:0:619:A:H61	1:0:629:C:H42	1.16	0.93
1:0:941:U:H2'	1:0:942:U:O4'	1.68	0.93
1:0:873:U:H1'	1:0:2246:A:H5''	1.47	0.93
1:0:1496:G:H22	1:0:1527:G:H22	0.97	0.93
1:0:1468:A:H8	1:0:1468:A:O5'	1.50	0.93
1:0:788:G:N2	1:0:800:U:C2'	2.32	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:698:A:H4'	1:0:700:C:H5	1.33	0.93
1:0:700:C:H2'	1:0:701:U:C2	2.04	0.93
1:0:1166:A:H2'	1:0:1167:A:H5''	1.49	0.93
1:0:1242:A:H2'	1:0:1243:G:H8	1.34	0.93
1:0:1386:A:H5''	1:0:2191:A:H62	1.34	0.93
1:0:168:A:H2'	1:0:169:C:H6	1.35	0.92
1:0:1496:G:N2	1:0:1527:G:H22	1.67	0.92
1:0:1528:C:H3'	1:0:1529:C:H5''	1.51	0.92
1:0:2565:C:H2'	1:0:2566:A:H5'	1.51	0.92
1:0:343:A:H2'	1:0:345:U:OP2	1.70	0.92
1:0:1496:G:H1	1:0:1527:G:H1	1.18	0.92
1:0:699:G:H21	1:0:801:A:H61	1.07	0.92
1:0:459:A:C2	1:0:466:A:N7	2.38	0.92
1:0:1541:G:N2	1:0:1562:G:H1	1.68	0.92
1:0:2780:A:H2'	1:0:2781:G:C8	2.05	0.92
1:0:2780:A:H2'	1:0:2781:G:H8	1.35	0.91
1:0:219:G:H1'	1:0:220:U:C5	2.04	0.91
1:0:940:G:H3'	1:0:941:U:C5'	2.00	0.91
1:0:1774:A:H2	1:0:2567:G:C8	1.88	0.91
1:0:2482:A:H4'	1:0:2483:U:OP1	1.68	0.91
1:0:699:G:H21	1:0:801:A:N6	1.67	0.91
1:0:1079:G:H2'	1:0:1080:A:H5'	1.51	0.91
1:0:2352:A:H2'	1:0:2353:G:C8	2.06	0.91
1:0:1978:U:H3	1:0:1979:C:N4	1.69	0.91
1:0:612:G:O3'	1:0:613:A:H4'	1.70	0.91
1:0:808:C:O2'	1:0:809:C:H5'	1.71	0.91
1:0:1787:U:H2'	1:0:1788:C:C6	2.06	0.91
1:0:67:G:H2'	1:0:68:C:H6	1.35	0.91
1:0:1166:A:C2'	1:0:1167:A:H5''	2.01	0.91
1:0:1938:U:O3'	1:0:1939:U:H6	1.53	0.91
1:0:202:A:C2	1:0:203:G:H1'	2.07	0.90
1:0:1380:C:H2'	1:0:1381:G:H5'	1.54	0.90
1:0:1896:A:H61	1:0:1899:A:H3'	1.33	0.90
1:0:2198:U:H3'	1:0:2199:C:H4'	0.93	0.90
1:0:225:G:O5'	1:0:226:C:H5'	1.71	0.90
1:0:536:A:N6	1:0:2605:C:H4'	1.86	0.90
1:0:651:C:H2'	1:0:652:C:H5''	1.53	0.90
1:0:2781:G:H2'	1:0:2782:G:C1'	2.02	0.90
1:0:2046:C:H1'	3:0:0:G34:S1	2.12	0.90
1:0:788:G:C2	1:0:800:U:H2'	2.06	0.90
1:0:788:G:N2	1:0:800:U:C3'	2.35	0.90

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2770:A:H5'	1:0:2867:G:N2	1.87	0.90
1:0:2212:U:H2'	1:0:2213:G:C8	2.06	0.89
1:0:2516:U:H2'	1:0:2517:C:C6	2.07	0.89
1:0:482:A:H2'	1:0:483:A:O4'	1.72	0.89
1:0:922:A:H2'	1:0:923:A:H8	1.36	0.89
1:0:173:A:N6	1:0:844:G:H21	1.69	0.89
1:0:619:A:H2'	1:0:620:G:H8	1.33	0.89
1:0:1354:A:H3'	1:0:1410:U:C2	2.08	0.89
1:0:2431:C:O2	1:0:2432:A:C8	2.26	0.89
1:0:1572:C:C2'	1:0:1573:G:H5''	2.02	0.89
1:0:536:A:C6	1:0:2605:C:H4'	2.08	0.89
1:0:788:G:H2'	1:0:807:A:N7	1.88	0.89
1:0:2222:U:H2'	1:0:2223:U:H6	1.38	0.89
3:0:0:G34:H10	3:0:0:G34:H14	1.51	0.89
1:0:1187:A:H2'	1:0:1188:A:H8	1.38	0.88
1:0:2661:G:O6	1:0:2708:U:H1'	1.73	0.88
1:0:1337:G:H1'	1:0:1632:A:N6	1.89	0.88
1:0:2628:C:H2'	1:0:2629:U:C6	2.09	0.88
1:0:836:G:H2'	1:0:837:U:C6	2.09	0.88
1:0:877:G:O2'	1:0:878:C:H5'	1.73	0.88
1:0:1830:C:N4	1:0:1881:U:H3'	1.88	0.88
1:0:547:U:H2'	1:0:548:G:H8	1.39	0.88
1:0:1313:U:H4'	1:0:1314:A:O5'	1.72	0.88
1:0:1474:A:O2'	1:0:1475:U:H5'	1.73	0.88
1:0:614:G:N2	1:0:634:G:N2	2.20	0.88
1:0:2206:C:H2'	1:0:2207:G:O4'	1.73	0.88
1:0:1373:G:H1	1:0:2192:U:H3	1.22	0.87
1:0:2014:A:H62	1:0:2477:C:C1'	1.87	0.87
1:0:2469:G:H5''	1:0:2470:U:OP1	1.73	0.87
1:0:2564:U:O2	1:0:2564:U:H2'	1.74	0.87
1:0:2759:U:H4'	1:0:2760:G:OP2	1.74	0.87
1:0:2672:U:H2'	1:0:2673:G:C8	2.09	0.87
1:0:357:A:H2'	1:0:358:C:H5'	1.56	0.87
1:0:1181:C:H3'	1:0:1182:U:H5''	1.55	0.87
1:0:1225:G:H2'	1:0:1249:G:N2	1.89	0.87
1:0:1288:A:N6	1:0:1309:G:H5'	1.89	0.87
1:0:1787:U:H2'	1:0:1788:C:H6	1.36	0.87
1:0:953:G:H2'	1:0:954:U:H5'	1.56	0.87
1:0:2172:U:H2'	1:0:2173:G:H8	1.38	0.87
1:0:2356:A:H2'	1:0:2357:A:C8	2.10	0.87
1:0:1055:A:H61	1:0:1123:G:H1'	1.40	0.87

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1495:G:H2'	1:0:1496:G:H8	1.40	0.87
1:0:83:A:N6	1:0:98:U:H1'	1.90	0.86
1:0:460:U:H4'	1:0:461:A:OP2	1.74	0.86
1:0:1198:C:H5''	1:0:1199:U:H5''	1.56	0.86
1:0:1586:A:H2'	1:0:1587:A:C8	2.09	0.86
1:0:537:C:C6	1:0:2759:U:C6	2.63	0.86
1:0:2042:A:C2	1:0:2482:A:N6	2.43	0.86
1:0:885:A:H2'	1:0:886:A:H8	1.40	0.86
1:0:322:A:H1'	1:0:343:A:C1'	2.06	0.86
1:0:539:A:H62	1:0:2024:U:H3	0.87	0.86
1:0:699:G:N2	1:0:801:A:H61	1.73	0.86
1:0:972:C:C2	1:0:2014:A:H2	1.93	0.86
1:0:2042:A:C4	1:0:2482:A:N6	2.42	0.86
1:0:88:G:H3'	1:0:89:A:C5'	2.03	0.86
1:0:1454:U:H2'	1:0:1455:C:H6	1.40	0.86
1:0:2138:U:H2'	1:0:2139:G:O4'	1.75	0.86
1:0:1977:C:C2	1:0:1978:U:H5	1.93	0.85
1:0:1137:A:H5''	1:0:1138:A:OP1	1.76	0.85
1:0:1496:G:H22	1:0:1527:G:N2	1.73	0.85
1:0:782:U:O2	1:0:1392:U:H1'	1.76	0.85
1:0:1625:A:H3'	1:0:1625:A:N3	1.91	0.85
1:0:984:A:N3	1:0:1201:G:N2	2.24	0.85
1:0:2839:G:H2'	1:0:2840:U:C6	2.10	0.85
1:0:1499:A:H2'	1:0:1500:U:C6	2.12	0.85
1:0:2093:G:H2'	1:0:2094:C:C5	2.11	0.85
1:0:2265:A:H1'	1:0:2325:A:H61	1.41	0.85
1:0:984:A:C2	1:0:1201:G:N2	2.45	0.85
1:0:50:G:H22	1:0:118:U:H3	1.24	0.85
1:0:77:C:H2'	1:0:78:C:H6	1.42	0.85
1:0:1386:A:H5''	1:0:2191:A:N6	1.90	0.85
1:0:1679:U:C2'	1:0:1680:U:H5''	2.04	0.85
1:0:219:G:O2'	1:0:220:U:C6	2.30	0.85
1:0:1073:G:H2'	1:0:1074:G:H4'	1.59	0.85
1:0:1301:U:O2'	1:0:1664:G:N2	2.09	0.85
1:0:2811:G:H2'	1:0:2812:A:H8	1.41	0.85
1:0:2014:A:N7	1:0:2477:C:O2	2.10	0.84
1:0:139:A:H2'	1:0:140:G:H8	1.41	0.84
1:0:2484:G:H4'	3:0:0:G34:H22	1.58	0.84
1:0:2628:C:H2'	1:0:2629:U:H6	1.42	0.84
1:0:13:A:C8	1:0:13:A:OP2	2.30	0.84
1:0:58:C:H42	1:0:73:A:N6	1.75	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1469:U:H5'	1:0:1470:G:OP2	1.77	0.84
1:0:2736:U:O2'	1:0:2737:A:H5'	1.76	0.84
1:0:1770:U:O4	1:0:1774:A:H2'	1.77	0.84
1:0:585:U:H2'	1:0:586:G:C8	2.13	0.84
1:0:1345:G:C4	1:0:1625:A:N1	2.46	0.84
1:0:1468:A:H5''	1:0:1472:C:N4	1.91	0.84
1:0:1563:U:H2'	1:0:1564:U:C6	2.13	0.84
1:0:1682:A:H2'	1:0:1683:G:C5'	2.07	0.84
1:0:564:U:H2'	1:0:565:A:C8	2.13	0.84
1:0:619:A:H2'	1:0:620:G:C8	2.12	0.84
1:0:190:A:H2'	1:0:191:G:C8	2.12	0.84
1:0:359:G:H2'	1:0:360:A:H8	1.43	0.84
1:0:1978:U:N3	1:0:1979:C:N4	2.26	0.84
1:0:987:G:H5'	1:0:1167:A:H62	1.43	0.83
1:0:1384:G:H21	1:0:1385:C:H41	1.22	0.83
1:0:2175:A:H2'	1:0:2176:U:C6	2.13	0.83
1:0:2532:G:C2	1:0:2533:U:H1'	2.13	0.83
1:0:2783:U:H4'	1:0:2783:U:OP1	1.78	0.83
1:0:616:U:H2'	1:0:617:U:H5''	1.56	0.83
1:0:719:A:H2'	1:0:720:A:O4'	1.78	0.83
1:0:1680:U:H6	1:0:1680:U:H5'	1.42	0.83
1:0:1938:U:O3'	1:0:1939:U:C6	2.30	0.83
1:0:577:U:H5'	1:0:956:A:N6	1.94	0.83
1:0:1534:A:H2'	1:0:1535:C:H5'	1.59	0.83
1:0:219:G:O2'	1:0:220:U:H6	1.60	0.83
1:0:1466:C:H2'	1:0:1467:U:O4'	1.78	0.83
1:0:1830:C:H41	1:0:1881:U:H3'	1.41	0.83
1:0:1288:A:H62	1:0:1309:G:C4'	1.91	0.83
1:0:1438:G:H2'	1:0:1439:G:O4'	1.79	0.83
1:0:1804:U:H2'	1:0:1805:G:H8	1.43	0.83
1:0:2688:G:O2'	1:0:2689:C:H5'	1.78	0.83
1:0:2038:C:H4'	1:0:2039:G:H5''	1.60	0.83
1:0:644:A:H2'	1:0:645:G:H5'	1.60	0.83
1:0:2737:A:H2'	1:0:2738:A:C5'	2.09	0.83
1:0:2764:U:H2'	1:0:2765:C:H6	1.44	0.82
1:0:411:C:H3'	1:0:412:U:H5''	1.61	0.82
1:0:968:C:N4	1:0:970:A:N3	2.27	0.82
1:0:983:G:O6	1:0:984:A:N6	2.12	0.82
1:0:455:A:H2	1:0:1258:G:N3	1.76	0.82
1:0:509:U:H3'	1:0:510:G:H8	1.44	0.82
1:0:1097:A:H1'	1:0:1114:A:H2	1.43	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1486:A:H2'	1:0:1487:C:C6	2.14	0.82
1:0:220:U:H2'	1:0:221:A:H8	1.45	0.82
1:0:805:G:H4'	1:0:806:A:OP2	1.77	0.82
1:0:984:A:C1'	1:0:1202:U:C6	2.57	0.82
1:0:1446:U:H2'	1:0:1447:U:H6	1.43	0.82
1:0:2387:U:H2'	1:0:2388:G:C8	2.14	0.82
1:0:170:U:H2'	1:0:171:G:H8	1.44	0.82
1:0:991:A:C6	1:0:992:A:N1	2.48	0.82
1:0:1587:A:H2'	1:0:1588:A:C8	2.13	0.82
1:0:50:G:N2	1:0:118:U:H3	1.76	0.82
1:0:2562:G:C4	1:0:2563:U:C5	2.68	0.82
1:0:1354:A:OP1	1:0:1354:A:C8	2.33	0.82
1:0:1690:U:C2'	1:0:1691:G:H5'	2.08	0.82
1:0:1468:A:O5'	1:0:1468:A:C8	2.33	0.81
1:0:459:A:H1'	1:0:461:A:N6	1.95	0.81
1:0:2024:U:H2'	1:0:2025:A:C8	2.15	0.81
1:0:2811:G:H2'	1:0:2812:A:C8	2.15	0.81
1:0:10:A:H2'	1:0:11:G:H8	1.45	0.81
1:0:965:G:N3	1:0:2253:A:H2	1.77	0.81
1:0:2123:G:H2'	1:0:2124:C:H5'	1.62	0.81
1:0:33:C:O2	1:0:34:U:C4	2.34	0.81
1:0:651:C:C2'	1:0:652:C:H5''	2.09	0.81
1:0:1057:A:H3'	1:0:1058:G:H5''	1.61	0.81
1:0:942:U:O2'	1:0:943:U:H5'	1.80	0.81
1:0:1174:G:H2'	1:0:1175:A:H8	1.45	0.81
1:0:403:A:H5''	1:0:404:A:OP1	1.79	0.81
1:0:1997:A:H2'	1:0:1998:A:C8	2.14	0.81
1:0:57:G:N2	1:0:72:A:C8	2.49	0.81
1:0:1087:C:H2'	1:0:1088:A:O4'	1.80	0.81
1:0:1918:G:H1'	1:0:1947:G:N2	1.96	0.81
1:0:1984:A:H4'	1:0:2668:U:H2'	1.62	0.81
1:0:877:G:H2'	1:0:878:C:H6	1.45	0.80
1:0:2725:C:H2'	1:0:2726:U:O4'	1.81	0.80
1:0:190:A:H2'	1:0:191:G:H8	1.44	0.80
1:0:830:C:O2'	1:0:852:U:H5''	1.79	0.80
1:0:1785:A:H4'	1:0:1883:A:C6	2.16	0.80
1:0:1785:A:H4'	1:0:1883:A:N1	1.97	0.80
1:0:663:G:H2'	1:0:664:C:H5'	1.63	0.80
1:0:1233:A:O2'	1:0:1234:C:OP1	2.00	0.80
1:0:941:U:O2	1:0:942:U:H1'	1.82	0.80
1:0:2271:C:H4'	1:0:2354:G:O4'	1.82	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2693:U:H6	1:0:2695:C:OP2	1.61	0.80
1:0:2540:A:H2'	1:0:2541:U:O5'	1.80	0.80
1:0:2689:C:O2'	1:0:2690:A:C5'	2.30	0.80
1:0:2875:C:O2'	1:0:2876:C:H5'	1.82	0.80
1:0:619:A:N6	1:0:629:C:H42	1.79	0.80
1:0:1252:C:C2'	1:0:1253:C:H5''	2.12	0.80
1:0:1882:G:O2'	1:0:1883:A:H5''	1.80	0.80
1:0:2222:U:H2'	1:0:2223:U:C6	2.15	0.80
1:0:929:A:H3'	1:0:930:A:H5''	1.63	0.80
1:0:173:A:H61	1:0:844:G:N2	1.77	0.79
1:0:1333:G:N7	1:0:1342:U:H5'	1.97	0.79
1:0:1900:U:H2'	1:0:1901:A:H5'	1.63	0.79
1:0:117:A:H4'	1:0:118:U:O5'	1.80	0.79
1:0:408:U:H2'	1:0:409:G:H8	1.45	0.79
1:0:541:C:N4	1:0:572:G:C8	2.50	0.79
1:0:790:A:H2'	1:0:791:G:H8	1.47	0.79
1:0:1409:U:H5''	1:0:1410:U:OP2	1.83	0.79
1:0:788:G:C5'	1:0:790:A:H1'	2.11	0.79
1:0:1618:U:C2	1:0:1618:U:OP2	2.36	0.79
1:0:2077:G:H22	1:0:2179:C:H1'	1.47	0.79
1:0:77:C:H2'	1:0:78:C:C6	2.17	0.79
1:0:1032:A:O2'	1:0:1134:C:H5''	1.83	0.79
1:0:1534:A:C2'	1:0:1535:C:H5'	2.11	0.79
1:0:417:C:H5''	1:0:418:C:OP1	1.82	0.79
1:0:1086:C:H2'	1:0:1087:C:H5''	1.64	0.79
1:0:1255:A:H2'	1:0:1256:C:C6	2.18	0.79
1:0:2758:A:O2'	1:0:2759:U:P	2.41	0.79
1:0:1288:A:H62	1:0:1309:G:H5'	1.45	0.79
1:0:1666:G:H2'	1:0:1667:A:H8	1.47	0.79
1:0:2693:U:H5	1:0:2695:C:OP2	1.66	0.79
1:0:831:G:N7	1:0:1199:U:O4	2.16	0.79
1:0:1002:C:N4	1:0:1003:C:H41	1.81	0.79
1:0:1003:C:O2'	1:0:1004:A:H5'	1.81	0.79
1:0:2626:U:H3	1:0:2653:A:N6	1.80	0.79
1:0:2435:C:O2'	1:0:2436:U:H5'	1.83	0.79
1:0:181:A:H4'	1:0:182:G:OP1	1.81	0.79
1:0:1345:G:H5''	1:0:1346:C:OP2	1.83	0.79
1:0:1596:A:H2'	1:0:1597:A:H5'	1.64	0.79
1:0:1623:C:H5'	1:0:1624:A:H5''	1.63	0.79
1:0:1791:C:O2'	1:0:1792:C:H3'	1.83	0.79
1:0:538:A:H8	1:0:538:A:H3'	1.46	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2691:C:H2'	1:0:2692:A:H5''	0.82	0.78
1:0:940:G:H2'	1:0:941:U:H4'	1.65	0.78
1:0:2262:C:H2'	1:0:2263:C:O4'	1.83	0.78
1:0:428:A:H2'	1:0:429:C:C6	2.18	0.78
1:0:1921:A:H2'	1:0:1922:U:H5''	1.63	0.78
1:0:2454:C:H2'	1:0:2455:A:H5'	1.63	0.78
1:0:664:C:H5	1:0:666:U:H4'	1.46	0.78
1:0:1057:A:O5'	1:0:1058:G:H5'	1.84	0.78
1:0:1073:G:H2'	1:0:1074:G:C4'	2.14	0.78
1:0:819:C:O3'	1:0:843:G:N2	2.16	0.78
1:0:1359:G:H5'	1:0:1359:G:H8	1.49	0.78
1:0:2208:U:H2'	1:0:2209:G:H8	1.49	0.78
1:0:1252:C:O2'	1:0:1253:C:H5''	1.83	0.78
1:0:1632:A:O2'	1:0:1633:C:P	2.42	0.78
1:0:66:U:N3	1:0:67:G:O6	2.15	0.78
1:0:202:A:H2'	1:0:203:G:O4'	1.84	0.78
1:0:2282:G:H2'	1:0:2283:G:H8	1.49	0.78
1:0:73:A:N3	1:0:73:A:H5''	1.99	0.77
1:0:400:U:H5''	1:0:401:G:OP1	1.84	0.77
1:0:456:C:O2'	1:0:457:C:H5'	1.84	0.77
1:0:631:G:H5''	1:0:632:A:OP1	1.83	0.77
1:0:831:G:H2'	1:0:832:A:H5''	1.65	0.77
1:0:1288:A:H62	1:0:1309:G:C5'	1.96	0.77
1:0:1793:A:O2'	1:0:1794:A:H5'	1.83	0.77
1:0:2565:C:C2'	1:0:2566:A:H5'	2.14	0.77
1:0:678:G:O2'	1:0:679:C:H5'	1.85	0.77
1:0:983:G:C6	1:0:984:A:N6	2.52	0.77
1:0:2539:C:H42	1:0:2540:A:N6	1.81	0.77
1:0:1279:G:H21	1:0:1995:G:H2'	1.48	0.77
1:0:2324:G:N2	1:0:2326:C:H41	1.81	0.77
1:0:2560:G:O6	1:0:2589:C:H2'	1.82	0.77
1:0:619:A:H61	1:0:629:C:N4	1.81	0.77
1:0:985:G:C8	1:0:1001:A:N6	2.37	0.77
1:0:1151:U:OP1	1:0:1153:A:OP1	2.02	0.77
1:0:2402:U:O2	1:0:2402:U:H2'	1.84	0.77
1:0:139:A:H2'	1:0:140:G:C8	2.19	0.77
1:0:538:A:N1	1:0:2025:A:H2'	1.99	0.77
1:0:813:A:C2'	1:0:814:G:H5''	2.14	0.77
1:0:1217:U:H2'	1:0:1218:C:H6	1.48	0.77
1:0:1715:A:O2'	1:0:1716:G:C3'	2.30	0.77
1:0:940:G:C8	1:0:941:U:O4'	2.38	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1674:C:H2'	1:0:1675:C:C6	2.15	0.77
1:0:67:G:H2'	1:0:68:C:C6	2.20	0.77
1:0:530:G:H2'	1:0:531:G:H8	1.49	0.77
1:0:566:U:H2'	1:0:567:G:H8	1.49	0.77
1:0:1482:U:H2'	1:0:1483:G:C8	2.19	0.77
1:0:2185:U:H2'	1:0:2186:G:C8	2.20	0.77
1:0:2515:G:H2'	1:0:2516:U:O4'	1.85	0.77
1:0:2876:C:H2'	1:0:2877:A:C8	2.17	0.77
1:0:554:U:OP2	1:0:554:U:H4'	1.85	0.77
1:0:698:A:H5'	1:0:700:C:H41	1.50	0.77
1:0:2507:U:O2'	1:0:2508:G:H3'	1.85	0.77
1:0:840:U:H4'	1:0:841:G:C2	2.20	0.76
1:0:984:A:C1'	1:0:1202:U:C5	2.67	0.76
1:0:1079:G:C2'	1:0:1080:A:H5'	2.15	0.76
1:0:1459:U:H3	1:0:1476:G:H5'	1.50	0.76
1:0:1753:A:O5'	1:0:1753:A:H8	1.67	0.76
1:0:2693:U:O2'	1:0:2694:G:OP1	2.02	0.76
1:0:359:G:H2'	1:0:360:A:C8	2.20	0.76
1:0:1386:A:C5'	1:0:2191:A:H62	1.98	0.76
1:0:490:A:O2'	1:0:491:A:H5'	1.85	0.76
1:0:1898:U:H3'	1:0:1899:A:C8	2.21	0.76
1:0:2409:A:O2'	1:0:2410:U:H5'	1.84	0.76
1:0:2556:A:H5''	1:0:2557:G:H5'	1.67	0.76
1:0:408:U:H2'	1:0:409:G:C8	2.21	0.76
1:0:698:A:H4'	1:0:700:C:C5	2.18	0.76
1:0:2565:C:H2'	1:0:2565:C:O2	1.84	0.76
1:0:1198:C:H5''	1:0:1199:U:C5'	2.15	0.76
1:0:2419:C:N3	1:0:2420:C:H1'	2.00	0.76
1:0:825:C:H1'	1:0:1263:G:N2	2.00	0.76
1:0:1354:A:H4'	1:0:1355:A:OP1	1.83	0.76
1:0:2055:G:O2'	1:0:2056:C:H5'	1.85	0.76
1:0:2217:G:H5''	1:0:2218:G:OP1	1.86	0.76
1:0:947:C:H2'	1:0:948:C:C6	2.21	0.76
1:0:1094:C:H2'	1:0:1096:A:OP2	1.86	0.76
1:0:2624:G:H4'	1:0:2712:G:O2'	1.86	0.75
1:0:797:A:H5'	1:0:798:G:OP1	1.85	0.75
1:0:2198:U:OP2	1:0:2199:C:H5''	1.85	0.75
1:0:718:A:H62	1:0:739:G:H1'	1.51	0.75
1:0:1958:G:H2'	1:0:1959:U:C6	2.21	0.75
1:0:2845:C:C4	1:0:2846:G:N7	2.55	0.75
1:0:242:A:O2'	1:0:243:G:O4'	2.04	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:538:A:H3'	1:0:538:A:C8	2.20	0.75
1:0:2311:U:H4'	1:0:2315:A:H61	1.52	0.75
1:0:1110:G:H2'	1:0:1111:C:C6	2.21	0.75
1:0:321:A:C2	1:0:323:G:H1'	2.21	0.75
1:0:329:C:O2'	1:0:330:C:H5'	1.87	0.75
1:0:700:C:O2	1:0:800:U:O3'	2.05	0.75
1:0:759:C:H1'	1:0:761:G:H21	1.52	0.75
1:0:1467:U:H3'	1:0:1468:A:H5'	1.68	0.75
1:0:2571:G:H2'	1:0:2572:U:O4'	1.86	0.75
1:0:76:C:H5'	1:0:76:C:C6	2.21	0.75
1:0:173:A:O2'	1:0:174:A:OP1	2.03	0.75
1:0:308:C:O2'	1:0:309:G:H5'	1.86	0.75
1:0:321:A:H2'	1:0:323:G:N7	2.02	0.75
1:0:1923:U:H5'	1:0:1924:C:OP1	1.87	0.75
1:0:2198:U:C4	1:0:2199:C:H1'	2.22	0.75
1:0:2225:G:H2'	1:0:2226:A:H8	1.50	0.75
1:0:2387:U:H2'	1:0:2388:G:H8	1.52	0.75
1:0:2492:G:H2'	1:0:2493:U:H6	1.50	0.75
1:0:862:A:H2'	1:0:863:C:C6	2.21	0.74
1:0:1618:U:H3'	1:0:1618:U:H6	1.51	0.74
1:0:2426:G:H5''	1:0:2427:A:O5'	1.87	0.74
1:0:585:U:H2'	1:0:586:G:H8	1.51	0.74
1:0:858:G:H2'	1:0:858:G:N3	2.02	0.74
1:0:1314:A:H4'	1:0:1314:A:OP1	1.86	0.74
1:0:1355:A:H1'	1:0:1410:U:H4'	1.67	0.74
1:0:1980:A:O2'	1:0:1981:A:H5'	1.87	0.74
1:0:2046:C:O2	1:0:2430:A:C2	2.40	0.74
1:0:2404:A:H5'	1:0:2406:C:O4'	1.86	0.74
1:0:2484:G:O2'	1:0:2485:U:C5'	2.35	0.74
1:0:728:G:N2	1:0:729:A:H1'	2.02	0.74
1:0:2431:C:O2	1:0:2431:C:H2'	1.86	0.74
1:0:57:G:C2	1:0:72:A:N7	2.55	0.74
1:0:814:G:H3'	1:0:815:A:C5'	2.16	0.74
1:0:1625:A:C8	1:0:1632:A:H1'	2.22	0.74
1:0:1977:C:C2	1:0:1978:U:C5	2.75	0.74
1:0:2691:C:C2'	1:0:2692:A:C5'	2.40	0.74
1:0:57:G:N2	1:0:69:G:C4	2.56	0.74
1:0:537:C:O2	1:0:538:A:N6	2.20	0.74
1:0:1846:A:H2'	1:0:1847:G:H8	1.53	0.74
1:0:2787:A:H2'	1:0:2788:C:H6	1.53	0.74
1:0:68:C:O2	1:0:68:C:H2'	1.87	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1921:A:C2'	1:0:1922:U:H5''	2.17	0.74
1:0:2708:U:H2'	1:0:2709:C:C6	2.22	0.74
1:0:317:U:H2'	1:0:318:G:H5'	1.69	0.74
1:0:836:G:H2'	1:0:837:U:H6	1.53	0.74
1:0:2320:G:H2'	1:0:2321:C:H6	1.51	0.74
1:0:2594:U:H6	1:0:2594:U:H5'	1.53	0.74
1:0:57:G:C2	1:0:72:A:C5	2.76	0.74
1:0:243:G:H2'	1:0:244:C:O4'	1.87	0.74
1:0:651:C:C3'	1:0:652:C:H5''	2.17	0.74
1:0:717:G:H2'	1:0:739:G:H22	1.53	0.74
1:0:1789:U:O2'	1:0:1793:A:H1'	1.87	0.74
1:0:2503:G:H2'	1:0:2504:G:H5''	1.70	0.74
1:0:759:C:H5'	1:0:761:G:H1'	1.69	0.73
1:0:1198:C:H5''	1:0:1199:U:C4'	2.17	0.73
1:0:1383:C:H2'	1:0:1384:G:C8	2.20	0.73
1:0:2059:U:H6	1:0:2059:U:H5'	1.52	0.73
1:0:2755:A:O2'	1:0:2756:A:H5'	1.88	0.73
1:0:356:A:O2'	1:0:357:A:H5'	1.88	0.73
1:0:1154:A:O2'	1:0:1155:G:OP1	2.06	0.73
1:0:2014:A:N7	1:0:2477:C:H1'	2.03	0.73
1:0:2567:G:O6	1:0:2586:G:C6	2.41	0.73
1:0:218:A:H1'	1:0:219:G:O4'	1.88	0.73
1:0:1353:A:O2'	1:0:1410:U:O4	2.05	0.73
1:0:1595:A:H2'	1:0:1596:A:C8	2.23	0.73
1:0:2447:G:O2'	1:0:2448:A:H5'	1.88	0.73
1:0:787:A:O2'	1:0:788:G:H5'	1.88	0.73
1:0:987:G:H4'	1:0:1167:A:N7	2.03	0.73
1:0:1325:U:O2'	1:0:1326:U:OP2	2.06	0.73
1:0:668:A:H2'	1:0:669:G:O4'	1.88	0.73
1:0:1055:A:N6	1:0:1123:G:H1'	2.02	0.73
1:0:1194:U:H2'	1:0:1195:U:C6	2.22	0.73
1:0:1463:A:H1'	1:0:1543:G:H22	1.53	0.73
1:0:2692:A:C2'	1:0:2693:U:OP1	2.37	0.73
1:0:171:G:C2'	1:0:172:A:H5'	2.18	0.73
1:0:788:G:H5''	1:0:789:G:OP1	1.88	0.73
1:0:992:A:N3	1:0:2020:G:H1'	2.04	0.73
1:0:1736:C:H2'	1:0:1737:G:H8	1.52	0.73
1:0:2093:G:H2'	1:0:2094:C:H5	1.51	0.73
1:0:322:A:N7	1:0:339:U:N3	2.35	0.73
1:0:941:U:H4'	1:0:941:U:OP1	1.88	0.73
1:0:958:G:H2'	1:0:959:C:C6	2.23	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2245:A:O2'	1:0:2246:A:OP2	2.05	0.73
1:0:368:A:H2'	1:0:369:C:O4'	1.89	0.73
1:0:1884:A:O2'	1:0:1885:C:H5'	1.88	0.73
1:0:2136:G:H2'	1:0:2137:G:C8	2.24	0.73
1:0:2320:G:H2'	1:0:2321:C:C6	2.24	0.73
1:0:2860:C:H2'	1:0:2861:A:O4'	1.88	0.73
1:0:219:G:C2'	1:0:220:U:OP2	2.35	0.73
1:0:840:U:H4'	1:0:841:G:N2	2.04	0.73
1:0:1198:C:C5'	1:0:1199:U:H4'	2.18	0.73
1:0:2109:A:H2'	1:0:2110:G:O4'	1.87	0.73
1:0:2176:U:H2'	1:0:2177:U:O4'	1.89	0.73
1:0:2311:U:C4'	1:0:2315:A:H61	2.01	0.73
1:0:2674:C:C2	1:0:2675:U:H5	2.07	0.73
1:0:1391:A:O2'	1:0:1392:U:C6	2.42	0.73
1:0:1495:G:H2'	1:0:1496:G:C8	2.23	0.73
1:0:1714:A:C5'	1:0:1715:A:H5''	2.19	0.73
1:0:1774:A:C2	1:0:2567:G:C8	2.75	0.73
1:0:2617:G:H21	1:0:2758:A:H62	1.37	0.73
1:0:2692:A:H2'	1:0:2693:U:OP1	1.89	0.73
1:0:167:A:H2'	1:0:168:A:C8	2.24	0.72
1:0:684:C:H2'	1:0:685:U:H6	1.53	0.72
1:0:1682:A:C3'	1:0:1683:G:H5''	2.18	0.72
1:0:76:C:H5'	1:0:76:C:H6	1.54	0.72
1:0:228:A:H2'	1:0:229:G:O4'	1.89	0.72
1:0:1927:U:O2	1:0:1927:U:H2'	1.86	0.72
1:0:2824:C:H1'	1:0:2843:A:C4	2.24	0.72
1:0:942:U:C2'	1:0:943:U:H5'	2.19	0.72
1:0:1174:G:H2'	1:0:1175:A:C8	2.24	0.72
1:0:1073:G:H3'	1:0:1074:G:H5''	1.70	0.72
1:0:2483:U:H2'	1:0:2484:G:C5'	2.13	0.72
1:0:2864:C:O2	1:0:2864:C:H2'	1.89	0.72
1:0:588:G:O2'	1:0:2002:A:OP1	2.06	0.72
1:0:843:G:N3	1:0:2427:A:N6	2.38	0.72
1:0:48:A:N1	1:0:154:U:O4	2.22	0.72
1:0:1354:A:C8	1:0:1410:U:O2	2.42	0.72
1:0:1408:A:O5'	1:0:1408:A:H8	1.72	0.72
1:0:2629:U:H2'	1:0:2630:C:H6	1.54	0.72
1:0:2826:C:H2'	1:0:2827:G:H5'	1.70	0.72
1:0:1582:A:O2'	1:0:1583:A:OP1	2.06	0.72
1:0:2669:C:O2	1:0:2669:C:H2'	1.90	0.72
1:0:2872:U:H2'	1:0:2873:G:H8	1.55	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:788:G:H2'	1:0:807:A:C8	2.25	0.72
1:0:1213:U:H3	1:0:1260:A:H2	1.37	0.72
1:0:1631:C:C5	1:0:1633:C:C2	2.78	0.72
1:0:2484:G:C2'	1:0:2485:U:H5'	2.19	0.72
1:0:2770:A:H5'	1:0:2867:G:H22	1.54	0.72
1:0:563:U:H2'	1:0:564:U:O4'	1.89	0.71
1:0:772:G:H2'	1:0:773:G:H8	1.55	0.71
1:0:1194:U:H2'	1:0:1195:U:H6	1.55	0.71
1:0:1533:G:H2'	1:0:1534:A:H8	1.54	0.71
1:0:1690:U:H2'	1:0:1691:G:C5'	2.20	0.71
1:0:2563:U:O2	1:0:2563:U:H2'	1.88	0.71
1:0:958:G:H2'	1:0:959:C:H6	1.54	0.71
1:0:1673:C:H2'	1:0:1674:C:H6	1.55	0.71
1:0:1685:A:N6	1:0:1693:A:H61	1.89	0.71
1:0:577:U:C5'	1:0:956:A:H62	1.99	0.71
1:0:807:A:C2	1:0:808:C:C2	2.78	0.71
1:0:1187:A:H2'	1:0:1188:A:C8	2.25	0.71
1:0:1794:A:H2	1:0:1814:G:N3	1.87	0.71
1:0:2230:G:C8	1:0:2429:A:H4'	2.25	0.71
1:0:2323:U:H5''	1:0:2324:G:OP1	1.91	0.71
1:0:2569:A:H2'	1:0:2570:C:H6	1.55	0.71
1:0:243:G:H2'	1:0:244:C:C4'	2.20	0.71
1:0:571:U:O2'	1:0:581:A:O4'	2.07	0.71
1:0:792:U:O2'	1:0:793:G:H5'	1.90	0.71
1:0:1198:C:O5'	1:0:1199:U:H4'	1.89	0.71
1:0:1807:A:N3	1:0:1809:G:N7	2.38	0.71
1:0:322:A:H8	1:0:343:A:C5	2.08	0.71
1:0:540:G:O6	1:0:2006:G:OP1	2.07	0.71
1:0:1458:A:H3'	1:0:1459:U:C5'	2.21	0.71
1:0:2770:A:H8	1:0:2770:A:O5'	1.73	0.71
1:0:659:G:H2'	1:0:660:G:C8	2.24	0.71
1:0:693:A:H2'	1:0:694:G:C8	2.25	0.71
1:0:1673:C:H2'	1:0:1674:C:C6	2.26	0.71
1:0:1901:A:H2'	1:0:1901:A:N3	2.05	0.71
1:0:2185:U:H2'	1:0:2186:G:H8	1.53	0.71
1:0:1436:G:H2'	1:0:1437:A:O4'	1.91	0.71
1:0:1900:U:H2'	1:0:1901:A:C5'	2.21	0.71
1:0:2484:G:O2'	1:0:2485:U:H5'	1.90	0.71
1:0:2644:A:H2'	1:0:2645:C:C6	2.25	0.71
1:0:460:U:O4	1:0:592:G:H1'	1.91	0.71
1:0:2076:G:H21	1:0:2181:A:H61	1.38	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2204:A:O2'	1:0:2205:C:OP2	2.08	0.71
1:0:1002:C:OP2	1:0:1200:G:OP2	2.08	0.71
1:0:1286:U:H4'	1:0:1288:A:OP2	1.91	0.71
1:0:127:C:O2'	1:0:128:C:H5'	1.91	0.70
1:0:789:G:O2'	1:0:790:A:OP2	2.09	0.70
1:0:926:C:H2'	1:0:927:C:H5'	1.73	0.70
1:0:1491:C:H42	1:0:1532:A:H61	1.39	0.70
1:0:2431:C:N3	1:0:2432:A:C5	2.59	0.70
1:0:2689:C:C2'	1:0:2690:A:O5'	2.39	0.70
1:0:68:C:HO2'	1:0:72:A:HO2'	1.33	0.70
1:0:1252:C:H2'	1:0:1253:C:H5''	1.71	0.70
1:0:2698:G:H2'	1:0:2699:G:C8	2.26	0.70
1:0:790:A:H2'	1:0:791:G:C8	2.26	0.70
1:0:939:C:N3	1:0:940:G:C6	2.59	0.70
1:0:2309:G:H2'	1:0:2310:G:O4'	1.91	0.70
1:0:2484:G:H1'	3:0:0:G34:H182	1.72	0.70
1:0:1153:A:O2'	1:0:1154:A:H5''	1.91	0.70
1:0:1427:G:OP2	1:0:1428:G:N1	2.25	0.70
1:0:2210:C:H2'	1:0:2211:U:O4'	1.91	0.70
1:0:2223:U:O2'	1:0:2224:U:H5'	1.91	0.70
1:0:2560:G:H22	1:0:2589:C:H5	1.40	0.70
1:0:1582:A:HO2'	1:0:1583:A:P	2.13	0.70
1:0:1978:U:H3'	1:0:1979:C:H5''	1.73	0.70
1:0:2261:G:H4'	1:0:2262:C:OP2	1.92	0.70
1:0:2861:A:H2'	1:0:2862:G:C8	2.26	0.70
1:0:170:U:H2'	1:0:171:G:C8	2.26	0.70
1:0:539:A:N6	1:0:2024:U:C2	2.59	0.70
1:0:929:A:H5''	1:0:2247:A:N1	2.05	0.70
1:0:942:U:H2'	1:0:943:U:O4'	1.89	0.70
1:0:1177:U:N3	1:0:1197:U:O2	2.24	0.70
1:0:1464:A:H61	1:0:1477:C:H42	1.38	0.70
1:0:2069:U:H2'	1:0:2070:G:C8	2.27	0.70
1:0:2691:C:O2'	1:0:2692:A:C2	2.42	0.70
1:0:698:A:C5'	1:0:700:C:H41	2.05	0.70
1:0:825:C:H1'	1:0:1263:G:C2	2.27	0.70
1:0:873:U:H2'	1:0:874:A:H5'	1.73	0.70
1:0:972:C:C2	1:0:2014:A:C2	2.79	0.70
1:0:1315:A:H5''	1:0:1316:G:OP2	1.90	0.70
1:0:2015:G:N2	1:0:2038:C:N3	2.39	0.70
1:0:2198:U:H2'	1:0:2199:C:O2'	1.92	0.70
1:0:224:G:C6	1:0:229:G:O6	2.45	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:387:A:C4	1:0:388:G:C8	2.79	0.70
1:0:697:G:C6	1:0:788:G:N7	2.60	0.70
1:0:885:A:H2'	1:0:886:A:C8	2.24	0.70
1:0:1437:A:O2'	1:0:1515:U:H4'	1.90	0.70
1:0:2727:G:H2'	1:0:2728:A:H5''	1.73	0.70
1:0:2861:A:H2'	1:0:2862:G:H8	1.55	0.70
1:0:216:U:H2'	1:0:217:U:O4'	1.92	0.70
1:0:698:A:C4'	1:0:700:C:H41	2.04	0.70
1:0:1250:A:O2'	1:0:1251:G:O4'	2.09	0.70
1:0:1749:G:O2'	1:0:1750:A:OP1	2.09	0.70
1:0:1908:C:H2'	1:0:1909:U:C4'	2.21	0.70
1:0:66:U:H1'	1:0:87:G:N2	2.07	0.69
1:0:1043:A:H2	1:0:1133:G:H22	1.39	0.69
1:0:1151:U:H5''	1:0:1153:A:OP1	1.92	0.69
1:0:1541:G:N2	1:0:1562:G:N1	2.40	0.69
1:0:1893:G:H2'	1:0:1894:U:C5	2.27	0.69
1:0:2826:C:H2'	1:0:2827:G:C5'	2.22	0.69
1:0:48:A:H2'	1:0:48:A:N3	2.06	0.69
1:0:149:A:O2'	1:0:150:A:H5'	1.92	0.69
1:0:242:A:H62	1:0:441:A:H8	1.38	0.69
1:0:520:C:O2	1:0:520:C:H2'	1.92	0.69
1:0:1088:A:H2'	1:0:1089:C:O4'	1.92	0.69
1:0:1216:G:O2'	1:0:1217:U:H5'	1.91	0.69
1:0:2044:G:C2	1:0:2046:C:C4	2.80	0.69
1:0:2668:U:O2	1:0:2693:U:H5''	1.92	0.69
1:0:2769:C:H2'	1:0:2867:G:N2	2.05	0.69
1:0:2790:C:H2'	1:0:2791:C:H6	1.57	0.69
1:0:171:G:H2'	1:0:172:A:H5'	1.74	0.69
1:0:1151:U:H5'	1:0:1153:A:O4'	1.92	0.69
1:0:133:C:H2'	1:0:134:G:O4'	1.93	0.69
1:0:1066:G:H3'	1:0:1067:G:H4'	1.73	0.69
1:0:1336:G:O6	1:0:1337:G:C6	2.46	0.69
1:0:1564:U:O2'	1:0:1565:G:H5'	1.93	0.69
1:0:1658:A:N6	1:0:1659:G:C2	2.61	0.69
1:0:2500:C:O2'	1:0:2543:A:H1'	1.93	0.69
1:0:2641:A:H2'	1:0:2642:G:O4'	1.92	0.69
1:0:2761:A:H5''	1:0:2762:G:H5'	1.75	0.69
1:0:13:A:O2'	1:0:14:A:C5'	2.39	0.69
1:0:67:G:C6	1:0:72:A:H2	2.09	0.69
1:0:104:C:H2'	1:0:105:G:H5''	1.73	0.69
1:0:340:G:OP2	1:0:340:G:H8	1.74	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:847:C:H41	1:0:955:G:N2	1.90	0.69
1:0:987:G:H2'	1:0:988:G:H8	1.58	0.69
1:0:1054:C:H2'	1:0:1055:A:H5'	1.75	0.69
1:0:2564:U:O2	1:0:2564:U:C2'	2.39	0.69
1:0:132:U:H2'	1:0:133:C:C6	2.27	0.69
1:0:141:G:O2'	1:0:142:U:H5'	1.92	0.69
1:0:308:C:C2'	1:0:309:G:H5'	2.23	0.69
1:0:640:C:H5''	1:0:660:G:O2'	1.92	0.69
1:0:859:U:H1'	1:0:860:U:N3	2.08	0.69
1:0:1199:U:C6	1:0:1199:U:H5'	2.28	0.69
1:0:1779:C:H2'	1:0:1780:A:C8	2.27	0.69
1:0:2306:A:H2'	1:0:2307:A:C8	2.28	0.69
1:0:2496:C:O2'	1:0:2497:A:H3'	1.93	0.69
1:0:2563:U:H5''	1:0:2564:U:OP2	1.92	0.69
1:0:2708:U:H2'	1:0:2709:C:H6	1.57	0.69
1:0:644:A:C2'	1:0:645:G:H5'	2.23	0.69
1:0:822:G:O2'	1:0:823:U:H5'	1.93	0.69
1:0:1359:G:H5'	1:0:1359:G:C8	2.27	0.69
1:0:1483:G:N2	1:0:1540:C:H1'	2.08	0.69
1:0:1783:G:H2'	1:0:1784:C:O4'	1.92	0.69
1:0:172:A:N3	1:0:227:G:N2	2.41	0.69
1:0:583:C:O2'	1:0:584:A:OP2	2.10	0.69
1:0:693:A:H2'	1:0:694:G:H8	1.58	0.69
1:0:918:A:C2'	1:0:919:U:H5''	2.18	0.69
1:0:1150:C:O3'	1:0:1153:A:H5'	1.93	0.69
1:0:1618:U:OP1	1:0:1618:U:C5	2.46	0.69
1:0:2020:G:H2'	1:0:2021:G:C8	2.28	0.69
1:0:109:A:H3'	1:0:110:U:H5''	1.74	0.68
1:0:1187:A:H3'	1:0:1189:G:O6	1.93	0.68
1:0:2040:A:O2'	1:0:2041:A:H5'	1.92	0.68
1:0:2044:G:N2	1:0:2046:C:C2	2.62	0.68
1:0:65:C:H2'	1:0:66:U:O4'	1.93	0.68
1:0:513:A:O2'	1:0:514:G:H5''	1.92	0.68
1:0:600:G:H2'	1:0:601:A:H5'	1.73	0.68
1:0:1251:G:O2'	1:0:1252:C:H5'	1.94	0.68
1:0:1278:A:HO2'	1:0:1279:G:C5'	2.01	0.68
1:0:1854:G:H2'	1:0:1855:G:H8	1.58	0.68
1:0:2696:A:O2'	1:0:2697:G:H5'	1.94	0.68
1:0:804:C:O2	1:0:804:C:H2'	1.92	0.68
1:0:48:A:H4'	1:0:49:U:H5''	1.75	0.68
1:0:976:C:O4'	1:0:2252:A:N3	2.27	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1326:U:O3'	1:0:1345:G:H5'	1.93	0.68
1:0:2291:U:H2'	1:0:2292:C:C6	2.28	0.68
1:0:13:A:O2'	1:0:14:A:P	2.52	0.68
1:0:66:U:C2	1:0:67:G:N7	2.61	0.68
1:0:177:U:O2	1:0:178:C:C6	2.46	0.68
1:0:1067:G:O6	1:0:1112:U:H3'	1.93	0.68
1:0:1466:C:H2'	1:0:1467:U:C1'	2.24	0.68
1:0:219:G:H2'	1:0:220:U:OP2	1.93	0.68
1:0:1692:C:O2'	1:0:1693:A:H5'	1.94	0.68
1:0:2081:U:H2'	1:0:2082:C:H5''	1.75	0.68
1:0:2085:G:H2'	1:0:2086:U:O4'	1.94	0.68
1:0:2424:G:O2'	1:0:2425:G:H5'	1.93	0.68
1:0:500:G:C5	1:0:1297:A:C2	2.81	0.68
1:0:665:A:H3'	1:0:666:U:H5''	1.76	0.68
1:0:987:G:H2'	1:0:988:G:C8	2.29	0.68
1:0:1502:G:O2'	1:0:1503:G:H5'	1.94	0.68
1:0:1772:C:HO2'	1:0:1773:C:P	2.17	0.68
1:0:1804:U:H2'	1:0:1805:G:C8	2.29	0.68
1:0:2526:U:O2'	1:0:2527:G:H5'	1.94	0.68
1:0:2594:U:H5'	1:0:2594:U:C6	2.28	0.68
1:0:787:A:C4	1:0:788:G:N7	2.61	0.68
1:0:831:G:C2'	1:0:832:A:H5''	2.23	0.68
1:0:1685:A:H4'	1:0:1686:A:O5'	1.94	0.68
1:0:2172:U:O2'	1:0:2173:G:H5'	1.94	0.68
1:0:13:A:HO2'	1:0:14:A:P	2.16	0.68
1:0:411:C:C3'	1:0:412:U:H5''	2.23	0.68
1:0:687:G:O2'	1:0:688:A:H5'	1.94	0.68
1:0:953:G:C2'	1:0:954:U:H5'	2.23	0.68
1:0:2778:U:H2'	1:0:2779:C:H5'	1.76	0.68
1:0:751:G:C2	1:0:752:G:H1'	2.29	0.68
1:0:777:A:O2'	1:0:778:G:OP1	2.12	0.68
1:0:1032:A:C8	1:0:1032:A:H3'	2.29	0.68
1:0:1363:C:H2'	1:0:1364:C:H6	1.57	0.68
1:0:1807:A:H1'	1:0:1809:G:C8	2.29	0.68
1:0:2080:U:H2'	1:0:2081:U:C6	2.29	0.68
1:0:2172:U:H2'	1:0:2173:G:C8	2.25	0.68
1:0:2197:U:H2'	1:0:2198:U:H5	1.58	0.68
1:0:2417:U:O2'	1:0:2419:C:OP1	2.12	0.68
1:0:2779:C:H2'	1:0:2780:A:O4'	1.93	0.68
1:0:1939:U:H1'	1:0:2531:U:OP1	1.93	0.67
1:0:2352:A:H2'	1:0:2353:G:H8	1.58	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2484:G:H2'	1:0:2485:U:H5'	1.76	0.67
1:0:12:U:O2'	1:0:13:A:H5'	1.94	0.67
1:0:193:A:C2	1:0:194:G:H1'	2.29	0.67
1:0:1242:A:H2'	1:0:1243:G:C8	2.24	0.67
1:0:1391:A:O2'	1:0:1392:U:O5'	2.12	0.67
1:0:2007:G:O2'	1:0:2008:C:H5'	1.95	0.67
1:0:2780:A:O2'	1:0:2781:G:H5'	1.95	0.67
1:0:65:C:C2'	1:0:66:U:H5'	2.24	0.67
1:0:1069:G:H2'	1:0:1070:G:O4'	1.94	0.67
1:0:2386:G:H2'	1:0:2387:U:C6	2.30	0.67
1:0:2839:G:H2'	1:0:2840:U:H6	1.57	0.67
1:0:152:G:O2'	1:0:153:A:H5'	1.93	0.67
1:0:322:A:H1'	1:0:343:A:H1'	1.75	0.67
1:0:509:U:H3'	1:0:510:G:C8	2.27	0.67
1:0:1272:G:H2'	1:0:1273:G:H8	1.57	0.67
1:0:1595:A:H2'	1:0:1596:A:H8	1.59	0.67
1:0:2045:A:H4'	1:0:2046:C:OP1	1.91	0.67
1:0:2653:A:H2'	1:0:2654:A:C8	2.28	0.67
1:0:33:C:H41	1:0:458:G:H1'	1.58	0.67
1:0:58:C:C3'	1:0:59:G:H5''	2.15	0.67
1:0:871:U:H2'	1:0:871:U:O2	1.93	0.67
1:0:1223:G:N1	1:0:1250:A:N7	2.43	0.67
1:0:2013:A:O2'	1:0:2014:A:O5'	2.12	0.67
1:0:2026:C:O5'	1:0:2759:U:O4	2.12	0.67
1:0:67:G:H2'	1:0:68:C:O4'	1.94	0.67
1:0:941:U:H3'	1:0:942:U:H6	1.60	0.67
1:0:2661:G:O6	1:0:2708:U:C1'	2.42	0.67
1:0:746:G:N7	1:0:774:A:C6	2.63	0.67
1:0:1344:C:HO2'	1:0:1345:G:H8	1.41	0.67
1:0:1436:G:H4'	1:0:1508:G:O2'	1.95	0.67
1:0:1645:U:H2'	1:0:1646:G:C8	2.30	0.67
1:0:2276:C:C2'	1:0:2277:A:H5'	2.24	0.67
1:0:211:U:O2	1:0:211:U:H2'	1.93	0.67
1:0:466:A:O2'	1:0:467:U:OP2	2.11	0.67
1:0:490:A:O2'	1:0:491:A:C5'	2.43	0.67
1:0:717:G:H2'	1:0:739:G:N2	2.10	0.67
1:0:1515:U:H2'	1:0:1516:A:O4'	1.94	0.67
1:0:2197:U:H2'	1:0:2198:U:C5	2.30	0.67
1:0:2540:A:C2'	1:0:2541:U:O5'	2.42	0.67
1:0:2698:G:H2'	1:0:2699:G:H8	1.59	0.67
1:0:2710:C:O2'	1:0:2711:G:H5'	1.95	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2872:U:H2'	1:0:2873:G:C8	2.29	0.67
1:0:538:A:C8	1:0:538:A:C3'	2.78	0.67
1:0:579:G:H4'	1:0:994:A:C2	2.30	0.67
1:0:862:A:H2'	1:0:863:C:H6	1.60	0.67
1:0:1055:A:N1	1:0:1122:A:H5'	2.09	0.67
1:0:1670:G:OP1	1:0:2797:G:N2	2.28	0.67
1:0:1695:U:O2'	1:0:1696:C:H5'	1.94	0.67
1:0:1971:C:O2'	1:0:1972:G:H5'	1.95	0.67
1:0:2841:U:O2	1:0:2843:A:H1'	1.95	0.67
1:0:306:G:H2'	1:0:307:C:H6	1.60	0.67
1:0:638:A:OP2	1:0:638:A:H4'	1.95	0.67
1:0:831:G:H5'	1:0:852:U:OP1	1.94	0.67
1:0:1198:C:H5''	1:0:1199:U:H4'	1.73	0.67
1:0:1323:G:N7	1:0:1324:G:N2	2.42	0.67
1:0:1898:U:H3'	1:0:1899:A:H8	1.59	0.67
1:0:2812:A:H2'	1:0:2813:G:H8	1.60	0.67
1:0:1281:A:H1'	1:0:1996:A:N6	2.09	0.66
1:0:1458:A:H3'	1:0:1459:U:H5'	1.75	0.66
1:0:1851:A:H2'	1:0:1852:G:O4'	1.95	0.66
1:0:2713:A:O2'	1:0:2714:A:H5'	1.96	0.66
1:0:451:A:H2'	1:0:452:G:C8	2.30	0.66
1:0:1862:C:H2'	1:0:1863:U:O4'	1.94	0.66
1:0:2562:G:C5	1:0:2563:U:C5	2.83	0.66
1:0:541:C:N4	1:0:572:G:O4'	2.29	0.66
1:0:813:A:HO2'	1:0:814:G:H8	1.42	0.66
1:0:843:G:H1'	1:0:2427:A:C6	2.30	0.66
1:0:1303:U:H2'	1:0:1304:U:C6	2.30	0.66
1:0:1993:G:O2'	1:0:1994:U:H5'	1.93	0.66
1:0:2553:G:N1	1:0:2554:C:C2	2.63	0.66
1:0:2796:A:OP2	2:B:110:GLY:CA	2.43	0.66
1:0:677:G:O2'	1:0:678:G:H5'	1.95	0.66
1:0:1253:C:H5'	1:0:1253:C:H6	1.60	0.66
1:0:1538:A:H2'	1:0:1539:U:C6	2.31	0.66
1:0:2240:C:H2'	1:0:2241:U:H5'	1.78	0.66
1:0:51:A:C2	1:0:155:G:H1'	2.30	0.66
1:0:104:C:C2'	1:0:105:G:H5''	2.25	0.66
1:0:114:C:H2'	1:0:115:G:O4'	1.95	0.66
1:0:233:A:H2'	1:0:234:C:C6	2.30	0.66
1:0:699:G:H5'	1:0:700:C:OP2	1.93	0.66
1:0:1109:A:H2'	1:0:1110:G:O4'	1.96	0.66
1:0:1440:G:H3'	1:0:1441:A:H5''	0.84	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1683:G:H5'	1:0:1683:G:H8	1.60	0.66
1:0:2083:G:H2'	1:0:2084:G:H8	1.59	0.66
1:0:457:C:O2'	1:0:458:G:H5'	1.96	0.66
1:0:503:G:H2'	1:0:504:G:O4'	1.95	0.66
1:0:787:A:O2'	1:0:790:A:N3	2.27	0.66
1:0:1947:G:H2'	1:0:1950:C:OP1	1.95	0.66
1:0:2492:G:H2'	1:0:2493:U:C6	2.28	0.66
1:0:600:G:C2'	1:0:601:A:H5'	2.25	0.66
1:0:701:U:O2	1:0:800:U:H4'	1.95	0.66
1:0:787:A:C5	1:0:788:G:N7	2.64	0.66
1:0:2047:C:N3	1:0:2425:G:N2	2.42	0.66
1:0:2074:U:H3'	1:0:2075:U:C5'	2.25	0.66
1:0:2437:G:H2'	1:0:2469:G:H1	1.59	0.66
1:0:788:G:H22	1:0:800:U:C3'	2.03	0.66
1:0:815:A:H3'	1:0:816:U:C5	2.31	0.66
1:0:891:A:H1'	1:0:911:A:N1	2.11	0.66
1:0:1062:G:N2	1:0:2731:G:N1	2.42	0.66
1:0:1585:A:H2'	1:0:1586:A:C8	2.31	0.66
1:0:2194:A:C3'	1:0:2195:C:H5''	2.26	0.66
1:0:330:C:H2'	1:0:331:U:O4'	1.95	0.66
1:0:813:A:O2'	1:0:814:G:H8	1.79	0.66
1:0:1045:G:H2'	1:0:1046:U:C6	2.31	0.66
1:0:1655:C:OP1	1:0:2690:A:H5'	1.96	0.66
1:0:2474:G:H2'	1:0:2475:C:O4'	1.96	0.66
1:0:222:G:O2'	1:0:223:C:H5'	1.96	0.66
1:0:224:G:N2	1:0:227:G:H3'	2.11	0.66
1:0:460:U:C4	1:0:592:G:H1'	2.31	0.66
1:0:995:A:O2'	1:0:996:C:OP1	2.13	0.66
1:0:1384:G:N2	1:0:1385:C:H41	1.94	0.66
1:0:1608:U:H2'	1:0:1609:G:H8	1.59	0.66
1:0:2054:A:H2'	1:0:2055:G:H8	1.59	0.66
1:0:2355:A:C2	1:0:2356:A:H1'	2.31	0.66
1:0:1629:G:C2	1:0:1633:C:C2	2.84	0.65
1:0:1801:C:H3'	1:0:1802:A:C5'	2.27	0.65
1:0:1255:A:H2'	1:0:1256:C:H6	1.59	0.65
1:0:1422:C:H2'	1:0:1423:A:H8	1.61	0.65
1:0:1436:G:H22	1:0:1593:C:H1'	1.60	0.65
1:0:1514:C:H5'	1:0:1593:C:H5'	1.79	0.65
1:0:1666:G:H2'	1:0:1667:A:C8	2.30	0.65
1:0:1669:A:N6	1:0:1670:G:N2	2.44	0.65
1:0:2454:C:C2'	1:0:2455:A:H5'	2.26	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2455:A:N3	1:0:2460:G:N2	2.43	0.65
1:0:2514:G:N2	1:0:2515:G:C1'	2.59	0.65
1:0:2551:A:OP1	1:0:2553:G:H4'	1.96	0.65
1:0:1261:G:O2'	1:0:1262:U:OP1	2.14	0.65
1:0:1653:C:O2	1:0:1751:A:H2	1.78	0.65
1:0:2282:G:H2'	1:0:2283:G:C8	2.31	0.65
1:0:12:U:C2'	1:0:13:A:H5'	2.26	0.65
1:0:541:C:O2	1:0:2018:G:N3	2.29	0.65
1:0:546:A:H2'	1:0:547:U:C6	2.31	0.65
1:0:844:G:N2	1:0:845:U:H1'	2.11	0.65
1:0:1279:G:C2'	1:0:1280:U:OP2	2.45	0.65
1:0:1563:U:H2'	1:0:1564:U:C5	2.31	0.65
1:0:1629:G:H1	1:0:1633:C:H2'	1.62	0.65
1:0:2074:U:H3'	1:0:2075:U:H5''	1.78	0.65
1:0:2588:U:H5'	1:0:2589:C:OP2	1.97	0.65
1:0:2608:A:N6	1:0:2869:U:C2	2.65	0.65
1:0:13:A:C2	1:0:15:G:C6	2.85	0.65
1:0:57:G:C6	1:0:72:A:C6	2.85	0.65
1:0:516:G:HO2'	1:0:517:A:H8	1.45	0.65
1:0:1068:A:H2'	1:0:1069:G:O4'	1.97	0.65
1:0:1082:G:H1	1:0:1103:C:H41	1.44	0.65
1:0:1404:C:C4	1:0:1407:G:N7	2.65	0.65
1:0:1624:A:N6	1:0:1627:C:C2	2.64	0.65
1:0:1773:C:O2	1:0:2587:G:O2'	2.10	0.65
1:0:1819:U:H4'	1:0:1953:A:O2'	1.97	0.65
1:0:2027:C:C2	1:0:2604:G:N2	2.63	0.65
1:0:971:A:H2'	1:0:973:U:H5'	1.76	0.65
1:0:1303:U:H2'	1:0:1304:U:H6	1.60	0.65
1:0:1514:C:OP2	1:0:1593:C:H5''	1.97	0.65
1:0:1662:G:H5''	1:0:1663:C:H5'	1.79	0.65
1:0:2049:C:C4	1:0:2050:G:N7	2.64	0.65
1:0:2229:G:N2	1:0:2475:C:H4'	2.12	0.65
1:0:2293:G:H2'	1:0:2294:U:C6	2.31	0.65
1:0:835:U:O4	1:0:955:G:H1'	1.97	0.65
1:0:876:A:H2'	1:0:877:G:C8	2.32	0.65
1:0:1016:C:C2	1:0:1154:A:C5	2.85	0.65
1:0:1871:G:N3	1:0:1871:G:C3'	2.58	0.65
1:0:2498:U:C4'	1:0:2499:C:OP1	2.39	0.65
1:0:2553:G:O2'	1:0:2554:C:H5'	1.97	0.65
1:0:71:A:H8	1:0:71:A:O5'	1.79	0.65
1:0:962:C:H2'	1:0:963:G:H8	1.61	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1404:C:H41	1:0:1408:A:H62	1.42	0.65
1:0:2047:C:H1'	1:0:2429:A:C2	2.31	0.65
1:0:322:A:H2'	1:0:322:A:N3	2.12	0.65
1:0:600:G:O2'	1:0:601:A:OP1	2.14	0.65
1:0:788:G:H4'	1:0:790:A:C4	2.31	0.65
1:0:930:A:H5'	1:0:931:G:C8	2.31	0.65
1:0:1271:C:H2'	1:0:1272:G:H8	1.61	0.65
1:0:1710:U:H4'	1:0:1711:C:OP2	1.96	0.65
1:0:684:C:H2'	1:0:685:U:C6	2.32	0.65
1:0:805:G:N7	1:0:2419:C:C1'	2.60	0.65
1:0:1002:C:H5'	1:0:1199:U:OP1	1.96	0.65
1:0:1082:G:H1	1:0:1103:C:N4	1.95	0.65
1:0:2066:G:H8	1:0:2066:G:O5'	1.79	0.65
1:0:2432:A:H4'	1:0:2551:A:O2'	1.96	0.65
1:0:2484:G:O2'	1:0:2485:U:H5''	1.97	0.65
1:0:2691:C:C3'	1:0:2692:A:C5'	2.75	0.65
1:0:2824:C:O2	1:0:2843:A:C8	2.50	0.65
1:0:566:U:O2'	1:0:567:G:H5'	1.97	0.64
1:0:839:U:OP1	1:0:2408:G:OP2	2.14	0.64
1:0:1337:G:O3'	1:0:1632:A:N7	2.30	0.64
1:0:1611:U:O2'	1:0:1612:U:H5'	1.96	0.64
1:0:1772:C:O2'	1:0:1773:C:O5'	2.15	0.64
1:0:773:G:C2'	1:0:774:A:H5'	2.26	0.64
1:0:833:A:O2'	1:0:834:A:H5'	1.97	0.64
1:0:976:C:H1'	1:0:2252:A:C2	2.32	0.64
1:0:1440:G:H8	1:0:1440:G:O5'	1.79	0.64
1:0:879:A:H2'	1:0:879:A:N3	2.12	0.64
1:0:1272:G:H2'	1:0:1273:G:C8	2.32	0.64
1:0:1685:A:N7	1:0:1691:G:C6	2.66	0.64
1:0:2501:U:H5'	1:0:2502:G:OP2	1.97	0.64
1:0:468:A:O2'	1:0:469:G:H4'	1.98	0.64
1:0:805:G:N7	1:0:2419:C:H1'	2.13	0.64
1:0:941:U:H2'	1:0:942:U:C1'	2.28	0.64
1:0:1191:G:H2'	1:0:1192:A:H8	1.62	0.64
1:0:1477:C:H5'	1:0:1478:U:OP2	1.97	0.64
1:0:1548:U:H2'	1:0:1549:C:C5	2.32	0.64
1:0:2404:A:O2'	1:0:2405:A:OP2	2.14	0.64
1:0:2642:G:O2'	1:0:2643:G:H5'	1.98	0.64
1:0:66:U:H2'	1:0:67:G:N7	2.12	0.64
1:0:339:U:O2	1:0:339:U:H2'	1.98	0.64
1:0:343:A:N6	1:0:346:C:C2	2.65	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:636:G:H2'	1:0:637:G:H5'	1.79	0.64
1:0:697:G:C6	1:0:788:G:C5	2.85	0.64
1:0:697:G:N2	1:0:807:A:N3	2.46	0.64
1:0:1791:C:C4	1:0:1810:U:O2	2.50	0.64
1:0:822:G:C2'	1:0:823:U:H5'	2.28	0.64
1:0:873:U:H1'	1:0:2246:A:C5'	2.23	0.64
1:0:877:G:H2'	1:0:878:C:C6	2.32	0.64
1:0:1279:G:C1'	1:0:1280:U:C5	2.67	0.64
1:0:1645:U:H2'	1:0:1646:G:H8	1.62	0.64
1:0:1770:U:O2	1:0:1774:A:C5	2.50	0.64
1:0:2092:U:O5'	1:0:2092:U:H6	1.81	0.64
1:0:2195:C:H2'	1:0:2196:U:H5'	1.78	0.64
1:0:2483:U:C5	3:0:0:G34:H12	2.33	0.64
1:0:2523:G:O2'	1:0:2524:G:H5'	1.98	0.64
1:0:594:G:H2'	1:0:1264:C:N4	2.13	0.64
1:0:622:U:H2'	1:0:623:G:H5'	1.80	0.64
1:0:1279:G:N2	1:0:1995:G:C2'	2.60	0.64
1:0:1572:C:H2'	1:0:1573:G:C5'	2.21	0.64
1:0:2200:G:H2'	1:0:2201:G:C8	2.32	0.64
1:0:2288:A:H2'	1:0:2289:A:H8	1.62	0.64
1:0:219:G:N2	1:0:232:A:P	2.69	0.64
1:0:1153:A:O2'	1:0:1154:A:H3'	1.98	0.64
1:0:1468:A:H8	1:0:1468:A:P	2.20	0.64
1:0:1770:U:C4	1:0:1774:A:H2'	2.32	0.64
1:0:2015:G:N3	1:0:2015:G:H2'	2.10	0.64
1:0:2061:C:O2'	1:0:2062:U:H5'	1.98	0.64
1:0:573:C:H2'	1:0:574:C:C6	2.33	0.64
1:0:1506:C:O2'	1:0:1507:A:C5	2.51	0.64
1:0:1509:A:H2'	1:0:1510:A:H8	1.63	0.64
1:0:2431:C:H42	1:0:2432:A:N6	1.96	0.64
1:0:172:A:H1'	1:0:227:G:N2	2.13	0.64
1:0:362:C:H2'	1:0:363:G:H4'	1.80	0.64
1:0:573:C:H2'	1:0:574:C:H6	1.62	0.64
1:0:1062:G:N2	1:0:2731:G:H1	1.97	0.64
1:0:1154:A:O2'	1:0:1155:G:P	2.57	0.64
1:0:1166:A:H2'	1:0:1167:A:C5'	2.25	0.64
1:0:1223:G:O2'	1:0:1224:A:OP2	2.16	0.64
1:0:1912:G:H2'	1:0:1912:G:N3	2.13	0.64
1:0:2059:U:O5'	1:0:2217:G:N2	2.31	0.64
1:0:2827:G:H2'	1:0:2828:C:O4'	1.98	0.64
1:0:88:G:C3'	1:0:89:A:H5''	2.09	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:137:A:H2'	1:0:138:G:H5'	1.79	0.63
1:0:2264:C:H2'	1:0:2265:A:H5'	1.78	0.63
1:0:2368:G:H5''	1:0:2369:U:H5'	1.78	0.63
1:0:2526:U:C4	1:0:2545:A:N7	2.65	0.63
1:0:2753:C:H2'	1:0:2754:C:H6	1.62	0.63
1:0:594:G:C4	1:0:1264:C:N4	2.67	0.63
1:0:698:A:H5'	1:0:700:C:N4	2.12	0.63
1:0:790:A:N3	1:0:791:G:C8	2.67	0.63
1:0:1356:G:H1'	1:0:1613:G:C2	2.33	0.63
1:0:1459:U:N3	1:0:1476:G:H5'	2.13	0.63
1:0:1629:G:C5	1:0:1633:C:C4	2.86	0.63
1:0:1715:A:HO2'	1:0:1716:G:P	2.21	0.63
1:0:2693:U:H5	1:0:2695:C:P	2.20	0.63
1:0:198:A:O4'	1:0:210:A:H1'	1.98	0.63
1:0:219:G:O2'	1:0:220:U:P	2.57	0.63
1:0:520:C:N3	1:0:521:U:C2	2.66	0.63
1:0:952:A:H2'	1:0:953:G:O4'	1.98	0.63
1:0:1300:A:C6	1:0:1301:U:N3	2.67	0.63
1:0:1577:G:H2'	1:0:1578:U:H6	1.64	0.63
1:0:2047:C:N4	1:0:2425:G:C6	2.62	0.63
1:0:2083:G:H2'	1:0:2084:G:C8	2.33	0.63
1:0:2487:G:C2	1:0:2561:G:O6	2.51	0.63
1:0:2821:G:H2'	1:0:2822:U:O4'	1.99	0.63
1:0:122:G:N2	1:0:124:A:H4'	2.14	0.63
1:0:620:G:H2'	1:0:621:U:H6	1.62	0.63
1:0:647:G:HO2'	1:0:649:G:HO2'	1.44	0.63
1:0:941:U:C2'	1:0:942:U:O4'	2.44	0.63
1:0:1437:A:O2'	1:0:1438:G:H5'	1.97	0.63
1:0:1625:A:H4'	1:0:1625:A:OP2	1.97	0.63
1:0:2163:U:H2'	1:0:2164:G:C8	2.32	0.63
1:0:2288:A:H2'	1:0:2289:A:C8	2.33	0.63
1:0:60:A:H8	1:0:60:A:OP1	1.81	0.63
1:0:867:G:H2'	1:0:868:U:C6	2.33	0.63
1:0:1766:U:O2'	1:0:1767:G:H5'	1.99	0.63
1:0:2031:A:C2	1:0:2032:G:H1'	2.34	0.63
1:0:2274:C:H2'	1:0:2274:C:O2	1.98	0.63
1:0:2335:U:O2'	1:0:2336:G:H5'	1.99	0.63
1:0:224:G:H22	1:0:227:G:H3'	1.62	0.63
1:0:1223:G:H5'	1:0:1225:G:O4'	1.97	0.63
1:0:1354:A:H3'	1:0:1410:U:O2	1.99	0.63
1:0:2132:G:H2'	1:0:2133:G:C8	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2447:G:H22	1:0:2460:G:H2'	1.63	0.63
1:0:2858:A:H5''	1:0:2859:U:H5'	1.80	0.63
1:0:482:A:O2'	1:0:483:A:H5'	1.98	0.63
1:0:682:G:C8	1:0:814:G:O6	2.51	0.63
1:0:1657:A:H5'	1:0:1657:A:H8	1.64	0.63
1:0:2054:A:H2'	1:0:2055:G:C8	2.33	0.63
1:0:2200:G:H2'	1:0:2201:G:H8	1.60	0.63
1:0:2427:A:O2'	1:0:2428:U:P	2.56	0.63
1:0:2531:U:H2'	1:0:2533:U:OP2	1.98	0.63
1:0:2633:A:C2	1:0:2644:A:H5''	2.34	0.63
1:0:153:A:H2'	1:0:154:U:C6	2.34	0.63
1:0:659:G:O5'	1:0:659:G:H8	1.82	0.63
1:0:1213:U:N3	1:0:1260:A:H2	1.96	0.63
1:0:1332:G:N1	1:0:1333:G:N2	2.47	0.63
1:0:1554:G:H2'	1:0:1555:A:O4'	1.98	0.63
1:0:1671:A:O2'	1:0:1672:A:H5'	1.99	0.63
1:0:1715:A:H1'	1:0:1717:A:O5'	1.98	0.63
1:0:1882:G:N2	1:0:1885:C:H41	1.96	0.63
1:0:2422:C:O2'	1:0:2423:G:H5'	1.98	0.63
1:0:2827:G:O2'	1:0:2828:C:H5'	1.98	0.63
1:0:2841:U:H1'	1:0:2843:A:O4'	1.99	0.63
1:0:2867:G:OP2	1:0:2867:G:H8	1.81	0.63
1:0:67:G:C6	1:0:72:A:C2	2.87	0.63
1:0:942:U:H2'	1:0:943:U:C4'	2.27	0.63
1:0:1528:C:C3'	1:0:1529:C:H5''	2.27	0.63
1:0:2036:G:H3'	1:0:2036:G:C8	2.33	0.63
1:0:2038:C:H2'	1:0:2483:U:H5'	1.80	0.63
1:0:2678:C:O2'	1:0:2679:G:H5'	1.98	0.63
1:0:2759:U:O4'	1:0:2761:A:C6	2.51	0.63
1:0:2840:U:C4	1:0:2841:U:C5	2.87	0.63
1:0:492:G:O2'	1:0:493:A:P	2.57	0.62
1:0:555:U:O2	1:0:555:U:H2'	1.98	0.62
1:0:577:U:C5'	1:0:956:A:N6	2.59	0.62
1:0:1354:A:H2'	1:0:1410:U:O2'	1.98	0.62
1:0:1482:U:H2'	1:0:1483:G:H8	1.64	0.62
1:0:1900:U:C2'	1:0:1901:A:H5'	2.29	0.62
1:0:1949:A:O2'	1:0:2572:U:H5'	1.98	0.62
1:0:2484:G:C2'	1:0:2485:U:C5'	2.77	0.62
1:0:2552:C:OP1	1:0:2553:G:OP1	2.17	0.62
1:0:2806:G:H1'	1:0:2858:A:C2	2.33	0.62
1:0:1439:G:H2'	1:0:1440:G:C8	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2019:C:O2'	1:0:2020:G:H5'	1.99	0.62
1:0:2059:U:H5'	1:0:2059:U:C6	2.34	0.62
1:0:2274:C:H2'	1:0:2275:U:H5'	1.81	0.62
1:0:2483:U:C6	3:0:0:G34:H12	2.34	0.62
1:0:2764:U:H2'	1:0:2765:C:C6	2.32	0.62
1:0:2770:A:O5'	1:0:2770:A:C8	2.51	0.62
1:0:34:U:O4	1:0:459:A:N6	2.33	0.62
1:0:40:U:H2'	1:0:41:G:H8	1.64	0.62
1:0:712:A:H2'	1:0:713:G:O4'	1.99	0.62
1:0:755:C:O2'	1:0:756:C:H5'	1.99	0.62
1:0:1039:A:N6	1:0:1136:G:H2'	2.15	0.62
1:0:1686:A:H5''	1:0:1687:C:OP2	1.99	0.62
1:0:1715:A:O2'	1:0:1716:G:P	2.57	0.62
1:0:1141:U:O2'	1:0:1142:G:P	2.58	0.62
1:0:1474:A:O2'	1:0:1475:U:OP2	2.15	0.62
1:0:1491:C:H2'	1:0:1492:A:C8	2.35	0.62
1:0:1845:A:O2'	1:0:1846:A:H5'	1.99	0.62
1:0:2492:G:C4	1:0:2493:U:C5	2.87	0.62
1:0:753:U:H2'	1:0:754:G:H8	1.64	0.62
1:0:859:U:O2'	1:0:860:U:O5'	2.17	0.62
1:0:1271:C:H2'	1:0:1272:G:C8	2.34	0.62
1:0:1427:G:N7	1:0:1428:G:N2	2.48	0.62
1:0:1445:A:H2'	1:0:1446:U:O4'	1.98	0.62
1:0:1755:G:N2	1:0:1756:C:C2	2.68	0.62
1:0:1846:A:H2'	1:0:1847:G:C8	2.34	0.62
1:0:2254:C:O2'	1:0:2255:G:OP2	2.15	0.62
1:0:2679:G:N2	1:0:2680:U:C2	2.67	0.62
1:0:7:G:N2	1:0:8:A:C4	2.67	0.62
1:0:367:G:C3'	1:0:368:A:H5''	2.29	0.62
1:0:577:U:H4'	1:0:956:A:N6	2.15	0.62
1:0:2026:C:N4	1:0:2757:G:C6	2.68	0.62
1:0:2712:G:H3'	1:0:2713:A:H5'	1.82	0.62
1:0:459:A:N1	1:0:466:A:N7	2.47	0.62
1:0:1234:C:H2'	1:0:1235:C:H6	1.65	0.62
1:0:2071:G:O2'	1:0:2072:C:H5'	1.99	0.62
1:0:2717:G:H2'	1:0:2718:A:H8	1.64	0.62
1:0:68:C:C2	1:0:72:A:N3	2.68	0.62
1:0:157:G:H5'	1:0:158:A:OP1	2.00	0.62
1:0:202:A:O2'	1:0:234:C:H4'	1.99	0.62
1:0:542:A:H2'	1:0:543:G:O4'	2.00	0.62
1:0:777:A:HO2'	1:0:778:G:P	2.22	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1670:G:P	1:0:2797:G:H22	2.21	0.62
1:0:1840:A:C2'	1:0:1841:G:H5'	2.30	0.62
1:0:1911:A:H2'	1:0:1912:G:H5'	1.81	0.62
1:0:2517:C:O2	1:0:2517:C:H2'	1.99	0.62
1:0:153:A:H2'	1:0:154:U:H6	1.65	0.62
1:0:1599:G:N2	1:0:1600:U:H1'	2.14	0.62
1:0:1631:C:H5	1:0:1633:C:C2	2.18	0.62
1:0:2324:G:N7	1:0:2360:C:C2	2.68	0.62
1:0:2468:G:H2'	1:0:2469:G:O4'	1.99	0.62
1:0:198:A:H5'	1:0:210:A:O2'	2.00	0.62
1:0:212:U:H3	1:0:443:A:H2	1.47	0.62
1:0:355:G:H8	1:0:355:G:O5'	1.83	0.62
1:0:424:G:H4'	1:0:424:G:OP1	1.99	0.62
1:0:548:G:N2	1:0:549:G:C4	2.68	0.62
1:0:746:G:N7	1:0:774:A:C5	2.68	0.62
1:0:826:U:O2'	1:0:1238:A:H1'	2.00	0.62
1:0:1151:U:OP1	1:0:1153:A:P	2.58	0.62
1:0:1202:U:O2'	1:0:1203:A:H5'	2.00	0.62
1:0:1618:U:H3'	1:0:1618:U:C6	2.34	0.62
1:0:1627:C:N4	1:0:1628:C:H41	1.97	0.62
1:0:1886:G:C2	1:0:1887:G:C8	2.88	0.62
1:0:2309:G:N2	1:0:2365:U:C2	2.68	0.62
1:0:2562:G:C6	1:0:2563:U:C4	2.88	0.62
1:0:726:G:H2'	1:0:727:U:O4'	1.99	0.61
1:0:1179:A:H2'	1:0:1180:A:C8	2.35	0.61
1:0:1500:U:O2'	1:0:1501:C:H5'	1.98	0.61
1:0:1625:A:C1'	1:0:1632:A:O2'	2.44	0.61
1:0:1644:G:H2'	1:0:1645:U:C6	2.35	0.61
1:0:1840:A:H2'	1:0:1841:G:H5'	1.81	0.61
1:0:1908:C:H2'	1:0:1909:U:H4'	1.81	0.61
1:0:2039:G:C4	1:0:2556:A:C2	2.88	0.61
1:0:2484:G:H4'	3:0:0:G34:C2	2.28	0.61
1:0:2604:G:H2'	1:0:2605:C:O4'	2.00	0.61
1:0:2689:C:H2'	1:0:2690:A:O5'	1.98	0.61
1:0:2797:G:H2'	1:0:2798:A:H5''	1.82	0.61
1:0:83:A:O2'	1:0:84:G:P	2.58	0.61
1:0:541:C:H3'	1:0:542:A:O4'	2.00	0.61
1:0:708:G:P	1:0:1442:C:H42	2.23	0.61
1:0:2034:A:N6	1:0:2593:A:H2'	2.15	0.61
1:0:2093:G:H2'	1:0:2094:C:C6	2.34	0.61
1:0:2104:G:H2'	1:0:2105:U:H6	1.65	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:50:G:N2	1:0:118:U:N3	2.44	0.61
1:0:957:G:H2'	1:0:958:G:H8	1.65	0.61
1:0:991:A:C5	1:0:992:A:N1	2.69	0.61
1:0:1141:U:O2'	1:0:1142:G:OP1	2.17	0.61
1:0:1344:C:O2'	1:0:1345:G:H8	1.84	0.61
1:0:1624:A:N7	1:0:1627:C:C4	2.68	0.61
1:0:1680:U:H6	1:0:1680:U:C5'	2.12	0.61
1:0:1955:G:C2'	1:0:1956:G:H5'	2.29	0.61
1:0:2106:G:H2'	1:0:2107:G:C8	2.35	0.61
1:0:2188:A:H2'	1:0:2189:A:N7	2.15	0.61
1:0:2225:G:N3	1:0:2226:A:C8	2.68	0.61
1:0:70:A:O2'	1:0:71:A:H5''	2.00	0.61
1:0:83:A:H62	1:0:98:U:H1'	1.61	0.61
1:0:665:A:H2'	1:0:665:A:N3	2.16	0.61
1:0:828:C:H2'	1:0:829:C:H6	1.66	0.61
1:0:1314:A:C2'	1:0:1315:A:O5'	2.48	0.61
1:0:2636:A:H2'	1:0:2637:C:C5'	2.28	0.61
1:0:351:A:N6	1:0:352:G:C2	2.68	0.61
1:0:859:U:O2	1:0:860:U:N3	2.33	0.61
1:0:940:G:N7	1:0:941:U:H6	1.98	0.61
1:0:994:A:N7	1:0:995:A:C6	2.68	0.61
1:0:1380:C:C2'	1:0:1381:G:H5'	2.27	0.61
1:0:1404:C:N4	1:0:1407:G:C8	2.67	0.61
1:0:1573:G:H5'	1:0:1573:G:H8	1.64	0.61
1:0:2264:C:O4'	1:0:2267:A:N6	2.32	0.61
1:0:2469:G:C5'	1:0:2470:U:OP1	2.46	0.61
1:0:2476:A:H1'	1:0:2477:C:H5	1.65	0.61
1:0:2483:U:C2'	1:0:2484:G:C5'	2.75	0.61
1:0:982:C:H5'	1:0:995:A:H5'	1.81	0.61
1:0:995:A:HO2'	1:0:996:C:P	2.23	0.61
1:0:1105:U:O2	1:0:1107:A:N7	2.33	0.61
1:0:1139:A:O2'	1:0:1140:A:O5'	2.18	0.61
1:0:1577:G:H2'	1:0:1578:U:C6	2.35	0.61
1:0:1790:G:O2'	1:0:1791:C:O5'	2.16	0.61
1:0:104:C:H2'	1:0:105:G:C5'	2.29	0.61
1:0:468:A:H61	1:0:481:A:H5''	1.66	0.61
1:0:1199:U:H5'	1:0:1199:U:H6	1.64	0.61
1:0:2104:G:H2'	1:0:2105:U:C6	2.34	0.61
1:0:2418:A:H4'	1:0:2419:C:O5'	2.01	0.61
1:0:2634:G:O2'	1:0:2635:U:H5	1.82	0.61
1:0:944:A:O2'	1:0:945:G:H5'	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1497:C:O2'	1:0:1498:G:H5'	2.00	0.61
1:0:2231:G:H2'	1:0:2232:G:H8	1.66	0.61
1:0:2238:G:H1'	1:0:2406:C:C2	2.35	0.61
1:0:516:G:O2'	1:0:517:A:H8	1.83	0.61
1:0:815:A:C2	1:0:816:U:C2	2.88	0.61
1:0:1010:U:H3'	1:0:1165:G:O6	2.00	0.61
1:0:1075:C:H2'	1:0:1076:U:C6	2.35	0.61
1:0:1147:G:H2'	1:0:1148:G:O4'	2.00	0.61
1:0:1354:A:C8	1:0:1354:A:P	2.93	0.61
1:0:1625:A:N7	1:0:1632:A:N3	2.49	0.61
1:0:2014:A:H62	1:0:2477:C:H1'	1.63	0.61
1:0:591:G:H2'	1:0:592:G:O4'	2.01	0.61
1:0:1465:G:OP1	1:0:1465:G:H4'	2.01	0.61
1:0:1591:U:H2'	1:0:1592:U:O4'	2.01	0.61
1:0:2117:A:C8	1:0:2118:A:H4'	2.36	0.61
1:0:2557:G:H2'	1:0:2557:G:N3	2.14	0.61
1:0:582:G:N2	1:0:2012:A:C2	2.69	0.60
1:0:796:A:N7	1:0:798:G:C8	2.69	0.60
1:0:1894:U:O5'	1:0:1894:U:H6	1.84	0.60
1:0:2027:C:N1	1:0:2604:G:N2	2.48	0.60
1:0:2044:G:C2	1:0:2046:C:N3	2.69	0.60
1:0:2322:U:O2'	1:0:2323:U:H5'	1.99	0.60
1:0:2503:G:C2'	1:0:2504:G:H5''	2.30	0.60
1:0:2838:U:H2'	1:0:2839:G:C8	2.35	0.60
1:0:132:U:H2'	1:0:133:C:H6	1.65	0.60
1:0:1337:G:H1'	1:0:1632:A:H62	1.62	0.60
1:0:1776:A:C8	1:0:1778:U:C5	2.89	0.60
1:0:1908:C:H2'	1:0:1909:U:O4'	2.00	0.60
1:0:2338:C:H2'	1:0:2339:A:C8	2.35	0.60
1:0:177:U:O2	1:0:178:C:O4'	2.19	0.60
1:0:196:A:O2'	1:0:197:G:H5'	2.01	0.60
1:0:460:U:C4'	1:0:461:A:OP2	2.47	0.60
1:0:571:U:O2	1:0:581:A:N9	2.34	0.60
1:0:759:C:C5'	1:0:761:G:H1'	2.31	0.60
1:0:778:G:H5'	1:0:778:G:H8	1.66	0.60
1:0:1151:U:H5''	1:0:1153:A:P	2.42	0.60
1:0:1228:G:C6	1:0:1229:C:N3	2.69	0.60
1:0:2083:G:H2'	1:0:2084:G:O4'	2.01	0.60
1:0:2496:C:C4	1:0:2521:A:C6	2.90	0.60
1:0:2528:G:H2'	1:0:2529:G:H8	1.65	0.60
1:0:62:U:O2	1:0:63:A:N7	2.35	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:545:C:N4	1:0:546:A:N6	2.49	0.60
1:0:765:C:O2	1:0:766:A:N7	2.34	0.60
1:0:1525:A:H3'	1:0:1526:U:O4'	2.00	0.60
1:0:1706:A:N7	1:0:1715:A:C2	2.70	0.60
1:0:1975:G:N2	1:0:1979:C:C5	2.69	0.60
1:0:2517:C:O2	1:0:2518:C:C6	2.54	0.60
1:0:2838:U:H2'	1:0:2839:G:H8	1.67	0.60
1:0:873:U:O2	1:0:2247:A:P	2.59	0.60
1:0:1180:A:H2'	1:0:1181:C:C6	2.36	0.60
1:0:1294:G:C5	1:0:1295:U:C5	2.90	0.60
1:0:1407:G:C2	1:0:1408:A:C4	2.89	0.60
1:0:1458:A:C3'	1:0:1459:U:C5'	2.78	0.60
1:0:1469:U:OP2	1:0:1471:G:OP2	2.20	0.60
1:0:1922:U:O4	1:0:1950:C:H1'	2.02	0.60
1:0:1955:G:O2'	1:0:1956:G:H5'	2.00	0.60
1:0:2433:G:O2'	1:0:2434:G:H5'	2.00	0.60
1:0:162:C:H2'	1:0:163:A:H8	1.67	0.60
1:0:1015:U:O4'	1:0:1021:A:C5	2.55	0.60
1:0:1777:A:N6	1:0:2585:C:O4'	2.31	0.60
1:0:1791:C:O2	1:0:1793:A:O4'	2.18	0.60
1:0:2308:A:H2'	1:0:2309:G:C8	2.36	0.60
1:0:2431:C:C2	1:0:2432:A:C8	2.89	0.60
1:0:2640:G:H2'	1:0:2641:A:O4'	2.01	0.60
1:0:2786:G:O2'	1:0:2787:A:H5'	2.01	0.60
1:0:219:G:C1'	1:0:220:U:C5	2.80	0.60
1:0:242:A:N6	1:0:441:A:C8	2.69	0.60
1:0:813:A:H1'	1:0:815:A:H4'	1.83	0.60
1:0:2370:G:N2	1:0:2408:G:H1'	2.17	0.60
1:0:2608:A:O2'	1:0:2609:G:O5'	2.18	0.60
1:0:2737:A:H2'	1:0:2738:A:H5'	1.84	0.60
1:0:109:A:C3'	1:0:110:U:H5''	2.31	0.60
1:0:221:A:C2	1:0:222:G:H1'	2.36	0.60
1:0:541:C:C6	1:0:542:A:H2	2.20	0.60
1:0:1149:G:H21	1:0:1154:A:H2	1.49	0.60
1:0:1611:U:H2'	1:0:1612:U:O4'	2.01	0.60
1:0:1978:U:N3	1:0:1979:C:C4	2.69	0.60
1:0:2019:C:H5'	1:0:2019:C:H6	1.67	0.60
1:0:2424:G:H2'	1:0:2425:G:H8	1.67	0.60
1:0:2824:C:H4'	1:0:2825:A:H5'	1.82	0.60
1:0:40:U:H2'	1:0:41:G:C8	2.36	0.60
1:0:48:A:H5'	1:0:49:U:O5'	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:219:G:H22	1:0:232:A:P	2.22	0.60
1:0:324:C:H2'	1:0:325:U:O4'	2.01	0.60
1:0:391:C:O2'	1:0:392:G:H5'	2.02	0.60
1:0:804:C:O2	1:0:804:C:C2'	2.47	0.60
1:0:815:A:H3'	1:0:816:U:H5	1.67	0.60
1:0:929:A:C3'	1:0:930:A:H5''	2.30	0.60
1:0:1117:G:H2'	1:0:1118:G:H8	1.67	0.60
1:0:1288:A:H62	1:0:1309:G:H4'	1.64	0.60
1:0:1313:U:H1'	1:0:1642:G:N2	2.17	0.60
1:0:1467:U:H3'	1:0:1468:A:C5'	2.30	0.60
1:0:1682:A:C3'	1:0:1683:G:C5'	2.80	0.60
1:0:1811:A:O2'	1:0:1812:U:H5''	2.01	0.60
1:0:1973:C:H2'	1:0:1974:U:O4'	2.01	0.60
1:0:2289:A:C2'	1:0:2290:A:H5'	2.32	0.60
1:0:13:A:OP2	1:0:13:A:H8	1.85	0.60
1:0:173:A:H2'	1:0:173:A:N3	2.15	0.60
1:0:357:A:C2'	1:0:358:C:H5'	2.30	0.60
1:0:538:A:C2	1:0:2025:A:H2'	2.37	0.60
1:0:571:U:O2'	1:0:572:G:OP2	2.20	0.60
1:0:635:C:H2'	1:0:636:G:H5''	1.82	0.60
1:0:751:G:C8	1:0:772:G:N2	2.70	0.60
1:0:754:G:C2	1:0:755:C:C4	2.90	0.60
1:0:1332:G:C2	1:0:1333:G:N2	2.70	0.60
1:0:1675:C:O2	1:0:1675:C:H2'	2.01	0.60
1:0:29:U:O5'	1:0:29:U:H6	1.85	0.59
1:0:636:G:H2'	1:0:637:G:C5'	2.32	0.59
1:0:649:G:C5	1:0:650:U:C5	2.90	0.59
1:0:1036:G:H1'	1:0:1145:C:O4'	2.02	0.59
1:0:1443:G:H2'	1:0:1444:C:C6	2.37	0.59
1:0:1714:A:H5''	1:0:1715:A:H5''	1.83	0.59
1:0:2362:G:H2'	1:0:2363:G:O4'	2.02	0.59
1:0:2752:C:O5'	1:0:2752:C:H6	1.84	0.59
1:0:2845:C:N4	1:0:2846:G:N7	2.50	0.59
1:0:1265:G:O2'	1:0:1266:G:O4'	2.19	0.59
1:0:1332:G:O2'	1:0:1333:G:H5'	2.02	0.59
1:0:1463:A:H1'	1:0:1543:G:N2	2.17	0.59
1:0:1716:G:C6	1:0:1754:G:N3	2.71	0.59
1:0:1790:G:C2	1:0:1811:A:N7	2.69	0.59
1:0:2205:C:O2'	1:0:2206:C:H5'	2.03	0.59
1:0:2228:U:H4'	1:0:2229:G:OP1	2.02	0.59
1:0:2270:U:H2'	1:0:2271:C:C6	2.37	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2324:G:C2	1:0:2326:C:H5	2.20	0.59
1:0:2668:U:O2	1:0:2693:U:C5'	2.50	0.59
1:0:2756:A:C2	1:0:2758:A:C6	2.90	0.59
1:0:199:A:N6	1:0:209:G:H1'	2.17	0.59
1:0:240:U:O2'	1:0:442:A:N3	2.34	0.59
1:0:537:C:N1	1:0:2759:U:C5	2.70	0.59
1:0:727:U:O5'	1:0:727:U:H6	1.85	0.59
1:0:872:G:O2'	1:0:873:U:H5''	2.02	0.59
1:0:1345:G:N3	1:0:1625:A:N1	2.50	0.59
1:0:1360:G:N2	1:0:1616:C:C2	2.70	0.59
1:0:1380:C:H2'	1:0:1381:G:C5'	2.28	0.59
1:0:1404:C:N3	1:0:1407:G:N7	2.50	0.59
1:0:1446:U:H2'	1:0:1447:U:C6	2.31	0.59
1:0:1549:C:H2'	1:0:1550:C:O4'	2.02	0.59
1:0:1824:C:N4	1:0:1825:C:C4	2.70	0.59
1:0:1836:C:C2	1:0:1880:G:N2	2.70	0.59
1:0:2276:C:O2'	1:0:2277:A:H5'	2.02	0.59
1:0:2291:U:H2'	1:0:2292:C:H6	1.65	0.59
1:0:58:C:N4	1:0:73:A:N6	2.48	0.59
1:0:859:U:O2	1:0:944:A:N1	2.35	0.59
1:0:926:C:C2'	1:0:927:C:H5'	2.32	0.59
1:0:940:G:N7	1:0:941:U:C6	2.70	0.59
1:0:1073:G:C2'	1:0:1074:G:H4'	2.29	0.59
1:0:1287:A:C2	1:0:1662:G:O4'	2.56	0.59
1:0:1823:G:H2'	1:0:1824:C:C6	2.37	0.59
1:0:1900:U:H1'	1:0:1946:U:O4'	2.02	0.59
1:0:2407:G:H5'	1:0:2408:G:C2	2.38	0.59
1:0:2426:G:H4'	1:0:2427:A:C5'	2.31	0.59
1:0:2687:G:O2'	1:0:2688:G:H5'	2.02	0.59
1:0:2784:A:C6	1:0:2866:A:C4	2.91	0.59
1:0:2870:C:C2	1:0:2871:U:C5	2.91	0.59
1:0:163:A:H2'	1:0:164:G:H8	1.68	0.59
1:0:235:C:H2'	1:0:236:C:H5'	1.83	0.59
1:0:427:C:H2'	1:0:428:A:C8	2.38	0.59
1:0:833:A:H1'	1:0:954:U:O2'	2.03	0.59
1:0:1356:G:H1'	1:0:1613:G:N3	2.17	0.59
1:0:1510:A:H2'	1:0:1511:A:H5'	1.85	0.59
1:0:2829:A:H2'	1:0:2830:U:O4'	2.03	0.59
1:0:48:A:N6	1:0:154:U:C5	2.66	0.59
1:0:107:G:N2	1:0:108:G:H1'	2.17	0.59
1:0:459:A:H4'	1:0:461:A:N7	2.18	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:465:C:O2'	1:0:483:A:N6	2.36	0.59
1:0:494:A:H2'	1:0:495:C:H5'	1.84	0.59
1:0:976:C:C1'	1:0:2252:A:C2	2.86	0.59
1:0:995:A:OP2	1:0:996:C:H5	1.85	0.59
1:0:1069:G:O2'	1:0:1070:G:H5'	2.02	0.59
1:0:1316:G:N2	1:0:1317:G:H1'	2.18	0.59
1:0:1625:A:N3	1:0:1625:A:C3'	2.65	0.59
1:0:2227:C:H3'	1:0:2228:U:H6	1.66	0.59
1:0:2354:G:N3	1:0:2356:A:N7	2.51	0.59
1:0:2434:G:C6	1:0:2435:C:N4	2.70	0.59
1:0:2629:U:H2'	1:0:2630:C:C6	2.36	0.59
1:0:2636:A:C2'	1:0:2637:C:H5'	2.29	0.59
1:0:2685:A:N1	1:0:2686:C:C2	2.70	0.59
1:0:2769:C:H2'	1:0:2867:G:H22	1.66	0.59
1:0:812:G:C6	1:0:813:A:N6	2.71	0.59
1:0:1055:A:N6	1:0:1123:G:C4	2.71	0.59
1:0:1268:U:C5'	1:0:1269:G:H5''	2.32	0.59
1:0:1861:G:O2'	1:0:1862:C:H5'	2.02	0.59
1:0:1938:U:H4'	1:0:1939:U:OP1	2.03	0.59
1:0:2473:G:O2'	1:0:2474:G:H5'	2.03	0.59
1:0:2556:A:H5''	1:0:2557:G:C5'	2.31	0.59
1:0:2608:A:HO2'	1:0:2609:G:P	2.25	0.59
1:0:2652:G:H2'	1:0:2653:A:H8	1.68	0.59
1:0:2824:C:O2'	1:0:2825:A:P	2.59	0.59
1:0:177:U:H2'	1:0:178:C:H5'	1.83	0.59
1:0:308:C:H2'	1:0:309:G:H5'	1.85	0.59
1:0:412:U:N3	1:0:413:G:H1'	2.18	0.59
1:0:666:U:OP1	1:0:666:U:H3'	2.02	0.59
1:0:783:G:H1'	1:0:1392:U:C4	2.38	0.59
1:0:795:A:H4'	1:0:796:A:OP1	2.03	0.59
1:0:1066:G:C3'	1:0:1067:G:H4'	2.32	0.59
1:0:1515:U:H2'	1:0:1516:A:C8	2.38	0.59
1:0:1724:C:O2	1:0:1747:G:C2	2.55	0.59
1:0:1886:G:H2'	1:0:1887:G:H8	1.67	0.59
1:0:1920:A:N1	1:0:1922:U:C4	2.71	0.59
1:0:2790:C:H2'	1:0:2791:C:C6	2.36	0.59
1:0:318:G:H22	1:0:321:A:C5'	2.16	0.59
1:0:658:G:H5'	1:0:2331:A:H5'	1.84	0.59
1:0:1788:C:N3	1:0:1789:U:C5	2.71	0.59
1:0:2236:U:H2'	1:0:2237:C:O4'	2.03	0.59
1:0:2496:C:N4	1:0:2521:A:C2	2.70	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:697:G:O6	1:0:788:G:C8	2.56	0.59
1:0:788:G:C5'	1:0:789:G:OP1	2.51	0.59
1:0:1514:C:OP1	1:0:1514:C:H6	1.86	0.59
1:0:1686:A:C5'	1:0:1687:C:OP2	2.51	0.59
1:0:2033:C:C5	1:0:2034:A:N7	2.70	0.59
1:0:2196:U:H2'	1:0:2197:U:O4'	2.03	0.59
1:0:2354:G:H1'	1:0:2356:A:H62	1.67	0.59
1:0:118:U:H5''	1:0:120:G:OP2	2.02	0.58
1:0:233:A:H2'	1:0:234:C:H6	1.67	0.58
1:0:631:G:H8	1:0:631:G:O5'	1.85	0.58
1:0:782:U:O2	1:0:1392:U:C1'	2.50	0.58
1:0:1491:C:H2'	1:0:1492:A:H8	1.68	0.58
1:0:1544:A:H2'	1:0:1545:G:O4'	2.02	0.58
1:0:492:G:C2'	1:0:493:A:OP2	2.50	0.58
1:0:591:G:H2'	1:0:592:G:C8	2.38	0.58
1:0:1604:A:H2'	1:0:1605:A:O4'	2.03	0.58
1:0:2191:A:H2'	1:0:2192:U:OP1	2.03	0.58
1:0:2299:A:H5'	1:0:2300:G:OP1	2.03	0.58
1:0:2311:U:H4'	1:0:2315:A:N6	2.18	0.58
1:0:43:A:C2'	1:0:44:G:H5'	2.33	0.58
1:0:73:A:O2'	1:0:74:G:OP2	2.21	0.58
1:0:155:G:O2'	1:0:156:G:H5'	2.02	0.58
1:0:333:A:C2	1:0:351:A:C6	2.91	0.58
1:0:516:G:H1'	1:0:517:A:H8	1.68	0.58
1:0:534:U:H4'	1:0:564:U:H4'	1.85	0.58
1:0:540:G:C6	1:0:2006:G:OP1	2.56	0.58
1:0:985:G:O2'	1:0:986:A:OP2	2.16	0.58
1:0:1386:A:H5'	1:0:2191:A:N7	2.18	0.58
1:0:1459:U:H5''	1:0:1460:G:OP1	2.04	0.58
1:0:1655:C:H4'	1:0:2689:C:O2	2.03	0.58
1:0:1715:A:O2'	1:0:1716:G:C5'	2.51	0.58
1:0:1790:G:O2'	1:0:1791:C:P	2.62	0.58
1:0:1812:U:O2	1:0:1812:U:H2'	2.03	0.58
1:0:1911:A:C2'	1:0:1912:G:H5'	2.33	0.58
1:0:2549:G:O2'	1:0:2550:C:H5'	2.04	0.58
1:0:537:C:C6	1:0:2759:U:C5	2.91	0.58
1:0:1039:A:H61	1:0:1136:G:H2'	1.67	0.58
1:0:89:A:H4'	1:0:90:G:O5'	2.04	0.58
1:0:579:G:C4'	1:0:994:A:C2	2.87	0.58
1:0:1016:C:C2	1:0:1017:C:C5	2.92	0.58
1:0:1313:U:O2'	1:0:1314:A:P	2.62	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1682:A:C2'	1:0:1683:G:C5'	2.70	0.58
1:0:1849:G:H8	1:0:1849:G:O5'	1.86	0.58
1:0:2137:G:H2'	1:0:2138:U:C6	2.39	0.58
1:0:2198:U:C5	1:0:2199:C:H1'	2.37	0.58
1:0:2592:U:O2'	1:0:2593:A:H5'	2.04	0.58
1:0:2727:G:C2'	1:0:2728:A:H5''	2.33	0.58
1:0:2760:G:H4'	1:0:2761:A:OP2	2.02	0.58
1:0:2782:G:H3'	1:0:2783:U:C4'	2.34	0.58
1:0:2:G:H2'	1:0:3:U:C6	2.39	0.58
1:0:831:G:N2	1:0:1204:G:C6	2.72	0.58
1:0:1767:G:N2	1:0:1768:U:H1'	2.18	0.58
1:0:2431:C:N3	1:0:2432:A:N7	2.51	0.58
1:0:58:C:H5'	1:0:59:G:OP2	2.03	0.58
1:0:60:A:H2'	1:0:61:U:H5'	1.85	0.58
1:0:65:C:H2'	1:0:66:U:H5'	1.86	0.58
1:0:133:C:H3'	1:0:134:G:H8	1.69	0.58
1:0:220:U:H2'	1:0:221:A:C8	2.33	0.58
1:0:498:C:C5	1:0:499:G:N7	2.72	0.58
1:0:1223:G:H4'	1:0:1224:A:O5'	2.02	0.58
1:0:1287:A:H2	1:0:1662:G:O4'	1.86	0.58
1:0:1301:U:C4	1:0:1340:C:H1'	2.39	0.58
1:0:1349:A:C2	1:0:1350:G:C4	2.91	0.58
1:0:1715:A:N3	1:0:1717:A:O4'	2.36	0.58
1:0:65:C:O2'	1:0:66:U:H5'	2.04	0.58
1:0:541:C:H6	1:0:542:A:C2	2.22	0.58
1:0:750:C:C4	1:0:751:G:N7	2.72	0.58
1:0:1091:C:H2'	1:0:1092:U:C6	2.39	0.58
1:0:1281:A:H2'	1:0:1282:A:H8	1.69	0.58
1:0:1869:A:H2'	1:0:1870:U:C6	2.37	0.58
1:0:1882:G:H21	1:0:1885:C:H41	1.50	0.58
1:0:1958:G:H2'	1:0:1959:U:H6	1.69	0.58
1:0:2288:A:N6	1:0:2289:A:N6	2.50	0.58
1:0:2475:C:N4	1:0:2476:A:C2	2.72	0.58
1:0:2497:A:H5''	1:0:2498:U:OP2	2.03	0.58
1:0:2500:C:H2'	1:0:2501:U:O4'	2.03	0.58
1:0:67:G:C2'	1:0:68:C:H6	2.11	0.58
1:0:594:G:C5	1:0:1264:C:C4	2.91	0.58
1:0:688:A:O2'	1:0:689:A:H5'	2.04	0.58
1:0:706:A:H2'	1:0:707:U:O4'	2.04	0.58
1:0:992:A:H2	1:0:2020:G:N3	2.01	0.58
1:0:1065:A:H2'	1:0:1066:G:H8	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1088:A:H8	1:0:1088:A:O5'	1.87	0.58
1:0:1404:C:N4	1:0:1407:G:N7	2.52	0.58
1:0:1468:A:H5''	1:0:1472:C:H42	1.67	0.58
1:0:1507:A:H4'	1:0:1510:A:OP1	2.04	0.58
1:0:1770:U:O2	1:0:1774:A:C6	2.57	0.58
1:0:1789:U:C4	1:0:1811:A:H2	2.21	0.58
1:0:2483:U:H3'	1:0:2483:U:H6	1.68	0.58
1:0:2557:G:OP1	1:0:2593:A:N6	2.36	0.58
1:0:455:A:C2	1:0:1258:G:N3	2.66	0.57
1:0:459:A:N6	1:0:484:G:C4	2.72	0.57
1:0:616:U:H2'	1:0:617:U:C5'	2.31	0.57
1:0:813:A:H1'	1:0:815:A:C4'	2.34	0.57
1:0:936:A:O2'	1:0:937:C:H5'	2.04	0.57
1:0:1226:A:C1'	1:0:1250:A:C2	2.87	0.57
1:0:1313:U:C4'	1:0:1314:A:O5'	2.46	0.57
1:0:2074:U:O4	1:0:2075:U:H5	1.87	0.57
1:0:2301:A:H2'	1:0:2302:G:O4'	2.04	0.57
1:0:2759:U:O4'	1:0:2761:A:N1	2.37	0.57
1:0:65:C:H2'	1:0:66:U:C5'	2.33	0.57
1:0:343:A:N7	1:0:346:C:C4	2.72	0.57
1:0:545:C:H42	1:0:546:A:N6	2.02	0.57
1:0:583:C:H4'	1:0:584:A:O5'	2.04	0.57
1:0:682:G:H1'	1:0:814:G:C6	2.38	0.57
1:0:689:A:C2	1:0:815:A:N6	2.71	0.57
1:0:774:A:H3'	1:0:774:A:H8	1.69	0.57
1:0:541:C:C6	1:0:542:A:C2	2.92	0.57
1:0:700:C:H2'	1:0:701:U:N1	2.19	0.57
1:0:789:G:O6	1:0:2055:G:OP1	2.23	0.57
1:0:2564:U:H2'	1:0:2565:C:OP2	2.05	0.57
1:0:43:A:H2'	1:0:44:G:H5'	1.87	0.57
1:0:459:A:C2	1:0:466:A:C8	2.93	0.57
1:0:512:A:H2'	1:0:513:A:H5'	1.87	0.57
1:0:541:C:O2	1:0:2018:G:C2	2.58	0.57
1:0:825:C:C1'	1:0:1263:G:C2	2.87	0.57
1:0:939:C:C2	1:0:940:G:C6	2.91	0.57
1:0:1036:G:H1'	1:0:1145:C:C4'	2.34	0.57
1:0:1564:U:H2'	1:0:1565:G:O4'	2.04	0.57
1:0:1788:C:C2	1:0:1789:U:C5	2.93	0.57
1:0:2096:U:H3'	1:0:2097:A:H5''	1.86	0.57
1:0:2433:G:H2'	1:0:2434:G:H8	1.68	0.57
1:0:428:A:H2'	1:0:429:C:O4'	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:571:U:C5	1:0:2019:C:O4'	2.58	0.57
1:0:741:G:C4	1:0:743:A:C8	2.93	0.57
1:0:813:A:O2'	1:0:815:A:C5'	2.53	0.57
1:0:1054:C:C2'	1:0:1055:A:H5'	2.33	0.57
1:0:1299:A:C4	1:0:1342:U:C4	2.92	0.57
1:0:1323:G:N2	1:0:1326:U:N3	2.53	0.57
1:0:1468:A:H5''	1:0:1472:C:H41	1.65	0.57
1:0:1573:G:O6	1:0:1574:A:N6	2.38	0.57
1:0:27:G:O2'	1:0:28:A:O5'	2.23	0.57
1:0:58:C:H3'	1:0:59:G:C5'	2.19	0.57
1:0:210:A:H61	1:0:442:A:N6	2.02	0.57
1:0:459:A:H1'	1:0:461:A:H62	1.68	0.57
1:0:1211:G:H2'	1:0:1212:U:C6	2.39	0.57
1:0:1223:G:C2	1:0:1250:A:N7	2.73	0.57
1:0:1355:A:H5''	1:0:1356:G:OP2	2.05	0.57
1:0:1632:A:HO2'	1:0:1633:C:P	2.26	0.57
1:0:1847:G:O2'	1:0:1848:U:H5'	2.04	0.57
1:0:192:G:C4'	1:0:193:A:H4'	2.34	0.57
1:0:530:G:H2'	1:0:531:G:C8	2.37	0.57
1:0:538:A:C2	1:0:2026:C:H4'	2.39	0.57
1:0:796:A:H8	1:0:797:A:H4'	1.69	0.57
1:0:1198:C:P	1:0:1199:U:H4'	2.44	0.57
1:0:1618:U:C6	1:0:1618:U:P	2.98	0.57
1:0:2526:U:H2'	1:0:2527:G:H8	1.69	0.57
1:0:2799:C:H2'	1:0:2800:C:O4'	2.04	0.57
1:0:30:G:C6	1:0:521:U:O2	2.58	0.57
1:0:54:G:H2'	1:0:55:A:H8	1.70	0.57
1:0:346:C:N3	1:0:347:C:C5	2.72	0.57
1:0:541:C:H41	1:0:572:G:C1'	2.17	0.57
1:0:611:C:N4	1:0:612:G:C5	2.73	0.57
1:0:751:G:H21	1:0:752:G:C2'	2.17	0.57
1:0:809:C:H2'	1:0:810:U:C6	2.40	0.57
1:0:931:G:N2	1:0:932:G:H1'	2.20	0.57
1:0:1337:G:H1'	1:0:1632:A:H61	1.67	0.57
1:0:1349:A:H2'	1:0:1350:G:H8	1.68	0.57
1:0:1420:A:H2'	1:0:1421:U:C6	2.40	0.57
1:0:1690:U:O2'	1:0:1691:G:H5'	2.05	0.57
1:0:2484:G:HO2'	1:0:2485:U:H6	1.53	0.57
1:0:2562:G:H2'	1:0:2563:U:C6	2.40	0.57
1:0:2799:C:C4	1:0:2800:C:N3	2.73	0.57
1:0:2837:G:H2'	1:0:2838:U:H6	1.70	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:57:G:C5	1:0:72:A:N6	2.73	0.57
1:0:164:G:H2'	1:0:165:G:H5'	1.87	0.57
1:0:666:U:OP1	1:0:667:U:OP2	2.22	0.57
1:0:1313:U:O2'	1:0:1314:A:O5'	2.21	0.57
1:0:1360:G:C2	1:0:1616:C:C2	2.92	0.57
1:0:1488:G:H1'	1:0:1536:G:N2	2.20	0.57
1:0:1712:G:N2	1:0:1713:G:C8	2.73	0.57
1:0:2107:G:H2'	1:0:2108:G:O4'	2.04	0.57
1:0:2178:U:O2'	1:0:2179:C:H5'	2.04	0.57
1:0:2496:C:C5	1:0:2521:A:C5	2.93	0.57
1:0:2768:C:H1'	1:0:2784:A:C8	2.39	0.57
1:0:2829:A:N1	1:0:2839:G:C6	2.72	0.57
1:0:192:G:O2'	1:0:193:A:H5''	2.05	0.57
1:0:465:C:H2'	1:0:467:U:O2	2.05	0.57
1:0:1079:G:N2	1:0:1106:A:O2'	2.37	0.57
1:0:2617:G:O2'	1:0:2618:A:H8	1.88	0.57
1:0:521:U:H5	1:0:522:G:C4	2.23	0.56
1:0:539:A:H1'	1:0:540:G:C6	2.40	0.56
1:0:728:G:C2	1:0:729:A:H1'	2.40	0.56
1:0:795:A:C4'	1:0:796:A:OP1	2.53	0.56
1:0:1017:C:C6	1:0:1148:G:N2	2.72	0.56
1:0:1047:G:C2'	1:0:1048:U:H5'	2.35	0.56
1:0:1059:A:N1	1:0:1123:G:N2	2.48	0.56
1:0:1293:A:O2'	1:0:1294:G:H5'	2.05	0.56
1:0:1374:G:O2'	1:0:2193:C:H1'	2.04	0.56
1:0:1693:A:H2	1:0:1976:U:O4'	1.87	0.56
1:0:2036:G:C8	1:0:2036:G:C3'	2.88	0.56
1:0:2265:A:H1'	1:0:2325:A:N6	2.15	0.56
1:0:2539:C:N4	1:0:2540:A:N6	2.52	0.56
1:0:149:A:H2'	1:0:150:A:O4'	2.04	0.56
1:0:539:A:O2'	1:0:540:G:O5'	2.23	0.56
1:0:559:C:H3'	1:0:559:C:C6	2.40	0.56
1:0:957:G:O2'	1:0:958:G:H5'	2.05	0.56
1:0:1110:G:H2'	1:0:1111:C:H6	1.67	0.56
1:0:1467:U:O4	1:0:1473:U:C2	2.58	0.56
1:0:1826:U:O4'	1:0:1952:A:C2	2.58	0.56
1:0:2206:C:H3'	1:0:2207:G:H8	1.70	0.56
1:0:2354:G:H8	1:0:2354:G:O5'	1.88	0.56
1:0:2371:A:H2'	1:0:2372:A:O4'	2.05	0.56
1:0:73:A:O2'	1:0:74:G:P	2.63	0.56
1:0:391:C:C2'	1:0:392:G:H5'	2.36	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:764:A:O2'	1:0:765:C:O5'	2.22	0.56
1:0:834:A:C8	1:0:957:G:C8	2.93	0.56
1:0:1345:G:C8	1:0:1625:A:N6	2.66	0.56
1:0:1360:G:C2	1:0:1616:C:N3	2.74	0.56
1:0:1421:U:H2'	1:0:1422:C:C6	2.39	0.56
1:0:1731:C:H2'	1:0:1732:U:O5'	2.04	0.56
1:0:1775:A:H4'	1:0:1776:A:C5'	2.35	0.56
1:0:2289:A:H2'	1:0:2290:A:H5'	1.86	0.56
1:0:2562:G:H2'	1:0:2563:U:H6	1.69	0.56
1:0:51:A:H2	1:0:155:G:N3	2.03	0.56
1:0:198:A:N7	1:0:243:G:C5	2.74	0.56
1:0:688:A:C2	1:0:689:A:N7	2.74	0.56
1:0:788:G:N2	1:0:800:U:O3'	2.30	0.56
1:0:992:A:H3'	1:0:993:C:C6	2.41	0.56
1:0:1022:A:C6	1:0:1024:G:C5	2.94	0.56
1:0:1094:C:C2	1:0:1096:A:OP2	2.58	0.56
1:0:1199:U:O4	1:0:1201:G:N7	2.38	0.56
1:0:1263:G:H4'	1:0:1264:C:OP1	2.05	0.56
1:0:1618:U:C6	1:0:1618:U:C3'	2.88	0.56
1:0:1749:G:HO2'	1:0:1750:A:P	2.29	0.56
1:0:2404:A:HO2'	1:0:2405:A:P	2.28	0.56
1:0:2425:G:N2	1:0:2480:C:C4	2.74	0.56
1:0:2806:G:C1'	1:0:2858:A:C2	2.89	0.56
1:0:32:C:H2'	1:0:33:C:O4'	2.05	0.56
1:0:1128:G:O2'	1:0:1129:A:H5'	2.04	0.56
1:0:1151:U:H5''	1:0:1153:A:O5'	2.05	0.56
1:0:1582:A:O2'	1:0:1583:A:P	2.62	0.56
1:0:1656:U:C2'	1:0:1657:A:H5''	2.36	0.56
1:0:2003:A:C2	1:0:2018:G:N2	2.74	0.56
1:0:2827:G:H2'	1:0:2828:C:C6	2.41	0.56
1:0:66:U:C2	1:0:67:G:O6	2.57	0.56
1:0:146:C:H2'	1:0:147:G:C8	2.41	0.56
1:0:212:U:C2'	1:0:213:C:H5'	2.36	0.56
1:0:298:C:H2'	1:0:299:C:H6	1.70	0.56
1:0:357:A:N6	1:0:359:G:H5'	2.20	0.56
1:0:390:U:H2'	1:0:391:C:C6	2.40	0.56
1:0:682:G:C4	1:0:814:G:N1	2.73	0.56
1:0:736:G:H2'	1:0:737:C:O4'	2.05	0.56
1:0:976:C:O2'	1:0:977:G:H5'	2.06	0.56
1:0:1301:U:C6	1:0:1340:C:O2	2.59	0.56
1:0:2157:C:H2'	1:0:2158:C:O4'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2159:A:H2'	1:0:2160:C:C6	2.40	0.56
1:0:2324:G:N2	1:0:2326:C:C5	2.74	0.56
1:0:2778:U:C2'	1:0:2779:C:H5'	2.34	0.56
1:0:218:A:HO2'	1:0:219:G:C5'	2.12	0.56
1:0:516:G:O2'	1:0:517:A:C8	2.59	0.56
1:0:537:C:C5	1:0:2759:U:C6	2.93	0.56
1:0:665:A:H3'	1:0:666:U:C5'	2.34	0.56
1:0:1329:U:H5'	1:0:1405:A:H1'	1.88	0.56
1:0:1625:A:O2'	1:0:1633:C:OP2	2.22	0.56
1:0:1688:U:O2	1:0:1690:U:H3'	2.05	0.56
1:0:2026:C:N4	1:0:2757:G:C5	2.74	0.56
1:0:2191:A:C2'	1:0:2192:U:OP1	2.52	0.56
1:0:2614:A:N6	1:0:2615:U:C4	2.74	0.56
1:0:2669:C:O2	1:0:2669:C:C2'	2.54	0.56
1:0:2701:A:H2'	1:0:2702:G:O4'	2.05	0.56
1:0:663:G:C2'	1:0:664:C:H5'	2.35	0.56
1:0:814:G:H3'	1:0:814:G:H8	1.70	0.56
1:0:971:A:N7	1:0:973:U:C6	2.74	0.56
1:0:1260:A:N6	1:0:1262:U:C2	2.71	0.56
1:0:1644:G:H2'	1:0:1645:U:H6	1.68	0.56
1:0:1798:G:H21	1:0:1800:A:H8	1.53	0.56
1:0:2044:G:N3	1:0:2046:C:C4	2.74	0.56
1:0:2812:A:H2'	1:0:2813:G:C8	2.39	0.56
1:0:2841:U:H4'	1:0:2843:A:H5'	1.87	0.56
1:0:246:C:O2	1:0:246:C:H2'	2.06	0.56
1:0:367:G:H2'	1:0:368:A:H5''	1.88	0.56
1:0:537:C:C5	1:0:2759:U:H2'	2.41	0.56
1:0:539:A:H1'	1:0:540:G:C5	2.41	0.56
1:0:800:U:H5''	1:0:801:A:H5'	1.87	0.56
1:0:814:G:H3'	1:0:814:G:C8	2.41	0.56
1:0:859:U:H2'	1:0:860:U:OP2	2.06	0.56
1:0:1213:U:N3	1:0:1260:A:C2	2.73	0.56
1:0:1385:C:H2'	1:0:1386:A:O4'	2.06	0.56
1:0:1850:G:O6	1:0:1867:A:N3	2.39	0.56
1:0:1896:A:H5''	1:0:1897:C:H5''	1.86	0.56
1:0:2510:A:H61	1:0:2641:A:H61	1.54	0.56
1:0:2860:C:H2'	1:0:2861:A:C4'	2.36	0.56
1:0:122:G:O2'	1:0:123:A:H5''	2.05	0.56
1:0:322:A:HO2'	1:0:323:G:P	2.28	0.56
1:0:451:A:H2'	1:0:452:G:H8	1.71	0.56
1:0:657:A:N3	1:0:2329:C:O2'	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:788:G:N2	1:0:801:A:OP1	2.38	0.56
1:0:846:A:H2'	1:0:847:C:C6	2.40	0.56
1:0:1434:U:H2'	1:0:1435:G:H8	1.70	0.56
1:0:1628:C:N4	1:0:1629:G:N7	2.54	0.56
1:0:1685:A:O2'	1:0:1686:A:OP2	2.22	0.56
1:0:1904:G:H2'	1:0:1905:G:O4'	2.06	0.56
1:0:2370:G:C2'	1:0:2371:A:OP2	2.54	0.56
1:0:2503:G:C3'	1:0:2504:G:H5''	2.35	0.56
1:0:2528:G:C2	1:0:2529:G:N7	2.74	0.56
1:0:59:G:H1'	1:0:73:A:N1	2.21	0.55
1:0:978:U:H2'	1:0:979:A:H8	1.71	0.55
1:0:987:G:N3	1:0:988:G:C8	2.74	0.55
1:0:1200:G:H3'	1:0:1201:G:H8	1.72	0.55
1:0:1482:U:C2	1:0:1541:G:N2	2.74	0.55
1:0:1514:C:H5'	1:0:1593:C:C5'	2.36	0.55
1:0:2267:A:H2'	1:0:2268:G:OP1	2.06	0.55
1:0:2758:A:HO2'	1:0:2759:U:P	2.28	0.55
1:0:2769:C:C2'	1:0:2867:G:H22	2.19	0.55
1:0:224:G:C8	1:0:226:C:O2	2.59	0.55
1:0:317:U:C2'	1:0:318:G:H5'	2.36	0.55
1:0:322:A:N7	1:0:339:U:C2	2.74	0.55
1:0:544:U:H2'	1:0:545:C:C6	2.42	0.55
1:0:788:G:C2	1:0:800:U:C2'	2.80	0.55
1:0:1032:A:C8	1:0:1032:A:C3'	2.89	0.55
1:0:1488:G:H1'	1:0:1536:G:H21	1.70	0.55
1:0:1653:C:O2	1:0:1751:A:C2	2.59	0.55
1:0:1710:U:C4'	1:0:1711:C:OP2	2.54	0.55
1:0:2043:A:O2'	1:0:2044:G:OP2	2.23	0.55
1:0:2756:A:H4'	1:0:2758:A:OP1	2.05	0.55
1:0:2841:U:O2	1:0:2843:A:O2'	2.23	0.55
1:0:210:A:N6	1:0:442:A:H61	2.04	0.55
1:0:689:A:H8	1:0:2052:G:H21	1.53	0.55
1:0:1016:C:H2'	1:0:1017:C:H6	1.71	0.55
1:0:1371:G:H2'	1:0:1384:G:H22	1.72	0.55
1:0:1923:U:C5'	1:0:1924:C:OP1	2.54	0.55
1:0:1990:U:H2'	1:0:1991:C:C6	2.41	0.55
1:0:26:G:C2	1:0:27:G:N2	2.74	0.55
1:0:83:A:O2'	1:0:84:G:O5'	2.25	0.55
1:0:187:U:H2'	1:0:188:G:H8	1.71	0.55
1:0:304:A:C2	1:0:356:A:N6	2.74	0.55
1:0:708:G:OP2	1:0:1442:C:N4	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:789:G:O2'	1:0:790:A:P	2.64	0.55
1:0:790:A:C2	1:0:791:G:C5	2.94	0.55
1:0:826:U:C6	1:0:1209:G:N2	2.75	0.55
1:0:981:C:O2'	1:0:995:A:H4'	2.06	0.55
1:0:1052:C:H2'	1:0:1053:G:C8	2.41	0.55
1:0:1161:U:H2'	1:0:1162:A:H8	1.71	0.55
1:0:1341:G:H2'	1:0:1343:C:C5	2.42	0.55
1:0:1431:U:H4'	1:0:1604:A:H4'	1.88	0.55
1:0:1596:A:C2'	1:0:1597:A:H5'	2.35	0.55
1:0:1608:U:H2'	1:0:1609:G:C8	2.41	0.55
1:0:2014:A:N6	1:0:2477:C:O4'	2.40	0.55
1:0:2324:G:N2	1:0:2326:C:H5	2.04	0.55
1:0:2325:A:HO2'	1:0:2326:C:P	2.29	0.55
1:0:2514:G:N2	1:0:2515:G:H1'	2.20	0.55
1:0:2523:G:C4	1:0:2524:G:C8	2.94	0.55
1:0:2758:A:C2'	1:0:2759:U:OP1	2.53	0.55
1:0:47:G:HO2'	1:0:48:A:H8	1.54	0.55
1:0:616:U:H5	1:0:630:G:C5	2.25	0.55
1:0:627:A:O2'	1:0:628:A:O4'	2.21	0.55
1:0:649:G:C5	1:0:650:U:H5	2.25	0.55
1:0:697:G:C6	1:0:788:G:C8	2.95	0.55
1:0:697:G:N1	1:0:788:G:C5	2.75	0.55
1:0:987:G:C4'	1:0:1167:A:N7	2.70	0.55
1:0:1187:A:H3'	1:0:1189:G:C6	2.40	0.55
1:0:1431:U:H4'	1:0:1604:A:C4'	2.36	0.55
1:0:1585:A:H2'	1:0:1586:A:H8	1.72	0.55
1:0:1796:A:C6	1:0:1797:C:N4	2.75	0.55
1:0:1850:G:H2'	1:0:1851:A:C8	2.42	0.55
1:0:1911:A:N7	1:0:1912:G:H8	2.03	0.55
1:0:2183:C:O2'	1:0:2184:C:H5'	2.06	0.55
1:0:2216:G:O5'	1:0:2216:G:H8	1.90	0.55
1:0:2769:C:O2'	1:0:2770:A:OP1	2.24	0.55
1:0:2782:G:H8	1:0:2782:G:OP2	1.90	0.55
1:0:2806:G:H1'	1:0:2858:A:N3	2.22	0.55
1:0:790:A:C2	1:0:791:G:C4	2.95	0.55
1:0:1344:C:O2'	1:0:1345:G:C8	2.58	0.55
1:0:1845:A:N3	1:0:2212:U:O2'	2.40	0.55
1:0:2476:A:O2'	1:0:2477:C:OP2	2.24	0.55
1:0:193:A:C8	1:0:445:A:C6	2.95	0.55
1:0:471:A:C2	1:0:481:A:C4	2.95	0.55
1:0:753:U:O2	1:0:771:C:H1'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1064:C:O5'	1:0:1064:C:H6	1.90	0.55
1:0:2371:A:C8	1:0:2372:A:C8	2.95	0.55
1:0:57:G:N2	1:0:69:G:C5	2.75	0.55
1:0:59:G:C6	1:0:62:U:C5	2.94	0.55
1:0:477:A:N3	1:0:696:U:H1'	2.22	0.55
1:0:757:U:C2'	1:0:758:G:H5'	2.37	0.55
1:0:939:C:N3	1:0:940:G:O6	2.40	0.55
1:0:1436:G:N2	1:0:1593:C:H1'	2.22	0.55
1:0:2026:C:P	1:0:2759:U:O4	2.65	0.55
1:0:16:G:O2'	1:0:17:G:H5'	2.07	0.55
1:0:490:A:HO2'	1:0:491:A:C5'	2.20	0.55
1:0:572:G:OP2	1:0:581:A:H5'	2.07	0.55
1:0:754:G:N2	1:0:755:C:C2	2.75	0.55
1:0:944:A:C2'	1:0:945:G:H5'	2.37	0.55
1:0:1429:A:N6	1:0:1602:G:H5'	2.22	0.55
1:0:1690:U:C2'	1:0:1691:G:C5'	2.81	0.55
1:0:1926:U:O2'	1:0:1927:U:P	2.65	0.55
1:0:2053:G:H2'	1:0:2054:A:C8	2.42	0.55
1:0:2431:C:C2	1:0:2432:A:N7	2.75	0.55
1:0:2676:G:O2'	1:0:2677:U:H5'	2.06	0.55
1:0:2696:A:H2'	1:0:2697:G:H8	1.72	0.55
1:0:2699:G:H5'	1:0:2822:U:OP1	2.06	0.55
1:0:71:A:OP1	1:0:71:A:C8	2.60	0.55
1:0:322:A:H8	1:0:343:A:C4	2.25	0.55
1:0:566:U:H2'	1:0:567:G:C8	2.38	0.55
1:0:778:G:H2'	1:0:779:U:H6	1.72	0.55
1:0:881:U:C4	1:0:882:C:N4	2.75	0.55
1:0:1002:C:O5'	1:0:1002:C:H6	1.90	0.55
1:0:1658:A:N6	1:0:1659:G:N3	2.55	0.55
1:0:1820:G:O2'	1:0:1821:A:P	2.65	0.55
1:0:1847:G:C2'	1:0:1848:U:H5'	2.37	0.55
1:0:1920:A:N6	1:0:1923:U:C5	2.75	0.55
1:0:1949:A:H1'	1:0:2572:U:H4'	1.88	0.55
1:0:2082:C:H2'	1:0:2083:G:O4'	2.07	0.55
1:0:2222:U:O2'	1:0:2223:U:H5'	2.07	0.55
1:0:2247:A:C8	1:0:2247:A:H3'	2.42	0.55
1:0:2564:U:C2'	1:0:2565:C:OP2	2.54	0.55
1:0:192:G:O2'	1:0:193:A:C5'	2.56	0.54
1:0:308:C:H2'	1:0:309:G:C5'	2.37	0.54
1:0:428:A:H2'	1:0:429:C:H6	1.70	0.54
1:0:541:C:N4	1:0:572:G:H8	2.01	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:691:C:H2'	1:0:692:C:H6	1.73	0.54
1:0:834:A:N7	1:0:957:G:C5	2.75	0.54
1:0:844:G:C2	1:0:845:U:H1'	2.41	0.54
1:0:891:A:H8	1:0:891:A:O5'	1.90	0.54
1:0:1002:C:N4	1:0:1003:C:N4	2.53	0.54
1:0:1516:A:C6	1:0:1517:C:N4	2.75	0.54
1:0:1849:G:N2	1:0:1869:A:N6	2.55	0.54
1:0:2225:G:C2	1:0:2405:A:H1'	2.42	0.54
1:0:2274:C:H2'	1:0:2275:U:C5'	2.37	0.54
1:0:21:A:C6	1:0:530:G:C6	2.95	0.54
1:0:232:A:N6	1:0:233:A:C2	2.75	0.54
1:0:751:G:N7	1:0:772:G:N1	2.55	0.54
1:0:946:U:H2'	1:0:947:C:C6	2.41	0.54
1:0:1266:G:O2'	1:0:1267:A:OP1	2.22	0.54
1:0:1363:C:H2'	1:0:1364:C:C6	2.39	0.54
1:0:1683:G:O6	1:0:1684:G:C2	2.60	0.54
1:0:1745:C:H2'	1:0:1745:C:O2	2.07	0.54
1:0:1774:A:H4'	1:0:1775:A:OP1	2.06	0.54
1:0:1937:G:O2'	1:0:1939:U:C5	2.56	0.54
1:0:2015:G:H22	1:0:2038:C:N4	2.05	0.54
1:0:2312:A:O2'	1:0:2313:G:OP2	2.23	0.54
1:0:2466:G:O2'	1:0:2467:A:H5'	2.07	0.54
1:0:2660:C:O2'	1:0:2661:G:OP2	2.21	0.54
1:0:48:A:C5'	1:0:49:U:H5''	2.37	0.54
1:0:622:U:O2'	1:0:626:A:N6	2.40	0.54
1:0:649:G:C2	1:0:660:G:N2	2.75	0.54
1:0:670:U:H2'	1:0:671:A:C8	2.42	0.54
1:0:774:A:H3'	1:0:774:A:C8	2.41	0.54
1:0:794:A:H2	1:0:1767:G:N3	2.05	0.54
1:0:985:G:H8	1:0:1001:A:H62	0.71	0.54
1:0:1253:C:C2	1:0:1254:G:C8	2.95	0.54
1:0:1729:C:H2'	1:0:1730:G:H8	1.73	0.54
1:0:2018:G:O2'	1:0:2019:C:OP1	2.22	0.54
1:0:2222:U:C2	1:0:2223:U:C5	2.95	0.54
1:0:2226:A:N3	1:0:2227:C:C6	2.76	0.54
1:0:2395:C:H2'	1:0:2396:C:C6	2.42	0.54
1:0:310:A:N3	1:0:330:C:O2'	2.36	0.54
1:0:577:U:O2	1:0:579:G:H8	1.90	0.54
1:0:582:G:N1	1:0:2014:A:OP2	2.34	0.54
1:0:611:C:O2	1:0:614:G:H4'	2.06	0.54
1:0:788:G:H5'	1:0:790:A:C1'	2.26	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1177:U:H2'	1:0:1178:C:H6	1.72	0.54
1:0:1337:G:C1'	1:0:1632:A:H62	2.21	0.54
1:0:1349:A:H2'	1:0:1350:G:C8	2.41	0.54
1:0:1349:A:O2'	1:0:1350:G:H5'	2.07	0.54
1:0:1530:U:O2'	1:0:1531:C:H6	1.90	0.54
1:0:1825:C:O2'	1:0:1952:A:N1	2.35	0.54
1:0:2451:G:C2	1:0:2454:C:N3	2.76	0.54
1:0:2840:U:C4	1:0:2841:U:H5	2.25	0.54
1:0:242:A:O2'	1:0:243:G:P	2.66	0.54
1:0:630:G:H3'	1:0:631:G:C8	2.43	0.54
1:0:987:G:H2'	1:0:987:G:N3	2.23	0.54
1:0:1217:U:H2'	1:0:1218:C:C6	2.36	0.54
1:0:1987:G:C5	1:0:1988:A:C8	2.95	0.54
1:0:2514:G:N3	1:0:2514:G:H2'	2.22	0.54
1:0:2578:G:O2'	1:0:2579:A:H5'	2.08	0.54
1:0:93:A:O2'	1:0:94:C:H5'	2.06	0.54
1:0:202:A:N3	1:0:203:G:H1'	2.21	0.54
1:0:577:U:C4'	1:0:956:A:N6	2.71	0.54
1:0:973:U:H4'	1:0:2475:C:O2'	2.07	0.54
1:0:1268:U:H5'	1:0:1269:G:H5''	1.88	0.54
1:0:1365:U:O2'	1:0:1366:A:H5'	2.07	0.54
1:0:1434:U:H2'	1:0:1435:G:C8	2.43	0.54
1:0:1466:C:C2'	1:0:1467:U:O4'	2.53	0.54
1:0:1618:U:OP2	1:0:1618:U:N1	2.40	0.54
1:0:1685:A:O4'	1:0:1686:A:C2	2.60	0.54
1:0:2018:G:O2'	1:0:2019:C:P	2.65	0.54
1:0:2324:G:N7	1:0:2351:G:N2	2.55	0.54
1:0:2791:C:O2'	1:0:2792:C:H5'	2.06	0.54
1:0:70:A:O2'	1:0:71:A:OP2	2.24	0.54
1:0:137:A:C2'	1:0:138:G:H5'	2.38	0.54
1:0:330:C:C4	1:0:331:U:C5	2.95	0.54
1:0:367:G:H3'	1:0:368:A:H5''	1.90	0.54
1:0:469:G:O2'	1:0:470:U:OP2	2.26	0.54
1:0:528:G:C6	1:0:529:U:O4	2.61	0.54
1:0:545:C:O2'	1:0:546:A:H5'	2.08	0.54
1:0:641:G:N2	1:0:644:A:OP2	2.37	0.54
1:0:678:G:H2'	1:0:679:C:O4'	2.07	0.54
1:0:816:U:O2'	1:0:817:A:H5'	2.08	0.54
1:0:956:A:O2'	1:0:957:G:O5'	2.26	0.54
1:0:1021:A:N3	1:0:1164:C:H1'	2.22	0.54
1:0:1544:A:N6	1:0:1559:G:H21	2.05	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1946:U:O2	1:0:1946:U:H2'	2.07	0.54
1:0:2523:G:H2'	1:0:2524:G:H8	1.72	0.54
1:0:2742:G:O6	1:0:2743:G:C2	2.61	0.54
1:0:476:G:N2	1:0:697:G:H1'	2.22	0.54
1:0:572:G:O6	1:0:587:A:N1	2.41	0.54
1:0:681:A:C4	1:0:683:A:N7	2.76	0.54
1:0:1015:U:H4'	1:0:1021:A:N7	2.23	0.54
1:0:1543:G:O6	1:0:1560:A:C8	2.61	0.54
1:0:1715:A:N3	1:0:1717:A:C1'	2.71	0.54
1:0:1836:C:H2'	1:0:1837:G:O4'	2.07	0.54
1:0:2253:A:N6	1:0:2255:G:N3	2.56	0.54
1:0:2542:U:O2	1:0:2545:A:C5	2.60	0.54
1:0:2709:C:N4	1:0:2710:C:N4	2.55	0.54
1:0:2860:C:C2'	1:0:2861:A:H5'	2.38	0.54
1:0:3:U:O2'	1:0:4:C:H5'	2.08	0.54
1:0:516:G:H1'	1:0:517:A:C8	2.43	0.54
1:0:972:C:C5'	1:0:973:U:OP2	2.56	0.54
1:0:1032:A:N1	1:0:1034:U:C2	2.76	0.54
1:0:1436:G:H1'	1:0:1508:G:H21	1.73	0.54
1:0:1452:U:O2'	1:0:1453:A:H5'	2.08	0.54
1:0:1578:U:H2'	1:0:1579:G:O4'	2.08	0.54
1:0:1760:G:O2'	1:0:1761:G:H5'	2.08	0.54
1:0:2463:G:O2'	1:0:2464:G:H5'	2.08	0.54
1:0:299:C:H2'	1:0:300:C:C5	2.44	0.54
1:0:808:C:C2'	1:0:809:C:H5'	2.38	0.54
1:0:841:G:H2'	1:0:842:A:N9	2.22	0.54
1:0:859:U:H1'	1:0:860:U:C2	2.42	0.54
1:0:891:A:H1'	1:0:911:A:C2	2.43	0.54
1:0:941:U:H3'	1:0:942:U:C6	2.40	0.54
1:0:1217:U:O2'	1:0:1218:C:H5'	2.08	0.54
1:0:1340:C:H2'	1:0:1341:G:O4'	2.07	0.54
1:0:1750:A:C8	1:0:2675:U:H1'	2.42	0.54
1:0:1901:A:N3	1:0:1901:A:C2'	2.70	0.54
1:0:2470:U:O2	1:0:2470:U:H2'	2.07	0.54
1:0:2636:A:H62	1:0:2643:G:H21	1.55	0.54
1:0:847:C:N4	1:0:955:G:H21	2.05	0.53
1:0:1197:U:C2'	1:0:1198:C:H5'	2.38	0.53
1:0:2247:A:H3'	1:0:2247:A:H8	1.73	0.53
1:0:2338:C:N4	1:0:2339:A:N6	2.57	0.53
1:0:2355:A:O2'	1:0:2356:A:H5'	2.09	0.53
1:0:2556:A:C8	1:0:2556:A:H3'	2.43	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2634:G:O2'	1:0:2635:U:C5	2.60	0.53
1:0:211:U:O2	1:0:211:U:C2'	2.55	0.53
1:0:336:A:H2'	1:0:337:G:O4'	2.09	0.53
1:0:548:G:C2	1:0:549:G:C8	2.96	0.53
1:0:568:G:H2'	1:0:569:C:O4'	2.07	0.53
1:0:819:C:O2'	1:0:820:U:H5'	2.07	0.53
1:0:820:U:P	1:0:843:G:N2	2.82	0.53
1:0:1960:A:O2'	1:0:1961:A:H5'	2.08	0.53
1:0:2262:C:C2	1:0:2368:G:N2	2.76	0.53
1:0:25:U:O2'	1:0:26:G:H5'	2.08	0.53
1:0:155:G:H2'	1:0:156:G:O4'	2.07	0.53
1:0:540:G:H1'	1:0:2004:U:O2'	2.08	0.53
1:0:820:U:O2	1:0:820:U:H2'	2.08	0.53
1:0:978:U:H2'	1:0:979:A:C8	2.43	0.53
1:0:981:C:C4	1:0:982:C:H5	2.27	0.53
1:0:1047:G:H2'	1:0:1048:U:H5'	1.90	0.53
1:0:1231:A:C6	1:0:1232:U:C4	2.96	0.53
1:0:1280:U:H2'	1:0:1281:A:H8	1.72	0.53
1:0:1629:G:C6	1:0:1635:G:O6	2.62	0.53
1:0:1713:G:C5	1:0:1714:A:C8	2.96	0.53
1:0:1896:A:N6	1:0:1899:A:H3'	2.15	0.53
1:0:1918:G:H1'	1:0:1947:G:C2	2.43	0.53
1:0:2832:G:C5	1:0:2834:A:OP2	2.61	0.53
1:0:2851:G:H5''	1:0:2851:G:H8	1.73	0.53
1:0:421:G:O2'	1:0:422:C:H5'	2.07	0.53
1:0:437:G:H2'	1:0:438:G:H8	1.74	0.53
1:0:708:G:OP1	1:0:1393:G:O2'	2.26	0.53
1:0:988:G:C2	1:0:998:C:O2	2.61	0.53
1:0:1199:U:H3'	1:0:1200:G:H5''	1.90	0.53
1:0:1538:A:H2'	1:0:1539:U:H6	1.71	0.53
1:0:1623:C:H5'	1:0:1624:A:C5'	2.38	0.53
1:0:1748:U:O2	1:0:1748:U:H2'	2.08	0.53
1:0:1953:A:H1'	1:0:1955:G:C8	2.43	0.53
1:0:2005:U:H5''	1:0:2006:G:OP1	2.07	0.53
1:0:2262:C:C2	1:0:2368:G:C2	2.96	0.53
1:0:2386:G:H2'	1:0:2387:U:H6	1.71	0.53
1:0:2431:C:C6	3:0:0:G34:H161	2.43	0.53
1:0:63:A:O2'	1:0:64:C:H5'	2.09	0.53
1:0:218:A:C2'	1:0:219:G:O5'	2.56	0.53
1:0:566:U:C2	1:0:567:G:C8	2.97	0.53
1:0:685:U:O2'	1:0:686:C:H5'	2.09	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1197:U:H2'	1:0:1198:C:H5'	1.89	0.53
1:0:1221:C:H2'	1:0:1222:G:H8	1.73	0.53
1:0:1262:U:H2'	1:0:1263:G:C8	2.43	0.53
1:0:1281:A:C1'	1:0:1996:A:N6	2.72	0.53
1:0:1391:A:O2'	1:0:1392:U:P	2.66	0.53
1:0:1424:U:O5'	1:0:1424:U:H6	1.91	0.53
1:0:1507:A:O2'	1:0:1509:A:O3'	2.27	0.53
1:0:1622:G:H4'	1:0:1624:A:N3	2.23	0.53
1:0:1697:U:O2	1:0:1755:G:H4'	2.09	0.53
1:0:2023:C:O2'	1:0:2024:U:H5'	2.08	0.53
1:0:2036:G:C2	1:0:2596:C:C2	2.96	0.53
1:0:2046:C:H5''	1:0:2047:C:OP2	2.09	0.53
1:0:2091:C:H3'	1:0:2092:U:C6	2.43	0.53
1:0:2276:C:N4	1:0:2297:G:H21	2.06	0.53
1:0:2526:U:C5	1:0:2545:A:C8	2.97	0.53
1:0:2781:G:H3'	1:0:2782:G:C8	2.43	0.53
1:0:2841:U:O2'	1:0:2842:C:O5'	2.26	0.53
1:0:674:U:H2'	1:0:675:C:O4'	2.08	0.53
1:0:764:A:C2	1:0:802:A:C4	2.96	0.53
1:0:1300:A:H2	1:0:1666:G:H5'	1.72	0.53
1:0:1428:G:O3'	1:0:1429:A:H8	1.91	0.53
1:0:2355:A:H2'	1:0:2356:A:O4'	2.09	0.53
1:0:2505:G:H22	1:0:2517:C:C1'	2.11	0.53
1:0:450:C:H2'	1:0:451:A:H8	1.74	0.53
1:0:556:A:H2'	1:0:556:A:N3	2.23	0.53
1:0:616:U:C2'	1:0:617:U:H5''	2.34	0.53
1:0:841:G:C5	1:0:842:A:N6	2.76	0.53
1:0:984:A:N9	1:0:1202:U:C4	2.77	0.53
1:0:1067:G:H21	1:0:1115:C:H42	1.57	0.53
1:0:1180:A:H2'	1:0:1181:C:H6	1.72	0.53
1:0:1459:U:O5'	1:0:1459:U:C6	2.62	0.53
1:0:1658:A:C8	1:0:1659:G:C8	2.97	0.53
1:0:1919:A:H5''	1:0:1920:A:O5'	2.09	0.53
1:0:2324:G:N3	1:0:2326:C:H5	2.07	0.53
1:0:2560:G:N1	1:0:2589:C:C6	2.72	0.53
1:0:2569:A:H2'	1:0:2570:C:C6	2.41	0.53
1:0:2809:A:N7	1:0:2854:G:N7	2.57	0.53
1:0:6:A:H2'	1:0:7:G:H8	1.73	0.53
1:0:164:G:C2'	1:0:165:G:H5'	2.38	0.53
1:0:192:G:C1'	1:0:193:A:H4'	2.38	0.53
1:0:333:A:H5'	1:0:351:A:O4'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:752:G:H5'	1:0:753:U:OP1	2.08	0.53
1:0:1371:G:H1'	1:0:1387:G:N1	2.24	0.53
1:0:1895:A:H8	1:0:1895:A:O5'	1.91	0.53
1:0:2041:A:N6	1:0:2042:A:H61	2.07	0.53
1:0:2368:G:H5''	1:0:2369:U:C5'	2.39	0.53
1:0:67:G:C2	1:0:73:A:C4	2.97	0.53
1:0:83:A:C2	1:0:101:A:C5	2.97	0.53
1:0:579:G:H5'	1:0:994:A:H2	1.73	0.53
1:0:708:G:H2'	1:0:709:A:O4'	2.08	0.53
1:0:941:U:OP1	1:0:941:U:O3'	2.26	0.53
1:0:1105:U:C2	1:0:1107:A:OP2	2.62	0.53
1:0:1117:G:H2'	1:0:1118:G:C8	2.44	0.53
1:0:1242:A:O2'	1:0:1243:G:H5'	2.09	0.53
1:0:1813:A:H8	1:0:1813:A:O5'	1.92	0.53
1:0:2202:G:H2'	1:0:2203:G:C8	2.44	0.53
1:0:2272:A:H5'	1:0:2273:C:OP2	2.09	0.53
1:0:2382:C:O2	1:0:2382:C:H2'	2.06	0.53
1:0:219:G:C1'	1:0:220:U:H5	2.06	0.53
1:0:600:G:C6	1:0:602:C:C4	2.97	0.53
1:0:813:A:O2'	1:0:815:A:H5'	2.09	0.53
1:0:1284:G:N2	1:0:1633:C:C4'	2.71	0.53
1:0:1398:G:C2	1:0:1416:A:C4	2.97	0.53
1:0:1509:A:H2'	1:0:1510:A:C8	2.42	0.53
1:0:1598:C:H2'	1:0:1599:G:O4'	2.09	0.53
1:0:2324:G:C2	1:0:2326:C:C5	2.97	0.53
1:0:2487:G:H1	1:0:2559:U:H3	1.57	0.53
1:0:132:U:C4	1:0:133:C:N4	2.72	0.52
1:0:635:C:O2'	1:0:670:U:H5''	2.09	0.52
1:0:650:U:O2	1:0:651:C:C6	2.62	0.52
1:0:793:G:H2'	1:0:795:A:N7	2.23	0.52
1:0:940:G:N7	1:0:941:U:O4'	2.42	0.52
1:0:947:C:C4	1:0:948:C:N4	2.77	0.52
1:0:1236:G:C2	1:0:1240:G:C2	2.97	0.52
1:0:1314:A:H2'	1:0:1315:A:O5'	2.08	0.52
1:0:1531:C:H1'	1:0:1573:G:O4'	2.09	0.52
1:0:1535:C:N4	1:0:1536:G:C6	2.77	0.52
1:0:1559:G:H8	1:0:1559:G:O5'	1.91	0.52
1:0:1628:C:C4	1:0:1629:G:N7	2.77	0.52
1:0:1715:A:HO2'	1:0:1716:G:H3'	1.64	0.52
1:0:1785:A:H4'	1:0:1883:A:C2	2.44	0.52
1:0:1785:A:H2'	1:0:1786:C:H6	1.73	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2245:A:C4	1:0:2251:U:H5	2.27	0.52
1:0:2551:A:O2'	1:0:2552:C:OP2	2.26	0.52
1:0:2599:U:H2'	1:0:2600:A:O4'	2.09	0.52
1:0:2756:A:C6	1:0:2762:G:H1'	2.44	0.52
1:0:67:G:N2	1:0:73:A:O4'	2.42	0.52
1:0:71:A:O5'	1:0:71:A:C8	2.61	0.52
1:0:215:G:C2	1:0:216:U:H1'	2.45	0.52
1:0:492:G:H1	1:0:519:C:H42	1.56	0.52
1:0:538:A:H2	1:0:2026:C:H4'	1.73	0.52
1:0:604:U:H2'	1:0:605:G:H8	1.75	0.52
1:0:613:A:H2'	1:0:614:G:H8	1.73	0.52
1:0:695:G:O2'	1:0:696:U:H5'	2.09	0.52
1:0:701:U:O2'	1:0:702:A:H5'	2.09	0.52
1:0:1344:C:C4	1:0:1346:C:C2	2.97	0.52
1:0:1641:C:H2'	1:0:1642:G:H5'	1.91	0.52
1:0:1653:C:H2'	1:0:1654:A:C8	2.43	0.52
1:0:1834:G:N2	1:0:1835:C:H1'	2.25	0.52
1:0:2653:A:C2	1:0:2654:A:C4	2.97	0.52
1:0:54:G:N2	1:0:114:C:C2	2.77	0.52
1:0:123:A:O2'	1:0:124:A:OP1	2.26	0.52
1:0:210:A:N6	1:0:442:A:N6	2.57	0.52
1:0:438:G:O2'	1:0:439:C:H5'	2.09	0.52
1:0:521:U:C5	1:0:522:G:C4	2.97	0.52
1:0:559:C:O5'	1:0:559:C:H6	1.93	0.52
1:0:923:A:H5''	1:0:924:C:H5''	1.89	0.52
1:0:1186:G:H2'	1:0:1186:G:N3	2.22	0.52
1:0:1221:C:H2'	1:0:1222:G:C8	2.44	0.52
1:0:1270:C:C2	1:0:1271:C:C5	2.96	0.52
1:0:1469:U:H5'	1:0:1470:G:P	2.50	0.52
1:0:1937:G:H2'	1:0:1939:U:O4	2.09	0.52
1:0:2280:A:H2'	1:0:2281:C:H6	1.73	0.52
1:0:2311:U:C4'	1:0:2315:A:N6	2.69	0.52
1:0:177:U:O2	1:0:178:C:H6	1.90	0.52
1:0:328:A:O2'	1:0:329:C:H5'	2.10	0.52
1:0:534:U:OP1	1:0:549:G:N2	2.36	0.52
1:0:1000:G:O2'	1:0:1001:A:OP2	2.26	0.52
1:0:1036:G:N3	1:0:1145:C:O4'	2.43	0.52
1:0:1086:C:C2'	1:0:1087:C:H5''	2.36	0.52
1:0:1141:U:HO2'	1:0:1142:G:P	2.33	0.52
1:0:1329:U:C2	1:0:1330:G:C8	2.97	0.52
1:0:1527:G:H8	1:0:1527:G:OP2	1.92	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2483:U:O2'	1:0:2484:G:H5'	2.09	0.52
1:0:2617:G:O2'	1:0:2618:A:O5'	2.27	0.52
1:0:51:A:C2	1:0:155:G:N3	2.77	0.52
1:0:427:C:N4	1:0:428:A:N6	2.58	0.52
1:0:488:A:C2	1:0:489:A:C4	2.98	0.52
1:0:555:U:O2	1:0:555:U:C2'	2.57	0.52
1:0:577:U:H4'	1:0:956:A:H61	1.73	0.52
1:0:635:C:C2'	1:0:636:G:H5''	2.39	0.52
1:0:801:A:C2'	1:0:802:A:OP2	2.57	0.52
1:0:809:C:H2'	1:0:810:U:H6	1.73	0.52
1:0:831:G:H8	1:0:831:G:O5'	1.93	0.52
1:0:852:U:H2'	1:0:853:C:C6	2.45	0.52
1:0:940:G:C2'	1:0:941:U:H4'	2.36	0.52
1:0:1113:C:H6	1:0:1113:C:O5'	1.93	0.52
1:0:1234:C:H2'	1:0:1235:C:O4'	2.09	0.52
1:0:1329:U:O2'	1:0:1330:G:H5'	2.08	0.52
1:0:1373:G:H2'	1:0:1374:G:H5'	1.92	0.52
1:0:1433:A:C6	1:0:1434:U:C2	2.98	0.52
1:0:1510:A:C2'	1:0:1511:A:H5'	2.40	0.52
1:0:1629:G:N1	1:0:1633:C:H2'	2.23	0.52
1:0:1764:A:H2'	1:0:1765:C:H5'	1.92	0.52
1:0:1821:A:H3'	1:0:1822:C:H6	1.74	0.52
1:0:1869:A:H2'	1:0:1870:U:O4'	2.09	0.52
1:0:2038:C:H2'	1:0:2483:U:C4'	2.40	0.52
1:0:2383:C:C4	1:0:2384:G:N7	2.78	0.52
1:0:2487:G:C2	1:0:2561:G:C6	2.98	0.52
1:0:2553:G:C6	1:0:2554:C:N3	2.77	0.52
1:0:2579:A:H2'	1:0:2580:C:C6	2.43	0.52
1:0:2837:G:C4	1:0:2838:U:C5	2.98	0.52
1:0:46:C:N3	1:0:156:G:C2	2.77	0.52
1:0:206:U:O2	1:0:431:G:H5''	2.10	0.52
1:0:299:C:H2'	1:0:300:C:C4	2.45	0.52
1:0:357:A:C4	1:0:358:C:H4'	2.44	0.52
1:0:594:G:H2'	1:0:1264:C:H41	1.74	0.52
1:0:697:G:C2	1:0:807:A:C2	2.98	0.52
1:0:744:C:N3	1:0:745:C:C5	2.78	0.52
1:0:744:C:N4	1:0:745:C:H41	2.08	0.52
1:0:995:A:OP2	1:0:996:C:C5	2.63	0.52
1:0:1284:G:H21	1:0:1633:C:H4'	1.73	0.52
1:0:1466:C:O2	1:0:1467:U:H1'	2.08	0.52
1:0:1792:C:H2'	1:0:1793:A:OP1	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1886:G:N3	1:0:1887:G:C8	2.77	0.52
1:0:2194:A:C2'	1:0:2195:C:H5''	2.40	0.52
1:0:2276:C:N4	1:0:2297:G:N2	2.57	0.52
1:0:2438:A:N6	1:0:2473:G:C6	2.77	0.52
1:0:2526:U:C6	1:0:2545:A:C5	2.97	0.52
1:0:2721:A:H2'	1:0:2722:C:H5'	1.91	0.52
1:0:2851:G:H2'	1:0:2852:G:O4'	2.08	0.52
1:0:20:C:C4	1:0:21:A:N7	2.77	0.52
1:0:57:G:N1	1:0:72:A:C5	2.77	0.52
1:0:82:G:N2	1:0:100:G:O2'	2.43	0.52
1:0:88:G:C8	1:0:89:A:H3'	2.45	0.52
1:0:204:A:O2'	1:0:205:A:O5'	2.25	0.52
1:0:340:G:H4'	1:0:341:A:OP2	2.10	0.52
1:0:828:C:H2'	1:0:829:C:C6	2.44	0.52
1:0:956:A:O2'	1:0:957:G:P	2.68	0.52
1:0:981:C:C4	1:0:982:C:C5	2.98	0.52
1:0:1226:A:C8	1:0:1250:A:C2	2.98	0.52
1:0:1279:G:H1'	1:0:1280:U:C6	2.38	0.52
1:0:1312:G:O6	1:0:1657:A:OP2	2.28	0.52
1:0:1451:C:H2'	1:0:1452:U:H6	1.73	0.52
1:0:1475:U:C2'	1:0:1476:G:OP2	2.58	0.52
1:0:1621:C:O4'	1:0:1626:A:C2	2.63	0.52
1:0:1793:A:O2'	1:0:1794:A:C5'	2.55	0.52
1:0:2454:C:H2'	1:0:2454:C:O2	2.09	0.52
1:0:2680:U:H5''	1:0:2681:A:H5'	1.91	0.52
1:0:2860:C:H2'	1:0:2861:A:C5'	2.40	0.52
1:0:58:C:N3	1:0:73:A:N1	2.58	0.52
1:0:699:G:N2	1:0:801:A:N6	2.42	0.52
1:0:764:A:HO2'	1:0:765:C:P	2.32	0.52
1:0:765:C:H6	1:0:1772:C:O2	1.92	0.52
1:0:843:G:C5	1:0:2427:A:N7	2.78	0.52
1:0:1090:C:O2'	1:0:1091:C:H5'	2.10	0.52
1:0:1222:G:O2'	1:0:1225:G:H4'	2.10	0.52
1:0:1271:C:O2'	1:0:1272:G:H5'	2.09	0.52
1:0:1325:U:O2'	1:0:1326:U:P	2.67	0.52
1:0:1354:A:C2'	1:0:1410:U:O2	2.58	0.52
1:0:1493:A:H2'	1:0:1494:G:O4'	2.10	0.52
1:0:1882:G:N2	1:0:1885:C:N4	2.58	0.52
1:0:2040:A:H2'	1:0:2041:A:O4'	2.10	0.52
1:0:2053:G:C2	1:0:2054:A:C4	2.97	0.52
1:0:2225:G:H2'	1:0:2226:A:C8	2.37	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2491:C:H2'	1:0:2492:G:O4'	2.08	0.52
1:0:2800:C:H2'	1:0:2801:A:O4'	2.08	0.52
1:0:235:C:C2'	1:0:236:C:H5'	2.39	0.52
1:0:342:G:O2'	1:0:343:A:P	2.68	0.52
1:0:684:C:C2'	1:0:685:U:O5'	2.57	0.52
1:0:754:G:C6	1:0:770:U:O2	2.63	0.52
1:0:830:C:H2'	1:0:830:C:O2	2.09	0.52
1:0:1519:G:O2'	1:0:1520:G:H5'	2.10	0.52
1:0:1629:G:C4	1:0:1633:C:N3	2.77	0.52
1:0:1680:U:H5'	1:0:1680:U:C6	2.33	0.52
1:0:1788:C:O2	1:0:1788:C:H2'	2.09	0.52
1:0:1872:A:N3	1:0:2069:U:O2'	2.39	0.52
1:0:2209:G:C2	1:0:2210:C:C6	2.98	0.52
1:0:2266:A:N6	1:0:2323:U:O2'	2.42	0.52
1:0:2300:G:H3'	1:0:2300:G:N3	2.24	0.52
1:0:2434:G:C5	1:0:2435:C:N4	2.78	0.52
1:0:2520:A:H4'	1:0:2744:A:N1	2.25	0.52
1:0:2824:C:O2'	1:0:2825:A:OP2	2.28	0.52
1:0:48:A:O2'	1:0:50:G:C2	2.57	0.52
1:0:91:A:H2'	1:0:92:U:C6	2.45	0.52
1:0:198:A:N7	1:0:243:G:C6	2.78	0.52
1:0:333:A:H5'	1:0:351:A:C4'	2.39	0.52
1:0:334:G:O2'	1:0:335:A:OP2	2.23	0.52
1:0:404:A:C5	1:0:405:C:C4	2.98	0.52
1:0:588:G:N3	1:0:1275:A:C2	2.78	0.52
1:0:633:G:O2'	1:0:634:G:H5'	2.10	0.52
1:0:636:G:H5'	1:0:636:G:H8	1.74	0.52
1:0:745:C:H2'	1:0:746:G:O4'	2.10	0.52
1:0:1016:C:O2	1:0:1154:A:C6	2.62	0.52
1:0:1175:A:C2	1:0:1176:U:C5	2.98	0.52
1:0:1384:G:H21	1:0:1385:C:N4	2.00	0.52
1:0:1895:A:C2'	1:0:1896:A:H5'	2.40	0.52
1:0:1983:G:HO2'	1:0:2668:U:H6	1.58	0.52
1:0:2061:C:H1'	1:0:2413:A:N3	2.25	0.52
1:0:2658:A:C5	1:0:2659:C:C5	2.98	0.52
1:0:235:C:H2'	1:0:236:C:C5'	2.40	0.51
1:0:459:A:N1	1:0:466:A:C8	2.78	0.51
1:0:571:U:O2	1:0:581:A:C4	2.63	0.51
1:0:604:U:H2'	1:0:605:G:C8	2.44	0.51
1:0:638:A:OP2	1:0:638:A:C4'	2.57	0.51
1:0:1693:A:H2'	1:0:1694:A:O4'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2039:G:H2'	1:0:2039:G:N3	2.24	0.51
1:0:2402:U:O2	1:0:2402:U:C2'	2.56	0.51
1:0:69:G:H2'	1:0:111:G:O2'	2.10	0.51
1:0:214:C:C2	1:0:215:G:C8	2.99	0.51
1:0:542:A:C8	1:0:543:G:C1'	2.93	0.51
1:0:759:C:C1'	1:0:761:G:H21	2.22	0.51
1:0:773:G:H2'	1:0:774:A:H5'	1.92	0.51
1:0:1216:G:H2'	1:0:1217:U:O4'	2.10	0.51
1:0:1789:U:C4	1:0:1811:A:C2	2.98	0.51
1:0:1792:C:C2'	1:0:1793:A:OP1	2.57	0.51
1:0:1979:C:O4'	1:0:1979:C:OP1	2.27	0.51
1:0:2035:G:N2	1:0:2036:G:C4	2.78	0.51
1:0:2122:G:H2'	1:0:2123:G:C8	2.46	0.51
1:0:2550:C:C6	1:0:2553:G:O4'	2.63	0.51
1:0:2729:A:OP1	1:0:2731:G:H5'	2.10	0.51
1:0:2811:G:C6	1:0:2812:A:N6	2.79	0.51
1:0:60:A:OP1	1:0:60:A:C8	2.63	0.51
1:0:154:U:H2'	1:0:155:G:OP1	2.09	0.51
1:0:492:G:HO2'	1:0:493:A:P	2.30	0.51
1:0:788:G:C2'	1:0:807:A:C8	2.94	0.51
1:0:984:A:C2	1:0:1201:G:C2	2.98	0.51
1:0:999:A:H4'	1:0:1166:A:H2	1.75	0.51
1:0:1066:G:H2'	1:0:1067:G:H4'	1.92	0.51
1:0:1177:U:H2'	1:0:1178:C:C6	2.46	0.51
1:0:1399:C:H2'	1:0:1400:A:H8	1.74	0.51
1:0:1509:A:C8	1:0:1510:A:N7	2.79	0.51
1:0:2204:A:H4'	1:0:2205:C:O5'	2.11	0.51
1:0:2270:U:OP1	1:0:2359:U:O2'	2.23	0.51
1:0:2491:C:H3'	1:0:2492:G:H5''	1.93	0.51
1:0:2769:C:C2'	1:0:2867:G:N2	2.74	0.51
1:0:600:G:O2'	1:0:601:A:P	2.68	0.51
1:0:789:G:N2	1:0:2220:A:OP1	2.44	0.51
1:0:825:C:C2	1:0:1263:G:N1	2.78	0.51
1:0:930:A:OP1	1:0:930:A:H4'	2.09	0.51
1:0:999:A:H4'	1:0:1166:A:C2	2.46	0.51
1:0:1155:G:H2'	1:0:1155:G:N3	2.23	0.51
1:0:1225:G:H1'	1:0:1250:A:N6	2.26	0.51
1:0:1330:G:C4	1:0:1331:G:C8	2.98	0.51
1:0:1427:G:H2'	1:0:1428:G:O4'	2.09	0.51
1:0:1577:G:O2'	1:0:1578:U:H5'	2.10	0.51
1:0:1706:A:N7	1:0:1715:A:H2	2.07	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1762:C:N3	1:0:1763:G:C5	2.79	0.51
1:0:1767:G:H2'	1:0:1768:U:H5'	1.92	0.51
1:0:1922:U:H1'	1:0:2570:C:O2'	2.10	0.51
1:0:2716:G:H2'	1:0:2717:G:H8	1.74	0.51
1:0:2866:A:N7	1:0:2867:G:C6	2.78	0.51
1:0:17:G:C6	1:0:534:U:O2	2.63	0.51
1:0:316:C:H2'	1:0:317:U:H6	1.76	0.51
1:0:400:U:C5'	1:0:401:G:OP1	2.56	0.51
1:0:538:A:N6	1:0:2025:A:C5	2.78	0.51
1:0:701:U:H3'	1:0:701:U:H6	1.76	0.51
1:0:801:A:H8	1:0:801:A:O5'	1.94	0.51
1:0:801:A:O2'	1:0:802:A:P	2.68	0.51
1:0:1090:C:H2'	1:0:1091:C:C6	2.45	0.51
1:0:1228:G:C6	1:0:1229:C:C4	2.98	0.51
1:0:1238:A:O2'	1:0:1239:A:H5'	2.09	0.51
1:0:1626:A:H4'	1:0:1627:C:OP2	2.08	0.51
1:0:1766:U:H2'	1:0:1767:G:C5'	2.41	0.51
1:0:1975:G:O2'	1:0:1976:U:P	2.69	0.51
1:0:2361:G:H8	1:0:2361:G:O5'	1.93	0.51
1:0:2407:G:H5''	1:0:2408:G:OP1	2.11	0.51
1:0:2550:C:C5	1:0:2553:G:O4'	2.64	0.51
1:0:2692:A:O2'	1:0:2693:U:P	2.67	0.51
1:0:2695:C:C4	1:0:2696:A:N7	2.78	0.51
1:0:2748:C:H2'	1:0:2749:A:H8	1.76	0.51
1:0:2843:A:O2'	1:0:2844:G:H5'	2.11	0.51
1:0:459:A:C6	1:0:466:A:N7	2.78	0.51
1:0:697:G:N1	1:0:788:G:C4	2.79	0.51
1:0:854:G:C2	1:0:855:G:C4	2.98	0.51
1:0:1154:A:HO2'	1:0:1155:G:P	2.29	0.51
1:0:1284:G:N2	1:0:1633:C:H4'	2.25	0.51
1:0:1331:G:H2'	1:0:1331:G:N3	2.26	0.51
1:0:1463:A:C1'	1:0:1543:G:H22	2.22	0.51
1:0:1681:A:H2'	1:0:1682:A:O4'	2.11	0.51
1:0:1692:C:C2'	1:0:1693:A:H5'	2.40	0.51
1:0:2188:A:H2'	1:0:2189:A:C8	2.46	0.51
1:0:2837:G:H2'	1:0:2838:U:C6	2.45	0.51
1:0:24:G:C5	1:0:25:U:C4	2.99	0.51
1:0:89:A:H5'	1:0:90:G:OP1	2.10	0.51
1:0:698:A:C5	1:0:787:A:C2	2.99	0.51
1:0:765:C:C2'	1:0:766:A:OP2	2.59	0.51
1:0:814:G:C8	1:0:814:G:C3'	2.94	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:830:C:HO2'	1:0:831:G:H5'	1.76	0.51
1:0:873:U:O2	1:0:2247:A:O5'	2.28	0.51
1:0:889:C:H2'	1:0:890:U:C6	2.45	0.51
1:0:1073:G:H3'	1:0:1074:G:C5'	2.40	0.51
1:0:1327:C:N4	1:0:1328:C:N4	2.59	0.51
1:0:1410:U:O2	1:0:1410:U:H2'	2.09	0.51
1:0:1514:C:OP1	1:0:1593:C:H4'	2.10	0.51
1:0:1858:C:O2	1:0:1858:C:H2'	2.10	0.51
1:0:1920:A:N1	1:0:1922:U:C5	2.79	0.51
1:0:2030:U:O2'	1:0:2031:A:H5'	2.10	0.51
1:0:2094:C:N4	1:0:2103:G:C4	2.79	0.51
1:0:2161:C:O2'	1:0:2162:C:OP1	2.28	0.51
1:0:2242:C:H42	1:0:2257:A:N6	2.09	0.51
1:0:2486:C:N4	1:0:2487:G:O6	2.43	0.51
1:0:2507:U:O3'	1:0:2508:G:H8	1.93	0.51
1:0:2697:G:O2'	1:0:2698:G:H5'	2.10	0.51
1:0:2787:A:O2'	1:0:2788:C:H5'	2.11	0.51
1:0:48:A:N1	1:0:154:U:C4	2.79	0.51
1:0:222:G:H1'	1:0:397:U:O2	2.10	0.51
1:0:616:U:H3	1:0:632:A:H2	1.53	0.51
1:0:728:G:H3'	1:0:729:A:H8	1.76	0.51
1:0:763:A:C2	1:0:766:A:H1'	2.46	0.51
1:0:1017:C:N3	1:0:1018:C:C4	2.79	0.51
1:0:1429:A:O2'	1:0:1430:G:H4'	2.10	0.51
1:0:1459:U:O2	1:0:1476:G:OP2	2.29	0.51
1:0:1486:A:N6	1:0:1536:G:O6	2.44	0.51
1:0:1736:C:H2'	1:0:1737:G:C8	2.41	0.51
1:0:2064:U:C4	1:0:2216:G:C2	2.99	0.51
1:0:2245:A:H1'	1:0:2251:U:O4	2.10	0.51
1:0:2331:A:N7	1:0:2345:A:C6	2.78	0.51
1:0:2862:G:O2'	1:0:2863:U:H5'	2.11	0.51
1:0:83:A:N6	1:0:98:U:C1'	2.70	0.51
1:0:664:C:C5	1:0:666:U:H4'	2.37	0.51
1:0:757:U:H2'	1:0:758:G:O4'	2.11	0.51
1:0:890:U:H2'	1:0:891:A:C8	2.46	0.51
1:0:956:A:C4	1:0:2427:A:H2	2.29	0.51
1:0:983:G:OP2	1:0:985:G:H5'	2.07	0.51
1:0:1032:A:C2	1:0:1034:U:C2	2.98	0.51
1:0:1344:C:N4	1:0:1346:C:O2	2.43	0.51
1:0:1574:A:O2'	1:0:1575:C:H3'	2.10	0.51
1:0:1688:U:H2'	1:0:1690:U:OP2	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1801:C:H3'	1:0:1802:A:H5'	1.91	0.51
1:0:1920:A:C2	1:0:1922:U:C4	2.98	0.51
1:0:1949:A:H1'	1:0:2572:U:H5'	1.93	0.51
1:0:2072:C:H2'	1:0:2073:A:O4'	2.10	0.51
1:0:2240:C:H2'	1:0:2241:U:C5'	2.41	0.51
1:0:2511:G:H2'	1:0:2512:A:O4'	2.11	0.51
1:0:2737:A:H2'	1:0:2738:A:H5''	1.90	0.51
1:0:19:C:O2'	1:0:20:C:H5'	2.09	0.51
1:0:26:G:C5	1:0:27:G:N1	2.79	0.51
1:0:200:A:N7	1:0:435:A:H1'	2.25	0.51
1:0:242:A:O2'	1:0:243:G:C4'	2.59	0.51
1:0:422:C:O2'	1:0:423:G:H5'	2.10	0.51
1:0:498:C:C4	1:0:499:G:N7	2.79	0.51
1:0:557:U:O5'	1:0:557:U:H6	1.94	0.51
1:0:562:G:C6	1:0:563:U:C4	2.99	0.51
1:0:593:C:N4	1:0:594:G:C6	2.79	0.51
1:0:698:A:O4'	1:0:700:C:N4	2.43	0.51
1:0:814:G:H3'	1:0:815:A:H5'	1.91	0.51
1:0:931:G:C2	1:0:932:G:H1'	2.47	0.51
1:0:985:G:H2'	1:0:985:G:N3	2.26	0.51
1:0:1213:U:H2'	1:0:1214:C:C6	2.46	0.51
1:0:1250:A:HO2'	1:0:1251:G:C4'	2.24	0.51
1:0:1309:G:C2'	1:0:1310:C:O5'	2.59	0.51
1:0:1367:A:H2'	1:0:1368:G:O4'	2.10	0.51
1:0:1420:A:C2	1:0:1612:U:O2	2.64	0.51
1:0:1442:C:C2'	1:0:1443:G:OP1	2.59	0.51
1:0:1782:A:O2'	1:0:1783:G:H5'	2.11	0.51
1:0:2048:C:H2'	1:0:2049:C:C6	2.45	0.51
1:0:2182:A:H62	1:0:2203:G:H21	1.59	0.51
1:0:2235:G:N2	1:0:2254:C:C5	2.79	0.51
1:0:2579:A:C6	1:0:2580:C:N4	2.79	0.51
1:0:2839:G:C4	1:0:2840:U:C5	2.99	0.51
1:0:139:A:N3	1:0:140:G:N7	2.58	0.50
1:0:327:C:N3	1:0:328:A:C8	2.79	0.50
1:0:357:A:H3'	1:0:358:C:O4'	2.10	0.50
1:0:513:A:N1	1:0:516:G:C2	2.80	0.50
1:0:683:A:H5''	1:0:684:C:OP1	2.11	0.50
1:0:796:A:H2'	1:0:797:A:H5'	1.92	0.50
1:0:831:G:O2'	1:0:832:A:O4'	2.23	0.50
1:0:857:U:H2'	1:0:858:G:H5'	1.93	0.50
1:0:1084:A:N3	1:0:1084:A:H2'	2.27	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1120:C:H2'	1:0:1121:G:O5'	2.11	0.50
1:0:1322:G:C6	1:0:1323:G:N7	2.79	0.50
1:0:1354:A:H2'	1:0:1410:U:O2	2.11	0.50
1:0:1458:A:H2'	1:0:1459:U:H5''	1.92	0.50
1:0:1624:A:O2'	1:0:1625:A:C5'	2.45	0.50
1:0:1631:C:H3'	1:0:1632:A:H5''	1.92	0.50
1:0:1772:C:O2'	1:0:1773:C:P	2.68	0.50
1:0:2036:G:N2	1:0:2596:C:H1'	2.27	0.50
1:0:2455:A:C2	1:0:2460:G:N2	2.78	0.50
1:0:2479:U:O2	1:0:2483:U:C4	2.63	0.50
1:0:2486:C:H2'	1:0:2487:G:C8	2.46	0.50
1:0:2799:C:C5	1:0:2800:C:C4	2.99	0.50
1:0:154:U:C2'	1:0:155:G:OP1	2.59	0.50
1:0:155:G:C4	1:0:156:G:C8	2.99	0.50
1:0:204:A:N7	1:0:2386:G:O4'	2.44	0.50
1:0:342:G:O2'	1:0:343:A:OP1	2.27	0.50
1:0:437:G:O2'	1:0:438:G:H5'	2.12	0.50
1:0:456:C:HO2'	1:0:457:C:H5'	1.76	0.50
1:0:523:A:N6	1:0:524:A:N6	2.59	0.50
1:0:699:G:C5'	1:0:700:C:OP2	2.58	0.50
1:0:735:G:O2'	1:0:736:G:H5'	2.11	0.50
1:0:847:C:N4	1:0:955:G:N2	2.59	0.50
1:0:849:G:O6	1:0:953:G:O6	2.29	0.50
1:0:866:U:O2'	1:0:867:G:H5'	2.11	0.50
1:0:1090:C:H5''	1:0:1099:A:N7	2.26	0.50
1:0:1226:A:C1'	1:0:1250:A:H2	2.25	0.50
1:0:1399:C:H2'	1:0:1400:A:C8	2.46	0.50
1:0:1601:U:O2'	1:0:1602:G:C5	2.61	0.50
1:0:1658:A:N7	1:0:1659:G:C8	2.78	0.50
1:0:1729:C:H2'	1:0:1730:G:C8	2.47	0.50
1:0:2005:U:H2'	1:0:2595:C:O2'	2.12	0.50
1:0:2059:U:O2'	1:0:2060:A:OP1	2.29	0.50
1:0:2217:G:H5'	1:0:2218:G:N7	2.26	0.50
1:0:2313:G:O2'	1:0:2314:A:OP1	2.17	0.50
1:0:2359:U:O4	1:0:2360:C:N4	2.45	0.50
1:0:2419:C:C2	1:0:2420:C:H1'	2.46	0.50
1:0:2564:U:O2'	1:0:2565:C:O5'	2.29	0.50
1:0:48:A:H4'	1:0:49:U:C5'	2.40	0.50
1:0:172:A:H1'	1:0:227:G:H22	1.76	0.50
1:0:790:A:C2	1:0:791:G:C8	3.00	0.50
1:0:941:U:N3	1:0:942:U:C2	2.79	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1043:A:H2	1:0:1133:G:N2	2.09	0.50
1:0:1080:A:H5''	1:0:1081:A:N7	2.27	0.50
1:0:1104:G:N2	1:0:1108:U:C5	2.80	0.50
1:0:1152:C:H2'	1:0:1152:C:O2	2.11	0.50
1:0:1314:A:C5	1:0:1316:G:C8	2.99	0.50
1:0:1537:U:N3	1:0:1538:A:C5	2.79	0.50
1:0:1627:C:N4	1:0:1628:C:N4	2.60	0.50
1:0:1747:G:H4'	1:0:1749:G:O4'	2.10	0.50
1:0:1783:G:O2'	1:0:1784:C:H5'	2.10	0.50
1:0:1920:A:N6	1:0:1923:U:C6	2.79	0.50
1:0:2384:G:C2'	1:0:2385:U:OP2	2.59	0.50
1:0:2646:C:H6	1:0:2646:C:O5'	1.94	0.50
1:0:89:A:H8	1:0:89:A:OP1	1.93	0.50
1:0:212:U:H2'	1:0:213:C:H5'	1.92	0.50
1:0:488:A:H8	1:0:488:A:OP1	1.94	0.50
1:0:768:U:H2'	1:0:769:C:C6	2.47	0.50
1:0:874:A:H3'	1:0:875:G:H8	1.77	0.50
1:0:1139:A:O2'	1:0:1140:A:O4'	2.27	0.50
1:0:1300:A:C5	1:0:1301:U:N3	2.79	0.50
1:0:1348:C:O2'	1:0:1349:A:H5'	2.10	0.50
1:0:1422:C:H2'	1:0:1423:A:C8	2.44	0.50
1:0:1683:G:H5'	1:0:1683:G:C8	2.43	0.50
1:0:1714:A:N6	1:0:1715:A:N6	2.60	0.50
1:0:1779:C:H2'	1:0:1780:A:O4'	2.11	0.50
1:0:2080:U:H2'	1:0:2081:U:C5	2.46	0.50
1:0:2395:C:N4	1:0:2396:C:H41	2.09	0.50
1:0:2548:G:O2'	1:0:2549:G:H5'	2.11	0.50
1:0:2661:G:C2'	1:0:2662:C:H5'	2.41	0.50
1:0:2675:U:O2'	1:0:2676:G:H5'	2.11	0.50
1:0:2841:U:O2	1:0:2843:A:C1'	2.57	0.50
1:0:219:G:H21	1:0:231:G:H2'	1.74	0.50
1:0:221:A:C2	1:0:222:G:C1'	2.95	0.50
1:0:224:G:H4'	1:0:399:G:C6	2.46	0.50
1:0:466:A:O2'	1:0:467:U:P	2.69	0.50
1:0:835:U:C5	1:0:955:G:O2'	2.63	0.50
1:0:976:C:C2'	1:0:977:G:O5'	2.59	0.50
1:0:1177:U:O4	1:0:1196:G:O6	2.29	0.50
1:0:1199:U:O4	1:0:1201:G:C5	2.65	0.50
1:0:1345:G:C5	1:0:1625:A:N6	2.79	0.50
1:0:1496:G:N2	1:0:1497:C:H1'	2.27	0.50
1:0:1583:A:O2'	1:0:1584:G:OP2	2.21	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1628:C:C4	1:0:1629:G:C8	3.00	0.50
1:0:1914:U:C5	1:0:1951:G:N2	2.80	0.50
1:0:1975:G:N2	1:0:1979:C:H5	2.09	0.50
1:0:2001:G:C6	1:0:2002:A:N6	2.80	0.50
1:0:2522:G:C6	1:0:2523:G:C6	2.99	0.50
1:0:2717:G:H2'	1:0:2718:A:C8	2.45	0.50
1:0:636:G:C2'	1:0:637:G:H5'	2.42	0.50
1:0:805:G:C8	1:0:2419:C:C2	3.00	0.50
1:0:1131:G:C6	1:0:1132:C:C4	3.00	0.50
1:0:1253:C:C4	1:0:1254:G:N7	2.79	0.50
1:0:1307:U:H2'	1:0:1308:C:O4'	2.12	0.50
1:0:1354:A:C2	1:0:1411:C:H4'	2.47	0.50
1:0:1469:U:C5'	1:0:1470:G:OP2	2.56	0.50
1:0:1977:C:H2'	1:0:1978:U:C6	2.46	0.50
1:0:2713:A:H2'	1:0:2714:A:H8	1.76	0.50
1:0:2810:A:H62	1:0:2853:U:H3'	1.76	0.50
1:0:822:G:H2'	1:0:823:U:H5'	1.93	0.50
1:0:1474:A:O2'	1:0:1475:U:C5'	2.52	0.50
1:0:1714:A:H5'	1:0:1715:A:H5''	1.93	0.50
1:0:1788:C:N3	1:0:1789:U:C4	2.80	0.50
1:0:1823:G:H2'	1:0:1824:C:H6	1.76	0.50
1:0:2444:C:O2'	1:0:2445:C:H5'	2.12	0.50
1:0:2690:A:OP1	1:0:2692:A:OP2	2.30	0.50
1:0:51:A:C8	1:0:115:G:N2	2.80	0.50
1:0:198:A:O2'	1:0:199:A:P	2.69	0.50
1:0:212:U:O2'	1:0:213:C:H5'	2.12	0.50
1:0:338:G:C5	1:0:339:U:C5	3.00	0.50
1:0:594:G:C5	1:0:1264:C:C5	3.00	0.50
1:0:719:A:H2'	1:0:720:A:C8	2.47	0.50
1:0:844:G:N1	1:0:845:U:C2	2.80	0.50
1:0:940:G:C3'	1:0:941:U:C5'	2.84	0.50
1:0:1285:A:O2'	1:0:1286:U:OP1	2.23	0.50
1:0:1495:G:HO2'	1:0:1496:G:P	2.35	0.50
1:0:1819:U:H2'	1:0:1820:G:O4'	2.12	0.50
1:0:1840:A:H2'	1:0:1841:G:C5'	2.42	0.50
1:0:1979:C:HO2'	1:0:1980:A:C4'	2.24	0.50
1:0:2121:U:O5'	1:0:2121:U:H6	1.94	0.50
1:0:2294:U:H2'	1:0:2295:C:O4'	2.12	0.50
1:0:2658:A:H2'	1:0:2659:C:H6	1.76	0.50
1:0:70:A:O2'	1:0:71:A:P	2.69	0.50
1:0:161:U:H2'	1:0:162:C:C6	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:367:G:C2'	1:0:368:A:H5''	2.42	0.50
1:0:402:A:N3	1:0:402:A:H2'	2.27	0.50
1:0:459:A:N7	1:0:484:G:C6	2.80	0.50
1:0:513:A:C6	1:0:515:A:N6	2.80	0.50
1:0:1151:U:C5'	1:0:1153:A:OP1	2.58	0.50
1:0:1300:A:N7	1:0:1301:U:C4	2.79	0.50
1:0:1390:G:H8	1:0:1390:G:O5'	1.95	0.50
1:0:1665:C:O2'	1:0:1666:G:H5'	2.12	0.50
1:0:1685:A:N7	1:0:1691:G:C5	2.80	0.50
1:0:1861:G:O5'	1:0:1861:G:H8	1.95	0.50
1:0:1955:G:H2'	1:0:1956:G:H8	1.77	0.50
1:0:2058:U:H1'	1:0:2576:G:H21	1.77	0.50
1:0:2299:A:H2'	1:0:2299:A:N3	2.27	0.50
1:0:2389:G:H2'	1:0:2390:A:O4'	2.12	0.50
1:0:2426:G:C5'	1:0:2427:A:O5'	2.59	0.50
1:0:2504:G:H5'	1:0:2504:G:H8	1.77	0.50
1:0:2756:A:N6	1:0:2762:G:N3	2.60	0.50
1:0:2759:U:C4'	1:0:2760:G:OP2	2.49	0.50
1:0:2781:G:C6	1:0:2782:G:C6	3.00	0.50
1:0:2831:A:H2'	1:0:2832:G:O4'	2.12	0.50
1:0:221:A:H2	1:0:222:G:H1'	1.77	0.49
1:0:514:G:C8	1:0:514:G:O5'	2.64	0.49
1:0:708:G:P	1:0:1442:C:N4	2.84	0.49
1:0:926:C:O5'	1:0:926:C:C6	2.65	0.49
1:0:1002:C:O4'	1:0:1198:C:H2'	2.12	0.49
1:0:1164:C:N3	1:0:1165:G:C4	2.80	0.49
1:0:1467:U:C3'	1:0:1468:A:H5'	2.39	0.49
1:0:1707:A:C8	1:0:1708:C:C6	2.99	0.49
1:0:1715:A:HO2'	1:0:1716:G:C3'	2.22	0.49
1:0:1724:C:N3	1:0:1747:G:C6	2.80	0.49
1:0:2038:C:H2'	1:0:2483:U:C5'	2.41	0.49
1:0:2096:U:C3'	1:0:2097:A:H5''	2.41	0.49
1:0:2219:U:O2'	1:0:2220:A:H5'	2.12	0.49
1:0:2434:G:H2'	1:0:2435:C:C6	2.47	0.49
1:0:2435:C:H2'	1:0:2436:U:O4'	2.12	0.49
1:0:2601:C:C2'	1:0:2602:G:O5'	2.60	0.49
1:0:2676:G:H2'	1:0:2677:U:O4'	2.12	0.49
1:0:2806:G:O4'	1:0:2858:A:C2	2.65	0.49
3:0:0:G34:H14	3:0:0:G34:C10	2.34	0.49
1:0:313:U:C2	1:0:314:G:C8	3.00	0.49
1:0:549:G:H2'	1:0:550:C:O4'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:583:C:H4'	1:0:584:A:C5'	2.42	0.49
1:0:751:G:N2	1:0:752:G:O2'	2.45	0.49
1:0:751:G:C8	1:0:772:G:N1	2.79	0.49
1:0:812:G:C6	1:0:813:A:C6	3.01	0.49
1:0:1004:A:C5	1:0:1005:U:C5	2.99	0.49
1:0:1016:C:C2	1:0:1154:A:C6	3.00	0.49
1:0:1018:C:C5	1:0:1019:U:H5	2.30	0.49
1:0:1407:G:N1	1:0:1408:A:C2	2.81	0.49
1:0:1629:G:C5	1:0:1633:C:N3	2.80	0.49
1:0:1685:A:HO2'	1:0:1686:A:P	2.35	0.49
1:0:1779:C:H2'	1:0:1780:A:H8	1.72	0.49
1:0:1927:U:O2	1:0:1927:U:C2'	2.55	0.49
1:0:2027:C:C6	1:0:2604:G:N2	2.80	0.49
1:0:2082:C:N4	1:0:2174:G:C2	2.80	0.49
1:0:2425:G:C2'	1:0:2426:G:H5'	2.42	0.49
1:0:26:G:C6	1:0:27:G:N1	2.80	0.49
1:0:351:A:H2'	1:0:352:G:O4'	2.13	0.49
1:0:429:C:H2'	1:0:430:C:H6	1.76	0.49
1:0:520:C:O2	1:0:520:C:C2'	2.59	0.49
1:0:521:U:H5''	1:0:522:G:OP2	2.11	0.49
1:0:621:U:O2'	1:0:622:U:H5'	2.11	0.49
1:0:661:C:H2'	1:0:662:G:H8	1.77	0.49
1:0:742:G:O2'	1:0:776:G:H4'	2.12	0.49
1:0:758:G:C2	1:0:766:A:C6	3.00	0.49
1:0:849:G:C8	1:0:850:C:H5	2.31	0.49
1:0:1057:A:H3'	1:0:1058:G:C5'	2.36	0.49
1:0:1619:A:H2'	1:0:1620:C:H5'	1.94	0.49
1:0:1697:U:O2	1:0:1754:G:C8	2.65	0.49
1:0:1980:A:C2'	1:0:1981:A:H5'	2.42	0.49
1:0:2264:C:C2'	1:0:2265:A:H5'	2.42	0.49
1:0:2270:U:O5'	1:0:2270:U:H6	1.95	0.49
1:0:2404:A:O4'	1:0:2406:C:C6	2.65	0.49
1:0:2714:A:H2'	1:0:2715:C:C6	2.47	0.49
1:0:2748:C:N4	1:0:2749:A:N6	2.60	0.49
1:0:27:G:O2'	1:0:28:A:P	2.71	0.49
1:0:34:U:H5	1:0:466:A:N3	2.10	0.49
1:0:38:G:H2'	1:0:39:C:C6	2.48	0.49
1:0:399:G:H5''	1:0:401:G:H22	1.76	0.49
1:0:1026:U:O2'	1:0:1027:C:H5'	2.12	0.49
1:0:1142:G:O2'	1:0:1143:A:O4'	2.20	0.49
1:0:1151:U:H5'	1:0:1153:A:C5'	2.42	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1175:A:N1	1:0:1176:U:C4	2.80	0.49
1:0:1190:C:H2'	1:0:1191:G:C8	2.48	0.49
1:0:1345:G:C4	1:0:1625:A:C6	3.00	0.49
1:0:1495:G:N2	1:0:1529:C:H1'	2.27	0.49
1:0:1964:A:C5'	1:0:1965:U:OP2	2.60	0.49
1:0:2027:C:C2	1:0:2604:G:C2	3.00	0.49
1:0:2036:G:H2'	1:0:2037:A:O4'	2.13	0.49
1:0:2052:G:C6	1:0:2053:G:N7	2.81	0.49
1:0:2244:C:H2'	1:0:2245:A:N7	2.27	0.49
1:0:2286:G:N7	1:0:2287:G:H1'	2.27	0.49
1:0:2526:U:C4	1:0:2545:A:C8	2.99	0.49
1:0:52:A:N6	1:0:115:G:O2'	2.45	0.49
1:0:608:G:O2'	1:0:609:U:H5'	2.12	0.49
1:0:787:A:O2'	1:0:788:G:C5'	2.58	0.49
1:0:849:G:C8	1:0:850:C:C5	3.00	0.49
1:0:973:U:O2'	1:0:974:U:H5'	2.11	0.49
1:0:1067:G:O6	1:0:1112:U:O5'	2.31	0.49
1:0:1163:C:O2'	1:0:1164:C:H5'	2.13	0.49
1:0:1178:C:C2	1:0:1196:G:N2	2.81	0.49
1:0:1209:G:O2'	1:0:1210:C:H5'	2.12	0.49
1:0:1255:A:C6	1:0:1256:C:N4	2.81	0.49
1:0:1443:G:O2'	1:0:1444:C:H5'	2.12	0.49
1:0:2489:C:C4	1:0:2490:U:C5	3.01	0.49
1:0:2756:A:N6	1:0:2762:G:H1'	2.27	0.49
1:0:2781:G:O3'	1:0:2782:G:O4'	2.30	0.49
1:0:2795:A:C2'	1:0:2796:A:OP1	2.60	0.49
1:0:2870:C:H2'	1:0:2871:U:C6	2.47	0.49
1:0:305:A:H2'	1:0:306:G:O4'	2.12	0.49
1:0:537:C:C5	1:0:2759:U:H6	2.29	0.49
1:0:781:G:H2'	1:0:782:U:C6	2.48	0.49
1:0:1140:A:N6	1:0:2470:U:OP1	2.45	0.49
1:0:1164:C:N4	1:0:1165:G:C6	2.80	0.49
1:0:1173:G:C4	1:0:1174:G:C8	3.01	0.49
1:0:1354:A:P	1:0:1354:A:H8	2.35	0.49
1:0:1549:C:H6	1:0:1549:C:O5'	1.96	0.49
1:0:1876:C:H2'	1:0:1877:C:H5'	1.95	0.49
1:0:2092:U:O5'	1:0:2092:U:C6	2.63	0.49
1:0:2523:G:H2'	1:0:2524:G:O4'	2.12	0.49
1:0:2767:C:N4	1:0:2768:C:N4	2.61	0.49
1:0:39:C:C4	1:0:40:U:O4	2.66	0.49
1:0:169:C:H2'	1:0:170:U:H5'	1.95	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:425:A:N7	1:0:2390:A:H2	2.11	0.49
1:0:615:C:C2	1:0:634:G:N2	2.80	0.49
1:0:765:C:O2'	1:0:766:A:C8	2.64	0.49
1:0:1036:G:C4	1:0:1145:C:O4'	2.66	0.49
1:0:1142:G:O2'	1:0:1143:A:C5'	2.60	0.49
1:0:1151:U:C5'	1:0:1153:A:O4'	2.61	0.49
1:0:1198:C:OP1	1:0:1199:U:H4'	2.12	0.49
1:0:1404:C:N4	1:0:1408:A:H62	2.09	0.49
1:0:1532:A:H2'	1:0:1533:G:C8	2.48	0.49
1:0:1682:A:N6	1:0:1683:G:C6	2.81	0.49
1:0:1757:C:O2	1:0:1970:G:C2	2.65	0.49
1:0:1866:G:H2'	1:0:1867:A:O4'	2.13	0.49
1:0:1982:C:H4'	1:0:2703:C:O2	2.12	0.49
1:0:2097:A:H1'	1:0:2105:U:OP1	2.13	0.49
1:0:2169:A:H8	1:0:2169:A:O5'	1.95	0.49
1:0:2351:G:C2	1:0:2352:A:C8	3.01	0.49
1:0:2409:A:C2'	1:0:2410:U:H5'	2.43	0.49
1:0:2493:U:H2'	1:0:2494:C:C6	2.47	0.49
1:0:2542:U:O2	1:0:2545:A:C8	2.66	0.49
1:0:7:G:N2	1:0:8:A:N3	2.61	0.49
1:0:69:G:C4'	1:0:70:A:OP1	2.38	0.49
1:0:344:G:C2	1:0:345:U:C5	3.00	0.49
1:0:369:C:O2'	1:0:370:U:H5'	2.13	0.49
1:0:531:G:H2'	1:0:532:A:H8	1.78	0.49
1:0:547:U:H2'	1:0:548:G:C8	2.32	0.49
1:0:1040:A:C8	1:0:1041:G:C8	3.00	0.49
1:0:1145:C:C6	1:0:1147:G:OP2	2.66	0.49
1:0:1181:C:C3'	1:0:1182:U:H5''	2.33	0.49
1:0:1337:G:C1'	1:0:1632:A:N6	2.70	0.49
1:0:1508:G:C2	1:0:1512:A:N6	2.81	0.49
1:0:1663:C:H3'	1:0:1663:C:H6	1.77	0.49
1:0:1665:C:N4	1:0:1993:G:C6	2.81	0.49
1:0:1806:G:O6	1:0:1807:A:N6	2.46	0.49
1:0:1970:G:O2'	1:0:1971:C:H5'	2.12	0.49
1:0:2015:G:N2	1:0:2038:C:C4	2.81	0.49
1:0:2161:C:O2'	1:0:2162:C:P	2.70	0.49
1:0:2492:G:O6	1:0:2553:G:C5	2.66	0.49
1:0:2498:U:C5	1:0:2520:A:C6	3.01	0.49
1:0:2604:G:C6	1:0:2605:C:N3	2.80	0.49
1:0:2795:A:O2'	1:0:2796:A:OP1	2.28	0.49
1:0:105:G:O2'	1:0:106:G:H5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:192:G:H4'	1:0:193:A:H4'	1.95	0.49
1:0:501:G:H2'	1:0:502:A:H8	1.78	0.49
1:0:536:A:N1	1:0:2605:C:H4'	2.27	0.49
1:0:646:C:H2'	1:0:647:G:O4'	2.12	0.49
1:0:698:A:O2'	1:0:699:G:OP2	2.28	0.49
1:0:815:A:C2'	1:0:816:U:O5'	2.61	0.49
1:0:871:U:C2	1:0:2247:A:C8	3.01	0.49
1:0:1040:A:H8	1:0:1040:A:O5'	1.95	0.49
1:0:1325:U:H4'	1:0:1326:U:O5'	2.12	0.49
1:0:1684:G:O5'	1:0:1684:G:H8	1.96	0.49
1:0:1800:A:H2'	1:0:1802:A:C8	2.48	0.49
1:0:2419:C:C4	1:0:2420:C:H1'	2.48	0.49
1:0:2447:G:O2'	1:0:2448:A:C5'	2.58	0.49
1:0:2498:U:C4	1:0:2521:A:N7	2.81	0.49
1:0:2526:U:C5	1:0:2545:A:N7	2.81	0.49
1:0:2652:G:N3	1:0:2653:A:C8	2.80	0.49
1:0:10:A:N1	1:0:2608:A:C2	2.80	0.49
1:0:68:C:O2	1:0:68:C:C2'	2.59	0.49
1:0:538:A:H2	1:0:2026:C:C5'	2.26	0.49
1:0:651:C:H42	1:0:658:G:H1	1.61	0.49
1:0:929:A:C2	1:0:930:A:H1'	2.48	0.49
1:0:1015:U:C4'	1:0:1021:A:N7	2.76	0.49
1:0:1443:G:H2'	1:0:1444:C:H6	1.78	0.49
1:0:1448:A:H61	1:0:1574:A:H61	1.61	0.49
1:0:1692:C:H2'	1:0:1693:A:C5'	2.43	0.49
1:0:2240:C:O2'	1:0:2241:U:H5''	2.12	0.49
1:0:2504:G:C2	1:0:2518:C:C2	3.01	0.49
1:0:2609:G:C8	1:0:2868:G:N3	2.81	0.49
1:0:219:G:O2'	1:0:220:U:OP2	2.30	0.48
1:0:307:C:N3	1:0:308:C:C5	2.81	0.48
1:0:343:A:C5	1:0:346:C:C4	3.01	0.48
1:0:701:U:HO2'	1:0:1771:A:H2	1.57	0.48
1:0:793:G:O5'	1:0:793:G:H8	1.95	0.48
1:0:1621:C:H4'	1:0:1626:A:C6	2.48	0.48
1:0:1636:G:H2'	1:0:1637:U:H6	1.77	0.48
1:0:1685:A:H61	1:0:1693:A:H61	1.61	0.48
1:0:1866:G:H8	1:0:1866:G:O5'	1.95	0.48
1:0:1920:A:C6	1:0:1922:U:C5	3.01	0.48
1:0:2044:G:O2'	1:0:2045:A:P	2.71	0.48
1:0:2404:A:H5'	1:0:2406:C:H5'	1.95	0.48
1:0:2867:G:OP2	1:0:2867:G:C8	2.64	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:105:G:C2'	1:0:106:G:H5'	2.43	0.48
1:0:225:G:C5'	1:0:226:C:H5'	2.43	0.48
1:0:541:C:H5''	1:0:542:A:C4	2.48	0.48
1:0:561:U:H6	1:0:561:U:H5''	1.78	0.48
1:0:616:U:C2	1:0:632:A:N1	2.81	0.48
1:0:697:G:C2	1:0:788:G:C6	3.01	0.48
1:0:939:C:C4	1:0:940:G:O6	2.65	0.48
1:0:995:A:O2'	1:0:996:C:P	2.70	0.48
1:0:1045:G:N2	1:0:1133:G:H1'	2.28	0.48
1:0:1266:G:O3'	1:0:1267:A:O4'	2.31	0.48
1:0:1351:G:C2	1:0:1352:G:C4	3.01	0.48
1:0:1715:A:O2'	1:0:1716:G:O5'	2.30	0.48
1:0:1964:A:H5''	1:0:1965:U:OP2	2.12	0.48
1:0:2075:U:C2'	1:0:2076:G:OP2	2.61	0.48
1:0:2556:A:C2	1:0:2593:A:C2	3.01	0.48
1:0:2674:C:C2	1:0:2675:U:C5	2.97	0.48
1:0:38:G:H1	1:0:453:U:H3	1.61	0.48
1:0:68:C:O2'	1:0:72:A:O2'	2.08	0.48
1:0:210:A:N7	1:0:211:U:H5	2.12	0.48
1:0:239:A:C2	1:0:443:A:N3	2.82	0.48
1:0:509:U:H2'	1:0:510:G:H5'	1.95	0.48
1:0:649:G:H2'	1:0:650:U:H6	1.78	0.48
1:0:705:C:H2'	1:0:706:A:C8	2.48	0.48
1:0:741:G:C5	1:0:743:A:N7	2.82	0.48
1:0:754:G:H2'	1:0:755:C:H6	1.78	0.48
1:0:1175:A:C2	1:0:1176:U:C4	3.02	0.48
1:0:1179:A:H2'	1:0:1180:A:H8	1.78	0.48
1:0:1602:G:HO2'	1:0:1603:A:H8	1.54	0.48
1:0:1672:A:C6	1:0:1673:C:C2	3.01	0.48
1:0:1753:A:O5'	1:0:1753:A:C8	2.58	0.48
1:0:2632:U:C2	1:0:2633:A:N7	2.81	0.48
1:0:2825:A:C8	1:0:2844:G:O4'	2.66	0.48
1:0:2841:U:O2'	1:0:2842:C:P	2.71	0.48
1:0:39:C:N3	1:0:40:U:C4	2.80	0.48
1:0:109:A:H2'	1:0:110:U:O4'	2.14	0.48
1:0:215:G:N2	1:0:216:U:H1'	2.28	0.48
1:0:470:U:C5	1:0:480:G:C2	3.01	0.48
1:0:580:A:C4	1:0:2013:A:N6	2.81	0.48
1:0:809:C:O2'	1:0:810:U:H5'	2.13	0.48
1:0:1104:G:N2	1:0:1108:U:H5	2.11	0.48
1:0:1298:G:O6	1:0:1342:U:C2	2.66	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1316:G:H21	1:0:1317:G:H1'	1.78	0.48
1:0:1393:G:N2	1:0:1394:G:H1'	2.28	0.48
1:0:1459:U:O2	1:0:1459:U:H2'	2.13	0.48
1:0:1684:G:H8	1:0:1684:G:C5'	2.26	0.48
1:0:2117:A:H8	1:0:2118:A:H4'	1.76	0.48
1:0:2205:C:C2'	1:0:2206:C:H5'	2.44	0.48
1:0:90:G:H5'	1:0:91:A:OP2	2.14	0.48
1:0:336:A:N6	1:0:349:G:N2	2.62	0.48
1:0:492:G:O2'	1:0:493:A:OP2	2.26	0.48
1:0:620:G:H1	1:0:628:A:N6	2.11	0.48
1:0:649:G:N1	1:0:660:G:N1	2.62	0.48
1:0:796:A:C8	1:0:797:A:H4'	2.47	0.48
1:0:991:A:C6	1:0:992:A:C2	3.02	0.48
1:0:1458:A:H2'	1:0:1459:U:C5'	2.42	0.48
1:0:1562:G:H5''	1:0:1563:U:H5'	1.95	0.48
1:0:1715:A:C2'	1:0:1716:G:OP2	2.61	0.48
1:0:1931:G:O2'	1:0:1932:G:H5'	2.12	0.48
1:0:2061:C:C2	1:0:2062:U:C6	3.00	0.48
1:0:2227:C:H3'	1:0:2228:U:C6	2.48	0.48
1:0:2229:G:N2	1:0:2475:C:H5''	2.28	0.48
1:0:2564:U:HO2'	1:0:2565:C:P	2.36	0.48
1:0:2621:G:C2	1:0:2753:C:O2	2.66	0.48
1:0:322:A:C8	1:0:343:A:C4	3.02	0.48
1:0:344:G:C2	1:0:345:U:C6	3.00	0.48
1:0:406:G:C5	1:0:407:A:N7	2.82	0.48
1:0:516:G:C2'	1:0:517:A:OP2	2.61	0.48
1:0:528:G:H2'	1:0:529:U:C6	2.49	0.48
1:0:1035:G:N1	1:0:1036:G:O6	2.47	0.48
1:0:1234:C:C2	1:0:1235:C:C6	3.02	0.48
1:0:1250:A:O2'	1:0:1251:G:C4'	2.62	0.48
1:0:1453:A:H2'	1:0:1454:U:O4'	2.13	0.48
1:0:1474:A:C2	1:0:1476:G:C6	3.00	0.48
1:0:1546:C:H2'	1:0:1547:U:C5	2.49	0.48
1:0:1685:A:C2	1:0:1976:U:C2	3.01	0.48
1:0:1997:A:H2'	1:0:1998:A:N7	2.28	0.48
1:0:2096:U:H2'	1:0:2097:A:H5''	1.95	0.48
1:0:2103:G:H2'	1:0:2104:G:O4'	2.13	0.48
1:0:2273:C:H2'	1:0:2274:C:H6	1.78	0.48
1:0:2660:C:O2'	1:0:2661:G:H5'	2.13	0.48
1:0:2826:C:C2'	1:0:2827:G:H5'	2.40	0.48
1:0:27:G:N2	1:0:522:G:O2'	2.46	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:240:U:H2'	1:0:241:C:O4'	2.14	0.48
1:0:318:G:N2	1:0:321:A:O4'	2.47	0.48
1:0:616:U:O2	1:0:632:A:N1	2.46	0.48
1:0:918:A:H2'	1:0:919:U:C5'	2.25	0.48
1:0:985:G:C5	1:0:1200:G:C2	3.01	0.48
1:0:987:G:O6	1:0:999:A:C2	2.66	0.48
1:0:1162:A:H2'	1:0:1163:C:O4'	2.13	0.48
1:0:1348:C:H2'	1:0:1349:A:H8	1.79	0.48
1:0:1391:A:H1'	1:0:1392:U:C4	2.49	0.48
1:0:1415:C:O2'	1:0:1416:A:H5'	2.14	0.48
1:0:1476:G:C5	1:0:1477:C:C5	3.02	0.48
1:0:1831:G:C5	1:0:1832:G:C8	3.02	0.48
1:0:1866:G:O5'	1:0:1866:G:C8	2.66	0.48
1:0:2004:U:O2'	1:0:2005:U:OP1	2.30	0.48
1:0:2047:C:O2	1:0:2429:A:C5	2.67	0.48
1:0:2404:A:H4'	1:0:2405:A:O5'	2.13	0.48
1:0:2510:A:H61	1:0:2641:A:N6	2.12	0.48
1:0:2637:C:N4	1:0:2643:G:N2	2.62	0.48
1:0:24:G:H2'	1:0:25:U:C6	2.49	0.48
1:0:529:U:H2'	1:0:530:G:H8	1.79	0.48
1:0:583:C:H1'	1:0:2038:C:C6	2.48	0.48
1:0:968:C:O2'	1:0:969:U:P	2.72	0.48
1:0:987:G:C2	1:0:988:G:N7	2.81	0.48
1:0:1016:C:C2	1:0:1017:C:H5	2.32	0.48
1:0:1136:G:C6	1:0:1137:A:N6	2.82	0.48
1:0:1767:G:C2'	1:0:1768:U:H5'	2.44	0.48
1:0:2238:G:C6	1:0:2239:C:C4	3.02	0.48
1:0:2278:A:H2'	1:0:2279:G:O4'	2.14	0.48
1:0:2484:G:C1'	3:0:0:G34:H182	2.41	0.48
1:0:2788:C:C2	1:0:2789:U:C6	3.02	0.48
1:0:2870:C:H2'	1:0:2871:U:H6	1.79	0.48
1:0:219:G:N2	1:0:231:G:H2'	2.29	0.48
1:0:239:A:H2	1:0:443:A:N3	2.11	0.48
1:0:847:C:O2'	1:0:848:A:H5'	2.14	0.48
1:0:973:U:H2'	1:0:974:U:O4'	2.14	0.48
1:0:1441:A:H3'	1:0:1441:A:N3	2.28	0.48
1:0:1458:A:C3'	1:0:1459:U:H5'	2.41	0.48
1:0:1672:A:H3'	1:0:1673:C:C6	2.49	0.48
1:0:1681:A:OP1	1:0:1682:A:OP2	2.31	0.48
1:0:1821:A:H3'	1:0:1822:C:C6	2.49	0.48
1:0:1916:G:H2'	1:0:1917:C:O4'	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1982:C:H2'	1:0:1983:G:O4'	2.13	0.48
1:0:2041:A:C6	1:0:2042:A:N6	2.82	0.48
1:0:2046:C:H3'	1:0:2047:C:H5''	1.95	0.48
1:0:2174:G:H2'	1:0:2175:A:C8	2.49	0.48
1:0:2342:U:O2'	1:0:2343:C:H5'	2.13	0.48
1:0:2431:C:O2	1:0:2432:A:N9	2.46	0.48
1:0:2469:G:C4'	1:0:2470:U:OP1	2.62	0.48
1:0:2634:G:H2'	1:0:2643:G:O6	2.14	0.48
1:0:2837:G:C6	1:0:2838:U:C4	3.01	0.48
1:0:3:U:H2'	1:0:4:C:H6	1.79	0.48
1:0:57:G:C2	1:0:72:A:C8	2.99	0.48
1:0:174:A:C2	1:0:175:C:H1'	2.49	0.48
1:0:322:A:H1'	1:0:343:A:N9	2.29	0.48
1:0:345:U:OP1	1:0:346:C:N4	2.47	0.48
1:0:351:A:N6	1:0:352:G:N2	2.61	0.48
1:0:521:U:OP2	1:0:522:G:C6	2.67	0.48
1:0:744:C:C2	1:0:745:C:C5	3.02	0.48
1:0:833:A:C2	1:0:834:A:C4	3.01	0.48
1:0:874:A:H2'	1:0:875:G:O4'	2.14	0.48
1:0:1011:A:N1	1:0:1166:A:C5	2.82	0.48
1:0:1035:G:OP1	1:0:1037:U:OP1	2.31	0.48
1:0:1153:A:O2'	1:0:1154:A:C3'	2.60	0.48
1:0:1385:C:C2	1:0:1386:A:C8	3.01	0.48
1:0:1399:C:N4	1:0:1400:A:H62	2.12	0.48
1:0:1525:A:C8	1:0:1526:U:H1'	2.49	0.48
1:0:1658:A:N7	1:0:1659:G:C5	2.82	0.48
1:0:1693:A:N6	1:0:1694:A:C6	2.82	0.48
1:0:1920:A:H8	1:0:1922:U:OP2	1.97	0.48
1:0:2014:A:N6	1:0:2477:C:C1'	2.67	0.48
1:0:2183:C:C2'	1:0:2184:C:H5'	2.44	0.48
1:0:2269:G:N2	1:0:2322:U:H1'	2.29	0.48
1:0:2322:U:H2'	1:0:2323:U:O4'	2.14	0.48
1:0:2536:G:O2'	1:0:2537:C:H5'	2.14	0.48
1:0:2719:U:H5''	1:0:2743:G:O6	2.14	0.48
1:0:2758:A:O2'	1:0:2759:U:OP2	2.30	0.48
1:0:2822:U:O4	1:0:2823:G:N1	2.47	0.48
1:0:2860:C:H6	1:0:2860:C:H3'	1.79	0.48
1:0:139:A:C2	1:0:140:G:N7	2.81	0.47
1:0:163:A:C6	1:0:188:G:C6	3.02	0.47
1:0:208:C:H2'	1:0:209:G:O4'	2.14	0.47
1:0:490:A:O2'	1:0:491:A:H3'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:514:G:N7	1:0:514:G:OP1	2.47	0.47
1:0:536:A:N1	1:0:2605:C:C4'	2.77	0.47
1:0:700:C:C2	1:0:800:U:O3'	2.67	0.47
1:0:883:A:H3'	1:0:884:C:C6	2.48	0.47
1:0:1131:G:H8	1:0:1131:G:O5'	1.96	0.47
1:0:1199:U:O5'	1:0:1200:G:O5'	2.32	0.47
1:0:1278:A:H1'	1:0:1279:G:O4'	2.14	0.47
1:0:1707:A:H2'	1:0:1708:C:O4'	2.13	0.47
1:0:1922:U:O2'	1:0:2571:G:O4'	2.25	0.47
1:0:2261:G:H5''	1:0:2262:C:O5'	2.13	0.47
1:0:2324:G:N2	1:0:2326:C:N4	2.56	0.47
1:0:2504:G:N2	1:0:2518:C:C2	2.82	0.47
1:0:2740:C:O2'	1:0:2741:G:H5'	2.14	0.47
1:0:2756:A:O4'	1:0:2758:A:N7	2.47	0.47
1:0:47:G:O2'	1:0:48:A:H8	1.97	0.47
1:0:76:C:H6	1:0:76:C:C5'	2.23	0.47
1:0:475:U:C6	1:0:801:A:C2	3.02	0.47
1:0:805:G:H2'	1:0:2419:C:N3	2.29	0.47
1:0:832:A:C2	1:0:1203:A:C2	3.02	0.47
1:0:976:C:O4'	1:0:2252:A:C2	2.67	0.47
1:0:1017:C:O2	1:0:1017:C:H2'	2.13	0.47
1:0:1067:G:H21	1:0:1115:C:N4	2.12	0.47
1:0:1133:G:O2'	1:0:1134:C:H5'	2.14	0.47
1:0:1478:U:H2'	1:0:1479:G:H8	1.79	0.47
1:0:1596:A:N1	1:0:1597:A:H1'	2.29	0.47
1:0:1907:C:H2'	1:0:1908:C:O4'	2.14	0.47
1:0:2234:G:H2'	1:0:2235:G:O4'	2.15	0.47
1:0:2324:G:N2	1:0:2361:G:C4	2.82	0.47
1:0:2492:G:N3	1:0:2493:U:C6	2.82	0.47
1:0:2501:U:O2	1:0:2501:U:H2'	2.14	0.47
1:0:2663:U:C4	1:0:2664:G:N7	2.83	0.47
3:0:0:G34:H10	3:0:0:G34:C14	2.33	0.47
1:0:312:G:C2'	1:0:313:U:O5'	2.63	0.47
1:0:322:A:O4'	1:0:343:A:N3	2.47	0.47
1:0:327:C:H2'	1:0:328:A:H5'	1.96	0.47
1:0:537:C:O2'	1:0:538:A:C4	2.67	0.47
1:0:946:U:H2'	1:0:947:C:H6	1.79	0.47
1:0:1082:G:C6	1:0:1083:C:N4	2.82	0.47
1:0:1173:G:C5	1:0:1174:G:N7	2.82	0.47
1:0:1190:C:H6	1:0:1190:C:O5'	1.96	0.47
1:0:1226:A:H1'	1:0:1250:A:C2	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1448:A:C6	1:0:1449:C:N4	2.82	0.47
1:0:1714:A:H3'	1:0:1715:A:H5''	1.96	0.47
1:0:1772:C:H4'	1:0:1773:C:H5''	1.95	0.47
1:0:1820:G:HO2'	1:0:1821:A:P	2.37	0.47
1:0:1842:G:H2'	1:0:1843:U:H6	1.78	0.47
1:0:1852:G:N3	1:0:1852:G:H2'	2.27	0.47
1:0:1971:C:C2'	1:0:1972:G:H5'	2.44	0.47
1:0:2038:C:C4'	1:0:2039:G:H5''	2.40	0.47
1:0:2055:G:C2	1:0:2417:U:O2	2.67	0.47
1:0:2625:U:O5'	1:0:2625:U:H6	1.97	0.47
1:0:2815:C:O2'	1:0:2816:C:H5'	2.15	0.47
1:0:13:A:N6	1:0:535:U:C4	2.81	0.47
1:0:13:A:C6	1:0:535:U:C4	3.02	0.47
1:0:35:G:C4	1:0:466:A:H2	2.31	0.47
1:0:48:A:H5'	1:0:49:U:C5'	2.44	0.47
1:0:123:A:C2'	1:0:124:A:OP1	2.62	0.47
1:0:212:U:N3	1:0:443:A:C2	2.82	0.47
1:0:357:A:C6	1:0:359:G:H5'	2.49	0.47
1:0:538:A:H2'	1:0:539:A:H5''	1.96	0.47
1:0:567:G:O2'	1:0:568:G:H5'	2.15	0.47
1:0:698:A:C4	1:0:787:A:C2	3.02	0.47
1:0:704:G:N2	1:0:705:C:H1'	2.29	0.47
1:0:805:G:H5''	1:0:806:A:O5'	2.15	0.47
1:0:1089:C:H2'	1:0:1099:A:O4'	2.14	0.47
1:0:1131:G:C2	1:0:1132:C:C2	3.03	0.47
1:0:1219:C:O5'	1:0:1219:C:H6	1.97	0.47
1:0:1355:A:C2	1:0:1358:C:C6	3.02	0.47
1:0:1596:A:H2'	1:0:1597:A:C5'	2.38	0.47
1:0:1678:G:C6	1:0:1983:G:C2	3.03	0.47
1:0:1680:U:HO2'	1:0:1681:A:C5'	2.27	0.47
1:0:1826:U:H1'	1:0:1955:G:N2	2.29	0.47
1:0:2045:A:O3'	1:0:2046:C:C6	2.67	0.47
1:0:2262:C:O2'	1:0:2263:C:H5'	2.13	0.47
1:0:2281:C:C2	1:0:2282:G:N7	2.82	0.47
1:0:2386:G:C4	1:0:2387:U:C5	3.03	0.47
1:0:2392:G:O2'	1:0:2393:G:H5'	2.14	0.47
1:0:2510:A:N6	1:0:2641:A:H61	2.10	0.47
1:0:2516:U:C2	1:0:2517:C:C5	3.02	0.47
1:0:2597:G:O2'	1:0:2598:C:H5'	2.15	0.47
1:0:2651:U:O2'	1:0:2652:G:H5'	2.15	0.47
1:0:2665:G:O2'	1:0:2666:U:H5'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2699:G:H8	1:0:2699:G:O5'	1.96	0.47
1:0:2705:A:O2'	1:0:2706:U:O5'	2.32	0.47
1:0:14:A:C2	1:0:536:A:N1	2.81	0.47
1:0:162:C:H2'	1:0:163:A:C8	2.47	0.47
1:0:318:G:N2	1:0:321:A:O5'	2.48	0.47
1:0:460:U:N3	1:0:592:G:H1'	2.29	0.47
1:0:633:G:H2'	1:0:634:G:C8	2.50	0.47
1:0:732:G:H8	1:0:732:G:O5'	1.97	0.47
1:0:886:A:C2	1:0:917:U:O2	2.67	0.47
1:0:941:U:OP1	1:0:941:U:C4'	2.61	0.47
1:0:955:G:H5''	1:0:955:G:H8	1.79	0.47
1:0:984:A:H1'	1:0:1202:U:N1	2.21	0.47
1:0:1008:G:O2'	1:0:1009:C:H5'	2.15	0.47
1:0:1120:C:C2'	1:0:1121:G:O5'	2.63	0.47
1:0:1191:G:H2'	1:0:1192:A:C8	2.46	0.47
1:0:1297:A:C6	1:0:1298:G:N2	2.83	0.47
1:0:1644:G:O2'	1:0:1645:U:H5'	2.14	0.47
1:0:1656:U:H2'	1:0:1657:A:H5''	1.96	0.47
1:0:1704:G:H1'	1:0:1719:G:N2	2.30	0.47
1:0:1895:A:H2'	1:0:1896:A:O4'	2.15	0.47
1:0:2019:C:H2'	1:0:2020:G:O5'	2.14	0.47
1:0:2225:G:C4	1:0:2226:A:N7	2.83	0.47
1:0:2507:U:O3'	1:0:2508:G:C8	2.67	0.47
1:0:2544:A:N7	1:0:2545:A:C2	2.82	0.47
1:0:246:C:N3	1:0:247:A:N7	2.63	0.47
1:0:349:G:N1	1:0:350:U:O2	2.48	0.47
1:0:559:C:C6	1:0:559:C:C3'	2.98	0.47
1:0:765:C:O2'	1:0:766:A:P	2.73	0.47
1:0:772:G:C4	1:0:773:G:C8	3.02	0.47
1:0:947:C:H2'	1:0:948:C:H6	1.76	0.47
1:0:987:G:C2	1:0:988:G:C5	3.02	0.47
1:0:1015:U:H1'	1:0:1021:A:C8	2.49	0.47
1:0:1015:U:H5'	1:0:1021:A:N6	2.29	0.47
1:0:1105:U:N3	1:0:1107:A:OP2	2.47	0.47
1:0:1550:C:H3'	1:0:1551:U:O4'	2.15	0.47
1:0:1585:A:C6	1:0:1586:A:C6	3.02	0.47
1:0:1682:A:C6	1:0:1683:G:C5	3.03	0.47
1:0:1861:G:C2'	1:0:1862:C:H5'	2.44	0.47
1:0:1950:C:C4	1:0:1951:G:N7	2.83	0.47
1:0:1979:C:C2'	1:0:1980:A:O4'	2.63	0.47
1:0:2165:A:C6	1:0:2166:G:N7	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2306:A:C5	1:0:2367:A:N1	2.82	0.47
1:0:2324:G:O2'	1:0:2325:A:OP2	2.28	0.47
1:0:2526:U:C5	1:0:2545:A:C5	3.03	0.47
1:0:2792:C:H2'	1:0:2793:G:O5'	2.13	0.47
1:0:2845:C:C4	1:0:2846:G:C8	3.02	0.47
1:0:51:A:N1	1:0:155:G:H1'	2.29	0.47
1:0:174:A:C2	1:0:175:C:C1'	2.98	0.47
1:0:227:G:C2	1:0:228:A:C4	3.02	0.47
1:0:322:A:H1'	1:0:343:A:O4'	2.13	0.47
1:0:339:U:O2	1:0:339:U:C2'	2.61	0.47
1:0:416:U:H5''	1:0:417:C:H5'	1.97	0.47
1:0:474:G:N2	1:0:476:G:H3'	2.30	0.47
1:0:578:U:H1'	1:0:958:G:O4'	2.15	0.47
1:0:834:A:C8	1:0:957:G:N7	2.82	0.47
1:0:929:A:C2	1:0:930:A:C1'	2.97	0.47
1:0:940:G:C8	1:0:941:U:H5''	2.49	0.47
1:0:942:U:C2'	1:0:943:U:C5'	2.89	0.47
1:0:1007:A:N6	1:0:1171:A:C6	2.83	0.47
1:0:1055:A:H61	1:0:1123:G:C1'	2.19	0.47
1:0:1134:C:C2'	1:0:1135:C:H5'	2.45	0.47
1:0:1226:A:N9	1:0:1250:A:C2	2.82	0.47
1:0:1249:G:O2'	1:0:1250:A:P	2.73	0.47
1:0:1318:A:C2	1:0:1319:C:C2	3.02	0.47
1:0:1329:U:N3	1:0:1330:G:N7	2.63	0.47
1:0:1644:G:C4	1:0:1645:U:C5	3.03	0.47
1:0:1683:G:H2'	1:0:1684:G:O4'	2.15	0.47
1:0:1699:A:H2'	1:0:1700:C:C6	2.49	0.47
1:0:1706:A:N3	1:0:1706:A:H2'	2.29	0.47
1:0:1880:G:H2'	1:0:1881:U:C6	2.49	0.47
1:0:1953:A:H5''	1:0:1954:A:OP1	2.15	0.47
1:0:1979:C:H2'	1:0:1980:A:O4'	2.14	0.47
1:0:2201:G:O2'	1:0:2202:G:H5'	2.14	0.47
1:0:2205:C:H2'	1:0:2206:C:C5'	2.44	0.47
1:0:2241:U:H2'	1:0:2242:C:O4'	2.14	0.47
1:0:2253:A:N7	1:0:2255:G:C8	2.82	0.47
1:0:2523:G:H1'	1:0:2625:U:H5'	1.95	0.47
1:0:2592:U:O2'	1:0:2593:A:OP1	2.21	0.47
1:0:2756:A:N3	1:0:2758:A:C5	2.82	0.47
1:0:2844:G:H8	1:0:2844:G:O5'	1.98	0.47
1:0:2871:U:N3	1:0:2872:U:C4	2.82	0.47
1:0:116:A:N7	1:0:117:A:C5	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:175:C:O2	1:0:176:A:H8	1.98	0.47
1:0:357:A:N3	1:0:358:C:H4'	2.30	0.47
1:0:545:C:N4	1:0:546:A:H62	2.11	0.47
1:0:638:A:C5	1:0:647:G:N2	2.83	0.47
1:0:754:G:N1	1:0:755:C:C4	2.83	0.47
1:0:833:A:N3	1:0:954:U:O2'	2.48	0.47
1:0:1151:U:C5'	1:0:1153:A:C5'	2.93	0.47
1:0:1190:C:H2'	1:0:1191:G:O4'	2.15	0.47
1:0:1345:G:N7	1:0:1625:A:N6	2.63	0.47
1:0:1355:A:C3'	1:0:1357:U:OP2	2.63	0.47
1:0:1479:G:H2'	1:0:1480:G:C8	2.50	0.47
1:0:1621:C:O4'	1:0:1626:A:N1	2.48	0.47
1:0:2198:U:P	1:0:2199:C:H5''	2.55	0.47
1:0:2235:G:N2	1:0:2254:C:C4	2.83	0.47
1:0:2247:A:C8	1:0:2247:A:C3'	2.97	0.47
1:0:2555:G:H3'	1:0:2555:G:OP1	2.15	0.47
1:0:2637:C:C4	1:0:2643:G:N2	2.83	0.47
1:0:2875:C:C2'	1:0:2876:C:H5'	2.45	0.47
1:0:185:C:H2'	1:0:186:C:C6	2.50	0.47
1:0:577:U:O2	1:0:579:G:C8	2.68	0.47
1:0:772:G:N3	1:0:773:G:C8	2.83	0.47
1:0:1011:A:C6	1:0:1166:A:C5	3.02	0.47
1:0:1085:G:O2'	1:0:1086:C:H5'	2.14	0.47
1:0:1123:G:O2'	1:0:1124:U:H5'	2.14	0.47
1:0:1253:C:H6	1:0:1253:C:C5'	2.26	0.47
1:0:1386:A:H2'	1:0:1387:G:O4'	2.15	0.47
1:0:1641:C:C2'	1:0:1642:G:H5'	2.45	0.47
1:0:1828:C:N4	1:0:1829:C:N4	2.63	0.47
1:0:2053:G:C2	1:0:2421:C:C2	3.02	0.47
1:0:2517:C:O2	1:0:2517:C:C2'	2.61	0.47
1:0:70:A:O2'	1:0:71:A:C5'	2.62	0.47
1:0:387:A:C5	1:0:388:G:C8	3.03	0.47
1:0:387:A:C5	1:0:388:G:N7	2.82	0.47
1:0:427:C:H1'	1:0:1856:U:H1'	1.96	0.47
1:0:890:U:O5'	1:0:890:U:H6	1.99	0.47
1:0:1311:C:N4	1:0:1312:G:C6	2.83	0.47
1:0:1368:G:C6	1:0:1390:G:N2	2.83	0.47
1:0:1685:A:H61	1:0:1693:A:N6	2.12	0.47
1:0:1804:U:O2'	1:0:1805:G:O4'	2.32	0.47
1:0:1913:G:C2'	1:0:1914:U:OP2	2.62	0.47
1:0:2108:G:N2	1:0:2157:C:C4	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2179:C:H2'	1:0:2180:U:O4'	2.15	0.47
1:0:2299:A:H2'	1:0:2312:A:N6	2.30	0.47
1:0:2315:A:O2'	1:0:2364:C:H5''	2.14	0.47
1:0:2440:C:H2'	1:0:2441:U:H6	1.79	0.47
1:0:2564:U:O2'	1:0:2565:C:P	2.72	0.47
1:0:2663:U:N3	1:0:2664:G:C5	2.83	0.47
1:0:2691:C:H2'	1:0:2692:A:H5'	1.78	0.47
1:0:22:C:H2'	1:0:23:G:O4'	2.15	0.46
1:0:218:A:N1	1:0:232:A:H5''	2.31	0.46
1:0:243:G:C2	1:0:244:C:H1'	2.50	0.46
1:0:338:G:C2	1:0:339:U:C6	3.03	0.46
1:0:616:U:H3'	1:0:616:U:C6	2.50	0.46
1:0:753:U:N3	1:0:771:C:O2	2.48	0.46
1:0:847:C:H1'	1:0:2337:A:N3	2.29	0.46
1:0:1692:C:N4	1:0:1693:A:C2	2.83	0.46
1:0:1949:A:H1'	1:0:2572:U:C5'	2.45	0.46
1:0:2748:C:C4	1:0:2749:A:N7	2.84	0.46
1:0:7:G:C2	1:0:8:A:C5	3.03	0.46
1:0:38:G:C2	1:0:39:C:C2	3.03	0.46
1:0:71:A:C4'	1:0:72:A:OP1	2.48	0.46
1:0:139:A:C2	1:0:140:G:C5	3.03	0.46
1:0:168:A:O2'	1:0:169:C:O4'	2.20	0.46
1:0:597:U:H2'	1:0:598:U:C6	2.50	0.46
1:0:758:G:C8	1:0:759:C:C5	3.02	0.46
1:0:783:G:C6	1:0:784:U:C4	3.03	0.46
1:0:787:A:N1	1:0:788:G:O6	2.48	0.46
1:0:791:G:C5	1:0:792:U:C5	3.04	0.46
1:0:814:G:H3'	1:0:815:A:H5''	1.96	0.46
1:0:837:U:H2'	1:0:838:A:C8	2.50	0.46
1:0:1196:G:H2'	1:0:1197:U:O4'	2.15	0.46
1:0:1299:A:C2	1:0:1302:C:C6	3.03	0.46
1:0:1309:G:H2'	1:0:1310:C:O5'	2.15	0.46
1:0:1411:C:O2'	1:0:1412:C:H5'	2.16	0.46
1:0:1587:A:H2'	1:0:1588:A:H8	1.75	0.46
1:0:1651:U:H4'	1:0:1652:G:OP2	2.15	0.46
1:0:1894:U:O5'	1:0:1894:U:C6	2.66	0.46
1:0:2001:G:H2'	1:0:2002:A:C8	2.51	0.46
1:0:2065:A:C2	1:0:2218:G:N3	2.83	0.46
1:0:2226:A:H2'	1:0:2227:C:H6	1.81	0.46
1:0:2266:A:H62	1:0:2323:U:H1'	1.79	0.46
1:0:2319:G:H2'	1:0:2320:G:H8	1.79	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2625:U:O4	1:0:2712:G:C6	2.68	0.46
1:0:2633:A:H4'	1:0:2634:G:O5'	2.16	0.46
1:0:68:C:O2	1:0:72:A:C1'	2.47	0.46
1:0:605:G:H2'	1:0:606:A:H8	1.80	0.46
1:0:1278:A:C2'	1:0:1279:G:O5'	2.58	0.46
1:0:1301:U:H4'	1:0:1302:C:OP2	2.15	0.46
1:0:1394:G:C2	1:0:1395:A:H1'	2.50	0.46
1:0:1598:C:O5'	1:0:1598:C:H6	1.99	0.46
1:0:1672:A:H3'	1:0:1673:C:C5	2.51	0.46
1:0:1834:G:H2'	1:0:1835:C:H6	1.80	0.46
1:0:2024:U:H2'	1:0:2025:A:H8	1.73	0.46
1:0:2133:G:O2'	1:0:2134:U:H5'	2.16	0.46
1:0:2198:U:H5''	1:0:2199:C:OP2	2.15	0.46
1:0:2482:A:H5'	1:0:2483:U:OP2	2.15	0.46
1:0:2792:C:C2	1:0:2805:G:N2	2.82	0.46
1:0:2792:C:C2'	1:0:2793:G:O5'	2.63	0.46
1:0:2856:U:O4	1:0:2857:C:N4	2.48	0.46
1:0:314:G:H2'	1:0:315:G:C8	2.51	0.46
1:0:659:G:O5'	1:0:659:G:C8	2.65	0.46
1:0:718:A:N6	1:0:739:G:H1'	2.25	0.46
1:0:778:G:O2'	1:0:779:U:H5'	2.15	0.46
1:0:1248:G:C6	1:0:1249:G:N2	2.84	0.46
1:0:1592:U:O5'	1:0:1592:U:H6	1.99	0.46
1:0:1648:C:H6	1:0:1648:C:H5'	1.81	0.46
1:0:2245:A:C4	1:0:2251:U:C5	3.04	0.46
1:0:2379:G:O2'	1:0:2380:U:H5'	2.15	0.46
1:0:69:G:H3'	1:0:69:G:P	2.56	0.46
1:0:191:G:O2'	1:0:192:G:H5'	2.14	0.46
1:0:764:A:O2'	1:0:765:C:P	2.73	0.46
1:0:831:G:OP2	1:0:1199:U:C2	2.69	0.46
1:0:846:A:H2'	1:0:847:C:H6	1.80	0.46
1:0:922:A:C2	1:0:923:A:C5	3.03	0.46
1:0:1000:G:C2'	1:0:1001:A:OP2	2.63	0.46
1:0:1355:A:C8	1:0:1410:U:H1'	2.51	0.46
1:0:1632:A:C2'	1:0:1633:C:OP1	2.62	0.46
1:0:1791:C:O2'	1:0:1792:C:C3'	2.59	0.46
1:0:2225:G:C2	1:0:2226:A:C5	3.04	0.46
1:0:2320:G:N2	1:0:2353:G:H4'	2.31	0.46
1:0:2382:C:O2	1:0:2383:C:C6	2.68	0.46
1:0:2815:C:H2'	1:0:2816:C:O5'	2.15	0.46
1:0:21:A:N6	1:0:530:G:O6	2.48	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:133:C:C4	1:0:134:G:C5	3.03	0.46
1:0:219:G:O2'	1:0:220:U:O5'	2.33	0.46
1:0:317:U:H2'	1:0:317:U:O2	2.15	0.46
1:0:352:G:H2'	1:0:353:G:H8	1.81	0.46
1:0:532:A:H2'	1:0:533:C:C6	2.50	0.46
1:0:652:C:H5'	1:0:652:C:H6	1.81	0.46
1:0:685:U:C2	1:0:822:G:N2	2.84	0.46
1:0:687:G:HO2'	1:0:688:A:H5'	1.81	0.46
1:0:789:G:C5	1:0:806:A:C8	3.04	0.46
1:0:933:G:O2'	1:0:934:G:H5'	2.16	0.46
1:0:953:G:H2'	1:0:954:U:C5'	2.37	0.46
1:0:1066:G:C2'	1:0:1067:G:H4'	2.45	0.46
1:0:1565:G:C6	1:0:1566:G:N7	2.84	0.46
1:0:1672:A:C2	1:0:1673:C:H1'	2.50	0.46
1:0:1724:C:H2'	1:0:1725:C:C6	2.51	0.46
1:0:1830:C:N4	1:0:1881:U:C3'	2.69	0.46
1:0:2258:G:C2'	1:0:2259:G:O5'	2.64	0.46
1:0:2359:U:O5'	1:0:2359:U:H6	1.99	0.46
1:0:29:U:H2'	1:0:30:G:H8	1.80	0.46
1:0:157:G:H5'	1:0:158:A:P	2.56	0.46
1:0:223:C:C4	1:0:224:G:N7	2.83	0.46
1:0:400:U:C4'	1:0:401:G:OP1	2.63	0.46
1:0:441:A:O2'	1:0:442:A:H5'	2.15	0.46
1:0:514:G:N3	1:0:514:G:H2'	2.30	0.46
1:0:537:C:H2'	1:0:538:A:OP2	2.15	0.46
1:0:682:G:C1'	1:0:814:G:C6	2.99	0.46
1:0:717:G:C2'	1:0:718:A:OP2	2.64	0.46
1:0:789:G:C5	1:0:806:A:N7	2.84	0.46
1:0:955:G:H8	1:0:955:G:C5'	2.28	0.46
1:0:1011:A:N1	1:0:1166:A:C4	2.84	0.46
1:0:1492:A:O2'	1:0:1493:A:O4'	2.33	0.46
1:0:1537:U:O4	1:0:1538:A:N6	2.49	0.46
1:0:1678:G:C6	1:0:1983:G:N1	2.84	0.46
1:0:1714:A:O2'	1:0:1961:A:OP1	2.31	0.46
1:0:2024:U:C4	1:0:2025:A:C6	3.04	0.46
1:0:2268:G:O2'	1:0:2269:G:H5'	2.16	0.46
1:0:2269:G:C2	1:0:2322:U:O2	2.69	0.46
1:0:2365:U:O2'	1:0:2366:U:H5'	2.16	0.46
1:0:2543:A:OP1	1:0:2627:G:O2'	2.34	0.46
1:0:2613:A:H2'	1:0:2614:A:H8	1.81	0.46
1:0:2814:G:H2'	1:0:2815:C:C6	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:48:A:C4'	1:0:49:U:H5''	2.43	0.46
1:0:71:A:H8	1:0:71:A:P	2.38	0.46
1:0:209:G:HO2'	1:0:210:A:C5'	2.29	0.46
1:0:351:A:N7	1:0:352:G:C5	2.84	0.46
1:0:466:A:C2'	1:0:467:U:OP2	2.63	0.46
1:0:540:G:N3	1:0:2004:U:O2'	2.49	0.46
1:0:581:A:N6	1:0:582:G:C6	2.83	0.46
1:0:758:G:N7	1:0:759:C:C5	2.84	0.46
1:0:790:A:C4	1:0:791:G:C8	3.04	0.46
1:0:883:A:N3	1:0:883:A:H2'	2.30	0.46
1:0:1023:U:O2	1:0:1154:A:N7	2.49	0.46
1:0:1097:A:H1'	1:0:1114:A:C2	2.35	0.46
1:0:1261:G:HO2'	1:0:1262:U:P	2.36	0.46
1:0:1354:A:H8	1:0:1410:U:H3	1.64	0.46
1:0:1371:G:H1'	1:0:1386:A:N6	2.31	0.46
1:0:1443:G:C2	1:0:1444:C:C2	3.04	0.46
1:0:1514:C:O4'	1:0:1593:C:H4'	2.15	0.46
1:0:1543:G:O6	1:0:1544:A:C2	2.68	0.46
1:0:1737:G:H2'	1:0:1738:U:C6	2.51	0.46
1:0:2019:C:C2'	1:0:2020:G:O5'	2.64	0.46
1:0:2217:G:C5'	1:0:2218:G:OP1	2.62	0.46
1:0:2242:C:N4	1:0:2257:A:N6	2.64	0.46
1:0:2689:C:O2'	1:0:2690:A:O5'	2.33	0.46
1:0:29:U:H2'	1:0:30:G:C8	2.51	0.46
1:0:168:A:C2	1:0:169:C:N3	2.84	0.46
1:0:187:U:H1'	1:0:1379:A:C2	2.51	0.46
1:0:193:A:H2'	1:0:194:G:O4'	2.15	0.46
1:0:312:G:HO2'	1:0:313:U:H6	1.60	0.46
1:0:349:G:C2	1:0:350:U:O2	2.69	0.46
1:0:404:A:H1'	1:0:424:G:O2'	2.16	0.46
1:0:461:A:C4	1:0:462:G:C8	3.04	0.46
1:0:741:G:C6	1:0:743:A:C5	3.03	0.46
1:0:831:G:C8	1:0:831:G:H3'	2.51	0.46
1:0:1483:G:N2	1:0:1540:C:C2	2.84	0.46
1:0:1544:A:O2'	1:0:1545:G:H5'	2.16	0.46
1:0:1757:C:N3	1:0:1970:G:C6	2.84	0.46
1:0:1791:C:H1'	1:0:1793:A:H5'	1.96	0.46
1:0:1831:G:C6	1:0:1910:A:N1	2.84	0.46
1:0:1895:A:H2'	1:0:1896:A:C4'	2.46	0.46
1:0:2245:A:C2	1:0:2251:U:C5	3.03	0.46
1:0:2633:A:N1	1:0:2644:A:H5''	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2642:G:C2'	1:0:2643:G:O5'	2.64	0.46
1:0:2769:C:H2'	1:0:2770:A:O4'	2.15	0.46
1:0:88:G:OP2	1:0:90:G:OP1	2.34	0.46
1:0:298:C:H2'	1:0:299:C:C6	2.51	0.46
1:0:468:A:H1'	1:0:470:U:C2	2.51	0.46
1:0:542:A:C8	1:0:543:G:H1'	2.51	0.46
1:0:681:A:C5	1:0:683:A:C8	3.03	0.46
1:0:765:C:O2'	1:0:766:A:H8	1.99	0.46
1:0:820:U:OP1	1:0:843:G:N2	2.49	0.46
1:0:830:C:O2'	1:0:852:U:C5'	2.58	0.46
1:0:1004:A:N6	1:0:1005:U:O4	2.49	0.46
1:0:1200:G:C6	1:0:1201:G:C5	3.04	0.46
1:0:1283:C:H5''	1:0:1284:G:O5'	2.16	0.46
1:0:1327:C:C2	1:0:1352:G:N2	2.84	0.46
1:0:1333:G:C8	1:0:1342:U:H5'	2.50	0.46
1:0:1361:G:C6	1:0:1615:C:N3	2.84	0.46
1:0:1427:G:OP2	1:0:1428:G:C6	2.69	0.46
1:0:1459:U:C2	1:0:1476:G:OP2	2.68	0.46
1:0:1475:U:O2'	1:0:1476:G:OP2	2.30	0.46
1:0:1480:G:C2	1:0:1481:U:O2	2.69	0.46
1:0:1488:G:N9	1:0:1536:G:N2	2.64	0.46
1:0:1522:C:H2'	1:0:1523:A:H5'	1.98	0.46
1:0:1528:C:H3'	1:0:1529:C:C5'	2.35	0.46
1:0:1602:G:O3'	1:0:1603:A:H8	1.99	0.46
1:0:1616:C:H2'	1:0:1617:G:O4'	2.16	0.46
1:0:1782:A:C2'	1:0:1783:G:H5'	2.45	0.46
1:0:1830:C:H41	1:0:1882:G:P	2.38	0.46
1:0:1900:U:H1'	1:0:1946:U:C4'	2.46	0.46
1:0:2103:G:N1	1:0:2162:C:N4	2.63	0.46
1:0:2713:A:C4	1:0:2714:A:C8	3.04	0.46
1:0:313:U:H2'	1:0:314:G:O4'	2.15	0.45
1:0:521:U:OP2	1:0:522:G:C5	2.69	0.45
1:0:755:C:H2'	1:0:756:C:C6	2.51	0.45
1:0:760:U:O2	1:0:1997:A:H1'	2.16	0.45
1:0:760:U:O5'	1:0:760:U:H6	1.98	0.45
1:0:791:G:C4	1:0:792:U:C5	3.04	0.45
1:0:822:G:H2'	1:0:823:U:C5'	2.45	0.45
1:0:1042:G:O6	1:0:1043:A:N6	2.49	0.45
1:0:1290:A:H2'	1:0:1291:G:C8	2.51	0.45
1:0:1410:U:O2	1:0:1410:U:C2'	2.63	0.45
1:0:1431:U:C2'	1:0:1432:G:H5'	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1447:U:HO2'	1:0:1448:A:H8	1.59	0.45
1:0:1466:C:C2	1:0:1467:U:O2	2.69	0.45
1:0:1587:A:C2	1:0:1588:A:C5	3.04	0.45
1:0:1644:G:C6	1:0:1656:U:N3	2.84	0.45
1:0:1714:A:C3'	1:0:1715:A:H5''	2.45	0.45
1:0:1742:G:O2'	1:0:1743:C:H5'	2.16	0.45
1:0:1748:U:O2	1:0:1748:U:C2'	2.64	0.45
1:0:1912:G:N3	1:0:1912:G:C2'	2.79	0.45
1:0:1923:U:C4'	1:0:1924:C:OP1	2.63	0.45
1:0:2026:C:H2'	1:0:2027:C:H6	1.82	0.45
1:0:2138:U:H3'	1:0:2139:G:H8	1.80	0.45
1:0:2319:G:O2'	1:0:2320:G:H5'	2.17	0.45
1:0:2383:C:C2	1:0:2384:G:C8	3.04	0.45
1:0:2433:G:H2'	1:0:2434:G:C8	2.50	0.45
1:0:2510:A:N3	1:0:2637:C:O2'	2.48	0.45
1:0:2556:A:C8	1:0:2556:A:C3'	2.99	0.45
1:0:2637:C:N4	1:0:2643:G:C2	2.84	0.45
1:0:2661:G:O2'	1:0:2662:C:H5'	2.15	0.45
1:0:2837:G:C2	1:0:2838:U:C2	3.04	0.45
1:0:57:G:C6	1:0:72:A:N6	2.84	0.45
1:0:93:A:H2'	1:0:94:C:H6	1.80	0.45
1:0:105:G:C4	1:0:106:G:C8	3.04	0.45
1:0:116:A:H8	1:0:117:A:C8	2.34	0.45
1:0:323:G:N3	1:0:323:G:H2'	2.31	0.45
1:0:351:A:N7	1:0:352:G:C4	2.85	0.45
1:0:404:A:N7	1:0:405:C:C4	2.85	0.45
1:0:414:A:H2'	1:0:415:A:O4'	2.15	0.45
1:0:457:C:C2'	1:0:458:G:H5'	2.46	0.45
1:0:488:A:C6	1:0:489:A:C6	3.04	0.45
1:0:692:C:O2'	1:0:693:A:H5'	2.16	0.45
1:0:751:G:O2'	1:0:752:G:O5'	2.24	0.45
1:0:883:A:C6	1:0:920:G:C6	3.04	0.45
1:0:976:C:O2'	1:0:977:G:C5'	2.64	0.45
1:0:1039:A:H61	1:0:1136:G:C2'	2.29	0.45
1:0:1151:U:H5'	1:0:1153:A:H5'	1.98	0.45
1:0:1151:U:P	1:0:1153:A:OP1	2.74	0.45
1:0:1188:A:OP2	1:0:1189:G:O6	2.34	0.45
1:0:1373:G:H22	1:0:2192:U:H3	1.63	0.45
1:0:1453:A:H2'	1:0:1454:U:H5'	1.97	0.45
1:0:1475:U:OP2	1:0:1475:U:H4'	2.15	0.45
1:0:1534:A:O2'	1:0:1535:C:H5'	2.15	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1540:C:H2'	1:0:1541:G:O4'	2.15	0.45
1:0:1671:A:C2'	1:0:1672:A:H5'	2.46	0.45
1:0:1895:A:H2'	1:0:1896:A:H5'	1.97	0.45
1:0:1963:G:O2'	1:0:1964:A:P	2.74	0.45
1:0:2666:U:H2'	1:0:2667:C:O4'	2.16	0.45
1:0:2673:G:C6	1:0:2696:A:C6	3.05	0.45
1:0:2762:G:O5'	1:0:2762:G:H8	2.00	0.45
1:0:82:G:H22	1:0:100:G:C2'	2.30	0.45
1:0:185:C:H2'	1:0:186:C:H6	1.80	0.45
1:0:510:G:C8	1:0:510:G:O5'	2.69	0.45
1:0:580:A:N7	1:0:584:A:C6	2.84	0.45
1:0:794:A:C2	1:0:1767:G:N3	2.84	0.45
1:0:873:U:O2	1:0:2246:A:H5''	2.15	0.45
1:0:1431:U:H2'	1:0:1432:G:H5'	1.99	0.45
1:0:1454:U:H2'	1:0:1455:C:C6	2.32	0.45
1:0:1548:U:N3	1:0:1549:C:N4	2.60	0.45
1:0:1635:G:C6	1:0:1636:G:N7	2.84	0.45
1:0:1712:G:C2'	1:0:1713:G:O5'	2.63	0.45
1:0:1818:G:H2'	1:0:1819:U:H6	1.81	0.45
1:0:1974:U:H2'	1:0:1975:G:H5'	1.97	0.45
1:0:2009:U:C6	1:0:2009:U:H3'	2.51	0.45
1:0:2024:U:C4	1:0:2025:A:N6	2.85	0.45
1:0:2562:G:C4	1:0:2563:U:C6	3.05	0.45
1:0:2759:U:O2	1:0:2761:A:N1	2.49	0.45
1:0:2856:U:H2'	1:0:2857:C:O4'	2.16	0.45
1:0:3:U:H2'	1:0:4:C:C6	2.51	0.45
1:0:88:G:N7	1:0:89:A:H3'	2.31	0.45
1:0:322:A:O2'	1:0:323:G:P	2.75	0.45
1:0:473:C:H2'	1:0:474:G:H8	1.80	0.45
1:0:535:U:O2'	1:0:536:A:H5'	2.16	0.45
1:0:549:G:C2'	1:0:550:C:H5'	2.47	0.45
1:0:620:G:H2'	1:0:621:U:C6	2.47	0.45
1:0:697:G:N2	1:0:788:G:C2	2.84	0.45
1:0:795:A:H5'	1:0:796:A:OP1	2.16	0.45
1:0:843:G:C4	1:0:2427:A:N6	2.85	0.45
1:0:859:U:O2	1:0:944:A:C6	2.69	0.45
1:0:1314:A:OP1	1:0:1314:A:C4'	2.62	0.45
1:0:1438:G:P	1:0:1439:G:OP2	2.74	0.45
1:0:1608:U:C2	1:0:1609:G:C8	3.05	0.45
1:0:1625:A:N9	1:0:1632:A:H1'	2.30	0.45
1:0:1842:G:H2'	1:0:1843:U:C6	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1933:G:C8	1:0:1934:U:C5	3.04	0.45
1:0:1940:C:H2'	1:0:1941:C:C6	2.51	0.45
1:0:1979:C:O2'	1:0:1980:A:O4'	2.34	0.45
1:0:2047:C:O2	1:0:2429:A:C6	2.68	0.45
1:0:2243:C:C4	1:0:2244:C:C4	3.04	0.45
1:0:2430:A:N7	1:0:2431:C:H5	2.14	0.45
1:0:2669:C:C2'	1:0:2670:C:OP2	2.62	0.45
1:0:2767:C:N4	1:0:2768:C:H41	2.13	0.45
1:0:91:A:H8	1:0:91:A:O5'	1.99	0.45
1:0:500:G:C6	1:0:501:G:C4	3.05	0.45
1:0:521:U:C5	1:0:522:G:N3	2.84	0.45
1:0:613:A:C4	1:0:636:G:N2	2.85	0.45
1:0:644:A:C8	1:0:645:G:O4'	2.70	0.45
1:0:689:A:C8	1:0:2422:C:H1'	2.52	0.45
1:0:844:G:N1	1:0:845:U:O2	2.49	0.45
1:0:1057:A:C5'	1:0:1058:G:H5'	2.46	0.45
1:0:1188:A:OP2	1:0:1189:G:N7	2.50	0.45
1:0:1279:G:H22	1:0:1995:G:H2'	1.75	0.45
1:0:1391:A:C2'	1:0:1392:U:O5'	2.63	0.45
1:0:1772:C:O2'	1:0:1773:C:C5'	2.64	0.45
1:0:2073:A:C6	1:0:2074:U:O4	2.69	0.45
1:0:2557:G:C2	1:0:2558:C:C6	3.05	0.45
1:0:2633:A:N6	1:0:2646:C:N4	2.64	0.45
1:0:2807:U:O2'	1:0:2809:A:C8	2.69	0.45
1:0:205:A:H2'	1:0:206:U:O5'	2.17	0.45
1:0:246:C:C5	1:0:373:A:C4	3.05	0.45
1:0:649:G:C4	1:0:650:U:C5	3.03	0.45
1:0:706:A:C4	1:0:783:G:N2	2.85	0.45
1:0:752:G:C4'	1:0:753:U:OP1	2.64	0.45
1:0:1193:G:H2'	1:0:1194:U:H6	1.81	0.45
1:0:1498:G:C2'	1:0:1499:A:H5'	2.46	0.45
1:0:1543:G:C6	1:0:1560:A:C5	3.04	0.45
1:0:1856:U:H2'	1:0:1857:G:O4'	2.16	0.45
1:0:1911:A:H3'	1:0:1911:A:H8	1.81	0.45
1:0:1944:C:H2'	1:0:1945:C:O4'	2.16	0.45
1:0:2075:U:H2'	1:0:2076:G:OP2	2.16	0.45
1:0:2276:C:H2'	1:0:2277:A:H5'	1.99	0.45
1:0:2423:G:C6	1:0:2424:G:C5	3.04	0.45
1:0:2427:A:C2'	1:0:2428:U:OP1	2.64	0.45
1:0:2718:A:C2	1:0:2719:U:C6	3.04	0.45
1:0:2759:U:O4'	1:0:2761:A:C2	2.70	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:105:G:H8	1:0:105:G:H5'	1.81	0.45
1:0:459:A:C8	1:0:466:A:N6	2.84	0.45
1:0:476:G:H21	1:0:697:G:C1'	2.29	0.45
1:0:717:G:H2'	1:0:718:A:OP2	2.16	0.45
1:0:954:U:N3	1:0:955:G:C4	2.85	0.45
1:0:983:G:P	1:0:985:G:C5'	3.04	0.45
1:0:1017:C:O2	1:0:1018:C:C6	2.69	0.45
1:0:1282:A:C2	1:0:1283:C:C2	3.05	0.45
1:0:1479:G:C2	1:0:1480:G:C4	3.04	0.45
1:0:1548:U:H2'	1:0:1549:C:H5	1.80	0.45
1:0:1856:U:H5''	1:0:2389:G:O2'	2.17	0.45
1:0:1913:G:H2'	1:0:1914:U:OP2	2.17	0.45
1:0:2589:C:H4'	1:0:2590:U:O5'	2.16	0.45
1:0:2617:G:H21	1:0:2758:A:N6	2.10	0.45
1:0:2758:A:H2'	1:0:2759:U:OP1	2.17	0.45
1:0:181:A:C4'	1:0:182:G:OP1	2.58	0.45
1:0:302:U:H2'	1:0:302:U:O2	2.16	0.45
1:0:340:G:C4'	1:0:341:A:OP2	2.65	0.45
1:0:524:A:H2'	1:0:525:A:C8	2.52	0.45
1:0:541:C:C5	1:0:572:G:O4'	2.69	0.45
1:0:587:A:OP1	1:0:1268:U:O2'	2.15	0.45
1:0:792:U:C2'	1:0:793:G:H5'	2.47	0.45
1:0:837:U:H2'	1:0:838:A:H8	1.81	0.45
1:0:1373:G:H2'	1:0:1374:G:C5'	2.47	0.45
1:0:1386:A:N6	1:0:1387:G:C2	2.85	0.45
1:0:1474:A:C2'	1:0:1475:U:OP2	2.65	0.45
1:0:1483:G:N2	1:0:1540:C:C1'	2.79	0.45
1:0:1620:C:H3'	1:0:1620:C:H6	1.81	0.45
1:0:1829:C:N4	1:0:1882:G:N7	2.65	0.45
1:0:1859:A:H2'	1:0:1860:A:C8	2.51	0.45
1:0:1870:U:C4	1:0:1871:G:N7	2.84	0.45
1:0:2034:A:H61	1:0:2593:A:H2'	1.79	0.45
1:0:2045:A:O3'	1:0:2046:C:C5	2.70	0.45
1:0:2426:G:H4'	1:0:2427:A:O5'	2.15	0.45
1:0:47:G:N2	1:0:48:A:H62	2.14	0.45
1:0:168:A:C2	1:0:169:C:C2	3.05	0.45
1:0:471:A:C6	1:0:481:A:C8	3.05	0.45
1:0:514:G:C8	1:0:514:G:OP1	2.70	0.45
1:0:667:U:H2'	1:0:668:A:C8	2.52	0.45
1:0:757:U:O2'	1:0:758:G:H5'	2.17	0.45
1:0:801:A:HO2'	1:0:802:A:P	2.39	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:942:U:H2'	1:0:943:U:C5'	2.47	0.45
1:0:982:C:OP2	1:0:985:G:N2	2.50	0.45
1:0:1011:A:C2	1:0:1166:A:C6	3.05	0.45
1:0:1261:G:O2'	1:0:1262:U:P	2.75	0.45
1:0:1279:G:O2'	1:0:1280:U:O5'	2.35	0.45
1:0:1352:G:C6	1:0:1353:A:N6	2.85	0.45
1:0:1601:U:OP1	1:0:1601:U:H3'	2.17	0.45
1:0:1774:A:C6	1:0:2566:A:C4	3.05	0.45
1:0:1774:A:N6	1:0:2566:A:N3	2.65	0.45
1:0:1774:A:H5''	1:0:1775:A:OP2	2.17	0.45
1:0:1831:G:C5	1:0:1832:G:N7	2.85	0.45
1:0:2033:C:C4	1:0:2034:A:N7	2.85	0.45
1:0:2034:A:H61	1:0:2593:A:C2'	2.30	0.45
1:0:2039:G:N2	1:0:2040:A:N9	2.65	0.45
1:0:2205:C:H2'	1:0:2206:C:O4'	2.17	0.45
1:0:2240:C:C2'	1:0:2241:U:C5'	2.95	0.45
1:0:2299:A:O2'	1:0:2312:A:N6	2.46	0.45
1:0:2419:C:C2'	1:0:2420:C:OP1	2.65	0.45
1:0:2615:U:H3	1:0:2762:G:H1	1.65	0.45
1:0:2616:U:C2	1:0:2762:G:N2	2.85	0.45
1:0:2748:C:C2	1:0:2749:A:C8	3.05	0.45
1:0:2753:C:H2'	1:0:2754:C:C6	2.49	0.45
1:0:2791:C:C2	1:0:2806:G:N2	2.85	0.45
1:0:52:A:C2'	1:0:53:G:H5'	2.47	0.45
1:0:306:G:H22	1:0:355:G:H1'	1.81	0.45
1:0:308:C:C2'	1:0:309:G:C5'	2.93	0.45
1:0:343:A:C8	1:0:346:C:N4	2.85	0.45
1:0:371:G:H2'	1:0:372:U:O5'	2.17	0.45
1:0:373:A:H2'	1:0:373:A:N3	2.31	0.45
1:0:771:C:O5'	1:0:771:C:H6	2.00	0.45
1:0:799:C:H2'	1:0:800:U:C6	2.52	0.45
1:0:972:C:N1	1:0:2014:A:H2	2.15	0.45
1:0:994:A:C2'	1:0:995:A:O5'	2.64	0.45
1:0:1033:G:C6	1:0:1151:U:C5	3.05	0.45
1:0:1249:G:O2'	1:0:1250:A:O5'	2.32	0.45
1:0:1941:C:C2'	1:0:1942:G:H5'	2.47	0.45
1:0:1955:G:O2'	1:0:1956:G:C5'	2.65	0.45
1:0:2020:G:H2'	1:0:2021:G:H8	1.77	0.45
1:0:2089:C:C2	1:0:2167:A:C2	3.04	0.45
1:0:2394:G:N2	1:0:2395:C:H1'	2.31	0.45
1:0:2511:G:N2	1:0:2642:G:H1'	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2772:U:O2'	1:0:2773:G:H5'	2.17	0.45
1:0:2788:C:C4	1:0:2789:U:C5	3.04	0.45
1:0:2856:U:C4	1:0:2857:C:C5	3.05	0.45
1:0:2864:C:O2	1:0:2864:C:C2'	2.58	0.45
1:0:304:A:H2'	1:0:305:A:H5''	1.99	0.44
1:0:565:A:C6	1:0:566:U:C4	3.05	0.44
1:0:639:G:H22	1:0:650:U:H4'	1.82	0.44
1:0:813:A:O2'	1:0:815:A:H5''	2.16	0.44
1:0:829:C:H2'	1:0:830:C:H6	1.81	0.44
1:0:829:C:O2'	1:0:830:C:H5'	2.16	0.44
1:0:1193:G:C2'	1:0:1194:U:O5'	2.64	0.44
1:0:1371:G:H1'	1:0:1387:G:H1	1.82	0.44
1:0:1432:G:H2'	1:0:1594:U:O4	2.16	0.44
1:0:1671:A:H2'	1:0:1672:A:C5'	2.47	0.44
1:0:1754:G:OP1	1:0:1754:G:H4'	2.17	0.44
1:0:1761:G:C5	1:0:1762:C:C5	3.05	0.44
1:0:2009:U:C6	1:0:2009:U:C3'	2.99	0.44
1:0:2476:A:O2'	1:0:2477:C:C5	2.71	0.44
1:0:2629:U:C2	1:0:2630:C:C6	3.05	0.44
1:0:2652:G:O2'	1:0:2653:A:H5'	2.17	0.44
1:0:300:C:H42	1:0:363:G:N2	2.15	0.44
1:0:640:C:H5''	1:0:660:G:HO2'	1.81	0.44
1:0:668:A:O2'	1:0:669:G:H4'	2.17	0.44
1:0:740:A:OP1	1:0:1445:A:O2'	2.28	0.44
1:0:815:A:H2'	1:0:816:U:C6	2.52	0.44
1:0:1090:C:H2'	1:0:1091:C:H6	1.82	0.44
1:0:1281:A:N6	1:0:1995:G:H1'	2.32	0.44
1:0:1354:A:O2'	1:0:1355:A:H5'	2.17	0.44
1:0:1455:C:O2	1:0:1455:C:H2'	2.15	0.44
1:0:1614:C:H2'	1:0:1615:C:H6	1.81	0.44
1:0:1618:U:C5	1:0:1619:A:H2	2.35	0.44
1:0:1834:G:O2'	1:0:1835:C:H5'	2.16	0.44
1:0:1844:C:O2'	1:0:1845:A:H5'	2.17	0.44
1:0:2064:U:H6	1:0:2064:U:O5'	1.99	0.44
1:0:2426:G:C4'	1:0:2427:A:O5'	2.66	0.44
1:0:2840:U:C5	1:0:2841:U:H5	2.35	0.44
1:0:6:A:C4	1:0:7:G:C8	3.06	0.44
1:0:27:G:C2	1:0:522:G:O2'	2.71	0.44
1:0:164:G:H2'	1:0:165:G:C5'	2.47	0.44
1:0:328:A:H2'	1:0:329:C:H6	1.82	0.44
1:0:453:U:O5'	1:0:453:U:H6	2.01	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:764:A:H8	1:0:764:A:O5'	2.00	0.44
1:0:787:A:H2'	1:0:788:G:H8	1.81	0.44
1:0:807:A:C6	1:0:808:C:C4	3.06	0.44
1:0:940:G:H2'	1:0:941:U:C4'	2.43	0.44
1:0:1011:A:C6	1:0:1166:A:N7	2.85	0.44
1:0:1323:G:H21	1:0:1326:U:H3	1.63	0.44
1:0:1371:G:H2'	1:0:1384:G:N2	2.32	0.44
1:0:1586:A:C4	1:0:1587:A:C8	3.05	0.44
1:0:1732:U:H2'	1:0:1733:U:O5'	2.18	0.44
1:0:1769:U:O4	1:0:1775:A:H1'	2.17	0.44
1:0:1807:A:N3	1:0:1809:G:C5	2.85	0.44
1:0:2182:A:H62	1:0:2203:G:N2	2.15	0.44
1:0:2198:U:H3'	1:0:2199:C:C5'	2.45	0.44
1:0:2402:U:H4'	1:0:2404:A:C8	2.52	0.44
1:0:2540:A:N6	1:0:2541:U:C4	2.86	0.44
1:0:2721:A:C2'	1:0:2722:C:H5'	2.47	0.44
1:0:2780:A:C6	1:0:2781:G:C6	3.05	0.44
1:0:33:C:O2	1:0:34:U:O4	2.36	0.44
1:0:143:A:H2'	1:0:144:U:O4'	2.18	0.44
1:0:151:G:H2'	1:0:152:G:H8	1.82	0.44
1:0:227:G:C6	1:0:228:A:C6	3.05	0.44
1:0:317:U:O2'	1:0:1224:A:N6	2.43	0.44
1:0:403:A:N3	1:0:403:A:H2'	2.33	0.44
1:0:437:G:H2'	1:0:438:G:C8	2.52	0.44
1:0:755:C:H2'	1:0:756:C:O4'	2.17	0.44
1:0:871:U:C4	1:0:2247:A:N7	2.86	0.44
1:0:956:A:C2	1:0:2427:A:C2	3.05	0.44
1:0:968:C:O2'	1:0:969:U:OP1	2.34	0.44
1:0:1301:U:H2'	1:0:1340:C:O2	2.17	0.44
1:0:1304:U:O2'	1:0:1305:C:H5'	2.17	0.44
1:0:1465:G:OP1	1:0:1465:G:C4'	2.65	0.44
1:0:1535:C:C4	1:0:1536:G:C6	3.05	0.44
1:0:2055:G:C2'	1:0:2056:C:H5'	2.47	0.44
1:0:2241:U:O4	1:0:2258:G:C6	2.71	0.44
1:0:2312:A:H4'	1:0:2313:G:O5'	2.18	0.44
1:0:2352:A:C6	1:0:2360:C:N3	2.86	0.44
1:0:2420:C:O2'	1:0:2421:C:H5'	2.16	0.44
1:0:2601:C:H2'	1:0:2602:G:O5'	2.16	0.44
1:0:2638:G:N2	1:0:2642:G:C5	2.85	0.44
1:0:2644:A:H2'	1:0:2645:C:H6	1.76	0.44
1:0:67:G:C8	1:0:68:C:C5	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:84:G:H2'	1:0:85:C:O4'	2.17	0.44
1:0:224:G:H4'	1:0:399:G:C5	2.52	0.44
1:0:600:G:HO2'	1:0:601:A:P	2.33	0.44
1:0:647:G:O2'	1:0:649:G:O2'	2.17	0.44
1:0:754:G:H2'	1:0:755:C:C6	2.53	0.44
1:0:873:U:H2'	1:0:874:A:C5'	2.44	0.44
1:0:955:G:C8	1:0:955:G:C3'	3.00	0.44
1:0:992:A:H3'	1:0:993:C:H6	1.83	0.44
1:0:1193:G:HO2'	1:0:1194:U:P	2.40	0.44
1:0:1474:A:O2'	1:0:1475:U:P	2.75	0.44
1:0:1636:G:H2'	1:0:1637:U:C6	2.52	0.44
1:0:1995:G:H8	1:0:1995:G:O5'	2.00	0.44
1:0:2241:U:H5'	1:0:2241:U:H6	1.82	0.44
1:0:2539:C:N3	1:0:2540:A:C5	2.86	0.44
1:0:2634:G:H2'	1:0:2634:G:N3	2.32	0.44
1:0:2705:A:O2'	1:0:2706:U:C6	2.70	0.44
1:0:12:U:H2'	1:0:13:A:H5'	1.96	0.44
1:0:177:U:O2	1:0:177:U:C2'	2.65	0.44
1:0:215:G:H2'	1:0:216:U:O4'	2.17	0.44
1:0:388:G:O2'	1:0:389:G:H5'	2.18	0.44
1:0:431:G:H2'	1:0:432:C:H6	1.82	0.44
1:0:442:A:C6	1:0:443:A:N6	2.85	0.44
1:0:459:A:C6	1:0:484:G:C4	3.05	0.44
1:0:460:U:N3	1:0:591:G:N2	2.65	0.44
1:0:517:A:H2'	1:0:517:A:N3	2.32	0.44
1:0:541:C:O2	1:0:2018:G:N2	2.51	0.44
1:0:635:C:C3'	1:0:636:G:H5''	2.48	0.44
1:0:991:A:C4	1:0:1146:G:O4'	2.70	0.44
1:0:1020:A:C6	1:0:1021:A:N1	2.86	0.44
1:0:1211:G:H2'	1:0:1212:U:H6	1.80	0.44
1:0:1256:C:H2'	1:0:1257:U:O4'	2.18	0.44
1:0:1293:A:H2'	1:0:1294:G:O4'	2.18	0.44
1:0:1359:G:C5	1:0:1617:G:C2	3.04	0.44
1:0:2020:G:C6	1:0:2021:G:C6	3.05	0.44
1:0:2160:C:H2'	1:0:2161:C:C6	2.53	0.44
1:0:2288:A:C6	1:0:2289:A:N6	2.86	0.44
1:0:2626:U:N3	1:0:2653:A:N6	2.58	0.44
1:0:2678:C:H2'	1:0:2679:G:H8	1.83	0.44
1:0:2756:A:N7	1:0:2762:G:C5	2.86	0.44
1:0:2785:A:H61	1:0:2865:G:H1'	1.81	0.44
1:0:212:U:H2'	1:0:213:C:C5'	2.48	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:246:C:H5	1:0:373:A:C4	2.35	0.44
1:0:494:A:H2'	1:0:495:C:C5'	2.47	0.44
1:0:516:G:H2'	1:0:517:A:OP2	2.17	0.44
1:0:593:C:C4	1:0:594:G:C5	3.06	0.44
1:0:740:A:N6	1:0:741:G:C6	2.86	0.44
1:0:776:G:O2'	1:0:778:G:H5''	2.17	0.44
1:0:835:U:C2	1:0:849:G:N2	2.85	0.44
1:0:929:A:OP1	1:0:929:A:H4'	2.17	0.44
1:0:952:A:N1	1:0:953:G:C2	2.85	0.44
1:0:1003:C:N3	1:0:1174:G:C2	2.86	0.44
1:0:1094:C:H2'	1:0:1095:A:H3'	2.00	0.44
1:0:1095:A:O2'	1:0:1096:A:H5'	2.18	0.44
1:0:1131:G:H2'	1:0:1132:C:O4'	2.18	0.44
1:0:1145:C:C5	1:0:1147:G:OP2	2.71	0.44
1:0:1149:G:C6	1:0:1150:C:C4	3.06	0.44
1:0:1253:C:C4	1:0:1254:G:C5	3.05	0.44
1:0:1310:C:N3	1:0:1311:C:C5	2.86	0.44
1:0:1393:G:C2	1:0:1394:G:C8	3.06	0.44
1:0:1671:A:H2'	1:0:1672:A:O5'	2.18	0.44
1:0:1949:A:H1'	1:0:2572:U:C4'	2.47	0.44
1:0:2713:A:C6	1:0:2714:A:N7	2.85	0.44
1:0:70:A:H4'	1:0:71:A:O5'	2.18	0.44
1:0:320:A:N3	1:0:340:G:O2'	2.35	0.44
1:0:624:A:H2'	1:0:625:A:C8	2.52	0.44
1:0:778:G:C5	1:0:779:U:C5	3.06	0.44
1:0:976:C:H2'	1:0:977:G:O5'	2.18	0.44
1:0:1035:G:C6	1:0:1036:G:C6	3.06	0.44
1:0:1213:U:C4	1:0:1260:A:H2	2.36	0.44
1:0:1328:C:H2'	1:0:1329:U:H6	1.82	0.44
1:0:1820:G:H4'	1:0:1821:A:OP1	2.18	0.44
1:0:1907:C:O5'	1:0:1907:C:H6	2.01	0.44
1:0:1911:A:C3'	1:0:1912:G:H5'	2.48	0.44
1:0:2031:A:N1	1:0:2032:G:C4	2.85	0.44
1:0:2091:C:H3'	1:0:2092:U:H6	1.83	0.44
1:0:2370:G:H2'	1:0:2371:A:OP2	2.18	0.44
1:0:2623:A:H2'	1:0:2624:G:O4'	2.17	0.44
1:0:136:A:N7	1:0:137:A:C4	2.86	0.44
1:0:242:A:O2'	1:0:243:G:O5'	2.36	0.44
1:0:308:C:H2'	1:0:308:C:O2	2.17	0.44
1:0:536:A:H61	1:0:2605:C:H4'	1.73	0.44
1:0:788:G:C5'	1:0:790:A:C1'	2.90	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1003:C:C2'	1:0:1004:A:H5'	2.47	0.44
1:0:1192:A:N1	1:0:1193:G:O6	2.50	0.44
1:0:1265:G:C2	1:0:1266:G:N2	2.86	0.44
1:0:1278:A:HO2'	1:0:1279:G:P	2.24	0.44
1:0:1416:A:O2'	1:0:1417:C:H5'	2.18	0.44
1:0:1560:A:H2'	1:0:1561:A:C8	2.52	0.44
1:0:1668:G:C2	1:0:1990:U:C2	3.06	0.44
1:0:1686:A:C6	1:0:1977:C:O2	2.71	0.44
1:0:1774:A:O5'	1:0:1774:A:H8	2.01	0.44
1:0:1815:G:C5	1:0:1816:G:C8	3.06	0.44
1:0:2123:G:P	1:0:2123:G:H8	2.41	0.44
1:0:2562:G:N3	1:0:2563:U:C6	2.86	0.44
1:0:7:G:C2	1:0:8:A:C4	3.05	0.43
1:0:34:U:H5	1:0:466:A:C2	2.35	0.43
1:0:67:G:N1	1:0:72:A:C2	2.85	0.43
1:0:192:G:H4'	1:0:193:A:O5'	2.18	0.43
1:0:196:A:C2'	1:0:197:G:H5'	2.47	0.43
1:0:469:G:O2'	1:0:480:G:N1	2.50	0.43
1:0:645:G:H2'	1:0:646:C:C6	2.53	0.43
1:0:649:G:C2	1:0:661:C:C2	3.06	0.43
1:0:761:G:N7	1:0:763:A:C8	2.86	0.43
1:0:991:A:N6	1:0:992:A:N1	2.64	0.43
1:0:1198:C:C5'	1:0:1199:U:H5''	2.38	0.43
1:0:1289:A:C2	1:0:1290:A:C5	3.05	0.43
1:0:1301:U:C4'	1:0:1302:C:OP2	2.64	0.43
1:0:1313:U:H1'	1:0:1642:G:C2	2.53	0.43
1:0:1621:C:N4	1:0:1622:G:C2	2.85	0.43
1:0:1693:A:N6	1:0:1694:A:N1	2.66	0.43
1:0:1856:U:C2'	1:0:1857:G:H5'	2.48	0.43
1:0:1895:A:H2'	1:0:1896:A:C5'	2.48	0.43
1:0:1978:U:C2	1:0:1979:C:C4	3.06	0.43
1:0:2043:A:O2'	1:0:2044:G:P	2.76	0.43
1:0:2331:A:C8	1:0:2345:A:N1	2.86	0.43
1:0:2446:C:H2'	1:0:2447:G:O4'	2.17	0.43
1:0:2466:G:H2'	1:0:2467:A:C8	2.53	0.43
1:0:2519:C:C5	1:0:2520:A:N7	2.86	0.43
1:0:2694:G:C2	1:0:2695:C:C2	3.06	0.43
1:0:2759:U:O2'	1:0:2760:G:OP2	2.32	0.43
1:0:37:C:H4'	1:0:463:C:OP1	2.17	0.43
1:0:113:C:O2'	1:0:114:C:H5'	2.18	0.43
1:0:118:U:C5	1:0:143:A:N1	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:358:C:O5'	1:0:358:C:H6	2.00	0.43
1:0:404:A:C6	1:0:405:C:N3	2.86	0.43
1:0:612:G:H4'	1:0:613:A:H4'	2.00	0.43
1:0:787:A:H2'	1:0:788:G:C8	2.53	0.43
1:0:1055:A:N6	1:0:1123:G:C1'	2.77	0.43
1:0:1169:C:C2'	1:0:1170:U:H5'	2.48	0.43
1:0:1328:C:H2'	1:0:1329:U:C6	2.53	0.43
1:0:1354:A:C3'	1:0:1410:U:O2	2.65	0.43
1:0:1399:C:N4	1:0:1400:A:N6	2.66	0.43
1:0:1402:G:N2	1:0:1412:C:C2	2.86	0.43
1:0:1464:A:H2'	1:0:1465:G:O4'	2.18	0.43
1:0:1537:U:H2'	1:0:1538:A:C8	2.53	0.43
1:0:2001:G:C6	1:0:2002:A:C6	3.05	0.43
1:0:2069:U:H2'	1:0:2070:G:H8	1.80	0.43
1:0:2557:G:C2	1:0:2558:C:C5	3.06	0.43
1:0:109:A:N1	1:0:110:U:C2	2.86	0.43
1:0:304:A:H2	1:0:356:A:N6	2.16	0.43
1:0:545:C:C2'	1:0:546:A:O5'	2.67	0.43
1:0:578:U:C4	1:0:579:G:C6	3.06	0.43
1:0:624:A:C4	1:0:625:A:C8	3.06	0.43
1:0:765:C:H2'	1:0:766:A:OP2	2.19	0.43
1:0:983:G:P	1:0:985:G:H5'	2.58	0.43
1:0:984:A:N3	1:0:1201:G:C2	2.86	0.43
1:0:1383:C:C2	1:0:1384:G:N7	2.85	0.43
1:0:1451:C:H2'	1:0:1452:U:C6	2.52	0.43
1:0:1484:G:C4	1:0:1485:U:C5	3.07	0.43
1:0:1530:U:HO2'	1:0:1531:C:H6	1.66	0.43
1:0:1744:G:N2	1:0:1746:A:H3'	2.33	0.43
1:0:1755:G:C2	1:0:1756:C:C2	3.06	0.43
1:0:1791:C:H41	1:0:1810:U:H1'	1.84	0.43
1:0:2068:C:H6	1:0:2068:C:O5'	2.01	0.43
1:0:2245:A:HO2'	1:0:2246:A:P	2.37	0.43
1:0:2302:G:N1	1:0:2303:C:C2	2.87	0.43
1:0:2483:U:C6	1:0:2483:U:C3'	3.00	0.43
1:0:2632:U:N3	1:0:2633:A:N7	2.66	0.43
1:0:2688:G:C2'	1:0:2689:C:H5'	2.48	0.43
1:0:2781:G:H3'	1:0:2782:G:H8	1.81	0.43
1:0:76:C:C6	1:0:76:C:C5'	2.97	0.43
1:0:175:C:O2	1:0:176:A:C8	2.72	0.43
1:0:236:C:H2'	1:0:237:G:H8	1.84	0.43
1:0:316:C:H2'	1:0:317:U:C6	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:322:A:N3	1:0:322:A:C2'	2.82	0.43
1:0:572:G:H1	1:0:587:A:H2	1.65	0.43
1:0:646:C:O2	1:0:650:U:H4'	2.18	0.43
1:0:715:U:H2'	1:0:715:U:O2	2.18	0.43
1:0:773:G:H2'	1:0:773:G:N3	2.33	0.43
1:0:778:G:C4	1:0:779:U:C5	3.07	0.43
1:0:865:A:H2'	1:0:866:U:C6	2.53	0.43
1:0:1098:G:C2	1:0:1100:G:H1'	2.54	0.43
1:0:1376:C:H2'	1:0:1377:G:H8	1.84	0.43
1:0:1429:A:H61	1:0:1602:G:H5'	1.81	0.43
1:0:1437:A:C6	1:0:1438:G:N7	2.86	0.43
1:0:1474:A:C2	1:0:1476:G:C5	3.06	0.43
1:0:1486:A:H2'	1:0:1487:C:H6	1.78	0.43
1:0:1629:G:H22	1:0:1633:C:H2'	1.82	0.43
1:0:1692:C:H2'	1:0:1693:A:H5'	2.00	0.43
1:0:1925:C:N3	1:0:1926:U:C4	2.86	0.43
1:0:2206:C:H3'	1:0:2207:G:C8	2.49	0.43
1:0:2437:G:O6	1:0:2469:G:H2'	2.17	0.43
1:0:2556:A:C2	1:0:2593:A:H2	2.36	0.43
1:0:147:G:O5'	1:0:147:G:H8	2.00	0.43
1:0:189:A:O2'	1:0:190:A:H5'	2.18	0.43
1:0:319:G:N2	1:0:488:A:C8	2.87	0.43
1:0:481:A:N6	1:0:482:A:N6	2.66	0.43
1:0:492:G:O2'	1:0:493:A:O5'	2.37	0.43
1:0:516:G:O2'	1:0:517:A:P	2.76	0.43
1:0:639:G:N2	1:0:650:U:H4'	2.33	0.43
1:0:754:G:C2	1:0:755:C:C5	3.06	0.43
1:0:797:A:HO2'	1:0:798:G:H8	1.66	0.43
1:0:984:A:H4'	1:0:1202:U:O4'	2.18	0.43
1:0:991:A:C5	1:0:992:A:C2	3.06	0.43
1:0:1062:G:H22	1:0:2731:G:H1	1.62	0.43
1:0:1101:U:O5'	1:0:1101:U:H6	2.01	0.43
1:0:1139:A:H2'	1:0:1140:A:OP2	2.18	0.43
1:0:1144:U:H2'	1:0:1147:G:OP1	2.18	0.43
1:0:1351:G:C2	1:0:1352:G:N3	2.86	0.43
1:0:1479:G:N2	1:0:1543:G:N2	2.67	0.43
1:0:1791:C:C5	1:0:1810:U:O2	2.71	0.43
1:0:1885:C:H2'	1:0:1886:G:H5'	2.00	0.43
1:0:1926:U:O2'	1:0:1927:U:OP2	2.36	0.43
1:0:2186:G:C2	1:0:2187:A:N7	2.86	0.43
1:0:2208:U:C6	1:0:2208:U:H3'	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2378:G:O2'	1:0:2379:G:H5'	2.18	0.43
1:0:2553:G:C6	1:0:2554:C:C4	3.06	0.43
1:0:2713:A:C5	1:0:2714:A:N7	2.86	0.43
1:0:14:A:C8	1:0:15:G:H1'	2.53	0.43
1:0:182:G:C2'	1:0:183:U:OP2	2.66	0.43
1:0:338:G:C6	1:0:339:U:C5	3.06	0.43
1:0:429:C:H2'	1:0:430:C:C6	2.53	0.43
1:0:435:A:C6	1:0:436:A:C6	3.06	0.43
1:0:628:A:C8	1:0:629:C:C5	3.07	0.43
1:0:636:G:H2'	1:0:637:G:O4'	2.18	0.43
1:0:1588:A:H2'	1:0:1589:G:H8	1.83	0.43
1:0:1877:C:H2'	1:0:1878:C:C6	2.54	0.43
1:0:2035:G:O6	1:0:2597:G:C2	2.71	0.43
1:0:2036:G:C2'	1:0:2037:A:H5'	2.49	0.43
1:0:2180:U:O2'	1:0:2181:A:C6	2.71	0.43
1:0:2272:A:C6	1:0:2273:C:N4	2.86	0.43
1:0:2429:A:OP1	1:0:2476:A:C8	2.72	0.43
1:0:2483:U:H1'	1:0:2551:A:N1	2.34	0.43
1:0:2664:G:O2'	1:0:2665:G:H5'	2.19	0.43
1:0:214:C:N3	1:0:215:G:N7	2.67	0.43
1:0:322:A:C8	1:0:343:A:C5	2.99	0.43
1:0:577:U:H2'	1:0:579:G:OP2	2.19	0.43
1:0:616:U:C6	1:0:616:U:C3'	3.01	0.43
1:0:783:G:O4'	1:0:1392:U:C5	2.71	0.43
1:0:795:A:C5'	1:0:796:A:OP1	2.66	0.43
1:0:956:A:C5	1:0:2427:A:H2	2.37	0.43
1:0:976:C:C1'	1:0:2252:A:H2	2.30	0.43
1:0:1015:U:O5'	1:0:1015:U:H6	2.02	0.43
1:0:1135:C:O2'	1:0:1136:G:H5'	2.17	0.43
1:0:1394:G:C2'	1:0:1395:A:H5'	2.49	0.43
1:0:1972:G:C6	1:0:1973:C:N3	2.87	0.43
1:0:2194:A:H2'	1:0:2195:C:H5''	1.99	0.43
1:0:2826:C:C4	1:0:2827:G:C5	3.06	0.43
1:0:2836:U:O2'	1:0:2837:G:H5'	2.18	0.43
1:0:35:G:C4	1:0:466:A:C2	3.06	0.43
1:0:118:U:H1'	1:0:143:A:C5	2.52	0.43
1:0:456:C:C6	1:0:456:C:H3'	2.54	0.43
1:0:548:G:N2	1:0:549:G:N9	2.66	0.43
1:0:614:G:N2	1:0:634:G:H22	2.13	0.43
1:0:728:G:H21	1:0:729:A:H1'	1.81	0.43
1:0:759:C:H1'	1:0:761:G:N2	2.26	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:785:U:H2'	1:0:786:U:H6	1.82	0.43
1:0:867:G:H2'	1:0:868:U:O4'	2.19	0.43
1:0:955:G:C5'	1:0:956:A:H5'	2.48	0.43
1:0:955:G:C8	1:0:955:G:H3'	2.54	0.43
1:0:981:C:C5	1:0:982:C:H5	2.36	0.43
1:0:1002:C:C4	1:0:1003:C:N4	2.86	0.43
1:0:1163:C:C2'	1:0:1164:C:H5'	2.49	0.43
1:0:1171:A:H2'	1:0:1172:U:H6	1.84	0.43
1:0:1492:A:N1	1:0:1530:U:N3	2.66	0.43
1:0:1605:A:O2'	1:0:1606:C:H5'	2.18	0.43
1:0:1629:G:C6	1:0:1633:C:C5	3.07	0.43
1:0:1955:G:H2'	1:0:1956:G:H5'	1.99	0.43
1:0:2052:G:C2	1:0:2053:G:C8	3.07	0.43
1:0:2064:U:O4	1:0:2216:G:C6	2.72	0.43
1:0:2229:G:N2	1:0:2475:C:C5'	2.81	0.43
1:0:2239:C:H2'	1:0:2240:C:H6	1.84	0.43
1:0:2491:C:C4	1:0:2492:G:C8	3.06	0.43
1:0:2558:C:H2'	1:0:2559:U:O4'	2.18	0.43
1:0:2678:C:C4	1:0:2679:G:N7	2.87	0.43
1:0:59:G:H1'	1:0:73:A:C2	2.54	0.43
1:0:105:G:H2'	1:0:106:G:C5'	2.49	0.43
1:0:139:A:N3	1:0:140:G:C8	2.87	0.43
1:0:205:A:N7	1:0:207:U:O2	2.51	0.43
1:0:424:G:OP1	1:0:424:G:C4'	2.64	0.43
1:0:649:G:N1	1:0:660:G:C2	2.87	0.43
1:0:693:A:C2	1:0:811:G:N3	2.87	0.43
1:0:1141:U:N3	1:0:2008:C:OP1	2.35	0.43
1:0:1233:A:O2'	1:0:1234:C:P	2.76	0.43
1:0:1293:A:C2'	1:0:1294:G:H5'	2.48	0.43
1:0:1317:G:N2	1:0:1641:C:N1	2.67	0.43
1:0:1351:G:N1	1:0:1352:G:C2	2.87	0.43
1:0:1353:A:H2'	1:0:1354:A:OP2	2.19	0.43
1:0:1624:A:N7	1:0:1627:C:N3	2.67	0.43
1:0:1675:C:O2	1:0:1675:C:C2'	2.62	0.43
1:0:1683:G:N1	1:0:1978:U:O4	2.51	0.43
1:0:2014:A:N6	1:0:2477:C:H1'	2.31	0.43
1:0:2306:A:C2	1:0:2307:A:C2	3.06	0.43
1:0:2669:C:O2'	1:0:2670:C:P	2.77	0.43
1:0:2811:G:O6	1:0:2812:A:N6	2.52	0.43
1:0:2825:A:N3	1:0:2826:C:C6	2.87	0.43
1:0:28:A:C2	1:0:523:A:N9	2.87	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:141:G:H2'	1:0:142:U:C6	2.54	0.43
1:0:148:C:C2'	1:0:149:A:OP2	2.67	0.43
1:0:180:C:N4	1:0:181:A:C6	2.87	0.43
1:0:243:G:H3'	1:0:244:C:H5''	2.01	0.43
1:0:306:G:C5	1:0:307:C:C5	3.07	0.43
1:0:392:G:C2	1:0:409:G:C4	3.07	0.43
1:0:447:U:O2'	1:0:448:C:C5	2.72	0.43
1:0:761:G:C8	1:0:763:A:N7	2.86	0.43
1:0:953:G:N7	1:0:954:U:C5	2.87	0.43
1:0:1052:C:H2'	1:0:1053:G:H8	1.82	0.43
1:0:1211:G:N2	1:0:1263:G:C5	2.86	0.43
1:0:1234:C:H2'	1:0:1235:C:C6	2.48	0.43
1:0:1256:C:O2'	1:0:1257:U:H5'	2.19	0.43
1:0:1300:A:C5	1:0:1301:U:C4	3.06	0.43
1:0:1345:G:N3	1:0:1626:A:N7	2.66	0.43
1:0:1356:G:N2	1:0:1418:C:C2	2.87	0.43
1:0:1498:G:O2'	1:0:1499:A:H5'	2.18	0.43
1:0:1624:A:C6	1:0:1627:C:C2	3.05	0.43
1:0:1625:A:C5	1:0:1632:A:N3	2.87	0.43
1:0:1724:C:C2	1:0:1747:G:C2	3.07	0.43
1:0:1750:A:H1'	1:0:2690:A:C2	2.54	0.43
1:0:1908:C:O5'	1:0:1908:C:H6	2.02	0.43
1:0:1938:U:O2'	1:0:1939:U:P	2.77	0.43
1:0:2223:U:C2'	1:0:2224:U:H5'	2.48	0.43
1:0:2860:C:H3'	1:0:2860:C:C6	2.54	0.43
1:0:174:A:C4	1:0:175:C:C6	3.07	0.42
1:0:221:A:H2'	1:0:221:A:N3	2.34	0.42
1:0:334:G:N3	1:0:344:G:H1'	2.33	0.42
1:0:424:G:H3'	1:0:2385:U:C4	2.54	0.42
1:0:481:A:N1	1:0:482:A:C6	2.87	0.42
1:0:539:A:O2'	1:0:540:G:P	2.76	0.42
1:0:1066:G:H3'	1:0:1067:G:C4'	2.44	0.42
1:0:1071:U:OP2	1:0:1072:U:C5	2.71	0.42
1:0:1156:U:H2'	1:0:1157:G:C8	2.53	0.42
1:0:1311:C:N1	1:0:1660:G:N2	2.67	0.42
1:0:1332:G:C5	1:0:1333:G:N1	2.87	0.42
1:0:1573:G:O6	1:0:1574:A:C6	2.71	0.42
1:0:1806:G:N7	1:0:1807:A:N6	2.67	0.42
1:0:1820:G:O2'	1:0:1821:A:O5'	2.37	0.42
1:0:1938:U:O2'	1:0:1939:U:C5'	2.46	0.42
1:0:2008:C:C4	1:0:2009:U:C4	3.07	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2181:A:H3'	1:0:2181:A:N3	2.33	0.42
1:0:2553:G:C2	1:0:2554:C:C2	3.07	0.42
1:0:2618:A:H1'	1:0:2758:A:C2	2.54	0.42
1:0:2802:C:H2'	1:0:2803:C:H6	1.84	0.42
1:0:172:A:H2	1:0:227:G:H1	1.67	0.42
1:0:481:A:C6	1:0:482:A:C6	3.07	0.42
1:0:514:G:N2	1:0:1248:G:OP1	2.52	0.42
1:0:594:G:C4	1:0:1264:C:C4	3.07	0.42
1:0:945:G:C5	1:0:946:U:C5	3.07	0.42
1:0:1008:G:C2	1:0:1009:C:C5	3.07	0.42
1:0:1605:A:H2'	1:0:1606:C:H6	1.84	0.42
1:0:1762:C:N4	1:0:1763:G:O6	2.52	0.42
1:0:1830:C:N3	1:0:1881:U:C4	2.87	0.42
1:0:2079:A:H2'	1:0:2080:U:C6	2.53	0.42
1:0:2182:A:N6	1:0:2203:G:H21	2.17	0.42
1:0:2265:A:O3'	1:0:2266:A:O4'	2.36	0.42
1:0:2312:A:O2'	1:0:2313:G:P	2.77	0.42
1:0:2562:G:C5	1:0:2563:U:C4	3.07	0.42
1:0:2652:G:C2	1:0:2653:A:N7	2.86	0.42
1:0:2727:G:C6	1:0:2734:U:C5	3.07	0.42
1:0:18:U:C5	1:0:19:C:H5	2.37	0.42
1:0:83:A:O2'	1:0:84:G:O4'	2.31	0.42
1:0:176:A:C6	1:0:2413:A:C6	3.07	0.42
1:0:188:G:O2'	1:0:189:A:H5'	2.20	0.42
1:0:482:A:C2'	1:0:483:A:H5'	2.48	0.42
1:0:490:A:N6	1:0:492:G:C2	2.86	0.42
1:0:494:A:C2'	1:0:495:C:H5'	2.49	0.42
1:0:697:G:C4	1:0:788:G:C6	3.06	0.42
1:0:698:A:N7	1:0:786:U:C4	2.87	0.42
1:0:751:G:H2'	1:0:752:G:O4'	2.19	0.42
1:0:921:A:C6	1:0:924:C:C2	3.08	0.42
1:0:1016:C:N3	1:0:1154:A:C2	2.88	0.42
1:0:1104:G:C2	1:0:1105:U:O4	2.72	0.42
1:0:1697:U:O2	1:0:1754:G:H8	2.02	0.42
1:0:1834:G:H2'	1:0:1835:C:C6	2.53	0.42
1:0:1911:A:H3'	1:0:1911:A:C8	2.54	0.42
1:0:2002:A:C2'	1:0:2003:A:O5'	2.68	0.42
1:0:2002:A:H2'	1:0:2003:A:C5'	2.50	0.42
1:0:2028:C:C2	1:0:2603:G:N2	2.88	0.42
1:0:2034:A:C6	1:0:2593:A:C4	3.08	0.42
1:0:2180:U:O2'	1:0:2181:A:N1	2.52	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2245:A:C1'	1:0:2251:U:O4	2.67	0.42
1:0:2254:C:C2'	1:0:2255:G:OP2	2.67	0.42
1:0:2352:A:N6	1:0:2360:C:H42	2.17	0.42
1:0:2432:A:H4'	1:0:2551:A:HO2'	1.82	0.42
1:0:2545:A:O2'	1:0:2546:G:OP2	2.35	0.42
1:0:2585:C:H2'	1:0:2586:G:H5'	2.00	0.42
1:0:33:C:C2'	1:0:34:U:O5'	2.67	0.42
1:0:475:U:C4	1:0:801:A:C5	3.08	0.42
1:0:478:G:H21	1:0:479:G:H1'	1.84	0.42
1:0:540:G:O3'	1:0:541:C:H4'	2.20	0.42
1:0:638:A:O2'	1:0:639:G:H5'	2.19	0.42
1:0:668:A:C2'	1:0:669:G:O4'	2.64	0.42
1:0:705:C:H2'	1:0:706:A:H8	1.85	0.42
1:0:810:U:H2'	1:0:811:G:O4'	2.19	0.42
1:0:1156:U:H2'	1:0:1157:G:H8	1.83	0.42
1:0:1187:A:OP2	1:0:1187:A:H8	2.02	0.42
1:0:1236:G:C4	1:0:1238:A:OP2	2.72	0.42
1:0:1346:C:N4	1:0:1347:C:N4	2.67	0.42
1:0:1404:C:N4	1:0:1408:A:N6	2.68	0.42
1:0:1444:C:H6	1:0:1444:C:O5'	2.01	0.42
1:0:1699:A:H3'	1:0:1700:C:C6	2.54	0.42
1:0:1699:A:C5	1:0:1748:U:C6	3.07	0.42
1:0:1893:G:H2'	1:0:1894:U:C6	2.53	0.42
1:0:1916:G:O2'	1:0:1957:C:H4'	2.19	0.42
1:0:1978:U:C3'	1:0:1979:C:H5''	2.46	0.42
1:0:2015:G:C2	1:0:2038:C:N3	2.87	0.42
1:0:2071:G:C2	1:0:2072:C:C6	3.07	0.42
1:0:2243:C:N4	1:0:2244:C:N4	2.66	0.42
1:0:2268:G:H2'	1:0:2269:G:O4'	2.19	0.42
1:0:2395:C:C4	1:0:2396:C:N4	2.87	0.42
1:0:2501:U:O2'	1:0:2626:U:H5''	2.19	0.42
1:0:2537:C:H2'	1:0:2538:C:O4'	2.19	0.42
1:0:2542:U:O2	1:0:2545:A:N7	2.53	0.42
1:0:2762:G:O5'	1:0:2762:G:C8	2.72	0.42
1:0:2833:C:N4	1:0:2834:A:C6	2.87	0.42
1:0:2859:U:C5	1:0:2860:C:C2	3.07	0.42
1:0:42:G:C6	1:0:43:A:C2	3.08	0.42
1:0:167:A:C6	1:0:168:A:C6	3.08	0.42
1:0:402:A:H5''	1:0:403:A:OP2	2.19	0.42
1:0:474:G:C6	1:0:478:G:O6	2.72	0.42
1:0:541:C:N4	1:0:2001:G:H1	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:553:C:O2'	1:0:555:U:OP1	2.32	0.42
1:0:591:G:H2'	1:0:592:G:H8	1.83	0.42
1:0:591:G:C4	1:0:592:G:C8	3.07	0.42
1:0:600:G:O6	1:0:602:C:C4	2.72	0.42
1:0:611:C:N4	1:0:612:G:C6	2.87	0.42
1:0:633:G:O2'	1:0:634:G:C5'	2.67	0.42
1:0:677:G:C2	1:0:678:G:C8	3.07	0.42
1:0:757:U:H2'	1:0:758:G:H5'	2.01	0.42
1:0:865:A:N6	1:0:937:C:N3	2.52	0.42
1:0:1068:A:C2'	1:0:1069:G:O4'	2.66	0.42
1:0:1225:G:H2'	1:0:1249:G:H21	1.76	0.42
1:0:1374:G:C2	1:0:1375:C:C6	3.07	0.42
1:0:1438:G:C2	1:0:1591:U:C2	3.07	0.42
1:0:2036:G:O2'	1:0:2037:A:H5'	2.20	0.42
1:0:2200:G:C4	1:0:2201:G:C8	3.08	0.42
1:0:2225:G:C2	1:0:2226:A:N7	2.88	0.42
1:0:2229:G:N2	1:0:2475:C:C4'	2.81	0.42
1:0:2519:C:C2'	1:0:2520:A:H5'	2.50	0.42
1:0:2668:U:O2	1:0:2693:U:O5'	2.37	0.42
1:0:2731:G:H8	1:0:2731:G:O5'	2.01	0.42
1:0:2789:U:H2'	1:0:2790:C:O4'	2.20	0.42
1:0:2810:A:N6	1:0:2853:U:C6	2.88	0.42
1:0:68:C:C2'	1:0:72:A:HO2'	2.32	0.42
1:0:163:A:N3	1:0:164:G:C8	2.88	0.42
1:0:177:U:O2	1:0:177:U:H3'	2.18	0.42
1:0:305:A:H2'	1:0:306:G:C5'	2.49	0.42
1:0:325:U:O2'	1:0:326:A:H5'	2.19	0.42
1:0:330:C:C2	1:0:331:U:C6	3.08	0.42
1:0:387:A:H2'	1:0:387:A:N3	2.35	0.42
1:0:401:G:OP1	1:0:401:G:O4'	2.38	0.42
1:0:459:A:N7	1:0:484:G:C5	2.88	0.42
1:0:621:U:N3	1:0:622:U:C5	2.88	0.42
1:0:622:U:H2'	1:0:623:G:C5'	2.49	0.42
1:0:998:C:O2'	1:0:1011:A:N3	2.45	0.42
1:0:1057:A:C3'	1:0:1058:G:C5'	2.97	0.42
1:0:1120:C:H3'	1:0:1121:G:N7	2.34	0.42
1:0:1144:U:H3'	1:0:1144:U:H6	1.84	0.42
1:0:1196:G:O2'	1:0:1197:U:H5'	2.20	0.42
1:0:1215:A:C2	1:0:1258:G:C4	3.08	0.42
1:0:1299:A:N6	1:0:1302:C:C2	2.86	0.42
1:0:1337:G:N2	1:0:1344:C:C2	2.87	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1437:A:C5	1:0:1438:G:N7	2.88	0.42
1:0:1690:U:O2'	1:0:1691:G:C5'	2.66	0.42
1:0:1713:G:C6	1:0:1714:A:C4	3.07	0.42
1:0:1718:A:C8	1:0:1719:G:C8	3.07	0.42
1:0:1724:C:C2	1:0:1747:G:C4	3.07	0.42
1:0:1791:C:O2	1:0:1793:A:C8	2.73	0.42
1:0:1819:U:C4'	1:0:1953:A:O2'	2.65	0.42
1:0:1982:C:OP1	1:0:2703:C:O2'	2.36	0.42
1:0:2023:C:O5'	1:0:2023:C:H6	2.03	0.42
1:0:2225:G:C4	1:0:2226:A:C8	3.08	0.42
1:0:2717:G:N3	1:0:2718:A:C8	2.88	0.42
1:0:115:G:C2	1:0:117:A:N6	2.88	0.42
1:0:366:U:H2'	1:0:367:G:O4'	2.20	0.42
1:0:531:G:O2'	1:0:532:A:H5'	2.20	0.42
1:0:658:G:H2'	1:0:659:G:C8	2.55	0.42
1:0:698:A:C8	1:0:786:U:C4	3.08	0.42
1:0:743:A:C2	1:0:744:C:C2	3.08	0.42
1:0:752:G:H4'	1:0:753:U:OP1	2.20	0.42
1:0:772:G:C4	1:0:773:G:N7	2.88	0.42
1:0:984:A:H1'	1:0:1202:U:C4	2.45	0.42
1:0:1060:C:N4	1:0:1061:A:N6	2.68	0.42
1:0:1198:C:OP1	1:0:1199:U:C4'	2.68	0.42
1:0:1285:A:O2'	1:0:1286:U:P	2.78	0.42
1:0:1320:A:C6	1:0:1638:G:C6	3.08	0.42
1:0:1355:A:C8	1:0:1410:U:C1'	3.02	0.42
1:0:1440:G:H8	1:0:1440:G:P	2.42	0.42
1:0:1466:C:H2'	1:0:1467:U:H1'	2.02	0.42
1:0:1474:A:C6	1:0:1476:G:C2	3.08	0.42
1:0:1681:A:H61	1:0:1979:C:N4	2.18	0.42
1:0:1899:A:H8	1:0:1899:A:O5'	2.03	0.42
1:0:1952:A:H1'	1:0:1956:G:O4'	2.20	0.42
1:0:2352:A:N1	1:0:2360:C:N3	2.68	0.42
1:0:2633:A:H2	1:0:2644:A:H5''	1.83	0.42
1:0:2860:C:H2'	1:0:2861:A:H5'	2.00	0.42
1:0:43:A:H2'	1:0:44:G:C5'	2.48	0.42
1:0:43:A:O2'	1:0:44:G:H5'	2.20	0.42
1:0:57:G:N1	1:0:72:A:C6	2.88	0.42
1:0:83:A:O2'	1:0:84:G:OP2	2.38	0.42
1:0:105:G:H2'	1:0:106:G:H5'	2.02	0.42
1:0:340:G:H5'	1:0:341:A:OP2	2.20	0.42
1:0:484:G:H8	1:0:484:G:O5'	2.03	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:500:G:C4	1:0:1297:A:C2	3.08	0.42
1:0:681:A:N6	1:0:683:A:H2'	2.35	0.42
1:0:804:C:C2'	1:0:805:G:OP2	2.67	0.42
1:0:970:A:N7	1:0:971:A:C6	2.87	0.42
1:0:1161:U:H2'	1:0:1162:A:C8	2.53	0.42
1:0:1316:G:N2	1:0:1317:G:C1'	2.82	0.42
1:0:1360:G:C6	1:0:1361:G:N7	2.88	0.42
1:0:1715:A:HO2'	1:0:1716:G:C5'	2.32	0.42
1:0:1744:G:H2'	1:0:1746:A:OP2	2.19	0.42
1:0:1789:U:N3	1:0:1811:A:C2	2.88	0.42
1:0:1825:C:O2'	1:0:1826:U:H5'	2.20	0.42
1:0:1850:G:N2	1:0:1868:A:C8	2.87	0.42
1:0:1852:G:N2	1:0:1853:C:C2	2.88	0.42
1:0:1908:C:C2'	1:0:1909:U:H4'	2.49	0.42
1:0:1977:C:H2'	1:0:1978:U:H6	1.82	0.42
1:0:2096:U:C2'	1:0:2097:A:H5''	2.50	0.42
1:0:2181:A:N1	1:0:2204:A:N6	2.68	0.42
1:0:2350:G:N1	1:0:2351:G:C5	2.87	0.42
1:0:2392:G:H2'	1:0:2393:G:H8	1.84	0.42
1:0:2431:C:O2	1:0:2431:C:C2'	2.57	0.42
1:0:2543:A:C2	1:0:2626:U:H4'	2.55	0.42
1:0:2778:U:H2'	1:0:2779:C:C5'	2.47	0.42
1:0:2826:C:H2'	1:0:2827:G:O5'	2.20	0.42
1:0:159:A:O5'	1:0:159:A:H8	2.03	0.42
1:0:173:A:O2'	1:0:174:A:P	2.77	0.42
1:0:178:C:H2'	1:0:179:U:O4'	2.19	0.42
1:0:200:A:C8	1:0:435:A:H1'	2.55	0.42
1:0:321:A:C5	1:0:323:G:C4	3.07	0.42
1:0:369:C:H2'	1:0:370:U:O4'	2.19	0.42
1:0:459:A:H4'	1:0:461:A:C5	2.55	0.42
1:0:529:U:H2'	1:0:530:G:C8	2.54	0.42
1:0:1151:U:C5'	1:0:1153:A:H5'	2.50	0.42
1:0:1225:G:O2'	1:0:1250:A:C6	2.72	0.42
1:0:1225:G:O2'	1:0:1250:A:N1	2.52	0.42
1:0:1227:A:O5'	1:0:1227:A:H8	2.03	0.42
1:0:1256:C:H2'	1:0:1257:U:C6	2.55	0.42
1:0:1270:C:C4	1:0:1271:C:N4	2.88	0.42
1:0:1547:U:H2'	1:0:1548:U:O4'	2.20	0.42
1:0:1586:A:C4	1:0:1587:A:N7	2.87	0.42
1:0:1655:C:OP1	1:0:2690:A:C5'	2.66	0.42
1:0:1926:U:H4'	1:0:1927:U:H5'	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1975:G:H22	1:0:1979:C:H6	1.61	0.42
1:0:2028:C:C2'	1:0:2029:G:O5'	2.68	0.42
1:0:2031:A:C2	1:0:2032:G:C1'	3.03	0.42
1:0:2046:C:C6	1:0:2046:C:O5'	2.72	0.42
1:0:2419:C:O2'	1:0:2420:C:OP1	2.35	0.42
1:0:2483:U:C6	1:0:2483:U:H3'	2.53	0.42
1:0:2500:C:H2'	1:0:2501:U:C6	2.54	0.42
1:0:2515:G:O5'	1:0:2515:G:H8	2.03	0.42
1:0:2595:C:C2	1:0:2596:C:C6	3.08	0.42
1:0:2771:C:O2	1:0:2771:C:H2'	2.18	0.42
1:0:2819:G:C5	1:0:2820:C:C4	3.08	0.42
1:0:2831:A:C6	1:0:2837:G:C6	3.07	0.42
1:0:33:C:N4	1:0:458:G:H1'	2.31	0.42
1:0:52:A:C8	1:0:53:G:C8	3.08	0.42
1:0:103:U:O4	1:0:104:C:N4	2.53	0.42
1:0:698:A:C4'	1:0:700:C:C5	2.98	0.42
1:0:718:A:N6	1:0:739:G:O2'	2.52	0.42
1:0:1176:U:C2'	1:0:1177:U:O5'	2.68	0.42
1:0:1194:U:O2'	1:0:1195:U:P	2.78	0.42
1:0:1468:A:C5'	1:0:1472:C:N4	2.73	0.42
1:0:1710:U:C5'	1:0:1711:C:OP2	2.68	0.42
1:0:1713:G:C6	1:0:1714:A:C5	3.07	0.42
1:0:1730:G:N1	1:0:1731:C:C4	2.88	0.42
1:0:2042:A:C2	1:0:2482:A:C6	3.08	0.42
1:0:2176:U:H3'	1:0:2177:U:C6	2.55	0.42
1:0:2198:U:N3	1:0:2199:C:H1'	2.35	0.42
1:0:2437:G:C6	1:0:2469:G:H2'	2.55	0.42
1:0:2471:U:O2	1:0:2471:U:H2'	2.20	0.42
1:0:2511:G:N7	1:0:2512:A:N7	2.68	0.42
1:0:2557:G:N2	1:0:2558:C:C2	2.88	0.42
1:0:2681:A:C5	1:0:2682:C:C5	3.08	0.42
1:0:2823:G:O2'	1:0:2824:C:OP2	2.36	0.42
1:0:422:C:H2'	1:0:423:G:H8	1.85	0.41
1:0:560:G:N3	1:0:1233:A:H2	2.17	0.41
1:0:831:G:C8	1:0:831:G:C3'	3.03	0.41
1:0:968:C:C4	1:0:970:A:N3	2.87	0.41
1:0:1135:C:H2'	1:0:1136:G:C8	2.55	0.41
1:0:1236:G:C4	1:0:1240:G:N2	2.88	0.41
1:0:1317:G:N2	1:0:1641:C:C2	2.88	0.41
1:0:1360:G:C2	1:0:1616:C:O2	2.73	0.41
1:0:1549:C:H2'	1:0:1550:C:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1675:C:C2	1:0:1676:U:C5	3.08	0.41
1:0:1938:U:O3'	1:0:1939:U:C5	2.72	0.41
1:0:1996:A:N3	1:0:1996:A:H2'	2.35	0.41
1:0:2062:U:H2'	1:0:2063:A:C8	2.55	0.41
1:0:2233:C:C2'	1:0:2234:G:H5'	2.50	0.41
1:0:2267:A:C2'	1:0:2268:G:OP1	2.66	0.41
1:0:2345:A:C6	1:0:2346:G:C4	3.08	0.41
1:0:2579:A:H2'	1:0:2580:C:C5	2.54	0.41
1:0:2772:U:H1'	1:0:2781:G:N2	2.34	0.41
1:0:2781:G:C2'	1:0:2782:G:C1'	2.88	0.41
1:0:2781:G:C5	1:0:2782:G:C5	3.08	0.41
1:0:2781:G:C3'	1:0:2782:G:O4'	2.68	0.41
1:0:2824:C:H4'	1:0:2825:A:C5'	2.49	0.41
1:0:2875:C:HO2'	1:0:2876:C:H5'	1.81	0.41
1:0:29:U:O5'	1:0:29:U:C6	2.71	0.41
1:0:165:G:C6	1:0:186:C:N4	2.89	0.41
1:0:354:C:H2'	1:0:355:G:O4'	2.20	0.41
1:0:425:A:N7	1:0:2390:A:C2	2.88	0.41
1:0:734:G:O2'	1:0:735:G:H5'	2.19	0.41
1:0:756:C:H2'	1:0:757:U:H6	1.85	0.41
1:0:796:A:H8	1:0:796:A:H2'	1.69	0.41
1:0:837:U:H3	1:0:846:A:H61	1.68	0.41
1:0:871:U:N3	1:0:2247:A:C8	2.87	0.41
1:0:1040:A:N3	1:0:2465:G:H1'	2.36	0.41
1:0:1513:U:C2'	1:0:1514:C:OP2	2.68	0.41
1:0:1629:G:C2	1:0:1633:C:O2	2.73	0.41
1:0:1653:C:H2'	1:0:1654:A:H8	1.85	0.41
1:0:1758:C:C4	1:0:1759:A:N7	2.88	0.41
1:0:1886:G:N2	1:0:1887:G:C4	2.88	0.41
1:0:2060:A:OP2	1:0:2060:A:C8	2.74	0.41
1:0:2500:C:H2'	1:0:2501:U:H6	1.85	0.41
1:0:2723:C:C2	1:0:2742:G:N2	2.88	0.41
1:0:24:G:C6	1:0:25:U:C4	3.09	0.41
1:0:76:C:H2'	1:0:77:C:O4'	2.20	0.41
1:0:118:U:C6	1:0:143:A:C2	3.09	0.41
1:0:485:G:C5	1:0:520:C:C5	3.09	0.41
1:0:541:C:O2'	1:0:542:A:P	2.77	0.41
1:0:751:G:H2'	1:0:751:G:N3	2.35	0.41
1:0:788:G:N2	1:0:800:U:H3'	2.30	0.41
1:0:849:G:H2'	1:0:850:C:C6	2.56	0.41
1:0:870:C:O2'	1:0:871:U:H5'	2.19	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:941:U:C2	1:0:942:U:N1	2.88	0.41
1:0:1198:C:OP1	1:0:1199:U:O2'	2.20	0.41
1:0:1236:G:C2	1:0:1240:G:N3	2.88	0.41
1:0:1310:C:C2	1:0:1311:C:C5	3.08	0.41
1:0:1345:G:N3	1:0:1625:A:C2	2.88	0.41
1:0:1442:C:H2'	1:0:1443:G:OP1	2.20	0.41
1:0:1533:G:H2'	1:0:1534:A:C8	2.44	0.41
1:0:1800:A:C6	1:0:1802:A:C6	3.08	0.41
1:0:1854:G:O2'	1:0:1855:G:H5'	2.20	0.41
1:0:1981:A:H4'	1:0:2704:U:O2'	2.20	0.41
1:0:2044:G:H2'	1:0:2046:C:H41	1.85	0.41
1:0:2235:G:H2'	1:0:2236:U:O5'	2.20	0.41
1:0:2307:A:C6	1:0:2308:A:N6	2.87	0.41
1:0:2462:C:C5	1:0:2463:G:C8	3.08	0.41
1:0:2661:G:H2'	1:0:2662:C:H5'	2.02	0.41
1:0:2696:A:H2'	1:0:2697:G:C8	2.54	0.41
1:0:2783:U:C4	1:0:2784:A:H2	2.38	0.41
1:0:2825:A:C2	1:0:2826:C:C4	3.08	0.41
1:0:2840:U:C5	1:0:2841:U:C5	3.08	0.41
1:0:13:A:N3	1:0:14:A:N1	2.67	0.41
1:0:52:A:H2'	1:0:53:G:H5'	2.02	0.41
1:0:308:C:O2	1:0:309:G:O4'	2.38	0.41
1:0:478:G:C2	1:0:479:G:C8	3.09	0.41
1:0:511:A:H2'	1:0:512:A:C8	2.56	0.41
1:0:578:U:O2'	1:0:994:A:N1	2.40	0.41
1:0:690:A:C6	1:0:815:A:N6	2.89	0.41
1:0:841:G:N7	1:0:842:A:N6	2.68	0.41
1:0:984:A:N3	1:0:984:A:H2'	2.35	0.41
1:0:1004:A:C6	1:0:1173:G:C6	3.08	0.41
1:0:1051:U:O2	1:0:1051:U:H2'	2.21	0.41
1:0:1073:G:H2'	1:0:1074:G:O4'	2.19	0.41
1:0:1330:G:H2'	1:0:1331:G:O4'	2.19	0.41
1:0:1478:U:H2'	1:0:1479:G:C8	2.55	0.41
1:0:1741:G:C2	1:0:1742:G:C8	3.08	0.41
1:0:1766:U:C2'	1:0:1767:G:H5'	2.50	0.41
1:0:1768:U:O2	1:0:1768:U:H2'	2.20	0.41
1:0:1916:G:H2'	1:0:1917:C:H6	1.84	0.41
1:0:2198:U:C2'	1:0:2199:C:H4'	2.45	0.41
1:0:2225:G:C2	1:0:2226:A:C8	3.08	0.41
1:0:2274:C:O2	1:0:2274:C:C2'	2.65	0.41
1:0:2299:A:C5'	1:0:2300:G:OP1	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2528:G:N3	1:0:2529:G:C8	2.88	0.41
1:0:2562:G:C6	1:0:2563:U:O4	2.74	0.41
1:0:2642:G:H2'	1:0:2643:G:O5'	2.19	0.41
1:0:2726:U:O4	1:0:2736:U:H5	2.04	0.41
1:0:2755:A:O2'	1:0:2756:A:C5'	2.65	0.41
1:0:28:A:C2	1:0:523:A:C8	3.09	0.41
1:0:35:G:C1'	1:0:466:A:N3	2.84	0.41
1:0:48:A:H1'	1:0:50:G:N3	2.35	0.41
1:0:65:C:C2'	1:0:66:U:C5'	2.94	0.41
1:0:67:G:N2	1:0:73:A:C4	2.89	0.41
1:0:107:G:H21	1:0:108:G:H1'	1.83	0.41
1:0:172:A:C2	1:0:178:C:C2	3.08	0.41
1:0:197:G:H1'	1:0:210:A:C2	2.55	0.41
1:0:303:C:C2	1:0:360:A:N1	2.88	0.41
1:0:314:G:C2	1:0:326:A:C2	3.08	0.41
1:0:456:C:C6	1:0:456:C:C3'	3.04	0.41
1:0:464:G:C2	1:0:469:G:C4	3.09	0.41
1:0:542:A:C2'	1:0:543:G:O5'	2.68	0.41
1:0:579:G:C6	1:0:2013:A:C2	3.08	0.41
1:0:653:G:H3'	1:0:653:G:H8	1.86	0.41
1:0:874:A:C4	1:0:875:G:C8	3.08	0.41
1:0:944:A:C2	1:0:945:G:C1'	3.03	0.41
1:0:945:G:O2'	1:0:946:U:H5'	2.20	0.41
1:0:1047:G:O2'	1:0:1048:U:H5'	2.20	0.41
1:0:1174:G:C2	1:0:1175:A:C5	3.09	0.41
1:0:1249:G:HO2'	1:0:1250:A:P	2.42	0.41
1:0:1282:A:H2'	1:0:1283:C:C6	2.55	0.41
1:0:1332:G:C6	1:0:1333:G:N1	2.89	0.41
1:0:1446:U:C6	1:0:1447:U:H5	2.38	0.41
1:0:1469:U:H3'	1:0:1470:G:C8	2.55	0.41
1:0:1561:A:H8	1:0:1561:A:O5'	2.04	0.41
1:0:1627:C:H42	1:0:1628:C:N4	2.17	0.41
1:0:1690:U:HO2'	1:0:1691:G:P	2.42	0.41
1:0:1886:G:H2'	1:0:1887:G:C8	2.52	0.41
1:0:2050:G:C6	1:0:2423:G:C6	3.09	0.41
1:0:2094:C:O2	1:0:2094:C:H2'	2.20	0.41
1:0:2448:A:N6	1:0:2460:G:O2'	2.53	0.41
1:0:2565:C:C2'	1:0:2565:C:O2	2.55	0.41
1:0:2664:G:C2'	1:0:2665:G:H5'	2.51	0.41
1:0:2782:G:O4'	1:0:2782:G:P	2.78	0.41
1:0:2783:U:O4	1:0:2866:A:C8	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:456:C:C2'	1:0:457:C:H5'	2.50	0.41
1:0:459:A:N6	1:0:484:G:N3	2.68	0.41
1:0:460:U:H3	1:0:592:G:H1'	1.85	0.41
1:0:591:G:C6	1:0:1272:G:N1	2.88	0.41
1:0:822:G:C2'	1:0:823:U:C5'	2.98	0.41
1:0:871:U:O2	1:0:871:U:C2'	2.63	0.41
1:0:1036:G:H1'	1:0:1145:C:H4'	2.01	0.41
1:0:1073:G:C2	1:0:1074:G:H1'	2.56	0.41
1:0:1194:U:O2'	1:0:1195:U:O5'	2.38	0.41
1:0:1245:G:O2'	1:0:1246:G:H5'	2.20	0.41
1:0:1247:U:O2'	1:0:1248:G:H5'	2.20	0.41
1:0:1294:G:N2	1:0:1303:U:C2	2.89	0.41
1:0:1355:A:O3'	1:0:1357:U:OP2	2.39	0.41
1:0:1373:G:C8	1:0:1374:G:C8	3.08	0.41
1:0:1530:U:H6	1:0:1530:U:H3'	1.85	0.41
1:0:1593:C:H6	1:0:1593:C:O5'	2.03	0.41
1:0:1639:U:H2'	1:0:1640:C:C6	2.56	0.41
1:0:1701:C:H2'	1:0:1702:C:H6	1.84	0.41
1:0:1767:G:N2	1:0:1768:U:C1'	2.82	0.41
1:0:1790:G:N1	1:0:1811:A:N7	2.69	0.41
1:0:1938:U:O2'	1:0:1939:U:OP1	2.30	0.41
1:0:1953:A:H4'	1:0:1955:G:O4'	2.21	0.41
1:0:1956:G:C6	1:0:1957:C:C4	3.09	0.41
1:0:2186:G:N2	1:0:2187:A:C5	2.89	0.41
1:0:2208:U:C6	1:0:2208:U:C3'	3.04	0.41
1:0:2315:A:H1'	1:0:2364:C:H5''	2.03	0.41
1:0:2324:G:N3	1:0:2326:C:C5	2.87	0.41
1:0:2424:G:H2'	1:0:2425:G:C8	2.51	0.41
1:0:2486:C:H2'	1:0:2487:G:H8	1.84	0.41
1:0:2526:U:C2	1:0:2527:G:C8	3.08	0.41
1:0:2824:C:C2'	1:0:2825:A:OP2	2.68	0.41
1:0:115:G:C6	1:0:117:A:C6	3.09	0.41
1:0:226:C:O2'	1:0:227:G:OP2	2.31	0.41
1:0:294:U:C4	1:0:295:C:N4	2.88	0.41
1:0:338:G:C5	1:0:339:U:H5	2.38	0.41
1:0:369:C:O5'	1:0:369:C:H6	2.03	0.41
1:0:452:G:C2	1:0:453:U:C2	3.08	0.41
1:0:497:C:C2	1:0:505:G:C2	3.09	0.41
1:0:539:A:C5	1:0:2006:G:C5	3.08	0.41
1:0:644:A:C3'	1:0:645:G:H5'	2.51	0.41
1:0:651:C:C3'	1:0:652:C:C5'	2.94	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:684:C:H2'	1:0:685:U:O5'	2.21	0.41
1:0:772:G:C5	1:0:773:G:N7	2.89	0.41
1:0:813:A:C2	1:0:815:A:H8	2.39	0.41
1:0:1301:U:H5''	1:0:1302:C:OP2	2.20	0.41
1:0:1312:G:H5''	1:0:1313:U:H5''	2.02	0.41
1:0:1344:C:C5	1:0:1346:C:N3	2.89	0.41
1:0:1445:A:H2'	1:0:1446:U:C6	2.55	0.41
1:0:1758:C:H2'	1:0:1759:A:O4'	2.21	0.41
1:0:1783:G:N2	1:0:1820:G:HO2'	2.18	0.41
1:0:1855:G:H2'	1:0:1856:U:C6	2.56	0.41
1:0:1882:G:H21	1:0:1885:C:N4	2.15	0.41
1:0:2044:G:C2'	1:0:2045:A:OP2	2.69	0.41
1:0:2226:A:O2'	1:0:2227:C:H5'	2.20	0.41
1:0:2410:U:O5'	1:0:2410:U:H6	2.03	0.41
1:0:2529:G:C6	1:0:2530:C:C4	3.09	0.41
1:0:2557:G:N2	1:0:2558:C:N1	2.69	0.41
1:0:2663:U:N3	1:0:2664:G:C8	2.89	0.41
1:0:2788:C:N3	1:0:2789:U:C5	2.88	0.41
1:0:2799:C:C4	1:0:2800:C:C2	3.08	0.41
1:0:2803:C:H2'	1:0:2804:G:O4'	2.20	0.41
1:0:66:U:O2	1:0:67:G:C6	2.73	0.41
1:0:79:G:H2'	1:0:80:A:H8	1.85	0.41
1:0:105:G:C6	1:0:106:G:N7	2.88	0.41
1:0:168:A:C2	1:0:169:C:C4	3.09	0.41
1:0:237:G:H1'	1:0:632:A:H1'	2.03	0.41
1:0:242:A:N6	1:0:441:A:H8	2.10	0.41
1:0:456:C:H3'	1:0:456:C:H6	1.85	0.41
1:0:493:A:C4	1:0:516:G:C6	3.08	0.41
1:0:562:G:C2	1:0:563:U:C2	3.09	0.41
1:0:690:A:O2'	1:0:691:C:H5'	2.21	0.41
1:0:693:A:C2	1:0:811:G:C4	3.09	0.41
1:0:1281:A:H2'	1:0:1282:A:C8	2.53	0.41
1:0:1283:C:N4	1:0:1665:C:H41	2.18	0.41
1:0:1288:A:N7	1:0:1309:G:C1'	2.84	0.41
1:0:1381:G:O5'	1:0:1381:G:H8	2.04	0.41
1:0:1629:G:C6	1:0:1635:G:C6	3.09	0.41
1:0:1680:U:O2'	1:0:1681:A:H5'	2.21	0.41
1:0:1730:G:C6	1:0:1737:G:C6	3.09	0.41
1:0:2096:U:H3'	1:0:2097:A:C5'	2.49	0.41
1:0:2227:C:H2'	1:0:2228:U:O4'	2.20	0.41
1:0:2291:U:H2'	1:0:2292:C:C5	2.54	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2311:U:O4'	1:0:2315:A:N6	2.54	0.41
1:0:2346:G:O2'	1:0:2347:C:H5'	2.20	0.41
1:0:2519:C:C4	1:0:2520:A:N7	2.88	0.41
1:0:2549:G:C2'	1:0:2550:C:H5'	2.51	0.41
1:0:2637:C:H2'	1:0:2638:G:C8	2.56	0.41
1:0:2669:C:H2'	1:0:2670:C:OP2	2.20	0.41
1:0:2714:A:C2	1:0:2715:C:C2	3.09	0.41
1:0:30:G:N1	1:0:521:U:O2	2.53	0.41
1:0:48:A:N3	1:0:48:A:C2'	2.82	0.41
1:0:142:U:H5''	1:0:143:A:OP1	2.21	0.41
1:0:154:U:H2'	1:0:154:U:O2	2.19	0.41
1:0:188:G:C2	1:0:189:A:C4	3.09	0.41
1:0:198:A:C2	1:0:210:A:C5	3.09	0.41
1:0:212:U:C2	1:0:443:A:C2	3.09	0.41
1:0:246:C:O2	1:0:246:C:C2'	2.66	0.41
1:0:306:G:H2'	1:0:307:C:C6	2.46	0.41
1:0:346:C:O2	1:0:346:C:H2'	2.21	0.41
1:0:434:C:H2'	1:0:435:A:OP2	2.20	0.41
1:0:434:C:C2'	1:0:435:A:OP2	2.68	0.41
1:0:470:U:C5	1:0:480:G:N2	2.89	0.41
1:0:588:G:C4	1:0:1275:A:N1	2.88	0.41
1:0:605:G:H2'	1:0:606:A:C8	2.55	0.41
1:0:620:G:N1	1:0:628:A:C6	2.86	0.41
1:0:651:C:N4	1:0:652:C:N4	2.69	0.41
1:0:678:G:C2'	1:0:679:C:H5'	2.51	0.41
1:0:691:C:H2'	1:0:692:C:C6	2.53	0.41
1:0:728:G:H3'	1:0:729:A:C8	2.54	0.41
1:0:797:A:C5'	1:0:798:G:OP1	2.64	0.41
1:0:824:U:O2'	1:0:1264:C:O4'	2.38	0.41
1:0:938:G:N2	1:0:939:C:O2	2.54	0.41
1:0:953:G:N7	1:0:954:U:C6	2.89	0.41
1:0:1003:C:HO2'	1:0:1004:A:H5'	1.84	0.41
1:0:1036:G:C4	1:0:1145:C:C1'	3.04	0.41
1:0:1057:A:H2'	1:0:1057:A:N3	2.35	0.41
1:0:1067:G:N2	1:0:1115:C:N4	2.69	0.41
1:0:1253:C:C5	1:0:1254:G:N7	2.89	0.41
1:0:1294:G:C2	1:0:1303:U:C2	3.09	0.41
1:0:1416:A:C2	1:0:1417:C:C2	3.09	0.41
1:0:1453:A:C2'	1:0:1454:U:H5'	2.50	0.41
1:0:1458:A:C2'	1:0:1459:U:C5'	2.99	0.41
1:0:1479:G:N2	1:0:1480:G:C4	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1541:G:C8	1:0:1541:G:H3'	2.56	0.41
1:0:1651:U:O5'	1:0:1651:U:H6	2.02	0.41
1:0:1674:C:C2	1:0:1675:C:C6	3.08	0.41
1:0:1739:G:H2'	1:0:1740:G:H8	1.85	0.41
1:0:1831:G:C4	1:0:1832:G:C8	3.09	0.41
1:0:1860:A:H2'	1:0:1861:G:O4'	2.21	0.41
1:0:1886:G:C2	1:0:1887:G:N7	2.89	0.41
1:0:1893:G:C5	1:0:1894:U:O4	2.74	0.41
1:0:2015:G:N3	1:0:2015:G:C2'	2.82	0.41
1:0:2037:A:N1	1:0:2595:C:C4	2.89	0.41
1:0:2066:G:O5'	1:0:2066:G:C8	2.68	0.41
1:0:2137:G:H8	1:0:2137:G:O5'	2.04	0.41
1:0:2161:C:HO2'	1:0:2162:C:P	2.42	0.41
1:0:2320:G:H22	1:0:2353:G:H4'	1.84	0.41
1:0:2336:G:N2	1:0:2339:A:OP2	2.45	0.41
1:0:2338:C:H2'	1:0:2339:A:H8	1.82	0.41
1:0:2427:A:O2'	1:0:2428:U:OP1	2.33	0.41
1:0:2431:C:C6	3:0:0:G34:C16	3.04	0.41
1:0:2437:G:H2'	1:0:2469:G:N1	2.29	0.41
1:0:2440:C:H2'	1:0:2441:U:C6	2.56	0.41
1:0:2483:U:H6	1:0:2483:U:C3'	2.33	0.41
1:0:2529:G:N1	1:0:2530:C:C4	2.88	0.41
1:0:2540:A:HO2'	1:0:2541:U:P	2.44	0.41
1:0:2556:A:N1	1:0:2593:A:H2	2.17	0.41
1:0:2557:G:N3	1:0:2557:G:C2'	2.81	0.41
1:0:2571:G:N1	1:0:2582:G:C6	2.89	0.41
1:0:2642:G:O2'	1:0:2643:G:C5'	2.69	0.41
1:0:2718:A:C2	1:0:2719:U:N1	2.89	0.41
1:0:2739:G:O2'	1:0:2740:C:H5'	2.21	0.41
1:0:2837:G:C5	1:0:2838:U:C5	3.08	0.41
1:0:2867:G:H2'	1:0:2868:G:OP2	2.21	0.41
1:0:123:A:O2'	1:0:124:A:P	2.80	0.41
1:0:165:G:C6	1:0:166:G:C4	3.09	0.41
1:0:172:A:N1	1:0:178:C:C2	2.89	0.41
1:0:175:C:O2'	1:0:176:A:C8	2.70	0.41
1:0:195:A:O2'	1:0:196:A:H5'	2.21	0.41
1:0:239:A:O2'	1:0:240:U:H5'	2.20	0.41
1:0:244:C:H6	1:0:244:C:C5'	2.34	0.41
1:0:336:A:H2'	1:0:337:G:C8	2.56	0.41
1:0:478:G:N2	1:0:479:G:C4	2.89	0.41
1:0:630:G:H5''	1:0:631:G:OP2	2.20	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:684:C:C6	1:0:685:U:H5	2.38	0.41
1:0:687:G:C2'	1:0:688:A:H5'	2.51	0.41
1:0:827:C:H2'	1:0:828:C:O5'	2.21	0.41
1:0:940:G:H8	1:0:941:U:H5''	1.86	0.41
1:0:1012:A:H2'	1:0:1013:G:H5'	2.03	0.41
1:0:1038:U:N3	1:0:2466:G:O2'	2.44	0.41
1:0:1094:C:O2	1:0:1096:A:H8	2.04	0.41
1:0:1235:C:H1'	1:0:1241:G:N2	2.36	0.41
1:0:1279:G:H22	1:0:1995:G:C3'	2.34	0.41
1:0:1281:A:C4	1:0:1282:A:C8	3.09	0.41
1:0:1292:A:N6	1:0:1293:A:C6	2.89	0.41
1:0:1294:G:C2	1:0:1303:U:O2	2.74	0.41
1:0:1323:G:N2	1:0:1326:U:H3	2.15	0.41
1:0:1477:C:H3'	1:0:1478:U:H6	1.86	0.41
1:0:1549:C:N4	1:0:1555:A:C2	2.89	0.41
1:0:1674:C:C2	1:0:1675:C:C5	3.09	0.41
1:0:1699:A:C2	1:0:1748:U:H1'	2.56	0.41
1:0:1703:C:H2'	1:0:1704:G:O4'	2.21	0.41
1:0:1750:A:H5'	1:0:2695:C:H1'	2.02	0.41
1:0:1815:G:C5	1:0:1816:G:N7	2.88	0.41
1:0:1885:C:C5	1:0:1886:G:C8	3.08	0.41
1:0:1973:C:H6	1:0:1973:C:O5'	2.04	0.41
1:0:2066:G:C6	1:0:2067:U:C4	3.09	0.41
1:0:2243:C:O2'	1:0:2244:C:H5'	2.20	0.41
1:0:2370:G:H21	1:0:2408:G:H1'	1.86	0.41
1:0:2539:C:N4	1:0:2540:A:H62	2.18	0.41
1:0:2660:C:C2'	1:0:2661:G:OP2	2.69	0.41
1:0:2807:U:O2	1:0:2809:A:C6	2.74	0.41
1:0:35:G:C2'	1:0:36:G:O5'	2.69	0.40
1:0:39:C:N4	1:0:40:U:O4	2.54	0.40
1:0:469:G:O2'	1:0:470:U:P	2.78	0.40
1:0:513:A:C2	1:0:516:G:C4	3.09	0.40
1:0:528:G:H2'	1:0:529:U:H6	1.86	0.40
1:0:815:A:H2'	1:0:815:A:N3	2.36	0.40
1:0:1011:A:N6	1:0:1166:A:C8	2.89	0.40
1:0:1066:G:H3'	1:0:1067:G:C5'	2.51	0.40
1:0:1193:G:O2'	1:0:1194:U:P	2.78	0.40
1:0:1218:C:C2	1:0:1255:A:C2	3.09	0.40
1:0:1226:A:H1'	1:0:1250:A:H2	1.85	0.40
1:0:1278:A:O2'	1:0:1279:G:P	2.75	0.40
1:0:1299:A:N1	1:0:1302:C:C6	2.90	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1351:G:N2	1:0:1352:G:N3	2.69	0.40
1:0:1354:A:C8	1:0:1410:U:C2	3.09	0.40
1:0:1374:G:O2'	1:0:1375:C:H5'	2.21	0.40
1:0:1488:G:C1'	1:0:1536:G:N2	2.84	0.40
1:0:1923:U:H4'	1:0:1924:C:OP1	2.20	0.40
1:0:2119:A:H2'	1:0:2120:C:H6	1.86	0.40
1:0:2243:C:H2'	1:0:2244:C:O4'	2.21	0.40
1:0:2293:G:H2'	1:0:2294:U:C5	2.55	0.40
1:0:2306:A:O2'	1:0:2307:A:O4'	2.32	0.40
1:0:2656:G:H2'	1:0:2657:G:C8	2.56	0.40
1:0:2725:C:C4	1:0:2726:U:C4	3.10	0.40
1:0:2757:G:C2'	1:0:2758:A:OP2	2.68	0.40
1:0:2764:U:C2	1:0:2765:C:C5	3.09	0.40
1:0:34:U:H5	1:0:466:A:C4	2.39	0.40
1:0:66:U:O2	1:0:67:G:O6	2.39	0.40
1:0:143:A:H2'	1:0:144:U:C6	2.56	0.40
1:0:318:G:O2'	1:0:319:G:C8	2.73	0.40
1:0:468:A:N3	1:0:470:U:C4	2.89	0.40
1:0:475:U:O2	1:0:699:G:N2	2.54	0.40
1:0:537:C:C2	1:0:2759:U:C5	3.08	0.40
1:0:631:G:C5'	1:0:632:A:OP1	2.62	0.40
1:0:825:C:C2	1:0:826:U:C5	3.09	0.40
1:0:830:C:HO2'	1:0:852:U:C5'	2.34	0.40
1:0:871:U:N3	1:0:2247:A:N7	2.69	0.40
1:0:953:G:C5	1:0:954:U:C6	3.09	0.40
1:0:956:A:C2	1:0:2427:A:N3	2.89	0.40
1:0:987:G:C2	1:0:988:G:C8	3.09	0.40
1:0:1023:U:O2	1:0:1154:A:C8	2.73	0.40
1:0:1112:U:H2'	1:0:1113:C:C6	2.55	0.40
1:0:1173:G:O2'	1:0:1174:G:H5'	2.22	0.40
1:0:1224:A:O5'	1:0:1224:A:C8	2.74	0.40
1:0:1252:C:H2'	1:0:1253:C:C5'	2.46	0.40
1:0:1316:G:N2	1:0:1317:G:C4	2.90	0.40
1:0:1322:G:C5	1:0:1323:G:N7	2.89	0.40
1:0:1366:A:C2	1:0:1391:A:C2	3.09	0.40
1:0:1378:A:C2	1:0:1379:A:C4	3.09	0.40
1:0:1451:C:O2'	1:0:1452:U:H5'	2.21	0.40
1:0:1621:C:C4'	1:0:1626:A:C6	3.04	0.40
1:0:1633:C:H6	1:0:1633:C:O5'	2.05	0.40
1:0:1786:C:H2'	1:0:1787:U:O4'	2.21	0.40
1:0:1788:C:O2	1:0:1788:C:C2'	2.68	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1811:A:O2'	1:0:1812:U:C5'	2.68	0.40
1:0:2006:G:H2'	1:0:2007:G:H8	1.85	0.40
1:0:2071:G:H2'	1:0:2072:C:H6	1.85	0.40
1:0:2324:G:O6	1:0:2360:C:C4	2.75	0.40
1:0:2438:A:N6	1:0:2473:G:C5	2.89	0.40
1:0:2847:G:C2	1:0:2848:A:N6	2.89	0.40
1:0:10:A:H2'	1:0:11:G:C8	2.36	0.40
1:0:30:G:O2'	1:0:31:C:H5'	2.22	0.40
1:0:89:A:H4'	1:0:90:G:C5'	2.52	0.40
1:0:137:A:H2'	1:0:138:G:C5'	2.48	0.40
1:0:139:A:C4	1:0:140:G:N7	2.89	0.40
1:0:238:G:O4'	1:0:618:A:C2	2.74	0.40
1:0:244:C:C4	1:0:245:C:C5	3.09	0.40
1:0:322:A:O2'	1:0:323:G:OP2	2.38	0.40
1:0:388:G:OP1	1:0:406:G:OP1	2.39	0.40
1:0:390:U:C4	1:0:391:C:N4	2.89	0.40
1:0:584:A:OP2	1:0:2038:C:N4	2.54	0.40
1:0:741:G:H5''	1:0:742:G:OP2	2.21	0.40
1:0:875:G:C2'	1:0:876:A:H5'	2.51	0.40
1:0:1280:U:O2'	1:0:1281:A:H5'	2.21	0.40
1:0:1417:C:O2'	1:0:1418:C:H5'	2.21	0.40
1:0:1574:A:HO2'	1:0:1575:C:P	2.44	0.40
1:0:1629:G:N2	1:0:1633:C:O2'	2.54	0.40
1:0:1658:A:N7	1:0:1659:G:N7	2.69	0.40
1:0:1807:A:H2	1:0:1809:G:O6	2.04	0.40
1:0:1992:G:O2'	1:0:1993:G:H5'	2.21	0.40
1:0:2038:C:C2'	1:0:2483:U:H5'	2.50	0.40
1:0:2177:U:C2	1:0:2178:U:H5	2.39	0.40
1:0:2186:G:N2	1:0:2187:A:N7	2.70	0.40
1:0:2280:A:H2'	1:0:2281:C:C6	2.54	0.40
1:0:2312:A:HO2'	1:0:2313:G:P	2.42	0.40
1:0:2322:U:H2'	1:0:2323:U:H6	1.87	0.40
1:0:2404:A:H5'	1:0:2406:C:C5'	2.51	0.40
1:0:2425:G:H2'	1:0:2426:G:H5'	2.03	0.40
1:0:2712:G:H5'	1:0:2713:A:C8	2.56	0.40
1:0:43:A:H8	1:0:43:A:O5'	2.04	0.40
1:0:292:A:N1	1:0:293:U:C4	2.89	0.40
1:0:320:A:C6	1:0:341:A:C6	3.09	0.40
1:0:425:A:N6	1:0:2390:A:O2'	2.54	0.40
1:0:718:A:C4	1:0:740:A:H1'	2.56	0.40
1:0:752:G:C8	1:0:752:G:OP2	2.74	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:815:A:H3'	1:0:816:U:C6	2.55	0.40
1:0:832:A:H2'	1:0:833:A:H8	1.85	0.40
1:0:854:G:H2'	1:0:855:G:C8	2.56	0.40
1:0:874:A:H3'	1:0:875:G:C8	2.55	0.40
1:0:944:A:H2'	1:0:945:G:H5'	2.03	0.40
1:0:1192:A:C2	1:0:1193:G:N7	2.89	0.40
1:0:1351:G:H2'	1:0:1352:G:O4'	2.21	0.40
1:0:1618:U:C5	1:0:1619:A:C2	3.09	0.40
1:0:1730:G:N2	1:0:1731:C:C2	2.90	0.40
1:0:1741:G:O2'	1:0:1742:G:H5'	2.21	0.40
1:0:1772:C:H4'	1:0:1773:C:C5'	2.52	0.40
1:0:1800:A:H2'	1:0:1802:A:H8	1.86	0.40
1:0:1919:A:H2	1:0:1926:U:H3	1.70	0.40
1:0:2002:A:O2'	1:0:2003:A:P	2.80	0.40
1:0:2041:A:N6	1:0:2042:A:N6	2.69	0.40
1:0:2097:A:C1'	1:0:2105:U:OP1	2.70	0.40
1:0:2188:A:C6	1:0:2189:A:N6	2.89	0.40
1:0:2219:U:H2'	1:0:2220:A:H8	1.87	0.40
1:0:2370:G:H1'	1:0:2408:G:N2	2.35	0.40
1:0:2405:A:C2'	1:0:2406:C:OP1	2.69	0.40
1:0:2488:G:C6	1:0:2489:C:C4	3.09	0.40
1:0:2494:C:H2'	1:0:2495:G:H8	1.86	0.40
1:0:2507:U:O2	1:0:2509:A:O5'	2.39	0.40
1:0:2522:G:H2'	1:0:2523:G:C8	2.56	0.40
1:0:2579:A:H2'	1:0:2580:C:H6	1.86	0.40
1:0:2605:C:O2'	1:0:2606:G:H5'	2.21	0.40
1:0:2807:U:O2'	1:0:2809:A:N9	2.55	0.40
1:0:2823:G:C2'	1:0:2824:C:OP2	2.69	0.40
1:0:16:G:C2'	1:0:17:G:H5'	2.52	0.40
1:0:132:U:C6	1:0:133:C:H5	2.39	0.40
1:0:234:C:O2'	1:0:235:C:H5'	2.22	0.40
1:0:450:C:C2	1:0:451:A:C8	3.09	0.40
1:0:478:G:C2	1:0:479:G:C4	3.09	0.40
1:0:492:G:H2'	1:0:493:A:OP2	2.21	0.40
1:0:521:U:O4	1:0:522:G:N2	2.54	0.40
1:0:774:A:C8	1:0:774:A:C3'	3.02	0.40
1:0:836:G:C4	1:0:837:U:C5	3.10	0.40
1:0:1187:A:OP2	1:0:1187:A:C8	2.75	0.40
1:0:1385:C:C4	1:0:1386:A:C5	3.09	0.40
1:0:1454:U:C2	1:0:1455:C:C5	3.10	0.40
1:0:1469:U:OP1	1:0:1470:G:OP2	2.40	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1590:C:O5'	1:0:1590:C:H6	2.04	0.40
1:0:1650:A:N6	1:0:1652:G:C2	2.89	0.40
1:0:1666:G:C6	1:0:1992:G:O6	2.73	0.40
1:0:1906:U:H2'	1:0:1907:C:C5	2.56	0.40
1:0:1919:A:N3	1:0:1923:U:O2	2.54	0.40
1:0:1931:G:C2	1:0:1942:G:C2	3.10	0.40
1:0:1938:U:H3'	1:0:2530:C:O2'	2.21	0.40
1:0:1941:C:O2'	1:0:1942:G:H5'	2.22	0.40
1:0:2045:A:O2'	1:0:2046:C:OP1	2.32	0.40
1:0:2074:U:H3	1:0:2207:G:H1	1.69	0.40
1:0:2193:C:H2'	1:0:2194:A:O4'	2.22	0.40
1:0:2221:G:C6	1:0:2222:U:C4	3.10	0.40
1:0:2299:A:N3	1:0:2299:A:C2'	2.85	0.40
1:0:2427:A:HO2'	1:0:2428:U:P	2.38	0.40
1:0:2814:G:H2'	1:0:2815:C:H6	1.87	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	2756/2880 (95%)	667 (24%)	192 (6%)

All (667) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	0	13	A
1	0	14	A
1	0	23	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	0	28	A
1	0	34	U
1	0	35	G
1	0	45	C
1	0	48	A
1	0	49	U
1	0	50	G
1	0	59	G
1	0	60	A
1	0	62	U
1	0	63	A
1	0	69	G
1	0	70	A
1	0	71	A
1	0	72	A
1	0	74	G
1	0	76	C
1	0	84	G
1	0	87	G
1	0	89	A
1	0	90	G
1	0	99	U
1	0	105	G
1	0	110	U
1	0	117	A
1	0	118	U
1	0	119	G
1	0	123	A
1	0	124	A
1	0	129	A
1	0	135	U
1	0	149	A
1	0	155	G
1	0	157	G
1	0	158	A
1	0	173	A
1	0	174	A
1	0	176	A
1	0	181	A
1	0	182	G
1	0	193	A
1	0	199	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	0	200	A
1	0	205	A
1	0	206	U
1	0	207	U
1	0	210	A
1	0	218	A
1	0	219	G
1	0	220	U
1	0	225	G
1	0	226	C
1	0	227	G
1	0	228	A
1	0	229	G
1	0	242	A
1	0	243	G
1	0	244	C
1	0	293	U
1	0	304	A
1	0	305	A
1	0	313	U
1	0	318	G
1	0	320	A
1	0	323	G
1	0	325	U
1	0	332	C
1	0	333	A
1	0	334	G
1	0	335	A
1	0	340	G
1	0	341	A
1	0	342	G
1	0	343	A
1	0	344	G
1	0	358	C
1	0	360	A
1	0	363	G
1	0	368	A
1	0	373	A
1	0	399	G
1	0	400	U
1	0	401	G
1	0	404	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	0	408	U
1	0	412	U
1	0	414	A
1	0	418	C
1	0	424	G
1	0	425	A
1	0	435	A
1	0	447	U
1	0	448	C
1	0	453	U
1	0	455	A
1	0	456	C
1	0	459	A
1	0	460	U
1	0	461	A
1	0	463	C
1	0	467	U
1	0	484	G
1	0	485	G
1	0	486	U
1	0	488	A
1	0	491	A
1	0	492	G
1	0	493	A
1	0	514	G
1	0	515	A
1	0	517	A
1	0	518	A
1	0	519	C
1	0	537	C
1	0	539	A
1	0	540	G
1	0	541	C
1	0	542	A
1	0	554	U
1	0	556	A
1	0	558	G
1	0	570	G
1	0	572	G
1	0	580	A
1	0	581	A
1	0	582	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	0	583	C
1	0	584	A
1	0	595	A
1	0	601	A
1	0	605	G
1	0	613	A
1	0	617	U
1	0	623	G
1	0	624	A
1	0	627	A
1	0	631	G
1	0	632	A
1	0	633	G
1	0	636	G
1	0	638	A
1	0	648	A
1	0	652	C
1	0	654	A
1	0	656	U
1	0	657	A
1	0	665	A
1	0	666	U
1	0	667	U
1	0	669	G
1	0	684	C
1	0	685	U
1	0	699	G
1	0	700	C
1	0	712	A
1	0	726	G
1	0	728	G
1	0	732	G
1	0	739	G
1	0	741	G
1	0	742	G
1	0	743	A
1	0	752	G
1	0	753	U
1	0	761	G
1	0	765	C
1	0	766	A
1	0	774	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	0	777	A
1	0	778	G
1	0	789	G
1	0	790	A
1	0	794	A
1	0	795	A
1	0	796	A
1	0	797	A
1	0	798	G
1	0	802	A
1	0	805	G
1	0	806	A
1	0	807	A
1	0	813	A
1	0	814	G
1	0	816	U
1	0	818	G
1	0	819	C
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	857	U
1	0	858	G
1	0	859	U
1	0	860	U
1	0	872	G
1	0	873	U
1	0	874	A
1	0	880	C
1	0	912	A
1	0	919	U
1	0	922	A
1	0	926	C
1	0	930	A
1	0	931	G
1	0	938	G
1	0	941	U
1	0	943	U
1	0	944	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	0	952	A
1	0	955	G
1	0	956	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
1	0	984	A
1	0	985	G
1	0	986	A
1	0	994	A
1	0	995	A
1	0	996	C
1	0	1000	G
1	0	1001	A
1	0	1006	C
1	0	1007	A
1	0	1019	U
1	0	1023	U
1	0	1024	G
1	0	1032	A
1	0	1033	G
1	0	1036	G
1	0	1037	U
1	0	1044	U
1	0	1045	G
1	0	1055	A
1	0	1056	U
1	0	1057	A
1	0	1058	G
1	0	1067	G
1	0	1071	U
1	0	1072	U
1	0	1074	G
1	0	1081	A
1	0	1082	G
1	0	1087	C
1	0	1090	C
1	0	1094	C
1	0	1111	C

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	0	1121	G
1	0	1123	G
1	0	1130	U
1	0	1137	A
1	0	1138	A
1	0	1139	A
1	0	1140	A
1	0	1142	G
1	0	1145	C
1	0	1146	G
1	0	1149	G
1	0	1152	C
1	0	1154	A
1	0	1155	G
1	0	1166	A
1	0	1167	A
1	0	1168	G
1	0	1182	U
1	0	1183	C
1	0	1185	C
1	0	1187	A
1	0	1194	U
1	0	1195	U
1	0	1199	U
1	0	1200	G
1	0	1213	U
1	0	1220	G
1	0	1224	A
1	0	1225	G
1	0	1233	A
1	0	1234	C
1	0	1250	A
1	0	1253	C
1	0	1260	A
1	0	1261	G
1	0	1262	U
1	0	1264	C
1	0	1265	G
1	0	1266	G
1	0	1267	A
1	0	1268	U
1	0	1269	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	0	1278	A
1	0	1279	G
1	0	1280	U
1	0	1284	G
1	0	1285	A
1	0	1286	U
1	0	1288	A
1	0	1289	A
1	0	1302	C
1	0	1314	A
1	0	1315	A
1	0	1316	G
1	0	1324	G
1	0	1326	U
1	0	1333	G
1	0	1334	A
1	0	1335	A
1	0	1337	G
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	1357	U
1	0	1358	C
1	0	1359	G
1	0	1392	U
1	0	1397	A
1	0	1398	G
1	0	1402	G
1	0	1409	U
1	0	1410	U
1	0	1411	C
1	0	1428	G
1	0	1429	A
1	0	1430	G
1	0	1433	A
1	0	1435	G
1	0	1441	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	0	1442	C
1	0	1443	G
1	0	1459	U
1	0	1460	G
1	0	1465	G
1	0	1467	U
1	0	1468	A
1	0	1469	U
1	0	1470	G
1	0	1473	U
1	0	1475	U
1	0	1476	G
1	0	1477	C
1	0	1482	U
1	0	1489	C
1	0	1490	U
1	0	1496	G
1	0	1498	G
1	0	1505	U
1	0	1506	C
1	0	1508	G
1	0	1509	A
1	0	1513	U
1	0	1514	C
1	0	1524	C
1	0	1525	A
1	0	1526	U
1	0	1529	C
1	0	1552	C
1	0	1554	G
1	0	1571	G
1	0	1573	G
1	0	1574	A
1	0	1575	C
1	0	1583	A
1	0	1584	G
1	0	1585	A
1	0	1594	U
1	0	1601	U
1	0	1618	U
1	0	1623	C
1	0	1624	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	0	1625	A
1	0	1626	A
1	0	1627	C
1	0	1631	C
1	0	1633	C
1	0	1634	A
1	0	1635	G
1	0	1648	C
1	0	1652	G
1	0	1657	A
1	0	1664	G
1	0	1665	C
1	0	1670	G
1	0	1671	A
1	0	1680	U
1	0	1683	G
1	0	1684	G
1	0	1686	A
1	0	1691	G
1	0	1692	C
1	0	1699	A
1	0	1711	C
1	0	1712	G
1	0	1715	A
1	0	1716	G
1	0	1717	A
1	0	1723	U
1	0	1724	C
1	0	1746	A
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	1775	A
1	0	1776	A
1	0	1778	U
1	0	1780	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	0	1791	C
1	0	1792	C
1	0	1793	A
1	0	1801	C
1	0	1802	A
1	0	1807	A
1	0	1808	C
1	0	1810	U
1	0	1811	A
1	0	1812	U
1	0	1821	A
1	0	1831	G
1	0	1840	A
1	0	1883	A
1	0	1884	A
1	0	1889	G
1	0	1901	A
1	0	1909	U
1	0	1912	G
1	0	1914	U
1	0	1919	A
1	0	1920	A
1	0	1922	U
1	0	1923	U
1	0	1924	C
1	0	1926	U
1	0	1927	U
1	0	1938	U
1	0	1939	U
1	0	1948	C
1	0	1949	A
1	0	1950	C
1	0	1953	A
1	0	1954	A
1	0	1955	G
1	0	1956	G
1	0	1957	C
1	0	1964	A
1	0	1976	U
1	0	1979	C
1	0	1980	A
1	0	2003	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	0	2004	U
1	0	2005	U
1	0	2006	G
1	0	2013	A
1	0	2014	A
1	0	2015	G
1	0	2016	A
1	0	2017	U
1	0	2019	C
1	0	2026	C
1	0	2034	A
1	0	2035	G
1	0	2038	C
1	0	2039	G
1	0	2044	G
1	0	2045	A
1	0	2046	C
1	0	2047	C
1	0	2050	G
1	0	2051	U
1	0	2052	G
1	0	2059	U
1	0	2060	A
1	0	2063	A
1	0	2075	U
1	0	2076	G
1	0	2082	C
1	0	2094	C
1	0	2096	U
1	0	2097	A
1	0	2109	A
1	0	2118	A
1	0	2119	A
1	0	2124	C
1	0	2140	G
1	0	2162	C
1	0	2168	A
1	0	2172	U
1	0	2189	A
1	0	2190	A
1	0	2191	A
1	0	2192	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	0	2195	C
1	0	2196	U
1	0	2199	C
1	0	2205	C
1	0	2217	G
1	0	2218	G
1	0	2229	G
1	0	2230	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	2266	A
1	0	2267	A
1	0	2268	G
1	0	2272	A
1	0	2277	A
1	0	2284	U
1	0	2285	U
1	0	2286	G
1	0	2288	A
1	0	2291	U
1	0	2298	U
1	0	2299	A
1	0	2300	G
1	0	2306	A
1	0	2313	G
1	0	2314	A
1	0	2316	G
1	0	2324	G
1	0	2325	A
1	0	2326	C
1	0	2329	C
1	0	2340	C
1	0	2351	G
1	0	2358	C
1	0	2362	G
1	0	2364	C
1	0	2371	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	0	2375	G
1	0	2381	A
1	0	2382	C
1	0	2385	U
1	0	2396	C
1	0	2398	U
1	0	2402	U
1	0	2404	A
1	0	2405	A
1	0	2406	C
1	0	2407	G
1	0	2408	G
1	0	2409	A
1	0	2418	A
1	0	2419	C
1	0	2420	C
1	0	2426	G
1	0	2427	A
1	0	2428	U
1	0	2448	A
1	0	2453	C
1	0	2455	A
1	0	2457	A
1	0	2470	U
1	0	2476	A
1	0	2477	C
1	0	2481	G
1	0	2482	A
1	0	2483	U
1	0	2484	G
1	0	2487	G
1	0	2492	G
1	0	2498	U
1	0	2499	C
1	0	2504	G
1	0	2508	G
1	0	2521	A
1	0	2522	G
1	0	2541	U
1	0	2543	A
1	0	2546	G
1	0	2551	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	0	2552	C
1	0	2561	G
1	0	2563	U
1	0	2564	U
1	0	2565	C
1	0	2566	A
1	0	2581	A
1	0	2582	G
1	0	2588	U
1	0	2589	C
1	0	2590	U
1	0	2591	C
1	0	2593	A
1	0	2594	U
1	0	2595	C
1	0	2609	G
1	0	2618	A
1	0	2624	G
1	0	2625	U
1	0	2633	A
1	0	2634	G
1	0	2637	C
1	0	2646	C
1	0	2660	C
1	0	2661	G
1	0	2668	U
1	0	2681	A
1	0	2690	A
1	0	2691	C
1	0	2692	A
1	0	2693	U
1	0	2694	G
1	0	2706	U
1	0	2712	G
1	0	2713	A
1	0	2728	A
1	0	2730	A
1	0	2731	G
1	0	2732	C
1	0	2736	U
1	0	2737	A
1	0	2738	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	0	2745	A
1	0	2746	G
1	0	2757	G
1	0	2758	A
1	0	2759	U
1	0	2760	G
1	0	2761	A
1	0	2770	A
1	0	2771	C
1	0	2780	A
1	0	2782	G
1	0	2783	U
1	0	2793	G
1	0	2794	G
1	0	2795	A
1	0	2796	A
1	0	2798	A
1	0	2805	G
1	0	2807	U
1	0	2808	U
1	0	2809	A
1	0	2810	A
1	0	2822	U
1	0	2825	A
1	0	2827	G
1	0	2841	U
1	0	2842	C
1	0	2843	A
1	0	2847	G
1	0	2849	C
1	0	2854	G
1	0	2855	C
1	0	2867	G
1	0	2868	G

All (192) RNA pucker outliers are listed below:

<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	0	13	A
1	0	27	G
1	0	69	G
1	0	70	A

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	0	71	A
1	0	73	A
1	0	83	A
1	0	89	A
1	0	117	A
1	0	123	A
1	0	173	A
1	0	176	A
1	0	181	A
1	0	192	G
1	0	198	A
1	0	199	A
1	0	204	A
1	0	218	A
1	0	219	G
1	0	242	A
1	0	312	G
1	0	322	A
1	0	340	G
1	0	342	G
1	0	399	G
1	0	403	A
1	0	434	C
1	0	447	U
1	0	454	G
1	0	458	G
1	0	460	U
1	0	466	A
1	0	468	A
1	0	469	G
1	0	485	G
1	0	492	G
1	0	516	G
1	0	539	A
1	0	571	U
1	0	580	A
1	0	582	G
1	0	583	C
1	0	596	C
1	0	600	G
1	0	631	G
1	0	682	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	0	683	A
1	0	698	A
1	0	699	G
1	0	741	G
1	0	764	A
1	0	765	C
1	0	777	A
1	0	789	G
1	0	795	A
1	0	801	A
1	0	805	G
1	0	818	G
1	0	840	U
1	0	859	U
1	0	956	A
1	0	968	C
1	0	972	C
1	0	995	A
1	0	1000	G
1	0	1006	C
1	0	1139	A
1	0	1141	U
1	0	1154	A
1	0	1193	G
1	0	1194	U
1	0	1223	G
1	0	1233	A
1	0	1249	G
1	0	1261	G
1	0	1263	G
1	0	1265	G
1	0	1266	G
1	0	1278	A
1	0	1279	G
1	0	1285	A
1	0	1301	U
1	0	1313	U
1	0	1315	A
1	0	1325	U
1	0	1333	G
1	0	1337	G
1	0	1338	G

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	0	1342	U
1	0	1345	G
1	0	1354	A
1	0	1355	A
1	0	1391	A
1	0	1398	G
1	0	1408	A
1	0	1474	A
1	0	1495	G
1	0	1582	A
1	0	1626	A
1	0	1631	C
1	0	1632	A
1	0	1633	C
1	0	1634	A
1	0	1651	U
1	0	1664	G
1	0	1684	G
1	0	1685	A
1	0	1690	U
1	0	1691	G
1	0	1698	C
1	0	1710	U
1	0	1749	G
1	0	1772	C
1	0	1774	A
1	0	1775	A
1	0	1777	A
1	0	1790	G
1	0	1809	G
1	0	1820	G
1	0	1913	G
1	0	1919	A
1	0	1921	A
1	0	1923	U
1	0	1926	U
1	0	1938	U
1	0	1947	G
1	0	1963	G
1	0	1975	G
1	0	2002	A
1	0	2004	U

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<b>Mol</b>	<b>Chain</b>	<b>Res</b>	<b>Type</b>
1	0	2005	U
1	0	2013	A
1	0	2015	G
1	0	2016	A
1	0	2018	G
1	0	2034	A
1	0	2044	G
1	0	2045	A
1	0	2050	G
1	0	2059	U
1	0	2093	G
1	0	2161	C
1	0	2191	A
1	0	2204	A
1	0	2217	G
1	0	2228	U
1	0	2245	A
1	0	2254	C
1	0	2261	G
1	0	2266	A
1	0	2299	A
1	0	2312	A
1	0	2325	A
1	0	2370	G
1	0	2404	A
1	0	2418	A
1	0	2426	G
1	0	2427	A
1	0	2428	U
1	0	2469	G
1	0	2476	A
1	0	2482	A
1	0	2497	A
1	0	2498	U
1	0	2521	A
1	0	2540	A
1	0	2545	A
1	0	2560	G
1	0	2564	U
1	0	2589	C
1	0	2592	U
1	0	2593	A

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Mol	Chain	Res	Type
1	0	2594	U
1	0	2617	G
1	0	2624	G
1	0	2633	A
1	0	2660	C
1	0	2668	U
1	0	2692	A
1	0	2693	U
1	0	2706	U
1	0	2758	A
1	0	2759	U
1	0	2760	G
1	0	2769	C
1	0	2795	A
1	0	2810	A
1	0	2823	G
1	0	2824	C
1	0	2841	U
1	0	2848	A
1	0	2867	G

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

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

#### 5.5 Carbohydrates [i](#)

There are no monosaccharides in this entry.

#### 5.6 Ligand geometry [i](#)

1 ligand is modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z  > 2	Counts	RMSZ	# Z  > 2
3	G34	0	0	-	40,40,40	2.53	11 (27%)	58,64,64	2.34	17 (29%)

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
3	G34	0	0	-	-	0/12/94/94	0/6/5/5

All (11) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
3	0	0	G34	C12-C11	7.56	1.62	1.55
3	0	0	G34	C5-C14	7.35	1.61	1.56
3	0	0	G34	C5-C6	4.96	1.64	1.56
3	0	0	G34	C10-C11	3.81	1.59	1.56
3	0	0	G34	O3-C14	3.34	1.52	1.46
3	0	0	G34	C17-C10	3.28	1.60	1.53
3	0	0	G34	C8-C7	2.97	1.59	1.53
3	0	0	G34	C5-C4	2.89	1.61	1.56
3	0	0	G34	C22-S1	2.83	1.84	1.81
3	0	0	G34	C28-N1	2.58	1.51	1.48
3	0	0	G34	C8-C9	2.29	1.60	1.54

All (17) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	0	0	G34	C18-C12-C11	8.93	113.28	108.06
3	0	0	G34	C4-C5-C6	-6.40	100.51	106.61
3	0	0	G34	O3-C21-C22	5.88	120.23	110.32
3	0	0	G34	C16-C6-C7	-3.81	104.63	110.37
3	0	0	G34	C9-C4-C3	-3.70	97.67	101.79
3	0	0	G34	C7-C6-C5	3.27	114.58	111.37
3	0	0	G34	C12-C11-C10	-3.18	111.47	114.58
3	0	0	G34	O3-C14-C5	3.08	110.88	106.18
3	0	0	G34	C5-C4-C3	2.97	123.37	116.92
3	0	0	G34	C1-C9-C8	2.70	116.38	110.01
3	0	0	G34	C24-C25-N1	2.68	111.36	107.53
3	0	0	G34	C29-C28-N1	2.58	111.23	107.53
3	0	0	G34	C2-C3-C4	-2.25	106.06	108.60
3	0	0	G34	C13-C12-C19	-2.19	106.51	111.04

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
3	0	0	G34	C30-N1-C25	-2.13	108.14	113.25
3	0	0	G34	C30-N1-C28	-2.02	108.40	113.25
3	0	0	G34	C24-C25-C26	-2.00	107.64	113.01

There are no chirality outliers.

There are no torsion outliers.

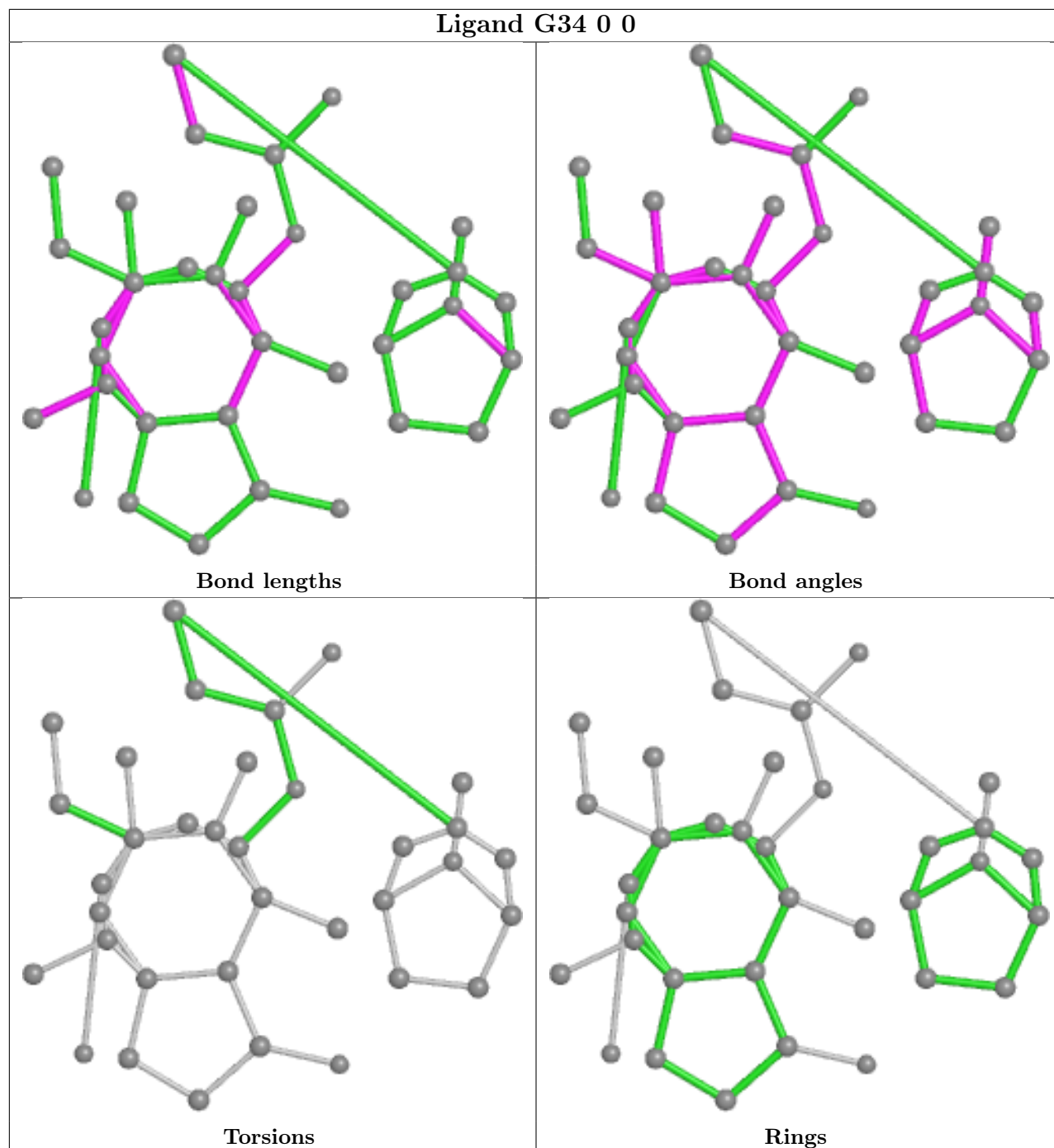
There are no ring outliers.

1 monomer is involved in 12 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
3	0	0	G34	12	0

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





## 5.7 Other polymers [i](#)

There are no such residues in this entry.

## 5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

## 6 Fit of model and data [i](#)

### 6.1 Protein, DNA and RNA chains [i](#)

Unable to reproduce the depositors R factor - this section is therefore empty.

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

Unable to reproduce the depositors R factor - this section is therefore empty.

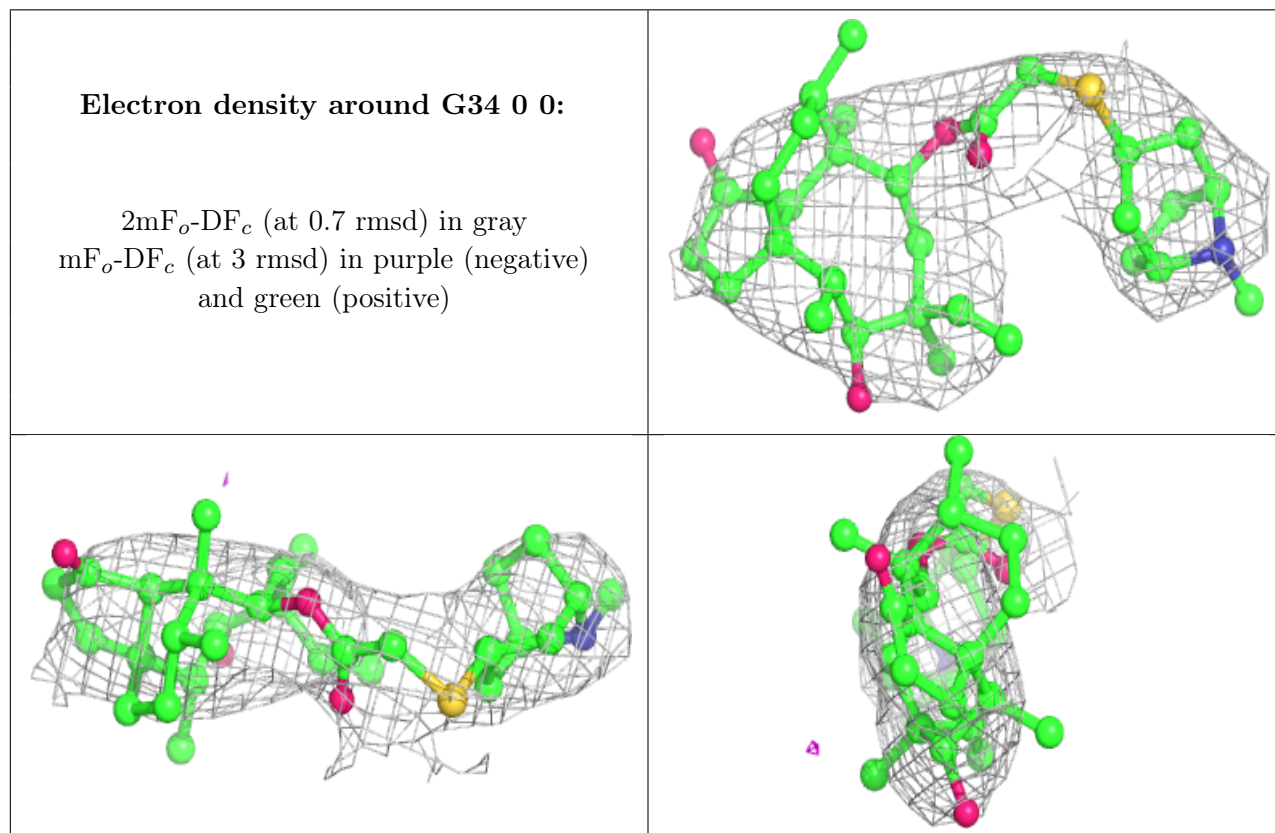
### 6.3 Carbohydrates [i](#)

Unable to reproduce the depositors R factor - this section is therefore empty.

### 6.4 Ligands [i](#)

Unable to reproduce the depositors R factor - this section is therefore empty.

The following is a graphical depiction of the model fit to experimental electron density of all instances of the Ligand of Interest. In addition, ligands with molecular weight > 250 and outliers as shown on the geometry validation Tables will also be included. Each fit is shown from different orientation to approximate a three-dimensional view.



## 6.5 Other polymers

Unable to reproduce the depositors R factor - this section is therefore empty.