



Full wwPDB X-ray Structure Validation Report ⓘ

Mar 26, 2026 – 10:54 PM UTC

PDB ID : 1P9X / pdb_00001p9x
Title : THE CRYSTAL STRUCTURE OF THE 50S LARGE RIBOSOMAL SUB-UNIT FROM DEINOCOCCUS RADIODURANS COMPLEXED WITH TELITHROMYCIN KETOLIDE ANTIBIOTIC
Authors : Berisio, R.; Harms, J.; Schlutzen, F.; Zarivach, R.; Hansen, H.A.; Fucini, P.; Yonath, A.
Deposited on : 2003-05-13
Resolution : 3.40 Å(reported)

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

We welcome your comments at validation@mail.wwpdb.org

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

The types of validation reports are described at

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

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

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

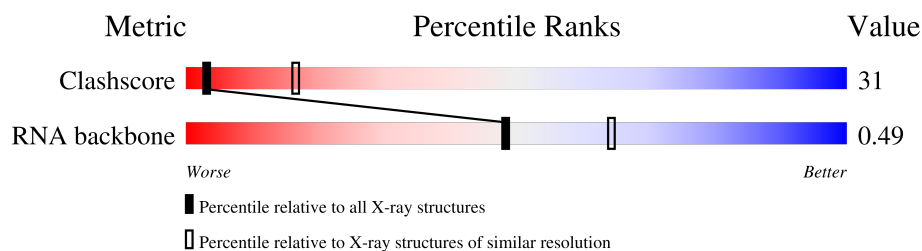
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.40 Å.

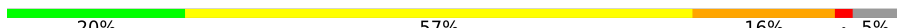
Percentile scores (ranging between 0-100) for global validation metrics of the entry are shown in the following graphic. The table shows the number of entries on which the scores are based.



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
Clashscore	190562	1022 (3.44-3.36)
RNA backbone	3983	1157 (3.80-3.00)

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

Note EDS was not executed.

Mol	Chain	Length	Quality of chain
1	0	2880	 20% 57% 16% • 5%

The following table lists non-polymeric compounds, carbohydrate monomers and non-standard residues in protein, DNA, RNA chains that are outliers for geometric or electron-density-fit criteria:

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
2	TEL	0	2881	X	-	-	-

2 Entry composition [i](#)

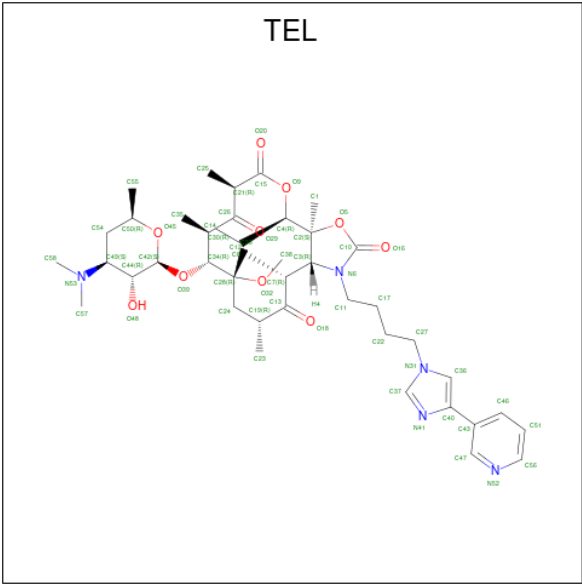
There are 2 unique types of molecules in this entry. The entry contains 58817 atoms, of which 0 are hydrogens and 0 are deuteriums.

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	2738	58759	26211	10836	18975	2737	0	0	0

- Molecule 2 is TELITHROMYCIN (CCD ID: TEL) (formula: C₄₃H₆₅N₅O₁₀).

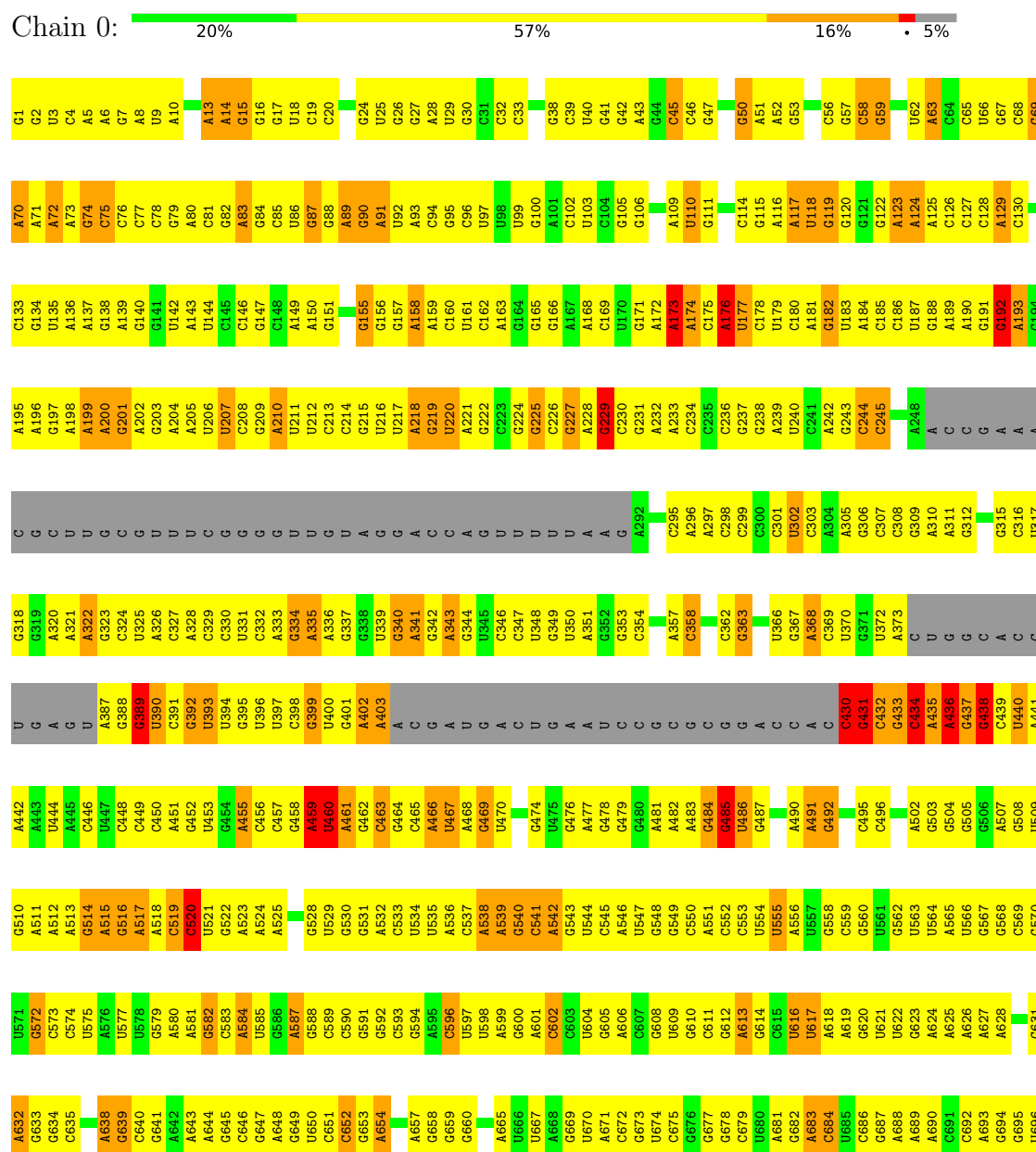


3 Residue-property plots

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

Note EDS was not executed.

• Molecule 1: 23S RIBOSOMAL RNA



C1615	C1616	C1617	C1618	C1619	C1620	C1621	C1622	C1623	C1624	C1625	C1626	C1627	C1628	C1629	C1630	C1631	C1632	C1633	C1634	C1635	C1641	C1642	C1643	C1644	C1645	C1646	C1647	C1648	C1651	C1652	C1653	C1654	C1655	C1656	C1657	C1661	C1662	C1663	C1664	C1665	C1666	C1669	C1670	C1671	C1672	C1673	C1674	C1675	C1676	C1677	C1678	C1679	C1680	C1681	C1682	C1683																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
U1473	U1474	U1475	U1476	U1477	U1478	U1479	U1480	U1481	U1482	U1483	U1484	U1485	U1486	U1487	U1488	U1489	U1490	U1491	U1492	U1493	U1494	U1495	U1496	U1497	U1498	U1499	U1500	U1501	U1502	U1503	U1504	U1505	U1506	U1507	U1508	U1509	U1510	U1511	U1512	U1513	U1514	U1515	U1516	U1517	U1518	U1519	U1520	U1521	U1522	U1523	U1524	U1525	U1526	U1527	U1528	U1529	U1530	U1531	U1532	U1533	U1534	U1535	U1536	U1537	U1538	U1539	U1540	U1541	U1542	U1543	U1544	U1545	U1546	U1547	U1548	U1549	U1550	U1551	U1552	U1553	U1554	U1555	U1556	U1557	U1558	U1559	U1560	U1561	U1562	U1563	U1564	U1565	U1566	U1567	U1568	U1569	U1570	U1571	U1572	U1573	U1574	U1575	U1576	U1577	U1578	U1579	U1582	U1583	U1584	U1585	U1586	U1587	U1588	U1589	U1592	U1593	U1594	U1595	U1596	U1597	U1598	U1603	U1604	U1605	U1606	U1607	U1608	U1609	U1610	U1611	U1612	U1613	U1614	U1615	U1616	U1617	U1618	U1619	U1620	U1621	U1622	U1623	U1624	U1625	U1626	U1627	U1628	U1629	U1630	U1631	U1632	U1633	U1634	U1635	U1636	U1637	U1638	U1639	U1640	U1641	U1642	U1643	U1644	U1645	U1646	U1647	U1648	U1649	U1650	U1651	U1652	U1653	U1654	U1655	U1656	U1657	U1658	U1659	U1660	U1661	U1662	U1663	U1664	U1665	U1666	U1667	U1668	U1669	U1670	U1671	U1672	U1673	U1674	U1675	U1676	U1677	U1678	U1679	U1680	U1681	U1682	U1683	U1684	U1685	U1686	U1687	U1688	U1689	U1690	U1691	U1692	U1693	U1694	U1695	U1696	U1697	U1698	U1699	U1700	U1701	U1702	U1703	U1704	U1705	U1706	U1707	U1708	U1709	U1710	U1711	U1712	U1713	U1714	U1715	U1716	U1717	U1718	U1719	U1720	U1721	U1722	U1723	U1724	U1725	U1726	U1727	U1728	U1729	U1730	U1731	U1732	U1733	U1734	U1735	U1736	U1737	U1738	U1739	U1740	U1741	U1742	U1743	U1744	U1745	U1746	U1747	U1748	U1749	U1750	U1751	U1752	U1753	U1754	U1755	U1756	U1757	U1758	U1759	U1760	U1761	U1762	U1763	U1764	U1765	U1766	U1767	U1768	U1769	U1770	U1771	U1772	U1773	U1774	U1775	U1776	U1777	U1778	U1779	U1780	U1781	U1782	U1783	U1784	U1785	U1786	U1787	U1788	U1789	U1790	U1791	U1792	U1793	U1794	U1795	U1796	U1797	U1798	U1799	U1800	U1801	U1802	U1803	U1804	U1805	U1806	U1807	U1808	U1809	U1810	U1811	U1812	U1813	U1814	U1815	U1816	U1817	U1818	U1819	U1820	U1821	U1822	U1823	U1824	U1825	U1826	U1827	U1828	U1829	U1830	U1831	U1832	U1833	U1834	U1835	U1836	U1837	U1838	U1839	U1840	U1841	U1842	U1843	U1844	U1845	U1846	U1847	U1848	U1849	U1850	U1851	U1852	U1853	U1854	U1855	U1856	U1857	U1858	U1859	U1860	U1861	U1862	U1863	U1864	U1865	U1866	U1867	U1868	U1869	U1870	U1871	U1872	U1873	U1874	U1875	U1876	U1877	U1878	U1879	U1880	U1881	U1882	U1883	U1884	U1885	U1886	U1887	U1888	U1889	U1890	U1891	U1892	U1893	U1894	U1895	U1896	U1897	U1898	U1899	U1900	U1901	U1902	U1903	U1904	U1905	U1906	U1907	U1908	U1909	U1910	U1911	U1912	U1913	U1914	U1915	U1916	U1917	U1918	U1919	U1920	U1921	U1922	U1923	U1924	U1925	U1926	U1927	U1928	U1929	U1930	U1931	U1932	U1933	U1934	U1935	U1936	U1937	U1938	U1939	U1940	U1941	U1942	U1943	U1944	U1945	U1946	U1947	U1948	U1949	U1950	U1951	U1952	U1953	U1954	U1955	U1956	U1957	U1958	U1959	U1960	U1961	U1962	U1963	U1964	U1965	U1966	U1967	U1968	U1969	U1970	U1971	U1972	U1973	U1974	U1975	U1976	U1977	U1978	U1979	U1980	U1981	U1982	U1983	U1984	U1985	U1986	U1987	U1988	U1989	U1990	U1991	U1992	U1993	U1994	U1995	U1996	U1997	U1998	U1999	U2000	U2001	U2002	U2003	U2004	U2005	U2006	U2007	U2008	U2009	U2010	U2011	U2012	U2013	U2014	U2015	U2016	U2017	U2018	U2019	U2020	U2021	U2022	U2023	U2024	U2025	U2026	U2027	U2028	U2029	U2030	U2031	U2032	U2033	U2034	U2035	U2036	U2037	U2038	U2039	U2040	U2041	U2042	U2043	U2044	U2045	U2046	U2047	U2048	U2049	U2050	U2051	U2052	U2053	U2054	U2055	U2056	U2057	U2058	U2059	U2060	U2061	U2062	U2063	U2064	U2065	U2066	U2067	U2068	U2069	U2070	U2071	U2072	U2073	U2074	U2075	U2076	U2077	U2078	U2079	U2080	U2081	U2082	U2083	U2084	U2085	U2086	U2087	U2088	U2089	U2090	U2091	U2092	U2093	U2094	U2095	U2096	U2097	U2098	U2099	U2100	U2101	U2102	U2103	U2104	U2105	U2106	U2107	U2108	U2109	U2110	U2111	U2112	U2113	U2114	U2115	U2116	U2117	U2118	U2119	U2120	U2121	U2122	U2123	U2124	U2125	U2126	U2127	U2128	U2129	U2130	U2131	U2132	U2133	U2134	U2135	U2136	U2137	U2138	U2139	U2140	U2141	U2142	U2143	U2144	U2145	U2146	U2147	U2148	U2149	U2150	U2151	U2152	U2153	U2154	U2155	U2156	U2157	U2158	U2159	U2160	U2161	U2162	U2163	U2164	U2165	U2166	U2167	U2168	U2169	U2170	U2171	U2172	U2173	U2174	U2175	U2176	U2177	U2178	U2179	U2180	U2181	U2182	U2183	U2184	U2185	U2186	U2187	U2188	U2189	U2190	U2191	U2192	U2193	U2194	U2195	U2196	U2197	U2198	U2199	U2200	U2201	U2202	U2203	U2204	U2205	U2206	U2207	U2208	U2209	U2210	U2211	U2212	U2213	U2214	U2215	U2216	U2217	U2218	U2219	U2220	U2221	U2222	U2223	U2224	U2225	U2226	U2227	U2228	U2229	U2230	U2231	U2232	U2233	U2234	U2235	U2236	U2237	U2238	U2239	U2240	U2241	U2242	U2243	U2244	U2245	U2246	U2247	U2248	U2249	U2250	U2251	U2252	U2253	U2254	U2255	U2256	U2257	U2258	U2259	U2260	U2261	U2262	U2263	U2264	U2265	U2266	U2267	U2268	U2269	U2270	U2271	U2272	U2273	U2274	U2275	U2276	U2277	U2278	U2279	U2280	U2281	U2282	U2283	U2284	U2285	U2286	U2287	U2288	U2289	U2290	U2291	U2292	U2293	U2294	U2295	U2296	U2297	U2298	U2299	U2300	U2301	U2302	U2303	U2304	U2305	U2306	U2307	U2308	U2309	U2310	U2311	U2312	U2313	U2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U2872	C2804	G2741	C2878
C2876	G2806	G2742	G2879
A2877	U2807	G2743	U2880
C	U2808	A2744	A2881
U	A2809	A2745	
C	A2810	G2746	A2884
	A2811	C2747	A2885
	A2812	C2748	A2886
	A2813	A2749	G2887
	G2813		G2888
	G2814	C2753	C2889
	C2815	C2754	A2890
	C2816	A2755	C2891
	A2817	A2756	A2892
		G2757	U2893
	G2821	A2758	C2894
	U2822	U2759	C2895
	G2823	G2760	A2896
	C2824	A2761	G2897
	A2825	G2762	G2898
	C2826	U2763	G2899
	G2827	U2764	U2700
	C2828	C2765	A2701
	A2829	U2766	G2702
	U2830	C2767	C2703
	A2831	C2768	U2704
		C2769	A2705
	A2835	A2770	U2706
	U2836	C2771	G2707
	G2837	U2772	U2708
		G2773	C2709
	U2841	U	C2710
	C2842	U	G2711
	A2843	A	G2712
	G2844		A2713
	C2845	U2778	A2714
	G2846	C2779	C2715
	A2847	U2780	G2716
	C2848	G2781	G2717
	C2849	G2782	A2718
	U2850	U2783	U2719
	G2851	A2784	A2720
	G2852	A2785	A2721
	U2853	G2786	C2722
	G2854	A2787	C2723
	C2855	C2788	G2724
	U2856	U2789	C2725
	C2857	C2790	U2726
	A2858	C2791	G2727
		C2792	A2728
	G2862	C2793	A2729
	U2863	G2794	A2730
	C2864	A2795	C2731
	G2865	A2796	C2732
	A2866	G2797	A2733
	G2867	U2798	U2734
	G2868	C2799	C2735
	U2869	C2800	U2736
	C2870	A2801	A2737
	U2871		

4 Data and refinement statistics

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

Property	Value	Source
Space group	I 2 2 2	Depositor
Cell constants a, b, c, α , β , γ	170.00Å 414.50Å 693.00Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	15.00 – 3.40	Depositor
% Data completeness (in resolution range)	(Not available) (15.00-3.40)	Depositor
R_{merge}	0.18	Depositor
R_{sym}	(Not available)	Depositor
Refinement program	CNS	Depositor
R, R_{free}	0.273 , 0.340	Depositor
Estimated twinning fraction	No twinning to report.	Xtriage
Total number of atoms	58817	wwPDB-VP
Average B, all atoms (Å ²)	58.0	wwPDB-VP

5 Model quality [i](#)

5.1 Standard geometry [i](#)

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	0	0.54	2/65792 (0.0%)	0.73	48/102613 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	0	0	28

All (2) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	0	762	A	O3'-P	-6.44	1.51	1.61
1	0	764	A	O5'-C5'	5.38	1.50	1.42

All (48) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	765	C	N1-C1'-C2'	9.61	128.42	114.00
1	0	2044	G	P-O3'-C3'	8.87	133.50	120.20
1	0	765	C	O4'-C4'-C3'	-7.29	98.81	106.10
1	0	1182	U	O4'-C1'-N1	7.20	119.30	108.50
1	0	2001	G	N9-C1'-C2'	-7.19	101.22	112.00
1	0	1223	G	C2'-C3'-O3'	-6.91	103.34	113.70
1	0	1698	C	C2'-C3'-O3'	-6.55	103.88	113.70
1	0	485	G	C2'-C3'-O3'	6.34	119.02	109.50
1	0	434	C	N1-C1'-C2'	6.17	121.26	112.00
1	0	1278	A	C2'-C3'-O3'	6.12	118.68	109.50
1	0	2018	G	C2'-C3'-O3'	6.11	118.66	109.50

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	430	C	C2'-C3'-O3'	-6.07	104.59	113.70
1	0	2758	A	C2'-C3'-O3'	6.01	118.52	109.50
1	0	2404	A	C2'-C3'-O3'	6.01	118.51	109.50
1	0	762	A	O3'-P-O5'	5.96	112.93	104.00
1	0	1777	A	C4'-C3'-O3'	-5.92	104.11	113.00
1	0	2469	G	C2'-C3'-O3'	-5.88	104.88	113.70
1	0	438	G	N9-C1'-C2'	5.80	122.69	114.00
1	0	2324	G	C2'-C3'-O3'	5.79	118.19	109.50
1	0	459	A	N9-C1'-C2'	5.79	120.68	112.00
1	0	1266	G	C2'-C3'-O3'	-5.74	105.09	113.70
1	0	2498	U	C2'-C3'-O3'	-5.73	105.11	113.70
1	0	173	A	C2'-C3'-O3'	5.72	122.28	113.70
1	0	430	C	C5'-C4'-O4'	-5.62	101.37	109.80
1	0	2217	G	C2'-C3'-O3'	-5.61	105.29	113.70
1	0	1618	U	C5'-C4'-O4'	-5.60	101.40	109.80
1	0	2823	G	C4'-C3'-O3'	-5.58	104.64	113.00
1	0	824	U	N1-C1'-C2'	5.55	120.33	112.00
1	0	1651	U	C2'-C3'-O3'	-5.50	105.44	113.70
1	0	192	G	C2'-C3'-O3'	5.42	117.63	109.50
1	0	176	A	C3'-C2'-O2'	5.41	118.81	110.70
1	0	1315	A	C2'-C3'-O3'	-5.39	105.62	113.70
1	0	1337	G	N9-C1'-C2'	5.35	120.02	112.00
1	0	1685	A	C4'-C3'-O3'	-5.29	105.07	113.00
1	0	1811	A	C2'-C3'-O3'	-5.27	105.80	113.70
1	0	2756	A	C2'-C3'-O3'	5.21	117.32	109.50
1	0	460	U	C3'-C2'-O2'	-5.19	106.82	114.60
1	0	2491	C	C2'-C3'-O3'	-5.18	105.93	113.70
1	0	1691	G	C2'-C3'-O3'	-5.14	105.99	113.70
1	0	2015	G	C2'-C3'-O3'	5.14	117.21	109.50
1	0	1150	C	C4'-C3'-O3'	-5.12	105.32	113.00
1	0	1333	G	C2'-C3'-O3'	-5.11	106.04	113.70
1	0	436	A	C4'-C3'-O3'	5.05	116.97	109.40
1	0	1754	G	C2'-C3'-O3'	-5.01	106.18	113.70
1	0	956	A	N9-C1'-C2'	5.01	119.51	112.00
1	0	1249	G	C4'-C3'-O3'	-5.01	105.49	113.00
1	0	1617	G	C3'-C2'-O2'	5.01	118.21	110.70
1	0	2660	C	N1-C1'-C2'	5.01	119.51	112.00

There are no chirality outliers.

All (28) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	0	1036	G	Sidechain
1	0	1475	U	Sidechain
1	0	1619	A	Sidechain
1	0	1632	A	Sidechain
1	0	1774	A	Sidechain
1	0	2051	U	Sidechain
1	0	229	G	Sidechain
1	0	2439	U	Sidechain
1	0	2625	U	Sidechain
1	0	2660	C	Sidechain
1	0	2700	U	Sidechain
1	0	2706	U	Sidechain
1	0	2712	G	Sidechain
1	0	2762	G	Sidechain
1	0	389	G	Sidechain
1	0	431	G	Sidechain
1	0	438	G	Sidechain
1	0	459	A	Sidechain
1	0	520	C	Sidechain
1	0	555	U	Sidechain
1	0	707	U	Sidechain
1	0	788	G	Sidechain
1	0	796	A	Sidechain
1	0	804	C	Sidechain
1	0	814	G	Sidechain
1	0	871	U	Sidechain
1	0	873	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	58759	0	29615	2736	0
2	0	58	0	65	11	0
All	All	58817	0	29680	2737	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 31.

All (2737) 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)
1:0:940:G:H3'	1:0:941:U:H5''	1.24	1.18
1:0:752:G:H5'	1:0:1775:A:H61	1.07	1.13
1:0:1572:C:H2'	1:0:1573:G:H5''	1.21	1.10
1:0:2451:G:H1'	1:0:2457:A:H61	1.16	1.09
1:0:387:A:H5'	1:0:436:A:H62	1.07	1.08
1:0:588:G:H4'	1:0:2001:G:C4'	1.85	1.06
1:0:1656:U:H2'	1:0:1657:A:H5''	1.38	1.05
1:0:2841:U:H1'	1:0:2843:A:H1'	1.34	1.04
1:0:2496:C:H42	1:0:2546:G:H1	1.05	1.02
1:0:436:A:H4'	1:0:437:G:H5''	1.42	1.01
1:0:2198:U:H3'	1:0:2199:C:H5''	1.39	1.01
1:0:2498:U:H5''	1:0:2499:C:OP1	1.59	1.00
1:0:2771:C:H42	1:0:2780:A:N6	1.59	1.00
1:0:588:G:C4'	1:0:2001:G:H4'	1.92	0.99
1:0:1449:C:H2'	1:0:1450:G:H5''	1.44	0.98
1:0:951:G:H2'	1:0:952:A:H5''	1.46	0.98
1:0:321:A:O2'	1:0:322:A:H3'	1.62	0.98
1:0:681:A:H2'	1:0:683:A:H62	1.27	0.98
1:0:1680:U:HO2'	1:0:1681:A:H8	0.97	0.96
1:0:588:G:H4'	1:0:2001:G:H4'	0.98	0.96
1:0:430:C:H4'	1:0:2386:G:N2	1.81	0.95
1:0:1673:C:N4	1:0:1987:G:H1	1.64	0.95
1:0:983:G:OP2	1:0:985:G:H5''	1.65	0.94
1:0:1747:G:H4'	1:0:1749:G:H1'	1.49	0.94
1:0:2660:C:O2'	1:0:2661:G:H5'	1.66	0.94
1:0:681:A:H2'	1:0:683:A:N6	1.81	0.94
1:0:1572:C:C2'	1:0:1573:G:H5''	1.96	0.94
1:0:794:A:H5'	1:0:795:A:H5''	1.48	0.94
1:0:614:G:N2	1:0:634:G:H22	1.65	0.94
1:0:616:U:H2'	1:0:617:U:H5''	1.50	0.93
1:0:317:U:H3	1:0:321:A:H62	1.07	0.93
1:0:1855:G:H4'	1:0:2390:A:H4'	1.51	0.93
1:0:2194:A:H3'	1:0:2195:C:H5''	1.48	0.92
1:0:430:C:H4'	1:0:2386:G:H21	1.35	0.92
1:0:1823:G:H1	1:0:1957:C:H42	1.10	0.92
1:0:1673:C:H42	1:0:1987:G:H1	1.09	0.92
1:0:1294:G:H1	1:0:1302:C:H42	1.09	0.92
1:0:752:G:H5'	1:0:1775:A:N6	1.85	0.92
1:0:2380:U:H2'	1:0:2381:A:H5'	1.51	0.92
1:0:2395:C:H2'	1:0:2396:C:H5''	1.51	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2771:C:H42	1:0:2780:A:H61	0.93	0.91
1:0:614:G:H22	1:0:634:G:N2	1.67	0.91
1:0:1791:C:H2'	1:0:1792:C:H5''	1.50	0.91
1:0:1937:G:H1'	1:0:2530:C:H4'	1.49	0.91
1:0:614:G:H22	1:0:634:G:H22	1.11	0.91
1:0:317:U:H3	1:0:321:A:N6	1.68	0.90
1:0:683:A:H3'	1:0:683:A:OP2	1.71	0.90
1:0:321:A:HO2'	1:0:322:A:H8	0.94	0.90
1:0:2804:G:H2'	1:0:2805:G:H5''	1.53	0.90
1:0:1651:U:H5''	1:0:1652:G:OP2	1.72	0.90
1:0:387:A:C5'	1:0:436:A:H62	1.86	0.89
1:0:2388:G:H2'	1:0:2389:G:O4'	1.73	0.89
1:0:1108:U:H2'	1:0:1109:A:H5'	1.54	0.89
1:0:2119:A:N6	1:0:2138:U:H3	1.71	0.89
1:0:2043:A:H1'	1:0:2481:G:H1'	1.52	0.89
1:0:1656:U:C2'	1:0:1657:A:H5''	2.03	0.88
1:0:1029:C:H2'	1:0:1030:U:H5''	1.55	0.88
1:0:1452:U:H3	1:0:1569:A:H62	1.18	0.88
1:0:2378:G:H1	1:0:2396:C:H42	1.18	0.88
1:0:613:A:H2'	1:0:614:G:H8	1.36	0.88
1:0:2063:A:H61	1:0:2219:U:H3	0.92	0.88
1:0:387:A:H5'	1:0:436:A:N6	1.88	0.87
1:0:990:A:H5'	1:0:991:A:H5''	1.56	0.87
1:0:2043:A:H1'	1:0:2481:G:C1'	2.05	0.86
1:0:2063:A:N6	1:0:2219:U:H3	1.72	0.86
1:0:2532:G:H3'	1:0:2533:U:H5''	1.57	0.86
1:0:27:G:H1'	1:0:523:A:N6	1.91	0.86
1:0:1908:C:H2'	1:0:1909:U:H4'	1.57	0.86
1:0:2311:U:H4'	1:0:2315:A:H61	1.36	0.86
1:0:2841:U:H1'	1:0:2843:A:C1'	2.06	0.86
1:0:804:C:O2	1:0:804:C:H2'	1.76	0.86
1:0:2268:G:H5''	1:0:2363:G:O2'	1.76	0.85
1:0:68:C:H1'	1:0:72:A:H1'	1.59	0.85
1:0:1776:A:H4'	1:0:1965:U:O2'	1.76	0.85
1:0:2410:U:O2	1:0:2412:A:H8	1.58	0.85
1:0:875:G:H2'	1:0:876:A:O4'	1.76	0.85
1:0:2119:A:H61	1:0:2138:U:H3	1.20	0.85
1:0:204:A:N6	1:0:2386:G:H1'	1.91	0.85
1:0:1949:A:H1'	1:0:2572:U:H5'	1.58	0.85
1:0:2469:G:H5''	1:0:2470:U:OP1	1.76	0.85
1:0:1679:U:H2'	1:0:1680:U:H5'	1.58	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1182:U:H2'	1:0:1183:C:H5''	1.58	0.85
1:0:334:G:N3	1:0:344:G:H1'	1.93	0.84
1:0:942:U:H2'	1:0:943:U:O4'	1.76	0.84
1:0:1029:C:N4	1:0:1153:A:H61	1.74	0.84
1:0:200:A:N6	1:0:435:A:H62	1.76	0.84
1:0:362:C:H2'	1:0:363:G:H4'	1.60	0.84
1:0:1916:G:H1	1:0:1950:C:H42	1.25	0.84
1:0:2085:G:H22	1:0:2171:U:H1'	1.42	0.84
1:0:940:G:H3'	1:0:941:U:C5'	2.06	0.84
1:0:1900:U:H4'	1:0:1946:U:H4'	1.58	0.84
1:0:588:G:H2'	1:0:589:C:C6	2.13	0.84
1:0:1582:A:H2'	1:0:1583:A:H5'	1.59	0.83
1:0:846:A:H62	1:0:955:G:N2	1.75	0.83
1:0:2380:U:C2'	1:0:2381:A:H5'	2.09	0.83
1:0:1900:U:H2'	1:0:1901:A:O4'	1.78	0.83
1:0:1791:C:H1'	1:0:1793:A:H5'	1.60	0.82
1:0:2081:U:H2'	1:0:2082:C:H5''	1.60	0.82
1:0:918:A:H3'	1:0:919:U:H5''	1.60	0.82
1:0:1449:C:C2'	1:0:1450:G:H5''	2.09	0.82
1:0:2549:G:H2'	1:0:2550:C:O4'	1.79	0.82
1:0:2824:C:O2	1:0:2824:C:H2'	1.79	0.82
1:0:1634:A:H4'	1:0:1635:G:OP1	1.77	0.81
1:0:1329:U:H5'	1:0:1405:A:H1'	1.61	0.81
1:0:2442:C:H42	1:0:2466:G:H1	1.25	0.81
1:0:114:C:O2'	1:0:124:A:H1'	1.80	0.81
1:0:1039:A:N6	1:0:1136:G:H2'	1.96	0.81
1:0:162:C:H5'	1:0:195:A:H1'	1.62	0.81
1:0:2599:U:H2'	1:0:2600:A:H5''	1.61	0.81
1:0:765:C:O2'	1:0:766:A:OP2	1.97	0.81
1:0:1911:A:H2'	1:0:1912:G:H5'	1.63	0.81
1:0:796:A:H4'	1:0:2568:A:OP1	1.81	0.81
1:0:834:A:H62	1:0:983:G:H21	1.29	0.81
1:0:109:A:H2'	1:0:110:U:H5''	1.63	0.81
1:0:202:A:H2'	1:0:203:G:O4'	1.79	0.81
1:0:204:A:H62	1:0:2386:G:H1'	1.44	0.80
1:0:2680:U:C5'	1:0:2681:A:H5''	2.11	0.80
1:0:490:A:H2'	1:0:491:A:H3'	1.63	0.80
1:0:1001:A:H5''	1:0:1168:G:OP2	1.81	0.80
1:0:2456:U:H1'	1:0:2460:G:H1	1.47	0.80
1:0:431:G:O6	1:0:433:G:N2	2.15	0.80
1:0:613:A:H2'	1:0:614:G:C8	2.16	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1930:C:H42	1:0:1942:G:H1	1.29	0.80
1:0:929:A:H3'	1:0:930:A:H5''	1.64	0.80
1:0:864:C:H1'	1:0:940:G:H22	1.47	0.79
1:0:2266:A:H61	1:0:2323:U:H1'	1.47	0.79
1:0:244:C:H2'	1:0:245:C:H5''	1.64	0.79
1:0:2436:U:H2'	1:0:2437:G:O4'	1.82	0.79
1:0:2771:C:N4	1:0:2780:A:H61	1.77	0.79
1:0:689:A:H8	1:0:2052:G:H21	1.31	0.79
1:0:2382:C:H42	1:0:2393:G:H1	1.28	0.79
1:0:2418:A:H5''	1:0:2419:C:OP1	1.83	0.79
1:0:759:C:O2	1:0:2590:U:H4'	1.83	0.79
1:0:611:C:O2'	1:0:614:G:H5''	1.83	0.79
1:0:490:A:O2'	1:0:491:A:H5'	1.82	0.78
1:0:2804:G:C2'	1:0:2805:G:H5''	2.13	0.78
1:0:1860:A:H2'	1:0:1861:G:H5'	1.64	0.78
1:0:2378:G:H1	1:0:2396:C:N4	1.82	0.78
1:0:2451:G:H1'	1:0:2457:A:N6	1.97	0.78
1:0:1811:A:H5''	1:0:1812:U:OP1	1.83	0.78
1:0:653:G:H2'	1:0:654:A:H4'	1.64	0.77
1:0:109:A:C3'	1:0:110:U:H5''	2.13	0.77
1:0:165:G:H2'	1:0:166:G:O4'	1.85	0.77
1:0:587:A:H2'	1:0:588:G:H5''	1.67	0.77
1:0:27:G:H1'	1:0:523:A:H62	1.49	0.77
1:0:2329:C:H2'	1:0:2330:G:O4'	1.84	0.77
1:0:38:G:H1	1:0:453:U:H3	1.31	0.77
1:0:393:U:H2'	1:0:394:U:O4'	1.84	0.77
1:0:1139:A:H1'	1:0:2495:G:O2'	1.84	0.77
1:0:192:G:H1'	1:0:193:A:H4'	1.66	0.77
1:0:396:U:H2'	1:0:398:C:N4	1.99	0.77
1:0:681:A:C2'	1:0:683:A:H62	1.97	0.77
1:0:1706:A:N7	1:0:1717:A:N1	2.32	0.77
1:0:1955:G:C2'	1:0:1956:G:H5'	2.15	0.77
1:0:243:G:C6	1:0:244:C:H1'	2.19	0.77
1:0:1683:G:H2'	1:0:1684:G:O4'	1.84	0.77
1:0:2034:A:C5'	1:0:2557:G:H5''	2.15	0.77
1:0:460:U:N3	1:0:592:G:H1'	2.00	0.77
1:0:552:C:H2'	1:0:553:C:H5'	1.67	0.76
1:0:2669:C:O2	1:0:2669:C:H2'	1.83	0.76
1:0:926:C:H2'	1:0:927:C:H5'	1.67	0.76
1:0:1823:G:H1	1:0:1957:C:N4	1.83	0.76
1:0:1856:U:H5'	1:0:2389:G:O2'	1.85	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:225:G:O5'	1:0:226:C:H5'	1.85	0.76
1:0:1528:C:H3'	1:0:1529:C:H5''	1.65	0.76
1:0:2599:U:C2'	1:0:2600:A:H5''	2.15	0.76
1:0:574:C:H4'	1:0:1266:G:O6	1.85	0.76
1:0:1955:G:O2'	1:0:1956:G:H5'	1.84	0.76
1:0:2797:G:H2'	1:0:2798:A:H5''	1.68	0.76
1:0:2228:U:H4'	1:0:2254:C:H5	1.51	0.76
1:0:2476:A:O2'	1:0:2477:C:H5'	1.86	0.76
1:0:2812:A:H2'	1:0:2813:G:C8	2.20	0.76
1:0:1294:G:H1	1:0:1302:C:N4	1.83	0.76
1:0:168:A:H2'	1:0:169:C:C6	2.20	0.76
1:0:210:A:H61	1:0:442:A:H61	1.34	0.76
1:0:1073:G:H2'	1:0:1074:G:C4'	2.15	0.76
1:0:1302:C:O2'	1:0:1343:C:H4'	1.86	0.76
1:0:2266:A:N6	1:0:2323:U:H1'	2.01	0.76
1:0:951:G:C2'	1:0:952:A:H5''	2.15	0.75
1:0:2475:C:H2'	1:0:2476:A:O4'	1.86	0.75
1:0:2672:U:H2'	1:0:2673:G:H8	1.50	0.75
1:0:1921:A:H2'	1:0:1922:U:H5''	1.66	0.75
1:0:460:U:C4	1:0:592:G:H1'	2.21	0.75
1:0:1998:A:H2'	1:0:1999:U:H5'	1.67	0.75
1:0:2377:U:H2'	1:0:2378:G:H8	1.50	0.75
1:0:437:G:H2'	1:0:438:G:H4'	1.68	0.75
1:0:760:U:O2	1:0:1997:A:H1'	1.85	0.75
1:0:128:C:H2'	1:0:129:A:H5''	1.67	0.75
1:0:328:A:O2'	1:0:329:C:H5'	1.87	0.75
1:0:940:G:C3'	1:0:941:U:H5''	2.13	0.75
1:0:1778:U:H5'	1:0:2568:A:O2'	1.86	0.75
1:0:2310:G:H2'	1:0:2311:U:O4'	1.86	0.75
1:0:468:A:H1'	1:0:470:U:C2	2.22	0.75
1:0:918:A:C3'	1:0:919:U:H5''	2.16	0.75
1:0:596:C:H1'	1:0:684:C:O4'	1.86	0.75
1:0:109:A:C2'	1:0:110:U:H5''	2.17	0.75
1:0:687:G:O2'	1:0:688:A:H5'	1.87	0.75
1:0:400:U:H4'	1:0:401:G:C8	2.22	0.74
1:0:777:A:H62	1:0:1767:G:H1'	1.52	0.74
1:0:826:U:O2'	1:0:1238:A:H1'	1.87	0.74
1:0:700:C:H1'	1:0:801:A:H5'	1.69	0.74
1:0:1528:C:C3'	1:0:1529:C:H5''	2.17	0.74
1:0:1529:C:H2'	1:0:1530:U:O4'	1.86	0.74
1:0:929:A:N7	1:0:2247:A:N1	2.36	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:964:A:H2'	1:0:965:G:H8	1.52	0.74
1:0:1066:G:H3'	1:0:1067:G:H5''	1.68	0.74
1:0:2194:A:C3'	1:0:2195:C:H5''	2.17	0.74
1:0:2395:C:C2'	1:0:2396:C:H5''	2.17	0.74
1:0:1088:A:H2'	1:0:1089:C:O4'	1.87	0.74
1:0:514:G:N3	1:0:514:G:H2'	2.01	0.74
1:0:987:G:H2'	1:0:988:G:H8	1.50	0.74
1:0:2377:U:H2'	1:0:2378:G:C8	2.23	0.74
1:0:633:G:H2'	1:0:634:G:C8	2.23	0.73
1:0:2483:U:H5'	1:0:2484:G:OP2	1.89	0.73
1:0:2686:C:H2'	1:0:2687:G:C8	2.24	0.73
1:0:1043:A:H2	1:0:1133:G:H22	1.37	0.73
1:0:2788:C:O2'	1:0:2789:U:H5'	1.87	0.73
1:0:588:G:O2'	1:0:2001:G:O2'	2.06	0.73
1:0:339:U:O2	1:0:339:U:H2'	1.88	0.73
1:0:1299:A:H2'	1:0:1301:U:OP2	1.88	0.73
1:0:840:U:H4'	1:0:841:G:C2	2.24	0.73
1:0:942:U:H2'	1:0:943:U:C4'	2.18	0.73
1:0:1923:U:H5'	1:0:1924:C:OP1	1.89	0.73
1:0:542:A:H2'	1:0:543:G:H5'	1.69	0.72
1:0:1149:G:H22	1:0:1154:A:C1'	2.01	0.72
1:0:214:C:H2'	1:0:215:G:H8	1.54	0.72
1:0:2811:G:H2'	1:0:2812:A:C8	2.24	0.72
1:0:485:G:O2'	1:0:486:U:OP1	2.06	0.72
1:0:1326:U:O2	1:0:1326:U:H2'	1.89	0.72
1:0:1337:G:H1'	1:0:1632:A:N6	2.04	0.72
1:0:1373:G:H2'	1:0:1374:G:H5'	1.71	0.72
1:0:311:A:H1'	1:0:330:C:H1'	1.70	0.72
1:0:1795:C:H2'	1:0:1796:A:H8	1.53	0.72
1:0:717:G:H1'	1:0:740:A:H61	1.53	0.72
1:0:825:C:H1'	1:0:1263:G:C2	2.25	0.72
1:0:2680:U:H5'	1:0:2681:A:H5''	1.72	0.72
1:0:482:A:C2'	1:0:483:A:H5'	2.20	0.72
1:0:816:U:H2'	1:0:817:A:H5'	1.70	0.72
1:0:930:A:OP1	1:0:930:A:H4'	1.90	0.72
1:0:2041:A:H61	2:0:2881:TEL:C58	2.02	0.72
1:0:1979:C:H2'	1:0:1980:A:O4'	1.88	0.72
1:0:369:C:H2'	1:0:370:U:O4'	1.90	0.72
1:0:1578:U:H2'	1:0:1579:G:C8	2.25	0.72
1:0:1918:G:H1'	1:0:1947:G:N2	2.05	0.72
1:0:1582:A:C2'	1:0:1583:A:H5'	2.19	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1016:C:H1'	1:0:1154:A:N3	2.05	0.71
1:0:2532:G:C3'	1:0:2533:U:H5''	2.20	0.71
1:0:2700:U:H3	1:0:2848:A:H62	1.38	0.71
1:0:1149:G:H22	1:0:1154:A:H1'	1.53	0.71
1:0:324:C:H2'	1:0:325:U:O4'	1.90	0.71
1:0:541:C:H42	1:0:572:G:H4'	1.56	0.71
1:0:1055:A:N1	1:0:1122:A:H5'	2.06	0.71
1:0:2814:G:H2'	1:0:2815:C:C6	2.26	0.71
1:0:1263:G:O2'	1:0:1264:C:OP1	2.07	0.71
1:0:1795:C:H2'	1:0:1796:A:C8	2.25	0.71
1:0:2593:A:O2'	1:0:2594:U:H5'	1.90	0.71
1:0:197:G:H1'	1:0:211:U:H1'	1.71	0.71
1:0:1982:C:H4'	1:0:2703:C:O2	1.90	0.71
1:0:2299:A:H5'	1:0:2300:G:C4	2.26	0.71
1:0:766:A:H2'	1:0:767:G:C8	2.26	0.71
1:0:864:C:H1'	1:0:940:G:N2	2.04	0.71
1:0:1719:G:H2'	1:0:1720:G:H8	1.56	0.71
1:0:2660:C:O2	1:0:2660:C:H2'	1.89	0.71
1:0:430:C:H6	1:0:430:C:H5''	1.56	0.71
1:0:616:U:C2'	1:0:617:U:H5''	2.20	0.71
1:0:984:A:H1'	1:0:1202:U:C4	2.25	0.71
1:0:1252:C:O2'	1:0:1253:C:H5''	1.91	0.71
1:0:1345:G:H5''	1:0:1346:C:OP2	1.90	0.71
1:0:1712:G:H3'	1:0:1712:G:N3	2.05	0.71
1:0:88:G:H3'	1:0:89:A:H5''	1.73	0.71
1:0:1177:U:H2'	1:0:1178:C:C6	2.25	0.71
1:0:1729:C:H2'	1:0:1730:G:C8	2.26	0.71
1:0:2404:A:H5''	1:0:2405:A:H5''	1.73	0.71
1:0:2599:U:C3'	1:0:2600:A:H5''	2.21	0.71
1:0:2727:G:C2'	1:0:2728:A:H5''	2.21	0.71
1:0:1007:A:H2'	1:0:1008:G:H8	1.55	0.70
1:0:484:G:O2'	1:0:485:G:H5'	1.91	0.70
1:0:1073:G:H2'	1:0:1074:G:H4'	1.71	0.70
1:0:1252:C:C2'	1:0:1253:C:H5''	2.20	0.70
1:0:2198:U:C3'	1:0:2199:C:H5''	2.19	0.70
1:0:200:A:N6	1:0:435:A:N6	2.39	0.70
1:0:1466:C:H2'	1:0:1467:U:O4'	1.92	0.70
1:0:700:C:O2	1:0:800:U:O3'	2.09	0.70
1:0:1541:G:H1	1:0:1562:G:H1	1.38	0.70
1:0:1681:A:C2	1:0:2706:U:H1'	2.26	0.70
1:0:2447:G:H1	1:0:2460:G:H2'	1.56	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:588:G:H2'	1:0:589:C:C5	2.26	0.70
1:0:2713:A:H2'	1:0:2714:A:C8	2.26	0.70
1:0:2812:A:H2'	1:0:2813:G:H8	1.56	0.70
1:0:540:G:C6	1:0:2005:U:H5''	2.27	0.70
1:0:826:U:H2'	1:0:827:C:C6	2.26	0.70
1:0:1154:A:O2'	1:0:1155:G:OP1	2.08	0.70
1:0:2686:C:H2'	1:0:2687:G:H8	1.55	0.70
1:0:16:G:O2'	1:0:17:G:H5'	1.92	0.70
1:0:1680:U:H1'	1:0:2665:G:O2'	1.91	0.70
1:0:218:A:N1	1:0:232:A:H5''	2.07	0.70
1:0:841:G:H2'	1:0:842:A:C8	2.26	0.70
1:0:1356:G:H5''	1:0:1614:C:OP2	1.92	0.70
1:0:2565:C:H2'	1:0:2566:A:C8	2.27	0.70
1:0:1791:C:O2'	1:0:1793:A:H5'	1.92	0.70
1:0:296:A:H2'	1:0:297:A:H8	1.57	0.69
1:0:1026:U:H2'	1:0:1027:C:C6	2.26	0.69
1:0:2754:C:H2'	1:0:2755:A:H8	1.57	0.69
1:0:742:G:H5'	1:0:743:A:H5''	1.73	0.69
1:0:343:A:N6	1:0:346:C:C5	2.60	0.69
1:0:1912:G:H2'	1:0:1912:G:N3	2.06	0.69
1:0:1918:G:H2'	1:0:1945:C:H42	1.57	0.69
1:0:1655:C:OP1	1:0:2690:A:H5'	1.90	0.69
1:0:52:A:H62	1:0:115:G:H21	1.39	0.69
1:0:765:C:O2'	1:0:766:A:P	2.50	0.69
1:0:937:C:H2'	1:0:938:G:O4'	1.92	0.69
1:0:651:C:C2'	1:0:652:C:H5''	2.22	0.69
1:0:677:G:H1'	1:0:951:G:H5''	1.75	0.69
1:0:871:U:O2	1:0:2247:A:H2'	1.93	0.69
1:0:1195:U:H2'	1:0:1196:G:C8	2.28	0.69
1:0:2692:A:H2'	1:0:2692:A:N3	2.07	0.69
1:0:990:A:C5'	1:0:991:A:H5''	2.22	0.69
1:0:1147:G:H2'	1:0:1148:G:H8	1.57	0.69
1:0:2137:G:H2'	1:0:2138:U:C6	2.28	0.69
1:0:2721:A:H61	1:0:2743:G:H1'	1.57	0.69
1:0:181:A:H5''	1:0:182:G:OP1	1.93	0.69
1:0:482:A:H2'	1:0:483:A:H5'	1.73	0.69
1:0:1429:A:H1'	1:0:1603:A:C6	2.28	0.69
1:0:2447:G:O2'	1:0:2448:A:H5''	1.93	0.69
1:0:119:G:H4'	1:0:142:U:H2'	1.75	0.69
1:0:192:G:C1'	1:0:193:A:H4'	2.23	0.69
1:0:474:G:N2	1:0:476:G:H3'	2.07	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:590:C:H2'	1:0:591:G:C8	2.28	0.69
1:0:658:G:H2'	1:0:659:G:H8	1.57	0.69
1:0:1854:G:H2'	1:0:1855:G:H8	1.57	0.69
1:0:1978:U:H3'	1:0:1979:C:H5''	1.74	0.69
1:0:431:G:H2'	1:0:432:C:O5'	1.93	0.68
1:0:644:A:H2'	1:0:645:G:H5'	1.73	0.68
1:0:2059:U:H5''	1:0:2217:G:H1	1.58	0.68
1:0:2404:A:H5'	1:0:2406:C:O4'	1.94	0.68
1:0:2708:U:H2'	1:0:2709:C:C6	2.28	0.68
1:0:218:A:H4'	1:0:219:G:O5'	1.94	0.68
1:0:56:C:H2'	1:0:57:G:O4'	1.93	0.68
1:0:598:U:H2'	1:0:599:A:C8	2.29	0.68
1:0:818:G:N1	1:0:2050:G:O2'	2.27	0.68
1:0:1032:A:H3'	1:0:1033:G:H5''	1.75	0.68
1:0:1234:C:O2'	1:0:1235:C:H5'	1.92	0.68
1:0:552:C:C2'	1:0:553:C:H5'	2.23	0.68
1:0:952:A:H2'	1:0:953:G:C8	2.28	0.68
1:0:2238:G:H4'	1:0:2407:G:OP2	1.93	0.68
1:0:2240:C:H1'	1:0:2367:A:H1'	1.75	0.68
1:0:2652:G:H2'	1:0:2653:A:H8	1.58	0.68
1:0:244:C:C2'	1:0:245:C:H5''	2.23	0.68
1:0:1315:A:H5''	1:0:1316:G:OP2	1.94	0.68
1:0:2266:A:HO2'	1:0:2267:A:H8	1.42	0.68
1:0:81:C:H5'	1:0:306:G:O2'	1.94	0.68
1:0:688:A:H1'	1:0:2422:C:O2'	1.94	0.68
1:0:716:U:H2'	1:0:717:G:O4'	1.93	0.68
1:0:1337:G:H4'	1:0:1632:A:H62	1.59	0.68
1:0:1608:U:H2'	1:0:1609:G:H8	1.58	0.68
1:0:1626:A:H5''	1:0:1627:C:OP2	1.94	0.68
1:0:1706:A:H2'	1:0:1707:A:O4'	1.94	0.68
1:0:2311:U:H4'	1:0:2315:A:N6	2.09	0.68
1:0:1036:G:H1'	1:0:1145:C:H4'	1.74	0.68
1:0:1368:G:H2'	1:0:1369:G:H8	1.57	0.68
1:0:2081:U:C2'	1:0:2082:C:H5''	2.24	0.68
1:0:2309:G:H1	1:0:2364:C:N4	1.89	0.68
1:0:2702:G:H2'	1:0:2703:C:C6	2.28	0.68
1:0:309:G:H21	1:0:351:A:H62	1.41	0.68
1:0:933:G:H2'	1:0:934:G:H8	1.58	0.68
1:0:1922:U:O2	1:0:2571:G:H4'	1.94	0.68
1:0:718:A:H62	1:0:739:G:H1'	1.58	0.68
1:0:1655:C:H5''	1:0:2689:C:O2'	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:366:U:H2'	1:0:367:G:H8	1.58	0.67
1:0:1514:C:H5'	1:0:1593:C:H5''	1.75	0.67
1:0:1766:U:H2'	1:0:1767:G:O4'	1.94	0.67
1:0:591:G:H2'	1:0:592:G:C8	2.28	0.67
1:0:699:G:H5'	1:0:700:C:OP2	1.94	0.67
1:0:1549:C:H2'	1:0:1550:C:O4'	1.93	0.67
1:0:1937:G:H1'	1:0:2530:C:C4'	2.22	0.67
1:0:15:G:H22	1:0:536:A:H2	1.42	0.67
1:0:1161:U:H2'	1:0:1162:A:H8	1.60	0.67
1:0:1202:U:H2'	1:0:1203:A:H8	1.60	0.67
1:0:1582:A:H62	1:0:1584:G:H21	1.40	0.67
1:0:1777:A:O2'	1:0:1778:U:OP1	2.12	0.67
1:0:1859:A:H2'	1:0:1860:A:H8	1.60	0.67
1:0:2041:A:H61	2:0:2881:TEL:H582	1.58	0.67
1:0:2736:U:O2'	1:0:2737:A:H5'	1.95	0.67
1:0:594:G:C6	1:0:1264:C:N4	2.55	0.67
1:0:109:A:H3'	1:0:110:U:H5''	1.76	0.67
1:0:368:A:H2'	1:0:369:C:O4'	1.94	0.67
1:0:389:G:C8	1:0:389:G:H3'	2.30	0.67
1:0:815:A:O2'	1:0:816:U:H5'	1.95	0.67
1:0:831:G:H21	1:0:1203:A:H62	1.41	0.67
1:0:1222:G:H1'	1:0:1251:G:N2	2.09	0.67
1:0:2033:C:H2'	1:0:2034:A:O4'	1.94	0.67
1:0:1021:A:H1'	1:0:1164:C:H1'	1.77	0.67
1:0:1029:C:C2'	1:0:1030:U:H5''	2.24	0.67
1:0:1930:C:N4	1:0:1942:G:H1	1.92	0.67
1:0:2410:U:O2	1:0:2412:A:C8	2.44	0.67
1:0:2432:A:H4'	1:0:2551:A:O2'	1.95	0.67
1:0:1141:U:O2'	1:0:1142:G:OP1	2.12	0.67
1:0:1247:U:H2'	1:0:1248:G:O4'	1.95	0.67
1:0:1883:A:N3	1:0:1953:A:N7	2.43	0.67
1:0:2369:U:H2'	1:0:2370:G:H8	1.59	0.67
1:0:38:G:H2'	1:0:39:C:C6	2.30	0.66
1:0:73:A:N3	1:0:73:A:H2'	2.10	0.66
1:0:139:A:H2'	1:0:140:G:H8	1.58	0.66
1:0:1288:A:H2'	1:0:1289:A:O4'	1.95	0.66
1:0:1911:A:C2'	1:0:1912:G:H5'	2.25	0.66
1:0:2245:A:O2'	1:0:2246:A:OP2	2.11	0.66
1:0:1804:U:H2'	1:0:1805:G:H8	1.60	0.66
1:0:741:G:H5'	1:0:742:G:OP2	1.94	0.66
1:0:1182:U:C2'	1:0:1183:C:H5''	2.25	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1223:G:H5'	1:0:1225:G:O4'	1.95	0.66
1:0:2396:C:H2'	1:0:2397:A:H5'	1.77	0.66
1:0:2521:A:H5'	1:0:2522:G:OP1	1.95	0.66
1:0:2675:U:H2'	1:0:2676:G:C8	2.29	0.66
1:0:1071:U:H2'	1:0:1072:U:H5'	1.77	0.66
1:0:541:C:H42	1:0:572:G:C4'	2.08	0.66
1:0:1634:A:O2'	1:0:1635:G:H5'	1.95	0.66
1:0:1679:U:C2'	1:0:1680:U:H5'	2.26	0.66
1:0:1958:G:H2'	1:0:1959:U:C6	2.31	0.66
1:0:2429:A:H5''	1:0:2476:A:H62	1.60	0.66
1:0:865:A:H2'	1:0:866:U:C6	2.30	0.66
1:0:2274:C:H2'	1:0:2275:U:H5'	1.77	0.66
1:0:2816:C:H1'	1:0:2852:G:H22	1.59	0.66
1:0:336:A:H2'	1:0:337:G:C8	2.31	0.66
1:0:340:G:H5'	1:0:341:A:OP1	1.95	0.66
1:0:589:C:H5'	1:0:2001:G:O2'	1.96	0.66
1:0:1083:C:N3	1:0:1103:C:C5	2.63	0.66
1:0:2402:U:H4'	1:0:2404:A:N7	2.10	0.66
1:0:762:A:O2'	1:0:1633:C:H1'	1.95	0.66
1:0:1561:A:H2'	1:0:1562:G:O4'	1.96	0.66
1:0:2804:G:C3'	1:0:2805:G:H5''	2.25	0.66
1:0:772:G:H2'	1:0:773:G:H8	1.61	0.65
1:0:681:A:C2'	1:0:683:A:N6	2.55	0.65
1:0:1218:C:H2'	1:0:1219:C:C6	2.32	0.65
1:0:2048:C:H2'	1:0:2049:C:H6	1.61	0.65
1:0:2483:U:H3'	1:0:2484:G:H5''	1.77	0.65
1:0:2782:G:H2'	1:0:2783:U:H5'	1.77	0.65
1:0:78:C:H2'	1:0:79:G:H8	1.61	0.65
1:0:542:A:C2'	1:0:543:G:H5'	2.25	0.65
1:0:759:C:H5'	1:0:761:G:H1'	1.78	0.65
1:0:1198:C:OP1	1:0:1199:U:H1'	1.96	0.65
1:0:1435:G:H2'	1:0:1436:G:H8	1.59	0.65
1:0:1458:A:H3'	1:0:1459:U:C5'	2.25	0.65
1:0:1625:A:H2'	1:0:1625:A:N3	2.11	0.65
1:0:389:G:H3'	1:0:389:G:H8	1.59	0.65
1:0:1572:C:H2'	1:0:1573:G:C5'	2.14	0.65
1:0:1662:G:H5''	1:0:1663:C:H5'	1.77	0.65
1:0:2526:U:H2'	1:0:2527:G:C8	2.31	0.65
1:0:2778:U:H2'	1:0:2779:C:C6	2.30	0.65
1:0:430:C:C4'	1:0:2386:G:N2	2.56	0.65
1:0:728:G:H2'	1:0:729:A:O4'	1.96	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:843:G:N3	1:0:2427:A:N6	2.44	0.65
1:0:2034:A:H5'	1:0:2557:G:H5''	1.78	0.65
1:0:983:G:H3'	1:0:984:A:H5''	1.79	0.65
1:0:1407:G:H2'	1:0:1408:A:O4'	1.96	0.65
1:0:2324:G:O2'	1:0:2325:A:OP2	2.12	0.65
1:0:2398:U:H2'	1:0:2399:C:C6	2.32	0.65
1:0:133:C:H2'	1:0:134:G:O4'	1.96	0.65
1:0:1552:C:H2'	1:0:1553:G:H5'	1.79	0.65
1:0:2651:U:O2'	1:0:2652:G:H5'	1.96	0.65
1:0:457:C:H2'	1:0:458:G:O4'	1.96	0.65
1:0:2034:A:H5''	1:0:2557:G:H5''	1.78	0.65
1:0:2312:A:H1'	1:0:2314:A:C5	2.32	0.65
1:0:534:U:O2'	1:0:535:U:H5'	1.97	0.65
1:0:1358:C:H2'	1:0:1359:G:H5'	1.79	0.65
1:0:2020:G:H2'	1:0:2021:G:C8	2.31	0.65
1:0:2334:C:C3'	1:0:2335:U:H5''	2.27	0.65
1:0:1353:A:H2'	1:0:1353:A:N3	2.11	0.65
1:0:1807:A:H1'	1:0:1809:G:C8	2.32	0.65
1:0:2824:C:H4'	1:0:2825:A:H5'	1.79	0.65
1:0:175:C:H1'	1:0:2413:A:H61	1.62	0.64
1:0:430:C:H6	1:0:430:C:C5'	2.09	0.64
1:0:984:A:H1'	1:0:1202:U:C5	2.32	0.64
1:0:1086:C:H2'	1:0:1087:C:H5''	1.78	0.64
1:0:1230:C:H2'	1:0:1231:A:H8	1.62	0.64
1:0:1681:A:H61	1:0:1979:C:N4	1.96	0.64
1:0:1725:C:N4	1:0:1741:G:H1	1.95	0.64
1:0:874:A:H2'	1:0:875:G:O4'	1.97	0.64
1:0:1058:G:H2'	1:0:1121:G:H1	1.63	0.64
1:0:2261:G:H4'	1:0:2262:C:OP2	1.95	0.64
1:0:540:G:O6	1:0:2006:G:OP1	2.16	0.64
1:0:587:A:C2'	1:0:588:G:H5''	2.27	0.64
1:0:789:G:H1'	1:0:806:A:C6	2.33	0.64
1:0:813:A:H2'	1:0:813:A:N3	2.12	0.64
1:0:1078:A:H2'	1:0:1079:G:H8	1.62	0.64
1:0:1791:C:C2'	1:0:1792:C:H5''	2.26	0.64
1:0:1223:G:N3	1:0:1225:G:N3	2.46	0.64
1:0:1303:U:H2'	1:0:1304:U:C6	2.32	0.64
1:0:1764:A:N7	1:0:1821:A:H1'	2.12	0.64
1:0:1955:G:H2'	1:0:1956:G:H8	1.62	0.64
1:0:2560:G:H3'	1:0:2560:G:N3	2.12	0.64
1:0:2633:A:O2'	1:0:2634:G:H4'	1.98	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2091:C:H2'	1:0:2092:U:O4'	1.97	0.64
1:0:2389:G:H2'	1:0:2390:A:C8	2.33	0.64
1:0:2671:C:H2'	1:0:2672:U:C6	2.32	0.64
1:0:1937:G:N3	1:0:2530:C:H5''	2.13	0.64
1:0:1948:C:OP2	1:0:1949:A:H3'	1.97	0.64
1:0:781:G:N2	1:0:1392:U:H1'	2.13	0.64
1:0:2713:A:H2'	1:0:2714:A:H8	1.61	0.64
1:0:765:C:HO2'	1:0:766:A:P	2.20	0.64
1:0:1299:A:O2'	1:0:1300:A:OP1	2.15	0.64
1:0:2096:U:H3'	1:0:2097:A:H5''	1.80	0.64
1:0:367:G:C3'	1:0:368:A:H5''	2.28	0.63
1:0:952:A:O2'	1:0:1204:G:H4'	1.99	0.63
1:0:1437:A:H2'	1:0:1438:G:H8	1.62	0.63
1:0:873:U:H3	1:0:930:A:N6	1.96	0.63
1:0:1332:G:N1	1:0:1333:G:N2	2.46	0.63
1:0:1337:G:C4'	1:0:1632:A:H62	2.12	0.63
1:0:651:C:H2'	1:0:652:C:H5''	1.78	0.63
1:0:1225:G:H2'	1:0:1249:G:N2	2.13	0.63
1:0:2191:A:H2'	1:0:2192:U:OP1	1.99	0.63
1:0:2274:C:H2'	1:0:2275:U:C5'	2.28	0.63
1:0:1886:G:H2'	1:0:1887:G:H8	1.63	0.63
1:0:2334:C:H2'	1:0:2335:U:H5''	1.81	0.63
1:0:2549:G:O2'	1:0:2550:C:H5'	1.98	0.63
1:0:1141:U:O2	1:0:2008:C:H5''	1.99	0.63
1:0:1451:C:H2'	1:0:1452:U:H6	1.62	0.63
1:0:2382:C:N4	1:0:2393:G:H1	1.95	0.63
1:0:2517:C:H2'	1:0:2518:C:C6	2.34	0.63
1:0:1242:A:O2'	1:0:1243:G:H5'	1.99	0.63
1:0:1345:G:C5	1:0:1625:A:N6	2.66	0.63
1:0:2299:A:H5'	1:0:2300:G:C5	2.34	0.63
1:0:68:C:O2	1:0:68:C:H2'	1.99	0.63
1:0:1588:A:H2'	1:0:1589:G:H8	1.64	0.63
1:0:2426:G:H1'	1:0:2480:C:C5	2.34	0.63
1:0:2428:U:H2'	1:0:2428:U:O2	1.98	0.63
1:0:114:C:HO2'	1:0:124:A:H1'	1.62	0.63
1:0:321:A:O2'	1:0:322:A:H8	1.74	0.63
1:0:612:G:O3'	1:0:613:A:H4'	1.99	0.63
1:0:2495:G:H2'	1:0:2496:C:O4'	1.98	0.63
1:0:1161:U:H2'	1:0:1162:A:C8	2.34	0.63
1:0:1679:U:O2	1:0:2666:U:H5''	1.99	0.63
1:0:1982:C:H5''	1:0:2703:C:O2'	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2043:A:O2'	1:0:2481:G:O4'	2.17	0.63
1:0:2384:G:H5''	1:0:2385:U:H5''	1.79	0.63
1:0:1380:C:H2'	1:0:1381:G:H5'	1.80	0.62
1:0:1725:C:H42	1:0:1741:G:H1	1.47	0.62
1:0:1791:C:H1'	1:0:1793:A:C5'	2.29	0.62
1:0:2261:G:H5''	1:0:2262:C:O5'	1.98	0.62
1:0:2687:G:O2'	1:0:2688:G:H5'	1.99	0.62
1:0:550:C:H2'	1:0:551:A:C8	2.34	0.62
1:0:1259:A:O2'	1:0:1260:A:H5'	1.99	0.62
1:0:2380:U:H2'	1:0:2381:A:C5'	2.28	0.62
1:0:7:G:H2'	1:0:8:A:C8	2.34	0.62
1:0:200:A:H62	1:0:435:A:H62	1.47	0.62
1:0:323:G:H2'	1:0:324:C:C6	2.34	0.62
1:0:2753:C:H2'	1:0:2754:C:C6	2.35	0.62
1:0:2754:C:H2'	1:0:2755:A:C8	2.34	0.62
1:0:2756:A:O2'	1:0:2757:G:OP2	2.15	0.62
1:0:2763:U:H2'	1:0:2764:U:O4'	1.99	0.62
1:0:198:A:H62	1:0:439:C:H42	1.46	0.62
1:0:210:A:N6	1:0:442:A:H61	1.98	0.62
1:0:1029:C:N4	1:0:1153:A:N6	2.46	0.62
1:0:1089:C:H2'	1:0:1099:A:O4'	2.00	0.62
1:0:1218:C:H2'	1:0:1219:C:H6	1.64	0.62
1:0:1416:A:O2'	1:0:1417:C:H5'	1.98	0.62
1:0:1698:C:H4'	1:0:1699:A:OP1	2.00	0.62
1:0:1871:G:H3'	1:0:1871:G:N3	2.14	0.62
1:0:2672:U:H2'	1:0:2673:G:C8	2.33	0.62
1:0:574:C:C4'	1:0:1266:G:O6	2.47	0.62
1:0:645:G:H2'	1:0:646:C:C6	2.35	0.62
1:0:1114:A:H2'	1:0:1115:C:O4'	1.98	0.62
1:0:1719:G:H2'	1:0:1720:G:C8	2.35	0.62
1:0:1981:A:H4'	1:0:2704:U:H4'	1.80	0.62
1:0:2024:U:H2'	1:0:2025:A:C8	2.34	0.62
1:0:2565:C:H2'	1:0:2566:A:H8	1.62	0.62
1:0:2746:G:H2'	1:0:2746:G:N3	2.13	0.62
1:0:2870:C:H2'	1:0:2871:U:C6	2.35	0.62
1:0:2:G:H2'	1:0:3:U:C6	2.33	0.62
1:0:168:A:H2'	1:0:169:C:H6	1.62	0.62
1:0:562:G:H2'	1:0:563:U:C6	2.35	0.62
1:0:788:G:N2	1:0:801:A:OP2	2.33	0.62
1:0:1900:U:H4'	1:0:1946:U:C4'	2.30	0.62
1:0:2343:C:H2'	1:0:2344:G:O4'	1.99	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:214:C:H2'	1:0:215:G:C8	2.34	0.62
1:0:367:G:H3'	1:0:368:A:H5''	1.81	0.62
1:0:396:U:H2'	1:0:398:C:H41	1.63	0.62
1:0:597:U:H2'	1:0:598:U:C6	2.34	0.62
1:0:707:U:OP1	1:0:1585:A:H1'	2.00	0.62
1:0:1782:A:N6	1:0:1820:G:H2'	2.14	0.62
1:0:1869:A:H2'	1:0:1870:U:O4'	2.00	0.62
1:0:2049:C:H2'	1:0:2050:G:H5'	1.82	0.62
1:0:2691:C:H3'	1:0:2692:A:H5''	1.81	0.62
1:0:2870:C:H2'	1:0:2871:U:H6	1.65	0.62
1:0:222:G:N2	1:0:231:G:H1'	2.15	0.62
1:0:431:G:N1	1:0:432:C:N4	2.48	0.62
1:0:538:A:C2	1:0:2025:A:H2'	2.35	0.62
1:0:1555:A:H2'	1:0:1556:A:C8	2.35	0.62
1:0:1194:U:H2'	1:0:1195:U:C6	2.34	0.62
1:0:1278:A:O2'	1:0:1279:G:H4'	2.00	0.62
1:0:2533:U:H2'	1:0:2534:U:C6	2.34	0.62
1:0:699:G:C5'	1:0:700:C:OP2	2.48	0.62
1:0:837:U:H2'	1:0:838:A:C8	2.34	0.62
1:0:2824:C:O2	1:0:2824:C:C2'	2.46	0.62
1:0:330:C:H2'	1:0:331:U:H6	1.64	0.61
1:0:431:G:C6	1:0:433:G:N2	2.67	0.61
1:0:569:C:N4	1:0:570:G:C6	2.67	0.61
1:0:873:U:O2	1:0:2247:A:O5'	2.17	0.61
1:0:978:U:H2'	1:0:979:A:C8	2.35	0.61
1:0:1102:G:N1	1:0:1112:U:H1'	2.15	0.61
1:0:1260:A:HO2'	1:0:1261:G:P	2.23	0.61
1:0:1979:C:O2'	1:0:1980:A:H5'	2.00	0.61
1:0:2495:G:H2'	1:0:2496:C:C1'	2.30	0.61
1:0:244:C:C3'	1:0:245:C:H5''	2.30	0.61
1:0:1338:G:H4'	1:0:1339:U:OP1	1.99	0.61
1:0:2520:A:H1'	1:0:2744:A:H2	1.65	0.61
1:0:2728:A:N1	1:0:2736:U:H1'	2.14	0.61
1:0:1288:A:H62	1:0:1309:G:C4'	2.13	0.61
1:0:2262:C:H2'	1:0:2263:C:O4'	2.00	0.61
1:0:495:C:H2'	1:0:496:C:C6	2.35	0.61
1:0:834:A:H62	1:0:983:G:N2	1.97	0.61
1:0:1033:G:O2'	1:0:1034:U:P	2.58	0.61
1:0:1764:A:H2'	1:0:1765:C:H5'	1.81	0.61
1:0:2059:U:C5'	1:0:2217:G:H1	2.13	0.61
1:0:14:A:H2'	1:0:14:A:N3	2.14	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:564:U:H2'	1:0:565:A:C8	2.34	0.61
1:0:1720:G:O2'	1:0:1721:G:H5'	2.00	0.61
1:0:2243:C:H2'	1:0:2244:C:O4'	2.01	0.61
1:0:2692:A:OP1	1:0:2692:A:O4'	2.19	0.61
1:0:822:G:O2'	1:0:823:U:H5'	2.00	0.61
1:0:1354:A:H62	1:0:1407:G:H1	1.48	0.61
1:0:1392:U:O2	1:0:1392:U:H2'	2.00	0.61
1:0:2096:U:C3'	1:0:2097:A:H5''	2.31	0.61
1:0:2391:A:H2'	1:0:2392:G:O4'	1.99	0.61
1:0:158:A:H1'	1:0:448:C:H5'	1.83	0.61
1:0:541:C:H42	1:0:572:G:C5'	2.14	0.61
1:0:1617:G:H2'	1:0:1618:U:H5'	1.82	0.61
1:0:1975:G:H22	1:0:1979:C:H5	1.47	0.61
1:0:2105:U:H2'	1:0:2106:G:C8	2.35	0.61
1:0:2658:A:O2'	1:0:2659:C:H5'	2.01	0.61
1:0:879:A:H2'	1:0:879:A:N3	2.16	0.61
1:0:987:G:H2'	1:0:988:G:C8	2.33	0.61
1:0:2351:G:H2'	1:0:2351:G:N3	2.15	0.61
1:0:2477:C:H3'	1:0:2477:C:H6	1.65	0.61
1:0:2727:G:O2'	1:0:2728:A:H5''	1.99	0.61
1:0:2748:C:H2'	1:0:2749:A:H8	1.65	0.61
1:0:460:U:H3	1:0:592:G:H1'	1.66	0.61
1:0:665:A:H2'	1:0:665:A:N3	2.15	0.61
1:0:796:A:H2'	1:0:796:A:N3	2.14	0.61
1:0:809:C:H2'	1:0:810:U:C6	2.35	0.61
1:0:1429:A:O2'	1:0:1430:G:H4'	2.00	0.61
1:0:1775:A:O5'	1:0:1775:A:H8	1.83	0.61
1:0:1997:A:H2'	1:0:1998:A:C8	2.36	0.61
1:0:987:G:H5'	1:0:1167:A:N6	2.16	0.60
1:0:65:C:H2'	1:0:66:U:O4'	2.01	0.60
1:0:706:A:H2'	1:0:707:U:C6	2.37	0.60
1:0:804:C:O2	1:0:804:C:C2'	2.45	0.60
1:0:824:U:H1'	1:0:1264:C:O2	2.00	0.60
1:0:1281:A:H2'	1:0:1282:A:O4'	2.01	0.60
1:0:1582:A:C3'	1:0:1583:A:H5'	2.30	0.60
1:0:1790:G:H4'	1:0:1791:C:C6	2.37	0.60
1:0:674:U:H2'	1:0:675:C:O4'	2.02	0.60
1:0:1172:U:H2'	1:0:1173:G:H8	1.64	0.60
1:0:1621:C:O4'	1:0:1626:A:N1	2.33	0.60
1:0:2225:G:H2'	1:0:2226:A:C8	2.36	0.60
1:0:2487:G:H2'	1:0:2488:G:H8	1.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:330:C:H2'	1:0:331:U:C6	2.36	0.60
1:0:388:G:P	1:0:436:A:H61	2.24	0.60
1:0:466:A:C2'	1:0:467:U:OP2	2.49	0.60
1:0:468:A:O2'	1:0:469:G:H4'	2.01	0.60
1:0:73:A:O3'	1:0:74:G:H4'	2.00	0.60
1:0:216:U:H2'	1:0:217:U:O4'	2.01	0.60
1:0:1474:A:H3'	1:0:1474:A:N3	2.16	0.60
1:0:2498:U:H3'	1:0:2498:U:OP2	2.00	0.60
1:0:510:G:H2'	1:0:512:A:OP2	2.00	0.60
1:0:1932:G:H3'	1:0:1933:G:C8	2.36	0.60
1:0:2463:G:H2'	1:0:2464:G:H8	1.65	0.60
1:0:2867:G:H2'	1:0:2867:G:N3	2.16	0.60
1:0:357:A:H2'	1:0:358:C:H5'	1.84	0.60
1:0:688:A:H2'	1:0:689:A:N3	2.15	0.60
1:0:1057:A:H3'	1:0:1058:G:C5'	2.32	0.60
1:0:1223:G:H5''	1:0:1224:A:OP1	2.02	0.60
1:0:1532:A:H2'	1:0:1533:G:C8	2.37	0.60
1:0:2000:U:H3'	1:0:2001:G:H5''	1.83	0.60
1:0:2136:G:H2'	1:0:2137:G:C8	2.36	0.60
1:0:2322:U:O2'	1:0:2323:U:H5'	2.02	0.60
1:0:2496:C:H2'	1:0:2497:A:H5''	1.84	0.60
1:0:460:U:H4'	1:0:461:A:OP2	2.01	0.60
1:0:827:C:O2'	1:0:828:C:H5'	2.01	0.60
1:0:872:G:O2'	1:0:873:U:H5''	2.01	0.60
1:0:1016:C:H1'	1:0:1154:A:C2	2.37	0.60
1:0:1184:G:H2'	1:0:1185:C:H5'	1.84	0.60
1:0:1725:C:H2'	1:0:1726:C:H6	1.67	0.60
1:0:579:G:H2'	1:0:2013:A:N7	2.16	0.60
1:0:644:A:C2'	1:0:645:G:H5'	2.32	0.60
1:0:658:G:H2'	1:0:659:G:C8	2.37	0.60
1:0:1700:C:H2'	1:0:1701:C:C6	2.36	0.60
1:0:1886:G:H2'	1:0:1887:G:C8	2.37	0.60
1:0:2278:A:H61	1:0:2296:U:H3	1.49	0.60
1:0:2425:G:H2'	1:0:2480:C:H5	1.67	0.60
1:0:2432:A:H2'	1:0:2433:G:H8	1.65	0.60
1:0:311:A:H1'	1:0:330:C:C1'	2.31	0.60
1:0:857:U:H2'	1:0:858:G:O4'	2.02	0.60
1:0:436:A:H4'	1:0:437:G:C5'	2.26	0.59
1:0:787:A:H2'	1:0:788:G:N7	2.17	0.59
1:0:1244:U:H2'	1:0:1245:G:C8	2.37	0.59
1:0:1621:C:O4'	1:0:1626:A:C2	2.55	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1999:U:H2'	1:0:2000:U:O4'	2.02	0.59
1:0:2309:G:H1	1:0:2364:C:H42	1.49	0.59
1:0:792:U:O2'	1:0:793:G:H5'	2.01	0.59
1:0:1353:A:H5''	1:0:1354:A:N7	2.16	0.59
1:0:2633:A:H5''	1:0:2634:G:OP1	2.02	0.59
1:0:66:U:H2'	1:0:67:G:C8	2.36	0.59
1:0:1175:A:H2'	1:0:1176:U:C6	2.38	0.59
1:0:1326:U:O2	1:0:1326:U:C2'	2.49	0.59
1:0:2384:G:H5''	1:0:2385:U:C5'	2.32	0.59
1:0:2659:C:H2'	1:0:2660:C:H6	1.66	0.59
1:0:68:C:H2'	1:0:69:G:C8	2.36	0.59
1:0:633:G:H2'	1:0:634:G:H8	1.66	0.59
1:0:802:A:N3	1:0:802:A:H2'	2.16	0.59
1:0:820:U:H2'	1:0:821:A:H8	1.67	0.59
1:0:1904:G:H2'	1:0:1905:G:O4'	2.02	0.59
1:0:2500:C:H4'	1:0:2544:A:O4'	2.03	0.59
1:0:834:A:N6	1:0:983:G:H21	1.99	0.59
1:0:998:C:H1'	1:0:1012:A:H1'	1.84	0.59
1:0:1376:C:H2'	1:0:1377:G:C8	2.37	0.59
1:0:2386:G:H2'	1:0:2386:G:N3	2.17	0.59
1:0:757:U:H2'	1:0:758:G:H5'	1.85	0.59
1:0:956:A:O2'	1:0:957:G:P	2.60	0.59
1:0:1225:G:H2'	1:0:1249:G:H22	1.67	0.59
1:0:1298:G:O6	1:0:1342:U:C6	2.56	0.59
1:0:1391:A:O2'	1:0:1392:U:P	2.60	0.59
1:0:1578:U:H2'	1:0:1579:G:H8	1.66	0.59
1:0:2469:G:H4'	1:0:2470:U:O5'	2.03	0.59
1:0:2483:U:H3'	1:0:2484:G:C5'	2.33	0.59
1:0:2652:G:O2'	1:0:2653:A:H5'	2.02	0.59
1:0:2863:U:H2'	1:0:2864:C:C6	2.37	0.59
1:0:824:U:C1'	1:0:1264:C:O2	2.50	0.59
1:0:1110:G:H2'	1:0:1111:C:C6	2.38	0.59
1:0:1304:U:O2'	1:0:1305:C:H5'	2.03	0.59
1:0:2312:A:H1'	1:0:2314:A:N7	2.17	0.59
1:0:244:C:H2'	1:0:245:C:O4'	2.03	0.59
1:0:333:A:O2'	1:0:350:U:H2'	2.02	0.59
1:0:759:C:C5'	1:0:761:G:H1'	2.33	0.59
1:0:1437:A:O2'	1:0:1515:U:H4'	2.02	0.59
1:0:2680:U:H5''	1:0:2681:A:H5''	1.83	0.59
1:0:698:A:H1'	1:0:700:C:C5	2.38	0.59
1:0:872:G:O2'	1:0:2247:A:H1'	2.03	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1325:U:H5'	1:0:1326:U:C6	2.38	0.59
1:0:2321:C:H2'	1:0:2322:U:O4'	2.03	0.59
1:0:233:A:H2'	1:0:234:C:C6	2.38	0.59
1:0:1548:U:H3	1:0:1554:G:H1	1.49	0.59
1:0:1949:A:H1'	1:0:2572:U:C5'	2.30	0.59
1:0:2015:G:O2'	1:0:2016:A:OP1	2.18	0.59
1:0:161:U:H2'	1:0:162:C:C6	2.37	0.58
1:0:336:A:H2'	1:0:337:G:H8	1.67	0.58
1:0:468:A:C2'	1:0:469:G:H4'	2.33	0.58
1:0:647:G:H4'	1:0:649:G:O3'	2.03	0.58
1:0:986:A:H2'	1:0:987:G:H5'	1.84	0.58
1:0:1222:G:H1'	1:0:1251:G:H22	1.68	0.58
1:0:1260:A:O2'	1:0:1261:G:OP1	2.21	0.58
1:0:1764:A:OP1	1:0:1820:G:H3'	2.02	0.58
1:0:2185:U:H2'	1:0:2186:G:C8	2.38	0.58
1:0:2356:A:H2'	1:0:2357:A:C8	2.38	0.58
1:0:2629:U:H2'	1:0:2630:C:C6	2.37	0.58
1:0:693:A:H2'	1:0:694:G:C8	2.37	0.58
1:0:2107:G:H2'	1:0:2108:G:H8	1.67	0.58
1:0:2326:C:H42	1:0:2350:G:N2	2.00	0.58
1:0:569:C:N4	1:0:570:G:O6	2.36	0.58
1:0:1180:A:O2'	1:0:1181:C:H5'	2.03	0.58
1:0:1764:A:N7	1:0:1821:A:C1'	2.66	0.58
1:0:2061:C:H5'	1:0:2413:A:H4'	1.85	0.58
1:0:2083:G:H22	1:0:2172:U:H3	1.51	0.58
1:0:2395:C:H2'	1:0:2396:C:C5'	2.29	0.58
1:0:2607:C:H3'	1:0:2608:A:H5''	1.85	0.58
1:0:2624:G:H4'	1:0:2712:G:H2'	1.84	0.58
1:0:2843:A:N6	1:0:2844:G:C6	2.72	0.58
1:0:3:U:H2'	1:0:4:C:C6	2.38	0.58
1:0:67:G:N2	1:0:73:A:H8	2.01	0.58
1:0:457:C:O2'	1:0:458:G:H5'	2.04	0.58
1:0:801:A:O2'	1:0:802:A:P	2.61	0.58
1:0:1633:C:O2'	1:0:1634:A:H3'	2.04	0.58
1:0:2555:G:H2'	1:0:2555:G:N3	2.17	0.58
1:0:165:G:O2'	1:0:166:G:H5'	2.04	0.58
1:0:1865:C:H2'	1:0:1866:G:O4'	2.03	0.58
1:0:1980:A:O2'	1:0:1981:A:H5'	2.03	0.58
1:0:86:U:H1'	1:0:95:G:N2	2.18	0.58
1:0:389:G:C8	1:0:389:G:C3'	2.87	0.58
1:0:543:G:H2'	1:0:544:U:C6	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:787:A:H2'	1:0:788:G:C8	2.39	0.58
1:0:855:G:O2'	1:0:856:A:H5'	2.03	0.58
1:0:1212:U:H2'	1:0:1213:U:C6	2.39	0.58
1:0:1860:A:C2'	1:0:1861:G:H5'	2.33	0.58
1:0:128:C:C2'	1:0:129:A:H5''	2.33	0.58
1:0:590:C:H2'	1:0:591:G:H8	1.66	0.58
1:0:847:C:N4	1:0:955:G:N2	2.52	0.58
1:0:877:G:H2'	1:0:878:C:C6	2.38	0.58
1:0:1337:G:H1'	1:0:1632:A:H61	1.67	0.58
1:0:2484:G:H5'	2:0:2881:TEL:H571	1.85	0.58
1:0:2544:A:H2'	1:0:2545:A:C1'	2.33	0.58
1:0:70:A:H5'	1:0:71:A:OP1	2.03	0.58
1:0:1001:A:H3'	1:0:1002:C:H5''	1.86	0.58
1:0:1821:A:H3'	1:0:1822:C:C6	2.38	0.58
1:0:1927:U:H4'	1:0:1938:U:O2'	2.04	0.58
1:0:2269:G:H2'	1:0:2270:U:O4'	2.03	0.58
1:0:199:A:OP1	1:0:438:G:O6	2.21	0.58
1:0:224:G:H1'	1:0:399:G:O6	2.04	0.58
1:0:782:U:H2'	1:0:783:G:H8	1.68	0.58
1:0:1299:A:N6	1:0:1302:C:N4	2.52	0.58
1:0:1337:G:C1'	1:0:1632:A:N6	2.66	0.58
1:0:1378:A:H2'	1:0:1379:A:C8	2.39	0.58
1:0:1465:G:H2'	1:0:1466:C:O4'	2.03	0.58
1:0:2326:C:O2'	1:0:2327:U:H5'	2.04	0.58
1:0:2432:A:H4'	1:0:2551:A:HO2'	1.67	0.58
1:0:62:U:H5'	1:0:63:A:OP1	2.04	0.58
1:0:605:G:C2	1:0:606:A:C5	2.91	0.58
1:0:651:C:C3'	1:0:652:C:H5''	2.34	0.58
1:0:697:G:N2	1:0:807:A:H2	2.02	0.58
1:0:788:G:H2'	1:0:807:A:C5	2.39	0.58
1:0:1955:G:H2'	1:0:1956:G:H5'	1.86	0.58
1:0:2493:U:H2'	1:0:2494:C:C6	2.39	0.58
1:0:755:C:H2'	1:0:756:C:C6	2.39	0.57
1:0:861:G:H1'	1:0:944:A:N3	2.18	0.57
1:0:1438:G:H2'	1:0:1439:G:H5'	1.85	0.57
1:0:1464:A:H2'	1:0:1465:G:O4'	2.04	0.57
1:0:2158:C:H2'	1:0:2159:A:C8	2.37	0.57
1:0:114:C:H2'	1:0:115:G:O4'	2.03	0.57
1:0:210:A:H61	1:0:442:A:N6	2.02	0.57
1:0:670:U:H2'	1:0:671:A:C8	2.39	0.57
1:0:763:A:H5''	1:0:1631:C:H42	1.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1829:C:H42	1:0:1886:G:H1	1.52	0.57
1:0:2121:U:H2'	1:0:2122:G:C8	2.38	0.57
1:0:2369:U:H2'	1:0:2370:G:C8	2.40	0.57
1:0:871:U:O2	1:0:871:U:H2'	2.03	0.57
1:0:1953:A:O2'	1:0:1955:G:O4'	2.21	0.57
1:0:2334:C:H3'	1:0:2335:U:H5''	1.87	0.57
1:0:2350:G:H2'	1:0:2351:G:H8	1.68	0.57
1:0:2491:C:C3'	1:0:2492:G:H5''	2.34	0.57
1:0:2690:A:OP1	1:0:2692:A:OP2	2.22	0.57
1:0:641:G:H4'	1:0:651:C:O2'	2.04	0.57
1:0:717:G:H1'	1:0:740:A:N6	2.18	0.57
1:0:1139:A:H61	1:0:2497:A:H61	1.50	0.57
1:0:1194:U:H2'	1:0:1195:U:H6	1.70	0.57
1:0:2615:U:H3	1:0:2762:G:H1	1.52	0.57
1:0:861:G:C8	1:0:862:A:N7	2.72	0.57
1:0:867:G:O2'	1:0:868:U:H5'	2.05	0.57
1:0:1265:G:C2	1:0:1266:G:N2	2.72	0.57
1:0:1393:G:H1'	1:0:1585:A:N6	2.19	0.57
1:0:68:C:C1'	1:0:72:A:H1'	2.34	0.57
1:0:87:G:H2'	1:0:87:G:N3	2.20	0.57
1:0:322:A:H2'	1:0:342:G:OP1	2.04	0.57
1:0:468:A:H2'	1:0:469:G:H4'	1.86	0.57
1:0:639:G:H2'	1:0:640:C:C6	2.40	0.57
1:0:2532:G:H2'	1:0:2533:U:O4'	2.04	0.57
1:0:514:G:N3	1:0:514:G:C2'	2.66	0.57
1:0:852:U:H2'	1:0:853:C:C6	2.39	0.57
1:0:1395:A:H2'	1:0:1396:C:O4'	2.05	0.57
1:0:1793:A:H2'	1:0:1794:A:C8	2.38	0.57
1:0:2390:A:O2'	1:0:2391:A:H5'	2.05	0.57
1:0:1136:G:C6	1:0:1137:A:N6	2.73	0.57
1:0:1758:C:O2'	1:0:1759:A:H5'	2.05	0.57
1:0:2034:A:N6	1:0:2593:A:N7	2.51	0.57
1:0:2334:C:C2'	1:0:2335:U:H5''	2.34	0.57
1:0:2442:C:N4	1:0:2466:G:H1	2.01	0.57
1:0:449:C:H2'	1:0:450:C:H6	1.69	0.57
1:0:552:C:H2'	1:0:553:C:C5'	2.35	0.57
1:0:677:G:O2'	1:0:678:G:H5'	2.04	0.57
1:0:2056:C:O2'	1:0:2057:U:H5'	2.04	0.57
1:0:2672:U:H5'	1:0:2844:G:N2	2.19	0.57
1:0:531:G:H2'	1:0:532:A:C8	2.40	0.57
1:0:580:A:N3	1:0:582:G:N7	2.53	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:723:C:H2'	1:0:724:C:C6	2.40	0.57
1:0:747:A:H2'	1:0:748:A:O4'	2.05	0.57
1:0:797:A:H5'	1:0:798:G:OP1	2.05	0.57
1:0:1069:G:O2'	1:0:1070:G:H5'	2.03	0.57
1:0:1194:U:HO2'	1:0:1195:U:C5'	2.17	0.57
1:0:1554:G:H2'	1:0:1555:A:C8	2.39	0.57
1:0:435:A:N1	1:0:436:A:N3	2.53	0.56
1:0:1103:C:H2'	1:0:1104:G:C8	2.40	0.56
1:0:1200:G:H2'	1:0:1201:G:O4'	2.05	0.56
1:0:1785:A:O2'	1:0:1883:A:H2'	2.05	0.56
1:0:202:A:C2	1:0:203:G:H1'	2.41	0.56
1:0:1313:U:O2'	1:0:1314:A:P	2.64	0.56
1:0:1596:A:H2'	1:0:1597:A:O4'	2.05	0.56
1:0:1981:A:O2'	1:0:2704:U:H1'	2.05	0.56
1:0:2048:C:H2'	1:0:2049:C:C6	2.40	0.56
1:0:2512:A:H2'	1:0:2513:A:C8	2.40	0.56
1:0:439:C:H3'	1:0:440:U:C6	2.40	0.56
1:0:1021:A:N3	1:0:1164:C:H1'	2.20	0.56
1:0:1286:U:H5''	1:0:1663:C:N4	2.19	0.56
1:0:1344:C:O2'	1:0:1345:G:H8	1.88	0.56
1:0:1457:A:H2'	1:0:1458:A:O4'	2.04	0.56
1:0:1608:U:H2'	1:0:1609:G:C8	2.39	0.56
1:0:1617:G:H2'	1:0:1618:U:C5'	2.36	0.56
1:0:2014:A:N7	1:0:2477:C:O2	2.39	0.56
1:0:2161:C:H2'	1:0:2162:C:C5	2.40	0.56
1:0:2261:G:N2	1:0:2406:C:N3	2.51	0.56
1:0:2478:C:H2'	1:0:2479:U:C6	2.41	0.56
1:0:45:C:OP2	1:0:192:G:H3'	2.05	0.56
1:0:391:C:H2'	1:0:392:G:H8	1.70	0.56
1:0:1033:G:O2'	1:0:1034:U:OP2	2.23	0.56
1:0:1285:A:OP2	1:0:1663:C:H2'	2.05	0.56
1:0:1474:A:H2'	1:0:1475:U:H5'	1.88	0.56
1:0:1655:C:H4'	1:0:2689:C:O2	2.06	0.56
1:0:1811:A:H4'	1:0:1813:A:C8	2.39	0.56
1:0:2058:U:H5'	1:0:2576:G:H1'	1.87	0.56
1:0:2771:C:H5'	1:0:2867:G:H22	1.69	0.56
1:0:478:G:O2'	1:0:479:G:H5'	2.05	0.56
1:0:821:A:H2'	1:0:822:G:H8	1.70	0.56
1:0:1318:A:O2'	1:0:1319:C:H5'	2.05	0.56
1:0:2397:A:H2'	1:0:2398:U:C6	2.41	0.56
1:0:2569:A:H2'	1:0:2570:C:C6	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:69:G:O2'	1:0:70:A:P	2.64	0.56
1:0:335:A:N6	1:0:349:G:O2'	2.37	0.56
1:0:1102:G:H1	1:0:1112:U:H1'	1.70	0.56
1:0:1345:G:N3	1:0:1626:A:N7	2.53	0.56
1:0:2034:A:H8	1:0:2034:A:OP2	1.87	0.56
1:0:2212:U:H2'	1:0:2213:G:C8	2.40	0.56
1:0:2830:U:H2'	1:0:2831:A:H8	1.71	0.56
1:0:119:G:H2'	1:0:120:G:H8	1.70	0.56
1:0:346:C:O2	1:0:346:C:H2'	2.04	0.56
1:0:1299:A:HO2'	1:0:1300:A:P	2.29	0.56
1:0:1340:C:H2'	1:0:1341:G:O4'	2.06	0.56
1:0:1922:U:H1'	1:0:2570:C:O2'	2.06	0.56
1:0:1933:G:H8	1:0:1933:G:O5'	1.88	0.56
1:0:2780:A:H2'	1:0:2780:A:N3	2.20	0.56
1:0:694:G:H2'	1:0:695:G:C8	2.41	0.56
1:0:879:A:H2'	1:0:880:C:C5'	2.36	0.56
1:0:1210:C:H2'	1:0:1211:G:C8	2.40	0.56
1:0:1252:C:H2'	1:0:1253:C:H5''	1.87	0.56
1:0:1987:G:C2'	1:0:1988:A:H5'	2.36	0.56
1:0:2229:G:H5''	1:0:2230:G:H5''	1.88	0.56
1:0:2268:G:H5''	1:0:2363:G:HO2'	1.70	0.56
1:0:2429:A:H5''	1:0:2476:A:N6	2.20	0.56
1:0:2496:C:N4	1:0:2546:G:H1	1.89	0.56
1:0:2624:G:H4'	1:0:2712:G:C2'	2.36	0.56
1:0:2624:G:H4'	1:0:2712:G:O2'	2.06	0.56
1:0:2824:C:H1'	1:0:2843:A:C2	2.40	0.56
1:0:449:C:H2'	1:0:450:C:C6	2.40	0.56
1:0:563:U:H2'	1:0:564:U:C6	2.40	0.56
1:0:573:C:H2'	1:0:574:C:O4'	2.06	0.56
1:0:682:G:N3	1:0:682:G:H2'	2.19	0.56
1:0:742:G:N2	1:0:1766:U:C6	2.74	0.56
1:0:971:A:C2	1:0:2475:C:H1'	2.41	0.56
1:0:1073:G:H3'	1:0:1074:G:H5''	1.88	0.56
1:0:1964:A:OP1	1:0:1965:U:OP2	2.24	0.56
1:0:2498:U:C5'	1:0:2499:C:OP1	2.44	0.56
1:0:117:A:H5'	1:0:118:U:OP1	2.06	0.56
1:0:324:C:O5'	1:0:324:C:H6	1.88	0.56
1:0:400:U:H4'	1:0:401:G:N9	2.20	0.56
1:0:455:A:H4'	1:0:1214:C:O2'	2.05	0.56
1:0:681:A:N6	1:0:683:A:H2'	2.21	0.56
1:0:871:U:C2	1:0:2247:A:H2'	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:887:G:O2'	1:0:888:G:H5'	2.06	0.56
1:0:929:A:C3'	1:0:930:A:H5''	2.36	0.56
1:0:1021:A:H1'	1:0:1164:C:C1'	2.35	0.56
1:0:1044:U:H5'	1:0:1045:G:OP1	2.06	0.56
1:0:1537:U:H2'	1:0:1538:A:C8	2.40	0.56
1:0:1797:C:H2'	1:0:1798:G:O4'	2.05	0.56
1:0:2073:A:N6	1:0:2208:U:H3	2.03	0.56
1:0:2085:G:H22	1:0:2171:U:C1'	2.15	0.56
1:0:2198:U:H3'	1:0:2199:C:C5'	2.26	0.56
1:0:2402:U:O2'	1:0:2404:A:H2'	2.05	0.56
1:0:2783:U:N3	1:0:2785:A:N6	2.54	0.55
1:0:1226:A:H62	1:0:1249:G:H1'	1.72	0.55
1:0:1698:C:H5''	1:0:1699:A:OP2	2.06	0.55
1:0:1811:A:H1'	1:0:1813:A:C6	2.41	0.55
1:0:503:G:H2'	1:0:504:G:O4'	2.05	0.55
1:0:979:A:H2'	1:0:980:G:C8	2.42	0.55
1:0:1378:A:H2'	1:0:1379:A:H8	1.71	0.55
1:0:1471:G:O2'	1:0:1472:C:H5'	2.07	0.55
1:0:2784:A:OP1	1:0:2784:A:H3'	2.05	0.55
1:0:219:G:C2'	1:0:220:U:OP2	2.55	0.55
1:0:486:U:O2'	1:0:515:A:H1'	2.07	0.55
1:0:781:G:H21	1:0:1392:U:H1'	1.70	0.55
1:0:837:U:H2'	1:0:838:A:H8	1.72	0.55
1:0:1498:G:O2'	1:0:1499:A:H5'	2.06	0.55
1:0:1962:C:O2'	1:0:1963:G:H5'	2.06	0.55
1:0:2003:A:C2	1:0:2018:G:N2	2.74	0.55
1:0:2191:A:C2'	1:0:2192:U:OP1	2.54	0.55
1:0:2298:U:H4'	1:0:2299:A:N7	2.21	0.55
1:0:2779:C:O2'	1:0:2780:A:H5'	2.06	0.55
1:0:1125:G:H2'	1:0:1126:A:C8	2.41	0.55
1:0:1301:U:C4	1:0:1340:C:H1'	2.42	0.55
1:0:1370:U:H2'	1:0:1371:G:O4'	2.06	0.55
1:0:1531:C:H2'	1:0:1532:A:H5'	1.88	0.55
1:0:1695:U:C2'	1:0:1696:C:H5'	2.36	0.55
1:0:2261:G:H1	1:0:2406:C:H42	1.52	0.55
1:0:2655:C:H2'	1:0:2656:G:C8	2.41	0.55
1:0:2796:A:H2'	1:0:2797:G:H8	1.70	0.55
1:0:2854:G:H2'	1:0:2854:G:N3	2.21	0.55
1:0:243:G:H3'	1:0:244:C:H5''	1.89	0.55
1:0:751:G:C2	1:0:752:G:H1'	2.41	0.55
1:0:1726:C:H1'	1:0:2835:A:H1'	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1987:G:H2'	1:0:1988:A:H5'	1.89	0.55
1:0:2069:U:H2'	1:0:2070:G:H8	1.71	0.55
1:0:2664:G:H2'	1:0:2665:G:H8	1.72	0.55
1:0:95:G:H2'	1:0:96:C:C6	2.42	0.55
1:0:459:A:N6	1:0:484:G:H1'	2.21	0.55
1:0:510:G:N2	1:0:513:A:OP2	2.40	0.55
1:0:1196:G:C2'	1:0:1197:U:H5'	2.37	0.55
1:0:1414:G:H2'	1:0:1415:C:C6	2.42	0.55
1:0:1594:U:H2'	1:0:1595:A:C8	2.41	0.55
1:0:2496:C:C4	1:0:2521:A:C6	2.95	0.55
1:0:58:C:H2'	1:0:59:G:O4'	2.07	0.55
1:0:941:U:H4'	1:0:941:U:OP1	2.05	0.55
1:0:1112:U:H2'	1:0:1113:C:C5	2.41	0.55
1:0:1554:G:H2'	1:0:1555:A:H8	1.70	0.55
1:0:1603:A:H2'	1:0:1604:A:C8	2.42	0.55
1:0:1763:G:C6	1:0:1963:G:N2	2.74	0.55
1:0:28:A:H61	1:0:522:G:H4'	1.71	0.55
1:0:820:U:H2'	1:0:821:A:C8	2.41	0.55
1:0:1015:U:H5'	1:0:1021:A:N6	2.22	0.55
1:0:1468:A:H3'	1:0:1469:U:H5''	1.88	0.55
1:0:1626:A:H4'	1:0:1627:C:OP1	2.07	0.55
1:0:2667:C:H42	1:0:2699:G:H3'	1.71	0.55
1:0:308:C:H2'	1:0:309:G:O4'	2.07	0.55
1:0:441:A:H2'	1:0:442:A:O4'	2.06	0.55
1:0:1367:A:H2'	1:0:1368:G:O4'	2.07	0.55
1:0:1482:U:H2'	1:0:1483:G:C8	2.41	0.55
1:0:1942:G:H2'	1:0:1943:A:O4'	2.06	0.55
1:0:2306:A:H2'	1:0:2307:A:C8	2.41	0.55
1:0:2674:C:H2'	1:0:2675:U:C6	2.42	0.55
1:0:2796:A:H2'	1:0:2797:G:C8	2.43	0.55
1:0:1213:U:H2'	1:0:1214:C:C6	2.42	0.54
1:0:1303:U:H2'	1:0:1304:U:H6	1.71	0.54
1:0:1376:C:H2'	1:0:1377:G:H8	1.71	0.54
1:0:1695:U:H2'	1:0:1696:C:H5'	1.90	0.54
1:0:1774:A:O2'	1:0:2586:G:H1'	2.06	0.54
1:0:1818:G:H2'	1:0:1819:U:H6	1.72	0.54
1:0:2054:A:H2	1:0:2419:C:H41	1.54	0.54
1:0:2213:G:O2'	1:0:2214:G:H5'	2.06	0.54
1:0:2252:A:H2'	1:0:2253:A:O4'	2.07	0.54
1:0:2437:G:O2'	1:0:2438:A:N7	2.34	0.54
1:0:2716:G:H2'	1:0:2717:G:H8	1.71	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2721:A:H2'	1:0:2722:C:O4'	2.07	0.54
1:0:718:A:C2	1:0:740:A:H1'	2.41	0.54
1:0:928:G:HO2'	1:0:929:A:H8	1.55	0.54
1:0:984:A:N3	1:0:984:A:H2'	2.21	0.54
1:0:1076:U:H2'	1:0:1077:U:O4'	2.06	0.54
1:0:1345:G:N7	1:0:1625:A:N6	2.54	0.54
1:0:1479:G:H2'	1:0:1480:G:H8	1.72	0.54
1:0:1587:A:H2'	1:0:1588:A:C8	2.42	0.54
1:0:1618:U:H3'	1:0:1619:A:H2	1.72	0.54
1:0:1790:G:C8	1:0:1811:A:N6	2.75	0.54
1:0:2018:G:O2'	1:0:2019:C:OP1	2.21	0.54
1:0:2446:C:H2'	1:0:2447:G:O4'	2.07	0.54
1:0:2668:U:O2	1:0:2693:U:O4'	2.24	0.54
1:0:391:C:H2'	1:0:392:G:C8	2.43	0.54
1:0:433:G:H1'	1:0:434:C:C5	2.42	0.54
1:0:435:A:N1	1:0:436:A:C4	2.75	0.54
1:0:652:C:H5'	1:0:652:C:H6	1.72	0.54
1:0:975:C:O5'	1:0:975:C:H6	1.90	0.54
1:0:1428:G:H5''	1:0:1429:A:H5'	1.89	0.54
1:0:2544:A:H2'	1:0:2545:A:H1'	1.88	0.54
1:0:8:A:H2'	1:0:9:U:C6	2.43	0.54
1:0:395:G:H2'	1:0:396:U:H5'	1.90	0.54
1:0:435:A:H2'	1:0:436:A:O5'	2.08	0.54
1:0:1975:G:O2'	1:0:1976:U:P	2.65	0.54
1:0:2204:A:O2'	1:0:2205:C:P	2.65	0.54
1:0:2644:A:H2'	1:0:2645:C:C6	2.42	0.54
1:0:2690:A:H3'	1:0:2691:C:H5'	1.89	0.54
1:0:1424:U:H2'	1:0:1425:G:C8	2.42	0.54
1:0:1826:U:O2'	1:0:1952:A:H2'	2.07	0.54
1:0:1831:G:O2'	1:0:1832:G:H5'	2.08	0.54
1:0:2271:C:H4'	1:0:2354:G:O4'	2.08	0.54
1:0:2507:U:HO2'	1:0:2508:G:H8	1.54	0.54
1:0:239:A:H5'	1:0:619:A:O2'	2.07	0.54
1:0:459:A:O2'	1:0:461:A:N6	2.38	0.54
1:0:466:A:O3'	1:0:467:U:H4'	2.08	0.54
1:0:1276:U:H3	1:0:1999:U:H3	1.55	0.54
1:0:1451:C:H2'	1:0:1452:U:C6	2.41	0.54
1:0:1452:U:O2'	1:0:1453:A:H5'	2.08	0.54
1:0:1618:U:H3'	1:0:1619:A:C2	2.43	0.54
1:0:2345:A:H2'	1:0:2346:G:O4'	2.08	0.54
1:0:2821:G:H2'	1:0:2822:U:O4'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:295:C:N4	1:0:296:A:H62	2.06	0.54
1:0:788:G:N2	1:0:801:A:P	2.80	0.54
1:0:846:A:N6	1:0:955:G:N2	2.53	0.54
1:0:1315:A:H4'	1:0:1316:G:OP1	2.07	0.54
1:0:1778:U:H4'	1:0:2568:A:O3'	2.08	0.54
1:0:1781:C:H2'	1:0:1782:A:C5	2.43	0.54
1:0:2072:C:H2'	1:0:2073:A:O4'	2.08	0.54
1:0:2109:A:H2'	1:0:2110:G:C8	2.42	0.54
1:0:2201:G:H2'	1:0:2202:G:H8	1.73	0.54
1:0:459:A:H1'	1:0:461:A:N6	2.22	0.54
1:0:964:A:H2'	1:0:965:G:C8	2.38	0.54
1:0:2492:G:H2'	1:0:2493:U:C6	2.42	0.54
1:0:2668:U:H4'	1:0:2669:C:H5''	1.90	0.54
1:0:2721:A:N6	1:0:2743:G:H1'	2.23	0.54
1:0:2773:G:H1	1:0:2779:C:H42	1.56	0.54
1:0:466:A:O2'	1:0:467:U:OP2	2.24	0.54
1:0:476:G:C6	1:0:477:A:N6	2.76	0.54
1:0:817:A:H2'	1:0:819:C:C4	2.43	0.54
1:0:2014:A:N7	1:0:2477:C:H1'	2.23	0.54
1:0:2204:A:O2'	1:0:2205:C:OP2	2.25	0.54
1:0:2228:U:H4'	1:0:2254:C:C5	2.40	0.54
1:0:80:A:H2'	1:0:81:C:C6	2.43	0.54
1:0:1825:C:O2'	1:0:1826:U:H5'	2.08	0.54
1:0:2002:A:C2'	1:0:2003:A:O5'	2.56	0.54
1:0:2053:G:H2'	1:0:2054:A:C8	2.43	0.54
1:0:2282:G:H1	1:0:2292:C:H42	1.54	0.54
1:0:2357:A:H2'	1:0:2358:C:O4'	2.07	0.54
1:0:69:G:H4'	1:0:70:A:OP1	2.08	0.53
1:0:136:A:H2'	1:0:137:A:O4'	2.08	0.53
1:0:162:C:H2'	1:0:163:A:H8	1.73	0.53
1:0:621:U:H2'	1:0:622:U:C6	2.43	0.53
1:0:700:C:H2'	1:0:701:U:C6	2.43	0.53
1:0:1443:G:H1'	1:0:1584:G:N3	2.22	0.53
1:0:1804:U:H2'	1:0:1805:G:C8	2.41	0.53
1:0:2086:U:H2'	1:0:2087:U:C6	2.43	0.53
1:0:2726:U:H2'	1:0:2727:G:O4'	2.08	0.53
1:0:550:C:H2'	1:0:551:A:H8	1.71	0.53
1:0:2299:A:H5'	1:0:2300:G:C8	2.43	0.53
1:0:2469:G:C5'	1:0:2470:U:OP1	2.54	0.53
1:0:2782:G:C2'	1:0:2783:U:H5'	2.39	0.53
1:0:195:A:H2'	1:0:196:A:O4'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:574:C:H2'	1:0:575:U:C6	2.43	0.53
1:0:1253:C:H2'	1:0:1254:G:C5'	2.38	0.53
1:0:1260:A:O2'	1:0:1261:G:P	2.66	0.53
1:0:1417:C:O2'	1:0:1418:C:H5'	2.09	0.53
1:0:1582:A:H3'	1:0:1583:A:C5'	2.38	0.53
1:0:1617:G:H3'	1:0:1618:U:O2	2.08	0.53
1:0:1821:A:H5''	1:0:1822:C:C5	2.44	0.53
1:0:2020:G:H2'	1:0:2021:G:H8	1.72	0.53
1:0:2621:G:O2'	1:0:2622:G:H5'	2.08	0.53
1:0:538:A:H62	1:0:2759:U:H3	1.56	0.53
1:0:1244:U:H2'	1:0:1245:G:H8	1.73	0.53
1:0:1247:U:O2'	1:0:1248:G:H5'	2.09	0.53
1:0:1267:A:OP1	1:0:1269:G:H8	1.91	0.53
1:0:1312:G:H4'	1:0:1314:A:N3	2.24	0.53
1:0:1355:A:H1'	1:0:1410:U:H4'	1.90	0.53
1:0:1669:A:N6	1:0:1670:G:C2	2.76	0.53
1:0:1697:U:H2'	1:0:1698:C:O4'	2.08	0.53
1:0:1846:A:H2'	1:0:1847:G:O4'	2.08	0.53
1:0:2696:A:H2'	1:0:2697:G:H8	1.72	0.53
1:0:139:A:H2'	1:0:140:G:C8	2.41	0.53
1:0:159:A:H2'	1:0:160:C:C6	2.44	0.53
1:0:178:C:H2'	1:0:179:U:H6	1.73	0.53
1:0:507:A:H2'	1:0:508:G:O4'	2.09	0.53
1:0:742:G:H2'	1:0:742:G:N3	2.23	0.53
1:0:1467:U:H3'	1:0:1468:A:H5'	1.89	0.53
1:0:2085:G:H2'	1:0:2086:U:C6	2.42	0.53
1:0:2432:A:H2'	1:0:2433:G:C8	2.44	0.53
1:0:52:A:H2'	1:0:53:G:H5'	1.90	0.53
1:0:573:C:HO2'	1:0:1266:G:H1	1.57	0.53
1:0:653:G:H21	1:0:657:A:N6	2.06	0.53
1:0:797:A:O2'	1:0:798:G:C8	2.61	0.53
1:0:861:G:N2	1:0:943:U:HO2'	2.07	0.53
1:0:1327:C:P	1:0:1345:G:H5'	2.49	0.53
1:0:1336:G:C2'	1:0:1337:G:H5'	2.39	0.53
1:0:1459:U:H2'	1:0:1475:U:O2'	2.08	0.53
1:0:1685:A:O2'	1:0:1686:A:O5'	2.25	0.53
1:0:1938:U:O2'	1:0:1939:U:OP1	2.23	0.53
1:0:2069:U:H2'	1:0:2070:G:C8	2.44	0.53
1:0:2652:G:H2'	1:0:2653:A:C8	2.41	0.53
1:0:315:G:H2'	1:0:316:C:C6	2.44	0.53
1:0:521:U:H2'	1:0:522:G:H5'	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1446:U:O2'	1:0:1447:U:H5'	2.09	0.53
1:0:1686:A:N3	1:0:1686:A:H2'	2.23	0.53
1:0:1807:A:O2'	1:0:1808:C:H4'	2.09	0.53
1:0:1981:A:O3'	1:0:2704:U:H4'	2.09	0.53
1:0:2784:A:H4'	1:0:2786:G:N7	2.24	0.53
1:0:2817:A:C2	1:0:2851:G:N1	2.76	0.53
1:0:176:A:H8	1:0:177:U:H5	1.57	0.53
1:0:701:U:O2'	1:0:1771:A:H2	1.90	0.53
1:0:1449:C:H2'	1:0:1450:G:C5'	2.29	0.53
1:0:2249:U:C2'	1:0:2250:G:H5'	2.39	0.53
1:0:756:C:H2'	1:0:757:U:H6	1.73	0.53
1:0:966:A:H2'	1:0:967:G:H5'	1.91	0.53
1:0:1380:C:C2'	1:0:1381:G:H5'	2.38	0.53
1:0:1485:U:H2'	1:0:1486:A:C8	2.44	0.53
1:0:1681:A:H2	1:0:2706:U:H1'	1.70	0.53
1:0:1816:G:H2'	1:0:1817:U:O4'	2.09	0.53
1:0:1999:U:O2'	1:0:2000:U:H5'	2.08	0.53
1:0:2301:A:H2'	1:0:2302:G:H5'	1.91	0.53
1:0:2671:C:H2'	1:0:2672:U:H6	1.73	0.53
1:0:789:G:N3	1:0:806:A:N6	2.56	0.53
1:0:879:A:H2'	1:0:880:C:H5'	1.89	0.53
1:0:940:G:C8	1:0:941:U:H5''	2.44	0.53
1:0:1883:A:H1'	1:0:1953:A:N7	2.24	0.53
1:0:2217:G:H5'	1:0:2218:G:N7	2.23	0.53
1:0:2279:G:H2'	1:0:2280:A:C8	2.43	0.53
1:0:2487:G:H2'	1:0:2488:G:C8	2.44	0.53
1:0:2535:C:H2'	1:0:2536:G:O4'	2.08	0.53
1:0:2612:G:H2'	1:0:2613:A:C8	2.43	0.53
1:0:2764:U:H2'	1:0:2765:C:C6	2.44	0.53
1:0:708:G:H1	1:0:780:U:H3	1.55	0.52
1:0:932:G:H2'	1:0:933:G:C8	2.44	0.52
1:0:1030:U:C2'	1:0:1031:C:H5'	2.39	0.52
1:0:1336:G:H2'	1:0:1337:G:H5'	1.91	0.52
1:0:1810:U:H4'	1:0:1813:A:H1'	1.91	0.52
1:0:2260:C:H2'	1:0:2261:G:C8	2.44	0.52
1:0:2266:A:O2'	1:0:2267:A:H8	1.92	0.52
1:0:2526:U:C4	1:0:2545:A:N7	2.77	0.52
1:0:67:G:H2'	1:0:68:C:O4'	2.08	0.52
1:0:296:A:H2'	1:0:297:A:C8	2.43	0.52
1:0:599:A:H2'	1:0:600:G:O4'	2.10	0.52
1:0:778:G:H2'	1:0:779:U:C6	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:831:G:H5'	1:0:852:U:OP1	2.10	0.52
1:0:839:U:OP1	1:0:2408:G:OP2	2.28	0.52
1:0:1001:A:N6	1:0:1200:G:O3'	2.42	0.52
1:0:1036:G:C4	1:0:1145:C:O4'	2.63	0.52
1:0:1332:G:H2'	1:0:1333:G:O4'	2.09	0.52
1:0:1364:C:H2'	1:0:1365:U:C6	2.45	0.52
1:0:1979:C:O4'	1:0:1979:C:OP1	2.28	0.52
1:0:2175:A:H2'	1:0:2176:U:C6	2.44	0.52
1:0:2225:G:H1	1:0:2237:C:H42	1.57	0.52
1:0:57:G:N2	1:0:72:A:C8	2.77	0.52
1:0:316:C:O5'	1:0:316:C:H6	1.93	0.52
1:0:545:C:O2'	1:0:546:A:H5'	2.09	0.52
1:0:678:G:O2'	1:0:679:C:H5'	2.09	0.52
1:0:1253:C:H2'	1:0:1254:G:H5'	1.92	0.52
1:0:1671:A:O2'	1:0:1672:A:H5'	2.09	0.52
1:0:2034:A:C6	1:0:2593:A:N6	2.77	0.52
1:0:2044:G:H1'	1:0:2482:A:N1	2.25	0.52
1:0:2270:U:O2'	1:0:2353:G:H1'	2.10	0.52
1:0:757:U:C2'	1:0:758:G:H5'	2.39	0.52
1:0:766:A:H2'	1:0:767:G:H8	1.73	0.52
1:0:940:G:N7	1:0:941:U:C6	2.78	0.52
1:0:2004:U:OP2	1:0:2005:U:H5	1.92	0.52
1:0:2265:A:H5''	1:0:2266:A:O4'	2.09	0.52
1:0:2745:A:H3'	1:0:2745:A:N3	2.25	0.52
1:0:27:G:HO2'	1:0:28:A:H8	1.56	0.52
1:0:436:A:H4'	1:0:437:G:OP1	2.08	0.52
1:0:437:G:H2'	1:0:438:G:C4'	2.37	0.52
1:0:727:U:H2'	1:0:728:G:H5''	1.90	0.52
1:0:1791:C:H1'	1:0:1793:A:C4'	2.40	0.52
1:0:2756:A:H4'	1:0:2758:A:OP1	2.09	0.52
1:0:324:C:C2'	1:0:325:U:H5'	2.39	0.52
1:0:532:A:H2'	1:0:533:C:C6	2.44	0.52
1:0:651:C:C3'	1:0:652:C:C5'	2.88	0.52
1:0:773:G:H2'	1:0:774:A:H5'	1.90	0.52
1:0:1001:A:C3'	1:0:1002:C:H5''	2.40	0.52
1:0:1479:G:H2'	1:0:1480:G:C8	2.44	0.52
1:0:1687:C:O2'	1:0:1977:C:H4'	2.09	0.52
1:0:1975:G:HO2'	1:0:1976:U:P	2.33	0.52
1:0:2204:A:H1'	1:0:2205:C:C5	2.45	0.52
1:0:2510:A:H61	1:0:2641:A:H61	1.57	0.52
1:0:208:C:H2'	1:0:209:G:O4'	2.10	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:616:U:OP2	1:0:616:U:O4'	2.27	0.52
1:0:783:G:H1'	1:0:1392:U:O4	2.10	0.52
1:0:930:A:N7	1:0:931:G:H1'	2.25	0.52
1:0:1442:C:H4'	1:0:1442:C:OP1	2.10	0.52
1:0:1761:G:H2'	1:0:1762:C:H5'	1.92	0.52
1:0:1764:A:C5	1:0:1821:A:H1'	2.45	0.52
1:0:2041:A:H8	1:0:2041:A:O5'	1.92	0.52
1:0:2484:G:OP2	2:0:2881:TEL:H581	2.10	0.52
1:0:2609:G:H1'	1:0:2868:G:H1'	1.90	0.52
1:0:2817:A:C2	1:0:2851:G:C6	2.97	0.52
1:0:222:G:H22	1:0:231:G:H1'	1.75	0.52
1:0:531:G:H2'	1:0:532:A:H8	1.74	0.52
1:0:841:G:H3'	1:0:841:G:N3	2.24	0.52
1:0:1322:G:O2'	1:0:1323:G:H5'	2.09	0.52
1:0:1532:A:H2'	1:0:1533:G:H8	1.74	0.52
1:0:1783:G:H2'	1:0:1784:C:O4'	2.09	0.52
1:0:2407:G:H5''	1:0:2408:G:OP1	2.08	0.52
1:0:66:U:H2'	1:0:67:G:N7	2.25	0.52
1:0:201:G:N7	1:0:432:C:H4'	2.25	0.52
1:0:1128:G:O2'	1:0:1129:A:H5'	2.10	0.52
1:0:1463:A:H1'	1:0:1543:G:N2	2.25	0.52
1:0:1624:A:C6	1:0:1627:C:C2	2.98	0.52
1:0:1823:G:C6	1:0:1824:C:N4	2.78	0.52
1:0:1982:C:OP1	1:0:2704:U:H5'	2.09	0.52
1:0:2520:A:H4'	1:0:2744:A:N1	2.24	0.52
1:0:2668:U:H5'	1:0:2669:C:OP1	2.10	0.52
1:0:162:C:C5'	1:0:195:A:H1'	2.36	0.52
1:0:604:U:H2'	1:0:605:G:O4'	2.10	0.52
1:0:1067:G:N1	1:0:1113:C:OP2	2.43	0.52
1:0:1549:C:H3'	1:0:1550:C:C6	2.45	0.52
1:0:1852:G:H2'	1:0:1853:C:C6	2.45	0.52
1:0:1982:C:OP1	1:0:2703:C:O2'	2.24	0.52
1:0:2024:U:O2'	1:0:2025:A:H5'	2.09	0.52
1:0:2586:G:H2'	1:0:2587:G:C8	2.45	0.52
1:0:2677:U:O2'	1:0:2678:C:H5'	2.10	0.52
1:0:2758:A:O2'	1:0:2759:U:P	2.68	0.52
1:0:92:U:H2'	1:0:93:A:C8	2.45	0.51
1:0:430:C:O2'	1:0:2386:G:C2	2.63	0.51
1:0:465:C:O2'	1:0:483:A:N6	2.43	0.51
1:0:749:C:O5'	1:0:749:C:H6	1.94	0.51
1:0:984:A:C2	1:0:1200:G:N1	2.75	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1280:U:H3	1:0:1996:A:H62	1.57	0.51
1:0:1284:G:O2'	1:0:1633:C:H4'	2.10	0.51
1:0:1413:U:H2'	1:0:1414:G:C8	2.44	0.51
1:0:1486:A:H2'	1:0:1487:C:C6	2.45	0.51
1:0:1545:G:H2'	1:0:1546:C:H6	1.75	0.51
1:0:1718:A:H2'	1:0:1719:G:H5'	1.92	0.51
1:0:1724:C:O2	1:0:1725:C:C5	2.62	0.51
1:0:2235:G:O2'	1:0:2236:U:H5'	2.10	0.51
1:0:2396:C:C2'	1:0:2397:A:H5'	2.40	0.51
1:0:122:G:O2'	1:0:123:A:H5''	2.10	0.51
1:0:393:U:H2'	1:0:394:U:C6	2.45	0.51
1:0:487:G:H4'	1:0:511:A:H61	1.75	0.51
1:0:638:A:O2'	1:0:639:G:H5'	2.11	0.51
1:0:1337:G:O2'	1:0:1632:A:N6	2.44	0.51
1:0:2007:G:H2'	1:0:2008:C:C6	2.46	0.51
1:0:2060:A:H61	1:0:2222:U:H3	1.58	0.51
1:0:460:U:C4'	1:0:461:A:OP2	2.58	0.51
1:0:839:U:H5''	1:0:2408:G:P	2.50	0.51
1:0:921:A:O2'	1:0:923:A:OP2	2.22	0.51
1:0:1149:G:N2	1:0:1154:A:C4	2.79	0.51
1:0:1528:C:C2'	1:0:1529:C:H5''	2.41	0.51
1:0:1823:G:H2'	1:0:1824:C:C6	2.45	0.51
1:0:1998:A:C2'	1:0:1999:U:H5'	2.39	0.51
1:0:29:U:H2'	1:0:30:G:H8	1.73	0.51
1:0:431:G:C2	1:0:432:C:H5	2.29	0.51
1:0:441:A:C2'	1:0:442:A:H5'	2.41	0.51
1:0:513:A:H5''	1:0:514:G:OP1	2.11	0.51
1:0:942:U:C2'	1:0:943:U:H5'	2.40	0.51
1:0:1007:A:H2'	1:0:1008:G:C8	2.42	0.51
1:0:1573:G:O6	1:0:1574:A:N6	2.43	0.51
1:0:1603:A:H2'	1:0:1604:A:H8	1.76	0.51
1:0:1670:G:H4'	1:0:1670:G:OP1	2.10	0.51
1:0:1716:G:O6	1:0:1754:G:H1'	2.11	0.51
1:0:1829:C:N4	1:0:1886:G:H1	2.08	0.51
1:0:1983:G:H2'	1:0:1984:A:C8	2.45	0.51
1:0:2014:A:H62	1:0:2477:C:H1'	1.75	0.51
1:0:2208:U:H2'	1:0:2209:G:H8	1.76	0.51
1:0:2218:G:N2	1:0:2219:U:H1'	2.25	0.51
1:0:2372:A:O2'	1:0:2373:C:H5'	2.10	0.51
1:0:2512:A:H2'	1:0:2513:A:H8	1.75	0.51
1:0:627:A:H2'	1:0:628:A:C8	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:846:A:H2'	1:0:847:C:C6	2.45	0.51
1:0:1514:C:H5'	1:0:1593:C:C5'	2.41	0.51
1:0:1777:A:HO2'	1:0:1778:U:P	2.33	0.51
1:0:1787:U:H2'	1:0:1788:C:H6	1.75	0.51
1:0:1859:A:H2'	1:0:1860:A:C8	2.43	0.51
1:0:155:G:O2'	1:0:156:G:H5'	2.09	0.51
1:0:460:U:O4	1:0:592:G:H1'	2.11	0.51
1:0:1355:A:O4'	1:0:1410:U:H1'	2.10	0.51
1:0:1821:A:H3'	1:0:1822:C:H6	1.74	0.51
1:0:2348:A:N6	1:0:2361:G:H22	2.08	0.51
1:0:2352:A:H2'	1:0:2353:G:C8	2.45	0.51
1:0:357:A:OP2	1:0:358:C:H1'	2.11	0.51
1:0:431:G:C2'	1:0:432:C:O5'	2.58	0.51
1:0:866:U:H2'	1:0:867:G:C8	2.45	0.51
1:0:1415:C:O2'	1:0:1416:A:H5'	2.10	0.51
1:0:1459:U:N3	1:0:1476:G:O5'	2.33	0.51
1:0:1623:C:H5'	1:0:1624:A:H5''	1.92	0.51
1:0:1875:C:H2'	1:0:1876:C:C6	2.44	0.51
1:0:1890:G:H2'	1:0:1891:C:C6	2.45	0.51
1:0:2002:A:H2'	1:0:2003:A:O5'	2.11	0.51
1:0:2039:G:OP2	1:0:2483:U:O5'	2.29	0.51
1:0:2173:G:H2'	1:0:2174:G:O4'	2.10	0.51
1:0:2680:U:H5'	1:0:2681:A:C5'	2.40	0.51
1:0:503:G:H2'	1:0:504:G:C8	2.45	0.51
1:0:566:U:H2'	1:0:567:G:H8	1.76	0.51
1:0:853:C:N3	1:0:950:G:O6	2.44	0.51
1:0:956:A:C2'	1:0:957:G:O5'	2.58	0.51
1:0:1477:C:O2'	1:0:2681:A:H1'	2.11	0.51
1:0:1739:G:H2'	1:0:1740:G:C8	2.46	0.51
1:0:1813:A:H2'	1:0:1814:G:C8	2.46	0.51
1:0:2021:G:O2'	1:0:2022:C:H5'	2.11	0.51
1:0:115:G:C2	1:0:117:A:N6	2.79	0.51
1:0:192:G:O2'	1:0:193:A:OP2	2.28	0.51
1:0:701:U:O2'	1:0:702:A:H5'	2.11	0.51
1:0:974:U:H1'	1:0:2229:G:C2	2.46	0.51
1:0:1948:C:C4	1:0:1949:A:N6	2.79	0.51
1:0:2553:G:H8	1:0:2553:G:O5'	1.93	0.51
1:0:2664:G:O2'	1:0:2665:G:H5'	2.11	0.51
1:0:2876:C:H2'	1:0:2877:A:H8	1.76	0.51
1:0:433:G:O2'	1:0:434:C:C6	2.63	0.51
1:0:520:C:H2'	1:0:521:U:O4'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:986:A:N7	1:0:987:G:C8	2.79	0.51
1:0:1133:G:O2'	1:0:1134:C:H5'	2.11	0.51
1:0:1354:A:H3'	1:0:1410:U:O2	2.11	0.51
1:0:1582:A:H62	1:0:1584:G:N2	2.07	0.51
1:0:1787:U:H2'	1:0:1788:C:C6	2.46	0.51
1:0:1827:G:H1'	1:0:1914:U:O4	2.10	0.51
1:0:2107:G:H2'	1:0:2108:G:C8	2.46	0.51
1:0:2210:C:H2'	1:0:2211:U:O4'	2.11	0.51
1:0:2249:U:H2'	1:0:2250:G:H5'	1.93	0.51
1:0:2394:G:H2'	1:0:2395:C:C6	2.46	0.51
1:0:2530:C:H2'	1:0:2531:U:O4'	2.11	0.51
1:0:2660:C:O2	1:0:2660:C:C2'	2.59	0.51
1:0:671:A:H2'	1:0:672:C:C6	2.46	0.50
1:0:805:G:O3'	1:0:806:A:O4'	2.29	0.50
1:0:1938:U:O2	1:0:1938:U:H2'	2.09	0.50
1:0:2516:U:H2'	1:0:2517:C:C6	2.45	0.50
1:0:2574:G:N2	1:0:2577:A:OP2	2.41	0.50
1:0:2627:G:O2'	1:0:2628:C:H5'	2.11	0.50
1:0:2710:C:O2'	1:0:2711:G:H5'	2.12	0.50
1:0:541:C:H42	1:0:572:G:H5''	1.76	0.50
1:0:625:A:N3	1:0:625:A:H2'	2.26	0.50
1:0:944:A:H2'	1:0:945:G:O4'	2.11	0.50
1:0:995:A:H5''	1:0:996:C:H5	1.75	0.50
1:0:2121:U:H2'	1:0:2122:G:H8	1.76	0.50
1:0:2390:A:H2'	1:0:2391:A:O4'	2.12	0.50
1:0:2491:C:H2'	1:0:2492:G:H5''	1.93	0.50
1:0:2705:A:O2'	1:0:2706:U:C6	2.64	0.50
1:0:2753:C:H2'	1:0:2754:C:H6	1.74	0.50
1:0:340:G:H4'	1:0:341:A:C5'	2.41	0.50
1:0:492:G:H2'	1:0:517:A:C2	2.46	0.50
1:0:701:U:H4'	1:0:1771:A:C2	2.47	0.50
1:0:914:C:H2'	1:0:915:C:C6	2.46	0.50
1:0:941:U:H2'	1:0:942:U:N1	2.26	0.50
1:0:1822:C:H2'	1:0:1823:G:C8	2.47	0.50
1:0:1877:C:H2'	1:0:1878:C:C6	2.46	0.50
1:0:2618:A:H1'	1:0:2758:A:C2	2.46	0.50
1:0:2716:G:O2'	1:0:2717:G:H5'	2.12	0.50
1:0:7:G:H2'	1:0:8:A:H8	1.74	0.50
1:0:218:A:O2'	1:0:219:G:P	2.69	0.50
1:0:228:A:C5	1:0:229:G:H1'	2.46	0.50
1:0:462:G:H2'	1:0:463:C:H5'	1.92	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:539:A:H2'	1:0:540:G:OP2	2.12	0.50
1:0:765:C:H4'	1:0:766:A:H5'	1.93	0.50
1:0:1172:U:H2'	1:0:1173:G:C8	2.45	0.50
1:0:1645:U:H2'	1:0:1646:G:C8	2.46	0.50
1:0:2522:G:H5''	1:0:2746:G:O3'	2.12	0.50
1:0:2669:C:H2'	1:0:2670:C:OP2	2.11	0.50
1:0:2765:C:H2'	1:0:2766:U:C6	2.46	0.50
1:0:2:G:H2'	1:0:3:U:H6	1.76	0.50
1:0:322:A:H2'	1:0:342:G:P	2.51	0.50
1:0:539:A:C2'	1:0:540:G:OP2	2.59	0.50
1:0:773:G:C2'	1:0:774:A:H5'	2.42	0.50
1:0:807:A:C6	1:0:808:C:C4	2.99	0.50
1:0:1035:G:H21	1:0:1155:G:C4'	2.23	0.50
1:0:1196:G:H2'	1:0:1197:U:H5'	1.93	0.50
1:0:1746:A:H2'	1:0:1747:G:H5'	1.94	0.50
1:0:2620:G:H2'	1:0:2621:G:H8	1.77	0.50
1:0:109:A:H2'	1:0:110:U:C5'	2.40	0.50
1:0:688:A:O2'	1:0:2422:C:H4'	2.11	0.50
1:0:733:G:H2'	1:0:734:G:H8	1.76	0.50
1:0:768:U:H2'	1:0:769:C:O4'	2.12	0.50
1:0:1036:G:N3	1:0:1145:C:O4'	2.45	0.50
1:0:1299:A:O2'	1:0:1300:A:P	2.69	0.50
1:0:1789:U:C2	1:0:1811:A:H2	2.30	0.50
1:0:2407:G:H5'	1:0:2408:G:C2	2.47	0.50
1:0:2519:C:C4	1:0:2520:A:N7	2.80	0.50
1:0:2551:A:H2'	1:0:2551:A:N3	2.26	0.50
1:0:14:A:H62	1:0:15:G:N2	2.10	0.50
1:0:32:C:H5'	1:0:1251:G:OP1	2.11	0.50
1:0:357:A:H3'	1:0:358:C:O4'	2.11	0.50
1:0:577:U:H4'	1:0:956:A:N6	2.26	0.50
1:0:598:U:H2'	1:0:599:A:H8	1.72	0.50
1:0:715:U:H2'	1:0:716:U:C6	2.46	0.50
1:0:813:A:O2'	1:0:815:A:H5'	2.12	0.50
1:0:857:U:O2'	1:0:858:G:H5'	2.11	0.50
1:0:953:G:H2'	1:0:954:U:O4'	2.12	0.50
1:0:971:A:H2	1:0:2475:C:H1'	1.76	0.50
1:0:1447:U:H1'	1:0:1577:G:N2	2.26	0.50
1:0:1542:G:H21	1:0:1561:A:H62	1.59	0.50
1:0:2018:G:O2'	1:0:2019:C:P	2.70	0.50
1:0:2351:G:N2	1:0:2352:A:N9	2.60	0.50
1:0:2520:A:H1'	1:0:2744:A:C2	2.46	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2522:G:O4'	1:0:2746:G:H4'	2.12	0.50
1:0:195:A:H2'	1:0:196:A:H5'	1.92	0.50
1:0:820:U:H1'	1:0:2424:G:OP1	2.11	0.50
1:0:1255:A:H2'	1:0:1256:C:C6	2.47	0.50
1:0:1363:C:O2'	1:0:1364:C:H5'	2.11	0.50
1:0:1685:A:HO2'	1:0:1686:A:P	2.33	0.50
1:0:2623:A:H2'	1:0:2624:G:O4'	2.11	0.50
1:0:2756:A:O2'	1:0:2757:G:P	2.69	0.50
1:0:183:U:H2'	1:0:184:A:H8	1.77	0.50
1:0:567:G:O2'	1:0:568:G:H5'	2.12	0.50
1:0:931:G:N1	1:0:2247:A:H5''	2.27	0.50
1:0:956:A:C2	1:0:2427:A:H1'	2.46	0.50
1:0:1013:G:N2	1:0:1165:G:H1'	2.26	0.50
1:0:2014:A:H62	1:0:2477:C:C1'	2.25	0.50
1:0:2642:G:H2'	1:0:2643:G:O4'	2.11	0.50
1:0:143:A:O2'	1:0:144:U:H5'	2.12	0.49
1:0:236:C:H2'	1:0:237:G:H8	1.77	0.49
1:0:239:A:H5''	1:0:620:G:H5'	1.93	0.49
1:0:357:A:H3'	1:0:358:C:C5'	2.42	0.49
1:0:1166:A:C2'	1:0:1167:A:H5''	2.41	0.49
1:0:2231:G:O2'	1:0:2232:G:H5'	2.12	0.49
1:0:2280:A:H2'	1:0:2281:C:C6	2.47	0.49
1:0:2307:A:H2'	1:0:2308:A:C8	2.47	0.49
1:0:2672:U:H5'	1:0:2844:G:H22	1.77	0.49
1:0:208:C:C2'	1:0:209:G:H5'	2.42	0.49
1:0:508:G:O2'	1:0:509:U:H5'	2.12	0.49
1:0:509:U:H2'	1:0:510:G:O4'	2.12	0.49
1:0:677:G:C1'	1:0:951:G:H5''	2.40	0.49
1:0:982:C:H2'	1:0:983:G:O4'	2.12	0.49
1:0:2016:A:N6	1:0:2019:C:N3	2.61	0.49
1:0:2030:U:O2'	1:0:2031:A:H5'	2.11	0.49
1:0:2484:G:O4'	2:0:2881:TEL:H572	2.13	0.49
1:0:2852:G:C2'	1:0:2853:U:H5'	2.42	0.49
1:0:26:G:C6	1:0:27:G:N1	2.80	0.49
1:0:26:G:N1	1:0:27:G:N2	2.60	0.49
1:0:52:A:H62	1:0:115:G:N2	2.07	0.49
1:0:389:G:C8	1:0:390:U:O4'	2.66	0.49
1:0:431:G:C4	1:0:432:C:C5	3.00	0.49
1:0:643:A:O2'	1:0:644:A:H5'	2.12	0.49
1:0:681:A:H2'	1:0:683:A:C6	2.45	0.49
1:0:688:A:N3	1:0:2422:C:O2'	2.39	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:998:C:H2'	1:0:999:A:H5'	1.94	0.49
1:0:1296:G:H2'	1:0:1298:G:OP2	2.12	0.49
1:0:1582:A:H3'	1:0:1583:A:H5'	1.93	0.49
1:0:1614:C:H2'	1:0:1615:C:C6	2.46	0.49
1:0:1691:G:H4'	1:0:1692:C:OP1	2.12	0.49
1:0:1916:G:H1	1:0:1950:C:N4	2.02	0.49
1:0:1932:G:H3'	1:0:1933:G:N7	2.27	0.49
1:0:2197:U:H2'	1:0:2198:U:C6	2.48	0.49
1:0:2677:U:H3	1:0:2688:G:H1	1.58	0.49
1:0:2748:C:H2'	1:0:2749:A:C8	2.47	0.49
1:0:431:G:N3	1:0:432:C:H5	2.11	0.49
1:0:717:G:H2'	1:0:739:G:N2	2.27	0.49
1:0:947:C:H2'	1:0:948:C:C6	2.48	0.49
1:0:951:G:C3'	1:0:952:A:H5''	2.41	0.49
1:0:989:G:H2'	1:0:990:A:O4'	2.12	0.49
1:0:1227:A:H2'	1:0:1228:G:O4'	2.12	0.49
1:0:1473:U:H4'	1:0:1474:A:C5	2.47	0.49
1:0:1778:U:H3'	1:0:1778:U:OP2	2.12	0.49
1:0:1921:A:C2'	1:0:1922:U:H5''	2.38	0.49
1:0:2228:U:C1'	1:0:2254:C:H41	2.25	0.49
1:0:2388:G:H2'	1:0:2389:G:C1'	2.41	0.49
1:0:2714:A:H2'	1:0:2715:C:O4'	2.12	0.49
1:0:19:C:H2'	1:0:20:C:H6	1.76	0.49
1:0:81:C:H5'	1:0:306:G:HO2'	1.77	0.49
1:0:219:G:H2'	1:0:220:U:OP2	2.13	0.49
1:0:339:U:O2	1:0:339:U:C2'	2.59	0.49
1:0:592:G:C6	1:0:593:C:N4	2.81	0.49
1:0:672:C:O2'	1:0:673:G:H5'	2.12	0.49
1:0:761:G:H8	1:0:763:A:OP2	1.96	0.49
1:0:941:U:H2'	1:0:942:U:C6	2.47	0.49
1:0:1066:G:C3'	1:0:1067:G:H5''	2.38	0.49
1:0:2049:C:H2'	1:0:2050:G:C5'	2.42	0.49
1:0:2060:A:N6	1:0:2222:U:H3	2.11	0.49
1:0:2082:C:H2'	1:0:2083:G:C8	2.48	0.49
1:0:2161:C:O2'	1:0:2162:C:P	2.70	0.49
1:0:2548:G:H2'	1:0:2549:G:H5'	1.93	0.49
1:0:2783:U:H3	1:0:2785:A:N6	2.10	0.49
1:0:203:G:N2	1:0:207:U:C4	2.80	0.49
1:0:485:G:O2'	1:0:486:U:P	2.69	0.49
1:0:833:A:N3	1:0:954:U:O2'	2.46	0.49
1:0:1175:A:H2'	1:0:1176:U:H6	1.78	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1540:C:H2'	1:0:1541:G:O4'	2.11	0.49
1:0:1705:U:O4'	1:0:1718:A:N6	2.45	0.49
1:0:1919:A:O4'	1:0:1923:U:C5	2.65	0.49
1:0:1937:G:H2'	1:0:1939:U:C4	2.47	0.49
1:0:190:A:H2'	1:0:191:G:C8	2.48	0.49
1:0:344:G:H2'	1:0:344:G:N3	2.28	0.49
1:0:482:A:H2'	1:0:483:A:C5'	2.43	0.49
1:0:838:A:H2'	1:0:839:U:O4'	2.13	0.49
1:0:1872:A:O2'	1:0:1873:A:H5'	2.13	0.49
1:0:1875:C:H2'	1:0:1876:C:H6	1.77	0.49
1:0:2093:G:O2'	1:0:2094:C:P	2.71	0.49
1:0:2245:A:H4'	1:0:2246:A:O5'	2.13	0.49
1:0:2308:A:H2'	1:0:2309:G:C8	2.47	0.49
1:0:2347:C:H2'	1:0:2348:A:C8	2.47	0.49
1:0:39:C:H2'	1:0:40:U:C6	2.47	0.49
1:0:88:G:H3'	1:0:89:A:C5'	2.40	0.49
1:0:173:A:H2	1:0:818:G:N3	2.10	0.49
1:0:566:U:H2'	1:0:567:G:C8	2.48	0.49
1:0:704:G:H2'	1:0:705:C:O4'	2.13	0.49
1:0:838:A:H4'	1:0:2407:G:C5	2.48	0.49
1:0:860:U:H3	1:0:945:G:N2	2.10	0.49
1:0:942:U:H6	1:0:942:U:O5'	1.95	0.49
1:0:1137:A:H4'	1:0:1138:A:H5''	1.95	0.49
1:0:1147:G:H2'	1:0:1148:G:C8	2.43	0.49
1:0:2203:G:H4'	1:0:2205:C:N3	2.28	0.49
1:0:2336:G:N2	1:0:2339:A:OP2	2.43	0.49
1:0:2433:G:N1	1:0:2478:C:N4	2.61	0.49
1:0:2544:A:H2'	1:0:2545:A:O4'	2.13	0.49
1:0:2795:A:C2'	1:0:2796:A:OP1	2.60	0.49
1:0:2800:C:H2'	1:0:2801:A:H5'	1.94	0.49
1:0:778:G:H2'	1:0:779:U:H6	1.78	0.49
1:0:1368:G:H2'	1:0:1369:G:C8	2.44	0.49
1:0:1391:A:O2'	1:0:1392:U:C6	2.66	0.49
1:0:1764:A:C2'	1:0:1765:C:H5'	2.43	0.49
1:0:2062:U:H2'	1:0:2063:A:O4'	2.12	0.49
1:0:2723:C:O2'	1:0:2724:G:H5'	2.13	0.49
1:0:50:G:H2'	1:0:117:A:N1	2.28	0.49
1:0:70:A:H4'	1:0:72:A:OP2	2.13	0.49
1:0:159:A:H1'	1:0:446:C:O2'	2.12	0.49
1:0:394:U:O5'	1:0:394:U:H6	1.96	0.49
1:0:1293:A:H2'	1:0:1294:G:C8	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1310:C:H2'	1:0:1311:C:H6	1.76	0.49
1:0:1653:C:H2'	1:0:1654:A:C8	2.48	0.49
1:0:2559:U:C2'	1:0:2560:G:H5'	2.42	0.49
1:0:2728:A:C6	1:0:2736:U:H1'	2.47	0.49
1:0:118:U:O2	1:0:143:A:N7	2.46	0.48
1:0:520:C:O2'	1:0:1249:G:H5''	2.12	0.48
1:0:968:C:C2'	1:0:969:U:OP1	2.61	0.48
1:0:1226:A:N6	1:0:1249:G:H1'	2.28	0.48
1:0:1973:C:H2'	1:0:1974:U:O4'	2.13	0.48
1:0:2451:G:C1'	1:0:2457:A:H61	2.06	0.48
1:0:69:G:H3'	1:0:111:G:O2'	2.13	0.48
1:0:125:A:H5''	1:0:126:C:C6	2.48	0.48
1:0:459:A:N6	1:0:484:G:C1'	2.76	0.48
1:0:614:G:N2	1:0:634:G:N2	2.38	0.48
1:0:621:U:H2'	1:0:622:U:H6	1.77	0.48
1:0:733:G:H2'	1:0:734:G:C8	2.48	0.48
1:0:942:U:O2'	1:0:943:U:H5'	2.13	0.48
1:0:1494:G:O6	1:0:1529:C:N3	2.46	0.48
1:0:2040:A:OP2	1:0:2483:U:OP1	2.31	0.48
1:0:2270:U:H5''	1:0:2359:U:O2'	2.12	0.48
1:0:2349:G:H2'	1:0:2350:G:O4'	2.13	0.48
1:0:2407:G:H4'	1:0:2408:G:C4	2.48	0.48
1:0:2427:A:OP2	1:0:2478:C:OP2	2.30	0.48
1:0:2549:G:C2'	1:0:2550:C:H5'	2.43	0.48
1:0:2671:C:H4'	1:0:2845:C:O2	2.13	0.48
1:0:78:C:H1'	1:0:357:A:N1	2.28	0.48
1:0:430:C:O2'	1:0:2386:G:N2	2.47	0.48
1:0:524:A:H1'	1:0:590:C:O2'	2.13	0.48
1:0:756:C:H2'	1:0:757:U:C6	2.48	0.48
1:0:931:G:H2'	1:0:932:G:H5'	1.95	0.48
1:0:978:U:H2'	1:0:979:A:H8	1.78	0.48
1:0:1408:A:H5''	1:0:1409:U:OP1	2.13	0.48
1:0:1918:G:C4	1:0:1945:C:N4	2.81	0.48
1:0:1964:A:H5''	1:0:1965:U:OP2	2.13	0.48
1:0:2229:G:H8	1:0:2229:G:OP1	1.96	0.48
1:0:2374:C:H42	1:0:2400:G:H1	1.61	0.48
1:0:2397:A:H2'	1:0:2398:U:O4'	2.13	0.48
1:0:2542:U:H2'	1:0:2544:A:OP2	2.13	0.48
1:0:2816:C:H1'	1:0:2852:G:N2	2.28	0.48
1:0:2869:U:H2'	1:0:2870:C:C6	2.48	0.48
1:0:84:G:H2'	1:0:85:C:C6	2.48	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:138:G:H2'	1:0:139:A:C8	2.48	0.48
1:0:191:G:O2'	1:0:192:G:H5'	2.13	0.48
1:0:697:G:C4	1:0:788:G:O6	2.66	0.48
1:0:991:A:H2	1:0:2020:G:N3	2.11	0.48
1:0:1766:U:C2'	1:0:1767:G:H5'	2.43	0.48
1:0:1783:G:H1	1:0:1820:G:H1'	1.78	0.48
1:0:1996:A:O2'	1:0:1997:A:H5'	2.13	0.48
1:0:2059:U:H5''	1:0:2217:G:N1	2.25	0.48
1:0:2199:C:H2'	1:0:2200:G:C8	2.49	0.48
1:0:2350:G:C2	1:0:2351:G:N7	2.82	0.48
1:0:2548:G:H2'	1:0:2549:G:C5'	2.43	0.48
1:0:388:G:OP2	1:0:388:G:H8	1.97	0.48
1:0:538:A:N6	1:0:2759:U:N3	2.61	0.48
1:0:838:A:H2'	1:0:839:U:C6	2.48	0.48
1:0:1038:U:C4	1:0:2467:A:H5'	2.49	0.48
1:0:1531:C:C2'	1:0:1532:A:H5'	2.43	0.48
1:0:1999:U:C2'	1:0:2000:U:H5'	2.43	0.48
1:0:2076:G:C2	1:0:2181:A:N6	2.81	0.48
1:0:2205:C:O2'	1:0:2206:C:H5'	2.13	0.48
1:0:2765:C:H2'	1:0:2766:U:H6	1.78	0.48
1:0:65:C:C2'	1:0:66:U:H5'	2.44	0.48
1:0:67:G:C6	1:0:72:A:C2	3.01	0.48
1:0:81:C:H5''	1:0:307:C:H5'	1.96	0.48
1:0:92:U:H2'	1:0:93:A:O4'	2.14	0.48
1:0:221:A:H2'	1:0:222:G:H5'	1.94	0.48
1:0:638:A:C2'	1:0:639:G:H5'	2.44	0.48
1:0:742:G:H5'	1:0:743:A:C5'	2.42	0.48
1:0:1092:U:H2'	1:0:1093:U:C6	2.48	0.48
1:0:1223:G:H5'	1:0:1225:G:C5'	2.43	0.48
1:0:1299:A:N6	1:0:1302:C:C4	2.81	0.48
1:0:1356:G:C5'	1:0:1614:C:OP2	2.62	0.48
1:0:81:C:C5'	1:0:307:C:H5'	2.44	0.48
1:0:762:A:H2'	1:0:763:A:H8	1.78	0.48
1:0:946:U:O5'	1:0:946:U:H6	1.96	0.48
1:0:961:G:H2'	1:0:962:C:C6	2.48	0.48
1:0:1312:G:H5''	1:0:1313:U:OP1	2.13	0.48
1:0:1341:G:H2'	1:0:1343:C:C4	2.48	0.48
1:0:1854:G:H2'	1:0:1855:G:C8	2.44	0.48
1:0:2548:G:C2'	1:0:2549:G:H5''	2.44	0.48
1:0:2555:G:N3	1:0:2555:G:C2'	2.76	0.48
1:0:2727:G:H2'	1:0:2728:A:H5''	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:180:C:N3	1:0:181:A:C6	2.82	0.48
1:0:433:G:C2'	1:0:434:C:OP2	2.61	0.48
1:0:529:U:H2'	1:0:530:G:H8	1.78	0.48
1:0:1313:U:O2'	1:0:1314:A:OP2	2.25	0.48
1:0:2011:U:H3	1:0:2016:A:N6	2.12	0.48
1:0:698:A:C1'	1:0:700:C:C5	2.97	0.48
1:0:825:C:H1'	1:0:1263:G:N1	2.27	0.48
1:0:882:C:H2'	1:0:883:A:O4'	2.14	0.48
1:0:1118:G:H2'	1:0:1119:U:C6	2.49	0.48
1:0:1712:G:N3	1:0:1712:G:C3'	2.75	0.48
1:0:1950:C:H2'	1:0:1951:G:H5'	1.94	0.48
1:0:1982:C:H5''	1:0:2703:C:C2'	2.43	0.48
1:0:2347:C:H2'	1:0:2348:A:O4'	2.14	0.48
1:0:2599:U:H3'	1:0:2600:A:H5''	1.95	0.48
1:0:163:A:C2	1:0:188:G:C4	3.02	0.48
1:0:173:A:O2'	1:0:174:A:OP1	2.30	0.48
1:0:192:G:O2'	1:0:193:A:P	2.72	0.48
1:0:477:A:N3	1:0:696:U:H1'	2.28	0.48
1:0:502:A:H2'	1:0:503:G:H5'	1.95	0.48
1:0:605:G:H2'	1:0:606:A:C8	2.48	0.48
1:0:772:G:H2'	1:0:773:G:C8	2.47	0.48
1:0:826:U:HO2'	1:0:1238:A:H1'	1.79	0.48
1:0:931:G:H1	1:0:2247:A:H5''	1.78	0.48
1:0:986:A:H2	1:0:1001:A:O4'	1.96	0.48
1:0:1327:C:OP1	1:0:1345:G:H5'	2.14	0.48
1:0:1922:U:O2'	1:0:2571:G:H1'	2.13	0.48
1:0:1955:G:O2'	1:0:1956:G:C5'	2.57	0.48
1:0:2448:A:H2'	1:0:2449:G:O4'	2.13	0.48
1:0:2555:G:H3'	1:0:2555:G:OP1	2.14	0.48
1:0:2732:C:H3'	1:0:2733:A:H8	1.79	0.48
1:0:119:G:H2'	1:0:120:G:C8	2.49	0.47
1:0:649:G:N1	1:0:660:G:N1	2.62	0.47
1:0:763:A:H5''	1:0:1631:C:N4	2.29	0.47
1:0:876:A:H2'	1:0:877:G:C8	2.49	0.47
1:0:1108:U:C2'	1:0:1109:A:H5'	2.34	0.47
1:0:1605:A:H2'	1:0:1606:C:C6	2.49	0.47
1:0:2463:G:H2'	1:0:2464:G:C8	2.47	0.47
1:0:2548:G:O2'	1:0:2549:G:H5''	2.14	0.47
1:0:2695:C:H2'	1:0:2696:A:H8	1.78	0.47
1:0:594:G:N1	1:0:1264:C:N4	2.57	0.47
1:0:1055:A:H1'	1:0:1058:G:H1'	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1489:C:H3'	1:0:1490:U:H5'	1.97	0.47
1:0:1618:U:OP2	1:0:1619:A:N1	2.47	0.47
1:0:1679:U:H2'	1:0:1680:U:C5'	2.37	0.47
1:0:2157:C:H2'	1:0:2158:C:C6	2.49	0.47
1:0:2246:A:H3'	1:0:2246:A:N3	2.30	0.47
1:0:2597:G:H2'	1:0:2598:C:H6	1.79	0.47
1:0:2764:U:H2'	1:0:2765:C:C5	2.49	0.47
1:0:548:G:O2'	1:0:549:G:H5'	2.14	0.47
1:0:608:G:O2'	1:0:609:U:H5'	2.15	0.47
1:0:701:U:HO2'	1:0:1771:A:H2	1.60	0.47
1:0:1040:A:C8	1:0:1041:G:C8	3.02	0.47
1:0:1528:C:H2'	1:0:1529:C:H5''	1.95	0.47
1:0:1545:G:H2'	1:0:1546:C:C6	2.48	0.47
1:0:1641:C:H2'	1:0:1642:G:H5'	1.96	0.47
1:0:1791:C:C1'	1:0:1793:A:H5'	2.38	0.47
1:0:1888:C:H2'	1:0:1913:G:C5	2.49	0.47
1:0:2549:G:H5'	1:0:2549:G:H8	1.79	0.47
1:0:2605:C:H2'	1:0:2606:G:O4'	2.14	0.47
1:0:2650:G:O2'	1:0:2651:U:H5'	2.13	0.47
1:0:577:U:H4'	1:0:956:A:H61	1.79	0.47
1:0:803:C:H6	1:0:803:C:H3'	1.80	0.47
1:0:839:U:H5'	1:0:2407:G:H2'	1.95	0.47
1:0:923:A:O4'	1:0:2243:C:H4'	2.15	0.47
1:0:1293:A:H2'	1:0:1294:G:H8	1.79	0.47
1:0:1386:A:H2'	1:0:1387:G:O4'	2.14	0.47
1:0:1435:G:H2'	1:0:1436:G:C8	2.45	0.47
1:0:2001:G:H3'	1:0:2001:G:C8	2.50	0.47
1:0:2377:U:O2'	1:0:2378:G:P	2.72	0.47
1:0:2467:A:H2'	1:0:2468:G:H8	1.78	0.47
1:0:2532:G:H2'	1:0:2533:U:C4'	2.44	0.47
1:0:2607:C:O2'	1:0:2762:G:OP1	2.33	0.47
1:0:26:G:H2'	1:0:27:G:O4'	2.15	0.47
1:0:178:C:O2'	1:0:179:U:H5'	2.13	0.47
1:0:187:U:H2'	1:0:188:G:H8	1.79	0.47
1:0:1293:A:O2'	1:0:1294:G:H5'	2.15	0.47
1:0:1356:G:H1'	1:0:1613:G:C2	2.50	0.47
1:0:1407:G:O2'	1:0:1408:A:H5'	2.15	0.47
1:0:1424:U:H2'	1:0:1425:G:H8	1.79	0.47
1:0:2073:A:H61	1:0:2208:U:H3	1.62	0.47
1:0:2876:C:H2'	1:0:2877:A:C8	2.49	0.47
1:0:200:A:C6	1:0:435:A:C5	3.03	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:690:A:H4'	1:0:2053:G:O2'	2.14	0.47
1:0:831:G:N2	1:0:1203:A:H62	2.11	0.47
1:0:939:C:N3	1:0:940:G:O6	2.48	0.47
1:0:1975:G:O2'	1:0:1976:U:O5'	2.33	0.47
1:0:2080:U:H2'	1:0:2081:U:C6	2.49	0.47
1:0:2629:U:H3	1:0:2649:A:H61	1.60	0.47
1:0:105:G:O2'	1:0:106:G:H5'	2.14	0.47
1:0:195:A:C2'	1:0:196:A:H5'	2.44	0.47
1:0:301:C:H2'	1:0:302:U:O4'	2.14	0.47
1:0:320:A:N3	1:0:340:G:H2'	2.29	0.47
1:0:398:C:H42	1:0:402:A:N6	2.13	0.47
1:0:564:U:H2'	1:0:565:A:H8	1.80	0.47
1:0:593:C:H2'	1:0:594:G:C8	2.49	0.47
1:0:782:U:H2'	1:0:783:G:C8	2.49	0.47
1:0:1073:G:C3'	1:0:1074:G:H5''	2.45	0.47
1:0:1086:C:O5'	1:0:1086:C:H6	1.97	0.47
1:0:1256:C:H2'	1:0:1257:U:C6	2.50	0.47
1:0:1313:U:C4	1:0:1651:U:H1'	2.50	0.47
1:0:1341:G:N2	1:0:1343:C:O2	2.48	0.47
1:0:1574:A:C2	1:0:1576:G:H1'	2.49	0.47
1:0:1629:G:H3'	1:0:1630:A:C5'	2.44	0.47
1:0:1736:C:H2'	1:0:1737:G:H8	1.79	0.47
1:0:1773:C:H1'	1:0:2588:U:O4'	2.15	0.47
1:0:2134:U:O5'	1:0:2134:U:H6	1.98	0.47
1:0:2200:G:H2'	1:0:2201:G:C8	2.49	0.47
1:0:2204:A:C2'	1:0:2205:C:OP2	2.63	0.47
1:0:2207:G:H2'	1:0:2208:U:O4'	2.14	0.47
1:0:2598:C:H2'	1:0:2599:U:C6	2.50	0.47
1:0:2633:A:H4'	1:0:2634:G:OP1	2.14	0.47
1:0:2760:G:H5'	1:0:2761:A:C8	2.50	0.47
1:0:200:A:N1	1:0:435:A:N7	2.63	0.47
1:0:203:G:O6	1:0:431:G:O3'	2.32	0.47
1:0:788:G:H5'	1:0:790:A:N3	2.30	0.47
1:0:1106:A:H2'	1:0:1107:A:C8	2.50	0.47
1:0:1259:A:C2'	1:0:1260:A:H5'	2.45	0.47
1:0:1373:G:H1	1:0:2192:U:H3	1.63	0.47
1:0:1431:U:H5''	1:0:1604:A:H1'	1.97	0.47
1:0:1806:G:O6	1:0:1807:A:N6	2.47	0.47
1:0:1820:G:H4'	1:0:1821:A:OP1	2.14	0.47
1:0:1906:U:H2'	1:0:1907:C:C6	2.50	0.47
1:0:1963:G:H2'	1:0:1964:A:OP1	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2061:C:O2'	1:0:2062:U:H5'	2.15	0.47
1:0:2161:C:H2'	1:0:2162:C:C6	2.50	0.47
1:0:2225:G:N2	1:0:2405:A:O2'	2.48	0.47
1:0:2386:G:C2	1:0:2387:U:C4	3.03	0.47
1:0:2496:C:C2	1:0:2521:A:N6	2.82	0.47
1:0:459:A:C2	1:0:466:A:N7	2.83	0.47
1:0:673:G:H2'	1:0:674:U:C6	2.49	0.47
1:0:830:C:H3'	1:0:831:G:H8	1.80	0.47
1:0:1207:G:H2'	1:0:1208:A:C8	2.50	0.47
1:0:1442:C:H3'	1:0:1443:G:C5'	2.45	0.47
1:0:1480:G:C2'	1:0:1481:U:H5'	2.45	0.47
1:0:2040:A:C6	1:0:2041:A:C6	3.03	0.47
1:0:2225:G:H2'	1:0:2226:A:H8	1.80	0.47
1:0:2240:C:H2'	1:0:2241:U:H5'	1.96	0.47
1:0:2324:G:H4'	1:0:2325:A:O5'	2.15	0.47
1:0:2477:C:H3'	1:0:2477:C:C6	2.48	0.47
1:0:295:C:N4	1:0:296:A:N6	2.62	0.47
1:0:387:A:H3'	1:0:388:G:C8	2.50	0.47
1:0:580:A:H1'	1:0:582:G:N7	2.30	0.47
1:0:718:A:N6	1:0:739:G:H1'	2.26	0.47
1:0:853:C:C2	1:0:950:G:N1	2.83	0.47
1:0:1039:A:H1'	1:0:2466:G:O5'	2.15	0.47
1:0:1199:U:C5	1:0:1201:G:O6	2.68	0.47
1:0:1302:C:OP2	1:0:1302:C:H6	1.98	0.47
1:0:1465:G:H2'	1:0:1466:C:C1'	2.45	0.47
1:0:1674:C:H2'	1:0:1675:C:C6	2.50	0.47
1:0:1949:A:N3	1:0:2572:U:O4'	2.48	0.47
1:0:1982:C:O2'	1:0:1983:G:H5'	2.15	0.47
1:0:2194:A:H2'	1:0:2195:C:O4'	2.15	0.47
1:0:2351:G:N2	1:0:2352:A:C4	2.83	0.47
1:0:2515:G:O2'	1:0:2516:U:H5'	2.15	0.47
1:0:2695:C:O5'	1:0:2695:C:H6	1.97	0.47
1:0:46:C:H2'	1:0:47:G:H8	1.80	0.46
1:0:176:A:C8	1:0:177:U:H5	2.33	0.46
1:0:357:A:C2'	1:0:358:C:H5'	2.45	0.46
1:0:1147:G:C4	1:0:1148:G:C8	3.03	0.46
1:0:1396:C:O5'	1:0:1396:C:H6	1.99	0.46
1:0:1443:G:N3	1:0:1584:G:C2	2.83	0.46
1:0:1949:A:N3	1:0:2571:G:O2'	2.40	0.46
1:0:2228:U:H1'	1:0:2254:C:H41	1.79	0.46
1:0:2387:U:C2'	1:0:2388:G:H5'	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2441:U:H2'	1:0:2442:C:C6	2.49	0.46
1:0:2447:G:N1	1:0:2460:G:H2'	2.27	0.46
1:0:2534:U:H2'	1:0:2535:C:H5'	1.98	0.46
1:0:2658:A:H2'	1:0:2659:C:O4'	2.14	0.46
1:0:460:U:H5'	1:0:461:A:OP2	2.14	0.46
1:0:516:G:C2'	1:0:517:A:OP2	2.62	0.46
1:0:540:G:N2	1:0:2004:U:O2'	2.49	0.46
1:0:616:U:C3'	1:0:617:U:H5''	2.45	0.46
1:0:658:G:H1'	1:0:2330:G:C5'	2.45	0.46
1:0:919:U:N3	1:0:920:G:N7	2.63	0.46
1:0:983:G:P	1:0:985:G:H5''	2.53	0.46
1:0:1272:G:H2'	1:0:1273:G:H8	1.80	0.46
1:0:1496:G:N2	1:0:1527:G:H22	2.12	0.46
1:0:1641:C:C2'	1:0:1642:G:H5'	2.45	0.46
1:0:1745:C:N3	1:0:2696:A:O2'	2.47	0.46
1:0:1861:G:H2'	1:0:1862:C:O4'	2.15	0.46
1:0:2120:C:H42	1:0:2137:G:H1	1.61	0.46
1:0:2437:G:O2'	1:0:2439:U:O4	2.33	0.46
1:0:2477:C:C6	1:0:2477:C:C3'	2.98	0.46
1:0:2499:C:C6	1:0:2546:G:H1'	2.49	0.46
1:0:2570:C:O2'	1:0:2571:G:H5'	2.15	0.46
1:0:2597:G:H2'	1:0:2598:C:C6	2.50	0.46
1:0:2691:C:C3'	1:0:2692:A:H5''	2.46	0.46
1:0:389:G:C8	1:0:390:U:O2	2.69	0.46
1:0:538:A:N1	1:0:2025:A:H2'	2.29	0.46
1:0:1030:U:H2'	1:0:1031:C:H5'	1.96	0.46
1:0:1468:A:H8	1:0:1468:A:O5'	1.98	0.46
1:0:1629:G:N1	1:0:1633:C:N4	2.63	0.46
1:0:2570:C:H42	1:0:2582:G:H1	1.64	0.46
1:0:200:A:C6	1:0:435:A:N6	2.84	0.46
1:0:318:G:N2	1:0:321:A:C8	2.83	0.46
1:0:474:G:H22	1:0:476:G:H3'	1.76	0.46
1:0:583:C:H5''	1:0:584:A:C5'	2.45	0.46
1:0:707:U:H5''	1:0:1585:A:C4	2.50	0.46
1:0:755:C:O2'	1:0:756:C:H5'	2.16	0.46
1:0:851:C:C4	1:0:952:A:N6	2.84	0.46
1:0:863:C:H2'	1:0:864:C:O4'	2.15	0.46
1:0:990:A:H5'	1:0:991:A:C5'	2.39	0.46
1:0:1129:A:H2'	1:0:1130:U:C6	2.50	0.46
1:0:1217:U:H2'	1:0:1218:C:H6	1.81	0.46
1:0:1278:A:HO2'	1:0:1279:G:P	2.39	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1339:U:O2'	1:0:1993:G:H1'	2.16	0.46
1:0:1699:A:OP1	1:0:1716:G:N2	2.49	0.46
1:0:1872:A:O2'	1:0:2070:G:H5'	2.16	0.46
1:0:2079:A:O2'	1:0:2080:U:H5'	2.15	0.46
1:0:2463:G:O2'	1:0:2464:G:H5'	2.15	0.46
1:0:2608:A:N6	1:0:2869:U:C2	2.82	0.46
1:0:2620:G:H2'	1:0:2621:G:C8	2.50	0.46
1:0:2678:C:O2'	1:0:2679:G:H5'	2.16	0.46
1:0:2782:G:C2	1:0:2866:A:N6	2.84	0.46
1:0:2824:C:O2'	1:0:2825:A:P	2.74	0.46
1:0:2825:A:C2	1:0:2844:G:H4'	2.51	0.46
1:0:2865:G:H8	1:0:2865:G:O5'	1.99	0.46
1:0:157:G:O6	1:0:191:G:N7	2.48	0.46
1:0:402:A:OP2	1:0:403:A:OP2	2.33	0.46
1:0:622:U:H2'	1:0:623:G:O4'	2.16	0.46
1:0:688:A:HO2'	1:0:2422:C:H4'	1.80	0.46
1:0:1302:C:OP2	1:0:1302:C:C6	2.69	0.46
1:0:1402:G:H2'	1:0:1403:U:O4'	2.16	0.46
1:0:1622:G:H5''	1:0:1624:A:O4'	2.16	0.46
1:0:1983:G:H2'	1:0:1984:A:H8	1.81	0.46
1:0:2121:U:H3	1:0:2136:G:H1	1.64	0.46
1:0:2559:U:H2'	1:0:2560:G:H5'	1.97	0.46
1:0:2569:A:H2'	1:0:2570:C:H6	1.80	0.46
1:0:2655:C:H2'	1:0:2656:G:H8	1.79	0.46
1:0:2787:A:H2'	1:0:2788:C:C6	2.51	0.46
1:0:2867:G:N3	1:0:2867:G:C2'	2.79	0.46
1:0:85:C:O2'	1:0:86:U:H5'	2.15	0.46
1:0:176:A:O2'	1:0:177:U:OP1	2.32	0.46
1:0:439:C:O2	1:0:439:C:H2'	2.16	0.46
1:0:697:G:H2'	1:0:700:C:N4	2.30	0.46
1:0:886:A:H2'	1:0:887:G:O4'	2.16	0.46
1:0:1253:C:C2'	1:0:1254:G:H5'	2.46	0.46
1:0:1312:G:O2'	1:0:1314:A:C2	2.66	0.46
1:0:1373:G:C2'	1:0:1374:G:H5'	2.43	0.46
1:0:1686:A:H5''	1:0:2529:G:OP1	2.15	0.46
1:0:1725:C:H2'	1:0:1726:C:C6	2.48	0.46
1:0:1964:A:H3'	1:0:1965:U:H5'	1.98	0.46
1:0:2043:A:C2'	1:0:2044:G:OP2	2.64	0.46
1:0:2716:G:H2'	1:0:2717:G:C8	2.51	0.46
1:0:2721:A:H3'	1:0:2722:C:C6	2.51	0.46
1:0:19:C:H2'	1:0:20:C:C6	2.50	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:129:A:H2'	1:0:130:C:O4'	2.16	0.46
1:0:198:A:O4'	1:0:210:A:H1'	2.15	0.46
1:0:243:G:H3'	1:0:244:C:C5'	2.46	0.46
1:0:339:U:O4	1:0:342:G:H5''	2.16	0.46
1:0:958:G:H2'	1:0:959:C:C6	2.51	0.46
1:0:1197:U:H2'	1:0:1198:C:O4'	2.15	0.46
1:0:1217:U:H2'	1:0:1218:C:C6	2.51	0.46
1:0:1287:A:C2	1:0:1315:A:H2	2.34	0.46
1:0:1316:G:C2	1:0:1317:G:C8	3.03	0.46
1:0:1456:C:H2'	1:0:1457:A:C8	2.51	0.46
1:0:1643:A:H2'	1:0:1644:G:H8	1.80	0.46
1:0:1684:G:H2'	1:0:1974:U:O4	2.15	0.46
1:0:1693:A:H2	1:0:1976:U:OP1	1.99	0.46
1:0:1834:G:H2'	1:0:1835:C:O4'	2.15	0.46
1:0:1873:A:H2	1:0:2214:G:H1'	1.81	0.46
1:0:2041:A:N6	2:0:2881:TEL:H582	2.30	0.46
1:0:2133:G:H2'	1:0:2134:U:C6	2.50	0.46
1:0:2181:A:O5'	1:0:2181:A:H8	1.98	0.46
1:0:2722:C:O5'	1:0:2722:C:H6	1.98	0.46
1:0:24:G:H2'	1:0:25:U:C6	2.51	0.46
1:0:127:C:H2'	1:0:128:C:C6	2.50	0.46
1:0:646:C:O2	1:0:650:U:H4'	2.15	0.46
1:0:681:A:O2'	1:0:683:A:N6	2.49	0.46
1:0:713:G:H2'	1:0:714:G:O4'	2.15	0.46
1:0:1704:G:H1'	1:0:1719:G:N2	2.30	0.46
1:0:1724:C:H1'	1:0:1747:G:C4	2.50	0.46
1:0:1772:C:O2'	1:0:1773:C:H5'	2.15	0.46
1:0:1924:C:H2'	1:0:1925:C:O4'	2.16	0.46
1:0:2402:U:H4'	1:0:2404:A:C5	2.51	0.46
1:0:2430:A:P	1:0:2476:A:H61	2.38	0.46
1:0:2447:G:O2'	1:0:2448:A:C5'	2.63	0.46
1:0:433:G:H2'	1:0:434:C:OP2	2.16	0.46
1:0:653:G:H21	1:0:657:A:H61	1.64	0.46
1:0:796:A:H2	1:0:797:A:H4'	1.81	0.46
1:0:1358:C:H1'	1:0:1409:U:H3	1.81	0.46
1:0:1435:G:O2'	1:0:1436:G:H5'	2.16	0.46
1:0:1651:U:C5'	1:0:1652:G:OP2	2.56	0.46
1:0:1885:C:H2'	1:0:1886:G:H5'	1.98	0.46
1:0:1955:G:H2'	1:0:1956:G:C8	2.48	0.46
1:0:2279:G:H2'	1:0:2280:A:H8	1.81	0.46
1:0:40:U:H2'	1:0:41:G:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:78:C:O2'	1:0:79:G:H5'	2.16	0.46
1:0:697:G:N2	1:0:807:A:C2	2.81	0.46
1:0:751:G:H2'	1:0:752:G:O4'	2.16	0.46
1:0:796:A:N3	1:0:796:A:C2'	2.78	0.46
1:0:1059:A:H2	1:0:1123:G:N2	2.14	0.46
1:0:1142:G:O6	1:0:2008:C:H1'	2.16	0.46
1:0:1445:A:H2'	1:0:1446:U:C6	2.51	0.46
1:0:1522:C:H2'	1:0:1523:A:O4'	2.16	0.46
1:0:1622:G:H4'	1:0:1624:A:N3	2.30	0.46
1:0:1696:C:H3'	1:0:1697:U:C6	2.51	0.46
1:0:2080:U:H2'	1:0:2081:U:H6	1.81	0.46
1:0:2197:U:H2'	1:0:2198:U:H6	1.81	0.46
1:0:2695:C:H2'	1:0:2696:A:C8	2.51	0.46
1:0:2744:A:N6	1:0:2746:G:C2	2.84	0.46
1:0:2756:A:H4'	1:0:2757:G:O5'	2.16	0.46
1:0:2828:C:O2'	1:0:2829:A:H5'	2.16	0.46
1:0:67:G:C5	1:0:72:A:C2	3.03	0.45
1:0:439:C:H5''	1:0:440:U:H5	1.81	0.45
1:0:622:U:C2'	1:0:623:G:H5'	2.46	0.45
1:0:677:G:H4'	1:0:952:A:OP1	2.16	0.45
1:0:982:C:H2'	1:0:983:G:C8	2.51	0.45
1:0:1055:A:OP1	1:0:1057:A:H5'	2.16	0.45
1:0:1750:A:C5'	1:0:2695:C:H1'	2.47	0.45
1:0:1819:U:H2'	1:0:1820:G:O4'	2.15	0.45
1:0:2767:C:H2'	1:0:2768:C:C6	2.51	0.45
1:0:162:C:H2'	1:0:163:A:C8	2.51	0.45
1:0:638:A:H2'	1:0:639:G:O4'	2.16	0.45
1:0:821:A:H2'	1:0:822:G:C8	2.49	0.45
1:0:970:A:H2'	1:0:971:A:C8	2.51	0.45
1:0:987:G:C5'	1:0:1167:A:H62	2.29	0.45
1:0:2386:G:C2	1:0:2387:U:C5	3.05	0.45
1:0:341:A:N1	1:0:1223:G:N7	2.64	0.45
1:0:698:A:H1'	1:0:701:U:O4	2.17	0.45
1:0:861:G:N2	1:0:943:U:C2'	2.79	0.45
1:0:1068:A:H2'	1:0:1069:G:C8	2.51	0.45
1:0:1086:C:C2'	1:0:1087:C:H5''	2.45	0.45
1:0:1376:C:H2'	1:0:1377:G:O4'	2.17	0.45
1:0:1408:A:H2'	1:0:1411:C:N4	2.30	0.45
1:0:1928:G:O6	1:0:1943:A:N6	2.48	0.45
1:0:2484:G:N3	1:0:2485:U:H5	2.14	0.45
1:0:2507:U:O2'	1:0:2508:G:H8	1.99	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2586:G:H2'	1:0:2587:G:O4'	2.15	0.45
1:0:2773:G:H1	1:0:2779:C:N4	2.13	0.45
1:0:2824:C:C2'	1:0:2825:A:OP2	2.64	0.45
1:0:2824:C:O2'	1:0:2825:A:O5'	2.33	0.45
1:0:1:G:H2'	1:0:2:G:C8	2.52	0.45
1:0:692:C:H2'	1:0:693:A:C8	2.51	0.45
1:0:703:A:O2'	1:0:704:G:H5'	2.16	0.45
1:0:788:G:H21	1:0:801:A:P	2.40	0.45
1:0:856:A:H2'	1:0:857:U:H5'	1.98	0.45
1:0:1029:C:C3'	1:0:1030:U:H5''	2.46	0.45
1:0:1184:G:C2'	1:0:1185:C:H5'	2.47	0.45
1:0:1392:U:O2	1:0:1392:U:C2'	2.65	0.45
1:0:1399:C:H2'	1:0:1400:A:C8	2.50	0.45
1:0:1438:G:C2'	1:0:1439:G:H5'	2.45	0.45
1:0:1467:U:H3'	1:0:1468:A:C5'	2.46	0.45
1:0:1661:C:H2'	1:0:1662:G:H8	1.81	0.45
1:0:1763:G:N1	1:0:1963:G:N2	2.64	0.45
1:0:2085:G:N2	1:0:2171:U:H1'	2.21	0.45
1:0:2410:U:O2	1:0:2410:U:H2'	2.15	0.45
1:0:192:G:O2'	1:0:193:A:H4'	2.16	0.45
1:0:200:A:H62	1:0:435:A:N6	2.09	0.45
1:0:431:G:C4	1:0:432:C:H5	2.35	0.45
1:0:459:A:H1'	1:0:466:A:H62	1.81	0.45
1:0:776:G:H3'	1:0:776:G:N3	2.32	0.45
1:0:946:U:O2'	1:0:947:C:H5'	2.17	0.45
1:0:1605:A:H2'	1:0:1606:C:H6	1.81	0.45
1:0:1618:U:O5'	1:0:1618:U:C2	2.69	0.45
1:0:1624:A:O2'	1:0:1625:A:H5'	2.17	0.45
1:0:1818:G:H2'	1:0:1819:U:C6	2.52	0.45
1:0:1914:U:O2'	1:0:1915:A:H5'	2.16	0.45
1:0:1951:G:H4'	1:0:1956:G:H4'	1.99	0.45
1:0:1993:G:O2'	1:0:1994:U:H5'	2.17	0.45
1:0:2357:A:C2'	1:0:2358:C:H5'	2.47	0.45
1:0:2856:U:H2'	1:0:2857:C:C6	2.52	0.45
1:0:17:G:H2'	1:0:18:U:C6	2.51	0.45
1:0:162:C:H4'	1:0:195:A:O2'	2.17	0.45
1:0:387:A:C4'	1:0:436:A:H62	2.30	0.45
1:0:706:A:H2'	1:0:707:U:O4'	2.16	0.45
1:0:753:U:H1'	1:0:1964:A:C4	2.52	0.45
1:0:780:U:O2'	1:0:781:G:H5'	2.17	0.45
1:0:874:A:C2	1:0:875:G:H1'	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:882:C:C2	1:0:883:A:C8	3.05	0.45
1:0:1785:A:H2'	1:0:1786:C:C6	2.51	0.45
1:0:1929:U:H3	1:0:1943:A:N6	2.15	0.45
1:0:2396:C:H2'	1:0:2397:A:C5'	2.45	0.45
1:0:2541:U:H2'	1:0:2542:U:O4'	2.17	0.45
1:0:2669:C:C2'	1:0:2670:C:OP2	2.65	0.45
1:0:192:G:H4'	1:0:193:A:O5'	2.17	0.45
1:0:395:G:C2'	1:0:396:U:H5'	2.47	0.45
1:0:625:A:H2'	1:0:626:A:H5'	1.99	0.45
1:0:1707:A:N7	1:0:1714:A:H2	2.15	0.45
1:0:1724:C:C2	1:0:1725:C:C5	3.05	0.45
1:0:1740:G:O2'	1:0:1741:G:H5'	2.17	0.45
1:0:1970:G:O2'	1:0:1971:C:H5'	2.16	0.45
1:0:2635:U:H3	1:0:2644:A:H8	1.64	0.45
1:0:2724:G:O2'	1:0:2725:C:H5'	2.17	0.45
1:0:73:A:N6	1:0:87:G:OP2	2.40	0.45
1:0:689:A:H2'	1:0:690:A:H5'	1.99	0.45
1:0:775:U:H4'	1:0:776:G:C8	2.52	0.45
1:0:824:U:O4'	1:0:1264:C:O2	2.35	0.45
1:0:1223:G:C5'	1:0:1224:A:OP1	2.65	0.45
1:0:1288:A:H2'	1:0:1289:A:C4'	2.46	0.45
1:0:1302:C:O2'	1:0:1303:U:H5'	2.16	0.45
1:0:1500:U:H2'	1:0:1501:C:C6	2.52	0.45
1:0:1724:C:H1'	1:0:1747:G:N3	2.32	0.45
1:0:1849:G:N2	1:0:1869:A:N6	2.64	0.45
1:0:1918:G:H1'	1:0:1947:G:C2	2.51	0.45
1:0:2204:A:H4'	1:0:2205:C:O4'	2.17	0.45
1:0:2239:C:H2'	1:0:2240:C:H6	1.82	0.45
1:0:2240:C:H2'	1:0:2241:U:C5'	2.47	0.45
1:0:2338:C:H2'	1:0:2339:A:C8	2.52	0.45
1:0:2827:G:H2'	1:0:2828:C:C6	2.52	0.45
2:0:2881:TEL:H231	2:0:2881:TEL:H332	1.99	0.45
1:0:173:A:C2	1:0:818:G:H1'	2.51	0.45
1:0:582:G:N1	1:0:2014:A:OP2	2.44	0.45
1:0:585:U:H5''	1:0:2482:A:OP1	2.17	0.45
1:0:737:C:H2'	1:0:738:G:O4'	2.17	0.45
1:0:802:A:N3	1:0:802:A:C2'	2.80	0.45
1:0:854:G:H2'	1:0:855:G:C8	2.52	0.45
1:0:861:G:N2	1:0:943:U:H2'	2.31	0.45
1:0:872:G:O2'	1:0:2247:A:N3	2.49	0.45
1:0:875:G:H3'	1:0:876:A:H8	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1035:G:H21	1:0:1155:G:H5'	1.82	0.45
1:0:1035:G:C6	1:0:1036:G:O6	2.70	0.45
1:0:1265:G:H2'	1:0:1266:G:O4'	2.16	0.45
1:0:1349:A:H2'	1:0:1350:G:C8	2.52	0.45
1:0:1830:C:N4	1:0:1881:U:H3'	2.32	0.45
1:0:1975:G:O4'	1:0:1977:C:H5	2.00	0.45
1:0:2013:A:C2'	1:0:2014:A:OP2	2.64	0.45
1:0:2513:A:C2	1:0:2514:G:H1'	2.52	0.45
1:0:2694:G:H2'	1:0:2695:C:C6	2.52	0.45
1:0:150:A:H2'	1:0:151:G:H5'	1.99	0.45
1:0:631:G:H5''	1:0:632:A:OP1	2.17	0.45
1:0:740:A:H2'	1:0:741:G:O4'	2.17	0.45
1:0:813:A:H1'	1:0:815:A:H4'	1.98	0.45
1:0:846:A:H62	1:0:955:G:H22	1.56	0.45
1:0:1149:G:N2	1:0:1154:A:H1'	2.28	0.45
1:0:1629:G:H3'	1:0:1630:A:H5''	1.99	0.45
1:0:1913:G:H2'	1:0:1914:U:OP2	2.16	0.45
1:0:2161:C:O2'	1:0:2162:C:OP1	2.30	0.45
1:0:2180:U:O2'	1:0:2181:A:N7	2.48	0.45
1:0:2380:U:O2'	1:0:2381:A:H5'	2.17	0.45
1:0:81:C:H2'	1:0:82:G:O4'	2.16	0.44
1:0:208:C:H2'	1:0:209:G:H5'	1.99	0.44
1:0:324:C:H2'	1:0:325:U:C5'	2.47	0.44
1:0:430:C:C5'	1:0:430:C:C6	2.97	0.44
1:0:441:A:O2'	1:0:442:A:H5'	2.16	0.44
1:0:688:A:N7	1:0:816:U:O4	2.50	0.44
1:0:697:G:C5	1:0:788:G:O6	2.70	0.44
1:0:830:C:O2'	1:0:852:U:H5''	2.17	0.44
1:0:1192:A:H2'	1:0:1193:G:H8	1.82	0.44
1:0:1385:C:H2'	1:0:1386:A:H8	1.82	0.44
1:0:1388:C:H2'	1:0:1389:C:H6	1.81	0.44
1:0:1406:A:O3'	1:0:1407:G:H8	2.00	0.44
1:0:1474:A:H2'	1:0:1476:G:OP1	2.17	0.44
1:0:1621:C:O4'	1:0:1626:A:C6	2.70	0.44
1:0:1758:C:C2'	1:0:1759:A:H5'	2.47	0.44
1:0:1804:U:O2'	1:0:1805:G:H5'	2.17	0.44
1:0:2005:U:O2'	1:0:2017:U:C2	2.70	0.44
1:0:2274:C:C2'	1:0:2275:U:C5'	2.95	0.44
1:0:2410:U:H2'	1:0:2412:A:OP2	2.16	0.44
1:0:2455:A:H2'	1:0:2455:A:N3	2.32	0.44
1:0:2633:A:C4'	1:0:2634:G:OP1	2.65	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2667:C:N4	1:0:2699:G:H3'	2.30	0.44
1:0:2816:C:H2'	1:0:2817:A:C8	2.52	0.44
1:0:734:G:H2'	1:0:735:G:H8	1.81	0.44
1:0:873:U:C4	1:0:929:A:N6	2.85	0.44
1:0:1528:C:H3'	1:0:1529:C:C5'	2.40	0.44
1:0:1948:C:N4	1:0:1949:A:N6	2.65	0.44
1:0:2212:U:H2'	1:0:2213:G:H8	1.79	0.44
1:0:2239:C:H2'	1:0:2240:C:C6	2.52	0.44
1:0:2242:C:N4	1:0:2257:A:C6	2.85	0.44
1:0:2578:G:N2	1:0:2579:A:H1'	2.33	0.44
1:0:2585:C:O2'	1:0:2586:G:H5'	2.17	0.44
1:0:2706:U:O2	1:0:2706:U:H2'	2.18	0.44
1:0:180:C:N3	1:0:181:A:N6	2.66	0.44
1:0:226:C:H4'	1:0:227:G:C8	2.53	0.44
1:0:653:G:H4'	1:0:2328:G:H4'	1.99	0.44
1:0:658:G:H1'	1:0:2330:G:H5''	1.99	0.44
1:0:756:C:H2'	1:0:757:U:O4'	2.17	0.44
1:0:873:U:H1'	1:0:2246:A:H5''	2.00	0.44
1:0:1083:C:N4	1:0:1103:C:C4	2.85	0.44
1:0:1216:G:O2'	1:0:1217:U:H5'	2.16	0.44
1:0:1355:A:H1'	1:0:1410:U:C4'	2.47	0.44
1:0:1391:A:O2'	1:0:1392:U:OP1	2.35	0.44
1:0:1463:A:O2'	1:0:1543:G:N2	2.51	0.44
1:0:1625:A:O2'	1:0:1632:A:H4'	2.17	0.44
1:0:2082:C:N4	1:0:2174:G:N2	2.65	0.44
1:0:2505:G:H22	1:0:2517:C:H1'	1.83	0.44
1:0:2800:C:C2'	1:0:2801:A:H5'	2.47	0.44
1:0:4:C:O2'	1:0:5:A:H5'	2.17	0.44
1:0:26:G:C2	1:0:27:G:N2	2.85	0.44
1:0:402:A:H2'	1:0:403:A:O4'	2.17	0.44
1:0:434:C:O2	1:0:434:C:C2'	2.66	0.44
1:0:439:C:H3'	1:0:440:U:C5	2.53	0.44
1:0:591:G:H2'	1:0:592:G:H8	1.80	0.44
1:0:1001:A:N7	1:0:1200:G:H4'	2.33	0.44
1:0:1030:U:H2'	1:0:1031:C:O4'	2.18	0.44
1:0:1711:C:H4'	1:0:1712:G:N2	2.32	0.44
1:0:1970:G:H2'	1:0:1971:C:C6	2.53	0.44
1:0:1999:U:O5'	1:0:1999:U:H6	2.00	0.44
1:0:2013:A:H2'	1:0:2014:A:OP2	2.18	0.44
1:0:2095:G:H2'	1:0:2096:U:H5''	1.99	0.44
1:0:2363:G:C2'	1:0:2364:C:OP1	2.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2797:G:H2'	1:0:2798:A:C5'	2.44	0.44
1:0:192:G:O2'	1:0:193:A:C5'	2.65	0.44
1:0:236:C:H2'	1:0:237:G:C8	2.52	0.44
1:0:239:A:H2'	1:0:240:U:O4'	2.17	0.44
1:0:353:G:H2'	1:0:354:C:C6	2.52	0.44
1:0:926:C:H2'	1:0:926:C:O2	2.17	0.44
1:0:939:C:C4	1:0:940:G:O6	2.71	0.44
1:0:1142:G:H2'	1:0:1143:A:C8	2.53	0.44
1:0:1196:G:H2'	1:0:1197:U:C5'	2.48	0.44
1:0:1310:C:H2'	1:0:1311:C:C6	2.52	0.44
1:0:1401:G:O2'	1:0:1402:G:H5'	2.17	0.44
1:0:1630:A:H8	1:0:1630:A:OP2	2.00	0.44
1:0:1751:A:H2'	1:0:1752:U:C6	2.52	0.44
1:0:2043:A:O2'	1:0:2481:G:O5'	2.36	0.44
1:0:2178:U:H2'	1:0:2179:C:H6	1.82	0.44
1:0:2227:C:H2'	1:0:2228:U:H5'	2.00	0.44
1:0:2467:A:H2'	1:0:2468:G:C8	2.53	0.44
1:0:2491:C:C2'	1:0:2492:G:H5''	2.47	0.44
1:0:2609:G:O4'	1:0:2868:G:N3	2.51	0.44
1:0:2661:G:H2'	1:0:2662:C:O4'	2.18	0.44
1:0:502:A:C2'	1:0:503:G:H5'	2.48	0.44
1:0:755:C:H2'	1:0:756:C:O4'	2.18	0.44
1:0:1086:C:H2'	1:0:1087:C:C5'	2.46	0.44
1:0:1199:U:H3'	1:0:1200:G:H5''	2.00	0.44
1:0:1257:U:O2'	1:0:1258:G:H5'	2.16	0.44
1:0:1321:A:N1	1:0:1624:A:N1	2.66	0.44
1:0:1437:A:H2'	1:0:1438:G:C8	2.48	0.44
1:0:2105:U:H2'	1:0:2106:G:H8	1.81	0.44
1:0:2299:A:H5'	1:0:2300:G:N9	2.32	0.44
1:0:2315:A:O2'	1:0:2364:C:H5''	2.17	0.44
1:0:2343:C:H2'	1:0:2344:G:C8	2.53	0.44
1:0:2666:U:H2'	1:0:2667:C:O4'	2.18	0.44
1:0:2676:G:H2'	1:0:2677:U:C6	2.53	0.44
1:0:2728:A:H2'	1:0:2729:A:O4'	2.17	0.44
1:0:5:A:H2'	1:0:6:A:H8	1.83	0.44
1:0:69:G:O2'	1:0:70:A:OP1	2.36	0.44
1:0:78:C:H2'	1:0:79:G:C8	2.48	0.44
1:0:216:U:H2'	1:0:217:U:C6	2.53	0.44
1:0:324:C:O2'	1:0:325:U:H5'	2.17	0.44
1:0:538:A:N6	1:0:2759:U:H3	2.15	0.44
1:0:572:G:OP2	1:0:581:A:H5'	2.17	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:620:G:H1	1:0:628:A:N6	2.15	0.44
1:0:742:G:N3	1:0:742:G:C2'	2.79	0.44
1:0:982:C:OP2	1:0:985:G:N1	2.50	0.44
1:0:1083:C:N4	1:0:1104:G:C6	2.85	0.44
1:0:1514:C:H4'	1:0:1592:U:O2'	2.18	0.44
1:0:2428:U:O2	1:0:2428:U:C2'	2.66	0.44
1:0:224:G:C1'	1:0:399:G:O6	2.66	0.44
1:0:357:A:C3'	1:0:358:C:H5'	2.47	0.44
1:0:469:G:O2'	1:0:470:U:C5	2.70	0.44
1:0:547:U:H2'	1:0:548:G:H8	1.82	0.44
1:0:698:A:OP2	1:0:787:A:N1	2.51	0.44
1:0:968:C:H2'	1:0:969:U:OP1	2.17	0.44
1:0:993:C:O5'	1:0:993:C:H6	2.01	0.44
1:0:1001:A:H2'	1:0:1002:C:H5''	1.99	0.44
1:0:1153:A:C2	1:0:1155:G:C6	3.06	0.44
1:0:1177:U:N3	1:0:1197:U:O2	2.51	0.44
1:0:1249:G:C2'	1:0:1250:A:OP2	2.66	0.44
1:0:1253:C:H2'	1:0:1254:G:O4'	2.17	0.44
1:0:1866:G:H8	1:0:1866:G:O5'	2.00	0.44
1:0:1929:U:H3	1:0:1943:A:H61	1.64	0.44
1:0:1932:G:H2'	1:0:1932:G:N3	2.33	0.44
1:0:2010:G:O2'	1:0:2011:U:H5'	2.18	0.44
1:0:2590:U:H1'	2:0:2881:TEL:H21	2.00	0.44
1:0:29:U:O5'	1:0:29:U:H6	2.01	0.44
1:0:93:A:O2'	1:0:94:C:H5'	2.18	0.44
1:0:189:A:O2'	1:0:190:A:H5'	2.17	0.44
1:0:200:A:C6	1:0:435:A:C6	3.05	0.44
1:0:503:G:H2'	1:0:504:G:H8	1.81	0.44
1:0:1052:C:O5'	1:0:1052:C:H6	2.00	0.44
1:0:1194:U:O2'	1:0:1195:U:P	2.76	0.44
1:0:1272:G:H2'	1:0:1273:G:C8	2.52	0.44
1:0:1333:G:N2	1:0:1344:C:N4	2.65	0.44
1:0:1800:A:N3	1:0:1802:A:N1	2.66	0.44
1:0:1981:A:H4'	1:0:2704:U:O2'	2.18	0.44
1:0:2122:G:H2'	1:0:2123:G:C8	2.52	0.44
1:0:2348:A:H61	1:0:2361:G:N2	2.16	0.44
1:0:2498:U:H3'	1:0:2498:U:P	2.58	0.44
1:0:2498:U:H5'	1:0:2546:G:N2	2.33	0.44
1:0:2622:G:H2'	1:0:2623:A:O4'	2.18	0.44
1:0:2828:C:H2'	1:0:2829:A:H8	1.83	0.44
1:0:16:G:C2'	1:0:17:G:H5'	2.48	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:52:A:C2'	1:0:53:G:H5'	2.48	0.43
1:0:326:A:H2'	1:0:327:C:O4'	2.18	0.43
1:0:810:U:H2'	1:0:811:G:C8	2.52	0.43
1:0:1013:G:H22	1:0:1165:G:H1'	1.83	0.43
1:0:1034:U:H2'	1:0:1035:G:H5'	2.00	0.43
1:0:1703:C:H2'	1:0:1704:G:O4'	2.18	0.43
1:0:1821:A:H5''	1:0:1822:C:H5	1.82	0.43
1:0:1904:G:H2'	1:0:1905:G:C8	2.53	0.43
1:0:2043:A:H1'	1:0:2481:G:O4'	2.17	0.43
1:0:2387:U:H2'	1:0:2388:G:H5'	2.00	0.43
1:0:2709:C:H2'	1:0:2710:C:C6	2.53	0.43
1:0:2824:C:H1'	1:0:2843:A:C4	2.53	0.43
1:0:436:A:C4'	1:0:437:G:OP1	2.65	0.43
1:0:451:A:H2'	1:0:452:G:O4'	2.18	0.43
1:0:504:G:O2'	1:0:505:G:H5'	2.18	0.43
1:0:568:G:H2'	1:0:569:C:O4'	2.18	0.43
1:0:587:A:C3'	1:0:588:G:H5''	2.48	0.43
1:0:855:G:H2'	1:0:856:A:O4'	2.18	0.43
1:0:1445:A:H2'	1:0:1446:U:O4'	2.19	0.43
1:0:1474:A:C2'	1:0:1475:U:H5'	2.47	0.43
1:0:2002:A:H61	1:0:2018:G:H22	1.65	0.43
1:0:2082:C:H2'	1:0:2083:G:H8	1.83	0.43
1:0:2875:C:O2'	1:0:2876:C:H5'	2.17	0.43
1:0:203:G:O2'	1:0:204:A:H5'	2.18	0.43
1:0:321:A:N1	1:0:323:G:H1'	2.34	0.43
1:0:600:G:O6	1:0:602:C:N4	2.51	0.43
1:0:1052:C:H2'	1:0:1053:G:C8	2.53	0.43
1:0:1223:G:H5'	1:0:1225:G:H5'	1.99	0.43
1:0:1388:C:H2'	1:0:1389:C:C6	2.53	0.43
1:0:2015:G:N3	1:0:2015:G:C2'	2.81	0.43
1:0:2041:A:H61	2:0:2881:TEL:H581	1.78	0.43
1:0:2409:A:N7	1:0:2410:U:H5	2.16	0.43
1:0:2792:C:C3'	1:0:2793:G:H5''	2.48	0.43
1:0:2814:G:H2'	1:0:2815:C:H6	1.75	0.43
1:0:32:C:H2'	1:0:33:C:O4'	2.18	0.43
1:0:190:A:H2'	1:0:191:G:H8	1.82	0.43
1:0:317:U:N3	1:0:321:A:N6	2.49	0.43
1:0:320:A:N7	1:0:341:A:N7	2.67	0.43
1:0:490:A:C2'	1:0:491:A:H5'	2.47	0.43
1:0:815:A:H2'	1:0:816:U:O4'	2.19	0.43
1:0:1625:A:N3	1:0:1625:A:C2'	2.80	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1779:C:O5'	1:0:1779:C:H6	2.01	0.43
1:0:1779:C:O2'	1:0:1780:A:H5'	2.18	0.43
1:0:1838:G:H2'	1:0:1839:A:O4'	2.19	0.43
1:0:2299:A:O2'	1:0:2312:A:N6	2.52	0.43
1:0:2343:C:O2'	1:0:2344:G:H5'	2.18	0.43
1:0:2377:U:H6	1:0:2377:U:O5'	2.01	0.43
1:0:2817:A:N1	1:0:2851:G:C6	2.86	0.43
1:0:202:A:O2'	1:0:203:G:H5'	2.18	0.43
1:0:700:C:O4'	1:0:801:A:O4'	2.36	0.43
1:0:788:G:H2'	1:0:807:A:C4	2.53	0.43
1:0:1610:A:H2'	1:0:1611:U:C6	2.54	0.43
1:0:1984:A:H2'	1:0:1985:G:H8	1.82	0.43
1:0:2476:A:O2'	1:0:2477:C:C6	2.69	0.43
1:0:2493:U:O2'	1:0:2494:C:H5'	2.18	0.43
1:0:201:G:N2	1:0:202:A:C4	2.86	0.43
1:0:219:G:C2'	1:0:231:G:H1	2.30	0.43
1:0:457:C:H5'	1:0:1261:G:O6	2.19	0.43
1:0:516:G:H2'	1:0:517:A:OP2	2.19	0.43
1:0:935:C:H2'	1:0:936:A:H8	1.83	0.43
1:0:935:C:O2'	1:0:936:A:H5'	2.19	0.43
1:0:1029:C:H41	1:0:1153:A:H61	1.56	0.43
1:0:1055:A:H61	1:0:1122:A:C5'	2.31	0.43
1:0:1094:C:H2'	1:0:1096:A:OP2	2.19	0.43
1:0:1154:A:C8	1:0:1154:A:H3'	2.54	0.43
1:0:1217:U:O2'	1:0:1218:C:H5'	2.19	0.43
1:0:1274:C:O5'	1:0:1274:C:H6	2.02	0.43
1:0:1358:C:C2'	1:0:1359:G:H5'	2.47	0.43
1:0:1654:A:H4'	1:0:2690:A:O2'	2.19	0.43
1:0:1715:A:O2'	1:0:1716:G:H5''	2.18	0.43
1:0:1715:A:O2'	1:0:1716:G:C5'	2.67	0.43
1:0:1922:U:O2'	1:0:2571:G:C1'	2.66	0.43
1:0:2178:U:H2'	1:0:2179:C:C6	2.53	0.43
1:0:82:G:O2'	1:0:83:A:H5'	2.19	0.43
1:0:486:U:OP2	1:0:486:U:H6	2.01	0.43
1:0:738:G:H2'	1:0:739:G:O4'	2.18	0.43
1:0:915:C:H2'	1:0:916:U:C6	2.53	0.43
1:0:1325:U:H5'	1:0:1326:U:H6	1.82	0.43
1:0:1370:U:O2'	1:0:1371:G:H5'	2.18	0.43
1:0:1900:U:H3'	1:0:1901:A:H8	1.82	0.43
1:0:2176:U:C2'	1:0:2177:U:H5'	2.49	0.43
1:0:2240:C:C1'	1:0:2367:A:H1'	2.45	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2694:G:H8	1:0:2694:G:OP1	2.01	0.43
1:0:139:A:O2'	1:0:140:G:H5'	2.19	0.43
1:0:221:A:C2'	1:0:222:G:H5'	2.49	0.43
1:0:322:A:C6	1:0:339:U:O2	2.72	0.43
1:0:744:C:H2'	1:0:745:C:C6	2.53	0.43
1:0:1089:C:C2	1:0:1099:A:H4'	2.54	0.43
1:0:1444:C:H2'	1:0:1445:A:C8	2.54	0.43
1:0:1458:A:C3'	1:0:1459:U:C5'	2.95	0.43
1:0:1566:G:H2'	1:0:1567:A:C8	2.53	0.43
1:0:1625:A:H1'	1:0:1632:A:H1'	2.00	0.43
1:0:1913:G:C2'	1:0:1914:U:OP2	2.67	0.43
1:0:2082:C:H2'	1:0:2083:G:O4'	2.19	0.43
1:0:2790:C:H2'	1:0:2791:C:H6	1.84	0.43
1:0:367:G:H2'	1:0:368:A:H5''	2.00	0.43
1:0:695:G:N2	1:0:809:C:C2	2.86	0.43
1:0:830:C:C5	1:0:831:G:N7	2.86	0.43
1:0:942:U:H2'	1:0:943:U:C5'	2.49	0.43
1:0:1054:C:H2'	1:0:1055:A:H5'	2.00	0.43
1:0:1071:U:C2'	1:0:1072:U:H5'	2.47	0.43
1:0:1083:C:N4	1:0:1104:G:O6	2.51	0.43
1:0:1088:A:O2'	1:0:1089:C:H5'	2.19	0.43
1:0:1501:C:H2'	1:0:1502:G:O4'	2.18	0.43
1:0:1686:A:N3	1:0:1686:A:C2'	2.81	0.43
1:0:1908:C:C2'	1:0:1909:U:H4'	2.40	0.43
1:0:1912:G:N3	1:0:1912:G:C2'	2.78	0.43
1:0:2028:C:H2'	1:0:2029:G:O5'	2.17	0.43
1:0:2033:C:H2'	1:0:2034:A:C1'	2.48	0.43
1:0:2107:G:O2'	1:0:2108:G:H5'	2.19	0.43
1:0:2418:A:H5'	1:0:2420:C:OP2	2.18	0.43
1:0:2492:G:H2'	1:0:2493:U:O4'	2.18	0.43
1:0:75:C:O5'	1:0:75:C:H6	2.01	0.43
1:0:90:G:H3'	1:0:91:A:C5'	2.48	0.43
1:0:128:C:C3'	1:0:129:A:H5''	2.48	0.43
1:0:202:A:N6	1:0:432:C:OP2	2.37	0.43
1:0:596:C:C1'	1:0:684:C:O4'	2.63	0.43
1:0:750:C:H2'	1:0:751:G:O4'	2.18	0.43
1:0:797:A:O2'	1:0:798:G:H8	2.02	0.43
1:0:807:A:C5	1:0:808:C:C4	3.07	0.43
1:0:930:A:N3	1:0:930:A:O4'	2.51	0.43
1:0:957:G:O2'	1:0:958:G:H5'	2.19	0.43
1:0:1125:G:H2'	1:0:1126:A:H8	1.81	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1204:G:H2'	1:0:1205:G:H8	1.84	0.43
1:0:1278:A:O2'	1:0:1279:G:P	2.76	0.43
1:0:1582:A:C3'	1:0:1583:A:C5'	2.93	0.43
1:0:1738:U:O2'	1:0:1739:G:H5'	2.19	0.43
1:0:1937:G:N3	1:0:2530:C:C5'	2.82	0.43
1:0:2123:G:H2'	1:0:2124:C:C6	2.54	0.43
1:0:2196:U:H2'	1:0:2197:U:O4'	2.19	0.43
1:0:2519:C:C5	1:0:2520:A:N7	2.87	0.43
1:0:102:C:H2'	1:0:103:U:O4'	2.19	0.42
1:0:174:A:O2'	1:0:2223:U:OP1	2.29	0.42
1:0:322:A:C2	1:0:346:C:C4	3.07	0.42
1:0:481:A:H3'	1:0:482:A:C8	2.54	0.42
1:0:515:A:H2'	1:0:516:G:H5'	2.00	0.42
1:0:860:U:O5'	1:0:860:U:H6	2.02	0.42
1:0:880:C:OP1	1:0:881:U:OP2	2.37	0.42
1:0:1316:G:C4	1:0:1317:G:C8	3.06	0.42
1:0:1630:A:H2'	1:0:1631:C:H5'	2.01	0.42
1:0:1655:C:H2'	1:0:1656:U:O4'	2.19	0.42
1:0:2023:C:H2'	1:0:2024:U:C6	2.54	0.42
1:0:2571:G:H2'	1:0:2572:U:C6	2.54	0.42
1:0:2593:A:C2'	1:0:2594:U:H5'	2.48	0.42
1:0:193:A:N7	1:0:444:U:N3	2.67	0.42
1:0:434:C:C2'	1:0:435:A:OP2	2.66	0.42
1:0:469:G:O2'	1:0:470:U:H5	2.02	0.42
1:0:697:G:C6	1:0:788:G:N7	2.88	0.42
1:0:931:G:H22	1:0:2247:A:C5'	2.32	0.42
1:0:956:A:O2'	1:0:957:G:OP1	2.36	0.42
1:0:1090:C:O2'	1:0:1091:C:H5'	2.18	0.42
1:0:1091:C:O2'	1:0:1092:U:H5'	2.19	0.42
1:0:1389:C:H2'	1:0:1390:G:O4'	2.19	0.42
1:0:1685:A:O2'	1:0:1686:A:P	2.77	0.42
1:0:1730:G:O2'	1:0:1731:C:H5'	2.20	0.42
1:0:1930:C:H2'	1:0:1931:G:H5'	2.01	0.42
1:0:2194:A:C3'	1:0:2195:C:C5'	2.95	0.42
1:0:2495:G:C2'	1:0:2496:C:O4'	2.65	0.42
1:0:2529:G:H2'	1:0:2530:C:H5'	2.01	0.42
1:0:2584:U:H2'	1:0:2585:C:C6	2.54	0.42
1:0:2763:U:O2'	1:0:2764:U:H5'	2.18	0.42
1:0:2792:C:H2'	1:0:2793:G:O4'	2.18	0.42
1:0:159:A:O2'	1:0:160:C:H5'	2.18	0.42
1:0:746:G:OP2	1:0:774:A:N6	2.44	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:789:G:H2'	1:0:790:A:OP2	2.18	0.42
1:0:987:G:C5'	1:0:1167:A:N6	2.81	0.42
1:0:1313:U:N3	1:0:1651:U:H1'	2.34	0.42
1:0:1419:G:O2'	1:0:1420:A:H5'	2.19	0.42
1:0:1473:U:H5'	1:0:1474:A:C8	2.54	0.42
1:0:1485:U:O2	1:0:1538:A:H2	2.03	0.42
1:0:1611:U:O2'	1:0:1612:U:H5'	2.18	0.42
1:0:1624:A:N6	1:0:1627:C:C2	2.87	0.42
1:0:2161:C:H2'	1:0:2162:C:H5	1.85	0.42
1:0:2244:C:N3	1:0:2245:A:N6	2.68	0.42
1:0:2506:C:O2'	1:0:2507:U:H5'	2.17	0.42
1:0:2549:G:H2'	1:0:2550:C:C5'	2.49	0.42
1:0:2867:G:HO2'	1:0:2868:G:P	2.42	0.42
1:0:173:A:H61	1:0:844:G:H1'	1.83	0.42
1:0:177:U:OP2	1:0:178:C:OP2	2.37	0.42
1:0:747:A:O2'	1:0:748:A:H5'	2.19	0.42
1:0:1248:G:N1	1:0:1249:G:N2	2.68	0.42
1:0:1461:C:H2'	1:0:1462:C:C6	2.54	0.42
1:0:2276:C:H1'	1:0:2301:A:N3	2.35	0.42
1:0:2278:A:H2'	1:0:2279:G:C8	2.55	0.42
1:0:2732:C:H3'	1:0:2733:A:C8	2.54	0.42
1:0:40:U:H2'	1:0:41:G:H8	1.84	0.42
1:0:192:G:HO2'	1:0:193:A:P	2.42	0.42
1:0:195:A:H2'	1:0:196:A:C5'	2.50	0.42
1:0:195:A:H61	1:0:212:U:H4'	1.84	0.42
1:0:341:A:C2	1:0:1223:G:N7	2.88	0.42
1:0:431:G:C2	1:0:432:C:C5	3.07	0.42
1:0:1154:A:H3'	1:0:1154:A:H8	1.85	0.42
1:0:1440:G:H1'	1:0:1588:A:H61	1.84	0.42
1:0:1641:C:H2'	1:0:1642:G:C5'	2.50	0.42
1:0:1791:C:H2'	1:0:1792:C:C5'	2.35	0.42
1:0:2792:C:H2'	1:0:2793:G:H5''	2.02	0.42
1:0:2836:U:O2'	1:0:2837:G:H5'	2.19	0.42
1:0:988:G:N3	1:0:1012:A:H2	2.18	0.42
1:0:1073:G:H2'	1:0:1074:G:C5'	2.48	0.42
1:0:1312:G:C4'	1:0:1314:A:N3	2.83	0.42
1:0:1365:U:H1'	1:0:1586:A:C2	2.55	0.42
1:0:1383:C:H2'	1:0:1384:G:O4'	2.20	0.42
1:0:1459:U:O4	1:0:1476:G:H5''	2.19	0.42
1:0:1729:C:H2'	1:0:1730:G:H8	1.83	0.42
1:0:2109:A:H2'	1:0:2110:G:H8	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2274:C:H2'	1:0:2275:U:H5''	1.99	0.42
1:0:2505:G:N1	1:0:2517:C:O2	2.52	0.42
1:0:2526:U:C5	1:0:2545:A:N7	2.88	0.42
1:0:76:C:H2'	1:0:77:C:C6	2.55	0.42
1:0:91:A:H2'	1:0:92:U:C6	2.54	0.42
1:0:146:C:H2'	1:0:147:G:C8	2.54	0.42
1:0:172:A:N1	1:0:178:C:N3	2.68	0.42
1:0:230:C:H2'	1:0:231:G:O4'	2.19	0.42
1:0:458:G:H4'	1:0:461:A:C4	2.54	0.42
1:0:790:A:O2'	1:0:791:G:H5'	2.20	0.42
1:0:1017:C:N3	1:0:1148:G:N1	2.68	0.42
1:0:1300:A:N3	1:0:1300:A:H2'	2.34	0.42
1:0:1717:A:O2'	1:0:1757:C:OP1	2.27	0.42
1:0:1872:A:H1'	1:0:2070:G:H5'	2.02	0.42
1:0:2446:C:H2'	1:0:2447:G:C1'	2.49	0.42
1:0:2462:C:H2'	1:0:2463:G:H5'	2.02	0.42
1:0:2490:U:H2'	1:0:2491:C:C6	2.54	0.42
1:0:2539:C:N4	1:0:2540:A:N6	2.68	0.42
1:0:73:A:H2'	1:0:74:G:OP2	2.20	0.42
1:0:238:G:O4'	1:0:618:A:H2	2.03	0.42
1:0:298:C:H2'	1:0:299:C:C6	2.55	0.42
1:0:458:G:H4'	1:0:461:A:N3	2.35	0.42
1:0:528:G:H2'	1:0:529:U:C6	2.54	0.42
1:0:1011:A:N6	1:0:1166:A:C8	2.88	0.42
1:0:1108:U:H2'	1:0:1109:A:C5'	2.39	0.42
1:0:1287:A:C2	1:0:1661:C:O2'	2.73	0.42
1:0:1337:G:O2'	1:0:1632:A:C6	2.72	0.42
1:0:1571:G:H2'	1:0:1572:C:O4'	2.20	0.42
1:0:1894:U:H3	1:0:1901:A:H61	1.66	0.42
1:0:346:C:O2'	1:0:347:C:H5'	2.19	0.42
1:0:387:A:O5'	1:0:436:A:N7	2.53	0.42
1:0:461:A:H61	1:0:466:A:N6	2.17	0.42
1:0:742:G:N2	1:0:1766:U:C1'	2.83	0.42
1:0:879:A:H2'	1:0:880:C:O5'	2.20	0.42
1:0:1029:C:N4	1:0:1153:A:C6	2.85	0.42
1:0:1125:G:H2'	1:0:1126:A:O4'	2.18	0.42
1:0:1550:C:C2'	1:0:1551:U:O5'	2.68	0.42
1:0:1749:G:H2'	1:0:1750:A:OP1	2.19	0.42
1:0:2087:U:H2'	1:0:2088:U:C6	2.54	0.42
1:0:2301:A:C2'	1:0:2302:G:H5'	2.50	0.42
1:0:2538:C:H2'	1:0:2539:C:H6	1.85	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:174:A:H2'	1:0:175:C:O4'	2.20	0.42
1:0:332:C:H5''	1:0:333:A:OP2	2.20	0.42
1:0:577:U:H5'	1:0:956:A:H62	1.85	0.42
1:0:801:A:HO2'	1:0:802:A:P	2.42	0.42
1:0:805:G:O6	1:0:2419:C:O4'	2.38	0.42
1:0:914:C:H2'	1:0:915:C:H6	1.83	0.42
1:0:1205:G:O2'	1:0:1206:G:H5'	2.20	0.42
1:0:1271:C:H2'	1:0:1272:G:C8	2.55	0.42
1:0:1514:C:OP2	1:0:1593:C:H5''	2.19	0.42
1:0:1542:G:N2	1:0:1561:A:H62	2.18	0.42
1:0:1552:C:C2'	1:0:1553:G:H5'	2.50	0.42
1:0:1770:U:H6	1:0:1770:U:H3'	1.85	0.42
1:0:1883:A:H1'	1:0:1953:A:C8	2.55	0.42
1:0:1900:U:O2'	1:0:1946:U:C5'	2.68	0.42
1:0:2696:A:H2'	1:0:2697:G:C8	2.53	0.42
1:0:2756:A:N6	1:0:2762:G:C4	2.88	0.42
1:0:180:C:O5'	1:0:180:C:H6	2.02	0.41
1:0:200:A:H1'	1:0:432:C:N3	2.35	0.41
1:0:244:C:H2'	1:0:245:C:C5'	2.41	0.41
1:0:310:A:C4	1:0:333:A:N6	2.88	0.41
1:0:2034:A:N6	1:0:2593:A:C5	2.88	0.41
1:0:2309:G:O2'	1:0:2310:G:H5'	2.19	0.41
1:0:2526:U:H2'	1:0:2527:G:H8	1.81	0.41
1:0:42:G:H2'	1:0:43:A:O4'	2.19	0.41
1:0:73:A:O3'	1:0:74:G:C4'	2.66	0.41
1:0:298:C:H2'	1:0:299:C:H6	1.83	0.41
1:0:367:G:C2'	1:0:368:A:H5''	2.49	0.41
1:0:439:C:H5''	1:0:440:U:C5	2.56	0.41
1:0:524:A:H2'	1:0:525:A:C8	2.55	0.41
1:0:634:G:O2'	1:0:635:C:H5'	2.20	0.41
1:0:805:G:H8	1:0:805:G:H5'	1.85	0.41
1:0:817:A:H2'	1:0:819:C:N4	2.35	0.41
1:0:984:A:H2	1:0:1200:G:N1	2.15	0.41
1:0:1312:G:N2	1:0:1657:A:H5'	2.35	0.41
1:0:1354:A:N6	1:0:1407:G:H1	2.14	0.41
1:0:1440:G:H3'	1:0:1441:A:C5'	2.50	0.41
1:0:1548:U:H2'	1:0:1549:C:H6	1.85	0.41
1:0:1635:G:H2'	1:0:1635:G:N3	2.33	0.41
1:0:1899:A:O5'	1:0:1899:A:H8	2.03	0.41
1:0:1900:U:O2'	1:0:1946:U:H5''	2.19	0.41
1:0:1975:G:N2	1:0:1979:C:H5	2.13	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2038:C:OP1	1:0:2039:G:H4'	2.20	0.41
1:0:2326:C:N4	1:0:2350:G:N2	2.68	0.41
1:0:2491:C:H42	1:0:2553:G:H1	1.67	0.41
1:0:2505:G:N1	1:0:2517:C:C2	2.88	0.41
1:0:321:A:H4'	1:0:322:A:N7	2.36	0.41
1:0:346:C:O2	1:0:346:C:C2'	2.68	0.41
1:0:477:A:H1'	1:0:696:U:O4'	2.20	0.41
1:0:610:G:N2	1:0:614:G:O3'	2.53	0.41
1:0:847:C:H41	1:0:955:G:N2	2.18	0.41
1:0:980:G:H2'	1:0:981:C:O4'	2.20	0.41
1:0:1159:U:O2'	1:0:1160:C:H5'	2.20	0.41
1:0:1550:C:H2'	1:0:1551:U:O5'	2.20	0.41
1:0:1750:A:C8	1:0:2675:U:H1'	2.56	0.41
1:0:1762:C:O2'	1:0:1777:A:O4'	2.37	0.41
1:0:1872:A:H2'	1:0:1873:A:C8	2.56	0.41
1:0:1873:A:H4'	1:0:2069:U:H4'	2.02	0.41
1:0:2015:G:N3	1:0:2015:G:H2'	2.34	0.41
1:0:2281:C:H6	1:0:2281:C:O5'	2.04	0.41
1:0:2484:G:H5'	2:0:2881:TEL:C57	2.48	0.41
1:0:2496:C:C4	1:0:2521:A:N6	2.88	0.41
1:0:2741:G:H2'	1:0:2742:G:C8	2.55	0.41
1:0:58:C:O4'	1:0:72:A:C8	2.74	0.41
1:0:114:C:O2'	1:0:115:G:H5'	2.21	0.41
1:0:593:C:O5'	1:0:593:C:H6	2.04	0.41
1:0:718:A:N6	1:0:739:G:O2'	2.52	0.41
1:0:1078:A:H2'	1:0:1079:G:C8	2.49	0.41
1:0:1083:C:C4	1:0:1104:G:O6	2.73	0.41
1:0:1166:A:H2'	1:0:1167:A:H5''	2.02	0.41
1:0:1211:G:N2	1:0:1263:G:C4	2.88	0.41
1:0:1221:C:H2'	1:0:1222:G:C8	2.55	0.41
1:0:1684:G:H2'	1:0:1685:A:OP2	2.20	0.41
1:0:1739:G:H2'	1:0:1740:G:H8	1.85	0.41
1:0:1783:G:O2'	1:0:1784:C:H5'	2.20	0.41
1:0:1945:C:O2'	1:0:1946:U:C6	2.73	0.41
1:0:2698:G:H2'	1:0:2699:G:O4'	2.21	0.41
1:0:2796:A:HO2'	1:0:2801:A:H2	1.63	0.41
1:0:81:C:H4'	1:0:307:C:H5'	2.01	0.41
1:0:197:G:OP2	1:0:439:C:OP2	2.38	0.41
1:0:369:C:O2'	1:0:370:U:H5'	2.20	0.41
1:0:742:G:N2	1:0:1766:U:N1	2.68	0.41
1:0:751:G:N3	1:0:752:G:H1'	2.35	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:779:U:H6	1:0:779:U:O5'	2.03	0.41
1:0:781:G:H2'	1:0:782:U:C6	2.56	0.41
1:0:846:A:H2'	1:0:847:C:H6	1.84	0.41
1:0:1316:G:C6	1:0:1317:G:N7	2.88	0.41
1:0:1454:U:H2'	1:0:1455:C:C6	2.55	0.41
1:0:1685:A:N1	1:0:1691:G:H1'	2.36	0.41
1:0:1723:U:H6	1:0:1723:U:O5'	2.03	0.41
1:0:2061:C:C5'	1:0:2413:A:H4'	2.50	0.41
1:0:2433:G:O6	1:0:2477:C:N4	2.54	0.41
1:0:2871:U:H2'	1:0:2872:U:C6	2.55	0.41
1:0:197:G:C1'	1:0:211:U:H1'	2.45	0.41
1:0:346:C:C2'	1:0:347:C:H5'	2.51	0.41
1:0:459:A:N7	1:0:484:G:C5	2.89	0.41
1:0:462:G:H8	1:0:462:G:O5'	2.03	0.41
1:0:474:G:C6	1:0:478:G:O6	2.73	0.41
1:0:919:U:C4	1:0:920:G:N7	2.88	0.41
1:0:1191:G:O2'	1:0:1192:A:H5'	2.20	0.41
1:0:1462:C:O2'	1:0:1560:A:H1'	2.19	0.41
1:0:1545:G:N2	1:0:1558:C:O2	2.54	0.41
1:0:1972:G:H2'	1:0:1973:C:O4'	2.21	0.41
1:0:2226:A:H2'	1:0:2227:C:C6	2.55	0.41
1:0:2314:A:H1'	1:0:2315:A:N7	2.35	0.41
1:0:2514:G:H2'	1:0:2515:G:H8	1.85	0.41
1:0:9:U:O2'	1:0:10:A:H5'	2.20	0.41
1:0:357:A:H3'	1:0:358:C:H5'	2.02	0.41
1:0:774:A:H8	1:0:774:A:O5'	2.04	0.41
1:0:833:A:H1'	1:0:954:U:O2'	2.21	0.41
1:0:841:G:O2'	1:0:842:A:O4'	2.37	0.41
1:0:1139:A:N6	1:0:2497:A:H61	2.16	0.41
1:0:1273:G:H2'	1:0:1274:C:C6	2.56	0.41
1:0:1588:A:H2'	1:0:1589:G:C8	2.50	0.41
1:0:1629:G:C6	1:0:1633:C:N4	2.89	0.41
1:0:1761:G:C2'	1:0:1762:C:H5'	2.49	0.41
1:0:2018:G:HO2'	1:0:2019:C:P	2.39	0.41
1:0:2034:A:H2	1:0:2035:G:O6	2.03	0.41
1:0:2302:G:H2'	1:0:2303:C:O4'	2.19	0.41
1:0:2382:C:N3	1:0:2393:G:N2	2.54	0.41
1:0:2684:A:H3'	1:0:2685:A:H8	1.85	0.41
1:0:162:C:H5'	1:0:195:A:C1'	2.41	0.41
1:0:387:A:N6	1:0:388:G:N2	2.69	0.41
1:0:545:C:N4	1:0:546:A:N6	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:677:G:C2'	1:0:678:G:H5'	2.50	0.41
1:0:922:A:H2'	1:0:923:A:C8	2.56	0.41
1:0:1219:C:H2'	1:0:1220:G:O5'	2.21	0.41
1:0:1260:A:C2'	1:0:1261:G:O5'	2.68	0.41
1:0:1286:U:O2'	1:0:1288:A:OP1	2.33	0.41
1:0:1341:G:H2'	1:0:1343:C:C5	2.55	0.41
1:0:1698:C:H2'	1:0:1753:A:H2'	2.01	0.41
1:0:1755:G:H2'	1:0:1756:C:C6	2.56	0.41
1:0:1809:G:H2'	1:0:1810:U:O4'	2.21	0.41
1:0:2633:A:C5'	1:0:2634:G:OP1	2.68	0.41
1:0:26:G:C6	1:0:27:G:C2	3.09	0.41
1:0:122:G:N2	1:0:124:A:H4'	2.36	0.41
1:0:200:A:C6	1:0:435:A:N7	2.88	0.41
1:0:200:A:H4'	1:0:432:C:O2	2.21	0.41
1:0:306:G:H2'	1:0:307:C:C6	2.56	0.41
1:0:340:G:C5'	1:0:341:A:OP1	2.65	0.41
1:0:434:C:H2'	1:0:435:A:OP2	2.21	0.41
1:0:459:A:H1'	1:0:466:A:N6	2.36	0.41
1:0:486:U:OP2	1:0:486:U:C6	2.74	0.41
1:0:700:C:C1'	1:0:801:A:O4'	2.69	0.41
1:0:767:G:H2'	1:0:768:U:C6	2.55	0.41
1:0:853:C:H2'	1:0:854:G:H8	1.86	0.41
1:0:889:C:O2'	1:0:890:U:H5'	2.20	0.41
1:0:1035:G:H21	1:0:1155:G:C5'	2.34	0.41
1:0:1045:G:H2'	1:0:1046:U:C6	2.56	0.41
1:0:1057:A:H3'	1:0:1058:G:H5''	2.00	0.41
1:0:1184:G:C6	1:0:1185:C:N4	2.89	0.41
1:0:1281:A:H1'	1:0:2592:U:O2	2.21	0.41
1:0:1342:U:C5'	1:0:1343:C:H5	2.34	0.41
1:0:1394:G:H1'	1:0:1587:A:C2	2.56	0.41
1:0:1450:G:H2'	1:0:1451:C:O4'	2.20	0.41
1:0:1548:U:H2'	1:0:1549:C:C6	2.56	0.41
1:0:1749:G:C2'	1:0:1750:A:OP1	2.69	0.41
1:0:1777:A:O2'	1:0:1778:U:P	2.77	0.41
1:0:1856:U:O3'	1:0:2388:G:O2'	2.39	0.41
1:0:1908:C:H6	1:0:1908:C:O5'	2.03	0.41
1:0:2334:C:H3'	1:0:2335:U:C5'	2.50	0.41
1:0:2380:U:H2'	1:0:2380:U:O2	2.20	0.41
1:0:2404:A:O2'	1:0:2405:A:OP2	2.34	0.41
1:0:2434:G:H2'	1:0:2435:C:C6	2.56	0.41
1:0:2498:U:H5'	1:0:2546:G:H21	1.86	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2519:C:H2'	1:0:2520:A:O4'	2.21	0.41
1:0:2571:G:C5	1:0:2572:U:C4	3.08	0.41
1:0:2746:G:N3	1:0:2746:G:C2'	2.83	0.41
1:0:2830:U:H2'	1:0:2831:A:C8	2.52	0.41
1:0:172:A:H1'	1:0:228:A:H1'	2.03	0.41
1:0:212:U:H2'	1:0:213:C:C6	2.55	0.41
1:0:324:C:H2'	1:0:325:U:H5'	2.02	0.41
1:0:487:G:H4'	1:0:511:A:N6	2.36	0.41
1:0:605:G:N1	1:0:606:A:C6	2.90	0.41
1:0:871:U:H1'	1:0:2248:A:H5''	2.03	0.41
1:0:991:A:C2	1:0:2020:G:N3	2.89	0.41
1:0:1018:C:H6	1:0:1018:C:O5'	2.04	0.41
1:0:1038:U:O2'	1:0:1039:A:H5'	2.21	0.41
1:0:1286:U:H4'	1:0:1288:A:OP1	2.21	0.41
1:0:1333:G:N7	1:0:1342:U:H5'	2.35	0.41
1:0:1352:G:H2'	1:0:1353:A:C8	2.56	0.41
1:0:1452:U:C2'	1:0:1453:A:H5'	2.51	0.41
1:0:1618:U:O2	1:0:1618:U:O5'	2.38	0.41
1:0:1619:A:O5'	1:0:1619:A:N3	2.54	0.41
1:0:1661:C:H2'	1:0:1662:G:C8	2.56	0.41
1:0:1672:A:C2	1:0:2032:G:H4'	2.56	0.41
1:0:1750:A:H5''	1:0:2695:C:H1'	2.02	0.41
1:0:2262:C:C5	1:0:2368:G:H2'	2.56	0.41
1:0:2357:A:H2'	1:0:2358:C:H5'	2.03	0.41
1:0:2616:U:H3	1:0:2756:A:H62	1.69	0.41
1:0:2823:G:O2'	1:0:2843:A:N6	2.54	0.41
1:0:13:A:H4'	1:0:14:A:H8	1.86	0.40
1:0:190:A:O2'	1:0:191:G:H5'	2.20	0.40
1:0:439:C:C4	1:0:440:U:C2	3.09	0.40
1:0:516:G:O2'	1:0:517:A:C8	2.73	0.40
1:0:853:C:N3	1:0:950:G:C6	2.89	0.40
1:0:952:A:HO2'	1:0:1204:G:H4'	1.86	0.40
1:0:1141:U:O2'	1:0:1142:G:P	2.78	0.40
1:0:1419:G:H2'	1:0:1420:A:O4'	2.20	0.40
1:0:1456:C:H2'	1:0:1457:A:H8	1.86	0.40
1:0:1681:A:C2	1:0:2706:U:C1'	3.00	0.40
1:0:1894:U:O5'	1:0:1894:U:H6	2.03	0.40
1:0:2041:A:N1	2:0:2881:TEL:O48	2.45	0.40
1:0:2204:A:P	1:0:2204:A:H8	2.44	0.40
1:0:2532:G:C3'	1:0:2533:U:C5'	2.96	0.40
1:0:2843:A:N6	1:0:2844:G:N1	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:171:G:C2	1:0:179:U:C2	3.09	0.40
1:0:173:A:HO2'	1:0:174:A:P	2.43	0.40
1:0:178:C:O4'	1:0:399:G:N2	2.54	0.40
1:0:464:G:H2'	1:0:465:C:H6	1.86	0.40
1:0:619:A:H2'	1:0:620:G:H8	1.87	0.40
1:0:748:A:H3'	1:0:749:C:C5	2.57	0.40
1:0:1233:A:H2'	1:0:1234:C:OP1	2.22	0.40
1:0:1234:C:H2'	1:0:1235:C:H6	1.86	0.40
1:0:1446:U:H2'	1:0:1447:U:O4'	2.22	0.40
1:0:1458:A:H5''	1:0:1459:U:OP2	2.21	0.40
1:0:1597:A:H2'	1:0:1598:C:C6	2.56	0.40
1:0:1778:U:O2'	1:0:1779:C:H5'	2.21	0.40
1:0:1816:G:O2'	1:0:1817:U:H5'	2.21	0.40
1:0:1994:U:H2'	1:0:1995:G:H5'	2.03	0.40
1:0:2082:C:O2'	1:0:2083:G:H5'	2.20	0.40
1:0:2322:U:C2'	1:0:2323:U:H5'	2.51	0.40
1:0:2633:A:C2	1:0:2644:A:H5''	2.56	0.40
1:0:2756:A:O2'	1:0:2757:G:C5'	2.69	0.40
1:0:14:A:N6	1:0:15:G:H21	2.19	0.40
1:0:474:G:N2	1:0:476:G:C8	2.87	0.40
1:0:686:C:H2'	1:0:687:G:H8	1.86	0.40
1:0:701:U:O5'	1:0:701:U:H6	2.04	0.40
1:0:743:A:C6	1:0:744:C:C4	3.10	0.40
1:0:796:A:C2	1:0:797:A:H4'	2.57	0.40
1:0:1294:G:N1	1:0:1302:C:N4	2.55	0.40
1:0:1406:A:O5'	1:0:1406:A:H8	2.04	0.40
1:0:1489:C:H3'	1:0:1490:U:C5'	2.51	0.40
1:0:1679:U:C2'	1:0:1680:U:C5'	2.97	0.40
1:0:1688:U:N3	1:0:1691:G:OP2	2.52	0.40
1:0:2264:C:H2'	1:0:2265:A:H5'	2.02	0.40
1:0:2783:U:C2	1:0:2866:A:N6	2.89	0.40
1:0:2816:C:O2	1:0:2852:G:N1	2.54	0.40
1:0:2862:G:O2'	1:0:2863:U:H5'	2.21	0.40
1:0:185:C:O2'	1:0:186:C:H5'	2.22	0.40
1:0:329:C:H2'	1:0:330:C:C6	2.57	0.40
1:0:541:C:N4	1:0:572:G:H5''	2.36	0.40
1:0:683:A:H5''	1:0:684:C:O5'	2.21	0.40
1:0:698:A:C4'	1:0:700:C:H5	2.35	0.40
1:0:834:A:O2'	1:0:955:G:H4'	2.22	0.40
1:0:844:G:H2'	1:0:845:U:O4'	2.21	0.40
1:0:873:U:N3	1:0:930:A:C6	2.69	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:874:A:C4	1:0:929:A:N6	2.89	0.40
1:0:924:C:H2'	1:0:925:U:O4'	2.22	0.40
1:0:1135:C:O2'	1:0:1136:G:H5'	2.22	0.40
1:0:1145:C:O5'	1:0:1146:G:OP2	2.39	0.40
1:0:1308:C:H2'	1:0:1309:G:H8	1.87	0.40
1:0:1450:G:O2'	1:0:1451:C:H5'	2.21	0.40
1:0:1676:U:O2'	1:0:1677:C:H5'	2.22	0.40
1:0:2363:G:H2'	1:0:2364:C:OP1	2.21	0.40
1:0:2377:U:O2'	1:0:2378:G:OP1	2.36	0.40
1:0:2499:C:N1	1:0:2546:G:H1'	2.37	0.40
1:0:2548:G:C2'	1:0:2549:G:C5'	3.00	0.40
1:0:2792:C:H3'	1:0:2793:G:H5''	2.04	0.40
1:0:2852:G:H2'	1:0:2853:U:H5'	2.03	0.40
1:0:38:G:H2'	1:0:39:C:H6	1.80	0.40
1:0:174:A:H2	1:0:2413:A:H62	1.69	0.40
1:0:441:A:H2'	1:0:442:A:H5'	2.04	0.40
1:0:516:G:H5''	1:0:519:C:H1'	2.04	0.40
1:0:839:U:N3	1:0:841:G:H1'	2.36	0.40
1:0:1029:C:H6	1:0:1029:C:O5'	2.05	0.40
1:0:1177:U:C2	1:0:1197:U:O2	2.75	0.40
1:0:1340:C:O2'	1:0:1341:G:H5'	2.21	0.40
1:0:1366:A:N7	1:0:1390:G:C2	2.89	0.40
1:0:1430:G:H2'	1:0:1431:U:C6	2.56	0.40
1:0:1706:A:H2'	1:0:1707:A:C5'	2.51	0.40
1:0:1725:C:O2'	1:0:1726:C:H5'	2.22	0.40
1:0:1938:U:O2	1:0:1938:U:C2'	2.69	0.40
1:0:1987:G:H2'	1:0:1988:A:C5'	2.52	0.40
1:0:2104:G:H2'	1:0:2105:U:C6	2.56	0.40
1:0:2160:C:H2'	1:0:2161:C:C6	2.56	0.40
1:0:2236:U:H2'	1:0:2237:C:O4'	2.22	0.40
1:0:2322:U:H4'	1:0:2352:A:O3'	2.22	0.40
1:0:2691:C:H5''	1:0:2694:G:H5'	2.04	0.40

There are no symmetry-related clashes.

5.3 Torsion angles ⓘ

5.3.1 Protein backbone ⓘ

There are no protein molecules in this entry.

5.3.2 Protein sidechains [i](#)

There are no protein molecules in this entry.

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	0	2727/2880 (94%)	580 (21%)	62 (2%)

All (580) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	0	13	A
1	0	14	A
1	0	15	G
1	0	45	C
1	0	50	G
1	0	51	A
1	0	58	C
1	0	59	G
1	0	63	A
1	0	70	A
1	0	72	A
1	0	74	G
1	0	75	C
1	0	83	A
1	0	87	G
1	0	89	A
1	0	90	G
1	0	91	A
1	0	97	U
1	0	99	U
1	0	100	G
1	0	110	U
1	0	116	A
1	0	117	A
1	0	118	U
1	0	119	G
1	0	123	A
1	0	124	A
1	0	129	A
1	0	135	U
1	0	149	A

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Mol	Chain	Res	Type
1	0	155	G
1	0	158	A
1	0	173	A
1	0	174	A
1	0	176	A
1	0	177	U
1	0	182	G
1	0	193	A
1	0	199	A
1	0	200	A
1	0	201	G
1	0	205	A
1	0	206	U
1	0	207	U
1	0	210	A
1	0	218	A
1	0	219	G
1	0	220	U
1	0	225	G
1	0	227	G
1	0	229	G
1	0	242	A
1	0	244	C
1	0	245	C
1	0	302	U
1	0	303	C
1	0	305	A
1	0	312	G
1	0	322	A
1	0	334	G
1	0	335	A
1	0	340	G
1	0	341	A
1	0	343	A
1	0	348	U
1	0	358	C
1	0	363	G
1	0	368	A
1	0	372	U
1	0	373	A
1	0	389	G
1	0	390	U

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Mol	Chain	Res	Type
1	0	392	G
1	0	393	U
1	0	397	U
1	0	399	G
1	0	402	A
1	0	403	A
1	0	431	G
1	0	432	C
1	0	433	G
1	0	434	C
1	0	435	A
1	0	437	G
1	0	438	G
1	0	440	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	469	G
1	0	484	G
1	0	486	U
1	0	491	A
1	0	492	G
1	0	514	G
1	0	515	A
1	0	517	A
1	0	518	A
1	0	519	C
1	0	520	C
1	0	537	C
1	0	538	A
1	0	540	G
1	0	541	C
1	0	542	A
1	0	554	U
1	0	555	U
1	0	556	A
1	0	558	G
1	0	559	C

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Mol	Chain	Res	Type
1	0	560	G
1	0	572	G
1	0	582	G
1	0	584	A
1	0	587	A
1	0	596	C
1	0	601	A
1	0	602	C
1	0	613	A
1	0	616	U
1	0	617	U
1	0	624	A
1	0	632	A
1	0	638	A
1	0	639	G
1	0	648	A
1	0	652	C
1	0	654	A
1	0	667	U
1	0	669	G
1	0	683	A
1	0	684	C
1	0	698	A
1	0	699	G
1	0	700	C
1	0	712	A
1	0	728	G
1	0	742	G
1	0	743	A
1	0	753	U
1	0	760	U
1	0	761	G
1	0	765	C
1	0	766	A
1	0	775	U
1	0	778	G
1	0	787	A
1	0	789	G
1	0	790	A
1	0	794	A
1	0	795	A
1	0	796	A

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Mol	Chain	Res	Type
1	0	797	A
1	0	798	G
1	0	801	A
1	0	802	A
1	0	803	C
1	0	804	C
1	0	805	G
1	0	806	A
1	0	807	A
1	0	815	A
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	860	U
1	0	869	C
1	0	873	U
1	0	880	C
1	0	919	U
1	0	922	A
1	0	926	C
1	0	930	A
1	0	931	G
1	0	939	C
1	0	941	U
1	0	943	U
1	0	944	A
1	0	952	A
1	0	956	A
1	0	957	G
1	0	969	U
1	0	970	A
1	0	972	C
1	0	984	A
1	0	985	G
1	0	990	A
1	0	994	A
1	0	996	C

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Mol	Chain	Res	Type
1	0	1016	C
1	0	1019	U
1	0	1023	U
1	0	1024	G
1	0	1030	U
1	0	1032	A
1	0	1033	G
1	0	1034	U
1	0	1036	G
1	0	1037	U
1	0	1044	U
1	0	1055	A
1	0	1056	U
1	0	1057	A
1	0	1058	G
1	0	1059	A
1	0	1067	G
1	0	1071	U
1	0	1073	G
1	0	1074	G
1	0	1081	A
1	0	1082	G
1	0	1087	C
1	0	1090	C
1	0	1099	A
1	0	1130	U
1	0	1137	A
1	0	1138	A
1	0	1141	U
1	0	1142	G
1	0	1145	C
1	0	1146	G
1	0	1152	C
1	0	1153	A
1	0	1155	G
1	0	1166	A
1	0	1167	A
1	0	1183	C
1	0	1185	C
1	0	1195	U
1	0	1199	U
1	0	1200	G

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Mol	Chain	Res	Type
1	0	1223	G
1	0	1224	A
1	0	1233	A
1	0	1235	C
1	0	1250	A
1	0	1251	G
1	0	1253	C
1	0	1261	G
1	0	1262	U
1	0	1264	C
1	0	1265	G
1	0	1267	A
1	0	1269	G
1	0	1274	C
1	0	1278	A
1	0	1279	G
1	0	1284	G
1	0	1285	A
1	0	1286	U
1	0	1288	A
1	0	1289	A
1	0	1300	A
1	0	1302	C
1	0	1313	U
1	0	1314	A
1	0	1316	G
1	0	1324	G
1	0	1327	C
1	0	1334	A
1	0	1338	G
1	0	1339	U
1	0	1342	U
1	0	1343	C
1	0	1346	C
1	0	1354	A
1	0	1356	G
1	0	1359	G
1	0	1391	A
1	0	1392	U
1	0	1397	A
1	0	1398	G
1	0	1407	G

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Mol	Chain	Res	Type
1	0	1411	C
1	0	1433	A
1	0	1441	A
1	0	1442	C
1	0	1443	G
1	0	1450	G
1	0	1459	U
1	0	1460	G
1	0	1468	A
1	0	1469	U
1	0	1470	G
1	0	1474	A
1	0	1475	U
1	0	1476	G
1	0	1482	U
1	0	1489	C
1	0	1490	U
1	0	1505	U
1	0	1508	G
1	0	1513	U
1	0	1514	C
1	0	1524	C
1	0	1529	C
1	0	1552	C
1	0	1553	G
1	0	1573	G
1	0	1574	A
1	0	1583	A
1	0	1585	A
1	0	1614	C
1	0	1618	U
1	0	1619	A
1	0	1623	C
1	0	1624	A
1	0	1625	A
1	0	1627	C
1	0	1631	C
1	0	1634	A
1	0	1635	G
1	0	1648	C
1	0	1652	G
1	0	1657	A

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Mol	Chain	Res	Type
1	0	1664	G
1	0	1665	C
1	0	1670	G
1	0	1671	A
1	0	1680	U
1	0	1685	A
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	1724	C
1	0	1733	U
1	0	1748	U
1	0	1749	G
1	0	1750	A
1	0	1754	G
1	0	1755	G
1	0	1763	G
1	0	1764	A
1	0	1770	U
1	0	1771	A
1	0	1772	C
1	0	1773	C
1	0	1776	A
1	0	1778	U
1	0	1792	C
1	0	1799	A
1	0	1800	A
1	0	1801	C
1	0	1802	A
1	0	1807	A
1	0	1808	C
1	0	1812	U
1	0	1821	A
1	0	1831	G
1	0	1840	A
1	0	1864	G

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Mol	Chain	Res	Type
1	0	1884	A
1	0	1889	G
1	0	1900	U
1	0	1909	U
1	0	1919	A
1	0	1920	A
1	0	1922	U
1	0	1924	C
1	0	1926	U
1	0	1927	U
1	0	1928	G
1	0	1930	C
1	0	1933	G
1	0	1938	U
1	0	1939	U
1	0	1946	U
1	0	1947	G
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	1964	A
1	0	1975	G
1	0	1976	U
1	0	1979	C
1	0	1980	A
1	0	2002	A
1	0	2003	A
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	2019	C
1	0	2026	C
1	0	2038	C
1	0	2039	G

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Mol	Chain	Res	Type
1	0	2043	A
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	2060	A
1	0	2075	U
1	0	2076	G
1	0	2082	C
1	0	2094	C
1	0	2096	U
1	0	2118	A
1	0	2119	A
1	0	2121	U
1	0	2140	G
1	0	2162	C
1	0	2168	A
1	0	2181	A
1	0	2191	A
1	0	2192	U
1	0	2195	C
1	0	2199	C
1	0	2205	C
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	2267	A
1	0	2268	G
1	0	2284	U
1	0	2285	U
1	0	2286	G
1	0	2287	G

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Mol	Chain	Res	Type
1	0	2288	A
1	0	2298	U
1	0	2299	A
1	0	2300	G
1	0	2301	A
1	0	2312	A
1	0	2313	G
1	0	2314	A
1	0	2315	A
1	0	2316	G
1	0	2324	G
1	0	2325	A
1	0	2326	C
1	0	2335	U
1	0	2340	C
1	0	2351	G
1	0	2362	G
1	0	2364	C
1	0	2378	G
1	0	2381	A
1	0	2385	U
1	0	2386	G
1	0	2389	G
1	0	2396	C
1	0	2402	U
1	0	2403	C
1	0	2405	A
1	0	2406	C
1	0	2407	G
1	0	2408	G
1	0	2409	A
1	0	2410	U
1	0	2411	A
1	0	2414	A
1	0	2419	C
1	0	2426	G
1	0	2427	A
1	0	2428	U
1	0	2447	G
1	0	2448	A
1	0	2455	A
1	0	2470	U

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Mol	Chain	Res	Type
1	0	2476	A
1	0	2477	C
1	0	2480	C
1	0	2481	G
1	0	2482	A
1	0	2483	U
1	0	2492	G
1	0	2496	C
1	0	2497	A
1	0	2498	U
1	0	2499	C
1	0	2521	A
1	0	2522	G
1	0	2533	U
1	0	2545	A
1	0	2546	G
1	0	2549	G
1	0	2551	A
1	0	2552	C
1	0	2553	G
1	0	2557	G
1	0	2561	G
1	0	2565	C
1	0	2578	G
1	0	2581	A
1	0	2582	G
1	0	2588	U
1	0	2589	C
1	0	2591	C
1	0	2593	A
1	0	2594	U
1	0	2600	A
1	0	2608	A
1	0	2609	G
1	0	2625	U
1	0	2633	A
1	0	2634	G
1	0	2660	C
1	0	2661	G
1	0	2669	C
1	0	2670	C
1	0	2692	A

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Mol	Chain	Res	Type
1	0	2693	U
1	0	2694	G
1	0	2706	U
1	0	2707	G
1	0	2712	G
1	0	2713	A
1	0	2719	U
1	0	2728	A
1	0	2730	A
1	0	2732	C
1	0	2735	C
1	0	2737	A
1	0	2745	A
1	0	2756	A
1	0	2757	G
1	0	2758	A
1	0	2759	U
1	0	2760	G
1	0	2761	A
1	0	2769	C
1	0	2771	C
1	0	2774	U
1	0	2782	G
1	0	2783	U
1	0	2785	A
1	0	2793	G
1	0	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	2823	G
1	0	2825	A
1	0	2841	U
1	0	2842	C
1	0	2847	G
1	0	2849	C
1	0	2854	G
1	0	2855	C
1	0	2858	A

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Mol	Chain	Res	Type
1	0	2866	A
1	0	2867	G
1	0	2868	G

All (62) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	0	69	G
1	0	117	A
1	0	173	A
1	0	176	A
1	0	192	G
1	0	218	A
1	0	219	G
1	0	430	C
1	0	434	C
1	0	436	A
1	0	438	G
1	0	460	U
1	0	466	A
1	0	485	G
1	0	516	G
1	0	539	A
1	0	765	C
1	0	789	G
1	0	801	A
1	0	956	A
1	0	1033	G
1	0	1141	U
1	0	1154	A
1	0	1194	U
1	0	1249	G
1	0	1260	A
1	0	1263	G
1	0	1278	A
1	0	1299	A
1	0	1313	U
1	0	1315	A
1	0	1338	G
1	0	1345	G
1	0	1391	A
1	0	1617	G

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Mol	Chain	Res	Type
1	0	1626	A
1	0	1634	A
1	0	1685	A
1	0	1691	G
1	0	1698	C
1	0	1715	A
1	0	1820	G
1	0	1975	G
1	0	2013	A
1	0	2015	G
1	0	2018	G
1	0	2093	G
1	0	2161	C
1	0	2191	A
1	0	2204	A
1	0	2245	A
1	0	2261	G
1	0	2312	A
1	0	2324	G
1	0	2377	U
1	0	2404	A
1	0	2469	G
1	0	2633	A
1	0	2756	A
1	0	2758	A
1	0	2824	C
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 oligosaccharides in this entry.

5.6 Ligand geometry [i](#)

1 ligand is modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# Z > 2	Counts	RMSZ	# Z > 2
2	TEL	0	2881	-	60,62,62	3.60	32 (53%)	78,92,92	3.48	36 (46%)

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
2	TEL	0	2881	-	1/1/19/19	21/73/108/108	0/4/5/5

All (32) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	0	2881	TEL	C30-C34	12.76	1.72	1.54
2	0	2881	TEL	C24-C28	7.88	1.64	1.52
2	0	2881	TEL	C47-C43	7.77	1.51	1.39
2	0	2881	TEL	O9-C15	7.45	1.51	1.34
2	0	2881	TEL	C51-C46	6.56	1.50	1.38
2	0	2881	TEL	C24-C19	6.45	1.62	1.54
2	0	2881	TEL	C11-N6	5.18	1.55	1.46
2	0	2881	TEL	C21-C26	4.96	1.60	1.52
2	0	2881	TEL	C30-C26	4.94	1.60	1.52
2	0	2881	TEL	C44-C49	4.30	1.62	1.53
2	0	2881	TEL	C2-C4	4.18	1.66	1.54
2	0	2881	TEL	O5-C10	4.17	1.42	1.35
2	0	2881	TEL	C40-N41	4.08	1.43	1.38
2	0	2881	TEL	C37-N31	3.94	1.44	1.35
2	0	2881	TEL	C10-N6	3.65	1.41	1.35
2	0	2881	TEL	C56-N52	3.64	1.44	1.33
2	0	2881	TEL	C36-N31	3.59	1.41	1.37
2	0	2881	TEL	C28-C34	3.50	1.64	1.55
2	0	2881	TEL	O32-C28	3.49	1.51	1.44
2	0	2881	TEL	C33-C28	3.34	1.59	1.52
2	0	2881	TEL	C49-N53	3.31	1.55	1.47

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	0	2881	TEL	C21-C15	3.17	1.57	1.51
2	0	2881	TEL	C8-C4	3.06	1.63	1.53
2	0	2881	TEL	C3-N6	2.95	1.53	1.47
2	0	2881	TEL	O16-C10	2.72	1.25	1.21
2	0	2881	TEL	O29-C26	2.52	1.25	1.21
2	0	2881	TEL	O18-C13	2.48	1.25	1.21
2	0	2881	TEL	C1-C2	2.42	1.57	1.52
2	0	2881	TEL	C12-C7	2.37	1.58	1.53
2	0	2881	TEL	C43-C40	2.32	1.51	1.47
2	0	2881	TEL	O39-C34	2.17	1.49	1.44
2	0	2881	TEL	O9-C4	2.14	1.49	1.46

All (36) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	0	2881	TEL	O9-C15-C21	13.62	124.38	110.93
2	0	2881	TEL	C3-N6-C10	-11.34	96.35	111.64
2	0	2881	TEL	C42-O39-C34	7.35	128.76	116.26
2	0	2881	TEL	O20-C15-C21	-6.88	115.73	124.65
2	0	2881	TEL	O39-C34-C28	-6.48	91.39	106.44
2	0	2881	TEL	C24-C28-C34	6.15	117.61	110.18
2	0	2881	TEL	C2-O5-C10	-5.77	104.19	109.23
2	0	2881	TEL	N31-C37-N41	-5.74	107.77	112.35
2	0	2881	TEL	C28-C24-C19	5.57	125.17	116.10
2	0	2881	TEL	O9-C4-C2	5.53	117.95	105.48
2	0	2881	TEL	C4-O9-C15	-5.09	109.31	118.20
2	0	2881	TEL	O9-C4-C8	-4.40	99.19	107.36
2	0	2881	TEL	C12-C7-C13	-4.38	100.44	108.09
2	0	2881	TEL	C43-C40-C36	-4.32	123.05	129.65
2	0	2881	TEL	C1-C2-C3	-3.89	109.14	116.36
2	0	2881	TEL	O5-C2-C3	-3.88	99.32	103.28
2	0	2881	TEL	C37-N41-C40	3.76	108.96	105.94
2	0	2881	TEL	C35-C30-C26	-3.69	101.64	108.09
2	0	2881	TEL	C43-C40-N41	3.64	127.51	122.45
2	0	2881	TEL	O32-C28-C34	-3.50	100.90	107.82
2	0	2881	TEL	C33-C28-C34	-3.44	104.74	109.79
2	0	2881	TEL	C1-C2-C4	-3.22	106.62	112.36
2	0	2881	TEL	C56-N52-C47	2.85	121.84	116.85
2	0	2881	TEL	C27-N31-C36	-2.80	121.36	125.63
2	0	2881	TEL	O29-C26-C30	-2.77	116.79	120.64
2	0	2881	TEL	C24-C19-C13	-2.74	108.72	113.32
2	0	2881	TEL	C54-C49-N53	-2.69	108.05	115.59

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	0	2881	TEL	O5-C2-C1	2.68	111.53	106.80
2	0	2881	TEL	C17-C11-N6	2.57	117.15	113.25
2	0	2881	TEL	C55-C50-C54	-2.38	109.68	113.27
2	0	2881	TEL	C54-C49-C44	-2.27	106.76	110.02
2	0	2881	TEL	O9-C15-O20	-2.26	119.86	123.95
2	0	2881	TEL	O32-C28-C24	2.24	110.43	105.71
2	0	2881	TEL	C14-C8-C4	2.20	118.43	113.11
2	0	2881	TEL	C23-C19-C24	2.06	113.71	109.88
2	0	2881	TEL	O29-C26-C21	-2.05	116.91	120.71

All (1) chirality outliers are listed below:

Mol	Chain	Res	Type	Atom
2	0	2881	TEL	C21

All (21) torsion outliers are listed below:

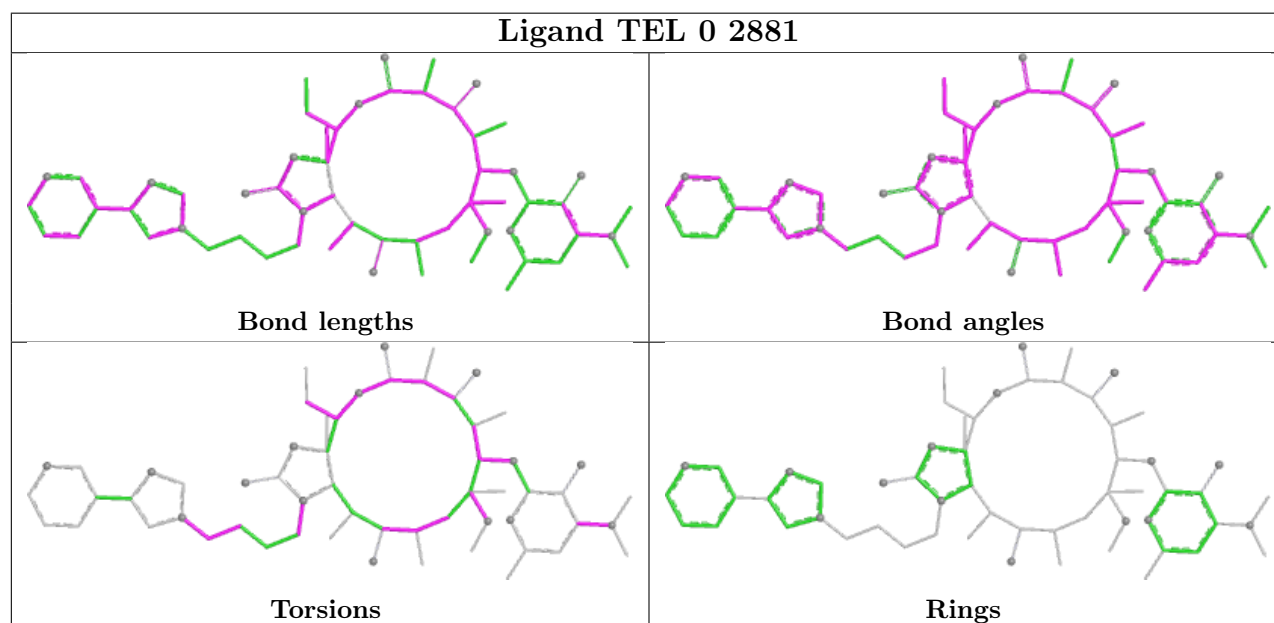
Mol	Chain	Res	Type	Atoms
2	0	2881	TEL	C7-C13-C19-C24
2	0	2881	TEL	C25-C21-C26-O29
2	0	2881	TEL	C25-C21-C26-C30
2	0	2881	TEL	C26-C30-C34-C28
2	0	2881	TEL	C28-C34-O39-C42
2	0	2881	TEL	C30-C34-O39-C42
2	0	2881	TEL	C21-C15-O9-C4
2	0	2881	TEL	C17-C22-C27-N31
2	0	2881	TEL	C54-C49-N53-C58
2	0	2881	TEL	C2-C4-C8-C14
2	0	2881	TEL	O20-C15-O9-C4
2	0	2881	TEL	O20-C15-C21-C25
2	0	2881	TEL	O9-C15-C21-C25
2	0	2881	TEL	O9-C4-C8-C14
2	0	2881	TEL	C15-C21-C26-O29
2	0	2881	TEL	C34-C28-O32-C38
2	0	2881	TEL	C2-C4-O9-C15
2	0	2881	TEL	C17-C11-N6-C10
2	0	2881	TEL	O18-C13-C19-C24
2	0	2881	TEL	C23-C19-C24-C28
2	0	2881	TEL	C22-C27-N31-C36

There are no ring outliers.

1 monomer is involved in 11 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
2	0	2881	TEL	11	0

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



5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

EDS was not executed - this section is therefore empty.

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

EDS was not executed - this section is therefore empty.

6.3 Carbohydrates

EDS was not executed - this section is therefore empty.

6.4 Ligands

EDS was not executed - this section is therefore empty.

6.5 Other polymers

EDS was not executed - this section is therefore empty.