



Full wwPDB X-ray Structure Validation Report ⓘ

Jan 24, 2018 – 03:05 AM EST

PDB ID : 2AAR
Title : Structure of trigger factor binding domain in biologically homologous complex with eubacterial ribosome.
Authors : Baram, D.; Pyetan, E.; Sittner, A.; Auerbach-Nevo, T.; Bashan, A.; Yonath, A.
Deposited on : 2005-07-14
Resolution : 3.50 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

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

MolProbity	:	4.02b-467
Xtriage (Phenix)	:	1.9-1692
EDS	:	rb-20030736
Percentile statistics	:	20161228.v01 (using entries in the PDB archive December 28th 2016)
Refmac	:	5.8.0135
CCP4	:	6.5.0
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	rb-20030736

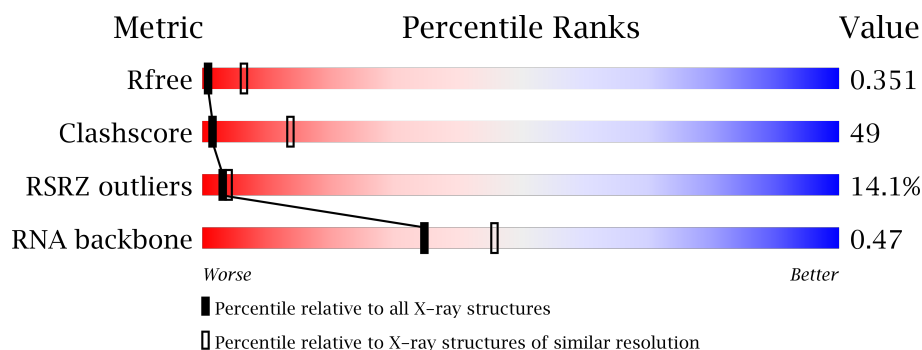
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.50 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
R_{free}	100719	1195 (3.60-3.40)
Clashscore	112137	1322 (3.60-3.40)
RSRZ outliers	101464	1226 (3.60-3.40)
RNA backbone	2435	1024 (4.10-2.86)

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

Mol	Chain	Length	Quality of chain
1	0	2880	
2	R	95	
3	W	67	
4	7	113	

2 Entry composition

There are 4 unique types of molecules in this entry. The entry contains 59630 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	0	2766	Total	C	N	O	P	0	0	0
			59359	26479	10949	19166	2765			

- Molecule 2 is a protein called 50S ribosomal protein L23.

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

- Molecule 3 is a protein called 50S ribosomal protein L29.

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

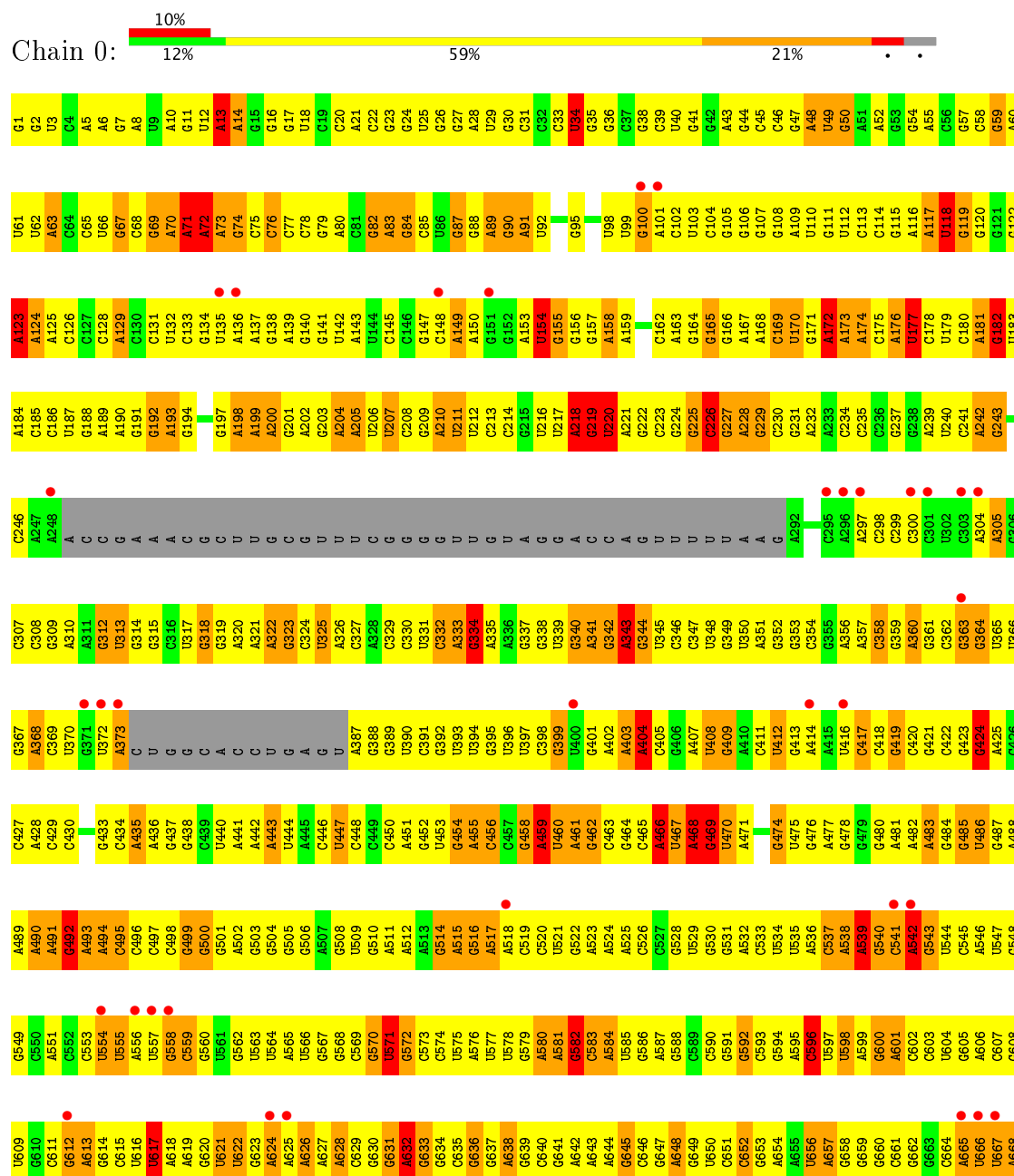
- Molecule 4 is a protein called Trigger Factor.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
4	7	113	Total	C	0	0	113
			113	113			

3 Residue-property plots

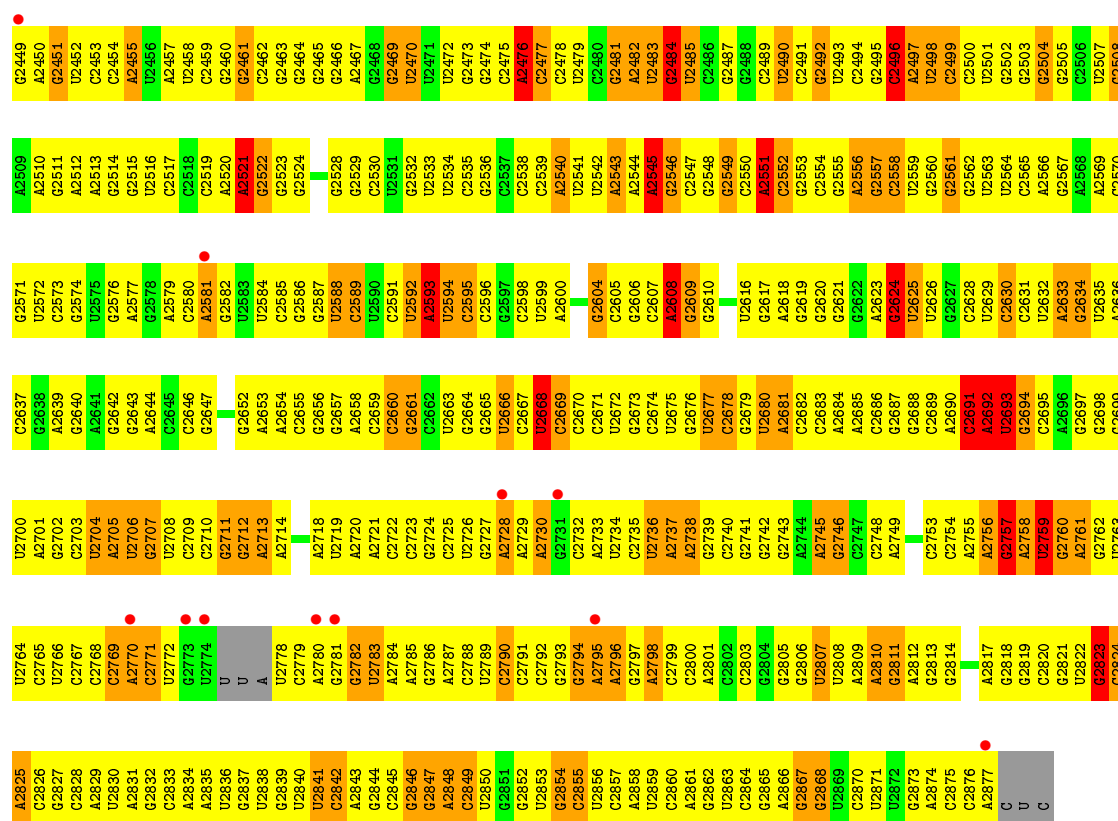
These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry and electron density. Residues are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

• Molecule 1: 23S ribosomal RNA

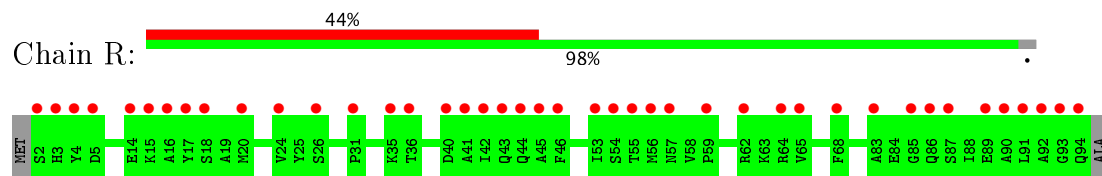




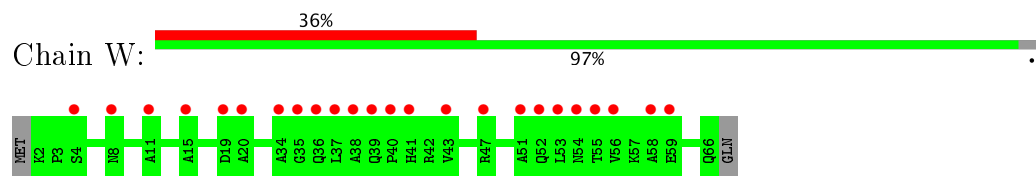
G2389	A2325	G2261	G2200	G2140	G2080	C2019	U1959	U1898	C1836	A1775	A1715	C1650
A2390	C2326	C2262	G2201	A	U2081	G2020	A1960	U1900	G1837	A1776	G1716	U1651
A2391	C2391	C2263	G2202	G	C2082	G2021	A1961	U1900	A1899	A1777	G1717	C1652
G2392	G2328	G2264	A2203	G	G2083	C2022	G1962	A1901	U1778	U1718	A1718	C1653
C2393	G2330	A2265	C2204	A	G2084	C2023	G1863	A1902	U1779	C1719	G1719	C1654
G2394	G	A2266	C2205	C	G2085	U2024	U1964	C1903	G1841	C1779	G1720	U1655
A2395	A2333	A2267	C2206	C	U2086	A2025	U1965	G1904	G1842	C1781	G1721	A1657
C2396	C2334	G2268	G2207	C	U2087	C2026	U1966	G1905	U1843	A1782	G1722	A1658
U2397	G2335	G2269	U2208	G	U2088	C2027	U1967	U1906	C1844	G1783	G1723	C1659
G2398	G2336	G2270	G2209	G	C2089	G2027	G1968	U1907	U1845	C1784	G1724	G1660
A2399	A2337	C2271	C2210	U	U2090	U2030	G1969	C1908	A1846	C1785	G1725	U1600
G2400	C2388	A2272	U2211	G	C2091	A2031	G1970	U1909	U1847	U1787	G1726	U1601
A2401	A2339	G2273	U2212	G	U2092	G2032	C1971	U1910	U1848	C1788	G1727	C1662
U2402	C2340	C2274	G2213	A	G2093	C2033	G1972	A1911	G1849	U1789	A1728	C1663
C2403	U2275	A	A2034	A	C2094	A2034	C1973	G1912	G1850	U1790	C1665	A1604
A2404	C2215	U	G2035	U	G2095	G2035	U1974	U1913	A1851	G1791	G1730	A1605
A2405	G2216	A	G2036	A	U2096	C2036	G1975	G1914	G1852	C1792	G1731	G1606
A2406	G2217	C2157	C2037	C2157	A2097	A2037	U1976	A1915	C1853	A1793	U1732	A1607
A2407	A2278	C2158	G2218	C2158	G	C2038	U1977	G1916	G1854	C1794	U1733	U1608
G2408	G2279	A2159	U2219	A2159	G	G2039	U1978	C1917	G1854	C1795	U1734	U1609
A2409	A2280	C2160	A2220	C2160	U	A2040	U1979	G1918	U1856	A1966	G1735	A1671
U2410	G2283	A	G2221	A	U	A2041	A1980	A1919	G1857	C1797	G1736	A1672
A2411	U2284	C2161	G2221	C2161	A	A2042	A1981	A1920	C1858	G1798	G1737	C1673
A2412	U2285	U2223	U2223	U2163	G2103	A2043	C1982	A1921	A1859	A1799	U1738	G1613
A2413	G2286	U2224	G2224	A2164	G2104	G2044	G1983	U1922	A1860	A1800	G1739	C1614
G2414	G2353	A2165	A2225	A2165	U2105	A2045	A1984	U1923	G1861	C1801	U1676	C1615
G2415	G2354	A2226	A2226	C2166	G2106	C2046	G1985	C1924	C1862	A1802	U1677	
A2416	A2355	G2227	C2227	A2167	G2107	C2047	G1986	C1925	U1863	G1803	G1742	C1677
U2417	A2366	A2280	U2228	A2168	G2108	C2048	G1987	U1926	G1864	U1804	C1743	U1618
A2418	A2357	U2291	G2229	A2169	A2109	C2049	A1988	U1927	C1865	G1805	G1744	U1619
C2419	C2358	G2230	G2230	C2170	G2110	G2050	U1989	U1928	G1866	A1806	G1745	C1620
A2420	U2359	G2231	G2231	U2171	C	U2051	U1990	U1929	A1867	A1807	C1746	C1621
C2421	C2360	U2296	G2232	G2172	U	G2052	C1991	G1930	G1867	C1808	A1682	C1622
G2422	G2361	G2297	C2233	G2173	C	G2053	G1992	G1931	A1869	G1809	G1747	C1623
G2423	G2362	U2298	C2234	G2174	U	A2054	G1993	G1932	U1870	U1810	G1684	A1624
G2424	G2363	A2175	G2235	A2175	C	G2055	G1994	G1933	C1871	A1811	A1685	A1625
A2425	C2364	U2176	U2236	U2176	G	C2056	U1995	U1934	A1872	A1750	A1686	A1626
G2426	A2365	U2177	C2237	U2177	A2117	U2057	A1996	A1936		U1812	C1687	C1627
A2427	U2366	G2238	C2237	U2178	A2118	U2058	A1997	A1937	C1876	U1752	U1688	C1628
U2428	C2367	G2302	G2238	U2179	C	U2059	A1998	G1937	C1877	G1814	U1689	G1629
A2429	G2368	C2303	C2239	C2179	U2059	A2060	U1999	U1938	G1878	G1691	U1690	A1630
C2430	C2369	C2304	C2240	U2180	C2120	C2061	G2000	U1939	C1879	C1692	C1692	C1631
A2431	C2305	U2241	U2241	A2181	U2121	C2061	U2000	U1939	U1817	G1693	A1692	A1632
G2432	A2306	C2242	C2242	C2182	G2122	U2062	G2001	C1940	G1818	C1693	A1693	C1633
C2433	A2307	C2243	C2243	C2183	G2123	A2063	A2002	C1941	U1881	C1758	A1694	A1634
G2434	A2308	C2244	C2244	C2184	C2124	U2064	U2003	G1942	G1882	A1759	C1696	G1635
G2434	G2309	A2245	A2245	U2185	C2125	A2065	A2004		G1883	C1760	C1697	G1636
C2435	G2310	A2246	A2246	G2186	U	G2066	U2005	C1945	A1884	G1761	U1697	U1637
G2436	C2311	A2247	A2247	A2187	U	U2067	G2006	U1946	C1885	C1822	C1762	G1638
G2437	U2311	A2188	A2248	A2188	U	U2068	G2007	G1947	G1886	G1823	C1698	U1639
A2438	C2312	A2189	C2248	A2189	U	C2068	G2008	C1948	G1887	C1824	U1700	C1640
U2439	G2313	A2190	U2251	A2190	C	U2069	U2009	A1949	U1826	C1825		C1641
C2440	C2314	A2191	A2252	A2191	G	G2070	G2010	G1950	G1889	C1827	A1706	G1642
U2441	G2316	U2192	A2253	U2192	U	G2071	G2011	G1951	G1890	G1828	A1707	A1643
C2442	G2317	C2193	C2254	C2193	G2132	C2072	A2012	A1952	C1891	C1829	U1768	G1644
C2443	C2383	A2194	G2255	A2194	G2133	A2073	A2012	A1952	C1892	C1830	U1769	U1645
G2444	C2384	C2195	U2256	C2195	C2135	U2074	A2013	A1953	C1893	G1831	U1770	G1646
C2445	U2380	A2257	G2256	U2196	G2136	G2075	A2014	A1954	C1894	A1711	C1771	C1647
A2446	A2381	G2316	A2257	U2197	G2137	G2076	A2016	G1956	A1895	U1833	G1712	U1648
C2446	G2386	U2322	G2258	U2197	G2137	G2077	A2016	G1956	A1895	C1772	G1712	C1649
G2447	U2387	U2323	G2259	U2198	G2138	U2078	U2017	C1957	A1896	G1773	C1773	A1650
C2448	C2388	C2324	G2260	C2199	U2139	G2078	C2018	C1958	C1897	A1714	A1714	C1651



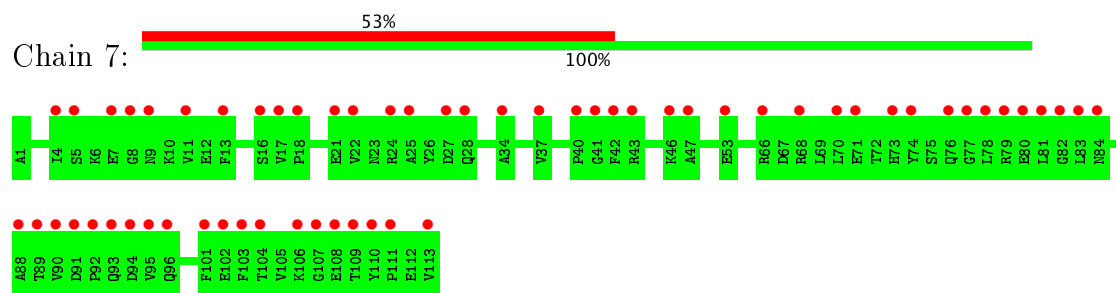
• Molecule 2: 50S ribosomal protein L23



• Molecule 3: 50S ribosomal protein L29



• Molecule 4: Trigger Factor



4 Data and refinement statistics

Property	Value	Source
Space group	I 2 2 2	Depositor
Cell constants a, b, c, α , β , γ	169.39Å 407.06Å 692.75Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	8.00 – 3.50 19.99 – 3.50	Depositor EDS
% Data completeness (in resolution range)	99.0 (8.00-3.50) 100.0 (19.99-3.50)	Depositor EDS
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
$\langle I/\sigma(I) \rangle$ ¹	1.83 (at 3.52Å)	Xtriage
Refinement program	CNS 1.1	Depositor
R, R_{free}	0.251 , 0.320 0.293 , 0.351	Depositor DCC
R_{free} test set	13460 reflections (4.97%)	DCC
Wilson B-factor (Å ²)	98.5	Xtriage
Anisotropy	0.659	Xtriage
Bulk solvent k_{sol} (e/Å ³), B_{sol} (Å ²)	0.18 , 68.5	EDS
L-test for twinning ²	$\langle L \rangle = 0.45$, $\langle L^2 \rangle = 0.28$	Xtriage
Estimated twinning fraction	No twinning to report.	Xtriage
F_o, F_c correlation	0.80	EDS
Total number of atoms	59630	wwPDB-VP
Average B, all atoms (Å ²)	90.0	wwPDB-VP

Xtriage's analysis on translational NCS is as follows: *The largest off-origin peak in the Patterson function is 2.03% of the height of the origin peak. No significant pseudotranslation is detected.*

¹Intensities estimated from amplitudes.

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

5 Model quality

5.1 Standard geometry

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	0.65	7/66467 (0.0%)	0.84	119/103673 (0.1%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	0	0	128

All (7) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	0	700	C	N1-C2	10.10	1.50	1.40
1	0	538	A	C5-C6	-5.66	1.35	1.41
1	0	788	G	N9-C4	5.49	1.42	1.38
1	0	2593	A	C5-C6	-5.46	1.36	1.41
1	0	774	A	C5-C6	-5.29	1.36	1.41
1	0	1684	G	C5-C6	-5.17	1.37	1.42
1	0	542	A	C5-C6	-5.05	1.36	1.41

All (119) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	1279	G	N9-C1'-C2'	10.85	128.10	114.00
1	0	1266	G	N9-C1'-C2'	10.62	127.81	114.00
1	0	765	C	O4'-C1'-N1	9.33	115.66	108.20
1	0	2237	C	N1-C1'-C2'	9.28	126.06	114.00
1	0	985	G	N9-C1'-C2'	9.24	126.01	114.00
1	0	2693	U	N1-C1'-C2'	8.80	125.45	114.00
1	0	1337	G	N9-C1'-C2'	8.75	125.38	114.00
1	0	1716	G	N9-C1'-C2'	8.62	125.20	114.00
1	0	788	G	N9-C1'-C2'	8.29	124.78	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	2692	A	N9-C1'-C2'	-8.22	102.96	112.00
1	0	1749	G	N9-C1'-C2'	8.18	124.63	114.00
1	0	2692	A	O4'-C1'-N9	8.15	114.72	108.20
1	0	2405	A	N9-C1'-C2'	8.10	124.53	114.00
1	0	804	C	N1-C1'-C2'	7.96	124.34	114.00
1	0	539	A	N9-C1'-C2'	7.79	124.13	114.00
1	0	1975	G	N9-C1'-C2'	7.69	124.00	114.00
1	0	1723	U	N1-C1'-C2'	7.67	123.98	114.00
1	0	1715	A	N9-C1'-C2'	7.63	123.92	114.00
1	0	1474	A	N9-C1'-C2'	7.51	123.76	114.00
1	0	1771	A	N9-C1'-C2'	7.47	123.71	114.00
1	0	2545	A	N9-C1'-C2'	7.42	123.65	114.00
1	0	582	G	N9-C1'-C2'	7.37	123.58	114.00
1	0	2823	G	N9-C1'-C2'	7.35	123.56	114.00
1	0	2660	C	N1-C1'-C2'	7.35	123.56	114.00
1	0	468	A	N9-C1'-C2'	7.31	123.50	114.00
1	0	765	C	C1'-O4'-C4'	-7.18	104.15	109.90
1	0	2217	G	N9-C1'-C2'	7.15	123.30	114.00
1	0	2810	A	N9-C1'-C2'	7.06	123.17	114.00
1	0	984	A	N9-C1'-C2'	7.04	123.15	114.00
1	0	596	C	N1-C1'-C2'	6.93	123.00	114.00
1	0	2692	A	C5'-C4'-C3'	-6.89	104.97	116.00
1	0	172	A	O4'-C1'-N9	6.77	113.61	108.20
1	0	469	G	N9-C1'-C2'	6.76	122.79	114.00
1	0	1036	G	N9-C1'-C2'	6.75	122.78	114.00
1	0	218	A	N9-C1'-C2'	6.72	122.73	114.00
1	0	818	G	N9-C1'-C2'	6.69	122.70	114.00
1	0	741	G	N9-C1'-C2'	6.69	122.70	114.00
1	0	789	G	C5'-C4'-C3'	6.69	126.70	116.00
1	0	1581	C	N1-C1'-C2'	6.69	122.69	114.00
1	0	2551	A	N9-C1'-C2'	6.66	122.66	114.00
1	0	2014	A	N9-C1'-C2'	6.65	122.64	114.00
1	0	571	U	N1-C1'-C2'	6.64	122.63	114.00
1	0	118	U	N1-C1'-C2'	6.56	122.53	114.00
1	0	700	C	N1-C1'-C2'	6.55	122.52	114.00
1	0	765	C	N1-C1'-C2'	6.40	122.32	114.00
1	0	700	C	N1-C2-O2	6.37	122.72	118.90
1	0	2593	A	N9-C1'-C2'	6.36	122.27	114.00
1	0	2428	U	N1-C1'-C2'	6.34	122.24	114.00
1	0	698	A	N9-C1'-C2'	6.30	122.18	114.00
1	0	2691	C	N1-C1'-C2'	6.28	122.16	114.00
1	0	1777	A	N9-C1'-C2'	6.25	122.12	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	1963	G	N9-C1'-C2'	6.25	122.12	114.00
1	0	2476	A	C5'-C4'-O4'	-6.24	101.61	109.10
1	0	2848	A	N9-C1'-C2'	6.23	122.09	114.00
1	0	176	A	N9-C1'-C2'	6.20	122.06	114.00
1	0	424	G	N9-C1'-C2'	6.20	122.06	114.00
1	0	169	C	N1-C1'-C2'	-6.12	105.27	112.00
1	0	2521	A	N9-C1'-C2'	6.12	121.95	114.00
1	0	795	A	C2'-C3'-O3'	-6.11	96.05	109.50
1	0	1324	G	N9-C1'-C2'	6.10	121.93	114.00
1	0	2426	G	N9-C1'-C2'	6.06	121.88	114.00
1	0	2810	A	C1'-O4'-C4'	-6.03	105.08	109.90
1	0	2608	A	N9-C1'-C2'	6.02	121.83	114.00
1	0	2692	A	C4-N9-C1'	6.01	137.12	126.30
1	0	2810	A	O4'-C1'-N9	5.99	112.99	108.20
1	0	2693	U	C1'-O4'-C4'	-5.95	105.14	109.90
1	0	1279	G	C1'-O4'-C4'	-5.95	105.14	109.90
1	0	334	G	O4'-C1'-N9	5.93	112.94	108.20
1	0	700	C	N3-C2-O2	-5.90	117.77	121.90
1	0	13	A	N9-C1'-C2'	5.89	121.66	114.00
1	0	1811	A	N9-C1'-C2'	5.83	121.58	114.00
1	0	343	A	N9-C1'-C2'	5.82	121.57	114.00
1	0	2692	A	C8-N9-C1'	-5.80	117.27	127.70
1	0	2692	A	C5'-C4'-O4'	5.79	116.05	109.10
1	0	2044	G	N9-C1'-C2'	5.78	121.51	114.00
1	0	177	U	N1-C1'-C2'	5.76	121.48	114.00
1	0	2669	C	N1-C1'-C2'	5.71	121.42	114.00
1	0	814	G	N9-C1'-C2'	5.70	121.41	114.00
1	0	1670	G	N9-C1'-C2'	5.67	121.37	114.00
1	0	1410	U	N1-C1'-C2'	5.66	121.36	114.00
1	0	2794	G	C5'-C4'-C3'	-5.64	106.97	116.00
1	0	925	U	N1-C1'-C2'	5.64	121.33	114.00
1	0	13	A	C2'-C3'-O3'	5.62	122.70	113.70
1	0	154	U	N1-C1'-C2'	5.61	121.29	114.00
1	0	1278	A	N9-C1'-C2'	5.61	121.29	114.00
1	0	1265	G	O4'-C1'-N9	5.60	112.68	108.20
1	0	1469	U	N1-C1'-C2'	5.52	121.18	114.00
1	0	1975	G	C2'-C3'-O3'	5.50	122.50	113.70
1	0	1791	C	N1-C1'-C2'	5.50	121.15	114.00
1	0	2668	U	O4'-C1'-N1	5.48	112.58	108.20
1	0	795	A	C5'-C4'-O4'	-5.48	102.53	109.10
1	0	34	U	N1-C1'-C2'	5.47	121.11	114.00
1	0	1963	G	C2'-C3'-O3'	5.42	122.38	113.70

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	855	G	N9-C1'-C2'	-5.40	106.06	112.00
1	0	1583	A	N9-C1'-C2'	5.39	121.01	114.00
1	0	1000	G	N9-C1'-C2'	5.37	120.98	114.00
1	0	2496	C	N1-C1'-C2'	5.37	120.98	114.00
1	0	219	G	N9-C1'-C2'	5.33	120.94	114.00
1	0	226	C	N1-C1'-C2'	5.30	120.89	114.00
1	0	2426	G	C1'-O4'-C4'	-5.27	105.69	109.90
1	0	1333	G	N9-C1'-C2'	5.27	120.85	114.00
1	0	1664	G	N9-C1'-C2'	5.21	120.78	114.00
1	0	542	A	C5'-C4'-O4'	-5.19	102.87	109.10
1	0	843	G	N9-C1'-C2'	5.19	120.74	114.00
1	0	1250	A	N9-C1'-C2'	5.17	120.72	114.00
1	0	182	G	O4'-C1'-N9	5.17	112.33	108.20
1	0	123	A	N9-C1'-C2'	5.15	120.70	114.00
1	0	873	U	O4'-C4'-C3'	-5.14	98.86	104.00
1	0	72	A	O4'-C1'-N9	5.14	112.31	108.20
1	0	1495	G	C2'-C3'-O3'	5.12	121.89	113.70
1	0	1947	G	N9-C1'-C2'	5.12	120.65	114.00
1	0	2604	G	C5'-C4'-C3'	-5.12	107.81	116.00
1	0	466	A	N9-C1'-C2'	5.09	120.62	114.00
1	0	71	A	N9-C1'-C2'	5.09	120.62	114.00
1	0	1357	U	N1-C1'-C2'	5.08	120.61	114.00
1	0	459	A	N9-C1'-C2'	5.08	120.60	114.00
1	0	468	A	C4'-C3'-O3'	-5.07	98.74	109.40
1	0	2624	G	N9-C1'-C2'	5.04	120.55	114.00
1	0	1926	U	N1-C1'-C2'	5.02	120.53	114.00

There are no chirality outliers.

All (128) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	0	1036	G	Sidechain
1	0	1142	G	Sidechain
1	0	1170	U	Sidechain
1	0	118	U	Sidechain
1	0	1201	G	Sidechain
1	0	1202	U	Sidechain
1	0	1206	G	Sidechain
1	0	123	A	Sidechain
1	0	1250	A	Sidechain
1	0	1251	G	Sidechain
1	0	1269	G	Sidechain

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Mol	Chain	Res	Type	Group
1	0	1279	G	Sidechain
1	0	1307	U	Sidechain
1	0	1313	U	Sidechain
1	0	1322	G	Sidechain
1	0	1325	U	Sidechain
1	0	1357	U	Sidechain
1	0	1373	G	Sidechain
1	0	1402	G	Sidechain
1	0	1410	U	Sidechain
1	0	1450	G	Sidechain
1	0	1459	U	Sidechain
1	0	1469	U	Sidechain
1	0	1474	A	Sidechain
1	0	1475	U	Sidechain
1	0	154	U	Sidechain
1	0	1581	C	Sidechain
1	0	1583	A	Sidechain
1	0	1613	G	Sidechain
1	0	1633	C	Sidechain
1	0	1634	A	Sidechain
1	0	1647	U	Sidechain
1	0	165	G	Sidechain
1	0	1651	U	Sidechain
1	0	1664	G	Sidechain
1	0	1666	G	Sidechain
1	0	1686	A	Sidechain
1	0	170	U	Sidechain
1	0	1710	U	Sidechain
1	0	1714	A	Sidechain
1	0	1715	A	Sidechain
1	0	1716	G	Sidechain
1	0	172	A	Sidechain
1	0	1723	U	Sidechain
1	0	1754	G	Sidechain
1	0	1755	G	Sidechain
1	0	1763	G	Sidechain
1	0	177	U	Sidechain
1	0	1771	A	Sidechain
1	0	1783	G	Sidechain
1	0	1819	U	Sidechain
1	0	1820	G	Sidechain
1	0	1926	U	Sidechain

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Mol	Chain	Res	Type	Group
1	0	1947	G	Sidechain
1	0	1974	U	Sidechain
1	0	1975	G	Sidechain
1	0	1978	U	Sidechain
1	0	1993	G	Sidechain
1	0	1994	U	Sidechain
1	0	1996	A	Sidechain
1	0	2014	A	Sidechain
1	0	2039	G	Sidechain
1	0	2041	A	Sidechain
1	0	2059	U	Sidechain
1	0	2063	A	Sidechain
1	0	211	U	Sidechain
1	0	219	G	Sidechain
1	0	220	U	Sidechain
1	0	2225	G	Sidechain
1	0	2237	C	Sidechain
1	0	2246	A	Sidechain
1	0	2251	U	Sidechain
1	0	2267	A	Sidechain
1	0	228	A	Sidechain
1	0	2427	A	Sidechain
1	0	2428	U	Sidechain
1	0	2451	G	Sidechain
1	0	2484	G	Sidechain
1	0	2487	G	Sidechain
1	0	2490	U	Sidechain
1	0	2540	A	Sidechain
1	0	2543	A	Sidechain
1	0	2557	G	Sidechain
1	0	2558	C	Sidechain
1	0	2620	G	Sidechain
1	0	2666	U	Sidechain
1	0	2677	U	Sidechain
1	0	2678	C	Sidechain
1	0	2680	U	Sidechain
1	0	2704	U	Sidechain
1	0	2757	G	Sidechain
1	0	2759	U	Sidechain
1	0	2790	C	Sidechain
1	0	2823	G	Sidechain
1	0	404	A	Sidechain

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Mol	Chain	Res	Type	Group
1	0	412	U	Sidechain
1	0	443	A	Sidechain
1	0	469	G	Sidechain
1	0	474	G	Sidechain
1	0	492	G	Sidechain
1	0	570	G	Sidechain
1	0	571	U	Sidechain
1	0	582	G	Sidechain
1	0	592	G	Sidechain
1	0	596	C	Sidechain
1	0	598	U	Sidechain
1	0	617	U	Sidechain
1	0	621	U	Sidechain
1	0	622	U	Sidechain
1	0	632	A	Sidechain
1	0	67	G	Sidechain
1	0	674	U	Sidechain
1	0	698	A	Sidechain
1	0	71	A	Sidechain
1	0	765	C	Sidechain
1	0	774	A	Sidechain
1	0	792	U	Sidechain
1	0	794	A	Sidechain
1	0	804	C	Sidechain
1	0	813	A	Sidechain
1	0	814	G	Sidechain
1	0	823	U	Sidechain
1	0	833	A	Sidechain
1	0	860	U	Sidechain
1	0	955	G	Sidechain
1	0	956	A	Sidechain
1	0	984	A	Sidechain
1	0	993	C	Sidechain

5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	0	59359	0	29917	4315	0
2	R	93	0	0	0	0
3	W	65	0	0	0	0
4	7	113	0	0	0	0
All	All	59630	0	29917	4315	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 49.

All (4315) 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)
1:0:541:C:O2'	1:0:2018:G:N2	1.63	1.29
1:0:788:G:H22	1:0:801:A:P	1.58	1.26
1:0:1066:G:H3'	1:0:1067:G:H4'	1.23	1.20
1:0:2170:C:H2'	1:0:2171:U:H5'	1.23	1.17
1:0:1314:A:O2'	1:0:1315:A:H3'	1.42	1.15
1:0:2691:C:H2'	1:0:2692:A:H5''	1.26	1.15
1:0:2708:U:H2'	1:0:2709:C:C6	1.83	1.14
1:0:2737:A:H2'	1:0:2738:A:H5'	1.28	1.13
1:0:788:G:C2	1:0:800:U:H2'	1.84	1.13
1:0:1440:G:H3'	1:0:1441:A:H5''	1.26	1.12
1:0:1055:A:H4'	1:0:1058:G:H4'	1.29	1.12
1:0:1690:U:H2'	1:0:1691:G:H5'	1.27	1.11
1:0:1345:G:H22	1:0:1625:A:H3'	1.13	1.10
1:0:931:G:N2	1:0:2247:A:H5'	1.66	1.10
1:0:2408:G:H5'	1:0:2409:A:OP2	1.51	1.10
1:0:1679:U:H2'	1:0:1680:U:H5''	1.29	1.08
1:0:1468:A:H5''	1:0:1472:C:H42	1.13	1.07
1:0:2672:U:H2'	1:0:2673:G:H8	1.13	1.07
1:0:1572:C:H2'	1:0:1573:G:H5''	1.31	1.07
1:0:861:G:H22	1:0:943:U:H1'	1.21	1.06
1:0:1921:A:H2'	1:0:1922:U:H5''	1.37	1.06
1:0:918:A:H2'	1:0:919:U:H5''	1.36	1.06
1:0:1345:G:N2	1:0:1625:A:H3'	1.70	1.05
1:0:788:G:H2'	1:0:807:A:N7	1.71	1.05
1:0:1337:G:H1'	1:0:1632:A:N6	1.70	1.05
1:0:1679:U:C2'	1:0:1680:U:H5''	1.86	1.04
1:0:219:G:N2	1:0:231:G:H2'	1.72	1.03
1:0:69:G:H4'	1:0:70:A:OP1	1.55	1.03
1:0:2556:A:H5''	1:0:2557:G:H5'	1.40	1.03
1:0:1680:U:H6	1:0:1680:U:H5'	1.19	1.02

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:873:U:H1'	1:0:2246:A:H5''	1.35	1.02
1:0:2708:U:H2'	1:0:2709:C:H6	1.13	1.02
1:0:940:G:H3'	1:0:941:U:C5'	1.88	1.02
1:0:1775:A:H4'	1:0:1776:A:O5'	1.53	1.02
1:0:2782:G:H3'	1:0:2783:U:H5''	1.35	1.02
1:0:2691:C:C2'	1:0:2692:A:H5''	1.90	1.02
1:0:976:C:H5'	1:0:2252:A:H1'	1.38	1.01
1:0:2198:U:H3'	1:0:2199:C:H5''	1.39	1.01
1:0:542:A:H2'	1:0:543:G:H5'	1.38	1.01
1:0:1468:A:H5''	1:0:1472:C:N4	1.74	1.01
1:0:2498:U:H4'	1:0:2499:C:OP1	1.54	1.01
1:0:1437:A:O2'	1:0:1515:U:H4'	1.60	1.00
1:0:1466:C:H2'	1:0:1467:U:H1'	1.39	1.00
1:0:2482:A:H4'	1:0:2483:U:OP1	1.58	1.00
1:0:788:G:N2	1:0:801:A:P	2.33	1.00
1:0:788:G:N2	1:0:800:U:C3'	2.25	1.00
1:0:2661:G:O6	1:0:2708:U:H1'	1.62	0.99
1:0:1337:G:H4'	1:0:1632:A:N7	1.77	0.98
1:0:1466:C:H2'	1:0:1467:U:C1'	1.92	0.98
1:0:940:G:H3'	1:0:941:U:H5''	0.99	0.98
1:0:1496:G:N2	1:0:1527:G:H1	1.62	0.98
1:0:983:G:OP2	1:0:985:G:H5''	1.64	0.98
1:0:2212:U:H2'	1:0:2213:G:C8	1.99	0.98
1:0:619:A:H61	1:0:629:C:H42	1.03	0.98
1:0:2496:C:O2'	1:0:2497:A:H3'	1.64	0.97
1:0:652:C:H42	1:0:657:A:H61	1.04	0.97
1:0:788:G:H5''	1:0:789:G:OP1	1.62	0.97
1:0:976:C:H1'	1:0:2252:A:C2	2.00	0.97
1:0:734:G:H2'	1:0:735:G:H8	1.27	0.97
1:0:2352:A:H2'	1:0:2353:G:C8	2.01	0.95
1:0:1572:C:C2'	1:0:1573:G:H5''	1.95	0.95
1:0:1459:U:N3	1:0:1476:G:O5'	1.98	0.95
1:0:2038:C:H5'	1:0:2039:G:H5''	1.49	0.95
1:0:824:U:H1'	1:0:1264:C:O2	1.64	0.95
1:0:67:G:C6	1:0:72:A:C2	2.55	0.95
1:0:805:G:H2'	1:0:2419:C:N3	1.82	0.95
1:0:940:G:C3'	1:0:941:U:H5''	1.94	0.95
1:0:2782:G:H5'	1:0:2783:U:OP2	1.67	0.94
1:0:1303:U:H2'	1:0:1304:U:C6	2.02	0.94
1:0:1459:U:H2'	1:0:1475:U:O2'	1.68	0.94
1:0:340:G:OP1	1:0:340:G:H3'	1.65	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1077:U:H2'	1:0:1079:G:OP2	1.68	0.94
1:0:2198:U:H3'	1:0:2199:C:C5'	1.98	0.93
1:0:1373:G:H22	1:0:2192:U:H3	0.95	0.93
1:0:1383:C:H2'	1:0:1384:G:H8	1.34	0.93
1:0:836:G:H2'	1:0:837:U:C6	2.04	0.93
1:0:929:A:H3'	1:0:930:A:H5''	1.51	0.93
1:0:2764:U:H2'	1:0:2765:C:H6	1.34	0.93
1:0:1030:U:H2'	1:0:1031:C:H5'	1.48	0.92
1:0:1204:G:H2'	1:0:1205:G:H8	1.34	0.92
1:0:1712:G:H2'	1:0:1713:G:H5'	1.48	0.92
1:0:2672:U:H2'	1:0:2673:G:C8	2.03	0.92
1:0:1714:A:C5'	1:0:1715:A:H5''	1.99	0.92
1:0:2352:A:H2'	1:0:2353:G:H8	1.31	0.92
1:0:66:U:N3	1:0:67:G:O6	2.03	0.92
1:0:1978:U:H3'	1:0:1979:C:H5''	1.52	0.91
1:0:1901:A:H2	1:0:1902:A:H62	1.16	0.91
1:0:1191:G:H2'	1:0:1192:A:H8	1.35	0.91
1:0:1242:A:H2'	1:0:1243:G:H8	1.35	0.91
1:0:2368:G:H5''	1:0:2369:U:H5'	1.53	0.91
1:0:1363:C:H2'	1:0:1364:C:H5'	1.52	0.90
1:0:2624:G:H4'	1:0:2712:G:O2'	1.69	0.90
1:0:788:G:H22	1:0:800:U:C3'	1.84	0.90
1:0:2556:A:H5''	1:0:2557:G:C5'	2.02	0.90
1:0:594:G:C4	1:0:1264:C:N4	2.40	0.90
1:0:1303:U:H2'	1:0:1304:U:H6	1.35	0.90
1:0:1528:C:H2'	1:0:1529:C:H5''	1.54	0.90
1:0:631:G:H4'	1:0:632:A:C5'	2.01	0.90
1:0:1465:G:H2'	1:0:1466:C:H6	1.37	0.90
1:0:168:A:H2'	1:0:169:C:C6	2.07	0.90
1:0:1698:C:O2'	1:0:1753:A:H2'	1.71	0.90
1:0:359:G:H2'	1:0:360:A:H8	1.33	0.90
1:0:635:C:O2'	1:0:670:U:H5''	1.69	0.90
1:0:691:C:H2'	1:0:692:C:H6	1.36	0.90
1:0:487:G:H4'	1:0:512:A:N1	1.87	0.90
1:0:83:A:H2	1:0:101:A:C5	1.90	0.89
1:0:594:G:C6	1:0:1264:C:H5	1.90	0.89
1:0:1438:G:H2'	1:0:1439:G:O4'	1.72	0.89
1:0:689:A:H8	1:0:2052:G:H21	1.19	0.89
1:0:1036:G:OP1	1:0:1036:G:H8	1.54	0.89
1:0:1221:C:H2'	1:0:1222:G:H8	1.36	0.89
1:0:1054:C:H2'	1:0:1055:A:H5'	1.53	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1764:A:H2'	1:0:1765:C:H5'	1.54	0.89
1:0:566:U:H2'	1:0:567:G:H8	1.37	0.89
1:0:1073:G:H2'	1:0:1074:G:H4'	1.52	0.89
1:0:1384:G:N2	1:0:1385:C:H41	1.69	0.89
1:0:168:A:H2'	1:0:169:C:H6	1.35	0.88
1:0:2516:U:H2'	1:0:2517:C:C6	2.08	0.88
1:0:700:C:O2	1:0:801:A:H5'	1.73	0.88
1:0:58:C:H5'	1:0:59:G:OP2	1.72	0.88
1:0:772:G:H2'	1:0:773:G:H8	1.36	0.88
1:0:1670:G:H5'	1:0:2797:G:N2	1.89	0.88
1:0:2516:U:H2'	1:0:2517:C:H6	1.37	0.88
1:0:1198:C:H5''	1:0:1199:U:H4'	1.56	0.88
1:0:2306:A:H2'	1:0:2307:A:C8	2.09	0.88
1:0:459:A:H4'	1:0:461:A:N7	1.88	0.88
1:0:926:C:H2'	1:0:927:C:H5'	1.53	0.88
1:0:2225:G:H2'	1:0:2226:A:H8	1.39	0.87
1:0:2503:G:H2'	1:0:2504:G:H5''	1.55	0.87
1:0:861:G:N2	1:0:943:U:H1'	1.88	0.87
1:0:1561:A:H2'	1:0:1562:G:O4'	1.74	0.87
1:0:1679:U:H2'	1:0:1680:U:C5'	2.04	0.87
1:0:2197:U:H2'	1:0:2198:U:C5	2.09	0.87
1:0:819:C:O3'	1:0:843:G:N2	2.08	0.87
1:0:1407:G:H2'	1:0:1408:A:C8	2.09	0.87
1:0:2491:C:H5'	1:0:2492:G:OP2	1.75	0.87
1:0:88:G:H3'	1:0:89:A:C5'	2.03	0.87
1:0:2024:U:H2'	1:0:2025:A:C8	2.09	0.87
1:0:542:A:H62	1:0:570:G:H21	1.21	0.87
1:0:2761:A:H5''	1:0:2762:G:H5'	1.57	0.87
1:0:1002:C:OP2	1:0:1200:G:OP2	1.93	0.86
1:0:2658:A:O2'	1:0:2659:C:H5'	1.75	0.86
1:0:39:C:H2'	1:0:40:U:C6	2.10	0.86
1:0:359:G:H2'	1:0:360:A:C8	2.10	0.86
1:0:2698:G:H2'	1:0:2699:G:C8	2.10	0.86
1:0:2764:U:H2'	1:0:2765:C:C6	2.11	0.86
1:0:469:G:N2	1:0:480:G:H2'	1.89	0.86
1:0:717:G:H2'	1:0:739:G:H22	1.41	0.86
1:0:2222:U:H2'	1:0:2223:U:H6	1.37	0.86
1:0:76:C:H6	1:0:76:C:H5'	1.37	0.86
1:0:619:A:N6	1:0:629:C:H42	1.74	0.86
1:0:918:A:C2'	1:0:919:U:H5''	2.04	0.86
1:0:1626:A:H5''	1:0:1627:C:OP2	1.75	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:211:U:O2	1:0:211:U:H2'	1.73	0.85
1:0:2811:G:H2'	1:0:2812:A:H8	1.41	0.85
1:0:1386:A:H5''	1:0:2191:A:N6	1.91	0.85
1:0:2311:U:H4'	1:0:2315:A:H61	1.40	0.85
1:0:1807:A:H1'	1:0:1809:G:C8	2.10	0.85
1:0:314:G:H2'	1:0:315:G:C8	2.12	0.85
1:0:450:C:H2'	1:0:451:A:H8	1.41	0.85
1:0:2737:A:H2'	1:0:2738:A:C5'	2.06	0.85
1:0:787:A:O2'	1:0:788:G:H5'	1.76	0.85
1:0:976:C:H5'	1:0:2252:A:C1'	2.06	0.85
1:0:1429:A:H1'	1:0:1603:A:C6	2.10	0.85
1:0:1624:A:O2'	1:0:1625:A:H5'	1.76	0.85
1:0:1937:G:H2'	1:0:1939:U:O4	1.76	0.85
1:0:2523:G:O2'	1:0:2524:G:H5'	1.77	0.85
1:0:1453:A:H2'	1:0:1454:U:H5'	1.57	0.85
1:0:1465:G:H2'	1:0:1466:C:C6	2.11	0.85
1:0:2051:U:H3	1:0:2409:A:H2	1.20	0.85
1:0:68:C:H2'	1:0:68:C:O2	1.77	0.84
1:0:2094:C:N3	1:0:2103:G:H1'	1.92	0.84
1:0:611:C:O2	1:0:614:G:H4'	1.75	0.84
1:0:624:A:C2'	1:0:625:A:H5'	2.06	0.84
1:0:734:G:H2'	1:0:735:G:C8	2.12	0.84
1:0:619:A:H2'	1:0:620:G:H8	1.39	0.84
1:0:1288:A:N6	1:0:1309:G:H5'	1.91	0.84
1:0:1563:U:H2'	1:0:1564:U:C6	2.11	0.84
1:0:2324:G:N2	1:0:2326:C:H41	1.74	0.84
1:0:631:G:H4'	1:0:632:A:H5'	1.59	0.84
1:0:788:G:N2	1:0:800:U:H2'	1.92	0.84
1:0:946:U:H2'	1:0:947:C:C6	2.12	0.84
1:0:1354:A:H3'	1:0:1410:U:O2	1.78	0.84
1:0:1459:U:O4	1:0:1476:G:H5''	1.76	0.84
1:0:2753:C:H2'	1:0:2754:C:H6	1.39	0.84
1:0:2807:U:H2'	1:0:2807:U:O2	1.78	0.84
1:0:641:G:H4'	1:0:651:C:O2'	1.78	0.83
1:0:841:G:H2'	1:0:842:A:C8	2.13	0.83
1:0:788:G:N2	1:0:800:U:C2'	2.42	0.83
1:0:954:U:C4	1:0:955:G:N2	2.46	0.83
1:0:2691:C:H2'	1:0:2692:A:C5'	2.07	0.83
1:0:1252:C:O2'	1:0:1253:C:H5''	1.78	0.83
1:0:1313:U:H4'	1:0:1314:A:O5'	1.79	0.83
1:0:665:A:H3'	1:0:666:U:H5''	1.57	0.83

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1040:A:H2'	1:0:1041:G:H5'	1.60	0.83
1:0:1373:G:N2	1:0:2192:U:H3	1.76	0.83
1:0:619:A:H2'	1:0:620:G:C8	2.12	0.83
1:0:2417:U:O2'	1:0:2418:A:H5''	1.79	0.82
1:0:1714:A:H5'	1:0:1715:A:H5''	1.61	0.82
1:0:2448:A:N6	1:0:2460:G:H1'	1.93	0.82
1:0:1345:G:N2	1:0:1625:A:C3'	2.42	0.82
1:0:2736:U:O2'	1:0:2737:A:H5'	1.77	0.82
1:0:1065:A:H2'	1:0:1066:G:H8	1.44	0.82
1:0:1680:U:C6	1:0:1680:U:H5'	2.12	0.82
1:0:1690:U:C2'	1:0:1691:G:H5'	2.08	0.82
1:0:652:C:N4	1:0:657:A:H61	1.76	0.82
1:0:1636:G:H2'	1:0:1637:U:H6	1.45	0.82
1:0:1673:C:H2'	1:0:1674:C:H6	1.44	0.82
1:0:1895:A:H2'	1:0:1896:A:H8	1.44	0.82
1:0:2447:G:H22	1:0:2460:G:H2'	1.45	0.82
1:0:185:C:H2'	1:0:186:C:H6	1.44	0.82
1:0:1384:G:H21	1:0:1385:C:H41	1.23	0.81
1:0:2569:A:H2'	1:0:2570:C:H6	1.43	0.81
1:0:1326:U:O4	1:0:1619:A:N6	2.12	0.81
1:0:2024:U:H2'	1:0:2025:A:H8	1.42	0.81
1:0:2228:U:H4'	1:0:2229:G:OP1	1.79	0.81
1:0:1483:G:H1	1:0:1539:U:H3	1.27	0.81
1:0:1463:A:H1'	1:0:1543:G:N2	1.94	0.81
1:0:2222:U:H2'	1:0:2223:U:C6	2.14	0.81
1:0:1710:U:H3	1:0:1821:A:H61	1.26	0.81
1:0:1900:U:H2'	1:0:1901:A:H5'	1.61	0.81
1:0:2320:G:H2'	1:0:2321:C:O4'	1.79	0.81
1:0:788:G:H2'	1:0:807:A:C8	2.15	0.81
1:0:403:A:H3'	1:0:403:A:P	2.20	0.81
1:0:469:G:H1'	1:0:470:U:H5	1.46	0.81
1:0:219:G:H22	1:0:231:G:H2'	1.45	0.81
1:0:594:G:C6	1:0:1264:C:C5	2.69	0.81
1:0:777:A:O2'	1:0:778:G:OP1	1.98	0.81
1:0:1223:G:H5'	1:0:1225:G:O4'	1.81	0.81
1:0:461:A:H2'	1:0:462:G:H8	1.45	0.81
1:0:846:A:H2'	1:0:847:C:C6	2.16	0.81
1:0:942:U:H2'	1:0:943:U:H5'	1.61	0.81
1:0:1055:A:C4'	1:0:1058:G:H4'	2.10	0.81
1:0:2811:G:H2'	1:0:2812:A:C8	2.15	0.81
1:0:2208:U:H2'	1:0:2209:G:H8	1.44	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2588:U:H4'	1:0:2589:C:OP2	1.81	0.80
1:0:2876:C:H2'	1:0:2877:A:O4'	1.81	0.80
1:0:412:U:H2'	1:0:413:G:H5'	1.64	0.80
1:0:543:G:OP2	1:0:543:G:H8	1.64	0.80
1:0:1458:A:H3'	1:0:1459:U:C5'	2.12	0.80
1:0:163:A:H2'	1:0:164:G:H8	1.46	0.80
1:0:873:U:H1'	1:0:2246:A:C5'	2.09	0.80
1:0:1467:U:H3'	1:0:1468:A:H5'	1.64	0.80
1:0:2425:G:H2'	1:0:2426:G:H5'	1.64	0.80
1:0:788:G:H21	1:0:804:C:H41	1.25	0.80
1:0:1055:A:H4'	1:0:1058:G:C4'	2.10	0.80
1:0:1191:G:H2'	1:0:1192:A:C8	2.17	0.80
1:0:1979:C:H2'	1:0:1980:A:O4'	1.82	0.80
1:0:482:A:C2'	1:0:483:A:H5'	2.12	0.80
1:0:1337:G:C1'	1:0:1632:A:H62	1.94	0.80
1:0:1301:U:O2'	1:0:1664:G:N2	2.14	0.79
1:0:2077:G:N1	1:0:2179:C:H1'	1.97	0.79
1:0:573:C:O2'	1:0:574:C:H5'	1.81	0.79
1:0:788:G:C5'	1:0:789:G:OP1	2.30	0.79
1:0:1690:U:H2'	1:0:1691:G:C5'	2.09	0.79
1:0:2690:A:OP1	1:0:2692:A:OP2	2.00	0.79
1:0:788:G:N2	1:0:800:U:H3'	1.98	0.79
1:0:2200:G:H2'	1:0:2201:G:C8	2.17	0.79
1:0:684:C:H2'	1:0:685:U:H6	1.47	0.79
1:0:787:A:C4	1:0:788:G:N7	2.51	0.79
1:0:699:G:N2	1:0:801:A:H61	1.80	0.79
1:0:752:G:H4'	1:0:753:U:OP1	1.81	0.79
1:0:836:G:H2'	1:0:837:U:H6	1.42	0.79
1:0:929:A:C3'	1:0:930:A:H5'	2.12	0.79
1:0:2371:A:H2	1:0:2403:C:H42	1.29	0.79
1:0:2821:G:H2'	1:0:2822:U:H6	1.46	0.79
1:0:590:C:H2'	1:0:591:G:C8	2.17	0.79
1:0:704:G:H2'	1:0:705:C:H6	1.46	0.79
1:0:922:A:H62	1:0:923:A:N6	1.80	0.79
1:0:2856:U:H2'	1:0:2857:C:H6	1.48	0.79
1:0:1645:U:H2'	1:0:1646:G:H8	1.48	0.79
1:0:2225:G:H2'	1:0:2226:A:C8	2.18	0.79
1:0:2669:C:H2'	1:0:2669:C:O2	1.83	0.79
1:0:2660:C:O2'	1:0:2661:G:H5'	1.82	0.79
1:0:583:C:H4'	1:0:584:A:O5'	1.82	0.79
1:0:2821:G:H2'	1:0:2822:U:C6	2.19	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:39:C:H2'	1:0:40:U:H6	1.49	0.78
1:0:2077:G:H1	1:0:2179:C:H1'	1.49	0.78
1:0:1199:U:H3'	1:0:1200:G:H5''	1.65	0.78
1:0:2513:A:C2	1:0:2514:G:H1'	2.18	0.78
1:0:603:C:H2'	1:0:604:U:H6	1.49	0.78
1:0:59:G:H1'	1:0:73:A:C2	2.18	0.78
1:0:922:A:N6	1:0:923:A:H62	1.82	0.78
1:0:1313:U:H1'	1:0:1642:G:C2	2.19	0.78
1:0:1337:G:C1'	1:0:1632:A:N6	2.45	0.78
1:0:1333:G:N2	1:0:1344:C:H41	1.81	0.78
1:0:1886:G:H2'	1:0:1887:G:H8	1.47	0.78
1:0:2422:C:O2'	1:0:2423:G:H5'	1.83	0.78
1:0:471:A:C2	1:0:481:A:C4	2.72	0.78
1:0:1807:A:H1'	1:0:1809:G:N9	1.98	0.78
1:0:2200:G:H2'	1:0:2201:G:H8	1.46	0.78
1:0:2522:G:H2'	1:0:2523:G:C8	2.19	0.78
1:0:1920:A:N7	1:0:1922:U:H5'	1.99	0.78
1:0:1686:A:H5'	1:0:1687:C:OP2	1.82	0.78
1:0:2698:G:H2'	1:0:2699:G:H8	1.48	0.78
1:0:1141:U:O2	1:0:2008:C:H5''	1.83	0.78
1:0:2316:G:H3'	1:0:2316:G:OP2	1.84	0.77
1:0:1359:G:H8	1:0:1359:G:H5'	1.50	0.77
1:0:2170:C:H2'	1:0:2171:U:C5'	2.11	0.77
1:0:229:G:O2'	1:0:230:C:H5'	1.84	0.77
1:0:66:U:H2'	1:0:67:G:C8	2.20	0.77
1:0:1393:G:N2	1:0:1586:A:N1	2.33	0.77
1:0:169:C:N4	1:0:170:U:C2	2.52	0.77
1:0:1748:U:H5'	1:0:1749:G:H5''	1.64	0.77
1:0:1904:G:H2'	1:0:1905:G:H8	1.48	0.77
1:0:2447:G:N2	1:0:2460:G:H2'	1.99	0.77
1:0:1459:U:H3	1:0:1476:G:C5'	1.98	0.77
1:0:2768:C:HO2'	1:0:2784:A:H8	1.31	0.77
1:0:619:A:H61	1:0:629:C:N4	1.82	0.77
1:0:644:A:H2'	1:0:645:G:H5'	1.66	0.77
1:0:2759:U:H4'	1:0:2761:A:N7	1.98	0.77
1:0:460:U:C4	1:0:592:G:H1'	2.20	0.77
1:0:89:A:H5'	1:0:90:G:OP1	1.83	0.77
1:0:1938:U:O2'	1:0:1939:U:OP1	2.03	0.77
1:0:2397:A:H2'	1:0:2398:U:O4'	1.84	0.77
1:0:1440:G:H3'	1:0:1441:A:C5'	2.12	0.77
1:0:1869:A:H2'	1:0:1870:U:O4'	1.85	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2075:U:HO2'	1:0:2076:G:H8	1.32	0.77
1:0:2407:G:H5''	1:0:2408:G:OP1	1.83	0.77
1:0:68:C:C2	1:0:72:A:N3	2.52	0.77
1:0:788:G:C5'	1:0:790:A:H1'	2.15	0.77
1:0:1919:A:H5''	1:0:1920:A:N1	2.00	0.76
1:0:992:A:H2	1:0:2010:G:N3	1.84	0.76
1:0:2521:A:H5'	1:0:2522:G:OP1	1.85	0.76
1:0:403:A:H5'	1:0:425:A:H4'	1.66	0.76
1:0:651:C:H2'	1:0:652:C:H5''	1.67	0.76
1:0:845:U:OP2	1:0:955:G:O6	2.03	0.76
1:0:624:A:H2'	1:0:625:A:H5'	1.67	0.76
1:0:788:G:C2	1:0:800:U:C2'	2.67	0.76
1:0:1174:G:H2'	1:0:1175:A:H8	1.49	0.76
1:0:1595:A:H2'	1:0:1596:A:O4'	1.85	0.76
1:0:620:G:H2'	1:0:621:U:H6	1.50	0.76
1:0:1066:G:H3'	1:0:1067:G:C4'	2.11	0.76
1:0:1338:G:H4'	1:0:1339:U:OP1	1.83	0.76
1:0:931:G:N2	1:0:2247:A:C5'	2.47	0.76
1:0:357:A:H2'	1:0:358:C:H5'	1.68	0.76
1:0:612:G:H4'	1:0:613:A:H4'	1.67	0.76
1:0:1071:U:H3'	1:0:1072:U:H5'	1.67	0.76
1:0:1337:G:H1'	1:0:1632:A:H62	1.50	0.76
1:0:2396:C:H6	1:0:2396:C:H5'	1.50	0.76
1:0:627:A:H2'	1:0:628:A:C8	2.20	0.76
1:0:2756:A:O2'	1:0:2757:G:OP2	2.03	0.76
1:0:33:C:N4	1:0:458:G:O2'	2.16	0.76
1:0:764:A:H2	1:0:802:A:H2'	1.49	0.76
1:0:169:C:H2'	1:0:170:U:H5'	1.67	0.76
1:0:58:C:H1'	1:0:72:A:C8	2.21	0.76
1:0:1794:A:H2	1:0:1814:G:N3	1.85	0.76
1:0:2820:C:O2'	1:0:2821:G:H5'	1.85	0.76
1:0:542:A:H3'	1:0:542:A:H8	1.50	0.76
1:0:955:G:H3'	1:0:955:G:C8	2.20	0.76
1:0:1383:C:H2'	1:0:1384:G:C8	2.19	0.75
1:0:2425:G:C2'	1:0:2426:G:H5'	2.16	0.75
1:0:469:G:O2'	1:0:470:U:OP2	2.03	0.75
1:0:687:G:C2'	1:0:688:A:H5'	2.16	0.75
1:0:1712:G:C2'	1:0:1713:G:H5'	2.16	0.75
1:0:83:A:C2	1:0:101:A:C5	2.73	0.75
1:0:1391:A:O2'	1:0:1392:U:C6	2.39	0.75
1:0:1548:U:H2'	1:0:1549:C:C6	2.20	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1685:A:H4'	1:0:1686:A:O5'	1.85	0.75
1:0:2286:G:C5	1:0:2287:G:H1'	2.21	0.75
1:0:638:A:O2'	1:0:639:G:H5'	1.85	0.75
1:0:1378:A:H2'	1:0:1379:A:C8	2.22	0.75
1:0:1859:A:H2'	1:0:1860:A:H8	1.52	0.75
1:0:536:A:N6	1:0:2605:C:H4'	2.01	0.75
1:0:460:U:H4'	1:0:461:A:OP2	1.87	0.75
1:0:788:G:H5''	1:0:790:A:H1'	1.69	0.75
1:0:1280:U:H2'	1:0:1281:A:H8	1.52	0.75
1:0:704:G:O2'	1:0:705:C:H5'	1.86	0.75
1:0:965:G:N3	1:0:2253:A:H2	1.84	0.75
1:0:1079:G:H2'	1:0:1080:A:O4'	1.85	0.75
1:0:1529:C:H2'	1:0:1530:U:O4'	1.86	0.75
1:0:498:C:H2'	1:0:499:G:H8	1.52	0.75
1:0:830:C:H2'	1:0:831:G:H8	1.51	0.75
1:0:1710:U:H4'	1:0:1711:C:OP2	1.86	0.75
1:0:308:C:H2'	1:0:309:G:O4'	1.87	0.75
1:0:388:G:N2	1:0:389:G:H1'	2.02	0.75
1:0:745:C:H2'	1:0:746:G:O4'	1.87	0.75
1:0:2311:U:C4'	1:0:2315:A:H61	2.00	0.75
1:0:2594:U:H5'	1:0:2594:U:H6	1.51	0.75
1:0:461:A:H2'	1:0:462:G:C8	2.21	0.75
1:0:538:A:H2'	1:0:539:A:H5''	1.69	0.75
1:0:620:G:H2'	1:0:621:U:C6	2.22	0.75
1:0:1587:A:H2'	1:0:1588:A:C8	2.22	0.74
1:0:1908:C:H2'	1:0:1909:U:H4'	1.69	0.74
1:0:687:G:H2'	1:0:817:A:H61	1.52	0.74
1:0:1255:A:H2'	1:0:1256:C:C6	2.21	0.74
1:0:1363:C:C2'	1:0:1364:C:H5'	2.17	0.74
1:0:2170:C:C2'	1:0:2171:U:H5'	2.12	0.74
1:0:26:G:N1	1:0:27:G:N2	2.35	0.74
1:0:789:G:H2'	1:0:789:G:N3	2.02	0.74
1:0:2737:A:C2'	1:0:2738:A:H5'	2.14	0.74
1:0:451:A:H2'	1:0:452:G:C8	2.22	0.74
1:0:1883:A:H1'	1:0:1953:A:H2'	1.69	0.74
1:0:2264:C:O4'	1:0:2267:A:N6	2.20	0.74
1:0:209:G:N2	1:0:433:G:OP1	2.19	0.74
1:0:597:U:H2'	1:0:598:U:C6	2.23	0.74
1:0:1281:A:H2'	1:0:1282:A:H8	1.52	0.74
1:0:682:G:H2'	1:0:682:G:N3	2.02	0.74
1:0:691:C:H2'	1:0:692:C:C6	2.22	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:742:G:H5'	1:0:743:A:H5''	1.68	0.74
1:0:942:U:C2'	1:0:943:U:H5'	2.17	0.74
1:0:2168:A:N3	1:0:2168:A:H2'	2.01	0.74
1:0:1004:A:O2'	1:0:1005:U:H5'	1.86	0.74
1:0:2691:C:C3'	1:0:2692:A:H5''	2.17	0.74
1:0:1636:G:H2'	1:0:1637:U:C6	2.23	0.74
1:0:1859:A:H2'	1:0:1860:A:C8	2.23	0.74
1:0:234:C:C2'	1:0:235:C:H5'	2.18	0.74
1:0:2769:C:H2'	1:0:2770:A:O4'	1.88	0.74
1:0:1054:C:C2'	1:0:1055:A:H5'	2.18	0.73
1:0:2197:U:H2'	1:0:2198:U:C6	2.22	0.73
1:0:698:A:H4'	1:0:700:C:H5	1.53	0.73
1:0:857:U:H2'	1:0:858:G:O4'	1.87	0.73
1:0:865:A:H2'	1:0:866:U:C6	2.23	0.73
1:0:1399:C:H2'	1:0:1400:A:C8	2.22	0.73
1:0:1979:C:C2'	1:0:1980:A:O5'	2.35	0.73
1:0:2106:G:H2'	1:0:2107:G:C8	2.23	0.73
1:0:2504:G:H8	1:0:2504:G:H5'	1.53	0.73
1:0:510:G:O5'	1:0:510:G:H8	1.70	0.73
1:0:1153:A:H2'	1:0:1155:G:N7	2.03	0.73
1:0:818:G:H5'	1:0:819:C:H5	1.52	0.73
1:0:2270:U:H2'	1:0:2271:C:H6	1.54	0.73
1:0:687:G:O2'	1:0:688:A:H5'	1.88	0.73
1:0:177:U:O4	1:0:225:G:C2	2.40	0.73
1:0:542:A:H3'	1:0:542:A:C8	2.24	0.73
1:0:1167:A:H5'	1:0:1168:G:OP2	1.89	0.73
1:0:116:A:N3	1:0:155:G:H1'	2.02	0.73
1:0:2271:C:H4'	1:0:2354:G:O4'	1.89	0.73
1:0:2569:A:H2'	1:0:2570:C:C6	2.23	0.73
1:0:83:A:H4'	1:0:84:G:O5'	1.88	0.73
1:0:1055:A:N6	1:0:1123:G:H1'	2.03	0.73
1:0:2254:C:O2'	1:0:2255:G:OP2	2.06	0.73
1:0:2335:U:H2'	1:0:2336:G:H8	1.52	0.73
1:0:1055:A:H61	1:0:1123:G:H1'	1.52	0.73
1:0:824:U:C1'	1:0:1264:C:O2	2.36	0.73
1:0:2241:U:H5'	1:0:2241:U:H6	1.53	0.73
1:0:2675:U:H2'	1:0:2676:G:C8	2.23	0.73
1:0:1625:A:H2'	1:0:1625:A:N3	2.03	0.73
1:0:1714:A:H5''	1:0:1715:A:H5''	1.71	0.73
1:0:2866:A:N7	1:0:2867:G:C6	2.57	0.73
1:0:422:C:H2'	1:0:423:G:C8	2.24	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1066:G:C3'	1:0:1067:G:H4'	2.13	0.72
1:0:1010:U:H1'	1:0:1168:G:H22	1.53	0.72
1:0:1384:G:H21	1:0:1385:C:N4	1.86	0.72
1:0:2503:G:C2'	1:0:2504:G:H5''	2.19	0.72
1:0:623:G:H5'	1:0:626:A:H62	1.54	0.72
1:0:847:C:H2'	1:0:848:A:H8	1.53	0.72
1:0:1065:A:H2'	1:0:1066:G:C8	2.23	0.72
1:0:1435:G:N2	1:0:1436:G:H1'	2.04	0.72
1:0:1937:G:H2'	1:0:1939:U:C4	2.24	0.72
1:0:1198:C:C5'	1:0:1199:U:H4'	2.18	0.72
1:0:1737:G:H2'	1:0:1738:U:C6	2.23	0.72
1:0:2652:G:H2'	1:0:2653:A:H8	1.52	0.72
1:0:2660:C:O2	1:0:2660:C:H2'	1.86	0.72
1:0:469:G:O2'	1:0:470:U:P	2.47	0.72
1:0:1314:A:H4'	1:0:1315:A:OP1	1.89	0.72
1:0:1979:C:H2'	1:0:1980:A:O5'	1.89	0.72
1:0:1378:A:H2'	1:0:1379:A:H8	1.54	0.72
1:0:1391:A:O2'	1:0:1392:U:O5'	2.07	0.72
1:0:1645:U:H2'	1:0:1646:G:C8	2.24	0.72
1:0:1774:A:N1	1:0:2566:A:H2'	2.05	0.72
1:0:1147:G:O2'	1:0:1148:G:H5'	1.90	0.72
1:0:1498:G:H22	1:0:1523:A:H1'	1.55	0.72
1:0:651:C:C2'	1:0:652:C:H5''	2.20	0.72
1:0:1238:A:O2'	1:0:1239:A:H5'	1.88	0.72
1:0:1496:G:H22	1:0:1527:G:H1	0.82	0.72
1:0:219:G:HO2'	1:0:220:U:P	2.12	0.72
1:0:2476:A:H1'	1:0:2477:C:H5	1.54	0.72
1:0:624:A:O2'	1:0:625:A:H5'	1.89	0.72
1:0:205:A:N3	1:0:207:U:H1'	2.04	0.72
1:0:542:A:H62	1:0:570:G:N2	1.88	0.72
1:0:1030:U:C5	1:0:1153:A:N6	2.58	0.72
1:0:1278:A:O2'	1:0:1279:G:O5'	2.07	0.72
1:0:1764:A:C2'	1:0:1765:C:H5'	2.18	0.72
1:0:1804:U:H2'	1:0:1805:G:H8	1.55	0.72
1:0:225:G:O5'	1:0:226:C:H5''	1.88	0.72
1:0:2274:C:H2'	1:0:2275:U:H5'	1.72	0.72
1:0:616:U:C4	1:0:617:U:H5	2.07	0.72
1:0:173:A:H61	1:0:844:G:H21	1.38	0.71
1:0:2185:U:H2'	1:0:2186:G:H8	1.55	0.71
1:0:2498:U:C4'	1:0:2499:C:OP1	2.37	0.71
1:0:454:G:N2	1:0:456:C:C2	2.58	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:543:G:OP2	1:0:543:G:C8	2.42	0.71
1:0:1818:G:H2'	1:0:1819:U:H6	1.53	0.71
1:0:65:C:H2'	1:0:66:U:O4'	1.89	0.71
1:0:1286:U:H4'	1:0:1288:A:OP2	1.90	0.71
1:0:1581:C:O2'	1:0:1582:A:H3'	1.90	0.71
1:0:2259:G:H4'	1:0:2306:A:H5'	1.71	0.71
1:0:838:A:H2'	1:0:839:U:O4'	1.90	0.71
1:0:117:A:H4'	1:0:118:U:O5'	1.89	0.71
1:0:1386:A:H5''	1:0:2191:A:C6	2.25	0.71
1:0:1670:G:H5'	1:0:2797:G:H22	1.52	0.71
1:0:1680:U:C5'	1:0:1680:U:H6	2.00	0.71
1:0:2387:U:H2'	1:0:2388:G:H8	1.56	0.71
1:0:428:A:H2'	1:0:429:C:C6	2.26	0.71
1:0:840:U:H4'	1:0:841:G:N2	2.05	0.71
1:0:2628:C:H2'	1:0:2629:U:C6	2.25	0.71
1:0:1442:C:C2'	1:0:1443:G:OP1	2.38	0.71
1:0:2418:A:H4'	1:0:2419:C:O5'	1.88	0.71
1:0:1:G:H2'	1:0:2:G:C8	2.24	0.71
1:0:634:G:H2'	1:0:635:C:H6	1.53	0.71
1:0:1299:A:H2'	1:0:1301:U:OP2	1.90	0.71
1:0:1436:G:H2'	1:0:1437:A:O4'	1.90	0.71
1:0:1606:C:N4	1:0:1607:A:H62	1.89	0.71
1:0:2003:A:O2'	1:0:2004:U:H3'	1.91	0.71
1:0:503:G:H2'	1:0:504:G:O4'	1.91	0.71
1:0:73:A:H4'	1:0:74:G:O5'	1.90	0.71
1:0:192:G:H4'	1:0:193:A:O5'	1.90	0.71
1:0:2712:G:H3'	1:0:2713:A:H5'	1.72	0.71
1:0:912:A:H2'	1:0:913:A:O4'	1.90	0.71
1:0:2075:U:O2'	1:0:2076:G:H8	1.72	0.71
1:0:2594:U:C6	1:0:2594:U:H5'	2.26	0.71
1:0:501:G:H2'	1:0:502:A:H8	1.56	0.71
1:0:755:C:O2'	1:0:756:C:H5'	1.91	0.71
1:0:1045:G:H2'	1:0:1046:U:C6	2.25	0.71
1:0:1102:G:H22	1:0:1112:U:H1'	1.56	0.71
1:0:1429:A:H62	1:0:1601:U:H5''	1.55	0.71
1:0:2675:U:H2'	1:0:2676:G:H8	1.53	0.71
1:0:2725:C:H2'	1:0:2726:U:C6	2.25	0.71
1:0:861:G:H1'	1:0:944:A:N3	2.06	0.71
1:0:1441:A:O2'	1:0:1442:C:C6	2.44	0.70
1:0:2019:C:O2'	1:0:2020:G:H5'	1.91	0.70
1:0:2437:G:O6	1:0:2469:G:H2'	1.91	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2560:G:N7	1:0:2589:C:C5	2.58	0.70
1:0:965:G:N3	1:0:2253:A:C2	2.59	0.70
1:0:1070:G:H2'	1:0:1071:U:O4'	1.91	0.70
1:0:794:A:H2	1:0:1767:G:N3	1.89	0.70
1:0:2299:A:H2'	1:0:2312:A:N6	2.06	0.70
1:0:2463:G:H2'	1:0:2464:G:H8	1.56	0.70
1:0:990:A:H2'	1:0:993:C:N4	2.07	0.70
1:0:1174:G:C2	1:0:1175:A:C5	2.80	0.70
1:0:246:C:C5	1:0:373:A:H1'	2.26	0.70
1:0:1097:A:H4'	1:0:1114:A:C2	2.26	0.70
1:0:1482:U:H4'	1:0:1482:U:OP1	1.91	0.70
1:0:590:C:H2'	1:0:591:G:H8	1.54	0.70
1:0:923:A:H8	1:0:2243:C:H1'	1.57	0.70
1:0:1435:G:C2	1:0:1436:G:H1'	2.26	0.70
1:0:1712:G:H2'	1:0:1713:G:C5'	2.21	0.70
1:0:2692:A:H5'	1:0:2693:U:H5'	1.73	0.70
1:0:57:G:N2	1:0:69:G:C4	2.59	0.70
1:0:592:G:C6	1:0:593:C:N4	2.60	0.70
1:0:635:C:H2'	1:0:636:G:H5''	1.73	0.70
1:0:788:G:H21	1:0:804:C:N4	1.89	0.70
1:0:875:G:N2	1:0:928:G:H1'	2.06	0.70
1:0:88:G:H3'	1:0:89:A:H5'	1.74	0.70
1:0:1953:A:O2'	1:0:1954:A:OP2	2.08	0.70
1:0:537:C:O2'	1:0:538:A:C4	2.44	0.70
1:0:816:U:C2'	1:0:817:A:H5'	2.21	0.70
1:0:871:U:H2'	1:0:871:U:O2	1.92	0.70
1:0:946:U:H2'	1:0:947:C:H6	1.53	0.70
1:0:1174:G:H2'	1:0:1175:A:C8	2.26	0.70
1:0:1204:G:H2'	1:0:1205:G:C8	2.23	0.70
1:0:1229:C:H2'	1:0:1230:C:H6	1.57	0.70
1:0:1777:A:O2'	1:0:1778:U:OP1	2.09	0.70
1:0:163:A:H2'	1:0:164:G:C8	2.26	0.70
1:0:2194:A:C3'	1:0:2195:C:H5''	2.22	0.70
1:0:2491:C:C5'	1:0:2492:G:OP2	2.38	0.70
1:0:755:C:H2'	1:0:756:C:C6	2.26	0.70
1:0:926:C:H2'	1:0:927:C:C5'	2.22	0.70
1:0:1538:A:H2'	1:0:1539:U:H6	1.56	0.70
1:0:149:A:H2'	1:0:150:A:C8	2.27	0.69
1:0:1656:U:O2'	1:0:1657:A:H5''	1.92	0.69
1:0:212:U:N3	1:0:443:A:C2	2.59	0.69
1:0:27:G:H1'	1:0:523:A:N6	2.06	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:27:G:N2	1:0:522:G:O2'	2.25	0.69
1:0:1088:A:H2'	1:0:1089:C:O4'	1.92	0.69
1:0:1427:G:H2'	1:0:1428:G:O4'	1.92	0.69
1:0:1790:G:H4'	1:0:1791:C:O5'	1.92	0.69
1:0:177:U:C5	1:0:225:G:N3	2.60	0.69
1:0:395:G:C6	1:0:396:U:O4	2.44	0.69
1:0:1538:A:H2'	1:0:1539:U:C6	2.27	0.69
1:0:2185:U:H2'	1:0:2186:G:C8	2.27	0.69
1:0:2268:G:H5''	1:0:2363:G:O2'	1.91	0.69
1:0:2632:U:H3	1:0:2633:A:H62	1.41	0.69
1:0:468:A:H1'	1:0:470:U:C6	2.28	0.69
1:0:1036:G:C8	1:0:1036:G:OP1	2.43	0.69
1:0:1255:A:H2'	1:0:1256:C:H6	1.58	0.69
1:0:1921:A:H2'	1:0:1922:U:C5'	2.19	0.69
1:0:689:A:C8	1:0:2422:C:H1'	2.27	0.69
1:0:1333:G:N2	1:0:1344:C:N4	2.40	0.69
1:0:2268:G:O2'	1:0:2269:G:H5'	1.93	0.69
1:0:318:G:N2	1:0:321:A:O5'	2.21	0.69
1:0:765:C:O2	1:0:766:A:N7	2.25	0.69
1:0:1177:U:N3	1:0:1196:G:N1	2.41	0.69
1:0:1283:C:H5''	1:0:1284:G:O5'	1.93	0.69
1:0:1512:A:H2'	1:0:1514:C:C4	2.28	0.69
1:0:940:G:N7	1:0:941:U:C6	2.60	0.69
1:0:1291:G:O2'	1:0:1292:A:H5'	1.93	0.69
1:0:2368:G:H5''	1:0:2369:U:C5'	2.23	0.69
1:0:2705:A:O2'	1:0:2706:U:C6	2.45	0.69
1:0:2787:A:O2'	1:0:2788:C:H5'	1.93	0.69
1:0:2859:U:H2'	1:0:2860:C:H5'	1.75	0.69
1:0:792:U:O2'	1:0:793:G:H5'	1.91	0.69
1:0:936:A:H2'	1:0:937:C:O4'	1.93	0.69
1:0:1058:G:OP1	1:0:1058:G:H3'	1.93	0.69
1:0:1435:G:C2'	1:0:1436:G:H5'	2.21	0.69
1:0:1528:C:C2'	1:0:1529:C:H5''	2.21	0.69
1:0:1550:C:H2'	1:0:1551:U:O4'	1.93	0.69
1:0:1815:G:O2'	1:0:1816:G:H5'	1.92	0.69
1:0:234:C:H2'	1:0:235:C:H5'	1.75	0.69
1:0:712:A:H2'	1:0:713:G:O4'	1.93	0.69
1:0:178:C:O2'	1:0:179:U:H5'	1.93	0.68
1:0:1921:A:C2'	1:0:1922:U:H5''	2.21	0.68
1:0:2015:G:N3	1:0:2015:G:H2'	2.07	0.68
1:0:1445:A:H2'	1:0:1446:U:O4'	1.93	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1459:U:C4	1:0:1476:G:P	2.86	0.68
1:0:1478:U:H2'	1:0:1479:G:H8	1.58	0.68
1:0:226:C:H4'	1:0:227:G:H5''	1.75	0.68
1:0:237:G:H1'	1:0:632:A:C8	2.27	0.68
1:0:516:G:O2'	1:0:517:A:H8	1.77	0.68
1:0:985:G:H1'	1:0:1001:A:N6	2.08	0.68
1:0:2107:G:H2'	1:0:2108:G:O4'	1.94	0.68
1:0:318:G:N2	1:0:321:A:O4'	2.26	0.68
1:0:2628:C:H2'	1:0:2629:U:H6	1.58	0.68
1:0:318:G:N2	1:0:320:A:H3'	2.08	0.68
1:0:1493:A:H2	1:0:1573:G:N3	1.91	0.68
1:0:2074:U:H3'	1:0:2075:U:H5''	1.74	0.68
1:0:1495:G:H2'	1:0:1496:G:C8	2.28	0.68
1:0:2497:A:H5''	1:0:2498:U:OP2	1.93	0.68
1:0:2542:U:O2	1:0:2544:A:H8	1.76	0.68
1:0:1221:C:H2'	1:0:1222:G:C8	2.26	0.68
1:0:1296:G:N2	1:0:1298:G:H3'	2.08	0.68
1:0:1437:A:H2'	1:0:1438:G:H8	1.59	0.68
1:0:1573:G:O6	1:0:1574:A:N6	2.27	0.68
1:0:1777:A:HO2'	1:0:1778:U:P	2.16	0.68
1:0:2198:U:O5'	1:0:2199:C:H5''	1.93	0.68
1:0:625:A:N3	1:0:625:A:H3'	2.09	0.68
1:0:1468:A:H8	1:0:1468:A:O5'	1.77	0.68
1:0:1689:U:C2'	1:0:1690:U:H5''	2.24	0.68
1:0:1779:C:H2'	1:0:1780:A:C8	2.29	0.68
1:0:2437:G:H2'	1:0:2469:G:H1	1.59	0.68
1:0:1441:A:H3'	1:0:1441:A:N3	2.09	0.68
1:0:1527:G:H2'	1:0:1527:G:N3	2.09	0.68
1:0:2442:C:H2'	1:0:2443:C:H6	1.59	0.68
1:0:353:G:H2'	1:0:354:C:O4'	1.94	0.68
1:0:482:A:H2'	1:0:483:A:H5'	1.75	0.68
1:0:968:C:N4	1:0:970:A:C2	2.61	0.68
1:0:2106:G:H2'	1:0:2107:G:H8	1.58	0.68
1:0:2779:C:H2'	1:0:2780:A:C8	2.28	0.68
1:0:509:U:H2'	1:0:510:G:H5'	1.75	0.68
1:0:1198:C:H5''	1:0:1199:U:C4'	2.22	0.67
1:0:1332:G:C6	1:0:1333:G:N1	2.62	0.67
1:0:1:G:N2	1:0:2877:A:H1'	2.09	0.67
1:0:486:U:O2	1:0:515:A:H2	1.77	0.67
1:0:566:U:H2'	1:0:567:G:C8	2.25	0.67
1:0:1501:C:H2'	1:0:1502:G:O4'	1.94	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2204:A:H4'	1:0:2205:C:O5'	1.93	0.67
1:0:2335:U:H2'	1:0:2336:G:C8	2.30	0.67
1:0:2442:C:H2'	1:0:2443:C:C6	2.30	0.67
1:0:2489:C:H2'	1:0:2490:U:H5'	1.76	0.67
1:0:2570:C:H2'	1:0:2571:G:C8	2.29	0.67
1:0:43:A:O2'	1:0:44:G:H5'	1.93	0.67
1:0:1106:A:H2'	1:0:1107:A:C8	2.28	0.67
1:0:192:G:C1'	1:0:193:A:H4'	2.23	0.67
1:0:208:C:N4	1:0:209:G:N2	2.43	0.67
1:0:2311:U:H4'	1:0:2315:A:N6	2.09	0.67
1:0:1750:A:C8	1:0:2675:U:H1'	2.29	0.67
1:0:2761:A:C5'	1:0:2762:G:H5'	2.24	0.67
1:0:317:U:H3'	1:0:318:G:H5''	1.76	0.67
1:0:460:U:N3	1:0:592:G:H1'	2.08	0.67
1:0:553:C:O2'	1:0:555:U:H5'	1.93	0.67
1:0:205:A:C2	1:0:207:U:H1'	2.29	0.67
1:0:5:A:H2'	1:0:6:A:H8	1.60	0.67
1:0:1404:C:N3	1:0:1407:G:C8	2.62	0.67
1:0:1690:U:H6	1:0:1690:U:H5'	1.59	0.67
1:0:393:U:H2'	1:0:394:U:H6	1.58	0.67
1:0:500:G:H8	1:0:500:G:OP1	1.78	0.67
1:0:1573:G:H5'	1:0:1573:G:H8	1.58	0.67
1:0:2184:C:O2'	1:0:2185:U:H5'	1.94	0.67
1:0:20:C:O2'	1:0:21:A:H5'	1.94	0.67
1:0:2274:C:H2'	1:0:2275:U:C5'	2.23	0.67
1:0:237:G:H1'	1:0:632:A:H8	1.60	0.67
1:0:113:C:O2'	1:0:114:C:H5'	1.95	0.67
1:0:2588:U:C4'	1:0:2589:C:OP2	2.43	0.67
1:0:2859:U:C5	1:0:2860:C:C2	2.83	0.67
1:0:324:C:H2'	1:0:325:U:O4'	1.94	0.67
1:0:347:C:O2'	1:0:348:U:H5'	1.95	0.67
1:0:616:U:H2'	1:0:617:U:C5'	2.25	0.67
1:0:652:C:H42	1:0:657:A:N6	1.86	0.67
1:0:68:C:C2'	1:0:72:A:H1'	2.25	0.67
1:0:717:G:C2'	1:0:739:G:H22	2.06	0.67
1:0:1181:C:H2'	1:0:1182:U:H4'	1.77	0.67
1:0:1467:U:H3'	1:0:1468:A:C5'	2.24	0.67
1:0:1710:U:H3	1:0:1821:A:N6	1.92	0.67
1:0:818:G:H5'	1:0:819:C:C5	2.30	0.67
1:0:1402:G:H2'	1:0:1403:U:O4'	1.94	0.67
1:0:1546:C:H42	1:0:1556:A:N6	1.93	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:623:G:H5'	1:0:626:A:N6	2.09	0.67
1:0:1181:C:C3'	1:0:1182:U:H4'	2.25	0.66
1:0:1431:U:H5'	1:0:1604:A:H1'	1.77	0.66
1:0:212:U:H3	1:0:443:A:H2	1.42	0.66
1:0:2324:G:N7	1:0:2351:G:N2	2.43	0.66
1:0:1459:U:N3	1:0:1476:G:P	2.68	0.66
1:0:2202:G:C2	1:0:2203:G:H1'	2.30	0.66
1:0:2657:G:O2'	1:0:2658:A:H5'	1.96	0.66
1:0:403:A:H5''	1:0:404:A:OP1	1.96	0.66
1:0:931:G:H21	1:0:2247:A:H5'	1.61	0.66
1:0:2680:U:H5''	1:0:2681:A:H5'	1.75	0.66
1:0:2759:U:H5''	1:0:2760:G:H3'	1.77	0.66
1:0:2074:U:H3'	1:0:2075:U:C5'	2.26	0.66
1:0:1029:C:C3'	1:0:1030:U:H5''	2.25	0.66
1:0:1109:A:H2'	1:0:1110:G:H5'	1.78	0.66
1:0:1059:A:H8	1:0:1121:G:H21	1.44	0.66
1:0:1442:C:N4	1:0:1585:A:C8	2.62	0.66
1:0:219:G:O2'	1:0:220:U:P	2.52	0.66
1:0:674:U:H2'	1:0:675:C:O4'	1.96	0.66
1:0:1329:U:C2	1:0:1330:G:C8	2.84	0.66
1:0:1727:C:H4'	1:0:2833:C:O2	1.96	0.66
1:0:1886:G:H2'	1:0:1887:G:C8	2.30	0.66
1:0:422:C:H2'	1:0:423:G:H8	1.60	0.66
1:0:616:U:H2'	1:0:617:U:H5'	1.76	0.66
1:0:682:G:H5''	1:0:683:A:OP2	1.95	0.66
1:0:1186:G:N3	1:0:1186:G:H2'	2.09	0.66
1:0:1196:G:H2'	1:0:1197:U:O4'	1.95	0.66
1:0:1824:C:N4	1:0:1825:C:C4	2.64	0.66
1:0:2109:A:H2'	1:0:2110:G:O4'	1.95	0.66
1:0:2270:U:H2'	1:0:2271:C:C6	2.31	0.66
1:0:2787:A:H2'	1:0:2788:C:H6	1.61	0.66
1:0:91:A:H2'	1:0:92:U:C6	2.31	0.66
1:0:1452:U:O2'	1:0:1453:A:H5'	1.96	0.66
1:0:1508:G:N2	1:0:1515:U:H1'	2.11	0.66
1:0:304:A:C3'	1:0:305:A:H5''	2.25	0.66
1:0:697:G:C6	1:0:788:G:C5	2.84	0.66
1:0:7:G:H2'	1:0:8:A:H8	1.60	0.66
1:0:2796:A:H2'	1:0:2797:G:H8	1.61	0.66
1:0:1729:C:H2'	1:0:1730:G:H8	1.60	0.66
1:0:402:A:C8	1:0:2392:G:H4'	2.31	0.66
1:0:2646:C:H2'	1:0:2647:G:O4'	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:514:G:H2'	1:0:514:G:N3	2.11	0.66
1:0:1474:A:O2'	1:0:1475:U:H5'	1.94	0.65
1:0:1447:U:H1'	1:0:1577:G:N2	2.10	0.65
1:0:1740:G:H2'	1:0:1741:G:O4'	1.95	0.65
1:0:234:C:O2'	1:0:235:C:H5'	1.96	0.65
1:0:320:A:N3	1:0:340:G:O2'	2.29	0.65
1:0:358:C:H6	1:0:358:C:O5'	1.79	0.65
1:0:67:G:N1	1:0:72:A:C2	2.64	0.65
1:0:922:A:N6	1:0:923:A:N6	2.43	0.65
1:0:1142:G:O2'	1:0:1143:A:O5'	2.13	0.65
1:0:1468:A:C8	1:0:1468:A:O5'	2.50	0.65
1:0:1614:C:O2'	1:0:1615:C:H5'	1.96	0.65
1:0:2498:U:C5	1:0:2520:A:C6	2.84	0.65
1:0:2859:U:H5	1:0:2860:C:C2	2.15	0.65
1:0:636:G:H5'	1:0:636:G:H8	1.60	0.65
1:0:672:C:O2'	1:0:673:G:H5'	1.96	0.65
1:0:704:G:H2'	1:0:705:C:C6	2.31	0.65
1:0:781:G:O2'	1:0:782:U:H5'	1.96	0.65
1:0:700:C:O2	1:0:801:A:C5'	2.44	0.65
1:0:1190:C:H2'	1:0:1191:G:C8	2.32	0.65
1:0:1356:G:O4'	1:0:1613:G:H2'	1.96	0.65
1:0:1453:A:C2'	1:0:1454:U:H5'	2.26	0.65
1:0:177:U:O2	1:0:178:C:O4'	2.14	0.65
1:0:2753:C:H2'	1:0:2754:C:C6	2.28	0.65
1:0:466:A:O2'	1:0:467:U:OP2	2.10	0.65
1:0:67:G:C5	1:0:72:A:C2	2.84	0.65
1:0:760:U:O2	1:0:1997:A:H1'	1.97	0.65
1:0:7:G:H2'	1:0:8:A:C8	2.31	0.65
1:0:1840:A:H2'	1:0:1841:G:O4'	1.96	0.65
1:0:1846:A:H61	1:0:1871:G:H1'	1.62	0.65
1:0:2379:G:O2'	1:0:2380:U:H5'	1.97	0.65
1:0:2034:A:N6	1:0:2593:A:C4	2.64	0.65
1:0:1692:C:N4	1:0:1693:A:C2	2.65	0.65
1:0:2759:U:H4'	1:0:2761:A:C8	2.32	0.65
1:0:501:G:H2'	1:0:502:A:C8	2.31	0.65
1:0:1337:G:H1'	1:0:1632:A:H61	1.62	0.65
1:0:1563:U:H2'	1:0:1564:U:H6	1.57	0.65
1:0:2873:G:O2'	1:0:2874:A:H5'	1.96	0.65
1:0:701:U:O2	1:0:800:U:H4'	1.96	0.65
1:0:1040:A:C2'	1:0:1041:G:H5'	2.27	0.65
1:0:1608:U:H2'	1:0:1609:G:H8	1.61	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1715:A:O2'	1:0:1716:G:C5'	2.45	0.65
1:0:2077:G:H1	1:0:2179:C:C1'	2.10	0.65
1:0:2313:G:O2'	1:0:2314:A:OP1	2.13	0.65
1:0:2780:A:C2'	1:0:2781:G:H5'	2.26	0.65
1:0:791:G:C6	1:0:792:U:N3	2.64	0.65
1:0:1707:A:N7	1:0:1714:A:H2	1.93	0.65
1:0:2071:G:O2'	1:0:2072:C:H5'	1.97	0.65
1:0:2843:A:H2'	1:0:2844:G:C8	2.32	0.65
1:0:321:A:C2	1:0:323:G:H1'	2.32	0.65
1:0:68:C:H2'	1:0:72:A:H1'	1.79	0.65
1:0:1481:U:HO2'	1:0:1562:G:HO2'	1.42	0.65
1:0:172:A:N1	1:0:178:C:N3	2.45	0.65
1:0:639:G:H2'	1:0:640:C:C6	2.32	0.65
1:0:1211:G:H2'	1:0:1212:U:H6	1.62	0.65
1:0:1526:U:H2'	1:0:1527:G:H8	1.62	0.65
1:0:1770:U:O2	1:0:1774:A:C5	2.50	0.65
1:0:1871:G:H3'	1:0:1871:G:N3	2.12	0.65
1:0:2355:A:O2'	1:0:2356:A:H5'	1.97	0.65
1:0:2499:C:O2'	1:0:2500:C:H5'	1.96	0.65
1:0:317:U:C3'	1:0:318:G:H5''	2.26	0.65
1:0:469:G:H22	1:0:480:G:H2'	1.61	0.65
1:0:1436:G:H3'	1:0:1437:A:H8	1.61	0.64
1:0:1851:A:N6	1:0:1867:A:H1'	2.12	0.64
1:0:2188:A:H2'	1:0:2189:A:N7	2.11	0.64
1:0:2245:A:N3	1:0:2251:U:H5	1.94	0.64
1:0:787:A:N1	1:0:788:G:O6	2.30	0.64
1:0:1007:A:N6	1:0:1171:A:C6	2.65	0.64
1:0:1329:U:H2'	1:0:1330:G:H8	1.61	0.64
1:0:1717:A:H5'	1:0:1718:A:OP2	1.97	0.64
1:0:976:C:C5'	1:0:2252:A:H1'	2.23	0.64
1:0:2437:G:H21	1:0:2438:A:N6	1.94	0.64
1:0:2780:A:O2'	1:0:2781:G:H5'	1.96	0.64
1:0:633:G:H2'	1:0:634:G:C8	2.31	0.64
1:0:67:G:C5	1:0:72:A:H2	2.15	0.64
1:0:237:G:O4'	1:0:632:A:H1'	1.98	0.64
1:0:805:G:H2'	1:0:2419:C:C2	2.33	0.64
1:0:2436:U:H2'	1:0:2437:G:O4'	1.97	0.64
1:0:68:C:C6	1:0:72:A:C2	2.85	0.64
1:0:1033:G:O2'	1:0:1034:U:O5'	2.15	0.64
1:0:1540:C:H2'	1:0:1541:G:H8	1.62	0.64
1:0:1608:U:H2'	1:0:1609:G:C8	2.32	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1789:U:C4	1:0:1811:A:H2	2.14	0.64
1:0:498:C:C5	1:0:499:G:N7	2.66	0.64
1:0:931:G:O2'	1:0:932:G:H5'	1.97	0.64
1:0:1434:U:H2'	1:0:1435:G:C8	2.31	0.64
1:0:1695:U:O2'	1:0:1696:C:H5'	1.98	0.64
1:0:1974:U:H2'	1:0:1975:G:H5'	1.79	0.64
1:0:211:U:O2	1:0:211:U:C2'	2.45	0.64
1:0:976:C:C1'	1:0:2252:A:C2	2.79	0.64
1:0:2266:A:N6	1:0:2323:U:C2	2.64	0.64
1:0:2778:U:O2'	1:0:2779:C:H5'	1.98	0.64
1:0:862:A:H2'	1:0:863:C:C6	2.33	0.64
1:0:177:U:O2	1:0:177:U:H2'	1.97	0.64
1:0:177:U:O2	1:0:178:C:C6	2.50	0.64
1:0:1993:G:O2'	1:0:1994:U:H5'	1.98	0.64
1:0:460:U:O4	1:0:592:G:H1'	1.97	0.64
1:0:464:G:C6	1:0:465:C:N4	2.65	0.64
1:0:510:G:N3	1:0:512:A:OP2	2.30	0.64
1:0:613:A:O2'	1:0:614:G:H5'	1.97	0.64
1:0:877:G:H2'	1:0:878:C:O4'	1.98	0.64
1:0:1818:G:H2'	1:0:1819:U:C6	2.32	0.64
1:0:2188:A:C6	1:0:2189:A:N6	2.66	0.64
1:0:2547:C:H2'	1:0:2548:G:O4'	1.96	0.64
1:0:2660:C:N3	1:0:2704:U:C4	2.66	0.64
1:0:816:U:O2'	1:0:817:A:H5'	1.98	0.64
1:0:1438:G:C2	1:0:1591:U:C2	2.86	0.64
1:0:2209:G:H2'	1:0:2210:C:H6	1.63	0.64
1:0:2311:U:C4'	1:0:2315:A:N6	2.61	0.64
1:0:1471:G:H1	1:0:2682:C:H42	1.44	0.64
1:0:2697:G:O2'	1:0:2698:G:H5'	1.97	0.64
1:0:2867:G:H8	1:0:2867:G:OP2	1.80	0.64
1:0:66:U:H2'	1:0:67:G:N7	2.12	0.64
1:0:955:G:H8	1:0:955:G:H3'	1.62	0.64
1:0:1313:U:H1'	1:0:1642:G:N2	2.13	0.64
1:0:1698:C:H2'	1:0:1753:A:N3	2.13	0.64
1:0:1753:A:H8	1:0:1753:A:O5'	1.81	0.64
1:0:1947:G:H2'	1:0:1950:C:OP1	1.98	0.64
1:0:847:C:H2'	1:0:848:A:C8	2.33	0.64
1:0:991:A:C2	1:0:2020:G:N3	2.66	0.64
1:0:1216:G:O2'	1:0:1217:U:H5'	1.98	0.64
1:0:1253:C:H6	1:0:1253:C:H5'	1.63	0.64
1:0:1638:G:N2	1:0:1639:U:C2	2.66	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1684:G:O2'	1:0:1685:A:P	2.56	0.64
1:0:2336:G:N2	1:0:2338:C:H5''	2.13	0.64
1:0:67:G:C6	1:0:72:A:N1	2.65	0.64
1:0:2522:G:H2'	1:0:2523:G:H8	1.61	0.63
1:0:1170:U:O2'	1:0:1171:A:H5'	1.97	0.63
1:0:1819:U:H5'	1:0:1954:A:OP2	1.98	0.63
1:0:2067:U:H2'	1:0:2068:C:H6	1.62	0.63
1:0:788:G:H5''	1:0:790:A:C1'	2.28	0.63
1:0:1782:A:N6	1:0:1820:G:H2'	2.13	0.63
1:0:2678:C:O2'	1:0:2679:G:H5'	1.99	0.63
1:0:2794:G:H5''	1:0:2794:G:H8	1.63	0.63
1:0:781:G:H2'	1:0:782:U:C6	2.34	0.63
1:0:952:A:H2'	1:0:953:G:O4'	1.98	0.63
1:0:1631:C:H5	1:0:1633:C:C4	2.17	0.63
1:0:1656:U:C2'	1:0:1657:A:H5''	2.28	0.63
1:0:1941:C:O2'	1:0:1942:G:H5'	1.99	0.63
1:0:2523:G:HO2'	1:0:2524:G:H5'	1.63	0.63
1:0:1391:A:N7	1:0:1393:G:C5	2.66	0.63
1:0:239:A:C2	1:0:443:A:N3	2.67	0.63
1:0:805:G:H4'	1:0:806:A:OP2	1.97	0.63
1:0:837:U:H2'	1:0:838:A:H8	1.63	0.63
1:0:1193:G:H2'	1:0:1194:U:C6	2.34	0.63
1:0:2160:C:H2'	1:0:2161:C:C6	2.33	0.63
1:0:2274:C:O2	1:0:2274:C:H2'	1.98	0.63
1:0:2756:A:O2'	1:0:2757:G:H5'	1.97	0.63
1:0:26:G:C2	1:0:27:G:N2	2.67	0.63
1:0:483:A:H2'	1:0:484:G:H5'	1.79	0.63
1:0:789:G:C2'	1:0:789:G:N3	2.62	0.63
1:0:1823:G:H2'	1:0:1824:C:C6	2.33	0.63
1:0:2387:U:H2'	1:0:2388:G:C8	2.34	0.63
1:0:2551:A:O2'	1:0:2552:C:OP2	2.16	0.63
1:0:304:A:H3'	1:0:305:A:H5''	1.81	0.63
1:0:455:A:C2	1:0:1258:G:N3	2.67	0.63
1:0:542:A:C3'	1:0:542:A:C8	2.81	0.63
1:0:742:G:H5'	1:0:743:A:C5'	2.28	0.63
1:0:846:A:H2'	1:0:847:C:H6	1.64	0.63
1:0:1442:C:O2'	1:0:1443:G:OP1	2.16	0.63
1:0:219:G:O2'	1:0:220:U:OP2	2.13	0.63
1:0:2222:U:C2	1:0:2223:U:C5	2.87	0.63
1:0:1039:A:N6	1:0:1136:G:H2'	2.14	0.63
1:0:1427:G:N7	1:0:1428:G:N3	2.47	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1541:G:N2	1:0:1562:G:H22	1.97	0.63
1:0:1919:A:H5''	1:0:1920:A:C2	2.33	0.63
1:0:2756:A:H4'	1:0:2757:G:C5'	2.29	0.63
1:0:1287:A:N1	1:0:1661:C:O2'	2.26	0.62
1:0:149:A:H2'	1:0:150:A:H8	1.64	0.62
1:0:1772:C:HO2'	1:0:1773:C:P	2.21	0.62
1:0:1825:C:O2'	1:0:1826:U:H5'	1.98	0.62
1:0:2642:G:H2'	1:0:2643:G:C5'	2.29	0.62
1:0:2788:C:O2'	1:0:2789:U:H5'	1.98	0.62
1:0:313:U:O2'	1:0:314:G:H5'	1.98	0.62
1:0:79:G:O2'	1:0:356:A:N3	2.30	0.62
1:0:404:A:H2'	1:0:405:C:C6	2.34	0.62
1:0:469:G:H1'	1:0:470:U:C5	2.32	0.62
1:0:1139:A:O2'	1:0:1140:A:P	2.57	0.62
1:0:1253:C:H2'	1:0:1254:G:H5'	1.80	0.62
1:0:1287:A:C2	1:0:1315:A:H2	2.16	0.62
1:0:1314:A:C2'	1:0:1315:A:H3'	2.29	0.62
1:0:1:G:H2'	1:0:2:G:H8	1.64	0.62
1:0:2032:G:O2'	1:0:2033:C:H5'	1.99	0.62
1:0:594:G:C5	1:0:1264:C:N4	2.63	0.62
1:0:698:A:H4'	1:0:700:C:C5	2.34	0.62
1:0:752:G:C4'	1:0:753:U:OP1	2.46	0.62
1:0:981:C:H2'	1:0:982:C:H6	1.64	0.62
1:0:1265:G:O2'	1:0:1266:G:O4'	2.16	0.62
1:0:1407:G:C2	1:0:1408:A:C4	2.87	0.62
1:0:1427:G:H2'	1:0:1428:G:C4'	2.29	0.62
1:0:1574:A:O2'	1:0:1575:C:H3'	1.99	0.62
1:0:2204:A:O2'	1:0:2205:C:OP2	2.13	0.62
1:0:58:C:N4	1:0:73:A:N6	2.47	0.62
1:0:73:A:O2'	1:0:74:G:OP2	2.15	0.62
1:0:14:A:C2	1:0:536:A:N1	2.68	0.62
1:0:1463:A:C1'	1:0:1543:G:H22	2.12	0.62
1:0:199:A:N6	1:0:201:G:N1	2.47	0.62
1:0:2690:A:C8	1:0:2694:G:O4'	2.53	0.62
1:0:46:C:H2'	1:0:47:G:H8	1.64	0.62
1:0:542:A:C2'	1:0:543:G:H5'	2.21	0.62
1:0:1197:U:H2'	1:0:1198:C:O4'	1.99	0.62
1:0:125:A:H5''	1:0:126:C:O4'	1.99	0.62
1:0:403:A:H4'	1:0:404:A:O5'	1.98	0.62
1:0:700:C:H2'	1:0:701:U:O4'	2.00	0.62
1:0:2434:G:H2'	1:0:2435:C:C6	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1681:A:C2	1:0:2706:U:C2	2.88	0.62
1:0:2738:A:H2'	1:0:2738:A:N3	2.14	0.62
1:0:38:G:C2	1:0:454:G:C2	2.88	0.62
1:0:764:A:C2	1:0:802:A:H2'	2.32	0.62
1:0:1082:G:N3	1:0:1082:G:H2'	2.13	0.62
1:0:1408:A:H2	1:0:1411:C:N3	1.97	0.62
1:0:1999:U:H2'	1:0:2000:U:O4'	1.99	0.62
1:0:2692:A:H3'	1:0:2693:U:C5'	2.29	0.62
1:0:493:A:H1'	1:0:508:G:N2	2.13	0.62
1:0:455:A:H2	1:0:1258:G:N3	1.98	0.62
1:0:1273:G:O2'	1:0:1274:C:H5'	1.99	0.62
1:0:2447:G:O2'	1:0:2448:A:H8	1.83	0.62
1:0:2455:A:C2	1:0:2460:G:N1	2.65	0.62
1:0:1097:A:H4'	1:0:1114:A:H2	1.64	0.62
1:0:1010:U:H1'	1:0:1168:G:N2	2.14	0.62
1:0:1345:G:C5	1:0:1625:A:C6	2.88	0.62
1:0:525:A:H2'	1:0:526:C:O4'	2.00	0.62
1:0:982:C:C2'	1:0:983:G:H5'	2.29	0.62
1:0:986:A:H2'	1:0:987:G:H5'	1.81	0.62
1:0:451:A:H2'	1:0:452:G:H8	1.64	0.62
1:0:541:C:O2	1:0:572:G:H5''	1.99	0.62
1:0:787:A:C5	1:0:788:G:N7	2.68	0.62
1:0:1458:A:C3'	1:0:1459:U:H5''	2.29	0.61
1:0:1490:U:H3'	1:0:1490:U:OP1	1.99	0.61
1:0:2279:G:H2'	1:0:2280:A:H8	1.65	0.61
1:0:2472:U:H2'	1:0:2473:G:O5'	2.00	0.61
1:0:2728:A:C8	1:0:2729:A:C8	2.88	0.61
1:0:2760:G:O2'	1:0:2761:A:OP1	2.18	0.61
1:0:333:A:O2'	1:0:334:G:OP1	2.18	0.61
1:0:1714:A:OP2	1:0:1715:A:H3'	2.00	0.61
1:0:2740:C:O2'	1:0:2741:G:H5'	2.00	0.61
1:0:58:C:H3'	1:0:59:G:H5''	1.82	0.61
1:0:796:A:H8	1:0:797:A:H4'	1.65	0.61
1:0:939:C:H2'	1:0:940:G:C8	2.35	0.61
1:0:1106:A:H2'	1:0:1107:A:H8	1.64	0.61
1:0:1262:U:H5'	1:0:1262:U:H6	1.64	0.61
1:0:1435:G:H2'	1:0:1436:G:H5'	1.82	0.61
1:0:1478:U:H2'	1:0:1479:G:C8	2.36	0.61
1:0:58:C:N3	1:0:73:A:N1	2.48	0.61
1:0:828:C:H2'	1:0:829:C:H6	1.65	0.61
1:0:984:A:H1'	1:0:1202:U:C5	2.36	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1213:U:N3	1:0:1260:A:H2	1.99	0.61
1:0:1337:G:C4'	1:0:1632:A:H62	2.13	0.61
1:0:211:U:O2	1:0:212:U:C6	2.54	0.61
1:0:2255:G:C6	1:0:2256:G:N7	2.68	0.61
1:0:2323:U:H5''	1:0:2324:G:OP1	2.01	0.61
1:0:2441:U:H2'	1:0:2442:C:H6	1.65	0.61
1:0:2709:C:H2'	1:0:2710:C:C6	2.35	0.61
1:0:746:G:N7	1:0:774:A:C5	2.68	0.61
1:0:1548:U:C4	1:0:1549:C:N4	2.69	0.61
1:0:1708:C:N3	1:0:1714:A:C2	2.69	0.61
1:0:2671:C:H2'	1:0:2672:U:C6	2.35	0.61
1:0:2825:A:H5'	1:0:2843:A:H2	1.65	0.61
1:0:2867:G:O2'	1:0:2868:G:OP2	2.18	0.61
1:0:452:G:H2'	1:0:453:U:O4'	2.01	0.61
1:0:5:A:H2'	1:0:6:A:C8	2.36	0.61
1:0:983:G:C6	1:0:984:A:N6	2.68	0.61
1:0:1153:A:H2'	1:0:1155:G:C8	2.36	0.61
1:0:1199:U:O5'	1:0:1200:G:H5'	2.00	0.61
1:0:1354:A:C2	1:0:1411:C:H4'	2.35	0.61
1:0:1754:G:H4'	1:0:1754:G:OP1	2.00	0.61
1:0:2198:U:H5''	1:0:2199:C:OP2	2.01	0.61
1:0:2548:G:H2'	1:0:2549:G:C5'	2.31	0.61
1:0:2557:G:N2	1:0:2558:C:N1	2.49	0.61
1:0:2782:G:H3'	1:0:2783:U:C5'	2.22	0.61
1:0:553:C:H5'	1:0:554:U:OP1	2.01	0.61
1:0:68:C:N1	1:0:72:A:N3	2.48	0.61
1:0:692:C:O2'	1:0:693:A:H5'	2.01	0.61
1:0:1502:G:O2'	1:0:1503:G:H5'	2.00	0.61
1:0:1325:U:O2	1:0:1619:A:N7	2.34	0.61
1:0:168:A:O2'	1:0:169:C:O4'	2.18	0.61
1:0:27:G:HO2'	1:0:28:A:H8	1.47	0.61
1:0:337:G:H2'	1:0:338:G:O4'	2.00	0.61
1:0:403:A:C5'	1:0:404:A:H5'	2.31	0.61
1:0:698:A:C5	1:0:787:A:C2	2.89	0.61
1:0:953:G:C6	1:0:954:U:N3	2.68	0.61
1:0:1242:A:O2'	1:0:1243:G:H5'	2.01	0.61
1:0:1429:A:N6	1:0:1601:U:H5''	2.16	0.61
1:0:1459:U:C4	1:0:1476:G:OP2	2.53	0.61
1:0:1692:C:N4	1:0:1693:A:N1	2.49	0.61
1:0:1794:A:C2	1:0:1814:G:N3	2.66	0.61
1:0:177:U:C4	1:0:225:G:N3	2.69	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2795:A:H2'	1:0:2795:A:N3	2.14	0.61
1:0:314:G:H2'	1:0:315:G:H8	1.66	0.61
1:0:717:G:HO2'	1:0:718:A:P	2.23	0.61
1:0:1435:G:C2	1:0:1436:G:C1'	2.84	0.61
1:0:1341:G:N2	1:0:1664:G:C2	2.68	0.61
1:0:1975:G:N2	1:0:1979:C:C5	2.68	0.61
1:0:2161:C:H2'	1:0:2162:C:C5	2.36	0.61
1:0:2303:C:H5''	1:0:2304:G:H5''	1.81	0.61
1:0:2560:G:N3	1:0:2560:G:H2'	2.15	0.61
1:0:2796:A:H2'	1:0:2797:G:C8	2.36	0.61
1:0:246:C:C6	1:0:373:A:H1'	2.36	0.61
1:0:387:A:H2'	1:0:387:A:N3	2.16	0.61
1:0:465:C:O2'	1:0:467:U:H1'	2.01	0.61
1:0:509:U:C2'	1:0:510:G:H5'	2.31	0.61
1:0:158:A:N1	1:0:159:A:C2	2.69	0.60
1:0:1779:C:H2'	1:0:1780:A:H8	1.63	0.60
1:0:2220:A:O2'	1:0:2221:G:H5'	2.01	0.60
1:0:2245:A:N3	1:0:2251:U:C5	2.69	0.60
1:0:2348:A:O2'	1:0:2349:G:H5'	2.00	0.60
1:0:2636:A:H2'	1:0:2637:C:H5'	1.83	0.60
1:0:343:A:H2'	1:0:345:U:OP2	2.00	0.60
1:0:490:A:O2'	1:0:491:A:C5'	2.49	0.60
1:0:1002:C:H5'	1:0:1199:U:OP1	2.01	0.60
1:0:1408:A:C2	1:0:1411:C:N3	2.69	0.60
1:0:140:G:H2'	1:0:141:G:C8	2.36	0.60
1:0:1573:G:H5'	1:0:1573:G:C8	2.36	0.60
1:0:1949:A:O2'	1:0:2572:U:H5'	2.00	0.60
1:0:2542:U:O2	1:0:2544:A:C8	2.53	0.60
1:0:2768:C:O2'	1:0:2784:A:H8	1.83	0.60
1:0:2875:C:H2'	1:0:2876:C:C6	2.36	0.60
1:0:1032:A:C2	1:0:1034:U:C2	2.89	0.60
1:0:1664:G:H5''	1:0:1665:C:OP1	2.01	0.60
1:0:1927:U:H2'	1:0:1927:U:O2	2.01	0.60
1:0:1950:C:H2'	1:0:1951:G:H5'	1.82	0.60
1:0:2501:U:O2'	1:0:2626:U:OP1	2.10	0.60
1:0:801:A:O2'	1:0:802:A:OP2	2.15	0.60
1:0:834:A:N7	1:0:957:G:C5	2.70	0.60
1:0:875:G:H2'	1:0:876:A:H5'	1.83	0.60
1:0:958:G:H2'	1:0:959:C:H6	1.65	0.60
1:0:991:A:H2	1:0:2020:G:N3	1.99	0.60
1:0:579:G:H4'	1:0:994:A:C2	2.36	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1288:A:N7	1:0:1309:G:C1'	2.63	0.60
1:0:1313:U:O2'	1:0:1314:A:OP2	2.19	0.60
1:0:2235:G:N2	1:0:2254:C:C4	2.70	0.60
1:0:2758:A:O2'	1:0:2759:U:OP1	2.14	0.60
1:0:389:G:C2	1:0:412:U:O2	2.53	0.60
1:0:577:U:N3	1:0:580:A:OP2	2.30	0.60
1:0:614:G:N1	1:0:634:G:N1	2.49	0.60
1:0:668:A:O2'	1:0:669:G:O4'	2.18	0.60
1:0:89:A:H4'	1:0:90:G:C5'	2.31	0.60
1:0:958:G:H2'	1:0:959:C:C6	2.36	0.60
1:0:1058:G:HO2'	1:0:1121:G:H1	1.48	0.60
1:0:1466:C:C2	1:0:1467:U:O2	2.55	0.60
1:0:2343:C:H2'	1:0:2344:G:O4'	2.01	0.60
1:0:2687:G:H2'	1:0:2688:G:H8	1.66	0.60
1:0:635:C:C2'	1:0:636:G:H5''	2.31	0.60
1:0:765:C:O2'	1:0:766:A:H8	1.84	0.60
1:0:828:C:H2'	1:0:829:C:C6	2.36	0.60
1:0:929:A:H5''	1:0:2247:A:N1	2.16	0.60
1:0:1507:A:H4'	1:0:1510:A:OP1	2.01	0.60
1:0:1548:U:H2'	1:0:1549:C:H6	1.64	0.60
1:0:2668:U:H5'	1:0:2669:C:H5'	1.84	0.60
1:0:2768:C:O2'	1:0:2784:A:C8	2.54	0.60
1:0:689:A:H8	1:0:2052:G:N2	1.97	0.60
1:0:805:G:N7	1:0:2419:C:H1'	2.15	0.60
1:0:531:G:H2'	1:0:532:A:H8	1.66	0.60
1:0:684:C:H2'	1:0:685:U:C6	2.34	0.60
1:0:827:C:O2'	1:0:1237:G:N2	2.34	0.60
1:0:927:C:O2'	1:0:928:G:H5'	2.01	0.60
1:0:983:G:N1	1:0:984:A:N6	2.48	0.60
1:0:1181:C:C2'	1:0:1182:U:H4'	2.32	0.60
1:0:1466:C:O2	1:0:1467:U:H1'	2.01	0.60
1:0:1715:A:O2'	1:0:1716:G:H3'	2.02	0.60
1:0:1724:C:C2	1:0:1747:G:C6	2.90	0.60
1:0:2054:A:H2'	1:0:2055:G:H8	1.67	0.60
1:0:2402:U:H1'	1:0:2404:A:C2	2.36	0.60
1:0:2666:U:C5	1:0:2667:C:C4	2.89	0.60
1:0:430:C:H1'	1:0:2386:G:N2	2.17	0.60
1:0:699:G:H5'	1:0:700:C:OP2	2.01	0.60
1:0:794:A:C2	1:0:1767:G:N3	2.69	0.60
1:0:1120:C:H2'	1:0:1121:G:H5'	1.84	0.60
1:0:1036:G:C4	1:0:1145:C:H1'	2.37	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1404:C:N3	1:0:1407:G:N7	2.50	0.60
1:0:2574:G:N2	1:0:2576:G:H3'	2.16	0.60
1:0:58:C:H42	1:0:73:A:N6	1.99	0.60
1:0:1261:G:H4'	1:0:1262:U:OP2	2.01	0.60
1:0:1633:C:O2'	1:0:1634:A:P	2.59	0.60
1:0:2633:A:C2	1:0:2644:A:H5''	2.36	0.60
1:0:2685:A:N1	1:0:2686:C:C2	2.70	0.60
1:0:2708:U:C2'	1:0:2709:C:H6	2.03	0.60
1:0:2827:G:O2'	1:0:2828:C:H5'	2.00	0.60
1:0:841:G:N7	1:0:842:A:N6	2.49	0.60
1:0:880:C:H6	1:0:880:C:O5'	1.85	0.60
1:0:955:G:C3'	1:0:955:G:C8	2.81	0.60
1:0:579:G:H5'	1:0:994:A:H2	1.66	0.60
1:0:1444:C:H2'	1:0:1445:A:H8	1.66	0.59
1:0:1525:A:H3'	1:0:1526:U:O4'	2.02	0.59
1:0:1923:U:H5'	1:0:1924:C:OP1	2.01	0.59
1:0:873:U:C6	1:0:2246:A:H4'	2.37	0.59
1:0:352:G:O2'	1:0:353:G:H5'	2.01	0.59
1:0:843:G:H4'	1:0:844:G:OP1	2.02	0.59
1:0:1666:G:N2	1:0:1667:A:C4	2.70	0.59
1:0:2080:U:H2'	1:0:2081:U:C6	2.37	0.59
1:0:2268:G:H3'	1:0:2268:G:OP2	2.02	0.59
1:0:2303:C:H5''	1:0:2304:G:C5'	2.32	0.59
1:0:2668:U:O2	1:0:2693:U:O4'	2.20	0.59
1:0:617:U:N3	1:0:632:A:N7	2.50	0.59
1:0:763:A:H2'	1:0:764:A:H5''	1.84	0.59
1:0:799:C:O2'	1:0:800:U:H5'	2.02	0.59
1:0:1260:A:N6	1:0:1262:U:C2	2.70	0.59
1:0:1582:A:O2'	1:0:1583:A:O5'	2.18	0.59
1:0:1699:A:H61	1:0:1723:U:H3	1.50	0.59
1:0:1828:C:N4	1:0:1829:C:N4	2.50	0.59
1:0:199:A:N6	1:0:201:G:C6	2.70	0.59
1:0:2014:A:C6	1:0:2477:C:H1'	2.38	0.59
1:0:2094:C:C2	1:0:2103:G:H1'	2.37	0.59
1:0:2551:A:HO2'	1:0:2552:C:P	2.24	0.59
1:0:773:G:C2'	1:0:774:A:H5'	2.31	0.59
1:0:1458:A:H2'	1:0:1460:G:OP1	2.02	0.59
1:0:1587:A:H2'	1:0:1588:A:H8	1.63	0.59
1:0:1845:A:H2'	1:0:1846:A:C8	2.38	0.59
1:0:2198:U:H3'	1:0:2199:C:C4'	2.32	0.59
1:0:2201:G:C2	1:0:2202:G:C8	2.91	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2534:U:H3'	1:0:2535:C:H6	1.67	0.59
1:0:2671:C:O2'	1:0:2672:U:H5'	2.02	0.59
1:0:107:G:N2	1:0:108:G:H1'	2.17	0.59
1:0:116:A:H8	1:0:117:A:C8	2.21	0.59
1:0:1635:G:O2'	1:0:1636:G:H5'	2.02	0.59
1:0:1950:C:H2'	1:0:1951:G:C5'	2.32	0.59
1:0:2354:G:N3	1:0:2356:A:N7	2.50	0.59
1:0:2482:A:C4'	1:0:2483:U:OP1	2.44	0.59
1:0:309:G:H21	1:0:351:A:H62	1.50	0.59
1:0:469:G:H21	1:0:480:G:H2'	1.67	0.59
1:0:633:G:H2'	1:0:634:G:H8	1.66	0.59
1:0:863:C:H2'	1:0:863:C:O2	2.01	0.59
1:0:1124:U:O2'	1:0:1125:G:H5'	2.02	0.59
1:0:54:G:N2	1:0:114:C:C2	2.70	0.59
1:0:1153:A:H4'	1:0:1154:A:OP1	2.03	0.59
1:0:1219:C:H2'	1:0:1220:G:O4'	2.02	0.59
1:0:1256:C:H2'	1:0:1257:U:C6	2.38	0.59
1:0:1293:A:O2'	1:0:1294:G:H5'	2.02	0.59
1:0:1323:G:H1'	1:0:1627:C:H5'	1.84	0.59
1:0:1574:A:C2	1:0:1576:G:H1'	2.38	0.59
1:0:1698:C:H1'	1:0:1754:G:H5'	1.84	0.59
1:0:1904:G:H2'	1:0:1905:G:C8	2.33	0.59
1:0:192:G:C4'	1:0:193:A:H4'	2.32	0.59
1:0:2728:A:N6	1:0:2737:A:N7	2.50	0.59
1:0:2756:A:H4'	1:0:2757:G:O5'	2.03	0.59
1:0:633:G:O2'	1:0:634:G:H5'	2.01	0.59
1:0:59:G:C4	1:0:73:A:N1	2.71	0.59
1:0:757:U:H2'	1:0:758:G:H5'	1.84	0.59
1:0:998:C:O2'	1:0:1011:A:H1'	2.02	0.59
1:0:1029:C:H2'	1:0:1030:U:H5''	1.83	0.59
1:0:1450:G:C4	1:0:1573:G:N2	2.70	0.59
1:0:1503:G:H2'	1:0:1504:G:C8	2.37	0.59
1:0:1744:G:N2	1:0:1746:A:H3'	2.18	0.59
1:0:1926:U:O2'	1:0:1927:U:P	2.59	0.59
1:0:2007:G:O2'	1:0:2008:C:H5'	2.02	0.59
1:0:2095:G:OP2	1:0:2103:G:H4'	2.03	0.59
1:0:2426:G:H4'	1:0:2427:A:C5'	2.33	0.59
1:0:2710:C:O2'	1:0:2711:G:H5'	2.03	0.59
1:0:2870:C:O2'	1:0:2871:U:H5'	2.01	0.59
1:0:310:A:N1	1:0:333:A:H2'	2.18	0.59
1:0:411:C:H2'	1:0:412:U:O4'	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:67:G:N2	1:0:73:A:O4'	2.35	0.59
1:0:1018:C:C4	1:0:1019:U:C4	2.91	0.59
1:0:1288:A:N7	1:0:1309:G:H1'	2.17	0.59
1:0:1329:U:O2'	1:0:1330:G:H5'	2.02	0.59
1:0:138:G:H2'	1:0:139:A:H8	1.67	0.59
1:0:1675:C:H2'	1:0:1676:U:H6	1.67	0.59
1:0:2324:G:N7	1:0:2360:C:C2	2.70	0.59
1:0:357:A:H3'	1:0:358:C:C6	2.37	0.59
1:0:222:G:H1'	1:0:397:U:O2	2.03	0.59
1:0:538:A:H3'	1:0:538:A:C8	2.38	0.59
1:0:1153:A:O2'	1:0:1154:A:H3'	2.02	0.59
1:0:1234:C:O2	1:0:1242:A:C2	2.56	0.59
1:0:147:G:O5'	1:0:147:G:H8	1.86	0.59
1:0:1729:C:H2'	1:0:1730:G:C8	2.38	0.59
1:0:237:G:C1'	1:0:632:A:H1'	2.32	0.59
1:0:2728:A:H8	1:0:2729:A:C8	2.19	0.59
1:0:2825:A:H2'	1:0:2826:C:H6	1.68	0.59
1:0:659:G:H2'	1:0:660:G:C8	2.38	0.59
1:0:682:G:C2'	1:0:682:G:N3	2.66	0.59
1:0:788:G:C2'	1:0:807:A:C8	2.86	0.59
1:0:83:A:H2	1:0:101:A:C4	2.21	0.59
1:0:968:C:O2'	1:0:969:U:OP1	2.20	0.59
1:0:1257:U:O2'	1:0:1258:G:H5'	2.02	0.59
1:0:1280:U:H2'	1:0:1281:A:C8	2.36	0.59
1:0:1419:G:H2'	1:0:1420:A:C8	2.38	0.59
1:0:1486:A:H2'	1:0:1487:C:C6	2.36	0.59
1:0:1731:C:N4	1:0:1732:U:H1'	2.17	0.59
1:0:1804:U:H2'	1:0:1805:G:C8	2.35	0.59
1:0:1789:U:N3	1:0:1811:A:C2	2.71	0.59
1:0:2338:C:H3'	1:0:2339:A:H8	1.67	0.59
1:0:2447:G:HO2'	1:0:2448:A:H8	1.50	0.59
1:0:2729:A:N6	1:0:2730:A:H62	2.00	0.59
1:0:2856:U:O2'	1:0:2857:C:H5'	2.03	0.59
1:0:986:A:C2	1:0:1001:A:C8	2.91	0.58
1:0:1675:C:H2'	1:0:1676:U:C6	2.38	0.58
1:0:1899:A:H2'	1:0:1900:U:H4'	1.85	0.58
1:0:2557:G:O2'	1:0:2558:C:H5'	2.03	0.58
1:0:340:G:O4'	1:0:488:A:H1'	2.03	0.58
1:0:541:C:N3	1:0:572:G:C4'	2.66	0.58
1:0:88:G:H3'	1:0:89:A:H5''	1.85	0.58
1:0:1004:A:C2'	1:0:1005:U:H5'	2.32	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1404:C:C4	1:0:1407:G:N7	2.71	0.58
1:0:1554:G:O2'	1:0:1555:A:H5'	2.02	0.58
1:0:1582:A:O2'	1:0:1583:A:P	2.60	0.58
1:0:1940:C:H2'	1:0:1941:C:C6	2.38	0.58
1:0:2036:G:C2'	1:0:2037:A:H5'	2.33	0.58
1:0:2325:A:HO2'	1:0:2326:C:P	2.26	0.58
1:0:2367:A:N7	1:0:2368:G:C6	2.71	0.58
1:0:2402:U:O2	1:0:2404:A:N1	2.36	0.58
1:0:2437:G:H21	1:0:2438:A:H61	1.49	0.58
1:0:442:A:C6	1:0:443:A:N6	2.71	0.58
1:0:573:C:HO2'	1:0:574:C:H5'	1.66	0.58
1:0:682:G:N2	1:0:683:A:C2	2.70	0.58
1:0:71:A:N6	1:0:110:U:H4'	2.18	0.58
1:0:765:C:HO2'	1:0:766:A:H8	1.40	0.58
1:0:826:U:C6	1:0:1209:G:N2	2.71	0.58
1:0:1199:U:O4	1:0:1201:G:O6	2.22	0.58
1:0:1376:C:H2'	1:0:1377:G:H8	1.68	0.58
1:0:2286:G:C6	1:0:2287:G:H1'	2.37	0.58
1:0:2770:A:H3'	1:0:2770:A:N3	2.18	0.58
1:0:652:C:H6	1:0:652:C:H5'	1.68	0.58
1:0:746:G:N7	1:0:774:A:C6	2.70	0.58
1:0:1588:A:H2'	1:0:1589:G:C8	2.38	0.58
1:0:1626:A:C5'	1:0:1627:C:OP2	2.48	0.58
1:0:2191:A:H3'	1:0:2192:U:C5	2.38	0.58
1:0:931:G:H22	1:0:2247:A:H5'	1.64	0.58
1:0:243:G:OP2	1:0:243:G:O4'	2.22	0.58
1:0:459:A:H1'	1:0:461:A:N6	2.18	0.58
1:0:538:A:H3'	1:0:538:A:H8	1.67	0.58
1:0:810:U:H2'	1:0:811:G:O4'	2.03	0.58
1:0:1581:C:O2'	1:0:1582:A:O5'	2.21	0.58
1:0:1606:C:H42	1:0:1607:A:N6	2.01	0.58
1:0:1693:A:H2	1:0:1976:U:O4'	1.87	0.58
1:0:199:A:N6	1:0:201:G:C2	2.71	0.58
1:0:2033:C:N4	1:0:2034:A:N1	2.52	0.58
1:0:361:G:H8	1:0:361:G:O5'	1.86	0.58
1:0:367:G:H3'	1:0:368:A:H5''	1.85	0.58
1:0:441:A:C2'	1:0:442:A:H5'	2.34	0.58
1:0:623:G:O3'	1:0:625:A:P	2.62	0.58
1:0:799:C:H2'	1:0:800:U:H6	1.69	0.58
1:0:764:A:C4	1:0:802:A:C2	2.91	0.58
1:0:808:C:O2'	1:0:809:C:H5'	2.04	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1177:U:H2'	1:0:1178:C:C6	2.38	0.58
1:0:116:A:C8	1:0:117:A:N7	2.72	0.58
1:0:1544:A:N6	1:0:1559:G:N2	2.52	0.58
1:0:1606:C:N4	1:0:1607:A:N6	2.50	0.58
1:0:162:C:O2'	1:0:163:A:H5'	2.04	0.58
1:0:992:A:C2	1:0:2010:G:N3	2.68	0.58
1:0:2309:G:H2'	1:0:2310:G:O4'	2.02	0.58
1:0:2701:A:O2'	1:0:2702:G:H5'	2.03	0.58
1:0:356:A:HO2'	1:0:357:A:H8	1.50	0.58
1:0:622:U:O2'	1:0:626:A:N6	2.33	0.58
1:0:672:C:C2'	1:0:673:G:H5'	2.33	0.58
1:0:717:G:C2'	1:0:739:G:N2	2.66	0.58
1:0:1188:A:H2'	1:0:1189:G:H5'	1.84	0.58
1:0:1845:A:N1	1:0:2070:G:H1'	2.19	0.58
1:0:2122:G:H2'	1:0:2123:G:C8	2.38	0.58
1:0:510:G:O5'	1:0:510:G:C8	2.56	0.58
1:0:851:C:H2'	1:0:852:U:O4'	2.03	0.58
1:0:1288:A:N7	1:0:1309:G:O4'	2.37	0.58
1:0:1399:C:O2'	1:0:1400:A:H5'	2.03	0.58
1:0:1639:U:H2'	1:0:1640:C:H6	1.67	0.58
1:0:542:A:N6	1:0:570:G:H21	1.98	0.58
1:0:614:G:N2	1:0:634:G:N2	2.51	0.58
1:0:765:C:O2'	1:0:766:A:C8	2.53	0.58
1:0:790:A:O2'	1:0:791:G:H5'	2.04	0.58
1:0:876:A:H2	1:0:926:C:H41	1.49	0.58
1:0:940:G:C8	1:0:941:U:O4'	2.56	0.58
1:0:957:G:O2'	1:0:958:G:H5'	2.04	0.58
1:0:1008:G:O2'	1:0:1009:C:H5'	2.03	0.58
1:0:1045:G:N2	1:0:1133:G:H1'	2.19	0.58
1:0:1372:A:H2'	1:0:1373:G:H5'	1.85	0.58
1:0:1467:U:O4	1:0:1473:U:H1'	2.04	0.58
1:0:1710:U:C4'	1:0:1711:C:OP2	2.51	0.58
1:0:1949:A:H1'	1:0:2572:U:C5'	2.33	0.58
1:0:2713:A:O2'	1:0:2714:A:H5'	2.04	0.58
1:0:2819:G:N2	1:0:2849:C:C6	2.72	0.58
1:0:469:G:N2	1:0:480:G:C2'	2.66	0.58
1:0:695:G:O2'	1:0:696:U:H5'	2.04	0.58
1:0:815:A:N3	1:0:815:A:H2'	2.18	0.58
1:0:829:C:N3	1:0:1206:G:C2	2.71	0.58
1:0:871:U:C2'	1:0:871:U:O2	2.52	0.58
1:0:1430:G:H2'	1:0:1431:U:C6	2.39	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:167:A:C8	1:0:184:A:C6	2.92	0.58
1:0:1899:A:H3'	1:0:1900:U:H5''	1.85	0.58
1:0:1920:A:H2'	1:0:1921:A:H8	1.69	0.58
1:0:2077:G:C2	1:0:2179:C:H1'	2.38	0.58
1:0:2528:G:H2'	1:0:2529:G:H8	1.68	0.58
1:0:2538:C:O2'	1:0:2539:C:H5'	2.04	0.58
1:0:450:C:H2'	1:0:451:A:C8	2.31	0.58
1:0:490:A:O2'	1:0:491:A:H5'	2.03	0.58
1:0:837:U:H2'	1:0:838:A:C8	2.38	0.58
1:0:1690:U:H5'	1:0:1690:U:C6	2.39	0.57
1:0:1777:A:O2'	1:0:1778:U:P	2.60	0.57
1:0:1919:A:H4'	1:0:1920:A:OP2	2.04	0.57
1:0:1947:G:N1	1:0:1950:C:C4	2.72	0.57
1:0:197:G:N3	1:0:210:A:H2	2.02	0.57
1:0:541:C:HO2'	1:0:2018:G:N2	1.99	0.57
1:0:2121:U:H2'	1:0:2122:G:C8	2.39	0.57
1:0:332:C:O2'	1:0:333:A:OP1	2.22	0.57
1:0:403:A:OP2	1:0:403:A:H3'	2.02	0.57
1:0:568:G:H2'	1:0:569:C:O4'	2.04	0.57
1:0:1211:G:C4	1:0:1212:U:C5	2.92	0.57
1:0:2301:A:C6	1:0:2312:A:N6	2.72	0.57
1:0:242:A:N6	1:0:441:A:C8	2.72	0.57
1:0:326:A:H2'	1:0:327:C:C6	2.39	0.57
1:0:427:C:H2'	1:0:428:A:C8	2.39	0.57
1:0:464:G:O2'	1:0:465:C:H5'	2.04	0.57
1:0:623:G:H4'	1:0:625:A:OP1	2.02	0.57
1:0:881:U:H2'	1:0:882:C:C6	2.39	0.57
1:0:1071:U:H3'	1:0:1072:U:C5'	2.34	0.57
1:0:824:U:H4'	1:0:1264:C:H1'	1.86	0.57
1:0:2220:A:C2	1:0:2221:G:C5	2.92	0.57
1:0:464:G:H2'	1:0:465:C:C6	2.39	0.57
1:0:820:U:H2'	1:0:821:A:C8	2.39	0.57
1:0:953:G:C5	1:0:954:U:C4	2.92	0.57
1:0:1252:C:C2'	1:0:1253:C:H5''	2.33	0.57
1:0:1287:A:H2'	1:0:1288:A:H5''	1.86	0.57
1:0:1376:C:H2'	1:0:1377:G:C8	2.38	0.57
1:0:1467:U:C3'	1:0:1468:A:H5'	2.33	0.57
1:0:1644:G:O2'	1:0:1645:U:H5'	2.04	0.57
1:0:177:U:O2	1:0:178:C:C1'	2.51	0.57
1:0:1973:C:H2'	1:0:1974:U:O4'	2.05	0.57
1:0:2254:C:O2'	1:0:2255:G:P	2.62	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2286:G:C4	1:0:2287:G:H1'	2.40	0.57
1:0:2782:G:C3'	1:0:2783:U:H5''	2.22	0.57
1:0:2824:C:H4'	1:0:2825:A:H5'	1.86	0.57
1:0:323:G:H2'	1:0:323:G:N3	2.19	0.57
1:0:68:C:C5	1:0:72:A:C2	2.92	0.57
1:0:944:A:C2	1:0:945:G:H1'	2.39	0.57
1:0:1392:U:OP2	1:0:1393:G:OP2	2.22	0.57
1:0:1317:G:N2	1:0:1641:C:C2	2.72	0.57
1:0:1807:A:N3	1:0:1809:G:N7	2.53	0.57
1:0:1854:G:H1	1:0:1863:U:H3	1.53	0.57
1:0:2549:G:O2'	1:0:2550:C:H5'	2.05	0.57
1:0:2876:C:O2'	1:0:2877:A:H5'	2.05	0.57
1:0:68:C:C2'	1:0:68:C:O2	2.48	0.57
1:0:954:U:C5	1:0:955:G:N2	2.73	0.57
1:0:1086:C:H2'	1:0:1087:C:H5''	1.86	0.57
1:0:2172:U:C2'	1:0:2173:G:H5'	2.35	0.57
1:0:2404:A:N3	1:0:2404:A:H2'	2.20	0.57
1:0:2691:C:OP1	1:0:2694:G:H4'	2.05	0.57
1:0:322:A:HO2'	1:0:323:G:P	2.26	0.57
1:0:373:A:H2'	1:0:373:A:N3	2.20	0.57
1:0:701:U:H5'	1:0:1771:A:C2	2.39	0.57
1:0:1451:C:H2'	1:0:1452:U:H6	1.69	0.57
1:0:1572:C:H2'	1:0:1573:G:C5'	2.18	0.57
1:0:2011:U:O2'	1:0:2012:A:H5'	2.04	0.57
1:0:2135:C:H2'	1:0:2136:G:H8	1.69	0.57
1:0:2748:C:C2	1:0:2749:A:C8	2.93	0.57
1:0:558:G:H2'	1:0:558:G:N3	2.18	0.57
1:0:1016:C:C2	1:0:1154:A:C5	2.92	0.57
1:0:1513:U:H5''	1:0:1514:C:OP2	2.05	0.57
1:0:1919:A:C5'	1:0:1920:A:N1	2.68	0.57
1:0:2184:C:H2'	1:0:2185:U:O4'	2.04	0.57
1:0:2665:G:C5	1:0:2666:U:N3	2.72	0.57
1:0:2756:A:H4'	1:0:2757:G:H5''	1.86	0.57
1:0:521:U:H5''	1:0:522:G:OP2	2.04	0.57
1:0:603:C:H2'	1:0:604:U:C6	2.37	0.57
1:0:71:A:O2'	1:0:72:A:P	2.63	0.57
1:0:1174:G:C2	1:0:1175:A:N7	2.73	0.57
1:0:1287:A:C2'	1:0:1288:A:H5''	2.35	0.57
1:0:1413:U:H2'	1:0:1414:G:C8	2.39	0.57
1:0:198:A:O4'	1:0:210:A:H1'	2.05	0.57
1:0:208:C:H2'	1:0:209:G:O4'	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2172:U:O2'	1:0:2173:G:H5'	2.04	0.57
1:0:2560:G:O2'	1:0:2561:G:N7	2.33	0.57
1:0:530:G:H2'	1:0:531:G:H8	1.70	0.57
1:0:541:C:C5	1:0:542:A:H1'	2.40	0.57
1:0:651:C:C3'	1:0:652:C:H5''	2.34	0.57
1:0:1152:C:O2'	1:0:1153:A:OP1	2.19	0.57
1:0:1458:A:H3'	1:0:1459:U:H5''	1.84	0.57
1:0:1544:A:H61	1:0:1559:G:N2	2.02	0.57
1:0:2004:U:O2'	1:0:2005:U:OP1	2.20	0.57
1:0:221:A:H2'	1:0:221:A:N3	2.20	0.57
1:0:2523:G:O2'	1:0:2524:G:C5'	2.48	0.57
1:0:2533:U:H2'	1:0:2534:U:C6	2.40	0.57
1:0:2739:G:C2'	1:0:2740:C:H5'	2.35	0.57
1:0:2756:A:O2'	1:0:2757:G:P	2.63	0.57
1:0:428:A:H2'	1:0:429:C:O4'	2.04	0.57
1:0:788:G:N2	1:0:801:A:OP1	2.37	0.57
1:0:1152:C:O5'	1:0:1152:C:H6	1.88	0.56
1:0:1181:C:C2	1:0:1182:U:H1'	2.40	0.56
1:0:1436:G:H8	1:0:1436:G:O5'	1.88	0.56
1:0:1541:G:N2	1:0:1562:G:N2	2.52	0.56
1:0:162:C:H2'	1:0:163:A:H8	1.69	0.56
1:0:1958:G:H2'	1:0:1959:U:C6	2.40	0.56
1:0:2264:C:C1'	1:0:2267:A:H62	2.17	0.56
1:0:2372:A:H2'	1:0:2373:C:O4'	2.05	0.56
1:0:2434:G:C6	1:0:2435:C:N4	2.73	0.56
1:0:2642:G:H2'	1:0:2643:G:O5'	2.05	0.56
1:0:2762:G:O2'	1:0:2763:U:H5'	2.05	0.56
1:0:455:A:C2	1:0:1258:G:H1'	2.40	0.56
1:0:546:A:H2'	1:0:547:U:C6	2.40	0.56
1:0:855:G:H2'	1:0:856:A:O4'	2.04	0.56
1:0:1202:U:H2'	1:0:1203:A:H8	1.69	0.56
1:0:1229:C:H2'	1:0:1230:C:C6	2.39	0.56
1:0:1253:C:H2'	1:0:1254:G:C5'	2.35	0.56
1:0:1281:A:H2'	1:0:1282:A:C8	2.37	0.56
1:0:1442:C:H2'	1:0:1443:G:OP1	2.03	0.56
1:0:1525:A:C8	1:0:1526:U:H1'	2.40	0.56
1:0:1541:G:O2'	1:0:1542:G:H5'	2.05	0.56
1:0:1920:A:C6	1:0:1922:U:C5	2.93	0.56
1:0:1279:G:O2'	1:0:1995:G:O6	2.15	0.56
1:0:2040:A:H2'	1:0:2041:A:C8	2.40	0.56
1:0:2194:A:H3'	1:0:2195:C:H5''	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:225:G:C2	1:0:2410:U:H4'	2.40	0.56
1:0:318:G:H22	1:0:321:A:C5'	2.18	0.56
1:0:587:A:H2'	1:0:588:G:H5''	1.85	0.56
1:0:631:G:H5''	1:0:632:A:OP1	2.05	0.56
1:0:1793:A:H2'	1:0:1794:A:O4'	2.06	0.56
1:0:1864:G:C2	1:0:1865:C:H1'	2.40	0.56
1:0:212:U:C2	1:0:443:A:C2	2.93	0.56
1:0:2321:C:O2'	1:0:2353:G:H5''	2.06	0.56
1:0:2447:G:N7	1:0:2455:A:N1	2.53	0.56
1:0:34:U:H5'	1:0:35:G:OP2	2.06	0.56
1:0:492:G:C2'	1:0:493:A:OP2	2.53	0.56
1:0:541:C:H2'	1:0:542:A:OP1	2.05	0.56
1:0:692:C:H2'	1:0:693:A:H8	1.70	0.56
1:0:1164:C:H2'	1:0:1165:G:O4'	2.05	0.56
1:0:172:A:C2	1:0:178:C:C2	2.93	0.56
1:0:1919:A:H5'	1:0:1923:U:C5	2.41	0.56
1:0:343:A:C5	1:0:346:C:C4	2.94	0.56
1:0:697:G:O6	1:0:788:G:C8	2.59	0.56
1:0:68:C:C2	1:0:72:A:C2	2.93	0.56
1:0:1263:G:H4'	1:0:1264:C:OP1	2.05	0.56
1:0:1437:A:O2'	1:0:1438:G:H5'	2.05	0.56
1:0:1715:A:O2'	1:0:1716:G:H5''	2.05	0.56
1:0:1829:C:H1'	1:0:1911:A:N3	2.20	0.56
1:0:2039:G:C2	1:0:2040:A:C8	2.94	0.56
1:0:2511:G:H2'	1:0:2512:A:C8	2.40	0.56
1:0:408:U:H2'	1:0:408:U:O2	2.04	0.56
1:0:651:C:N4	1:0:652:C:N4	2.53	0.56
1:0:717:G:O2'	1:0:718:A:P	2.62	0.56
1:0:873:U:H2'	1:0:874:A:H5'	1.88	0.56
1:0:982:C:OP2	1:0:985:G:N2	2.38	0.56
1:0:1200:G:H5''	1:0:1200:G:H8	1.70	0.56
1:0:1518:C:H2'	1:0:1519:G:C8	2.41	0.56
1:0:1793:A:N1	1:0:1814:G:H1'	2.21	0.56
1:0:986:A:N3	1:0:1001:A:C4	2.74	0.56
1:0:1153:A:H5''	1:0:1154:A:OP1	2.05	0.56
1:0:1250:A:HO2'	1:0:1251:G:C4'	2.18	0.56
1:0:1260:A:HO2'	1:0:1261:G:P	2.28	0.56
1:0:1488:G:C4	1:0:1536:G:N2	2.73	0.56
1:0:153:A:O2'	1:0:154:U:H5'	2.05	0.56
1:0:1997:A:H2'	1:0:1998:A:C8	2.40	0.56
1:0:2034:A:H61	1:0:2593:A:H2'	1.71	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2367:A:H5'	1:0:2368:G:OP2	2.05	0.56
1:0:2511:G:H1'	1:0:2642:G:N2	2.21	0.56
1:0:366:U:H2'	1:0:367:G:C8	2.40	0.56
1:0:551:A:C2	1:0:562:G:C2	2.93	0.56
1:0:1002:C:C4	1:0:1198:C:N3	2.73	0.56
1:0:1749:G:O2'	1:0:1750:A:OP1	2.22	0.56
1:0:2138:U:H6	1:0:2138:U:O5'	1.88	0.56
1:0:2174:G:H2'	1:0:2175:A:C8	2.40	0.56
1:0:839:U:OP1	1:0:2408:G:OP2	2.23	0.56
1:0:2799:C:H2'	1:0:2800:C:O4'	2.06	0.56
1:0:2812:A:H2'	1:0:2813:G:H8	1.70	0.56
1:0:2845:C:H2'	1:0:2846:G:C5'	2.36	0.56
1:0:579:G:C4'	1:0:994:A:C2	2.88	0.56
1:0:58:C:C5'	1:0:59:G:OP2	2.51	0.56
1:0:604:U:H2'	1:0:604:U:O2	2.05	0.56
1:0:67:G:N1	1:0:73:A:C5	2.74	0.56
1:0:697:G:N2	1:0:801:A:OP2	2.38	0.56
1:0:1149:G:O2'	1:0:1150:C:H5'	2.05	0.56
1:0:1837:G:O2'	1:0:1838:G:H5'	2.06	0.56
1:0:2108:G:N2	1:0:2109:A:H62	2.04	0.56
1:0:226:C:O2'	1:0:227:G:P	2.64	0.56
1:0:2856:U:H2'	1:0:2857:C:C6	2.36	0.56
1:0:330:C:C2'	1:0:331:U:H5'	2.36	0.56
1:0:741:G:HO2'	1:0:742:G:P	2.29	0.56
1:0:787:A:O2'	1:0:790:A:N3	2.39	0.56
1:0:1354:A:O2'	1:0:1355:A:OP1	2.21	0.56
1:0:1631:C:C5	1:0:1633:C:C4	2.94	0.56
1:0:1690:U:C2'	1:0:1691:G:C5'	2.79	0.56
1:0:1761:G:O2'	1:0:1762:C:H5'	2.05	0.56
1:0:1926:U:H1'	1:0:1928:G:H5'	1.86	0.56
1:0:204:A:O2'	1:0:205:A:O5'	2.21	0.56
1:0:2382:C:O2	1:0:2383:C:C6	2.59	0.56
1:0:2429:A:C2	1:0:2430:A:C4	2.93	0.56
1:0:2441:U:H2'	1:0:2442:C:C6	2.40	0.56
1:0:2511:G:H2'	1:0:2512:A:H8	1.71	0.56
1:0:667:U:H2'	1:0:667:U:O2	2.04	0.56
1:0:1278:A:H8	1:0:1278:A:OP1	1.88	0.56
1:0:1365:U:O2'	1:0:1366:A:H5'	2.06	0.56
1:0:165:G:H2'	1:0:166:G:O4'	2.06	0.56
1:0:1745:C:H2'	1:0:1746:A:O4'	2.06	0.56
1:0:1830:C:H42	1:0:1881:U:H2'	1.70	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2006:G:C2	1:0:2007:G:C8	2.94	0.56
1:0:2036:G:H2'	1:0:2037:A:H5'	1.87	0.56
1:0:2807:U:C2'	1:0:2807:U:O2	2.51	0.56
1:0:541:C:N3	1:0:572:G:H4'	2.21	0.56
1:0:611:C:H2'	1:0:612:G:H5'	1.88	0.56
1:0:69:G:H2'	1:0:111:G:O2'	2.06	0.56
1:0:1026:U:O2'	1:0:1027:C:H5'	2.06	0.55
1:0:1089:C:C4	1:0:1099:A:H1'	2.40	0.55
1:0:1811:A:O2'	1:0:1812:U:OP2	2.23	0.55
1:0:2268:G:H2'	1:0:2269:G:H8	1.71	0.55
1:0:2291:U:H6	1:0:2291:U:O5'	1.88	0.55
1:0:2046:C:O2	1:0:2430:A:C2	2.59	0.55
1:0:2544:A:H2'	1:0:2545:A:H1'	1.87	0.55
1:0:388:G:H21	1:0:389:G:H1'	1.70	0.55
1:0:38:G:N2	1:0:454:G:N3	2.54	0.55
1:0:58:C:C4	1:0:72:A:C6	2.94	0.55
1:0:646:C:O2'	1:0:650:U:OP1	2.17	0.55
1:0:1102:G:H22	1:0:1112:U:C1'	2.19	0.55
1:0:1139:A:O2'	1:0:1140:A:OP2	2.22	0.55
1:0:1611:U:H2'	1:0:1612:U:O4'	2.06	0.55
1:0:1725:C:C2	1:0:1742:G:N2	2.74	0.55
1:0:1821:A:H5''	1:0:1822:C:H5	1.71	0.55
1:0:2178:U:O2'	1:0:2179:C:H5'	2.07	0.55
1:0:2370:G:O2'	1:0:2371:A:P	2.64	0.55
1:0:2387:U:O2'	1:0:2388:G:H5'	2.06	0.55
1:0:2423:G:C5	1:0:2424:G:C8	2.94	0.55
1:0:2630:C:H2'	1:0:2631:C:C6	2.40	0.55
1:0:2630:C:H2'	1:0:2631:C:H6	1.71	0.55
1:0:1670:G:C5'	1:0:2797:G:N2	2.68	0.55
1:0:2845:C:C2'	1:0:2846:G:H5'	2.35	0.55
1:0:367:G:C3'	1:0:368:A:H5''	2.36	0.55
1:0:460:U:C4'	1:0:461:A:OP2	2.53	0.55
1:0:541:C:C5	1:0:542:A:N3	2.75	0.55
1:0:624:A:H2'	1:0:625:A:C5'	2.35	0.55
1:0:688:A:C2	1:0:689:A:N7	2.74	0.55
1:0:575:U:O2'	1:0:822:G:OP2	2.18	0.55
1:0:926:C:C2'	1:0:927:C:H5'	2.30	0.55
1:0:1253:C:C6	1:0:1253:C:H5'	2.41	0.55
1:0:1314:A:H2	1:0:1642:G:N3	2.05	0.55
1:0:1352:G:C6	1:0:1353:A:N6	2.73	0.55
1:0:168:A:C2	1:0:169:C:C2	2.95	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2094:C:O2	1:0:2095:G:N7	2.39	0.55
1:0:2433:G:O2'	1:0:2434:G:H5'	2.06	0.55
1:0:2469:G:H5''	1:0:2470:U:OP1	2.06	0.55
1:0:2686:C:H2'	1:0:2687:G:C8	2.41	0.55
1:0:338:G:C5	1:0:339:U:C5	2.95	0.55
1:0:994:A:N7	1:0:995:A:C5	2.75	0.55
1:0:1326:U:H5''	1:0:1327:C:OP2	2.06	0.55
1:0:1499:A:H2'	1:0:1500:U:C6	2.41	0.55
1:0:2087:U:H2'	1:0:2088:U:O4'	2.07	0.55
1:0:2663:U:H2'	1:0:2664:G:O4'	2.05	0.55
1:0:58:C:C6	1:0:72:A:N7	2.75	0.55
1:0:658:G:H2'	1:0:659:G:H8	1.71	0.55
1:0:757:U:C2'	1:0:758:G:H5'	2.37	0.55
1:0:1301:U:H2'	1:0:1340:C:O2	2.07	0.55
1:0:1313:U:O2'	1:0:1314:A:P	2.65	0.55
1:0:157:G:H5'	1:0:158:A:OP2	2.06	0.55
1:0:173:A:O2'	1:0:174:A:OP1	2.24	0.55
1:0:1770:U:O2	1:0:1774:A:C6	2.59	0.55
1:0:1926:U:O2'	1:0:1927:U:OP2	2.23	0.55
1:0:1978:U:C3'	1:0:1979:C:H5''	2.29	0.55
1:0:2404:A:O2'	1:0:2405:A:P	2.65	0.55
1:0:2642:G:O2'	1:0:2643:G:H5'	2.05	0.55
1:0:58:C:H3'	1:0:59:G:C5'	2.37	0.55
1:0:758:G:C2	1:0:766:A:C6	2.94	0.55
1:0:813:A:H4'	1:0:814:G:O5'	2.07	0.55
1:0:1242:A:H2'	1:0:1243:G:C8	2.28	0.55
1:0:116:A:H1'	1:0:155:G:O4'	2.05	0.55
1:0:1697:U:O2	1:0:1754:G:H3'	2.06	0.55
1:0:1731:C:H6	1:0:1731:C:O5'	1.90	0.55
1:0:1724:C:O2	1:0:1747:G:C2	2.59	0.55
1:0:1802:A:H2'	1:0:1803:G:O4'	2.07	0.55
1:0:2197:U:H2'	1:0:2198:U:H5	1.64	0.55
1:0:2548:G:H2'	1:0:2549:G:H5'	1.89	0.55
1:0:538:A:H2	1:0:2026:C:H4'	1.72	0.55
1:0:540:G:C2	1:0:2005:U:OP1	2.59	0.55
1:0:790:A:C2	1:0:791:G:C4	2.94	0.55
1:0:1029:C:C2'	1:0:1030:U:H5''	2.36	0.55
1:0:1098:G:N3	1:0:1100:G:H1'	2.21	0.55
1:0:109:A:C2	1:0:110:U:C2	2.94	0.55
1:0:1499:A:H2'	1:0:1500:U:O4'	2.06	0.55
1:0:192:G:O4'	1:0:193:A:H4'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2845:C:H2'	1:0:2846:G:H5'	1.89	0.55
1:0:465:C:O2'	1:0:466:A:H5''	2.05	0.55
1:0:653:G:N2	1:0:657:A:H62	2.04	0.55
1:0:830:C:H2'	1:0:831:G:C8	2.39	0.55
1:0:862:A:H2'	1:0:863:C:H6	1.70	0.55
1:0:105:G:O2'	1:0:106:G:H5'	2.06	0.55
1:0:1250:A:O2'	1:0:1251:G:O4'	2.14	0.55
1:0:574:C:H4'	1:0:1266:G:O6	2.06	0.55
1:0:1399:C:H2'	1:0:1400:A:H8	1.68	0.55
1:0:1427:G:C8	1:0:1428:G:N3	2.75	0.55
1:0:1458:A:C3'	1:0:1459:U:C5'	2.83	0.55
1:0:1668:G:N2	1:0:1990:U:C2	2.75	0.55
1:0:2476:A:H1'	1:0:2477:C:C5	2.40	0.55
1:0:2849:C:O2	1:0:2849:C:H2'	2.06	0.55
1:0:297:A:H2'	1:0:298:C:C6	2.42	0.55
1:0:625:A:H5''	1:0:626:A:OP2	2.07	0.55
1:0:693:A:H2'	1:0:694:G:C8	2.42	0.55
1:0:760:U:H6	1:0:760:U:O5'	1.90	0.55
1:0:699:G:N2	1:0:801:A:N6	2.54	0.55
1:0:822:G:O2'	1:0:823:U:H5'	2.07	0.55
1:0:826:U:O2'	1:0:1238:A:H1'	2.07	0.55
1:0:865:A:H2'	1:0:866:U:H6	1.70	0.55
1:0:939:C:N3	1:0:940:G:O6	2.39	0.55
1:0:1260:A:N6	1:0:1262:U:O2	2.39	0.55
1:0:219:G:C2'	1:0:220:U:OP2	2.55	0.55
1:0:2262:C:C2	1:0:2368:G:C2	2.95	0.55
1:0:2496:C:O2'	1:0:2497:A:O5'	2.24	0.55
1:0:2668:U:H1'	1:0:2693:U:C2	2.42	0.55
1:0:477:A:C2	1:0:809:C:O4'	2.60	0.55
1:0:620:G:H1	1:0:628:A:N6	2.05	0.55
1:0:111:G:H5'	1:0:112:U:OP1	2.06	0.55
1:0:1424:U:H2'	1:0:1425:G:C8	2.42	0.55
1:0:1496:G:N2	1:0:1528:C:C2	2.75	0.55
1:0:1653:C:H2'	1:0:1654:A:C8	2.41	0.55
1:0:1872:A:H1'	1:0:2070:G:H5'	1.89	0.55
1:0:2062:U:O4	1:0:2063:A:N6	2.40	0.55
1:0:1922:U:O2'	1:0:2571:G:O4'	2.25	0.55
1:0:2616:U:O2	1:0:2762:G:C2	2.60	0.55
1:0:2825:A:H2'	1:0:2826:C:C6	2.42	0.55
1:0:393:U:O2'	1:0:394:U:H5'	2.06	0.55
1:0:532:A:H2'	1:0:533:C:C6	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:677:G:C4'	1:0:951:G:H5''	2.37	0.55
1:0:833:A:H1'	1:0:954:U:H1'	1.89	0.55
1:0:579:G:H5'	1:0:994:A:C2	2.42	0.55
1:0:1403:U:C2	1:0:1408:A:N1	2.75	0.54
1:0:1659:G:C6	1:0:1660:G:C5	2.95	0.54
1:0:1826:U:O4'	1:0:1952:A:C2	2.60	0.54
1:0:1970:G:N2	1:0:1971:C:C2	2.75	0.54
1:0:2007:G:H2'	1:0:2008:C:H6	1.70	0.54
1:0:208:C:N4	1:0:209:G:H21	2.05	0.54
1:0:488:A:OP1	1:0:488:A:H8	1.90	0.54
1:0:500:G:OP1	1:0:500:G:C8	2.59	0.54
1:0:67:G:H2'	1:0:68:C:O4'	2.06	0.54
1:0:825:C:H1'	1:0:1263:G:N2	2.22	0.54
1:0:1218:C:O2'	1:0:1219:C:H5'	2.07	0.54
1:0:1974:U:C2'	1:0:1975:G:H5'	2.37	0.54
1:0:2191:A:H3'	1:0:2192:U:H5	1.71	0.54
1:0:221:A:C2	1:0:222:G:H1'	2.42	0.54
1:0:2859:U:C2'	1:0:2860:C:H5'	2.37	0.54
1:0:667:U:O2	1:0:668:A:H3'	2.06	0.54
1:0:76:C:H6	1:0:76:C:C5'	2.15	0.54
1:0:82:G:N2	1:0:100:G:H2'	2.22	0.54
1:0:1301:U:H5''	1:0:1302:C:OP2	2.06	0.54
1:0:1288:A:H62	1:0:1309:G:H5'	1.71	0.54
1:0:132:U:H2'	1:0:133:C:C6	2.42	0.54
1:0:1399:C:O2'	1:0:1400:A:C5'	2.55	0.54
1:0:1846:A:N6	1:0:1871:G:H1'	2.22	0.54
1:0:1963:G:O2'	1:0:1964:A:OP1	2.20	0.54
1:0:1994:U:C2'	1:0:1995:G:H5'	2.38	0.54
1:0:2829:A:H2'	1:0:2830:U:O4'	2.07	0.54
1:0:516:G:O2'	1:0:517:A:P	2.66	0.54
1:0:58:C:C1'	1:0:72:A:C8	2.90	0.54
1:0:68:C:C4	1:0:72:A:C2	2.95	0.54
1:0:956:A:C2	1:0:2427:A:N3	2.76	0.54
1:0:957:G:H2'	1:0:958:G:H8	1.72	0.54
1:0:1213:U:H3	1:0:1260:A:H2	1.54	0.54
1:0:1479:G:O2'	1:0:1480:G:H5'	2.06	0.54
1:0:210:A:H61	1:0:442:A:N6	2.04	0.54
1:0:229:G:H2'	1:0:230:C:O4'	2.08	0.54
1:0:689:A:H8	1:0:2422:C:H1'	1.70	0.54
1:0:2701:A:H2'	1:0:2702:G:O4'	2.08	0.54
1:0:322:A:H1'	1:0:343:A:C1'	2.37	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:474:G:C6	1:0:478:G:O6	2.61	0.54
1:0:640:C:H4'	1:0:660:G:N3	2.22	0.54
1:0:831:G:OP2	1:0:1199:U:C4	2.60	0.54
1:0:1468:A:C5'	1:0:1472:C:N4	2.62	0.54
1:0:182:G:O2'	1:0:183:U:OP2	2.25	0.54
1:0:1979:C:OP1	1:0:1979:C:O4'	2.26	0.54
1:0:2048:C:O2'	1:0:2049:C:H5'	2.07	0.54
1:0:2797:G:H2'	1:0:2798:A:H5''	1.89	0.54
1:0:2841:U:H4'	1:0:2842:C:O5'	2.08	0.54
1:0:1035:G:C6	1:0:1036:G:C6	2.95	0.54
1:0:1199:U:O5'	1:0:1200:G:C5'	2.56	0.54
1:0:1230:C:O2'	1:0:1231:A:H5'	2.07	0.54
1:0:139:A:O2'	1:0:140:G:H5'	2.08	0.54
1:0:1440:G:N7	1:0:1441:A:C5	2.76	0.54
1:0:2081:U:H2'	1:0:2082:C:H5''	1.89	0.54
1:0:2198:U:C3'	1:0:2199:C:H5''	2.26	0.54
1:0:2782:G:C5'	1:0:2783:U:OP2	2.50	0.54
1:0:2811:G:H8	1:0:2811:G:H5'	1.72	0.54
1:0:58:C:N3	1:0:73:A:C6	2.76	0.54
1:0:931:G:C2	1:0:932:G:H1'	2.42	0.54
1:0:986:A:C2	1:0:1001:A:N9	2.74	0.54
1:0:1287:A:C6	1:0:1315:A:C2	2.96	0.54
1:0:1725:C:O2'	1:0:1726:C:H5'	2.07	0.54
1:0:2198:U:H6	1:0:2198:U:O5'	1.91	0.54
1:0:2209:G:H2'	1:0:2210:C:C6	2.42	0.54
1:0:840:U:O2	1:0:2225:G:H4'	2.07	0.54
1:0:175:C:N3	1:0:225:G:N2	2.54	0.54
1:0:698:A:C8	1:0:786:U:C4	2.95	0.54
1:0:877:G:H2'	1:0:878:C:H6	1.73	0.54
1:0:879:A:H2'	1:0:879:A:N3	2.22	0.54
1:0:1452:U:OP2	1:0:1568:A:N6	2.41	0.54
1:0:1761:G:C2'	1:0:1762:C:H5'	2.38	0.54
1:0:1994:U:H2'	1:0:1995:G:H5'	1.90	0.54
1:0:216:U:H2'	1:0:217:U:O4'	2.07	0.54
1:0:2700:U:H2'	1:0:2701:A:H8	1.73	0.54
1:0:298:C:O2'	1:0:299:C:H5'	2.07	0.54
1:0:48:A:C2	1:0:118:U:O4	2.61	0.54
1:0:541:C:N3	1:0:572:G:O4'	2.41	0.54
1:0:637:G:O5'	1:0:637:G:H8	1.91	0.54
1:0:67:G:C2	1:0:73:A:C4	2.96	0.54
1:0:75:C:H2'	1:0:76:C:H5'	1.90	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:774:A:O5'	1:0:774:A:C8	2.61	0.54
1:0:1136:G:C6	1:0:1137:A:N6	2.76	0.54
1:0:1285:A:O2'	1:0:1286:U:OP1	2.22	0.54
1:0:1326:U:H6	1:0:1326:U:H3'	1.73	0.54
1:0:1573:G:O6	1:0:1574:A:C6	2.61	0.54
1:0:1632:A:H4'	1:0:1633:C:OP2	2.07	0.54
1:0:1767:G:N2	1:0:1768:U:H1'	2.23	0.54
1:0:1788:C:C4	1:0:1789:U:C4	2.95	0.54
1:0:2055:G:O2'	1:0:2056:C:H5'	2.07	0.54
1:0:2240:C:H2'	1:0:2241:U:H5'	1.88	0.54
1:0:839:U:H5''	1:0:2408:G:OP2	2.08	0.54
1:0:2676:G:C6	1:0:2690:A:C2	2.96	0.54
1:0:2739:G:H2'	1:0:2740:C:H5'	1.90	0.54
1:0:514:G:C2'	1:0:514:G:N3	2.70	0.54
1:0:617:U:C6	1:0:632:A:N6	2.76	0.54
1:0:632:A:C2	1:0:633:G:C8	2.96	0.54
1:0:689:A:C2	1:0:815:A:N6	2.75	0.54
1:0:827:C:O2'	1:0:828:C:H5'	2.08	0.54
1:0:1030:U:C2'	1:0:1031:C:H5'	2.31	0.54
1:0:1109:A:C2'	1:0:1110:G:H5'	2.37	0.54
1:0:1241:G:O2'	1:0:1242:A:H5'	2.08	0.54
1:0:1684:G:O2'	1:0:1685:A:OP2	2.25	0.54
1:0:169:C:C2'	1:0:170:U:H5'	2.35	0.54
1:0:2094:C:C4	1:0:2103:G:H1'	2.41	0.54
1:0:2199:C:H2'	1:0:2200:G:H8	1.71	0.54
1:0:2362:G:H2'	1:0:2363:G:O4'	2.07	0.54
1:0:2722:C:C4	1:0:2743:G:N2	2.76	0.54
1:0:2762:G:C2'	1:0:2763:U:H5'	2.38	0.54
1:0:538:A:C2	1:0:2026:C:H4'	2.43	0.54
1:0:833:A:N3	1:0:954:U:O2'	2.37	0.54
1:0:1003:C:O2'	1:0:1004:A:H5'	2.08	0.53
1:0:1758:C:C4	1:0:1759:A:N7	2.76	0.53
1:0:185:C:O2'	1:0:186:C:H5'	2.08	0.53
1:0:1977:C:C2	1:0:1978:U:C5	2.97	0.53
1:0:2080:U:H2'	1:0:2081:U:H6	1.73	0.53
1:0:222:G:H2'	1:0:223:C:H6	1.72	0.53
1:0:2345:A:O5'	1:0:2345:A:H8	1.91	0.53
1:0:2825:A:N3	1:0:2826:C:C6	2.77	0.53
1:0:2827:G:H2'	1:0:2828:C:C6	2.43	0.53
1:0:2857:C:H2'	1:0:2858:A:O5'	2.08	0.53
1:0:2859:U:H3'	1:0:2859:U:H6	1.73	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:403:A:H4'	1:0:404:A:C5'	2.37	0.53
1:0:614:G:C5	1:0:615:C:C5	2.96	0.53
1:0:1105:U:N3	1:0:1107:A:N7	2.55	0.53
1:0:1030:U:C4	1:0:1153:A:N6	2.77	0.53
1:0:1172:U:O2'	1:0:1173:G:H5'	2.08	0.53
1:0:202:A:O2'	1:0:234:C:H4'	2.09	0.53
1:0:2247:A:OP1	1:0:2247:A:H4'	2.08	0.53
1:0:2557:G:C2	1:0:2558:C:C6	2.96	0.53
1:0:197:G:H22	1:0:440:U:H2'	1.73	0.53
1:0:612:G:H4'	1:0:613:A:C4'	2.36	0.53
1:0:633:G:C6	1:0:634:G:C6	2.96	0.53
1:0:700:C:N3	1:0:800:U:O3'	2.41	0.53
1:0:1464:A:C6	1:0:1465:G:C6	2.96	0.53
1:0:1749:G:O2'	1:0:1750:A:P	2.67	0.53
1:0:777:A:H62	1:0:1766:U:H3	1.56	0.53
1:0:2172:U:H2'	1:0:2173:G:O4'	2.08	0.53
1:0:2343:C:C2'	1:0:2344:G:H5'	2.39	0.53
1:0:2529:G:N2	1:0:2530:C:C2	2.76	0.53
1:0:499:G:HO2'	1:0:500:G:P	2.31	0.53
1:0:807:A:C2	1:0:808:C:C2	2.96	0.53
1:0:819:C:O2'	1:0:820:U:H5'	2.09	0.53
1:0:1064:C:H6	1:0:1064:C:O5'	1.91	0.53
1:0:1265:G:O2'	1:0:1266:G:C1'	2.57	0.53
1:0:1459:U:O4	1:0:1476:G:OP2	2.25	0.53
1:0:1501:C:H2'	1:0:1502:G:C8	2.44	0.53
1:0:1987:G:C5	1:0:1988:A:C8	2.97	0.53
1:0:2324:G:N7	1:0:2360:C:O2	2.41	0.53
1:0:2309:G:N2	1:0:2365:U:C2	2.76	0.53
1:0:2734:U:H2'	1:0:2736:U:OP1	2.08	0.53
1:0:365:U:H6	1:0:365:U:O5'	1.90	0.53
1:0:366:U:H2'	1:0:367:G:H8	1.74	0.53
1:0:774:A:H3'	1:0:774:A:H8	1.73	0.53
1:0:834:A:N6	1:0:957:G:C2	2.76	0.53
1:0:875:G:H22	1:0:928:G:H1'	1.73	0.53
1:0:978:U:H2'	1:0:979:A:C8	2.43	0.53
1:0:1199:U:O4	1:0:1201:G:C6	2.61	0.53
1:0:1475:U:OP2	1:0:1475:U:H4'	2.09	0.53
1:0:1559:G:O2'	1:0:1560:A:H5'	2.08	0.53
1:0:1715:A:HO2'	1:0:1716:G:P	2.32	0.53
1:0:1724:C:N3	1:0:1747:G:C6	2.77	0.53
1:0:1788:C:N4	1:0:1789:U:O4	2.41	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2333:A:C2	1:0:2343:C:C2	2.97	0.53
1:0:2563:U:O5'	1:0:2563:U:H6	1.92	0.53
1:0:2671:C:H2'	1:0:2672:U:H6	1.72	0.53
1:0:2728:A:O2'	1:0:2729:A:H5'	2.09	0.53
1:0:2824:C:H4'	1:0:2825:A:C5'	2.38	0.53
1:0:2845:C:O2'	1:0:2846:G:H5'	2.09	0.53
1:0:469:G:O2'	1:0:480:G:N1	2.40	0.53
1:0:564:U:H2'	1:0:565:A:C8	2.44	0.53
1:0:572:G:N2	1:0:573:C:C2	2.77	0.53
1:0:876:A:H2'	1:0:877:G:O4'	2.07	0.53
1:0:1059:A:H8	1:0:1121:G:N2	2.07	0.53
1:0:2699:G:H8	1:0:2699:G:O5'	1.91	0.53
1:0:592:G:C6	1:0:593:C:C4	2.97	0.53
1:0:751:G:H1'	1:0:772:G:N2	2.24	0.53
1:0:89:A:H4'	1:0:90:G:O5'	2.09	0.53
1:0:1002:C:O2	1:0:1175:A:C2	2.62	0.53
1:0:1253:C:C5'	1:0:1253:C:H6	2.21	0.53
1:0:132:U:H2'	1:0:133:C:H6	1.74	0.53
1:0:1598:C:H2'	1:0:1599:G:O4'	2.09	0.53
1:0:1653:C:O2	1:0:1751:A:H2	1.91	0.53
1:0:225:G:N7	1:0:227:G:N3	2.57	0.53
1:0:2308:A:C2	1:0:2366:U:O2	2.61	0.53
1:0:2824:C:O2'	1:0:2825:A:OP2	2.22	0.53
1:0:312:G:O2'	1:0:313:U:P	2.67	0.53
1:0:459:A:H1'	1:0:461:A:H62	1.71	0.53
1:0:492:G:O2'	1:0:493:A:P	2.66	0.53
1:0:498:C:C6	1:0:499:G:N7	2.76	0.53
1:0:66:U:C2	1:0:67:G:O6	2.60	0.53
1:0:739:G:HO2'	1:0:740:A:P	2.31	0.53
1:0:88:G:OP2	1:0:90:G:OP1	2.26	0.53
1:0:951:G:H3'	1:0:952:A:H5''	1.91	0.53
1:0:994:A:N7	1:0:995:A:C6	2.76	0.53
1:0:1407:G:C6	1:0:1408:A:C6	2.97	0.53
1:0:1541:G:H22	1:0:1561:A:N6	2.07	0.53
1:0:1672:A:C6	1:0:1673:C:C2	2.97	0.53
1:0:1789:U:C4	1:0:1811:A:C2	2.96	0.53
1:0:2556:A:H5''	1:0:2557:G:H5''	1.88	0.53
1:0:299:C:H2'	1:0:300:C:C5	2.43	0.53
1:0:342:G:O2'	1:0:343:A:P	2.67	0.53
1:0:631:G:H4'	1:0:632:A:H5''	1.88	0.53
1:0:946:U:C2	1:0:947:C:C5	2.97	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1091:C:H2'	1:0:1092:U:C6	2.43	0.53
1:0:118:U:O2'	1:0:119:G:OP2	2.23	0.53
1:0:1535:C:C4	1:0:1536:G:C6	2.97	0.53
1:0:1750:A:N7	1:0:2675:U:H1'	2.23	0.53
1:0:1778:U:H2'	1:0:1779:C:C6	2.44	0.53
1:0:1790:G:O2'	1:0:1791:C:H5''	2.08	0.53
1:0:1801:C:H3'	1:0:1802:A:C5'	2.39	0.53
1:0:427:C:H1'	1:0:1856:U:H1'	1.91	0.53
1:0:2196:U:H2'	1:0:2197:U:O4'	2.08	0.53
1:0:2259:G:H4'	1:0:2306:A:C5'	2.39	0.53
1:0:2375:G:C2	1:0:2400:G:C2	2.97	0.53
1:0:843:G:C5	1:0:2427:A:N7	2.77	0.53
1:0:1938:U:C5	1:0:2536:G:N2	2.77	0.53
1:0:2639:A:H2'	1:0:2640:G:O4'	2.09	0.53
1:0:606:A:C2	1:0:607:C:C2	2.97	0.53
1:0:1154:A:O2'	1:0:1155:G:OP1	2.21	0.53
1:0:1249:G:O2'	1:0:1250:A:O5'	2.25	0.53
1:0:1319:C:O2'	1:0:1320:A:H5'	2.09	0.53
1:0:1394:G:H1'	1:0:1587:A:N1	2.24	0.53
1:0:1528:C:C3'	1:0:1529:C:H5''	2.39	0.53
1:0:1681:A:C2	1:0:2706:U:N1	2.77	0.53
1:0:1689:U:H2'	1:0:1690:U:H5''	1.90	0.53
1:0:198:A:H4'	1:0:199:A:OP2	2.08	0.53
1:0:580:A:C4	1:0:2013:A:N6	2.77	0.53
1:0:203:G:O2'	1:0:205:A:N6	2.42	0.53
1:0:2423:G:H2'	1:0:2424:G:O4'	2.09	0.53
1:0:956:A:C4	1:0:2427:A:C2	2.96	0.53
1:0:2779:C:H2'	1:0:2780:A:N9	2.24	0.53
1:0:538:A:C3'	1:0:538:A:C8	2.90	0.53
1:0:622:U:C2	1:0:627:A:C2	2.96	0.53
1:0:881:U:C4	1:0:882:C:N4	2.77	0.53
1:0:976:C:H2'	1:0:977:G:H8	1.73	0.53
1:0:1004:A:C5	1:0:1005:U:C5	2.97	0.52
1:0:1052:C:H6	1:0:1052:C:O5'	1.92	0.52
1:0:1287:A:H2	1:0:1661:C:O2	1.92	0.52
1:0:1385:C:H2'	1:0:1386:A:O4'	2.09	0.52
1:0:13:A:O2'	1:0:14:A:OP2	2.21	0.52
1:0:1463:A:C1'	1:0:1543:G:N2	2.66	0.52
1:0:1787:U:H2'	1:0:1788:C:C6	2.44	0.52
1:0:2056:C:O2'	1:0:2057:U:H5'	2.09	0.52
1:0:2177:U:O2'	1:0:2178:U:H5'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2842:C:H5'	1:0:2843:A:H5'	1.91	0.52
1:0:2:G:H2'	1:0:3:U:C6	2.44	0.52
1:0:420:C:H2'	1:0:421:G:H8	1.74	0.52
1:0:547:U:H2'	1:0:548:G:H8	1.73	0.52
1:0:574:C:C4'	1:0:1266:G:O6	2.57	0.52
1:0:460:U:H3	1:0:592:G:H1'	1.73	0.52
1:0:612:G:O2'	1:0:613:A:H4'	2.09	0.52
1:0:455:A:H2	1:0:1258:G:H1'	1.75	0.52
1:0:1309:G:N2	1:0:1310:C:C2	2.77	0.52
1:0:1468:A:H8	1:0:1468:A:P	2.31	0.52
1:0:2068:C:O2	1:0:2068:C:H2'	2.09	0.52
1:0:2370:G:O2'	1:0:2371:A:OP2	2.27	0.52
1:0:747:A:H2'	1:0:748:A:H8	1.73	0.52
1:0:10:A:H2'	1:0:11:G:C8	2.44	0.52
1:0:1375:C:N3	1:0:1376:C:C5	2.78	0.52
1:0:140:G:H2'	1:0:141:G:H8	1.73	0.52
1:0:1732:U:H2'	1:0:1733:U:O5'	2.10	0.52
1:0:2038:C:H2'	1:0:2483:U:H4'	1.89	0.52
1:0:2598:C:O2'	1:0:2599:U:H5'	2.09	0.52
1:0:2658:A:H2'	1:0:2659:C:H6	1.74	0.52
1:0:638:A:N6	1:0:647:G:H2'	2.24	0.52
1:0:689:A:H1'	1:0:2422:C:O4'	2.09	0.52
1:0:1105:U:O2	1:0:1107:A:N7	2.43	0.52
1:0:1230:C:C4	1:0:1246:G:N1	2.77	0.52
1:0:1288:A:N6	1:0:1309:G:C5'	2.70	0.52
1:0:1493:A:H2'	1:0:1494:G:O4'	2.10	0.52
1:0:1582:A:HO2'	1:0:1583:A:P	2.32	0.52
1:0:1614:C:H2'	1:0:1615:C:H6	1.74	0.52
1:0:173:A:O2'	1:0:174:A:P	2.67	0.52
1:0:1813:A:O5'	1:0:1813:A:H8	1.92	0.52
1:0:200:A:OP2	1:0:435:A:H4'	2.09	0.52
1:0:1845:A:H1'	1:0:2212:U:O2'	2.09	0.52
1:0:242:A:O2'	1:0:243:G:H4'	2.09	0.52
1:0:2580:C:H5''	1:0:2581:A:OP2	2.09	0.52
1:0:2634:G:H2'	1:0:2634:G:N3	2.24	0.52
1:0:356:A:H2'	1:0:357:A:C8	2.43	0.52
1:0:48:A:N1	1:0:118:U:O4	2.42	0.52
1:0:710:C:H2'	1:0:711:C:C6	2.45	0.52
1:0:68:C:C6	1:0:72:A:H2	2.27	0.52
1:0:110:U:H2'	1:0:111:G:O4'	2.10	0.52
1:0:594:G:C2	1:0:1264:C:N4	2.78	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:128:C:H2'	1:0:129:A:H5''	1.91	0.52
1:0:1310:C:C2	1:0:1311:C:C5	2.98	0.52
1:0:1325:U:O2'	1:0:1326:U:OP2	2.26	0.52
1:0:2010:G:N2	1:0:2020:G:C8	2.78	0.52
1:0:2666:U:H2'	1:0:2667:C:O4'	2.09	0.52
1:0:423:G:N2	1:0:2386:G:C5	2.78	0.52
1:0:441:A:H2'	1:0:442:A:H5'	1.92	0.52
1:0:976:C:O2'	1:0:977:G:H5'	2.08	0.52
1:0:1135:C:H2'	1:0:1136:G:O4'	2.09	0.52
1:0:1558:C:H2'	1:0:1558:C:O2	2.08	0.52
1:0:1834:G:H2'	1:0:1835:C:C6	2.44	0.52
1:0:1854:G:O2'	1:0:1855:G:H5'	2.10	0.52
1:0:1920:A:N6	1:0:1922:U:C6	2.77	0.52
1:0:204:A:HO2'	1:0:205:A:P	2.32	0.52
1:0:2061:C:H42	1:0:2220:A:H61	1.57	0.52
1:0:2560:G:N3	1:0:2560:G:C2'	2.73	0.52
1:0:421:G:O2'	1:0:422:C:H5'	2.09	0.52
1:0:692:C:H2'	1:0:693:A:C8	2.43	0.52
1:0:1300:A:C2	1:0:1301:U:C2	2.98	0.52
1:0:1339:U:H5	1:0:1664:G:HO2'	1.58	0.52
1:0:1498:G:N2	1:0:1523:A:H1'	2.24	0.52
1:0:2020:G:C2	1:0:2021:G:C4	2.97	0.52
1:0:2048:C:H1'	1:0:2428:U:H3	1.73	0.52
1:0:2069:U:H2'	1:0:2070:G:C8	2.45	0.52
1:0:212:U:O2'	1:0:213:C:H5'	2.10	0.52
1:0:2652:G:N3	1:0:2653:A:C8	2.78	0.52
1:0:2840:U:C4	1:0:2841:U:C5	2.97	0.52
1:0:71:A:N6	1:0:110:U:C4'	2.73	0.52
1:0:799:C:H2'	1:0:800:U:O4'	2.09	0.52
1:0:941:U:H2'	1:0:942:U:C6	2.44	0.52
1:0:1427:G:C2'	1:0:1428:G:H5'	2.39	0.52
1:0:1683:G:H2'	1:0:1684:G:H5'	1.91	0.52
1:0:1767:G:N2	1:0:1768:U:C1'	2.73	0.52
1:0:2135:C:H2'	1:0:2136:G:C8	2.44	0.52
1:0:340:G:OP2	1:0:340:G:H8	1.93	0.52
1:0:498:C:H2'	1:0:499:G:C8	2.40	0.52
1:0:580:A:N7	1:0:584:A:C6	2.78	0.52
1:0:699:G:H4'	1:0:700:C:OP2	2.09	0.52
1:0:719:A:O5'	1:0:719:A:H8	1.93	0.52
1:0:703:A:N1	1:0:786:U:C4	2.77	0.52
1:0:83:A:H62	1:0:98:U:C1'	2.23	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:872:G:O2'	1:0:873:U:H5''	2.09	0.52
1:0:1253:C:C2'	1:0:1254:G:H5'	2.40	0.52
1:0:594:G:N1	1:0:1264:C:H5	2.06	0.52
1:0:1695:U:H2'	1:0:1696:C:O4'	2.09	0.52
1:0:1795:C:C4	1:0:1806:G:N2	2.78	0.52
1:0:1969:G:O2'	1:0:1970:G:H5'	2.09	0.52
1:0:2202:G:H2'	1:0:2203:G:O4'	2.10	0.52
1:0:2478:C:C4	1:0:2479:U:C4	2.98	0.52
1:0:2548:G:C2'	1:0:2549:G:H5''	2.40	0.52
1:0:2636:A:C2'	1:0:2637:C:H5'	2.40	0.52
1:0:2821:G:H2'	1:0:2822:U:O4'	2.10	0.52
1:0:483:A:C2'	1:0:484:G:H5'	2.39	0.52
1:0:490:A:O2'	1:0:491:A:P	2.68	0.52
1:0:540:G:H5''	1:0:541:C:OP2	2.10	0.52
1:0:840:U:C4'	1:0:841:G:N2	2.72	0.52
1:0:875:G:C2'	1:0:876:A:H5'	2.40	0.52
1:0:987:G:C2	1:0:988:G:C5	2.97	0.52
1:0:1165:G:O5'	1:0:1165:G:H8	1.92	0.52
1:0:1269:G:H2'	1:0:1269:G:N3	2.24	0.52
1:0:142:U:H5''	1:0:143:A:OP1	2.10	0.52
1:0:1698:C:O2'	1:0:1753:A:C2'	2.51	0.52
1:0:1920:A:N6	1:0:1922:U:C5	2.78	0.52
1:0:588:G:O2'	1:0:2002:A:OP1	2.22	0.52
1:0:2075:U:O2	1:0:2204:A:O2'	2.27	0.52
1:0:213:C:H2'	1:0:214:C:H6	1.75	0.52
1:0:2170:C:H6	1:0:2170:C:O5'	1.92	0.52
1:0:2177:U:H2'	1:0:2178:U:O4'	2.10	0.52
1:0:2288:A:N3	1:0:2288:A:H2'	2.25	0.52
1:0:2478:C:N4	1:0:2479:U:O4	2.43	0.52
1:0:2839:G:H2'	1:0:2840:U:C6	2.45	0.52
1:0:638:A:OP2	1:0:638:A:H4'	2.09	0.52
1:0:706:A:H2'	1:0:707:U:O4'	2.09	0.52
1:0:775:U:H5''	1:0:776:G:OP1	2.10	0.52
1:0:788:G:H5''	1:0:790:A:N9	2.25	0.52
1:0:887:G:N2	1:0:888:G:H1'	2.25	0.52
1:0:1495:G:H2'	1:0:1496:G:H8	1.71	0.51
1:0:1674:C:H2'	1:0:1674:C:O2	2.09	0.51
1:0:1686:A:H3'	1:0:1687:C:H5'	1.91	0.51
1:0:191:G:O2'	1:0:192:G:H5'	2.09	0.51
1:0:2002:A:N6	1:0:2003:A:C6	2.78	0.51
1:0:2324:G:O2'	1:0:2325:A:OP2	2.25	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2351:G:C2	1:0:2352:A:C8	2.98	0.51
1:0:2501:U:C5'	1:0:2502:G:OP2	2.58	0.51
1:0:2605:C:H2'	1:0:2606:G:O4'	2.10	0.51
1:0:2663:U:C4	1:0:2664:G:N7	2.78	0.51
1:0:391:C:C2'	1:0:392:G:H5'	2.40	0.51
1:0:48:A:O2'	1:0:50:G:C2	2.63	0.51
1:0:521:U:O4	1:0:522:G:C2	2.63	0.51
1:0:621:U:O2	1:0:628:A:H2	1.94	0.51
1:0:71:A:O5'	1:0:71:A:H8	1.93	0.51
1:0:759:C:OP1	1:0:761:G:H4'	2.09	0.51
1:0:788:G:H5'	1:0:790:A:H1'	1.92	0.51
1:0:790:A:C2	1:0:791:G:N9	2.78	0.51
1:0:792:U:C2'	1:0:793:G:H5'	2.40	0.51
1:0:840:U:H2'	1:0:2051:U:O2	2.10	0.51
1:0:977:G:C5'	1:0:2251:U:O2	2.57	0.51
1:0:1066:G:H5''	1:0:1067:G:OP2	2.10	0.51
1:0:1153:A:C4'	1:0:1154:A:OP1	2.58	0.51
1:0:124:A:H2'	1:0:125:A:C8	2.45	0.51
1:0:1340:C:H2'	1:0:1341:G:O4'	2.10	0.51
1:0:1509:A:H2'	1:0:1510:A:C8	2.45	0.51
1:0:1692:C:N4	1:0:1693:A:C6	2.79	0.51
1:0:2188:A:H2'	1:0:2189:A:C8	2.45	0.51
1:0:2534:U:H3'	1:0:2535:C:C6	2.45	0.51
1:0:2548:G:H2'	1:0:2549:G:H5''	1.93	0.51
1:0:2762:G:C2	1:0:2763:U:C6	2.98	0.51
1:0:2762:G:N2	1:0:2763:U:H1'	2.24	0.51
1:0:529:U:O2'	1:0:530:G:H5'	2.10	0.51
1:0:632:A:H3'	1:0:632:A:N3	2.25	0.51
1:0:816:U:H2'	1:0:817:A:H5'	1.91	0.51
1:0:864:C:O2'	1:0:865:A:H5'	2.11	0.51
1:0:1141:U:O2'	1:0:1142:G:P	2.68	0.51
1:0:1187:A:H2'	1:0:1188:A:H8	1.75	0.51
1:0:1323:G:N2	1:0:1326:U:N3	2.59	0.51
1:0:1296:G:N2	1:0:1342:U:O4	2.43	0.51
1:0:1836:C:H2'	1:0:1837:G:O4'	2.10	0.51
1:0:1279:G:O2'	1:0:1995:G:C6	2.61	0.51
1:0:2073:A:C5	1:0:2074:U:C5	2.99	0.51
1:0:2177:U:H2'	1:0:2178:U:C6	2.46	0.51
1:0:2448:A:H62	1:0:2460:G:H1'	1.73	0.51
1:0:2489:C:C2'	1:0:2490:U:H5'	2.39	0.51
1:0:2623:A:N6	1:0:2624:G:N1	2.58	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:52:A:H61	1:0:115:G:C2'	2.23	0.51
1:0:880:C:O2	1:0:925:U:H4'	2.11	0.51
1:0:1606:C:C2	1:0:1607:A:N7	2.78	0.51
1:0:1715:A:O2'	1:0:1716:G:P	2.68	0.51
1:0:1953:A:O4'	1:0:1955:G:H1'	2.09	0.51
1:0:2569:A:C2	1:0:2584:U:C2	2.99	0.51
1:0:2780:A:C5	1:0:2781:G:N7	2.78	0.51
1:0:38:G:C2	1:0:454:G:N3	2.79	0.51
1:0:600:G:O2'	1:0:601:A:OP1	2.22	0.51
1:0:611:C:H5''	1:0:611:C:H6	1.75	0.51
1:0:874:A:H2'	1:0:875:G:O4'	2.10	0.51
1:0:983:G:P	1:0:985:G:H5''	2.50	0.51
1:0:1036:G:O4'	1:0:1036:G:OP1	2.28	0.51
1:0:1102:G:H2'	1:0:1103:C:C6	2.45	0.51
1:0:1322:G:O2'	1:0:1323:G:H5'	2.11	0.51
1:0:1493:A:C2	1:0:1494:G:H1'	2.46	0.51
1:0:1697:U:C5	1:0:1698:C:C4	2.98	0.51
1:0:187:U:H2'	1:0:188:G:H8	1.76	0.51
1:0:190:A:H2'	1:0:191:G:C8	2.46	0.51
1:0:2052:G:C6	1:0:2053:G:N7	2.79	0.51
1:0:2207:G:O2'	1:0:2208:U:H5'	2.11	0.51
1:0:2266:A:N6	1:0:2323:U:C1'	2.74	0.51
1:0:2592:U:H4'	1:0:2593:A:OP1	2.10	0.51
1:0:2768:C:H2'	1:0:2769:C:O4'	2.11	0.51
1:0:577:U:O5'	1:0:956:A:N6	2.43	0.51
1:0:982:C:O2'	1:0:983:G:H5'	2.10	0.51
1:0:105:G:C2'	1:0:106:G:H5'	2.40	0.51
1:0:1129:A:H2'	1:0:1130:U:H6	1.74	0.51
1:0:1181:C:H3'	1:0:1182:U:C4'	2.41	0.51
1:0:1251:G:N2	1:0:1252:C:C2	2.78	0.51
1:0:1312:G:H2'	1:0:1643:A:N6	2.26	0.51
1:0:1426:U:O5'	1:0:1428:G:N2	2.36	0.51
1:0:175:C:H5'	1:0:2223:U:OP1	2.11	0.51
1:0:2058:U:C4	1:0:2217:G:C6	2.99	0.51
1:0:2076:G:H21	1:0:2181:A:N6	2.09	0.51
1:0:2642:G:C2'	1:0:2643:G:H5'	2.41	0.51
1:0:343:A:C8	1:0:346:C:N4	2.79	0.51
1:0:59:G:H1'	1:0:73:A:N1	2.25	0.51
1:0:1011:A:H2'	1:0:1012:A:O4'	2.11	0.51
1:0:1094:C:H2'	1:0:1096:A:N7	2.24	0.51
1:0:1129:A:O2'	1:0:1130:U:H5'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1544:A:C6	1:0:1545:G:N1	2.79	0.51
1:0:1708:C:H2'	1:0:1709:U:C6	2.46	0.51
1:0:2286:G:N3	1:0:2286:G:H2'	2.25	0.51
1:0:840:U:C4	1:0:2409:A:C6	2.99	0.51
1:0:2656:G:H2'	1:0:2657:G:H8	1.74	0.51
1:0:2676:G:N1	1:0:2690:A:C2	2.79	0.51
1:0:2817:A:O2'	1:0:2818:G:H5'	2.10	0.51
1:0:2843:A:H2'	1:0:2844:G:H8	1.76	0.51
1:0:330:C:H2'	1:0:331:U:H5'	1.92	0.51
1:0:562:G:C6	1:0:563:U:N3	2.78	0.51
1:0:616:U:N3	1:0:617:U:H5	2.07	0.51
1:0:941:U:H2'	1:0:942:U:H6	1.76	0.51
1:0:1248:G:C2	1:0:1249:G:N2	2.79	0.51
1:0:55:A:O4'	1:0:125:A:C2	2.64	0.51
1:0:1437:A:HO2'	1:0:1515:U:H4'	1.72	0.51
1:0:1606:C:H2'	1:0:1607:A:H8	1.75	0.51
1:0:1621:C:N4	1:0:1622:G:C2	2.79	0.51
1:0:1707:A:N7	1:0:1714:A:C2	2.78	0.51
1:0:1901:A:N3	1:0:1902:A:N7	2.58	0.51
1:0:1920:A:H8	1:0:1921:A:H3'	1.76	0.51
1:0:1991:C:H2'	1:0:1992:G:H8	1.75	0.51
1:0:2201:G:O2'	1:0:2202:G:H5'	2.11	0.51
1:0:2255:G:C2	1:0:2256:G:C8	2.99	0.51
1:0:2727:G:H2'	1:0:2728:A:H5''	1.92	0.51
1:0:404:A:H2'	1:0:405:C:H6	1.74	0.51
1:0:429:C:H2'	1:0:430:C:H6	1.76	0.51
1:0:78:C:H2'	1:0:79:G:H8	1.76	0.51
1:0:790:A:C2	1:0:791:G:C8	2.98	0.51
1:0:1305:C:H2'	1:0:1306:U:C6	2.45	0.51
1:0:154:U:O2'	1:0:155:G:OP1	2.24	0.51
1:0:1658:A:C8	1:0:1659:G:C8	2.98	0.51
1:0:2016:A:C5	1:0:2019:C:C4	2.99	0.51
1:0:2036:G:N2	1:0:2596:C:C2	2.79	0.51
1:0:2054:A:C2	1:0:2420:C:N3	2.78	0.51
1:0:2063:A:H2'	1:0:2064:U:O4'	2.11	0.51
1:0:225:G:N3	1:0:2410:U:H4'	2.25	0.51
1:0:2279:G:H2'	1:0:2280:A:C8	2.45	0.51
1:0:227:G:C6	1:0:228:A:C6	2.98	0.51
1:0:2362:G:H2'	1:0:2363:G:C8	2.46	0.51
1:0:2384:G:N2	1:0:2390:A:N7	2.59	0.51
1:0:424:G:OP2	1:0:2386:G:OP2	2.29	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2560:G:O6	1:0:2589:C:C2	2.64	0.51
1:0:2686:C:H2'	1:0:2687:G:H8	1.75	0.51
1:0:691:C:O2'	1:0:692:C:H5'	2.10	0.51
1:0:777:A:O2'	1:0:778:G:P	2.69	0.51
1:0:793:G:C2	1:0:795:A:C2	2.99	0.51
1:0:1137:A:H5''	1:0:1138:A:OP1	2.11	0.51
1:0:115:G:C6	1:0:117:A:N6	2.79	0.51
1:0:1325:U:O2'	1:0:1326:U:P	2.69	0.51
1:0:1355:A:C6	1:0:1358:C:C2	2.99	0.51
1:0:1437:A:H2'	1:0:1438:G:C8	2.42	0.51
1:0:1481:U:O4'	1:0:1561:A:H2	1.94	0.51
1:0:1498:G:O2'	1:0:1499:A:H5'	2.10	0.51
1:0:1754:G:H2'	1:0:1755:G:O5'	2.11	0.51
1:0:2507:U:HO2'	1:0:2508:G:H8	1.58	0.51
1:0:2870:C:H2'	1:0:2871:U:H6	1.76	0.51
1:0:645:G:H2'	1:0:646:C:C6	2.46	0.51
1:0:756:C:H2'	1:0:757:U:H6	1.76	0.51
1:0:1029:C:H3'	1:0:1030:U:H5''	1.92	0.50
1:0:1160:C:H2'	1:0:1161:U:O4'	2.11	0.50
1:0:1234:C:H2'	1:0:1235:C:H6	1.76	0.50
1:0:1249:G:HO2'	1:0:1250:A:P	2.32	0.50
1:0:1495:G:O2'	1:0:1496:G:OP1	2.30	0.50
1:0:1488:G:H1	1:0:1534:A:N6	2.08	0.50
1:0:1481:U:O2'	1:0:1562:G:H1'	2.10	0.50
1:0:1928:G:N2	1:0:1929:U:C2	2.79	0.50
1:0:1973:C:H2'	1:0:1974:U:C6	2.46	0.50
1:0:2083:G:N2	1:0:2084:G:H1'	2.26	0.50
1:0:2324:G:O6	1:0:2360:C:C4	2.64	0.50
1:0:2557:G:N2	1:0:2558:C:C2	2.80	0.50
1:0:2573:C:C4	1:0:2574:G:N7	2.79	0.50
1:0:321:A:N1	1:0:323:G:H1'	2.26	0.50
1:0:353:G:O2'	1:0:354:C:H5'	2.10	0.50
1:0:490:A:HO2'	1:0:491:A:P	2.34	0.50
1:0:677:G:C2	1:0:678:G:C8	2.99	0.50
1:0:813:A:O2'	1:0:814:G:P	2.69	0.50
1:0:861:G:N7	1:0:862:A:N7	2.59	0.50
1:0:890:U:H6	1:0:890:U:O5'	1.94	0.50
1:0:940:G:H8	1:0:940:G:O5'	1.94	0.50
1:0:317:U:H4'	1:0:1224:A:H61	1.75	0.50
1:0:122:G:C2'	1:0:123:A:H5''	2.41	0.50
1:0:14:A:N1	1:0:536:A:C2	2.79	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1581:C:HO2'	1:0:1582:A:P	2.34	0.50
1:0:2231:G:C2'	1:0:2232:G:H5'	2.41	0.50
1:0:2352:A:C4	1:0:2353:G:N7	2.80	0.50
1:0:2665:G:C2	1:0:2666:U:O2	2.64	0.50
1:0:329:C:H2'	1:0:330:C:H6	1.77	0.50
1:0:357:A:H2'	1:0:358:C:C5'	2.40	0.50
1:0:490:A:H4'	1:0:491:A:H5'	1.92	0.50
1:0:531:G:H2'	1:0:532:A:C8	2.45	0.50
1:0:58:C:C4	1:0:72:A:N6	2.79	0.50
1:0:833:A:C2	1:0:834:A:N3	2.79	0.50
1:0:921:A:C6	1:0:924:C:C2	2.99	0.50
1:0:1016:C:O2'	1:0:1023:U:C4	2.64	0.50
1:0:1205:G:N2	1:0:1206:G:H1'	2.25	0.50
1:0:1361:G:C6	1:0:1615:C:N4	2.80	0.50
1:0:1689:U:C3'	1:0:1690:U:H5''	2.38	0.50
1:0:2016:A:H2'	1:0:2018:G:OP2	2.10	0.50
1:0:2228:U:N3	1:0:2232:G:OP2	2.43	0.50
1:0:871:U:H1'	1:0:2248:A:C5'	2.41	0.50
1:0:234:C:H2'	1:0:235:C:C5'	2.41	0.50
1:0:2382:C:H2'	1:0:2382:C:O2	2.10	0.50
1:0:2477:C:O2'	1:0:2478:C:H5'	2.11	0.50
1:0:2702:G:C5	1:0:2703:C:C4	2.99	0.50
1:0:47:G:N2	1:0:48:A:N7	2.57	0.50
1:0:614:G:C2	1:0:634:G:N2	2.80	0.50
1:0:774:A:C8	1:0:774:A:H3'	2.46	0.50
1:0:781:G:H2'	1:0:782:U:H6	1.76	0.50
1:0:814:G:O2'	1:0:815:A:OP1	2.25	0.50
1:0:82:G:N2	1:0:101:A:OP2	2.44	0.50
1:0:1002:C:H2'	1:0:1003:C:C6	2.46	0.50
1:0:1459:U:H2'	1:0:1475:U:HO2'	1.75	0.50
1:0:1622:G:H4'	1:0:1624:A:N3	2.26	0.50
1:0:1715:A:O2'	1:0:1716:G:O5'	2.30	0.50
1:0:1885:C:H2'	1:0:1886:G:H5'	1.92	0.50
1:0:2054:A:H2'	1:0:2055:G:C8	2.46	0.50
1:0:2361:G:O5'	1:0:2361:G:C8	2.64	0.50
1:0:1949:A:H1'	1:0:2572:U:H5'	1.93	0.50
1:0:2844:G:O2'	1:0:2845:C:H5'	2.11	0.50
1:0:562:G:C6	1:0:563:U:C4	2.99	0.50
1:0:541:C:C2	1:0:572:G:O4'	2.65	0.50
1:0:836:G:C4	1:0:837:U:C5	3.00	0.50
1:0:1421:U:H6	1:0:1421:U:O5'	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1444:C:H2'	1:0:1445:A:C8	2.46	0.50
1:0:1691:G:O2'	1:0:1693:A:N6	2.45	0.50
1:0:1727:C:C2	1:0:1740:G:N2	2.80	0.50
1:0:1908:C:N3	1:0:1909:U:O2'	2.42	0.50
1:0:2036:G:C2	1:0:2596:C:C2	3.00	0.50
1:0:203:G:O2'	1:0:204:A:H5'	2.12	0.50
1:0:2133:G:H2'	1:0:2134:U:C6	2.47	0.50
1:0:2057:U:C2	1:0:2415:G:N2	2.79	0.50
1:0:2549:G:H2'	1:0:2550:C:O4'	2.11	0.50
1:0:2642:G:H2'	1:0:2643:G:H5'	1.94	0.50
1:0:2722:C:O2'	1:0:2723:C:H5'	2.11	0.50
1:0:1010:U:O2	1:0:1010:U:H2'	2.10	0.50
1:0:1208:A:H2'	1:0:1209:G:O5'	2.11	0.50
1:0:1288:A:N6	1:0:1308:C:O2'	2.45	0.50
1:0:1336:G:C2	1:0:1346:C:H1'	2.47	0.50
1:0:1404:C:C4	1:0:1407:G:C8	3.00	0.50
1:0:1417:C:H2'	1:0:1418:C:C6	2.47	0.50
1:0:1487:C:O5'	1:0:1487:C:H6	1.95	0.50
1:0:1540:C:H2'	1:0:1541:G:C8	2.45	0.50
1:0:1658:A:N6	1:0:1659:G:C2	2.79	0.50
1:0:1678:G:C5	1:0:1983:G:N2	2.79	0.50
1:0:174:A:H5'	1:0:174:A:H8	1.75	0.50
1:0:177:U:O4	1:0:225:G:N3	2.44	0.50
1:0:2194:A:H2'	1:0:2195:C:H5''	1.93	0.50
1:0:2361:G:O5'	1:0:2361:G:H8	1.94	0.50
1:0:2496:C:N4	1:0:2521:A:C2	2.79	0.50
1:0:2824:C:H1'	1:0:2843:A:C4	2.46	0.50
1:0:362:C:C4	1:0:363:G:H1'	2.46	0.50
1:0:599:A:C2	1:0:681:A:C2	3.00	0.50
1:0:653:G:N2	1:0:657:A:N6	2.59	0.50
1:0:687:G:H2'	1:0:688:A:H5'	1.94	0.50
1:0:1272:G:O2'	1:0:1273:G:H5'	2.12	0.50
1:0:1582:A:H4'	1:0:1583:A:OP1	2.11	0.50
1:0:1437:A:C2	1:0:1592:U:O2	2.65	0.50
1:0:1314:A:H2	1:0:1642:G:H21	1.58	0.50
1:0:1689:U:H2'	1:0:1690:U:C5'	2.42	0.50
1:0:1698:C:C2'	1:0:1753:A:H2'	2.42	0.50
1:0:1772:C:O2'	1:0:1773:C:O5'	2.29	0.50
1:0:1904:G:O2'	1:0:1905:G:H5'	2.12	0.50
1:0:1825:C:O2'	1:0:1952:A:N1	2.44	0.50
1:0:1953:A:H5'	1:0:1955:G:H1'	1.94	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2007:G:H2'	1:0:2008:C:C6	2.46	0.50
1:0:2245:A:H5'	1:0:2246:A:C5	2.46	0.50
1:0:931:G:O6	1:0:2247:A:N7	2.44	0.50
1:0:2629:U:H2'	1:0:2630:C:C6	2.47	0.50
1:0:2813:G:O2'	1:0:2814:G:H5'	2.12	0.50
1:0:304:A:H2'	1:0:305:A:H5''	1.93	0.50
1:0:594:G:N3	1:0:1264:C:N4	2.56	0.50
1:0:986:A:H62	1:0:999:A:H2	1.59	0.50
1:0:1466:C:H2'	1:0:1467:U:O4'	2.11	0.50
1:0:1459:U:C2'	1:0:1475:U:O2'	2.52	0.50
1:0:2570:C:H2'	1:0:2571:G:H8	1.72	0.50
1:0:2595:C:H2'	1:0:2596:C:H6	1.76	0.50
1:0:2761:A:H5''	1:0:2762:G:C5'	2.36	0.50
1:0:2812:A:O2'	1:0:2813:G:H5'	2.11	0.50
1:0:2825:A:C2	1:0:2826:C:C2	3.00	0.50
1:0:2845:C:N3	1:0:2846:G:C5	2.80	0.50
1:0:322:A:H1'	1:0:343:A:N9	2.27	0.50
1:0:623:G:O2'	1:0:625:A:OP1	2.14	0.50
1:0:676:G:C6	1:0:677:G:C5	2.99	0.50
1:0:827:C:H1'	1:0:1237:G:N2	2.27	0.50
1:0:836:G:N2	1:0:847:C:O2	2.43	0.50
1:0:830:C:O2'	1:0:852:U:OP1	2.29	0.50
1:0:1149:G:O2'	1:0:1154:A:N1	2.34	0.50
1:0:116:A:H8	1:0:117:A:N7	2.09	0.50
1:0:1502:G:H2'	1:0:1503:G:H8	1.76	0.50
1:0:1614:C:H2'	1:0:1615:C:C6	2.47	0.50
1:0:1678:G:C4	1:0:1983:G:N2	2.80	0.50
1:0:1821:A:H5''	1:0:1822:C:C5	2.46	0.50
1:0:1881:U:C2'	1:0:1882:G:H5'	2.41	0.50
1:0:1977:C:H2'	1:0:1978:U:H6	1.77	0.50
1:0:789:G:C2	1:0:2220:A:OP1	2.65	0.50
1:0:2407:G:H5'	1:0:2408:G:N3	2.27	0.50
1:0:2713:A:H2'	1:0:2714:A:H8	1.76	0.50
1:0:2832:G:N2	1:0:2835:A:OP2	2.44	0.50
1:0:490:A:O2'	1:0:491:A:O5'	2.29	0.50
1:0:62:U:O2'	1:0:63:A:N7	2.45	0.50
1:0:806:A:C2'	1:0:807:A:OP2	2.60	0.50
1:0:1234:C:H2'	1:0:1235:C:C6	2.47	0.49
1:0:1242:A:C4	1:0:1243:G:C8	3.00	0.49
1:0:1223:G:C4	1:0:1250:A:N6	2.80	0.49
1:0:1467:U:O4	1:0:1473:U:C2	2.65	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1731:C:C4	1:0:1732:U:H1'	2.47	0.49
1:0:1764:A:H2	1:0:1960:A:N1	2.10	0.49
1:0:1793:A:C6	1:0:1794:A:C6	3.00	0.49
1:0:1975:G:C5	1:0:1980:A:C6	3.00	0.49
1:0:222:G:H2'	1:0:223:C:C6	2.47	0.49
1:0:2447:G:O2'	1:0:2448:A:O5'	2.28	0.49
1:0:2725:C:H2'	1:0:2726:U:H6	1.73	0.49
1:0:2753:C:O2'	1:0:2754:C:H5'	2.12	0.49
1:0:753:U:H2'	1:0:754:G:C8	2.47	0.49
1:0:773:G:H2'	1:0:774:A:H5'	1.94	0.49
1:0:832:A:C8	1:0:1202:U:O4	2.65	0.49
1:0:838:A:H2'	1:0:839:U:C6	2.47	0.49
1:0:873:U:H2'	1:0:874:A:C5'	2.41	0.49
1:0:1287:A:N1	1:0:1315:A:H2	2.10	0.49
1:0:1375:C:H42	1:0:1376:C:N4	2.11	0.49
1:0:1407:G:N1	1:0:1408:A:C2	2.80	0.49
1:0:1435:G:O2'	1:0:1436:G:H5'	2.12	0.49
1:0:1706:A:N7	1:0:1715:A:N1	2.59	0.49
1:0:2042:A:C2	1:0:2482:A:C5	3.00	0.49
1:0:2239:C:H2'	1:0:2240:C:H6	1.76	0.49
1:0:2325:A:O2'	1:0:2326:C:P	2.70	0.49
1:0:2472:U:C2'	1:0:2473:G:O5'	2.59	0.49
1:0:2543:A:C2	1:0:2544:A:C2	2.99	0.49
1:0:2633:A:N3	1:0:2635:U:C4	2.81	0.49
1:0:2669:C:C2'	1:0:2670:C:OP2	2.59	0.49
1:0:312:G:O2'	1:0:313:U:O5'	2.30	0.49
1:0:717:G:O2'	1:0:739:G:N2	2.45	0.49
1:0:735:G:H2'	1:0:736:G:O4'	2.12	0.49
1:0:76:C:O2'	1:0:77:C:H5'	2.12	0.49
1:0:789:G:O2'	1:0:790:A:P	2.70	0.49
1:0:944:A:C2	1:0:945:G:C1'	2.95	0.49
1:0:1169:C:C2'	1:0:1170:U:H5'	2.42	0.49
1:0:1407:G:C2	1:0:1408:A:N3	2.80	0.49
1:0:1509:A:H2'	1:0:1510:A:H8	1.77	0.49
1:0:1569:A:C6	1:0:1571:G:H1'	2.47	0.49
1:0:1625:A:N3	1:0:1625:A:C2'	2.73	0.49
1:0:1926:U:HO2'	1:0:1927:U:P	2.35	0.49
1:0:2047:C:H5''	1:0:2047:C:H6	1.75	0.49
1:0:207:U:H2'	1:0:207:U:O2	2.11	0.49
1:0:2357:A:H2'	1:0:2358:C:H5'	1.93	0.49
1:0:2496:C:C4	1:0:2521:A:C6	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2588:U:C5'	1:0:2589:C:OP2	2.61	0.49
1:0:2737:A:C2'	1:0:2738:A:C5'	2.85	0.49
1:0:2762:G:H21	1:0:2763:U:H1'	1.76	0.49
1:0:2780:A:H2'	1:0:2781:G:H5'	1.92	0.49
1:0:1670:G:C5'	1:0:2797:G:H22	2.23	0.49
1:0:2856:U:C2	1:0:2857:C:C5	3.00	0.49
1:0:330:C:O2'	1:0:331:U:H5'	2.12	0.49
1:0:700:C:O2	1:0:800:U:O3'	2.29	0.49
1:0:1433:A:N1	1:0:1434:U:H1'	2.27	0.49
1:0:1683:G:C2'	1:0:1684:G:H5'	2.43	0.49
1:0:2019:C:H6	1:0:2019:C:H5'	1.77	0.49
1:0:2093:G:H4'	1:0:2094:C:OP1	2.13	0.49
1:0:2215:C:H2'	1:0:2216:G:O4'	2.12	0.49
1:0:2395:C:H2'	1:0:2396:C:H5'	1.94	0.49
1:0:2452:U:O2	1:0:2452:U:H2'	2.13	0.49
1:0:2646:C:O5'	1:0:2646:C:H6	1.95	0.49
1:0:1192:A:C2	1:0:1193:G:N7	2.80	0.49
1:0:1293:A:C2'	1:0:1294:G:H5'	2.43	0.49
1:0:1368:G:H2'	1:0:1369:G:H8	1.77	0.49
1:0:1394:G:O2'	1:0:1395:A:H5'	2.12	0.49
1:0:1567:A:O2'	1:0:1568:A:H5'	2.13	0.49
1:0:186:C:O2	1:0:186:C:H2'	2.13	0.49
1:0:2233:C:C2'	1:0:2234:G:H5'	2.43	0.49
1:0:2253:A:N6	1:0:2255:G:N3	2.61	0.49
1:0:2431:C:O2'	1:0:2432:A:H5'	2.13	0.49
1:0:2665:G:N2	1:0:2704:U:H1'	2.28	0.49
1:0:2839:G:C5	1:0:2840:U:C4	3.01	0.49
1:0:2770:A:H5'	1:0:2867:G:H21	1.76	0.49
1:0:312:G:O2'	1:0:313:U:C6	2.65	0.49
1:0:321:A:H2'	1:0:323:G:N7	2.26	0.49
1:0:490:A:C2'	1:0:491:A:H5'	2.42	0.49
1:0:496:C:C2	1:0:506:G:N2	2.81	0.49
1:0:528:G:H2'	1:0:529:U:C6	2.48	0.49
1:0:612:G:H4'	1:0:613:A:O3'	2.12	0.49
1:0:840:U:H4'	1:0:841:G:H21	1.77	0.49
1:0:874:A:C2'	1:0:875:G:H5'	2.42	0.49
1:0:982:C:H2'	1:0:983:G:O4'	2.13	0.49
1:0:1087:C:H3'	1:0:1088:A:C8	2.47	0.49
1:0:1245:G:H2'	1:0:1246:G:H8	1.78	0.49
1:0:1339:U:H5	1:0:1664:G:O2'	1.95	0.49
1:0:1560:A:N1	1:0:1561:A:C2	2.80	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2220:A:C2	1:0:2221:G:C4	3.00	0.49
1:0:2427:A:O2'	1:0:2428:U:P	2.70	0.49
1:0:2733:A:C2'	1:0:2734:U:H5'	2.43	0.49
1:0:2781:G:O3'	1:0:2782:G:O4'	2.30	0.49
1:0:2820:C:H2'	1:0:2821:G:H8	1.77	0.49
1:0:298:C:O5'	1:0:298:C:H6	1.95	0.49
1:0:319:G:H2'	1:0:320:A:O4'	2.13	0.49
1:0:594:G:N1	1:0:1264:C:C5	2.81	0.49
1:0:647:G:H4'	1:0:649:G:O3'	2.12	0.49
1:0:841:G:C2'	1:0:842:A:C8	2.92	0.49
1:0:859:U:O2'	1:0:860:U:C6	2.54	0.49
1:0:882:C:H2'	1:0:883:A:O4'	2.13	0.49
1:0:1111:C:H3'	1:0:1112:U:H6	1.77	0.49
1:0:1133:G:C2	1:0:1134:C:C6	3.01	0.49
1:0:1002:C:N4	1:0:1198:C:H42	2.11	0.49
1:0:1486:A:H2'	1:0:1487:C:C5	2.48	0.49
1:0:1567:A:C2'	1:0:1568:A:H5'	2.42	0.49
1:0:1570:C:O2'	1:0:1571:G:OP1	2.21	0.49
1:0:1427:G:H1'	1:0:1604:A:H61	1.78	0.49
1:0:1787:U:H2'	1:0:1788:C:H6	1.76	0.49
1:0:1795:C:N4	1:0:1806:G:N2	2.60	0.49
1:0:1981:A:H2'	1:0:1982:C:H6	1.77	0.49
1:0:538:A:N7	1:0:2025:A:N1	2.61	0.49
1:0:2177:U:H2'	1:0:2178:U:H6	1.77	0.49
1:0:2194:A:C2'	1:0:2195:C:H5''	2.42	0.49
1:0:2370:G:C1'	1:0:2403:C:H41	2.25	0.49
1:0:2437:G:C4	1:0:2469:G:C2	3.01	0.49
1:0:2658:A:HO2'	1:0:2659:C:H5'	1.74	0.49
1:0:26:G:C2'	1:0:524:A:H61	2.26	0.49
1:0:2785:A:H2'	1:0:2786:G:O4'	2.12	0.49
1:0:2825:A:C5'	1:0:2843:A:H2	2.24	0.49
1:0:548:G:N2	1:0:549:G:C4	2.81	0.49
1:0:58:C:H3'	1:0:59:G:C4'	2.42	0.49
1:0:697:G:C6	1:0:788:G:N7	2.80	0.49
1:0:840:U:H4'	1:0:841:G:C2	2.46	0.49
1:0:940:G:OP2	1:0:941:U:H5'	2.12	0.49
1:0:1142:G:O2'	1:0:1143:A:C5'	2.60	0.49
1:0:1169:C:O2'	1:0:1170:U:H5'	2.12	0.49
1:0:1440:G:H1'	1:0:1589:G:O6	2.12	0.49
1:0:1559:G:C8	1:0:1559:G:H3'	2.48	0.49
1:0:1830:C:N4	1:0:1881:U:H2'	2.28	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1881:U:O2'	1:0:1882:G:H5'	2.13	0.49
1:0:1931:G:O2'	1:0:1932:G:H5'	2.12	0.49
1:0:2048:C:H1'	1:0:2428:U:N3	2.28	0.49
1:0:2561:G:O2'	1:0:2562:G:H5'	2.12	0.49
1:0:501:G:H2'	1:0:502:A:O4'	2.13	0.49
1:0:643:A:H61	1:0:652:C:P	2.36	0.49
1:0:861:G:C1'	1:0:944:A:N3	2.76	0.49
1:0:956:A:H5'	1:0:957:G:OP2	2.12	0.49
1:0:1149:G:H2'	1:0:1150:C:H6	1.77	0.49
1:0:1208:A:C2'	1:0:1209:G:O5'	2.61	0.49
1:0:1251:G:C2	1:0:1252:C:C2	3.01	0.49
1:0:1260:A:O2'	1:0:1261:G:OP1	2.25	0.49
1:0:1585:A:C6	1:0:1586:A:C6	3.01	0.49
1:0:1750:A:H5'	1:0:2695:C:H1'	1.95	0.49
1:0:1763:G:H2'	1:0:1764:A:H4'	1.95	0.49
1:0:1825:C:H2'	1:0:1826:U:C6	2.47	0.49
1:0:1901:A:O5'	1:0:1901:A:H8	1.95	0.49
1:0:1908:C:C2'	1:0:1909:U:H4'	2.40	0.49
1:0:208:C:O2'	1:0:209:G:H5'	2.12	0.49
1:0:631:G:O5'	1:0:631:G:H8	1.94	0.49
1:0:793:G:H1'	1:0:796:A:H61	1.78	0.49
1:0:846:A:C5	1:0:847:C:C4	3.01	0.49
1:0:116:A:N3	1:0:155:G:C1'	2.74	0.49
1:0:1173:G:H2'	1:0:1174:G:H8	1.77	0.49
1:0:1831:G:C5	1:0:1832:G:N7	2.81	0.49
1:0:1964:A:H5''	1:0:1965:U:OP2	2.11	0.49
1:0:2238:G:O2'	1:0:2239:C:H5'	2.13	0.49
1:0:2427:A:O2'	1:0:2428:U:OP1	2.31	0.49
1:0:2429:A:H2'	1:0:2429:A:N3	2.27	0.49
1:0:2632:U:C2	1:0:2633:A:N7	2.80	0.49
1:0:2633:A:H2	1:0:2644:A:H5''	1.77	0.49
1:0:389:G:N1	1:0:412:U:O2	2.46	0.49
1:0:46:C:C4	1:0:47:G:N7	2.81	0.49
1:0:677:G:H4'	1:0:951:G:H5''	1.95	0.49
1:0:738:G:O5'	1:0:738:G:H8	1.96	0.49
1:0:838:A:H2'	1:0:839:U:H6	1.78	0.49
1:0:930:A:H2	1:0:2247:A:C2	2.31	0.49
1:0:1016:C:C2	1:0:1017:C:C5	3.01	0.48
1:0:1262:U:H3'	1:0:1262:U:C6	2.48	0.48
1:0:1553:G:H2'	1:0:1553:G:N3	2.27	0.48
1:0:172:A:C2	1:0:227:G:N2	2.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:184:A:N7	1:0:185:C:C4	2.81	0.48
1:0:242:A:O2'	1:0:243:G:C4'	2.61	0.48
1:0:322:A:O2'	1:0:323:G:P	2.69	0.48
1:0:346:C:N3	1:0:347:C:C5	2.81	0.48
1:0:1034:U:O4	1:0:1035:G:N3	2.46	0.48
1:0:1098:G:N2	1:0:1100:G:O2'	2.42	0.48
1:0:1226:A:H2'	1:0:1227:A:C8	2.47	0.48
1:0:1325:U:O2'	1:0:1327:C:N4	2.46	0.48
1:0:155:G:O2'	1:0:156:G:H5'	2.13	0.48
1:0:1692:C:C2'	1:0:1693:A:H5'	2.43	0.48
1:0:1833:U:O2'	1:0:1834:G:H5'	2.13	0.48
1:0:1894:U:O5'	1:0:1894:U:H6	1.97	0.48
1:0:1918:G:C4	1:0:1945:C:N4	2.81	0.48
1:0:1681:A:H61	1:0:1979:C:N4	2.11	0.48
1:0:1987:G:N7	1:0:1988:A:N7	2.61	0.48
1:0:2026:C:O5'	1:0:2759:U:O4	2.31	0.48
1:0:203:G:H1'	1:0:205:A:N6	2.28	0.48
1:0:2083:G:O2'	1:0:2084:G:H5'	2.12	0.48
1:0:2256:G:C6	1:0:2257:A:N7	2.82	0.48
1:0:2544:A:H2'	1:0:2545:A:C1'	2.43	0.48
1:0:2554:C:H2'	1:0:2557:G:O6	2.14	0.48
1:0:2561:G:H8	1:0:2561:G:H5'	1.78	0.48
1:0:2632:U:H3	1:0:2633:A:N6	2.08	0.48
1:0:2724:G:N7	1:0:2735:C:C2	2.81	0.48
1:0:2758:A:HO2'	1:0:2759:U:P	2.35	0.48
1:0:2852:G:O2'	1:0:2853:U:H5'	2.13	0.48
1:0:408:U:O2	1:0:409:G:N7	2.46	0.48
1:0:482:A:H2'	1:0:483:A:O4'	2.13	0.48
1:0:616:U:H2'	1:0:617:U:H5'	1.96	0.48
1:0:729:A:H2'	1:0:730:C:C6	2.48	0.48
1:0:756:C:O2'	1:0:757:U:H5'	2.13	0.48
1:0:806:A:O2'	1:0:807:A:H5'	2.13	0.48
1:0:317:U:H4'	1:0:1224:A:N6	2.28	0.48
1:0:1249:G:O2'	1:0:1250:A:P	2.72	0.48
1:0:1527:G:N3	1:0:1527:G:C2'	2.75	0.48
1:0:1317:G:C2	1:0:1641:C:C2	3.02	0.48
1:0:1772:C:O2'	1:0:1773:C:C5'	2.61	0.48
1:0:2048:C:H2'	1:0:2049:C:O4'	2.12	0.48
1:0:2161:C:O2'	1:0:2162:C:P	2.71	0.48
1:0:2266:A:N6	1:0:2323:U:H1'	2.28	0.48
1:0:2359:U:O4	1:0:2360:C:N4	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2262:C:N3	1:0:2368:G:C2	2.82	0.48
1:0:2392:G:H2'	1:0:2393:G:O4'	2.12	0.48
1:0:805:G:N7	1:0:2419:C:C1'	2.75	0.48
1:0:2594:U:H2'	1:0:2595:C:H6	1.78	0.48
1:0:304:A:C2'	1:0:305:A:H5''	2.43	0.48
1:0:43:A:C2'	1:0:44:G:H5'	2.42	0.48
1:0:501:G:C4	1:0:502:A:C8	3.01	0.48
1:0:557:U:H6	1:0:557:U:O5'	1.96	0.48
1:0:657:A:C2	1:0:658:G:C4	3.01	0.48
1:0:686:C:N3	1:0:821:A:C2	2.82	0.48
1:0:1113:C:H2'	1:0:1114:A:C8	2.48	0.48
1:0:1153:A:C5'	1:0:1154:A:OP1	2.62	0.48
1:0:1653:C:O2	1:0:1751:A:C2	2.65	0.48
1:0:1689:U:C3'	1:0:1690:U:C5'	2.91	0.48
1:0:1727:C:O2'	1:0:1728:A:H5'	2.13	0.48
1:0:1761:G:C5	1:0:1762:C:C5	3.01	0.48
1:0:1918:G:N2	1:0:1947:G:O4'	2.46	0.48
1:0:1963:G:O2'	1:0:1965:U:OP2	2.32	0.48
1:0:2161:C:O5'	1:0:2161:C:H6	1.96	0.48
1:0:2172:U:O5'	1:0:2172:U:H6	1.97	0.48
1:0:2555:G:O2'	1:0:2558:C:OP2	2.31	0.48
1:0:2594:U:C2	1:0:2595:C:C5	3.01	0.48
1:0:2691:C:C2'	1:0:2692:A:C5'	2.78	0.48
1:0:2690:A:OP1	1:0:2692:A:P	2.71	0.48
1:0:571:U:O2'	1:0:572:G:OP2	2.18	0.48
1:0:665:A:OP2	1:0:666:U:H5'	2.14	0.48
1:0:699:G:C4'	1:0:700:C:OP2	2.61	0.48
1:0:736:G:C2	1:0:737:C:H1'	2.47	0.48
1:0:854:G:C4	1:0:949:G:N2	2.82	0.48
1:0:1407:G:H2'	1:0:1408:A:H8	1.74	0.48
1:0:1791:C:O2'	1:0:1792:C:P	2.71	0.48
1:0:540:G:N3	1:0:2005:U:OP1	2.46	0.48
1:0:2076:G:H2'	1:0:2076:G:N3	2.28	0.48
1:0:2245:A:C2	1:0:2251:U:H5	2.31	0.48
1:0:2238:G:C2	1:0:2261:G:C6	3.02	0.48
1:0:2274:C:C6	1:0:2317:G:N2	2.81	0.48
1:0:2447:G:C8	1:0:2455:A:N1	2.81	0.48
1:0:2463:G:H2'	1:0:2464:G:C8	2.44	0.48
1:0:2661:G:O6	1:0:2708:U:C1'	2.49	0.48
1:0:318:G:C2	1:0:320:A:H3'	2.47	0.48
1:0:36:G:O2'	1:0:462:G:H2'	2.12	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:498:C:C4	1:0:499:G:N7	2.82	0.48
1:0:546:A:H2'	1:0:547:U:H6	1.77	0.48
1:0:760:U:HO2'	1:0:761:G:P	2.36	0.48
1:0:861:G:H22	1:0:943:U:C1'	2.07	0.48
1:0:994:A:N6	1:0:995:A:N1	2.62	0.48
1:0:1228:G:C6	1:0:1229:C:C4	3.02	0.48
1:0:123:A:C2'	1:0:124:A:OP1	2.61	0.48
1:0:825:C:H1'	1:0:1263:G:C2	2.48	0.48
1:0:1345:G:C4	1:0:1625:A:C2	3.02	0.48
1:0:1459:U:O4	1:0:1476:G:C5'	2.56	0.48
1:0:1586:A:H2'	1:0:1587:A:C8	2.49	0.48
1:0:1778:U:H3'	1:0:1779:C:H6	1.79	0.48
1:0:1976:U:H2'	1:0:1977:C:O4'	2.14	0.48
1:0:1996:A:N6	1:0:1997:A:C6	2.81	0.48
1:0:2352:A:C2	1:0:2353:G:C5	3.01	0.48
1:0:332:C:HO2'	1:0:333:A:P	2.37	0.48
1:0:562:G:H2'	1:0:563:U:O4'	2.14	0.48
1:0:704:G:O2'	1:0:705:C:C5'	2.61	0.48
1:0:789:G:C2'	1:0:790:A:OP2	2.61	0.48
1:0:819:C:N3	1:0:820:U:H5	2.12	0.48
1:0:579:G:C5'	1:0:994:A:C2	2.96	0.48
1:0:1325:U:H4'	1:0:1326:U:O5'	2.13	0.48
1:0:1359:G:C8	1:0:1359:G:H5'	2.39	0.48
1:0:1900:U:C2'	1:0:1901:A:H5'	2.39	0.48
1:0:2245:A:C2	1:0:2251:U:C5	3.01	0.48
1:0:2321:C:N3	1:0:2322:U:C2	2.81	0.48
1:0:60:A:H2'	1:0:61:U:H5'	1.96	0.48
1:0:1036:G:N3	1:0:1145:C:O4'	2.46	0.48
1:0:1391:A:C8	1:0:1393:G:N7	2.82	0.48
1:0:12:U:C2'	1:0:13:A:H5'	2.44	0.48
1:0:1474:A:HO2'	1:0:1475:U:H5'	1.79	0.48
1:0:1685:A:O2'	1:0:1686:A:OP2	2.30	0.48
1:0:1971:C:H2'	1:0:1972:G:O4'	2.13	0.48
1:0:1984:A:C2	1:0:1985:G:C4	3.02	0.48
1:0:2077:G:N2	1:0:2179:C:H1'	2.28	0.48
1:0:2258:G:C2'	1:0:2259:G:O5'	2.61	0.48
1:0:2427:A:H4'	1:0:2428:U:OP2	2.14	0.48
1:0:2608:A:O2'	1:0:2609:G:O5'	2.30	0.48
1:0:2663:U:C2	1:0:2664:G:C8	3.02	0.48
1:0:2825:A:O2'	1:0:2826:C:H5'	2.14	0.48
1:0:2862:G:O2'	1:0:2863:U:H5'	2.13	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:583:C:H4'	1:0:584:A:C5'	2.43	0.48
1:0:592:G:O6	1:0:593:C:N4	2.47	0.48
1:0:912:A:C2	1:0:913:A:H1'	2.48	0.48
1:0:84:G:N3	1:0:101:A:C2	2.82	0.48
1:0:1066:G:N7	1:0:1067:G:H1'	2.28	0.48
1:0:1137:A:H4'	1:0:1138:A:H5''	1.95	0.48
1:0:594:G:O6	1:0:1264:C:H5	1.96	0.48
1:0:1310:C:H2'	1:0:1311:C:C6	2.49	0.48
1:0:145:C:C2	1:0:153:A:C2	3.01	0.48
1:0:2050:G:O3'	1:0:2051:U:H4'	2.14	0.48
1:0:2311:U:C1'	1:0:2315:A:N6	2.77	0.48
1:0:2519:C:H2'	1:0:2520:A:H5'	1.96	0.48
1:0:2490:U:O4	1:0:2554:C:N3	2.47	0.48
1:0:2676:G:C6	1:0:2677:U:C4	3.02	0.48
1:0:621:U:C2	1:0:622:U:C6	3.01	0.48
1:0:237:G:H1'	1:0:632:A:H1'	1.96	0.48
1:0:650:U:H2'	1:0:651:C:C6	2.49	0.48
1:0:640:C:H4'	1:0:660:G:H21	1.79	0.48
1:0:807:A:C2	1:0:808:C:N1	2.82	0.48
1:0:877:G:O2'	1:0:878:C:H5'	2.14	0.48
1:0:967:G:H2'	1:0:968:C:H5''	1.95	0.48
1:0:1198:C:OP1	1:0:1199:U:O2'	2.17	0.48
1:0:1332:G:C2	1:0:1333:G:C2	3.02	0.48
1:0:1441:A:C3'	1:0:1441:A:N3	2.77	0.48
1:0:1451:C:H2'	1:0:1452:U:C6	2.47	0.48
1:0:1491:C:N4	1:0:1492:A:C6	2.82	0.48
1:0:169:C:C5	1:0:170:U:C6	3.02	0.48
1:0:2001:G:H2'	1:0:2002:A:O4'	2.14	0.48
1:0:2238:G:C4	1:0:2406:C:N3	2.82	0.48
1:0:2299:A:C2	1:0:2312:A:C6	3.02	0.48
1:0:2407:G:H5'	1:0:2408:G:C2	2.49	0.48
1:0:1949:A:N3	1:0:2572:U:O4'	2.47	0.48
1:0:26:G:H1'	1:0:524:A:N6	2.28	0.48
1:0:2860:C:N4	1:0:2861:A:C4	2.82	0.48
1:0:474:G:C2	1:0:478:G:C6	3.01	0.48
1:0:584:A:C2	1:0:585:U:C6	3.02	0.48
1:0:587:A:C2'	1:0:588:G:H5''	2.43	0.48
1:0:836:G:H2'	1:0:837:U:C5	2.45	0.48
1:0:951:G:C3'	1:0:952:A:H5''	2.44	0.48
1:0:982:C:H5'	1:0:995:A:H5'	1.96	0.48
1:0:1004:A:HO2'	1:0:1005:U:H5'	1.78	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1022:A:C5	1:0:1024:G:C8	3.01	0.47
1:0:1097:A:H5'	1:0:1115:C:H1'	1.95	0.47
1:0:1136:G:OP2	1:0:1137:A:H2'	2.14	0.47
1:0:134:G:C2	1:0:136:A:OP1	2.67	0.47
1:0:1488:G:H1	1:0:1534:A:H61	1.59	0.47
1:0:155:G:C6	1:0:156:G:N7	2.82	0.47
1:0:1778:U:C4	1:0:1779:C:C4	3.02	0.47
1:0:1714:A:O2'	1:0:1961:A:OP1	2.24	0.47
1:0:1971:C:C5	1:0:1972:G:N7	2.82	0.47
1:0:197:G:N2	1:0:440:U:H2'	2.29	0.47
1:0:580:A:C4	1:0:2013:A:C6	3.02	0.47
1:0:2357:A:C2'	1:0:2358:C:H5'	2.44	0.47
1:0:2364:C:H2'	1:0:2365:U:C6	2.48	0.47
1:0:2476:A:H4'	1:0:2477:C:O5'	2.13	0.47
1:0:2608:A:O2'	1:0:2609:G:P	2.73	0.47
1:0:492:G:H1'	1:0:516:G:N2	2.29	0.47
1:0:662:G:H2'	1:0:662:G:N3	2.29	0.47
1:0:813:A:HO2'	1:0:814:G:P	2.37	0.47
1:0:830:C:O2'	1:0:852:U:H5''	2.14	0.47
1:0:935:C:H2'	1:0:936:A:C8	2.49	0.47
1:0:959:C:O4'	1:0:995:A:C2	2.67	0.47
1:0:1231:A:C4	1:0:1232:U:C6	3.02	0.47
1:0:1265:G:O2'	1:0:1266:G:N9	2.47	0.47
1:0:1288:A:H2'	1:0:1289:A:O4'	2.14	0.47
1:0:1312:G:H4'	1:0:1313:U:H5'	1.94	0.47
1:0:1366:A:C6	1:0:1367:A:C6	3.01	0.47
1:0:1466:C:O3'	1:0:1467:U:C4'	2.62	0.47
1:0:1459:U:C4	1:0:1476:G:O5'	2.67	0.47
1:0:1606:C:H2'	1:0:1607:A:C8	2.48	0.47
1:0:2762:G:N2	1:0:2763:U:C1'	2.77	0.47
1:0:2863:U:C2	1:0:2864:C:C6	3.01	0.47
1:0:413:G:C8	1:0:413:G:H3'	2.50	0.47
1:0:482:A:O2'	1:0:483:A:H5'	2.13	0.47
1:0:490:A:C4'	1:0:491:A:H5'	2.43	0.47
1:0:577:U:O2	1:0:579:G:C8	2.67	0.47
1:0:67:G:N2	1:0:72:A:H2'	2.30	0.47
1:0:763:A:H5''	1:0:1631:C:N4	2.29	0.47
1:0:833:A:C2	1:0:834:A:C4	3.02	0.47
1:0:929:A:C2'	1:0:930:A:H5''	2.43	0.47
1:0:936:A:O2'	1:0:937:C:H5'	2.14	0.47
1:0:1212:U:H2'	1:0:1213:U:C6	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1479:G:H2'	1:0:1480:G:H8	1.79	0.47
1:0:1537:U:N3	1:0:1538:A:C6	2.82	0.47
1:0:1699:A:C2	1:0:1748:U:H1'	2.48	0.47
1:0:1840:A:O2'	1:0:1841:G:H5'	2.14	0.47
1:0:198:A:O2'	1:0:199:A:P	2.73	0.47
1:0:2254:C:C2'	1:0:2255:G:OP2	2.61	0.47
1:0:2050:G:C4	1:0:2423:G:N2	2.81	0.47
1:0:2557:G:N2	1:0:2558:C:C6	2.82	0.47
1:0:2642:G:C2'	1:0:2643:G:O5'	2.62	0.47
1:0:2673:G:C2	1:0:2674:C:C6	3.03	0.47
1:0:26:G:H8	1:0:26:G:O5'	1.97	0.47
1:0:21:A:C6	1:0:530:G:C6	3.02	0.47
1:0:1068:A:O2'	1:0:1069:G:H5'	2.14	0.47
1:0:105:G:N1	1:0:106:G:C5	2.82	0.47
1:0:116:A:H2'	1:0:118:U:O4	2.14	0.47
1:0:1193:G:O2'	1:0:1194:U:O5'	2.32	0.47
1:0:1208:A:N1	1:0:1209:G:C4	2.82	0.47
1:0:1391:A:H1'	1:0:1392:U:C5	2.49	0.47
1:0:1581:C:O2'	1:0:1582:A:C3'	2.62	0.47
1:0:1645:U:C2	1:0:1646:G:C8	3.02	0.47
1:0:1881:U:H2'	1:0:1882:G:H5'	1.96	0.47
1:0:1921:A:C2'	1:0:1922:U:C5'	2.88	0.47
1:0:2007:G:C2	1:0:2023:C:O2	2.68	0.47
1:0:2117:A:H61	1:0:2139:G:N2	2.11	0.47
1:0:2347:C:H2'	1:0:2348:A:O4'	2.13	0.47
1:0:319:G:O5'	1:0:319:G:H8	1.96	0.47
1:0:395:G:C5	1:0:396:U:C5	3.02	0.47
1:0:540:G:O6	1:0:2006:G:OP1	2.32	0.47
1:0:861:G:N3	1:0:944:A:H1'	2.30	0.47
1:0:83:A:H62	1:0:98:U:H1'	1.78	0.47
1:0:1033:G:O2'	1:0:1034:U:P	2.72	0.47
1:0:1128:G:O2'	1:0:1129:A:H5'	2.14	0.47
1:0:13:A:HO2'	1:0:14:A:P	2.37	0.47
1:0:1953:A:O4'	1:0:1955:G:C1'	2.62	0.47
1:0:1693:A:C2	1:0:1976:U:O4'	2.65	0.47
1:0:2006:G:C2	1:0:2024:U:O2	2.67	0.47
1:0:2093:G:O2'	1:0:2094:C:P	2.72	0.47
1:0:644:A:N3	1:0:2382:C:H4'	2.29	0.47
1:0:2419:C:N3	1:0:2420:C:H1'	2.29	0.47
1:0:2490:U:H2'	1:0:2491:C:C6	2.49	0.47
1:0:2573:C:N4	1:0:2574:G:N7	2.63	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2771:C:C4	1:0:2772:U:C5	3.02	0.47
1:0:59:G:N3	1:0:73:A:C6	2.82	0.47
1:0:617:U:N1	1:0:632:A:N6	2.62	0.47
1:0:103:U:H2'	1:0:104:C:C6	2.50	0.47
1:0:1134:C:N4	1:0:1135:C:H41	2.13	0.47
1:0:1260:A:O2'	1:0:1261:G:P	2.72	0.47
1:0:1271:C:O2'	1:0:1272:G:H5'	2.14	0.47
1:0:1298:G:C5	1:0:1342:U:C5	3.02	0.47
1:0:1337:G:H4'	1:0:1632:A:C5	2.49	0.47
1:0:1373:G:H2'	1:0:1374:G:H5'	1.95	0.47
1:0:1502:G:H2'	1:0:1503:G:C8	2.49	0.47
1:0:1606:C:N3	1:0:1607:A:N7	2.63	0.47
1:0:1658:A:H2'	1:0:1659:G:O4'	2.15	0.47
1:0:1890:G:H2'	1:0:1891:C:O4'	2.14	0.47
1:0:1964:A:C5'	1:0:1965:U:OP2	2.62	0.47
1:0:2015:G:H4'	1:0:2016:A:OP2	2.13	0.47
1:0:2790:C:H2'	1:0:2791:C:C6	2.50	0.47
1:0:2794:G:H5''	1:0:2794:G:C8	2.47	0.47
1:0:2824:C:H4'	1:0:2843:A:C2	2.50	0.47
1:0:310:A:H1'	1:0:330:C:O2'	2.15	0.47
1:0:200:A:C6	1:0:435:A:C5	3.03	0.47
1:0:492:G:H2'	1:0:493:A:OP2	2.14	0.47
1:0:622:U:H1'	1:0:627:A:H2	1.79	0.47
1:0:658:G:O2'	1:0:659:G:H5'	2.14	0.47
1:0:68:C:C2	1:0:72:A:C4	3.03	0.47
1:0:990:A:H2'	1:0:993:C:H42	1.75	0.47
1:0:1017:C:O2'	1:0:1018:C:H5'	2.15	0.47
1:0:1077:U:H6	1:0:1077:U:O5'	1.97	0.47
1:0:109:A:O2'	1:0:110:U:H5'	2.15	0.47
1:0:1177:U:O4	1:0:1196:G:O6	2.33	0.47
1:0:1181:C:H3'	1:0:1182:U:H4'	1.96	0.47
1:0:1282:A:H2'	1:0:1283:C:C6	2.49	0.47
1:0:1336:G:O6	1:0:1337:G:C6	2.67	0.47
1:0:1381:G:C2	1:0:1382:G:C8	3.01	0.47
1:0:1466:C:O3'	1:0:1467:U:H4'	2.13	0.47
1:0:1538:A:C8	1:0:1539:U:H5	2.32	0.47
1:0:1482:U:H1'	1:0:1562:G:N2	2.29	0.47
1:0:1581:C:N4	1:0:1583:A:C2	2.82	0.47
1:0:1968:G:C6	1:0:1969:G:N7	2.83	0.47
1:0:198:A:HO2'	1:0:199:A:P	2.38	0.47
1:0:2061:C:H2'	1:0:2062:U:O4'	2.14	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:208:C:C2'	1:0:209:G:H5'	2.45	0.47
1:0:2208:U:H2'	1:0:2209:G:C8	2.36	0.47
1:0:2252:A:N7	1:0:2253:A:C5	2.83	0.47
1:0:2523:G:H2'	1:0:2524:G:C8	2.49	0.47
1:0:320:A:N6	1:0:341:A:C2	2.82	0.47
1:0:739:G:O2'	1:0:740:A:O5'	2.33	0.47
1:0:88:G:C3'	1:0:89:A:C5'	2.86	0.47
1:0:982:C:H2'	1:0:983:G:H5'	1.95	0.47
1:0:1053:G:H22	1:0:1123:G:N2	2.12	0.47
1:0:136:A:H3'	1:0:137:A:H8	1.79	0.47
1:0:1459:U:C4	1:0:1476:G:H5''	2.49	0.47
1:0:1492:A:O5'	1:0:1492:A:H8	1.98	0.47
1:0:1568:A:O2'	1:0:1569:A:H5'	2.14	0.47
1:0:167:A:C6	1:0:168:A:C5	3.02	0.47
1:0:1740:G:O2'	1:0:1741:G:H5'	2.13	0.47
1:0:2383:C:O2	1:0:2383:C:H2'	2.15	0.47
1:0:2608:A:HO2'	1:0:2609:G:P	2.38	0.47
1:0:2805:G:O2'	1:0:2806:G:H5'	2.13	0.47
1:0:2868:G:N3	1:0:2868:G:H2'	2.30	0.47
1:0:365:U:O2'	1:0:366:U:H5'	2.14	0.47
1:0:459:A:H4'	1:0:461:A:C5	2.48	0.47
1:0:612:G:C4'	1:0:613:A:H4'	2.41	0.47
1:0:672:C:H2'	1:0:673:G:C5'	2.44	0.47
1:0:686:C:C2'	1:0:687:G:H5'	2.45	0.47
1:0:704:G:N3	1:0:705:C:C6	2.83	0.47
1:0:709:A:O2'	1:0:710:C:H5'	2.14	0.47
1:0:742:G:H4'	1:0:776:G:H5'	1.96	0.47
1:0:475:U:C2	1:0:801:A:C6	3.02	0.47
1:0:1008:G:C6	1:0:1170:U:N3	2.83	0.47
1:0:1223:G:C8	1:0:1250:A:N6	2.82	0.47
1:0:1332:G:N1	1:0:1333:G:N2	2.63	0.47
1:0:1610:A:H2'	1:0:1611:U:O4'	2.15	0.47
1:0:1637:U:H5''	1:0:1638:G:OP1	2.15	0.47
1:0:1761:G:H2'	1:0:1762:C:H5'	1.97	0.47
1:0:16:G:O2'	1:0:17:G:H5'	2.15	0.47
1:0:202:A:C2	1:0:205:A:N6	2.83	0.47
1:0:2044:G:N2	1:0:2046:C:C2	2.83	0.47
1:0:2205:C:H2'	1:0:2206:C:C5'	2.45	0.47
1:0:2703:C:HO2'	1:0:2704:U:H5'	1.79	0.47
1:0:330:C:H2'	1:0:331:U:C5'	2.45	0.47
1:0:441:A:O2'	1:0:442:A:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:788:G:C5'	1:0:790:A:C4	2.98	0.47
1:0:914:C:H2'	1:0:915:C:C6	2.50	0.47
1:0:1043:A:H2'	1:0:1044:U:H5'	1.97	0.47
1:0:1060:C:H2'	1:0:1061:A:H5'	1.96	0.47
1:0:1105:U:C2	1:0:1107:A:N7	2.83	0.47
1:0:1294:G:C2	1:0:1303:U:C2	3.03	0.47
1:0:1436:G:H3'	1:0:1437:A:C8	2.47	0.47
1:0:1679:U:C2'	1:0:1680:U:C5'	2.73	0.47
1:0:1733:U:H5'	1:0:1734:C:H5	1.80	0.47
1:0:1794:A:H61	1:0:1806:G:H2'	1.79	0.47
1:0:1687:C:H1'	1:0:1976:U:O2	2.15	0.47
1:0:2180:U:C4	1:0:2203:G:C2	3.03	0.47
1:0:2076:G:H21	1:0:2181:A:H62	1.63	0.47
1:0:2192:U:O5'	1:0:2192:U:H6	1.97	0.47
1:0:2669:C:O2'	1:0:2670:C:P	2.72	0.47
1:0:2860:C:N4	1:0:2861:A:C5	2.82	0.47
1:0:2867:G:H4'	1:0:2868:G:O5'	2.15	0.47
1:0:398:C:C2'	1:0:399:G:OP2	2.63	0.47
1:0:632:A:C2	1:0:633:G:C4	3.02	0.47
1:0:639:G:H4'	1:0:661:C:O2'	2.15	0.47
1:0:788:G:C5'	1:0:790:A:C1'	2.88	0.47
1:0:820:U:H2'	1:0:821:A:H8	1.79	0.47
1:0:984:A:C1'	1:0:1202:U:C6	2.98	0.47
1:0:1071:U:H3	1:0:1090:C:N4	2.13	0.47
1:0:1310:C:N4	1:0:1311:C:H41	2.13	0.47
1:0:1365:U:O2	1:0:1391:A:N6	2.47	0.47
1:0:1400:A:C6	1:0:1401:G:C5	3.03	0.47
1:0:1427:G:OP2	1:0:1428:G:C6	2.68	0.47
1:0:1431:U:H4'	1:0:1604:A:H4'	1.97	0.47
1:0:1546:C:N4	1:0:1556:A:N6	2.63	0.47
1:0:1633:C:O2'	1:0:1634:A:OP1	2.33	0.47
1:0:175:C:N4	1:0:225:G:H1	2.12	0.47
1:0:1882:G:H8	1:0:1882:G:H3'	1.80	0.47
1:0:1920:A:H2'	1:0:1921:A:C8	2.49	0.47
1:0:2354:G:N3	1:0:2356:A:C8	2.82	0.47
1:0:204:A:N6	1:0:2386:G:C8	2.83	0.47
1:0:240:U:H2'	1:0:241:C:O4'	2.15	0.47
1:0:1040:A:N3	1:0:2465:G:H1'	2.30	0.47
1:0:2859:U:H2'	1:0:2860:C:C5'	2.44	0.47
1:0:304:A:C6	1:0:356:A:N6	2.77	0.47
1:0:3:U:O5'	1:0:3:U:H6	1.98	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:580:A:C8	1:0:584:A:N6	2.83	0.47
1:0:817:A:H2'	1:0:819:C:N4	2.30	0.47
1:0:1147:G:HO2'	1:0:1148:G:H5'	1.79	0.46
1:0:114:C:H2'	1:0:115:G:C8	2.50	0.46
1:0:1255:A:C6	1:0:1256:C:N4	2.84	0.46
1:0:138:G:H2'	1:0:139:A:C8	2.49	0.46
1:0:1410:U:O2'	1:0:1411:C:P	2.73	0.46
1:0:1442:C:O2'	1:0:1443:G:P	2.72	0.46
1:0:1638:G:C2	1:0:1639:U:C2	3.03	0.46
1:0:1699:A:H2'	1:0:1700:C:C6	2.51	0.46
1:0:1707:A:N6	1:0:1708:C:O2	2.48	0.46
1:0:182:G:C2'	1:0:183:U:OP2	2.62	0.46
1:0:1829:C:O2'	1:0:1910:A:N3	2.40	0.46
1:0:1982:C:O2	1:0:2666:U:O2'	2.32	0.46
1:0:571:U:C4	1:0:2019:C:O4'	2.68	0.46
1:0:2034:A:H2	1:0:2035:G:O6	1.97	0.46
1:0:218:A:O2'	1:0:219:G:O5'	2.32	0.46
1:0:2309:G:C2'	1:0:2310:G:H5'	2.45	0.46
1:0:2396:C:C6	1:0:2396:C:H5'	2.40	0.46
1:0:840:U:C4	1:0:2409:A:C5	3.03	0.46
1:0:2561:G:C8	1:0:2561:G:H5'	2.50	0.46
1:0:1676:U:O2'	1:0:2692:A:N6	2.48	0.46
1:0:2781:G:H2'	1:0:2782:G:C1'	2.45	0.46
1:0:367:G:H2'	1:0:368:A:H5''	1.97	0.46
1:0:68:C:N1	1:0:72:A:C2	2.83	0.46
1:0:872:G:H22	1:0:929:A:P	2.37	0.46
1:0:928:G:H8	1:0:928:G:O5'	1.98	0.46
1:0:1048:U:H2'	1:0:1049:C:O4'	2.16	0.46
1:0:1332:G:N2	1:0:1347:C:C6	2.83	0.46
1:0:1378:A:O2'	1:0:1379:A:H5'	2.16	0.46
1:0:1433:A:C2	1:0:1434:U:H1'	2.50	0.46
1:0:1443:G:H2'	1:0:1444:C:C6	2.50	0.46
1:0:1458:A:H2'	1:0:1459:U:H5''	1.97	0.46
1:0:1577:G:H2'	1:0:1578:U:O4'	2.15	0.46
1:0:1337:G:H4'	1:0:1632:A:H62	1.80	0.46
1:0:165:G:O2'	1:0:1378:A:N6	2.48	0.46
1:0:1797:C:H2'	1:0:1798:G:O4'	2.15	0.46
1:0:2209:G:C4	1:0:2210:C:C5	3.03	0.46
1:0:2329:C:H2'	1:0:2330:G:O4'	2.15	0.46
1:0:2352:A:N1	1:0:2353:G:C6	2.82	0.46
1:0:2521:A:C5'	1:0:2522:G:OP1	2.58	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2549:G:H5'	1:0:2549:G:H8	1.80	0.46
1:0:2633:A:O2'	1:0:2634:G:H4'	2.15	0.46
1:0:239:A:H2	1:0:443:A:N3	2.12	0.46
1:0:511:A:N6	1:0:512:A:C6	2.83	0.46
1:0:59:G:H1'	1:0:73:A:H2	1.74	0.46
1:0:608:G:H2'	1:0:609:U:C6	2.50	0.46
1:0:700:C:C5	1:0:701:U:C4	3.03	0.46
1:0:575:U:H4'	1:0:822:G:OP2	2.15	0.46
1:0:119:G:H2'	1:0:120:G:H8	1.79	0.46
1:0:1230:C:C6	1:0:1246:G:N2	2.84	0.46
1:0:1288:A:H62	1:0:1309:G:C5'	2.28	0.46
1:0:1348:C:H2'	1:0:1349:A:H8	1.81	0.46
1:0:1427:G:H1'	1:0:1604:A:N6	2.30	0.46
1:0:1564:U:O2'	1:0:1565:G:H5'	2.14	0.46
1:0:1657:A:C2'	1:0:1658:A:H5'	2.45	0.46
1:0:1796:A:N3	1:0:1805:G:C2	2.84	0.46
1:0:1827:G:N3	1:0:1914:U:C5	2.84	0.46
1:0:1938:U:H5	1:0:2536:G:N2	2.13	0.46
1:0:2184:C:C2'	1:0:2185:U:H5'	2.44	0.46
1:0:2225:G:C2	1:0:2405:A:H1'	2.50	0.46
1:0:2324:G:N2	1:0:2361:G:C4	2.83	0.46
1:0:2391:A:H2'	1:0:2392:G:H5'	1.98	0.46
1:0:2457:A:N7	1:0:2458:U:C5	2.83	0.46
1:0:2519:C:C5	1:0:2520:A:N7	2.83	0.46
1:0:452:G:C2	1:0:453:U:C2	3.04	0.46
1:0:499:G:O2'	1:0:500:G:OP1	2.32	0.46
1:0:58:C:H3'	1:0:59:G:O4'	2.16	0.46
1:0:1088:A:H8	1:0:1088:A:O5'	1.97	0.46
1:0:1089:C:O5'	1:0:1089:C:H6	1.99	0.46
1:0:1283:C:H5''	1:0:1284:G:C5'	2.45	0.46
1:0:1411:C:O5'	1:0:1411:C:H6	1.97	0.46
1:0:1427:G:H2'	1:0:1428:G:C5'	2.44	0.46
1:0:1915:A:H61	1:0:1951:G:H1'	1.80	0.46
1:0:1982:C:O2'	1:0:1983:G:H5'	2.14	0.46
1:0:2081:U:C3'	1:0:2082:C:H5''	2.45	0.46
1:0:2231:G:H2'	1:0:2232:G:O4'	2.15	0.46
1:0:2375:G:O2'	1:0:2376:G:H5'	2.16	0.46
1:0:2642:G:C2'	1:0:2643:G:C5'	2.94	0.46
1:0:342:G:O2'	1:0:343:A:O5'	2.24	0.46
1:0:349:G:H2'	1:0:350:U:O4'	2.15	0.46
1:0:498:C:N4	1:0:499:G:O6	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:621:U:O2'	1:0:622:U:H5'	2.16	0.46
1:0:57:G:C2	1:0:72:A:N7	2.83	0.46
1:0:67:G:N2	1:0:73:A:C4	2.83	0.46
1:0:790:A:N3	1:0:790:A:H2'	2.30	0.46
1:0:846:A:C5	1:0:847:C:N4	2.84	0.46
1:0:961:G:C6	1:0:962:C:C4	3.04	0.46
1:0:1174:G:N2	1:0:1175:A:C5	2.83	0.46
1:0:10:A:H2'	1:0:11:G:H8	1.80	0.46
1:0:1231:A:C5	1:0:1232:U:C5	3.03	0.46
1:0:1295:U:H2'	1:0:1296:G:C8	2.50	0.46
1:0:1295:U:O2'	1:0:1296:G:H5'	2.15	0.46
1:0:1329:U:C2	1:0:1330:G:N7	2.84	0.46
1:0:1370:U:O2'	1:0:1371:G:H5'	2.15	0.46
1:0:1692:C:O2'	1:0:1693:A:H5'	2.15	0.46
1:0:1901:A:O5'	1:0:1901:A:C8	2.68	0.46
1:0:1979:C:H3'	1:0:1979:C:H6	1.80	0.46
1:0:2062:U:N3	1:0:2063:A:C5	2.83	0.46
1:0:2309:G:N2	1:0:2365:U:N3	2.63	0.46
1:0:2338:C:H3'	1:0:2339:A:C8	2.49	0.46
1:0:2426:G:H4'	1:0:2427:A:O5'	2.15	0.46
1:0:2043:A:H1'	1:0:2481:G:C1'	2.45	0.46
1:0:2492:G:H2'	1:0:2493:U:C6	2.50	0.46
1:0:2557:G:H21	1:0:2558:C:C1'	2.29	0.46
1:0:573:C:C2'	1:0:574:C:H5'	2.46	0.46
1:0:606:A:H2'	1:0:607:C:C6	2.51	0.46
1:0:876:A:O2'	1:0:877:G:H5'	2.16	0.46
1:0:1134:C:C2	1:0:1135:C:C5	3.03	0.46
1:0:1180:A:H2'	1:0:1181:C:C6	2.51	0.46
1:0:1312:G:H5''	1:0:1313:U:H5''	1.97	0.46
1:0:1632:A:HO2'	1:0:1633:C:P	2.39	0.46
1:0:1659:G:H2'	1:0:1660:G:O4'	2.15	0.46
1:0:1920:A:N1	1:0:1922:U:C5	2.84	0.46
1:0:1923:U:C5'	1:0:1924:C:OP1	2.64	0.46
1:0:2050:G:H4'	1:0:2051:U:OP2	2.14	0.46
1:0:2066:G:C6	1:0:2067:U:N3	2.84	0.46
1:0:2161:C:HO2'	1:0:2162:C:P	2.37	0.46
1:0:2188:A:N1	1:0:2189:A:N6	2.63	0.46
1:0:2404:A:O2'	1:0:2405:A:O5'	2.32	0.46
1:0:1040:A:H1'	1:0:2465:G:O4'	2.15	0.46
1:0:2499:C:C2'	1:0:2500:C:H5'	2.46	0.46
1:0:2551:A:O2'	1:0:2552:C:P	2.71	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2571:G:H2'	1:0:2572:U:H6	1.81	0.46
1:0:307:C:O2'	1:0:308:C:H5'	2.15	0.46
1:0:435:A:N1	1:0:436:A:C2	2.84	0.46
1:0:443:A:H2'	1:0:444:U:H5'	1.98	0.46
1:0:616:U:C2'	1:0:617:U:C5'	2.93	0.46
1:0:674:U:O2'	1:0:675:C:H5'	2.15	0.46
1:0:712:A:C2	1:0:1650:A:N3	2.83	0.46
1:0:765:C:H2'	1:0:766:A:OP2	2.16	0.46
1:0:853:C:H2'	1:0:854:G:H8	1.81	0.46
1:0:986:A:N7	1:0:987:G:N7	2.63	0.46
1:0:1020:A:OP2	1:0:1021:A:OP2	2.34	0.46
1:0:1022:A:C2	1:0:1024:G:C4	3.03	0.46
1:0:109:A:C2	1:0:110:U:O2	2.69	0.46
1:0:111:G:C5'	1:0:112:U:OP1	2.64	0.46
1:0:1323:G:N2	1:0:1326:U:H3	2.14	0.46
1:0:1459:U:N3	1:0:1476:G:C5'	2.70	0.46
1:0:1543:G:O6	1:0:1560:A:C8	2.69	0.46
1:0:1828:C:N4	1:0:1829:C:H41	2.11	0.46
1:0:2079:A:H2'	1:0:2080:U:C6	2.51	0.46
1:0:2187:A:C2'	1:0:2188:A:H5'	2.45	0.46
1:0:2202:G:N2	1:0:2203:G:H1'	2.31	0.46
1:0:2228:U:O3'	1:0:2229:G:H4'	2.15	0.46
1:0:177:U:H5	1:0:225:G:N3	2.11	0.46
1:0:2322:U:H2'	1:0:2323:U:O4'	2.16	0.46
1:0:2712:G:H3'	1:0:2713:A:C5'	2.45	0.46
1:0:2806:G:O4'	1:0:2858:A:C2	2.69	0.46
1:0:297:A:C5	1:0:298:C:N4	2.84	0.46
1:0:322:A:OP1	1:0:343:A:C2	2.69	0.46
1:0:537:C:O2	1:0:538:A:N6	2.48	0.46
1:0:548:G:O2'	1:0:549:G:H5'	2.16	0.46
1:0:638:A:H2'	1:0:639:G:O4'	2.16	0.46
1:0:875:G:H2'	1:0:876:A:C5'	2.46	0.46
1:0:889:C:H2'	1:0:890:U:O4'	2.16	0.46
1:0:1040:A:H2'	1:0:1041:G:C5'	2.40	0.46
1:0:829:C:C4	1:0:1206:G:C2	3.04	0.46
1:0:1309:G:C2	1:0:1310:C:C2	3.04	0.46
1:0:1577:G:O2'	1:0:1578:U:H5'	2.16	0.46
1:0:1621:C:H5'	1:0:1626:A:N6	2.31	0.46
1:0:1882:G:C8	1:0:1882:G:H3'	2.51	0.46
1:0:538:A:H2	1:0:2026:C:C5'	2.29	0.46
1:0:2269:G:C2	1:0:2322:U:O2	2.69	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2277:A:H2'	1:0:2278:A:O4'	2.15	0.46
1:0:23:G:C2	1:0:24:G:C8	3.04	0.46
1:0:2501:U:H5''	1:0:2502:G:OP2	2.16	0.46
1:0:2857:C:C2'	1:0:2858:A:O5'	2.64	0.46
1:0:617:U:C2	1:0:632:A:N7	2.84	0.46
1:0:924:C:H2'	1:0:925:U:O4'	2.16	0.46
1:0:953:G:N7	1:0:954:U:C4	2.84	0.46
1:0:986:A:C2'	1:0:987:G:H5'	2.46	0.46
1:0:1019:U:O2'	1:0:1020:A:P	2.74	0.46
1:0:1221:C:C2	1:0:1222:G:N7	2.84	0.46
1:0:1298:G:C6	1:0:1342:U:C6	3.04	0.46
1:0:1427:G:H2'	1:0:1428:G:H5'	1.96	0.46
1:0:1455:C:N4	1:0:1456:C:N4	2.64	0.46
1:0:13:A:O2'	1:0:14:A:P	2.74	0.46
1:0:1622:G:H4'	1:0:1624:A:C2	2.50	0.46
1:0:1699:A:C4	1:0:1748:U:C2	3.04	0.46
1:0:2057:U:H4'	1:0:2577:A:O4'	2.16	0.46
1:0:2266:A:H61	1:0:2323:U:C2'	2.29	0.46
1:0:2262:C:C2	1:0:2368:G:N2	2.83	0.46
1:0:2636:A:H2'	1:0:2637:C:C5'	2.44	0.46
1:0:2742:G:O2'	1:0:2743:G:H5'	2.15	0.46
1:0:2812:A:H2'	1:0:2813:G:C8	2.50	0.46
1:0:2866:A:N7	1:0:2867:G:C5	2.84	0.46
1:0:468:A:N6	1:0:481:A:H5''	2.31	0.46
1:0:819:C:C2	1:0:820:U:C5	3.04	0.46
1:0:947:C:H2'	1:0:948:C:H6	1.81	0.46
1:0:1059:A:C8	1:0:1121:G:N2	2.73	0.46
1:0:1102:G:N2	1:0:1112:U:H1'	2.29	0.46
1:0:1119:U:O5'	1:0:1119:U:H6	1.98	0.46
1:0:1193:G:O2'	1:0:1194:U:P	2.73	0.46
1:0:1459:U:C6	1:0:1475:U:H2'	2.51	0.46
1:0:1799:A:O2'	1:0:1800:A:OP1	2.31	0.46
1:0:1956:G:H8	1:0:1956:G:H5'	1.81	0.46
1:0:201:G:H2'	1:0:202:A:O4'	2.16	0.46
1:0:211:U:O2	1:0:212:U:O4'	2.34	0.46
1:0:2198:U:P	1:0:2199:C:H5''	2.55	0.46
1:0:2231:G:H2'	1:0:2232:G:H5'	1.98	0.46
1:0:2343:C:H2'	1:0:2344:G:H5'	1.98	0.46
1:0:2505:G:N1	1:0:2517:C:C2	2.83	0.46
1:0:2034:A:C6	1:0:2593:A:C4	3.04	0.46
1:0:2655:C:H2'	1:0:2656:G:C8	2.51	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:412:U:C2'	1:0:413:G:H5'	2.42	0.46
1:0:713:G:C6	1:0:746:G:C2	3.04	0.46
1:0:1137:A:H4'	1:0:1138:A:C5'	2.47	0.45
1:0:124:A:H8	1:0:125:A:C4	2.34	0.45
1:0:1305:C:H2'	1:0:1306:U:H6	1.81	0.45
1:0:202:A:H2'	1:0:203:G:H5'	1.98	0.45
1:0:2083:G:H2'	1:0:2084:G:O4'	2.16	0.45
1:0:2311:U:O4'	1:0:2315:A:N6	2.49	0.45
1:0:840:U:O4	1:0:2409:A:C5	2.69	0.45
1:0:2450:A:N7	1:0:2451:G:N7	2.64	0.45
1:0:2652:G:H2'	1:0:2653:A:C8	2.42	0.45
1:0:2663:U:N3	1:0:2664:G:C8	2.84	0.45
1:0:2867:G:H4'	1:0:2868:G:O4'	2.17	0.45
1:0:469:G:H22	1:0:480:G:C2'	2.24	0.45
1:0:495:C:H2'	1:0:496:C:C6	2.50	0.45
1:0:578:U:H1'	1:0:958:G:O4'	2.16	0.45
1:0:66:U:C2	1:0:67:G:N7	2.84	0.45
1:0:672:C:O5'	1:0:672:C:H6	1.99	0.45
1:0:681:A:H2'	1:0:683:A:N7	2.31	0.45
1:0:104:C:H2'	1:0:105:G:H8	1.81	0.45
1:0:1255:A:O2'	1:0:1256:C:H5'	2.16	0.45
1:0:1426:U:H3'	1:0:1428:G:N2	2.31	0.45
1:0:1429:A:H1'	1:0:1603:A:N6	2.29	0.45
1:0:1429:A:O2'	1:0:1430:G:H4'	2.15	0.45
1:0:1439:G:N2	1:0:1440:G:C2	2.84	0.45
1:0:1539:U:N3	1:0:1540:C:C5	2.84	0.45
1:0:712:A:H2	1:0:1650:A:N3	2.14	0.45
1:0:1761:G:C2	1:0:1966:C:O2	2.70	0.45
1:0:1915:A:H2'	1:0:1916:G:O4'	2.16	0.45
1:0:20:C:HO2'	1:0:21:A:H5'	1.80	0.45
1:0:2205:C:C2'	1:0:2206:C:H5'	2.46	0.45
1:0:2665:G:C6	1:0:2666:U:N3	2.83	0.45
1:0:26:G:C6	1:0:27:G:C2	3.05	0.45
1:0:494:A:H3'	1:0:495:C:C6	2.52	0.45
1:0:605:G:H2'	1:0:606:A:H8	1.81	0.45
1:0:620:G:C4	1:0:621:U:C5	3.04	0.45
1:0:629:C:O2	1:0:629:C:H2'	2.17	0.45
1:0:725:C:O5'	1:0:725:C:H6	1.99	0.45
1:0:59:G:C2	1:0:73:A:C6	3.04	0.45
1:0:796:A:H2'	1:0:797:A:H4'	1.99	0.45
1:0:1218:C:H2'	1:0:1219:C:C6	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1299:A:C6	1:0:1302:C:C2	3.05	0.45
1:0:1292:A:C2	1:0:1305:C:C2	3.04	0.45
1:0:1340:C:O2'	1:0:1341:G:H5'	2.16	0.45
1:0:1633:C:O2'	1:0:1634:A:O5'	2.34	0.45
1:0:165:G:N7	1:0:166:G:N7	2.65	0.45
1:0:171:G:H2'	1:0:172:A:O4'	2.16	0.45
1:0:1778:U:C3'	1:0:1779:C:H6	2.28	0.45
1:0:1840:A:H2'	1:0:1841:G:C5'	2.47	0.45
1:0:572:G:H1'	1:0:2001:G:N2	2.30	0.45
1:0:2093:G:H3'	1:0:2103:G:OP2	2.17	0.45
1:0:2625:U:H6	1:0:2625:U:O5'	1.98	0.45
1:0:2678:C:C4	1:0:2679:G:N7	2.84	0.45
1:0:395:G:C4	1:0:396:U:C5	3.04	0.45
1:0:437:G:O2'	1:0:438:G:H5'	2.16	0.45
1:0:470:U:C4	1:0:480:G:N2	2.84	0.45
1:0:468:A:N1	1:0:481:A:H5''	2.32	0.45
1:0:641:G:N2	1:0:643:A:H3'	2.32	0.45
1:0:700:C:H2'	1:0:701:U:C1'	2.47	0.45
1:0:741:G:O2'	1:0:742:G:OP1	2.34	0.45
1:0:119:G:H2'	1:0:120:G:C8	2.51	0.45
1:0:1209:G:O2'	1:0:1210:C:H5'	2.16	0.45
1:0:1294:G:N3	1:0:1303:U:O2	2.50	0.45
1:0:1301:U:C2'	1:0:1340:C:O2	2.65	0.45
1:0:1346:C:N3	1:0:1347:C:C5	2.85	0.45
1:0:1435:G:H2'	1:0:1436:G:C5'	2.46	0.45
1:0:1480:G:H2'	1:0:1481:U:O4'	2.15	0.45
1:0:1534:A:N6	1:0:1535:C:N4	2.65	0.45
1:0:1679:U:C3'	1:0:1680:U:H5''	2.45	0.45
1:0:1713:G:H2'	1:0:1714:A:O4'	2.17	0.45
1:0:1780:A:C6	1:0:1781:C:C4	3.05	0.45
1:0:192:G:H1'	1:0:193:A:H4'	1.99	0.45
1:0:1950:C:C4	1:0:1951:G:C5	3.05	0.45
1:0:2027:C:N1	1:0:2604:G:N2	2.64	0.45
1:0:976:C:O4'	1:0:2252:A:N3	2.49	0.45
1:0:2358:C:H2'	1:0:2359:U:C6	2.51	0.45
1:0:2439:U:H2'	1:0:2440:C:H5'	1.98	0.45
1:0:2462:C:C4	1:0:2463:G:N7	2.85	0.45
1:0:2466:G:H2'	1:0:2467:A:H8	1.82	0.45
1:0:2532:G:C2	1:0:2533:U:H1'	2.51	0.45
1:0:2697:G:N1	1:0:2698:G:C5	2.84	0.45
1:0:60:A:C2'	1:0:61:U:H5'	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:658:G:H2'	1:0:659:G:C8	2.51	0.45
1:0:697:G:O2'	1:0:801:A:N6	2.39	0.45
1:0:812:G:C6	1:0:813:A:C6	3.04	0.45
1:0:858:G:H8	1:0:858:G:O5'	1.99	0.45
1:0:118:U:O2	1:0:118:U:H2'	2.15	0.45
1:0:1223:G:H5'	1:0:1225:G:C1'	2.47	0.45
1:0:1233:A:O2'	1:0:1234:C:OP1	2.31	0.45
1:0:1326:U:C3'	1:0:1326:U:C6	3.00	0.45
1:0:1410:U:HO2'	1:0:1411:C:P	2.40	0.45
1:0:1474:A:C6	1:0:1476:G:C4	3.04	0.45
1:0:1480:G:O2'	1:0:1481:U:H5'	2.16	0.45
1:0:1498:G:H22	1:0:1523:A:C1'	2.27	0.45
1:0:1692:C:H2'	1:0:1693:A:H5'	1.98	0.45
1:0:1823:G:H2'	1:0:1824:C:H6	1.78	0.45
1:0:187:U:H2'	1:0:188:G:C8	2.51	0.45
1:0:1923:U:O2'	1:0:1925:C:N4	2.38	0.45
1:0:2362:G:H2'	1:0:2363:G:H8	1.82	0.45
1:0:2396:C:H2'	1:0:2397:A:O4'	2.16	0.45
1:0:2639:A:H2'	1:0:2640:G:C8	2.51	0.45
1:0:2840:U:C5	1:0:2841:U:C5	3.04	0.45
1:0:446:C:H2'	1:0:447:U:O4'	2.17	0.45
1:0:58:C:C5	1:0:72:A:N6	2.85	0.45
1:0:801:A:O2'	1:0:802:A:P	2.73	0.45
1:0:826:U:N1	1:0:1209:G:N2	2.64	0.45
1:0:829:C:O2'	1:0:830:C:H5'	2.17	0.45
1:0:1294:G:C6	1:0:1295:U:C4	3.05	0.45
1:0:1440:G:O6	1:0:1441:A:N6	2.50	0.45
1:0:1469:U:H3'	1:0:1470:G:N7	2.32	0.45
1:0:1666:G:C2	1:0:1667:A:C4	3.05	0.45
1:0:1673:C:H2'	1:0:1674:C:C6	2.36	0.45
1:0:1689:U:C2'	1:0:1690:U:C5'	2.95	0.45
1:0:1711:C:O2'	1:0:1712:G:OP2	2.30	0.45
1:0:1822:C:O2'	1:0:1823:G:H5'	2.16	0.45
1:0:2003:A:C2	1:0:2018:G:C2	3.04	0.45
1:0:2068:C:H1'	1:0:2214:G:N2	2.31	0.45
1:0:2273:C:H2'	1:0:2274:C:H6	1.82	0.45
1:0:2379:G:C2'	1:0:2380:U:H5'	2.47	0.45
1:0:2460:G:C2'	1:0:2461:G:OP2	2.64	0.45
1:0:2503:G:H2'	1:0:2504:G:C5'	2.35	0.45
1:0:2516:U:H2'	1:0:2517:C:O4'	2.16	0.45
1:0:26:G:H1'	1:0:525:A:H61	1.81	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2844:G:C2'	1:0:2845:C:H5'	2.47	0.45
1:0:388:G:H2'	1:0:389:G:O4'	2.17	0.45
1:0:223:C:O2'	1:0:398:C:H5'	2.16	0.45
1:0:541:C:C4	1:0:542:A:N3	2.85	0.45
1:0:764:A:C2	1:0:802:A:C4	3.04	0.45
1:0:813:A:C2	1:0:815:A:H8	2.34	0.45
1:0:978:U:H2'	1:0:979:A:H8	1.80	0.45
1:0:1007:A:C2	1:0:1008:G:C8	3.04	0.45
1:0:1197:U:O5'	1:0:1197:U:H6	1.99	0.45
1:0:1448:A:O2'	1:0:1449:C:H5'	2.17	0.45
1:0:1625:A:C6	1:0:1632:A:C2	3.04	0.45
1:0:1744:G:H2'	1:0:1746:A:OP2	2.17	0.45
1:0:1913:G:HO2'	1:0:1914:U:P	2.40	0.45
1:0:2034:A:N6	1:0:2593:A:H2'	2.31	0.45
1:0:2059:U:O5'	1:0:2217:G:N2	2.50	0.45
1:0:2231:G:H2'	1:0:2232:G:C5'	2.47	0.45
1:0:2240:C:H1'	1:0:2367:A:H1'	1.97	0.45
1:0:2434:G:C5	1:0:2435:C:N4	2.84	0.45
1:0:1654:A:H4'	1:0:2690:A:O2'	2.16	0.45
1:0:2794:G:C2	1:0:2803:C:C2	3.04	0.45
1:0:2825:A:H5'	1:0:2843:A:C2	2.50	0.45
1:0:395:G:C6	1:0:396:U:C4	3.04	0.45
1:0:580:A:O2'	1:0:582:G:OP2	2.31	0.45
1:0:611:C:H2'	1:0:614:G:H5''	1.99	0.45
1:0:66:U:H1'	1:0:87:G:N2	2.32	0.45
1:0:79:G:H2'	1:0:80:A:H8	1.81	0.45
1:0:914:C:H2'	1:0:915:C:H6	1.81	0.45
1:0:1141:U:O2'	1:0:1142:G:O5'	2.35	0.45
1:0:1175:A:C2	1:0:1176:U:C2	3.05	0.45
1:0:1179:A:H2'	1:0:1180:A:C8	2.52	0.45
1:0:1205:G:N2	1:0:1206:G:C1'	2.80	0.45
1:0:162:C:H2'	1:0:163:A:C8	2.49	0.45
1:0:177:U:O2	1:0:177:U:C2'	2.64	0.45
1:0:1784:C:O5'	1:0:1784:C:H6	1.99	0.45
1:0:2094:C:N4	1:0:2103:G:C4	2.85	0.45
1:0:2162:C:O2	1:0:2162:C:H2'	2.17	0.45
1:0:2692:A:C5'	1:0:2693:U:H5'	2.45	0.45
1:0:26:G:C6	1:0:27:G:N2	2.85	0.45
1:0:471:A:C2	1:0:481:A:C5	3.04	0.45
1:0:498:C:O2'	1:0:499:G:H5'	2.17	0.45
1:0:538:A:N7	1:0:2025:A:C6	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:584:A:C2	1:0:585:U:C5	3.04	0.45
1:0:718:A:H62	1:0:739:G:H1'	1.81	0.45
1:0:865:A:C5	1:0:866:U:C4	3.05	0.45
1:0:922:A:H2'	1:0:923:A:O4'	2.16	0.45
1:0:131:C:O5'	1:0:131:C:H6	1.99	0.45
1:0:1415:C:H2'	1:0:1416:A:H5'	1.99	0.45
1:0:1559:G:O5'	1:0:1559:G:H8	1.99	0.45
1:0:1605:A:O2'	1:0:1606:C:H5'	2.16	0.45
1:0:1706:A:N7	1:0:1715:A:C2	2.85	0.45
1:0:1820:G:O2'	1:0:1821:A:OP1	2.33	0.45
1:0:1927:U:C2'	1:0:1927:U:O2	2.65	0.45
1:0:225:G:C5'	1:0:226:C:H5''	2.47	0.45
1:0:2447:G:O2'	1:0:2448:A:C8	2.66	0.45
1:0:2469:G:C4'	1:0:2470:U:OP1	2.65	0.45
1:0:2534:U:C6	1:0:2535:C:C6	3.05	0.45
1:0:536:A:H61	1:0:2605:C:H4'	1.80	0.45
1:0:493:A:H5''	1:0:494:A:OP1	2.16	0.45
1:0:611:C:O2	1:0:614:G:C5'	2.65	0.45
1:0:60:A:C5	1:0:61:U:C5	3.05	0.45
1:0:879:A:O2'	1:0:880:C:H5'	2.16	0.45
1:0:994:A:N6	1:0:995:A:C2	2.85	0.45
1:0:1375:C:H2'	1:0:1375:C:O2	2.15	0.45
1:0:1424:U:H2'	1:0:1425:G:O4'	2.17	0.45
1:0:1790:G:O2'	1:0:1791:C:OP2	2.30	0.45
1:0:1824:C:O5'	1:0:1824:C:H6	1.99	0.45
1:0:1757:C:O2	1:0:1970:G:C2	2.70	0.45
1:0:1279:G:H22	1:0:1995:G:H2'	1.82	0.45
1:0:2021:G:O2'	1:0:2022:C:H5'	2.17	0.45
1:0:2103:G:N1	1:0:2162:C:N4	2.65	0.45
1:0:229:G:H2'	1:0:230:C:H6	1.81	0.45
1:0:2359:U:H6	1:0:2359:U:O5'	2.00	0.45
1:0:2395:C:N4	1:0:2396:C:N4	2.64	0.45
1:0:1038:U:O2	1:0:2466:G:O3'	2.35	0.45
1:0:2519:C:C2'	1:0:2520:A:H5'	2.46	0.45
1:0:2703:C:O2'	1:0:2704:U:H5'	2.17	0.45
1:0:600:G:O2'	1:0:601:A:H5'	2.18	0.45
1:0:611:C:O2	1:0:614:G:C4'	2.57	0.45
1:0:640:C:C4'	1:0:660:G:H21	2.30	0.45
1:0:651:C:C3'	1:0:652:C:C5'	2.95	0.45
1:0:67:G:C2	1:0:72:A:C2	3.05	0.45
1:0:475:U:C2	1:0:801:A:N6	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:813:A:C2	1:0:815:A:C8	3.05	0.45
1:0:1038:U:H2'	1:0:1039:A:O4'	2.17	0.44
1:0:1417:C:H2'	1:0:1418:C:H6	1.82	0.44
1:0:1854:G:H2'	1:0:1855:G:H8	1.83	0.44
1:0:1939:U:C4	1:0:1940:C:C4	3.04	0.44
1:0:1997:A:H8	1:0:1997:A:O5'	2.00	0.44
1:0:2093:G:O2'	1:0:2094:C:H6	2.00	0.44
1:0:2252:A:C8	1:0:2253:A:C8	3.06	0.44
1:0:2366:U:H6	1:0:2366:U:H3'	1.82	0.44
1:0:2394:G:C6	1:0:2395:C:C4	3.04	0.44
1:0:2523:G:H2'	1:0:2524:G:H8	1.82	0.44
1:0:2540:A:N6	1:0:2541:U:C4	2.84	0.44
1:0:2687:G:O2'	1:0:2688:G:H5'	2.17	0.44
1:0:2824:C:O2'	1:0:2825:A:P	2.75	0.44
1:0:2841:U:HO2'	1:0:2842:C:P	2.40	0.44
1:0:364:G:H2'	1:0:365:U:C6	2.51	0.44
1:0:485:G:O6	1:0:520:C:N4	2.51	0.44
1:0:521:U:O4	1:0:522:G:N2	2.50	0.44
1:0:632:A:H2	1:0:633:G:C5	2.35	0.44
1:0:650:U:H2'	1:0:651:C:H6	1.82	0.44
1:0:691:C:C2	1:0:692:C:C5	3.05	0.44
1:0:705:C:O2'	1:0:706:A:H5'	2.17	0.44
1:0:831:G:H5'	1:0:852:U:OP1	2.17	0.44
1:0:1111:C:OP2	1:0:1112:U:H5	2.00	0.44
1:0:54:G:N2	1:0:114:C:N1	2.65	0.44
1:0:1153:A:O2'	1:0:1154:A:C3'	2.66	0.44
1:0:1168:G:H8	1:0:1168:G:O5'	2.00	0.44
1:0:1393:G:C2	1:0:1394:G:C8	3.05	0.44
1:0:167:A:C6	1:0:168:A:C6	3.05	0.44
1:0:180:C:C2	1:0:181:A:N7	2.85	0.44
1:0:192:G:O2'	1:0:193:A:C5'	2.65	0.44
1:0:198:A:C8	1:0:243:G:C6	3.06	0.44
1:0:540:G:H1'	1:0:2004:U:O2'	2.17	0.44
1:0:2182:A:C2	1:0:2183:C:H1'	2.52	0.44
1:0:2058:U:H2'	1:0:2217:G:N2	2.32	0.44
1:0:2370:G:H22	1:0:2406:C:H4'	1.81	0.44
1:0:2656:G:H2'	1:0:2657:G:C8	2.51	0.44
1:0:2753:C:C6	1:0:2754:C:H5	2.35	0.44
1:0:318:G:H5'	1:0:318:G:H8	1.83	0.44
1:0:344:G:C6	1:0:345:U:C4	3.05	0.44
1:0:309:G:N2	1:0:351:A:H62	2.14	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:48:A:H4'	1:0:49:U:H5''	1.99	0.44
1:0:49:U:H2'	1:0:50:G:OP1	2.17	0.44
1:0:531:G:C2	1:0:532:A:C5	3.05	0.44
1:0:698:A:C4'	1:0:700:C:H41	2.29	0.44
1:0:1177:U:N3	1:0:1197:U:O2	2.51	0.44
1:0:1682:A:H2'	1:0:1683:G:O4'	2.17	0.44
1:0:1711:C:C2'	1:0:1712:G:OP2	2.66	0.44
1:0:1826:U:H1'	1:0:1955:G:N2	2.32	0.44
1:0:2235:G:C6	1:0:2236:U:C4	3.05	0.44
1:0:2236:U:H2'	1:0:2237:C:O4'	2.18	0.44
1:0:2324:G:C2'	1:0:2325:A:OP2	2.65	0.44
1:0:2840:U:C4	1:0:2841:U:H5	2.34	0.44
1:0:337:G:O2'	1:0:338:G:H5'	2.16	0.44
1:0:391:C:H2'	1:0:392:G:H5'	1.99	0.44
1:0:40:U:H2'	1:0:41:G:O4'	2.16	0.44
1:0:488:A:H2'	1:0:489:A:O4'	2.16	0.44
1:0:586:G:C6	1:0:587:A:N6	2.85	0.44
1:0:78:C:C4	1:0:106:G:N1	2.86	0.44
1:0:935:C:H2'	1:0:936:A:H8	1.82	0.44
1:0:963:G:C6	1:0:977:G:C6	3.04	0.44
1:0:1167:A:C5'	1:0:1168:G:OP2	2.63	0.44
1:0:1341:G:H2'	1:0:1343:C:C4	2.52	0.44
1:0:1385:C:C2	1:0:1386:A:C8	3.05	0.44
1:0:168:A:O2'	1:0:169:C:H5'	2.16	0.44
1:0:1715:A:O2'	1:0:1716:G:C3'	2.65	0.44
1:0:1781:C:H5''	1:0:1782:A:OP1	2.17	0.44
1:0:1865:C:N4	1:0:1866:G:H21	2.16	0.44
1:0:1872:A:H1'	1:0:2069:U:O2'	2.16	0.44
1:0:2350:G:C2	1:0:2351:G:C5	3.06	0.44
1:0:2629:U:H2'	1:0:2630:C:H6	1.81	0.44
1:0:2713:A:H2'	1:0:2714:A:C8	2.51	0.44
1:0:2756:A:N6	1:0:2762:G:C4	2.86	0.44
1:0:2791:C:O2'	1:0:2792:C:H5'	2.16	0.44
1:0:2799:C:C4	1:0:2800:C:N3	2.85	0.44
1:0:2836:U:O2'	1:0:2837:G:H5'	2.18	0.44
1:0:304:A:N6	1:0:356:A:N7	2.66	0.44
1:0:356:A:O2'	1:0:357:A:H8	2.01	0.44
1:0:510:G:H2'	1:0:512:A:OP2	2.17	0.44
1:0:67:G:H2'	1:0:68:C:H6	1.82	0.44
1:0:765:C:O2'	1:0:766:A:P	2.75	0.44
1:0:819:C:C2	1:0:820:U:H5	2.35	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:998:C:O2	1:0:1011:A:H2	2.01	0.44
1:0:1016:C:N3	1:0:1154:A:C4	2.85	0.44
1:0:1159:U:O2'	1:0:1160:C:H5'	2.18	0.44
1:0:1213:U:H2'	1:0:1214:C:C6	2.53	0.44
1:0:1265:G:O2'	1:0:1266:G:C4	2.66	0.44
1:0:1310:C:H2'	1:0:1311:C:H6	1.80	0.44
1:0:1351:G:H2'	1:0:1352:G:C8	2.53	0.44
1:0:1523:A:O5'	1:0:1523:A:H8	2.01	0.44
1:0:1345:G:N7	1:0:1625:A:N6	2.66	0.44
1:0:1635:G:N1	1:0:1636:G:C5	2.86	0.44
1:0:1901:A:H2'	1:0:1902:A:C8	2.52	0.44
1:0:2011:U:H2'	1:0:2012:A:O4'	2.18	0.44
1:0:2091:C:H2'	1:0:2092:U:H5'	1.99	0.44
1:0:216:U:O2'	1:0:217:U:H5'	2.18	0.44
1:0:2308:A:O2'	1:0:2309:G:H5'	2.18	0.44
1:0:2316:G:OP2	1:0:2317:G:OP2	2.35	0.44
1:0:2324:G:N3	1:0:2326:C:C5	2.85	0.44
1:0:2569:A:O2'	1:0:2570:C:H5'	2.17	0.44
1:0:2691:C:H3'	1:0:2692:A:H5''	1.95	0.44
1:0:494:A:H3'	1:0:495:C:C5	2.52	0.44
1:0:496:C:N3	1:0:506:G:C2	2.86	0.44
1:0:604:U:C2'	1:0:604:U:O2	2.65	0.44
1:0:634:G:H8	1:0:634:G:O5'	2.00	0.44
1:0:76:C:C6	1:0:76:C:H5'	2.30	0.44
1:0:827:C:H2'	1:0:828:C:O5'	2.18	0.44
1:0:1032:A:H3'	1:0:1032:A:C8	2.52	0.44
1:0:1073:G:C2	1:0:1074:G:H1'	2.53	0.44
1:0:1177:U:O2	1:0:1196:G:N2	2.51	0.44
1:0:1326:U:C6	1:0:1326:U:H3'	2.52	0.44
1:0:1464:A:N6	1:0:1465:G:C6	2.85	0.44
1:0:1469:U:H3'	1:0:1470:G:C8	2.53	0.44
1:0:1490:U:C2	1:0:1534:A:C2	3.06	0.44
1:0:1314:A:C2	1:0:1642:G:N3	2.85	0.44
1:0:1668:G:C2	1:0:1990:U:C2	3.06	0.44
1:0:1723:U:C5	1:0:1748:U:OP2	2.70	0.44
1:0:2104:G:O2'	1:0:2105:U:H5'	2.17	0.44
1:0:2261:G:H4'	1:0:2262:C:O5'	2.18	0.44
1:0:2343:C:H2'	1:0:2344:G:C5'	2.47	0.44
1:0:1774:A:H2	1:0:2567:G:C8	2.35	0.44
1:0:2691:C:H2'	1:0:2692:A:C4'	2.47	0.44
1:0:2705:A:C4	1:0:2707:G:C8	3.06	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2757:G:H8	1:0:2757:G:H3'	1.81	0.44
1:0:421:G:C2	1:0:422:C:C2	3.06	0.44
1:0:48:A:N6	1:0:154:U:C6	2.86	0.44
1:0:500:G:C5	1:0:1297:A:C2	3.06	0.44
1:0:616:U:N3	1:0:617:U:C5	2.86	0.44
1:0:613:A:C4	1:0:636:G:N2	2.86	0.44
1:0:65:C:C2'	1:0:66:U:H5'	2.47	0.44
1:0:879:A:N6	1:0:926:C:C5	2.86	0.44
1:0:1255:A:C4	1:0:1256:C:C5	3.05	0.44
1:0:1391:A:N7	1:0:1393:G:C6	2.85	0.44
1:0:1657:A:H2'	1:0:1658:A:O4'	2.17	0.44
1:0:1788:C:C4	1:0:1789:U:C5	3.06	0.44
1:0:1799:A:HO2'	1:0:1800:A:P	2.41	0.44
1:0:1966:C:O2'	1:0:1967:U:H5'	2.18	0.44
1:0:2015:G:C2	1:0:2038:C:N3	2.86	0.44
1:0:2187:A:O2'	1:0:2188:A:H5'	2.17	0.44
1:0:468:A:N3	1:0:470:U:C4	2.86	0.44
1:0:48:A:H5'	1:0:49:U:O5'	2.18	0.44
1:0:628:A:N7	1:0:629:C:C5	2.86	0.44
1:0:639:G:H2'	1:0:640:C:H6	1.82	0.44
1:0:677:G:O2'	1:0:678:G:H5'	2.17	0.44
1:0:787:A:H2'	1:0:788:G:H8	1.81	0.44
1:0:806:A:H2'	1:0:807:A:OP2	2.18	0.44
1:0:941:U:H2'	1:0:942:U:O4'	2.17	0.44
1:0:1193:G:H2'	1:0:1194:U:H6	1.80	0.44
1:0:1198:C:O5'	1:0:1199:U:H4'	2.17	0.44
1:0:1200:G:H2'	1:0:1201:G:O4'	2.17	0.44
1:0:1312:G:C2'	1:0:1643:A:N6	2.81	0.44
1:0:1469:U:P	1:0:1470:G:OP2	2.76	0.44
1:0:1681:A:N3	1:0:2706:U:C2	2.86	0.44
1:0:1697:U:O2'	1:0:1754:G:N7	2.37	0.44
1:0:1790:G:O2'	1:0:1791:C:P	2.76	0.44
1:0:1842:G:H2'	1:0:1843:U:H6	1.82	0.44
1:0:167:A:C4	1:0:184:A:C2	3.05	0.44
1:0:1908:C:H2'	1:0:1909:U:C4'	2.44	0.44
1:0:2084:G:C2	1:0:2085:G:N7	2.85	0.44
1:0:2312:A:O2'	1:0:2313:G:P	2.76	0.44
1:0:1040:A:H2	1:0:2444:C:O2	2.01	0.44
1:0:2469:G:C5'	1:0:2470:U:OP1	2.66	0.44
1:0:2542:U:H1'	1:0:2545:A:C5	2.52	0.44
1:0:2657:G:HO2'	1:0:2658:A:H5'	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2748:C:C4	1:0:2749:A:N7	2.86	0.44
1:0:591:G:H2'	1:0:592:G:O4'	2.17	0.44
1:0:593:C:N4	1:0:594:G:C6	2.85	0.44
1:0:622:U:H2'	1:0:623:G:H5'	1.99	0.44
1:0:683:A:H4'	1:0:684:C:O5'	2.18	0.44
1:0:765:C:C2'	1:0:766:A:OP2	2.66	0.44
1:0:787:A:C2	1:0:788:G:C6	3.06	0.44
1:0:80:A:O4'	1:0:305:A:H2	2.01	0.44
1:0:951:G:H2'	1:0:952:A:O4'	2.17	0.44
1:0:984:A:O2'	1:0:985:G:P	2.75	0.44
1:0:102:C:H6	1:0:102:C:O5'	2.01	0.44
1:0:1196:G:O2'	1:0:1197:U:H5'	2.17	0.44
1:0:1206:G:C6	1:0:1207:G:N7	2.86	0.44
1:0:1226:A:C1'	1:0:1250:A:C2	3.00	0.44
1:0:1223:G:C2	1:0:1250:A:N7	2.85	0.44
1:0:1441:A:C2'	1:0:1441:A:N3	2.81	0.44
1:0:1479:G:N2	1:0:1543:G:H21	2.16	0.44
1:0:1518:C:H2'	1:0:1519:G:H8	1.82	0.44
1:0:1593:C:H2'	1:0:1594:U:O4'	2.17	0.44
1:0:1684:G:O2'	1:0:1974:U:O4	2.36	0.44
1:0:1716:G:O2'	1:0:1717:A:OP1	2.34	0.44
1:0:1895:A:C8	1:0:1896:A:N7	2.86	0.44
1:0:2043:A:H4'	1:0:2481:G:O4'	2.18	0.44
1:0:210:A:N6	1:0:442:A:H61	2.16	0.44
1:0:211:U:O2'	1:0:212:U:H5'	2.18	0.44
1:0:221:A:C2	1:0:222:G:C1'	3.00	0.44
1:0:2240:C:C4	1:0:2259:G:N1	2.86	0.44
1:0:23:G:N2	1:0:24:G:H1'	2.32	0.44
1:0:2710:C:H2'	1:0:2711:G:C8	2.52	0.44
1:0:2818:G:N2	1:0:2850:U:C2	2.86	0.44
1:0:2846:G:O2'	1:0:2847:G:H5''	2.17	0.44
1:0:322:A:H1'	1:0:343:A:C4	2.53	0.44
1:0:630:G:H5''	1:0:631:G:OP2	2.18	0.44
1:0:63:A:H2'	1:0:63:A:N3	2.33	0.44
1:0:664:C:H2'	1:0:665:A:C8	2.52	0.44
1:0:68:C:O2	1:0:69:G:C8	2.70	0.44
1:0:785:U:H2'	1:0:786:U:H6	1.81	0.44
1:0:78:C:H2'	1:0:79:G:C8	2.53	0.44
1:0:871:U:H1'	1:0:2248:A:H5''	1.99	0.44
1:0:929:A:O2'	1:0:930:A:OP1	2.30	0.44
1:0:1008:G:C2	1:0:1009:C:C6	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1300:A:H5''	1:0:1301:U:OP2	2.18	0.43
1:0:1309:G:C4	1:0:1662:G:N2	2.85	0.43
1:0:1382:G:O2'	1:0:1383:C:H5'	2.17	0.43
1:0:1434:U:H2'	1:0:1435:G:N7	2.32	0.43
1:0:1645:U:C4	1:0:1646:G:N7	2.86	0.43
1:0:1678:G:O2'	1:0:1679:U:H5'	2.18	0.43
1:0:1794:A:H61	1:0:1806:G:C2'	2.31	0.43
1:0:2010:G:C2	1:0:2020:G:C5	3.06	0.43
1:0:2161:C:O2	1:0:2162:C:H5	2.01	0.43
1:0:2205:C:O2'	1:0:2206:C:H5'	2.17	0.43
1:0:976:C:C1'	1:0:2252:A:N3	2.81	0.43
1:0:2299:A:H5'	1:0:2300:G:OP1	2.18	0.43
1:0:2691:C:O2'	1:0:2692:A:N3	2.42	0.43
1:0:2699:G:HO2'	1:0:2700:U:H6	1.65	0.43
1:0:2720:A:C6	1:0:2721:A:C6	3.05	0.43
1:0:333:A:O4'	1:0:351:A:H1'	2.18	0.43
1:0:340:G:C4'	1:0:341:A:OP2	2.66	0.43
1:0:425:A:N7	1:0:2390:A:H2	2.16	0.43
1:0:465:C:O2'	1:0:483:A:N6	2.47	0.43
1:0:536:A:O2'	1:0:2026:C:C2'	2.66	0.43
1:0:672:C:H2'	1:0:673:G:H5'	2.00	0.43
1:0:842:A:O2'	1:0:843:G:P	2.76	0.43
1:0:931:G:N2	1:0:932:G:H1'	2.33	0.43
1:0:986:A:H1'	1:0:1001:A:C2	2.53	0.43
1:0:1071:U:N3	1:0:1090:C:N4	2.65	0.43
1:0:1142:G:O2'	1:0:1143:A:O4'	2.35	0.43
1:0:1223:G:N9	1:0:1250:A:N6	2.65	0.43
1:0:1332:G:N2	1:0:1347:C:N1	2.67	0.43
1:0:1353:A:H4'	1:0:1354:A:OP2	2.19	0.43
1:0:1461:C:H2'	1:0:1462:C:H6	1.82	0.43
1:0:1715:A:HO2'	1:0:1716:G:H3'	1.83	0.43
1:0:1866:G:H2'	1:0:1867:A:C8	2.53	0.43
1:0:1928:G:OP2	1:0:1928:G:H8	2.01	0.43
1:0:1947:G:H5'	1:0:1948:C:OP2	2.17	0.43
1:0:2062:U:N3	1:0:2063:A:N7	2.66	0.43
1:0:2120:C:H2'	1:0:2121:U:H5'	2.00	0.43
1:0:2222:U:O2	1:0:2223:U:C6	2.70	0.43
1:0:2262:C:C5	1:0:2368:G:C4	3.06	0.43
1:0:2311:U:C1'	1:0:2315:A:H62	2.30	0.43
1:0:2876:C:C2'	1:0:2877:A:H5'	2.48	0.43
1:0:333:A:H5'	1:0:351:A:O4'	2.18	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:212:U:O2	1:0:443:A:C2	2.71	0.43
1:0:492:G:H1'	1:0:516:G:H21	1.83	0.43
1:0:534:U:H2'	1:0:535:U:C6	2.53	0.43
1:0:58:C:N1	1:0:72:A:N7	2.66	0.43
1:0:708:G:OP1	1:0:1393:G:O2'	2.29	0.43
1:0:777:A:C3'	1:0:778:G:H5'	2.48	0.43
1:0:791:G:C6	1:0:792:U:C2	3.05	0.43
1:0:826:U:C2	1:0:1209:G:N2	2.86	0.43
1:0:1168:G:O5'	1:0:1168:G:C8	2.71	0.43
1:0:1210:C:C2	1:0:1211:G:C8	3.06	0.43
1:0:1235:C:C2	1:0:1241:G:C2	3.07	0.43
1:0:1301:U:C4'	1:0:1302:C:OP2	2.66	0.43
1:0:118:U:H1'	1:0:143:A:C8	2.53	0.43
1:0:1764:A:C3'	1:0:1765:C:H5'	2.48	0.43
1:0:1764:A:C5	1:0:1821:A:H1'	2.53	0.43
1:0:1834:G:C2	1:0:1835:C:C2	3.06	0.43
1:0:2039:G:N3	1:0:2039:G:H2'	2.34	0.43
1:0:2057:U:C2	1:0:2415:G:C2	3.06	0.43
1:0:2068:C:O2	1:0:2068:C:C2'	2.66	0.43
1:0:2219:U:C2	1:0:2220:A:C8	3.07	0.43
1:0:2240:C:H2'	1:0:2241:U:C5'	2.47	0.43
1:0:219:G:HO2'	1:0:231:G:H1	1.64	0.43
1:0:2451:G:H2'	1:0:2454:C:H42	1.83	0.43
1:0:2434:G:N1	1:0:2477:C:N4	2.66	0.43
1:0:2607:C:O4'	1:0:2761:A:C2	2.72	0.43
1:0:2610:G:N3	1:0:2785:A:H2	2.16	0.43
1:0:501:G:O2'	1:0:502:A:H5'	2.18	0.43
1:0:58:C:O2	1:0:73:A:C2	2.72	0.43
1:0:624:A:C2'	1:0:625:A:C5'	2.90	0.43
1:0:633:G:H2'	1:0:634:G:O5'	2.18	0.43
1:0:827:C:N4	1:0:828:C:N4	2.67	0.43
1:0:84:G:H2'	1:0:85:C:O4'	2.17	0.43
1:0:912:A:H8	1:0:912:A:O5'	2.01	0.43
1:0:929:A:H2'	1:0:930:A:H5''	2.00	0.43
1:0:930:A:H5'	1:0:931:G:C8	2.53	0.43
1:0:105:G:H2'	1:0:106:G:H5'	2.01	0.43
1:0:1262:U:C3'	1:0:1262:U:C6	3.00	0.43
1:0:1332:G:N1	1:0:1333:G:C2	2.86	0.43
1:0:1348:C:H2'	1:0:1349:A:C8	2.53	0.43
1:0:1382:G:O4'	1:0:1799:A:N6	2.52	0.43
1:0:1515:U:O5'	1:0:1515:U:H6	2.02	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1431:U:C5'	1:0:1604:A:H1'	2.47	0.43
1:0:1631:C:H5	1:0:1633:C:N3	2.16	0.43
1:0:1674:C:O2	1:0:1674:C:C2'	2.65	0.43
1:0:1688:U:O2	1:0:1690:U:H3'	2.18	0.43
1:0:1776:A:C8	1:0:1778:U:C5	3.05	0.43
1:0:1876:C:H2'	1:0:1877:C:H5'	2.00	0.43
1:0:1895:A:H2'	1:0:1896:A:C8	2.37	0.43
1:0:1913:G:C2'	1:0:1914:U:OP2	2.66	0.43
1:0:2450:A:C5	1:0:2451:G:C8	3.07	0.43
1:0:2560:G:O6	1:0:2589:C:C6	2.72	0.43
1:0:2655:C:O2	1:0:2712:G:N2	2.52	0.43
1:0:2792:C:C2	1:0:2805:G:C2	3.07	0.43
1:0:2824:C:O4'	1:0:2843:A:C2	2.72	0.43
1:0:510:G:N2	1:0:512:A:OP1	2.51	0.43
1:0:577:U:O2	1:0:579:G:H8	2.00	0.43
1:0:619:A:N1	1:0:629:C:N3	2.66	0.43
1:0:640:C:H4'	1:0:660:G:N2	2.34	0.43
1:0:703:A:C2	1:0:786:U:N3	2.87	0.43
1:0:825:C:O2'	1:0:826:U:H5'	2.19	0.43
1:0:861:G:C8	1:0:862:A:N7	2.86	0.43
1:0:834:A:C8	1:0:957:G:C8	3.06	0.43
1:0:1110:G:H2'	1:0:1111:C:C6	2.54	0.43
1:0:1291:G:H2'	1:0:1292:A:O4'	2.19	0.43
1:0:1312:G:H2'	1:0:1643:A:H61	1.83	0.43
1:0:1332:G:C2	1:0:1333:G:N2	2.86	0.43
1:0:1347:C:H2'	1:0:1347:C:O2	2.17	0.43
1:0:1365:U:H1'	1:0:1586:A:C2	2.53	0.43
1:0:1368:G:C6	1:0:1390:G:N2	2.86	0.43
1:0:1550:C:O5'	1:0:1550:C:H6	2.01	0.43
1:0:1567:A:H2'	1:0:1568:A:H5'	2.01	0.43
1:0:1430:G:O2'	1:0:1603:A:N3	2.49	0.43
1:0:165:G:N1	1:0:186:C:C4	2.87	0.43
1:0:190:A:O2'	1:0:191:G:C5'	2.67	0.43
1:0:2045:A:H4'	1:0:2046:C:OP1	2.15	0.43
1:0:2168:A:N3	1:0:2168:A:C2'	2.76	0.43
1:0:1774:A:C6	1:0:2566:A:C2	3.05	0.43
1:0:1774:A:H5'	1:0:2587:G:H4'	2.00	0.43
1:0:1:G:H2'	1:0:2:G:O4'	2.18	0.43
1:0:404:A:C4	1:0:424:G:C2	3.07	0.43
1:0:544:U:H2'	1:0:545:C:C6	2.53	0.43
1:0:613:A:C5	1:0:636:G:N2	2.86	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:616:U:C2'	1:0:617:U:H5''	2.48	0.43
1:0:718:A:C8	1:0:740:A:N3	2.86	0.43
1:0:768:U:C5	1:0:769:C:C5	3.06	0.43
1:0:772:G:C4	1:0:773:G:C8	3.07	0.43
1:0:931:G:H2'	1:0:932:G:O4'	2.19	0.43
1:0:973:U:H2'	1:0:974:U:H6	1.83	0.43
1:0:1045:G:H2'	1:0:1046:U:H6	1.82	0.43
1:0:1211:G:H2'	1:0:1212:U:C6	2.49	0.43
1:0:1270:C:C2	1:0:1271:C:C5	3.07	0.43
1:0:1330:G:C6	1:0:1349:A:C6	3.07	0.43
1:0:1359:G:C6	1:0:1360:G:N7	2.86	0.43
1:0:1466:C:N3	1:0:1467:U:O2	2.52	0.43
1:0:1845:A:C6	1:0:1846:A:C6	3.07	0.43
1:0:192:G:H4'	1:0:193:A:H4'	2.01	0.43
1:0:2031:A:C6	1:0:2032:G:C5	3.07	0.43
1:0:2059:U:H4'	1:0:2060:A:OP1	2.17	0.43
1:0:2321:C:H2'	1:0:2322:U:O4'	2.18	0.43
1:0:2515:G:C6	1:0:2516:U:C4	3.06	0.43
1:0:2705:A:N7	1:0:2707:G:C5	2.87	0.43
1:0:2825:A:C8	1:0:2844:G:O4'	2.71	0.43
1:0:312:G:C4	1:0:313:U:C4	3.07	0.43
1:0:310:A:N6	1:0:333:A:O2'	2.51	0.43
1:0:470:U:C5	1:0:480:G:N2	2.86	0.43
1:0:623:G:C5'	1:0:626:A:H62	2.26	0.43
1:0:708:G:C4	1:0:709:A:C8	3.06	0.43
1:0:987:G:N3	1:0:988:G:C8	2.87	0.43
1:0:1016:C:C2	1:0:1154:A:C4	3.06	0.43
1:0:1144:U:H2'	1:0:1147:G:OP1	2.19	0.43
1:0:1211:G:C4	1:0:1212:U:H5	2.36	0.43
1:0:1381:G:C2	1:0:1382:G:N7	2.87	0.43
1:0:1391:A:N7	1:0:1393:G:N7	2.66	0.43
1:0:13:A:C2	1:0:535:U:N3	2.87	0.43
1:0:1404:C:N4	1:0:1407:G:C8	2.87	0.43
1:0:1713:G:C2'	1:0:1714:A:O5'	2.66	0.43
1:0:1742:G:C6	1:0:1743:C:N4	2.87	0.43
1:0:1781:C:H2'	1:0:1782:A:C5	2.53	0.43
1:0:1861:G:O2'	1:0:1862:C:H5'	2.18	0.43
1:0:1911:A:H2'	1:0:1912:G:H5'	2.01	0.43
1:0:1947:G:C6	1:0:1950:C:C4	3.07	0.43
1:0:2474:G:C5	1:0:2475:C:C5	3.07	0.43
1:0:2745:A:H2	1:0:2746:G:O4'	2.01	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2820:C:O2'	1:0:2821:G:C5'	2.60	0.43
1:0:497:C:O2	1:0:505:G:C2	2.71	0.43
1:0:510:G:H8	1:0:510:G:P	2.41	0.43
1:0:704:G:C2	1:0:705:C:C6	3.06	0.43
1:0:871:U:C5	1:0:932:G:N2	2.87	0.43
1:0:959:C:O2'	1:0:960:U:H5'	2.17	0.43
1:0:1016:C:H2'	1:0:1017:C:H6	1.84	0.43
1:0:1066:G:H3'	1:0:1067:G:C5'	2.49	0.43
1:0:1251:G:O2'	1:0:1252:C:H5'	2.19	0.43
1:0:1287:A:C2	1:0:1662:G:O4'	2.72	0.43
1:0:1493:A:C2	1:0:1573:G:N3	2.79	0.43
1:0:157:G:H5'	1:0:158:A:P	2.58	0.43
1:0:1322:G:H1'	1:0:1627:C:O2'	2.18	0.43
1:0:1666:G:C2	1:0:1667:A:C8	3.06	0.43
1:0:1769:U:C5	1:0:1775:A:N3	2.87	0.43
1:0:1827:G:H1'	1:0:1914:U:C2	2.54	0.43
1:0:1920:A:N1	1:0:1922:U:C4	2.87	0.43
1:0:2208:U:O2'	1:0:2209:G:H5'	2.19	0.43
1:0:2212:U:C2'	1:0:2213:G:C8	2.86	0.43
1:0:2243:C:O2'	1:0:2244:C:H5'	2.18	0.43
1:0:976:C:C4'	1:0:2252:A:N3	2.80	0.43
1:0:2324:G:C2	1:0:2326:C:N4	2.86	0.43
1:0:2543:A:C6	1:0:2544:A:N1	2.87	0.43
1:0:2687:G:N3	1:0:2688:G:C8	2.87	0.43
1:0:2772:U:C2	1:0:2781:G:C2	3.07	0.43
1:0:2820:C:H6	1:0:2820:C:O5'	2.01	0.43
1:0:495:C:H2'	1:0:496:C:H6	1.84	0.43
1:0:600:G:C6	1:0:602:C:C4	3.06	0.43
1:0:67:G:C2	1:0:73:A:N9	2.87	0.43
1:0:935:C:O2'	1:0:936:A:H5'	2.19	0.43
1:0:986:A:H2'	1:0:987:G:C5'	2.48	0.43
1:0:1007:A:N3	1:0:1008:G:C8	2.87	0.43
1:0:1022:A:C6	1:0:1024:G:C5	3.07	0.43
1:0:1151:U:O3'	1:0:1152:C:H3'	2.19	0.43
1:0:1174:G:N3	1:0:1175:A:C8	2.87	0.43
1:0:50:G:O2'	1:0:117:A:N1	2.35	0.43
1:0:1181:C:H3'	1:0:1182:U:C5'	2.49	0.43
1:0:1219:C:O5'	1:0:1219:C:H6	2.01	0.43
1:0:1231:A:H2'	1:0:1232:U:O4'	2.18	0.43
1:0:1578:U:H2'	1:0:1579:G:C8	2.53	0.43
1:0:2226:A:H2'	1:0:2227:C:C6	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2355:A:H2'	1:0:2356:A:O4'	2.19	0.43
1:0:2504:G:C8	1:0:2504:G:H5'	2.42	0.43
1:0:2501:U:O4	1:0:2520:A:H2	2.02	0.43
1:0:2532:G:N3	1:0:2533:U:H1'	2.34	0.43
1:0:2658:A:H2'	1:0:2659:C:C6	2.53	0.43
1:0:2522:G:C6	1:0:2745:A:C5	3.07	0.43
1:0:2834:A:O2'	1:0:2835:A:H5'	2.18	0.43
1:0:2824:C:C4'	1:0:2843:A:C2	3.02	0.43
1:0:462:G:OP1	1:0:1261:G:N2	2.49	0.43
1:0:583:C:O2'	1:0:584:A:OP2	2.30	0.43
1:0:754:G:C2	1:0:755:C:C5	3.07	0.43
1:0:774:A:O5'	1:0:774:A:H8	2.02	0.43
1:0:777:A:C2'	1:0:778:G:H5'	2.49	0.43
1:0:788:G:H4'	1:0:790:A:C4	2.54	0.43
1:0:829:C:H2'	1:0:830:C:C6	2.54	0.43
1:0:991:A:N7	1:0:992:A:N6	2.67	0.43
1:0:1188:A:C2'	1:0:1189:G:H5'	2.48	0.43
1:0:1177:U:C2	1:0:1197:U:O2	2.72	0.43
1:0:1002:C:C5	1:0:1198:C:C4	3.07	0.43
1:0:984:A:O4'	1:0:1202:U:C6	2.72	0.43
1:0:1208:A:C2	1:0:1209:G:C4	3.07	0.43
1:0:1391:A:H1'	1:0:1392:U:C4	2.54	0.43
1:0:1416:A:H2'	1:0:1417:C:C6	2.53	0.43
1:0:1453:A:C2	1:0:1569:A:C4	3.06	0.43
1:0:1459:U:C4	1:0:1476:G:C5'	3.02	0.43
1:0:1458:A:C2'	1:0:1459:U:H5''	2.48	0.43
1:0:1820:G:O2'	1:0:1821:A:P	2.76	0.43
1:0:1908:C:H6	1:0:1908:C:O5'	2.02	0.43
1:0:1925:C:N3	1:0:1926:U:O4	2.52	0.43
1:0:1937:G:H2'	1:0:1939:U:C5	2.53	0.43
1:0:1900:U:O2'	1:0:1946:U:O4'	2.36	0.43
1:0:1953:A:H4'	1:0:1954:A:O5'	2.18	0.43
1:0:1977:C:H2'	1:0:1978:U:C6	2.54	0.43
1:0:2233:C:O2'	1:0:2234:G:H5'	2.18	0.43
1:0:2352:A:C6	1:0:2353:G:C6	3.07	0.43
1:0:2042:A:C6	1:0:2482:A:N7	2.87	0.43
1:0:2571:G:H2'	1:0:2572:U:C6	2.54	0.43
1:0:2792:C:C2	1:0:2805:G:N2	2.87	0.43
1:0:2873:G:H2'	1:0:2874:A:C8	2.54	0.43
1:0:468:A:H61	1:0:481:A:H5''	1.83	0.43
1:0:572:G:C8	1:0:2001:G:C2	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:648:A:H5'	1:0:649:G:O5'	2.19	0.43
1:0:692:C:O2	1:0:693:A:C8	2.72	0.43
1:0:77:C:C2	1:0:78:C:C5	3.07	0.43
1:0:1016:C:O2	1:0:1154:A:C6	2.72	0.42
1:0:1199:U:H5	1:0:1201:G:N7	2.17	0.42
1:0:10:A:H2'	1:0:11:G:O4'	2.18	0.42
1:0:1328:C:C2	1:0:1329:U:C5	3.07	0.42
1:0:1367:A:H2'	1:0:1368:G:O4'	2.18	0.42
1:0:1447:U:C1'	1:0:1577:G:N2	2.79	0.42
1:0:1453:A:H2'	1:0:1454:U:C5'	2.40	0.42
1:0:1520:G:H2'	1:0:1521:U:C6	2.53	0.42
1:0:1529:C:H3'	1:0:1529:C:C6	2.54	0.42
1:0:1665:C:C2	1:0:1666:G:C8	3.07	0.42
1:0:1736:C:O2'	1:0:1737:G:H5'	2.19	0.42
1:0:1926:U:O2	1:0:1926:U:C2'	2.67	0.42
1:0:1994:U:O2'	1:0:1995:G:H5'	2.19	0.42
1:0:2493:U:H2'	1:0:2494:C:C6	2.54	0.42
1:0:2694:G:O2'	1:0:2695:C:H5'	2.19	0.42
1:0:2729:A:N6	1:0:2730:A:N6	2.67	0.42
1:0:2771:C:N4	1:0:2772:U:O4	2.52	0.42
1:0:309:G:C2	1:0:350:U:C5	3.08	0.42
1:0:356:A:H2'	1:0:357:A:N7	2.33	0.42
1:0:538:A:N1	1:0:2025:A:H2'	2.34	0.42
1:0:600:G:O2'	1:0:601:A:P	2.76	0.42
1:0:644:A:H1'	1:0:2382:C:O3'	2.19	0.42
1:0:71:A:C2'	1:0:72:A:OP1	2.67	0.42
1:0:59:G:N3	1:0:73:A:N1	2.67	0.42
1:0:865:A:N1	1:0:937:C:O2	2.51	0.42
1:0:974:U:H1'	1:0:2229:G:C6	2.54	0.42
1:0:1046:U:H2'	1:0:1047:G:C8	2.53	0.42
1:0:1135:C:O2'	1:0:1136:G:H5'	2.19	0.42
1:0:1234:C:O2	1:0:1242:A:N1	2.52	0.42
1:0:1253:C:C2	1:0:1254:G:C8	3.07	0.42
1:0:1407:G:N2	1:0:1411:C:C6	2.87	0.42
1:0:1402:G:N2	1:0:1412:C:C2	2.87	0.42
1:0:1754:G:C2'	1:0:1755:G:O5'	2.67	0.42
1:0:179:U:H2'	1:0:180:C:C6	2.54	0.42
1:0:1904:G:C4	1:0:1905:G:C8	3.07	0.42
1:0:1915:A:N6	1:0:1951:G:H1'	2.34	0.42
1:0:1280:U:C5	1:0:1995:G:N2	2.88	0.42
1:0:2026:C:C4	1:0:2757:G:C2	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:922:A:N6	1:0:2256:G:O2'	2.52	0.42
1:0:229:G:N3	1:0:230:C:C6	2.87	0.42
1:0:2302:G:H21	1:0:2316:G:H5'	1.84	0.42
1:0:2371:A:C8	1:0:2372:A:C8	3.08	0.42
1:0:2452:U:C2	1:0:2453:C:C6	3.07	0.42
1:0:24:G:H2'	1:0:25:U:O4'	2.19	0.42
1:0:2558:C:H2'	1:0:2559:U:O4'	2.19	0.42
1:0:2617:G:O2'	1:0:2618:A:H8	2.02	0.42
1:0:1681:A:C2	1:0:2706:U:H1'	2.53	0.42
1:0:2800:C:C5	1:0:2801:A:C8	3.07	0.42
1:0:2813:G:H2'	1:0:2814:G:O4'	2.19	0.42
1:0:453:U:H2'	1:0:454:G:C8	2.54	0.42
1:0:469:G:C2'	1:0:470:U:OP2	2.66	0.42
1:0:482:A:H2'	1:0:483:A:C5'	2.43	0.42
1:0:791:G:N2	1:0:800:U:C2	2.87	0.42
1:0:987:G:H2'	1:0:988:G:H8	1.84	0.42
1:0:1469:U:OP2	1:0:1471:G:N7	2.53	0.42
1:0:1483:G:C2	1:0:1540:C:C2	3.07	0.42
1:0:1569:A:N1	1:0:1571:G:H1'	2.35	0.42
1:0:1753:A:C8	1:0:1753:A:O5'	2.68	0.42
1:0:188:G:O2'	1:0:189:A:H5'	2.19	0.42
1:0:1960:A:H2'	1:0:1961:A:O4'	2.19	0.42
1:0:2016:A:N6	1:0:2019:C:C2	2.88	0.42
1:0:2096:U:O2'	1:0:2097:A:H5''	2.19	0.42
1:0:210:A:H61	1:0:442:A:H61	1.67	0.42
1:0:2389:G:N2	1:0:2390:A:H1'	2.35	0.42
1:0:2484:G:O2'	1:0:2485:U:H5''	2.19	0.42
1:0:2787:A:H2'	1:0:2788:C:C6	2.46	0.42
1:0:2825:A:C2	1:0:2826:C:C4	3.07	0.42
1:0:30:G:C6	1:0:31:C:C4	3.08	0.42
1:0:329:C:C2	1:0:330:C:C5	3.08	0.42
1:0:537:C:H1'	1:0:2759:U:C4	2.54	0.42
1:0:572:G:C8	1:0:2001:G:N1	2.88	0.42
1:0:614:G:N2	1:0:634:G:C2	2.87	0.42
1:0:640:C:H1'	1:0:650:U:H1'	2.00	0.42
1:0:677:G:O4'	1:0:951:G:H5''	2.18	0.42
1:0:801:A:C2'	1:0:802:A:OP2	2.67	0.42
1:0:934:G:O2'	1:0:935:C:H5'	2.19	0.42
1:0:579:G:C5'	1:0:994:A:H2	2.31	0.42
1:0:1017:C:O2	1:0:1018:C:C6	2.72	0.42
1:0:1035:G:H8	1:0:1035:G:O5'	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1147:G:C2'	1:0:1148:G:H5'	2.48	0.42
1:0:1178:C:C2	1:0:1196:G:N2	2.88	0.42
1:0:12:U:O2'	1:0:13:A:H5'	2.19	0.42
1:0:1323:G:H1'	1:0:1627:C:C5'	2.50	0.42
1:0:1460:G:OP2	1:0:1475:U:O2	2.36	0.42
1:0:1552:C:C2'	1:0:1553:G:H5'	2.49	0.42
1:0:1314:A:H2	1:0:1642:G:N2	2.16	0.42
1:0:1645:U:H2'	1:0:1646:G:O4'	2.19	0.42
1:0:1696:C:H5	1:0:1697:U:C4	2.36	0.42
1:0:1851:A:H2'	1:0:1852:G:O4'	2.20	0.42
1:0:1933:G:C8	1:0:1934:U:C5	3.07	0.42
1:0:820:U:H1'	1:0:2043:A:H61	1.83	0.42
1:0:2055:G:C2'	1:0:2056:C:H5'	2.49	0.42
1:0:2408:G:C5'	1:0:2409:A:OP2	2.43	0.42
1:0:2632:U:N3	1:0:2633:A:N6	2.66	0.42
1:0:2682:C:C4	1:0:2683:C:C5	3.08	0.42
1:0:2764:U:O2'	1:0:2765:C:H5'	2.19	0.42
1:0:2838:U:C2	1:0:2839:G:C8	3.07	0.42
1:0:298:C:H2'	1:0:299:C:H6	1.83	0.42
1:0:307:C:N3	1:0:308:C:C5	2.88	0.42
1:0:312:G:HO2'	1:0:313:U:H6	1.63	0.42
1:0:461:A:C4	1:0:462:G:C8	3.06	0.42
1:0:545:C:H2'	1:0:546:A:C8	2.54	0.42
1:0:700:C:C6	1:0:701:U:C4	3.07	0.42
1:0:970:A:C6	1:0:971:A:C6	3.07	0.42
1:0:1098:G:C2	1:0:1100:G:H1'	2.54	0.42
1:0:1045:G:H22	1:0:1133:G:H1'	1.83	0.42
1:0:1187:A:H2'	1:0:1188:A:C8	2.54	0.42
1:0:1234:C:C2	1:0:1242:A:N1	2.87	0.42
1:0:1333:G:N7	1:0:1342:U:H5'	2.35	0.42
1:0:1346:C:C4	1:0:1347:C:C5	3.08	0.42
1:0:1381:G:N2	1:0:1382:G:C4	2.87	0.42
1:0:1401:G:O2'	1:0:1402:G:H5'	2.19	0.42
1:0:1529:C:C3'	1:0:1529:C:C6	3.02	0.42
1:0:1531:C:C5	1:0:1532:A:C4	3.08	0.42
1:0:1541:G:H22	1:0:1562:G:N2	2.16	0.42
1:0:1365:U:H1'	1:0:1586:A:H2	1.84	0.42
1:0:1732:U:C2'	1:0:1733:U:O5'	2.67	0.42
1:0:1790:G:C5	1:0:1811:A:N6	2.87	0.42
1:0:1864:G:N2	1:0:1865:C:H1'	2.34	0.42
1:0:1940:C:H2'	1:0:1941:C:C5	2.53	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:538:A:C2	1:0:2025:A:H2'	2.55	0.42
1:0:2038:C:H2'	1:0:2483:U:C4'	2.49	0.42
1:0:2039:G:C6	1:0:2556:A:C8	3.08	0.42
1:0:2053:G:C6	1:0:2054:A:C6	3.07	0.42
1:0:207:U:O2	1:0:208:C:C6	2.72	0.42
1:0:221:A:C2	1:0:232:A:C2	3.07	0.42
1:0:2347:C:O2'	1:0:2348:A:H5'	2.19	0.42
1:0:2044:G:H1'	1:0:2482:A:C2	2.55	0.42
1:0:2699:G:HO2'	1:0:2700:U:P	2.42	0.42
1:0:465:C:HO2'	1:0:467:U:H1'	1.83	0.42
1:0:47:G:H2'	1:0:47:G:N3	2.34	0.42
1:0:493:A:OP2	1:0:517:A:N6	2.43	0.42
1:0:697:G:C2	1:0:807:A:C2	3.07	0.42
1:0:775:U:H4'	1:0:776:G:O5'	2.19	0.42
1:0:764:A:C5	1:0:802:A:C2	3.07	0.42
1:0:827:C:H1'	1:0:1237:G:H22	1.84	0.42
1:0:838:A:C2'	1:0:839:U:O4'	2.62	0.42
1:0:1095:A:C8	1:0:1096:A:N7	2.88	0.42
1:0:48:A:N1	1:0:116:A:C4	2.87	0.42
1:0:1181:C:H2'	1:0:1182:U:C4'	2.47	0.42
1:0:1216:G:C6	1:0:1217:U:C4	3.07	0.42
1:0:123:A:O2'	1:0:124:A:P	2.76	0.42
1:0:1251:G:N2	1:0:1252:C:H1'	2.34	0.42
1:0:1535:C:N3	1:0:1536:G:C6	2.88	0.42
1:0:1649:A:H8	1:0:1649:A:O5'	2.02	0.42
1:0:185:C:H2'	1:0:186:C:C6	2.37	0.42
1:0:2030:U:O2'	1:0:2031:A:H5'	2.20	0.42
1:0:2411:A:C6	1:0:2412:A:C6	3.08	0.42
1:0:2042:A:C6	1:0:2482:A:C8	3.08	0.42
1:0:2549:G:C2	1:0:2550:C:C2	3.08	0.42
1:0:2595:C:H2'	1:0:2596:C:C6	2.54	0.42
1:0:2756:A:O2'	1:0:2757:G:C5'	2.68	0.42
1:0:469:G:N2	1:0:480:G:C4	2.87	0.42
1:0:511:A:N6	1:0:512:A:N1	2.67	0.42
1:0:567:G:O2'	1:0:568:G:H5'	2.20	0.42
1:0:611:C:C5'	1:0:611:C:H6	2.33	0.42
1:0:697:G:N1	1:0:788:G:C4	2.88	0.42
1:0:59:G:C4	1:0:73:A:C6	3.07	0.42
1:0:762:A:C6	1:0:1634:A:C2	3.07	0.42
1:0:88:G:C2	1:0:89:A:C8	3.07	0.42
1:0:929:A:H4'	1:0:929:A:OP1	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1442:C:HO2'	1:0:1443:G:P	2.42	0.42
1:0:149:A:C8	1:0:150:A:N7	2.87	0.42
1:0:1564:U:C2	1:0:1565:G:C8	3.08	0.42
1:0:1591:U:O2'	1:0:1592:U:H5'	2.20	0.42
1:0:1787:U:H2'	1:0:1788:C:O4'	2.19	0.42
1:0:1920:A:C8	1:0:1921:A:H3'	2.55	0.42
1:0:2069:U:H2'	1:0:2070:G:H8	1.82	0.42
1:0:2207:G:C2'	1:0:2208:U:H5'	2.49	0.42
1:0:2058:U:H2'	1:0:2217:G:H22	1.84	0.42
1:0:2299:A:H2'	1:0:2312:A:H62	1.79	0.42
1:0:2315:A:H2'	1:0:2316:G:O5'	2.20	0.42
1:0:2500:C:H2'	1:0:2501:U:O4'	2.19	0.42
1:0:2559:U:C4	1:0:2560:G:H8	2.38	0.42
1:0:2674:C:O2'	1:0:2675:U:H5'	2.20	0.42
1:0:2702:G:H2'	1:0:2703:C:C6	2.55	0.42
1:0:2722:C:N3	1:0:2743:G:N2	2.68	0.42
1:0:2792:C:H2'	1:0:2793:G:O4'	2.19	0.42
1:0:2818:G:O2'	1:0:2819:G:H5'	2.20	0.42
1:0:2867:G:OP2	1:0:2867:G:C8	2.67	0.42
1:0:452:G:H2'	1:0:453:U:C6	2.55	0.42
1:0:571:U:O2'	1:0:581:A:O4'	2.36	0.42
1:0:988:G:O2'	1:0:989:G:H5'	2.19	0.42
1:0:984:A:H1'	1:0:1202:U:C6	2.54	0.42
1:0:1238:A:HO2'	1:0:1239:A:H5'	1.81	0.42
1:0:1313:U:HO2'	1:0:1314:A:P	2.40	0.42
1:0:1334:A:H3'	1:0:1335:A:H8	1.85	0.42
1:0:1361:G:O6	1:0:1615:C:N4	2.53	0.42
1:0:1720:G:O2'	1:0:1721:G:H5'	2.20	0.42
1:0:1811:A:H1'	1:0:1813:A:C5	2.55	0.42
1:0:1837:G:C2	1:0:1879:G:C2	3.08	0.42
1:0:1949:A:N3	1:0:2572:U:C4'	2.83	0.42
1:0:2015:G:C2'	1:0:2015:G:N3	2.80	0.42
1:0:2034:A:C2	1:0:2035:G:O6	2.73	0.42
1:0:2333:A:N1	1:0:2343:C:N3	2.67	0.42
1:0:2446:C:H2'	1:0:2447:G:O4'	2.20	0.42
1:0:2494:C:O2'	1:0:2495:G:H5'	2.20	0.42
1:0:2691:C:C3'	1:0:2692:A:C5'	2.94	0.42
1:0:2728:A:C2	1:0:2737:A:N6	2.88	0.42
1:0:341:A:H2	1:0:1223:G:H2'	1.84	0.42
1:0:616:U:C4	1:0:617:U:C5	2.98	0.42
1:0:682:G:H3'	1:0:683:A:C8	2.55	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:849:G:C5	1:0:850:C:C4	3.08	0.42
1:0:1073:G:H3'	1:0:1074:G:H5''	2.02	0.42
1:0:1096:A:O2'	1:0:1115:C:O2	2.37	0.42
1:0:1329:U:N3	1:0:1330:G:N7	2.68	0.42
1:0:1537:U:C4	1:0:1538:A:C6	3.08	0.42
1:0:1624:A:O2'	1:0:1626:A:OP2	2.37	0.42
1:0:172:A:N1	1:0:178:C:C2	2.88	0.42
1:0:177:U:O2	1:0:178:C:N1	2.53	0.42
1:0:203:G:H5'	1:0:234:C:H4'	2.02	0.42
1:0:2081:U:C2'	1:0:2082:C:H5''	2.50	0.42
1:0:2221:G:C5	1:0:2222:U:C6	3.07	0.42
1:0:226:C:HO2'	1:0:227:G:P	2.43	0.42
1:0:2295:C:H2'	1:0:2296:U:C6	2.54	0.42
1:0:2297:G:O2'	1:0:2300:G:O6	2.37	0.42
1:0:2309:G:O2'	1:0:2310:G:H5'	2.20	0.42
1:0:2532:G:H2'	1:0:2533:U:O4'	2.19	0.42
1:0:2653:A:C2	1:0:2654:A:C4	3.08	0.42
1:0:2665:G:C5	1:0:2666:U:C2	3.07	0.42
1:0:2728:A:C2'	1:0:2729:A:H5'	2.50	0.42
1:0:2845:C:C2'	1:0:2846:G:C5'	2.97	0.42
1:0:2854:G:H5'	1:0:2855:C:OP1	2.19	0.42
1:0:309:G:C2	1:0:350:U:C4	3.08	0.42
1:0:468:A:N6	1:0:482:A:OP2	2.52	0.42
1:0:530:G:H2'	1:0:531:G:C8	2.52	0.42
1:0:557:U:H3'	1:0:559:C:N4	2.35	0.42
1:0:580:A:C6	1:0:584:A:C8	3.07	0.42
1:0:787:A:O2'	1:0:788:G:C5'	2.58	0.42
1:0:869:C:O2	1:0:934:G:C2	2.73	0.42
1:0:852:U:O2	1:0:951:G:C2	2.73	0.42
1:0:976:C:HO2'	1:0:2252:A:H2	1.68	0.42
1:0:1098:G:N3	1:0:1100:G:C1'	2.82	0.42
1:0:1145:C:C6	1:0:1147:G:OP1	2.73	0.42
1:0:1161:U:H2'	1:0:1162:A:H8	1.84	0.42
1:0:829:C:C4	1:0:1206:G:N1	2.88	0.42
1:0:1573:G:O5'	1:0:1574:A:H5''	2.20	0.42
1:0:1772:C:O2'	1:0:1773:C:P	2.76	0.42
1:0:1995:G:C2'	1:0:1996:A:O5'	2.67	0.42
1:0:2006:G:C2	1:0:2007:G:N7	2.88	0.42
1:0:2057:U:H2'	1:0:2058:U:C6	2.55	0.42
1:0:2176:U:H2'	1:0:2177:U:O4'	2.20	0.42
1:0:2492:G:H2'	1:0:2493:U:O4'	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2718:A:C6	1:0:2719:U:C5	3.08	0.42
1:0:2721:A:H2'	1:0:2722:C:O4'	2.20	0.42
1:0:404:A:C5	1:0:424:G:C2	3.08	0.42
1:0:49:U:C2'	1:0:50:G:OP1	2.68	0.42
1:0:665:A:H3'	1:0:666:U:C5'	2.39	0.42
1:0:699:G:C5'	1:0:700:C:OP2	2.65	0.42
1:0:878:C:N4	1:0:920:G:C8	2.86	0.42
1:0:1174:G:N3	1:0:1175:A:N7	2.68	0.41
1:0:1363:C:C2'	1:0:1364:C:C5'	2.92	0.41
1:0:1469:U:O5'	1:0:1470:G:OP2	2.38	0.41
1:0:1500:U:O2'	1:0:1501:C:H5'	2.20	0.41
1:0:153:A:C2'	1:0:154:U:H5'	2.50	0.41
1:0:1559:G:C8	1:0:1559:G:C3'	3.03	0.41
1:0:1621:C:C4'	1:0:1626:A:C6	3.03	0.41
1:0:1669:A:C2	1:0:1989:C:N3	2.88	0.41
1:0:1774:A:C2	1:0:2567:G:C8	3.08	0.41
1:0:1811:A:O2'	1:0:1812:U:H5'	2.20	0.41
1:0:1850:G:HO2'	1:0:1851:A:C5'	2.33	0.41
1:0:1956:G:C6	1:0:1957:C:C4	3.08	0.41
1:0:428:A:N1	1:0:2388:G:C6	2.88	0.41
1:0:2457:A:N6	1:0:2458:U:C2	2.89	0.41
1:0:2655:C:H2'	1:0:2656:G:O4'	2.19	0.41
1:0:2757:G:C8	1:0:2757:G:H3'	2.54	0.41
1:0:2831:A:H2'	1:0:2832:G:C8	2.55	0.41
1:0:43:A:O5'	1:0:43:A:H8	2.02	0.41
1:0:464:G:C2	1:0:469:G:N7	2.88	0.41
1:0:476:G:C6	1:0:477:A:N6	2.88	0.41
1:0:554:U:OP2	1:0:554:U:H4'	2.20	0.41
1:0:698:A:C4	1:0:787:A:C2	3.08	0.41
1:0:863:C:N4	1:0:939:C:H42	2.18	0.41
1:0:1055:A:C5'	1:0:1058:G:H4'	2.50	0.41
1:0:1109:A:H2'	1:0:1110:G:C5'	2.47	0.41
1:0:1274:C:H2'	1:0:1275:A:O5'	2.20	0.41
1:0:1781:C:H2'	1:0:1782:A:N7	2.35	0.41
1:0:1795:C:H2'	1:0:1796:A:O4'	2.20	0.41
1:0:1913:G:O2'	1:0:1914:U:P	2.78	0.41
1:0:1926:U:O2	1:0:1926:U:H2'	2.19	0.41
1:0:2043:A:HO2'	1:0:2044:G:P	2.42	0.41
1:0:2053:G:C2	1:0:2421:C:C2	3.08	0.41
1:0:2164:G:H2'	1:0:2165:A:O4'	2.20	0.41
1:0:2220:A:N1	1:0:2221:G:C6	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2449:G:O2'	1:0:2450:A:H5'	2.19	0.41
1:0:2592:U:O2'	1:0:2593:A:OP1	2.29	0.41
1:0:2676:G:C2	1:0:2690:A:C2	3.08	0.41
1:0:2619:G:C6	1:0:2755:A:C2	3.08	0.41
1:0:2766:U:O2'	1:0:2767:C:H5'	2.19	0.41
1:0:369:C:H2'	1:0:370:U:O4'	2.20	0.41
1:0:668:A:C2'	1:0:669:G:OP2	2.68	0.41
1:0:774:A:C3'	1:0:774:A:C8	3.04	0.41
1:0:852:U:H1'	1:0:951:G:N2	2.35	0.41
1:0:1008:G:N2	1:0:1009:C:C2	2.88	0.41
1:0:103:U:C2	1:0:104:C:C5	3.09	0.41
1:0:1566:G:H2'	1:0:1567:A:H8	1.85	0.41
1:0:1672:A:N3	1:0:1672:A:H2'	2.35	0.41
1:0:1806:G:C5	1:0:1807:A:N7	2.89	0.41
1:0:1833:U:H2'	1:0:1834:G:O4'	2.20	0.41
1:0:992:A:C2	1:0:2011:U:O4'	2.73	0.41
1:0:2040:A:C6	1:0:2041:A:C6	3.07	0.41
1:0:2083:G:C2	1:0:2084:G:H1'	2.56	0.41
1:0:2187:A:H2'	1:0:2188:A:H5'	2.01	0.41
1:0:2221:G:N2	1:0:2413:A:H2	2.17	0.41
1:0:2424:G:C2'	1:0:2425:G:H5'	2.50	0.41
1:0:2448:A:H61	1:0:2460:G:H1'	1.80	0.41
1:0:2569:A:C4	1:0:2570:C:C5	3.09	0.41
1:0:2685:A:N6	1:0:2686:C:C4	2.88	0.41
1:0:2825:A:N7	1:0:2843:A:O2'	2.54	0.41
1:0:28:A:C2	1:0:523:A:H1'	2.55	0.41
1:0:545:C:H2'	1:0:546:A:H8	1.85	0.41
1:0:565:A:H8	1:0:565:A:O5'	2.03	0.41
1:0:588:G:N2	1:0:1275:A:C4	2.88	0.41
1:0:649:G:H2'	1:0:650:U:H6	1.84	0.41
1:0:753:U:C4	1:0:771:C:O2	2.73	0.41
1:0:756:C:H2'	1:0:757:U:C6	2.54	0.41
1:0:836:G:C6	1:0:848:A:N1	2.88	0.41
1:0:1019:U:HO2'	1:0:1020:A:P	2.44	0.41
1:0:1124:U:H2'	1:0:1125:G:H8	1.84	0.41
1:0:1142:G:O2'	1:0:1143:A:P	2.78	0.41
1:0:1171:A:H2'	1:0:1172:U:C6	2.55	0.41
1:0:1358:C:H2'	1:0:1359:G:H5'	2.02	0.41
1:0:1491:C:H42	1:0:1532:A:H61	1.66	0.41
1:0:1686:A:H3'	1:0:1687:C:C5'	2.51	0.41
1:0:1791:C:C4	1:0:1810:U:O2	2.73	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:182:G:O2'	1:0:183:U:P	2.78	0.41
1:0:1279:G:O2'	1:0:1995:G:N1	2.54	0.41
1:0:2308:A:H2'	1:0:2309:G:O4'	2.20	0.41
1:0:2519:C:H2'	1:0:2520:A:C5'	2.51	0.41
1:0:2594:U:C5'	1:0:2594:U:H6	2.27	0.41
1:0:2702:G:C6	1:0:2703:C:N3	2.88	0.41
1:0:2713:A:C6	1:0:2714:A:C5	3.09	0.41
1:0:2780:A:H2'	1:0:2781:G:C5'	2.50	0.41
1:0:322:A:C2'	1:0:323:G:OP1	2.68	0.41
1:0:402:A:H8	1:0:402:A:OP1	2.03	0.41
1:0:416:U:H5''	1:0:417:C:OP1	2.20	0.41
1:0:746:G:C8	1:0:774:A:C6	3.09	0.41
1:0:79:G:C5	1:0:80:A:N7	2.89	0.41
1:0:834:A:H5''	1:0:835:U:H6	1.85	0.41
1:0:874:A:H2'	1:0:875:G:H5'	2.01	0.41
1:0:1023:U:H5'	1:0:1024:G:OP1	2.20	0.41
1:0:1070:G:H2'	1:0:1071:U:C4'	2.51	0.41
1:0:1011:A:C6	1:0:1166:A:C5	3.08	0.41
1:0:1375:C:N3	1:0:1376:C:C6	2.89	0.41
1:0:1643:A:H1'	1:0:1657:A:C2	2.56	0.41
1:0:1653:C:O2'	1:0:1751:A:N3	2.39	0.41
1:0:1804:U:O2'	1:0:1805:G:H5'	2.20	0.41
1:0:1849:G:H8	1:0:1849:G:O5'	2.02	0.41
1:0:2071:G:H2'	1:0:2072:C:H6	1.84	0.41
1:0:2195:C:C4	1:0:2196:U:C4	3.09	0.41
1:0:2253:A:N6	1:0:2255:G:C4	2.88	0.41
1:0:2304:G:N2	1:0:2305:C:O2	2.52	0.41
1:0:2402:U:H1'	1:0:2404:A:N1	2.35	0.41
1:0:2556:A:C2	1:0:2593:A:C6	3.08	0.41
1:0:459:A:N1	1:0:466:A:H2'	2.36	0.41
1:0:541:C:O2	1:0:572:G:C5'	2.67	0.41
1:0:591:G:H2'	1:0:592:G:C8	2.55	0.41
1:0:617:U:H2'	1:0:618:A:O4'	2.21	0.41
1:0:668:A:O2'	1:0:669:G:P	2.78	0.41
1:0:783:G:H1'	1:0:1392:U:C4	2.56	0.41
1:0:1040:A:C8	1:0:1041:G:C8	3.08	0.41
1:0:1105:U:H2'	1:0:1106:A:H8	1.85	0.41
1:0:1197:U:C2'	1:0:1198:C:H5'	2.51	0.41
1:0:1415:C:C2'	1:0:1416:A:H5'	2.50	0.41
1:0:1491:C:N4	1:0:1492:A:N6	2.68	0.41
1:0:1842:G:H2'	1:0:1843:U:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:203:G:H1'	1:0:205:A:H62	1.85	0.41
1:0:2071:G:C6	1:0:2072:C:C4	3.08	0.41
1:0:2090:U:H1'	1:0:2166:G:N2	2.36	0.41
1:0:2283:G:C2	1:0:2284:U:C4	3.08	0.41
1:0:2433:G:C5	1:0:2434:G:N7	2.88	0.41
1:0:2463:G:C4	1:0:2464:G:C8	3.09	0.41
1:0:2739:G:O2'	1:0:2740:C:H5'	2.20	0.41
1:0:2860:C:C4	1:0:2861:A:C4	3.08	0.41
1:0:486:U:O2'	1:0:515:A:H1'	2.20	0.41
1:0:485:G:C6	1:0:520:C:C4	3.08	0.41
1:0:520:C:O2'	1:0:1249:G:H5''	2.20	0.41
1:0:567:G:C2'	1:0:568:G:H5'	2.51	0.41
1:0:592:G:C4	1:0:593:C:C5	3.09	0.41
1:0:686:C:H2'	1:0:687:G:H5'	2.02	0.41
1:0:736:G:C6	1:0:737:C:C2	3.08	0.41
1:0:1073:G:H2'	1:0:1074:G:C4'	2.36	0.41
1:0:1075:C:H6	1:0:1075:C:O5'	2.04	0.41
1:0:1231:A:H2'	1:0:1232:U:H6	1.85	0.41
1:0:1399:C:C2	1:0:1400:A:N7	2.89	0.41
1:0:1625:A:H1'	1:0:1632:A:H1'	2.01	0.41
1:0:1794:A:N6	1:0:1806:G:H2'	2.36	0.41
1:0:1807:A:P	1:0:1814:G:H4'	2.61	0.41
1:0:1982:C:OP1	1:0:2703:C:O2'	2.38	0.41
1:0:1141:U:C2	1:0:2008:C:H5''	2.54	0.41
1:0:2179:C:H2'	1:0:2180:U:O4'	2.20	0.41
1:0:2299:A:N3	1:0:2312:A:C6	2.88	0.41
1:0:2371:A:H2	1:0:2403:C:N4	2.07	0.41
1:0:2439:U:C2'	1:0:2440:C:H5'	2.51	0.41
1:0:2507:U:O2'	1:0:2508:G:H3'	2.20	0.41
1:0:2499:C:C6	1:0:2546:G:H1'	2.56	0.41
1:0:2579:A:H2'	1:0:2580:C:C6	2.55	0.41
1:0:2634:G:H2'	1:0:2643:G:O6	2.20	0.41
1:0:2827:G:C6	1:0:2828:C:N3	2.88	0.41
1:0:309:G:N1	1:0:350:U:C5	2.89	0.41
1:0:224:G:H4'	1:0:399:G:C6	2.56	0.41
1:0:194:G:C6	1:0:444:U:O2	2.74	0.41
1:0:462:G:P	1:0:1261:G:H22	2.42	0.41
1:0:740:A:N6	1:0:741:G:N1	2.68	0.41
1:0:1231:A:C5	1:0:1245:G:N1	2.88	0.41
1:0:590:C:C2	1:0:1273:G:N2	2.89	0.41
1:0:1552:C:H2'	1:0:1553:G:H5'	2.01	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1587:A:N1	1:0:1588:A:C6	2.88	0.41
1:0:1629:G:C6	1:0:1635:G:O6	2.74	0.41
1:0:1657:A:H2'	1:0:1658:A:H5'	2.03	0.41
1:0:1684:G:C2'	1:0:1974:U:O4	2.68	0.41
1:0:1687:C:C5	1:0:1688:U:C4	3.09	0.41
1:0:1747:G:H5'	1:0:1748:U:OP1	2.21	0.41
1:0:2040:A:H2'	1:0:2041:A:O4'	2.20	0.41
1:0:2109:A:C2'	1:0:2110:G:O4'	2.66	0.41
1:0:2171:U:O5'	1:0:2171:U:H6	2.03	0.41
1:0:2205:C:H2'	1:0:2206:C:O4'	2.21	0.41
1:0:2233:C:H2'	1:0:2234:G:H5'	2.03	0.41
1:0:2484:G:HO2'	1:0:2485:U:H6	1.66	0.41
1:0:2489:C:H2'	1:0:2490:U:C5'	2.49	0.41
1:0:2504:G:C2	1:0:2505:G:C5	3.08	0.41
1:0:2660:C:C2'	1:0:2660:C:O2	2.58	0.41
1:0:2685:A:C2	1:0:2686:C:C2	3.08	0.41
1:0:2873:G:H2'	1:0:2874:A:H8	1.85	0.41
1:0:312:G:C5	1:0:313:U:O4	2.74	0.41
1:0:389:G:H2'	1:0:390:U:C6	2.56	0.41
1:0:669:G:H2'	1:0:670:U:C6	2.55	0.41
1:0:827:C:C2'	1:0:828:C:O5'	2.69	0.41
1:0:833:A:N1	1:0:834:A:C2	2.89	0.41
1:0:863:C:O2	1:0:863:C:C2'	2.61	0.41
1:0:870:C:O2'	1:0:871:U:H5'	2.21	0.41
1:0:1103:C:H2'	1:0:1104:G:H8	1.85	0.41
1:0:1134:C:N3	1:0:1135:C:C5	2.89	0.41
1:0:1175:A:C2	1:0:1176:U:C6	3.09	0.41
1:0:1311:C:H5'	1:0:1315:A:N6	2.35	0.41
1:0:1382:G:C6	1:0:1383:C:C4	3.08	0.41
1:0:1424:U:H2'	1:0:1425:G:H8	1.84	0.41
1:0:1475:U:H5'	1:0:1476:G:OP1	2.21	0.41
1:0:1538:A:C8	1:0:1539:U:C5	3.09	0.41
1:0:1591:U:H2'	1:0:1592:U:O4'	2.21	0.41
1:0:1807:A:O2'	1:0:1808:C:H4'	2.20	0.41
1:0:2187:A:N6	1:0:2199:C:N3	2.69	0.41
1:0:2299:A:C2	1:0:2312:A:C5	3.09	0.41
1:0:2351:G:C2	1:0:2352:A:N7	2.88	0.41
1:0:2543:A:H8	1:0:2543:A:O5'	2.03	0.41
1:0:2585:C:C2'	1:0:2586:G:H5'	2.51	0.41
1:0:2859:U:C6	1:0:2859:U:C3'	3.04	0.41
1:0:367:G:C2'	1:0:368:A:H5''	2.50	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:407:A:H2'	1:0:408:U:C6	2.56	0.41
1:0:446:C:O2'	1:0:447:U:H5'	2.21	0.41
1:0:613:A:C6	1:0:636:G:N1	2.89	0.41
1:0:625:A:H5''	1:0:626:A:P	2.61	0.41
1:0:825:C:C1'	1:0:1263:G:C2	3.04	0.41
1:0:945:G:C6	1:0:946:U:C4	3.09	0.41
1:0:103:U:N3	1:0:104:C:C4	2.89	0.41
1:0:1139:A:O2'	1:0:1140:A:O5'	2.39	0.41
1:0:1214:C:O2	1:0:1259:A:C2	2.74	0.41
1:0:1221:C:N4	1:0:1222:G:O6	2.54	0.41
1:0:128:C:H2'	1:0:129:A:O4'	2.21	0.41
1:0:172:A:C2	1:0:178:C:O2	2.73	0.41
1:0:18:U:H6	1:0:18:U:O5'	2.03	0.41
1:0:1983:G:C2'	1:0:1984:A:H5'	2.51	0.41
1:0:2103:G:H2'	1:0:2104:G:O4'	2.20	0.41
1:0:871:U:N3	1:0:2247:A:C8	2.88	0.41
1:0:2370:G:C2'	1:0:2371:A:OP2	2.69	0.41
1:0:246:C:C5	1:0:373:A:C1'	3.01	0.41
1:0:2504:G:O2'	1:0:2505:G:H5'	2.21	0.41
1:0:2681:A:N6	1:0:2682:C:C4	2.89	0.41
1:0:2685:A:C6	1:0:2686:C:C4	3.08	0.41
1:0:2705:A:O2'	1:0:2706:U:N1	2.54	0.41
1:0:2758:A:O2'	1:0:2760:G:H2'	2.21	0.41
1:0:2864:C:O2'	1:0:2865:G:H5'	2.21	0.41
1:0:347:C:C2	1:0:348:U:C6	3.09	0.41
1:0:396:U:C5	1:0:398:C:C5	3.09	0.41
1:0:48:A:H4'	1:0:49:U:C5'	2.50	0.41
1:0:689:A:H2'	1:0:690:A:H5'	2.02	0.41
1:0:1115:C:H2'	1:0:1116:U:C6	2.56	0.41
1:0:1141:U:HO2'	1:0:1142:G:P	2.43	0.41
1:0:1274:C:C2'	1:0:1275:A:O5'	2.69	0.41
1:0:1332:G:C5	1:0:1333:G:C6	3.08	0.41
1:0:1359:G:C6	1:0:1360:G:C5	3.09	0.41
1:0:1469:U:OP2	1:0:1471:G:OP2	2.39	0.41
1:0:1526:U:H2'	1:0:1527:G:C8	2.49	0.41
1:0:1586:A:H2'	1:0:1587:A:H8	1.86	0.41
1:0:1431:U:H4'	1:0:1604:A:C4'	2.51	0.41
1:0:1690:U:HO2'	1:0:1691:G:P	2.44	0.41
1:0:189:A:O2'	1:0:190:A:H5'	2.20	0.41
1:0:2219:U:O2'	1:0:2220:A:H5'	2.21	0.41
1:0:2395:C:C4	1:0:2396:C:N4	2.89	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2465:G:C2	1:0:2466:G:C4	3.09	0.41
1:0:2669:C:O2'	1:0:2670:C:OP2	2.37	0.41
1:0:2683:C:N4	1:0:2684:A:C6	2.89	0.41
1:0:317:U:C2'	1:0:318:G:H5''	2.51	0.41
1:0:309:G:N1	1:0:350:U:H5	2.19	0.41
1:0:499:G:C2'	1:0:500:G:O5'	2.69	0.41
1:0:573:C:H2'	1:0:574:C:O4'	2.21	0.41
1:0:649:G:C4	1:0:650:U:C5	3.09	0.41
1:0:649:G:N1	1:0:660:G:N1	2.65	0.41
1:0:79:G:C4	1:0:80:A:C8	3.08	0.41
1:0:856:A:N6	1:0:857:U:N3	2.69	0.41
1:0:996:C:OP2	1:0:996:C:H3'	2.21	0.41
1:0:1002:C:O5'	1:0:1002:C:H6	2.03	0.40
1:0:10:A:C2	1:0:11:G:H1'	2.56	0.40
1:0:341:A:C2	1:0:1223:G:H2'	2.56	0.40
1:0:1251:G:C2	1:0:1252:C:N1	2.90	0.40
1:0:1211:G:N2	1:0:1263:G:C5	2.89	0.40
1:0:1312:G:H5''	1:0:1313:U:OP1	2.21	0.40
1:0:1436:G:C8	1:0:1437:A:N7	2.89	0.40
1:0:1497:C:O2	1:0:1497:C:H2'	2.21	0.40
1:0:1491:C:C2	1:0:1533:G:C2	3.09	0.40
1:0:158:A:C6	1:0:159:A:N1	2.89	0.40
1:0:1655:C:H5''	1:0:2689:C:O2'	2.21	0.40
1:0:1658:A:N6	1:0:1659:G:N3	2.69	0.40
1:0:1698:C:H4'	1:0:1699:A:OP1	2.19	0.40
1:0:169:C:N4	1:0:170:U:N1	2.69	0.40
1:0:1910:A:N1	1:0:1911:A:C2	2.89	0.40
1:0:1678:G:C5	1:0:1983:G:C2	3.08	0.40
1:0:2019:C:O2'	1:0:2020:G:C5'	2.66	0.40
1:0:2032:G:O2'	1:0:2033:C:C5'	2.66	0.40
1:0:2053:G:C6	1:0:2054:A:C5	3.09	0.40
1:0:2204:A:H5'	1:0:2205:C:O4'	2.21	0.40
1:0:2274:C:C2'	1:0:2275:U:C5'	2.95	0.40
1:0:2349:G:C6	1:0:2350:G:C4	3.09	0.40
1:0:2510:A:C6	1:0:2511:G:C5	3.09	0.40
1:0:2652:G:C2	1:0:2653:A:C8	3.09	0.40
1:0:2748:C:N3	1:0:2749:A:N7	2.69	0.40
1:0:346:C:C2	1:0:347:C:C5	3.09	0.40
1:0:396:U:C6	1:0:398:C:H5	2.39	0.40
1:0:404:A:C8	1:0:424:G:N2	2.89	0.40
1:0:702:A:N6	1:0:703:A:C6	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:782:U:O2	1:0:1392:U:H1'	2.21	0.40
1:0:922:A:C5	1:0:923:A:N7	2.90	0.40
1:0:946:U:N3	1:0:947:C:C4	2.89	0.40
1:0:986:A:H2	1:0:1001:A:O4'	2.04	0.40
1:0:105:G:C2	1:0:106:G:C4	3.10	0.40
1:0:1047:G:C6	1:0:1131:G:C6	3.09	0.40
1:0:1205:G:H21	1:0:1206:G:H1'	1.86	0.40
1:0:1281:A:H1'	1:0:2592:U:O2	2.21	0.40
1:0:1386:A:H2'	1:0:1387:G:O4'	2.21	0.40
1:0:1496:G:N2	1:0:1528:C:H1'	2.36	0.40
1:0:1558:C:O2	1:0:1558:C:C2'	2.68	0.40
1:0:167:A:C2	1:0:168:A:C4	3.09	0.40
1:0:174:A:C8	1:0:174:A:H5'	2.55	0.40
1:0:1761:G:H2'	1:0:1762:C:C5'	2.51	0.40
1:0:1827:G:H1'	1:0:1914:U:N1	2.36	0.40
1:0:2174:G:H2'	1:0:2175:A:H8	1.83	0.40
1:0:2198:U:C3'	1:0:2199:C:C5'	2.86	0.40
1:0:2363:G:H5''	1:0:2365:U:OP1	2.22	0.40
1:0:2459:C:N4	1:0:2460:G:C6	2.89	0.40
1:0:2463:G:N3	1:0:2464:G:C8	2.89	0.40
1:0:2492:G:H2'	1:0:2493:U:H6	1.85	0.40
1:0:2496:C:HO2'	1:0:2497:A:P	2.44	0.40
1:0:2039:G:C5	1:0:2556:A:N7	2.89	0.40
1:0:2687:G:C4	1:0:2688:G:C8	3.09	0.40
1:0:2709:C:C2	1:0:2710:C:C5	3.10	0.40
1:0:2728:A:H2'	1:0:2729:A:C5'	2.51	0.40
1:0:26:G:C6	1:0:27:G:N1	2.90	0.40
1:0:2829:A:C2	1:0:2830:U:C2	3.09	0.40
1:0:459:A:C1'	1:0:461:A:N6	2.84	0.40
1:0:521:U:C5	1:0:522:G:C4	3.09	0.40
1:0:562:G:C5	1:0:563:U:C4	3.09	0.40
1:0:598:U:H2'	1:0:599:A:C8	2.57	0.40
1:0:634:G:C5	1:0:635:C:C5	3.09	0.40
1:0:644:A:H2'	1:0:645:G:C5'	2.43	0.40
1:0:656:U:OP1	1:0:657:A:N7	2.53	0.40
1:0:700:C:C5	1:0:701:U:N3	2.89	0.40
1:0:732:G:O2'	1:0:733:G:H5'	2.21	0.40
1:0:7:G:O2'	1:0:8:A:O4'	2.37	0.40
1:0:1314:A:O2'	1:0:1315:A:O5'	2.39	0.40
1:0:1467:U:O4	1:0:1473:U:C1'	2.69	0.40
1:0:1676:U:C2	1:0:1985:G:N2	2.89	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1730:G:C4	1:0:1737:G:N2	2.89	0.40
1:0:1982:C:H4'	1:0:2703:C:O2	2.21	0.40
1:0:203:G:N2	1:0:204:A:N3	2.69	0.40
1:0:2061:C:O2'	1:0:2062:U:H5'	2.21	0.40
1:0:2104:G:N2	1:0:2161:C:O2	2.55	0.40
1:0:2196:U:C2'	1:0:2197:U:O4'	2.70	0.40
1:0:2269:G:N2	1:0:2322:U:H1'	2.36	0.40
1:0:2270:U:O2'	1:0:2353:G:N3	2.45	0.40
1:0:22:C:C2	1:0:23:G:C8	3.09	0.40
1:0:2424:G:H2'	1:0:2425:G:H5'	2.04	0.40
1:0:2460:G:H2'	1:0:2461:G:OP2	2.22	0.40
1:0:2042:A:N3	1:0:2482:A:N6	2.69	0.40
1:0:2683:C:N4	1:0:2684:A:N1	2.69	0.40
1:0:2781:G:OP1	1:0:2782:G:OP1	2.39	0.40
1:0:304:A:N1	1:0:356:A:N6	2.69	0.40
1:0:419:G:O2'	1:0:420:C:H5'	2.20	0.40
1:0:576:A:H2'	1:0:577:U:O4'	2.21	0.40
1:0:700:C:C2	1:0:800:U:O3'	2.74	0.40
1:0:739:G:O2'	1:0:740:A:P	2.77	0.40
1:0:1035:G:P	1:0:1037:U:OP1	2.79	0.40
1:0:1194:U:O2'	1:0:1195:U:P	2.79	0.40
1:0:1330:G:C2	1:0:1331:G:C4	3.09	0.40
1:0:1371:G:O2'	1:0:1386:A:N6	2.48	0.40
1:0:1587:A:C2	1:0:1588:A:C5	3.09	0.40
1:0:1680:U:C5'	1:0:1680:U:C6	2.90	0.40
1:0:1741:G:HO2'	1:0:2835:A:H2	1.68	0.40
1:0:1773:C:OP1	1:0:1774:A:OP2	2.39	0.40
1:0:1833:U:C2	1:0:1834:G:C8	3.08	0.40
1:0:1995:G:O2'	1:0:1996:A:O5'	2.36	0.40
1:0:2009:U:C6	1:0:2009:U:C3'	3.05	0.40
1:0:2033:C:N4	1:0:2034:A:C6	2.89	0.40
1:0:202:A:C2'	1:0:203:G:H5'	2.50	0.40
1:0:2044:G:O2'	1:0:2045:A:OP2	2.35	0.40
1:0:2184:C:H2'	1:0:2185:U:C5'	2.52	0.40
1:0:2796:A:C2	1:0:2797:G:C5	3.09	0.40
1:0:29:U:H2'	1:0:30:G:C8	2.57	0.40
1:0:321:A:C5	1:0:323:G:C4	3.08	0.40
1:0:305:A:C4	1:0:356:A:C6	3.09	0.40
1:0:403:A:H5'	1:0:404:A:H5'	2.04	0.40
1:0:583:C:H5''	1:0:584:A:C5'	2.52	0.40
1:0:58:C:C2	1:0:73:A:C2	3.09	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:788:G:N2	1:0:801:A:OP2	2.54	0.40
1:0:1153:A:C6	1:0:1155:G:C6	3.09	0.40
1:0:1657:A:H5'	1:0:1657:A:H8	1.87	0.40
1:0:1308:C:H42	1:0:1662:G:H1	1.69	0.40
1:0:1760:G:C2	1:0:1761:G:C8	3.10	0.40
1:0:1143:A:N6	1:0:2008:C:O2	2.55	0.40
1:0:2187:A:H2'	1:0:2188:A:C5'	2.51	0.40
1:0:220:U:C5	1:0:231:G:N2	2.90	0.40
1:0:2270:U:C2	1:0:2271:C:C5	3.09	0.40
1:0:2770:A:C5	1:0:2770:A:OP2	2.75	0.40
1:0:322:A:C6	1:0:339:U:N3	2.90	0.40
1:0:38:G:H22	1:0:454:G:H1'	1.86	0.40
1:0:541:C:O2	1:0:572:G:O4'	2.39	0.40
1:0:57:G:N2	1:0:69:G:C5	2.88	0.40
1:0:622:U:C2	1:0:627:A:N1	2.89	0.40
1:0:633:G:C2'	1:0:634:G:O5'	2.70	0.40
1:0:5:A:N6	1:0:6:A:N6	2.68	0.40
1:0:710:C:H2'	1:0:711:C:H6	1.83	0.40
1:0:756:C:O5'	1:0:756:C:H6	2.05	0.40
1:0:789:G:H2'	1:0:790:A:OP2	2.22	0.40
1:0:873:U:C6	1:0:874:A:H5'	2.57	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

5.3.2 Protein sidechains [i](#)

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

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	0	2757/2880 (95%)	657 (23%)	223 (8%)

All (657) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	0	13	A
1	0	14	A
1	0	34	U
1	0	45	C
1	0	48	A
1	0	49	U
1	0	50	G
1	0	59	G
1	0	63	A
1	0	69	G
1	0	70	A
1	0	71	A
1	0	72	A
1	0	74	G
1	0	76	C
1	0	82	G
1	0	84	G
1	0	87	G
1	0	89	A
1	0	90	G
1	0	91	A
1	0	95	G
1	0	99	U
1	0	100	G
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	148	C
1	0	149	A
1	0	155	G
1	0	158	A
1	0	173	A
1	0	174	A
1	0	176	A
1	0	181	A
1	0	182	G
1	0	193	A
1	0	199	A

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Mol	Chain	Res	Type
1	0	200	A
1	0	205	A
1	0	206	U
1	0	207	U
1	0	210	A
1	0	218	A
1	0	219	G
1	0	220	U
1	0	225	G
1	0	226	C
1	0	227	G
1	0	229	G
1	0	242	A
1	0	243	G
1	0	305	A
1	0	313	U
1	0	318	G
1	0	322	A
1	0	323	G
1	0	325	U
1	0	333	A
1	0	334	G
1	0	335	A
1	0	340	G
1	0	341	A
1	0	342	G
1	0	343	A
1	0	344	G
1	0	358	C
1	0	360	A
1	0	363	G
1	0	364	G
1	0	368	A
1	0	372	U
1	0	373	A
1	0	399	G
1	0	401	G
1	0	403	A
1	0	404	A
1	0	408	U
1	0	409	G
1	0	414	A

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Mol	Chain	Res	Type
1	0	418	C
1	0	419	G
1	0	424	G
1	0	435	A
1	0	447	U
1	0	448	C
1	0	455	A
1	0	456	C
1	0	458	G
1	0	459	A
1	0	460	U
1	0	461	A
1	0	462	G
1	0	463	C
1	0	467	U
1	0	469	G
1	0	470	U
1	0	483	A
1	0	486	U
1	0	491	A
1	0	492	G
1	0	493	A
1	0	494	A
1	0	495	C
1	0	500	G
1	0	514	G
1	0	515	A
1	0	517	A
1	0	518	A
1	0	519	C
1	0	537	C
1	0	539	A
1	0	540	G
1	0	541	C
1	0	542	A
1	0	543	G
1	0	554	U
1	0	555	U
1	0	556	A
1	0	558	G
1	0	559	C
1	0	560	G

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Mol	Chain	Res	Type
1	0	572	G
1	0	581	A
1	0	582	G
1	0	584	A
1	0	595	A
1	0	601	A
1	0	613	A
1	0	617	U
1	0	624	A
1	0	626	A
1	0	628	A
1	0	631	G
1	0	632	A
1	0	633	G
1	0	636	G
1	0	638	A
1	0	642	A
1	0	645	G
1	0	648	A
1	0	652	C
1	0	654	A
1	0	656	U
1	0	657	A
1	0	665	A
1	0	666	U
1	0	667	U
1	0	669	G
1	0	683	A
1	0	684	C
1	0	699	G
1	0	700	C
1	0	718	A
1	0	728	G
1	0	740	A
1	0	741	G
1	0	742	G
1	0	743	A
1	0	752	G
1	0	753	U
1	0	760	U
1	0	761	G
1	0	765	C

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Mol	Chain	Res	Type
1	0	774	A
1	0	776	G
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	797	A
1	0	798	G
1	0	802	A
1	0	803	C
1	0	805	G
1	0	806	A
1	0	807	A
1	0	813	A
1	0	814	G
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	856	A
1	0	863	C
1	0	872	G
1	0	873	U
1	0	874	A
1	0	878	C
1	0	879	A
1	0	912	A
1	0	919	U
1	0	922	A
1	0	927	C
1	0	930	A
1	0	931	G
1	0	938	G
1	0	941	U
1	0	943	U

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Mol	Chain	Res	Type
1	0	944	A
1	0	952	A
1	0	957	G
1	0	968	C
1	0	969	U
1	0	970	A
1	0	972	C
1	0	973	U
1	0	984	A
1	0	985	G
1	0	994	A
1	0	995	A
1	0	996	C
1	0	1000	G
1	0	1006	C
1	0	1007	A
1	0	1019	U
1	0	1020	A
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	1054	C
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	1072	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	1104	G

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Mol	Chain	Res	Type
1	0	1123	G
1	0	1137	A
1	0	1138	A
1	0	1139	A
1	0	1140	A
1	0	1142	G
1	0	1145	C
1	0	1146	G
1	0	1152	C
1	0	1153	A
1	0	1154	A
1	0	1155	G
1	0	1166	A
1	0	1167	A
1	0	1168	G
1	0	1182	U
1	0	1185	C
1	0	1187	A
1	0	1194	U
1	0	1195	U
1	0	1199	U
1	0	1200	G
1	0	1220	G
1	0	1224	A
1	0	1225	G
1	0	1234	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	1266	G
1	0	1267	A
1	0	1268	U
1	0	1269	G
1	0	1278	A
1	0	1279	G
1	0	1284	G
1	0	1285	A
1	0	1286	U

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Mol	Chain	Res	Type
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	1315	A
1	0	1316	G
1	0	1324	G
1	0	1326	U
1	0	1331	G
1	0	1333	G
1	0	1334	A
1	0	1337	G
1	0	1338	G
1	0	1339	U
1	0	1342	U
1	0	1346	C
1	0	1353	A
1	0	1354	A
1	0	1355	A
1	0	1356	G
1	0	1358	C
1	0	1359	G
1	0	1364	C
1	0	1391	A
1	0	1392	U
1	0	1397	A
1	0	1398	G
1	0	1409	U
1	0	1411	C
1	0	1427	G
1	0	1430	G
1	0	1435	G
1	0	1437	A
1	0	1441	A
1	0	1442	C
1	0	1443	G
1	0	1459	U
1	0	1460	G
1	0	1467	U
1	0	1468	A

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Mol	Chain	Res	Type
1	0	1469	U
1	0	1470	G
1	0	1473	U
1	0	1474	A
1	0	1475	U
1	0	1476	G
1	0	1489	C
1	0	1490	U
1	0	1496	G
1	0	1498	G
1	0	1505	U
1	0	1507	A
1	0	1513	U
1	0	1514	C
1	0	1524	C
1	0	1525	A
1	0	1528	C
1	0	1529	C
1	0	1530	U
1	0	1552	C
1	0	1554	G
1	0	1570	C
1	0	1571	G
1	0	1573	G
1	0	1574	A
1	0	1576	G
1	0	1582	A
1	0	1583	A
1	0	1585	A
1	0	1601	U
1	0	1602	G
1	0	1618	U
1	0	1619	A
1	0	1623	C
1	0	1624	A
1	0	1625	A
1	0	1626	A
1	0	1627	C
1	0	1631	C
1	0	1633	C
1	0	1634	A
1	0	1635	G

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Mol	Chain	Res	Type
1	0	1648	C
1	0	1652	G
1	0	1657	A
1	0	1664	G
1	0	1665	C
1	0	1670	G
1	0	1671	A
1	0	1680	U
1	0	1685	A
1	0	1686	A
1	0	1687	C
1	0	1690	U
1	0	1691	G
1	0	1692	C
1	0	1699	A
1	0	1710	U
1	0	1711	C
1	0	1712	G
1	0	1713	G
1	0	1715	A
1	0	1716	G
1	0	1717	A
1	0	1723	U
1	0	1724	C
1	0	1732	U
1	0	1734	C
1	0	1747	G
1	0	1748	U
1	0	1749	G
1	0	1750	A
1	0	1754	G
1	0	1755	G
1	0	1764	A
1	0	1771	A
1	0	1772	C
1	0	1773	C
1	0	1775	A
1	0	1776	A
1	0	1777	A
1	0	1778	U
1	0	1782	A
1	0	1791	C

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Mol	Chain	Res	Type
1	0	1792	C
1	0	1793	A
1	0	1800	A
1	0	1801	C
1	0	1802	A
1	0	1807	A
1	0	1808	C
1	0	1811	A
1	0	1812	U
1	0	1821	A
1	0	1830	C
1	0	1831	G
1	0	1840	A
1	0	1863	U
1	0	1866	G
1	0	1889	G
1	0	1897	C
1	0	1900	U
1	0	1909	U
1	0	1910	A
1	0	1914	U
1	0	1920	A
1	0	1921	A
1	0	1922	U
1	0	1923	U
1	0	1924	C
1	0	1926	U
1	0	1927	U
1	0	1928	G
1	0	1930	C
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	1951	G
1	0	1953	A
1	0	1954	A
1	0	1955	G
1	0	1956	G

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Mol	Chain	Res	Type
1	0	1957	C
1	0	1964	A
1	0	1976	U
1	0	1979	C
1	0	1980	A
1	0	2004	U
1	0	2005	U
1	0	2006	G
1	0	2014	A
1	0	2015	G
1	0	2016	A
1	0	2017	U
1	0	2019	C
1	0	2026	C
1	0	2034	A
1	0	2035	G
1	0	2038	C
1	0	2039	G
1	0	2044	G
1	0	2045	A
1	0	2046	C
1	0	2051	U
1	0	2052	G
1	0	2059	U
1	0	2060	A
1	0	2075	U
1	0	2076	G
1	0	2082	C
1	0	2083	G
1	0	2094	C
1	0	2096	U
1	0	2110	G
1	0	2118	A
1	0	2140	G
1	0	2162	C
1	0	2168	A
1	0	2171	U
1	0	2172	U
1	0	2181	A
1	0	2189	A
1	0	2191	A
1	0	2192	U

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Mol	Chain	Res	Type
1	0	2195	C
1	0	2199	C
1	0	2205	C
1	0	2214	G
1	0	2217	G
1	0	2218	G
1	0	2229	G
1	0	2237	C
1	0	2241	U
1	0	2245	A
1	0	2246	A
1	0	2247	A
1	0	2254	C
1	0	2255	G
1	0	2261	G
1	0	2262	C
1	0	2265	A
1	0	2268	G
1	0	2285	U
1	0	2286	G
1	0	2287	G
1	0	2288	A
1	0	2289	A
1	0	2298	U
1	0	2299	A
1	0	2300	G
1	0	2301	A
1	0	2303	C
1	0	2304	G
1	0	2306	A
1	0	2307	A
1	0	2313	G
1	0	2314	A
1	0	2316	G
1	0	2324	G
1	0	2325	A
1	0	2326	C
1	0	2329	C
1	0	2338	C
1	0	2340	C
1	0	2351	G
1	0	2362	G

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Mol	Chain	Res	Type
1	0	2364	C
1	0	2369	U
1	0	2371	A
1	0	2381	A
1	0	2382	C
1	0	2385	U
1	0	2386	G
1	0	2396	C
1	0	2398	U
1	0	2402	U
1	0	2404	A
1	0	2405	A
1	0	2406	C
1	0	2408	G
1	0	2409	A
1	0	2410	U
1	0	2418	A
1	0	2419	C
1	0	2420	C
1	0	2427	A
1	0	2428	U
1	0	2448	A
1	0	2455	A
1	0	2461	G
1	0	2470	U
1	0	2477	C
1	0	2481	G
1	0	2483	U
1	0	2484	G
1	0	2485	U
1	0	2492	G
1	0	2497	A
1	0	2498	U
1	0	2499	C
1	0	2504	G
1	0	2508	G
1	0	2521	A
1	0	2522	G
1	0	2545	A
1	0	2546	G
1	0	2549	G
1	0	2552	C

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Mol	Chain	Res	Type
1	0	2553	G
1	0	2556	A
1	0	2561	G
1	0	2564	U
1	0	2565	C
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	2595	C
1	0	2600	A
1	0	2609	G
1	0	2621	G
1	0	2624	G
1	0	2625	U
1	0	2630	C
1	0	2633	A
1	0	2634	G
1	0	2661	G
1	0	2668	U
1	0	2681	A
1	0	2691	C
1	0	2692	A
1	0	2693	U
1	0	2694	G
1	0	2705	A
1	0	2706	U
1	0	2707	G
1	0	2711	G
1	0	2712	G
1	0	2713	A
1	0	2728	A
1	0	2730	A
1	0	2732	C
1	0	2736	U
1	0	2737	A
1	0	2738	A
1	0	2745	A
1	0	2746	G

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Mol	Chain	Res	Type
1	0	2757	G
1	0	2758	A
1	0	2759	U
1	0	2761	A
1	0	2769	C
1	0	2770	A
1	0	2771	C
1	0	2782	G
1	0	2783	U
1	0	2795	A
1	0	2796	A
1	0	2798	A
1	0	2807	U
1	0	2808	U
1	0	2809	A
1	0	2810	A
1	0	2811	G
1	0	2825	A
1	0	2841	U
1	0	2842	C
1	0	2846	G
1	0	2847	G
1	0	2849	C
1	0	2854	G
1	0	2855	C
1	0	2867	G
1	0	2868	G

All (223) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	0	13	A
1	0	34	U
1	0	50	G
1	0	69	G
1	0	70	A
1	0	71	A
1	0	73	A
1	0	82	G
1	0	83	A
1	0	89	A
1	0	117	A

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Mol	Chain	Res	Type
1	0	123	A
1	0	154	U
1	0	173	A
1	0	176	A
1	0	181	A
1	0	192	G
1	0	198	A
1	0	204	A
1	0	218	A
1	0	219	G
1	0	226	C
1	0	312	G
1	0	322	A
1	0	332	C
1	0	333	A
1	0	340	G
1	0	342	G
1	0	343	A
1	0	403	A
1	0	417	C
1	0	434	C
1	0	447	U
1	0	454	G
1	0	458	G
1	0	459	A
1	0	460	U
1	0	466	A
1	0	468	A
1	0	469	G
1	0	485	G
1	0	490	A
1	0	492	G
1	0	499	G
1	0	516	G
1	0	539	A
1	0	571	U
1	0	580	A
1	0	582	G
1	0	583	C
1	0	596	C
1	0	600	G
1	0	612	G

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Mol	Chain	Res	Type
1	0	631	G
1	0	668	A
1	0	682	G
1	0	683	A
1	0	684	C
1	0	698	A
1	0	699	G
1	0	717	G
1	0	739	G
1	0	741	G
1	0	752	G
1	0	760	U
1	0	775	U
1	0	777	A
1	0	789	G
1	0	795	A
1	0	801	A
1	0	804	C
1	0	805	G
1	0	813	A
1	0	814	G
1	0	818	G
1	0	842	A
1	0	843	G
1	0	956	A
1	0	968	C
1	0	972	C
1	0	984	A
1	0	1000	G
1	0	1019	U
1	0	1023	U
1	0	1033	G
1	0	1137	A
1	0	1139	A
1	0	1141	U
1	0	1142	G
1	0	1152	C
1	0	1153	A
1	0	1154	A
1	0	1167	A
1	0	1193	G
1	0	1194	U

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Mol	Chain	Res	Type
1	0	1223	G
1	0	1233	A
1	0	1249	G
1	0	1260	A
1	0	1261	G
1	0	1263	G
1	0	1265	G
1	0	1266	G
1	0	1278	A
1	0	1279	G
1	0	1285	A
1	0	1299	A
1	0	1301	U
1	0	1313	U
1	0	1314	A
1	0	1315	A
1	0	1324	G
1	0	1325	U
1	0	1333	G
1	0	1337	G
1	0	1338	G
1	0	1342	U
1	0	1345	G
1	0	1353	A
1	0	1354	A
1	0	1355	A
1	0	1391	A
1	0	1410	U
1	0	1442	C
1	0	1469	U
1	0	1495	G
1	0	1513	U
1	0	1582	A
1	0	1618	U
1	0	1624	A
1	0	1626	A
1	0	1631	C
1	0	1632	A
1	0	1633	C
1	0	1634	A
1	0	1651	U
1	0	1664	G

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Mol	Chain	Res	Type
1	0	1670	G
1	0	1684	G
1	0	1685	A
1	0	1691	G
1	0	1698	C
1	0	1710	U
1	0	1715	A
1	0	1716	G
1	0	1749	G
1	0	1772	C
1	0	1775	A
1	0	1777	A
1	0	1790	G
1	0	1791	C
1	0	1799	A
1	0	1811	A
1	0	1820	G
1	0	1913	G
1	0	1919	A
1	0	1923	U
1	0	1926	U
1	0	1938	U
1	0	1947	G
1	0	1953	A
1	0	1963	G
1	0	1975	G
1	0	1979	C
1	0	2004	U
1	0	2005	U
1	0	2015	G
1	0	2018	G
1	0	2034	A
1	0	2044	G
1	0	2045	A
1	0	2050	G
1	0	2059	U
1	0	2093	G
1	0	2161	C
1	0	2204	A
1	0	2217	G
1	0	2228	U
1	0	2237	C

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Mol	Chain	Res	Type
1	0	2245	A
1	0	2254	C
1	0	2261	G
1	0	2312	A
1	0	2325	A
1	0	2370	G
1	0	2404	A
1	0	2405	A
1	0	2418	A
1	0	2426	G
1	0	2427	A
1	0	2428	U
1	0	2447	G
1	0	2469	G
1	0	2476	A
1	0	2482	A
1	0	2485	U
1	0	2496	C
1	0	2497	A
1	0	2498	U
1	0	2521	A
1	0	2545	A
1	0	2551	A
1	0	2588	U
1	0	2592	U
1	0	2593	A
1	0	2594	U
1	0	2608	A
1	0	2633	A
1	0	2668	U
1	0	2693	U
1	0	2705	A
1	0	2706	U
1	0	2756	A
1	0	2758	A
1	0	2760	G
1	0	2810	A
1	0	2823	G
1	0	2824	C
1	0	2841	U
1	0	2846	G
1	0	2848	A

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Mol	Chain	Res	Type
1	0	2854	G
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 carbohydrates in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

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

In the following table, the column labelled ‘#RSRZ> 2’ contains the number (and percentage) of RSRZ outliers, followed by percent RSRZ outliers for the chain as percentile scores relative to all X-ray entries and entries of similar resolution. The OWAB column contains the minimum, median, 95th percentile and maximum values of the occupancy-weighted average B-factor per residue. The column labelled ‘Q< 0.9’ lists the number of (and percentage) of residues with an average occupancy less than 0.9.

Mol	Chain	Analysed	<RSRZ>	#RSRZ>2	OWAB(Å ²)	Q<0.9
1	0	2766/2880 (96%)	0.56	301 (10%) 6 7	21, 75, 199, 205	0
2	R	93/95 (97%)	2.46	42 (45%) 0 0	16, 63, 157, 200	0
3	W	65/67 (97%)	1.96	24 (36%) 0 0	21, 86, 159, 200	0
4	7	113/113 (100%)	3.78	60 (53%) 0 0	16, 120, 200, 200	0
All	All	3037/3155 (96%)	0.77	427 (14%) 3 4	16, 76, 200, 205	0

All (427) RSRZ outliers are listed below:

Mol	Chain	Res	Type	RSRZ
4	7	84	ASN	17.7
2	R	90	ALA	16.5
4	7	110	TYR	15.3
2	R	93	GLY	14.0
4	7	77	GLY	14.0
4	7	25	ALA	13.7
4	7	104	THR	12.7
4	7	74	TYR	12.7
4	7	89	THR	12.6
4	7	111	PRO	12.5
3	W	55	THR	12.2
4	7	108	GLU	12.1
1	0	1120	C	11.2
4	7	28	GLN	11.1
4	7	70	LEU	11.0
1	0	558	G	10.9
4	7	13	PHE	10.7
2	R	92	ALA	10.5
4	7	21	GLU	10.1
1	0	1061	A	9.9
1	0	1075	C	9.3

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Mol	Chain	Res	Type	RSRZ
4	7	17	VAL	9.3
4	7	106	LYS	8.9
1	0	1072	U	8.5
4	7	91	ASP	8.5
1	0	1062	G	8.4
4	7	71	GLU	8.4
1	0	1084	A	8.3
1	0	1187	A	8.2
1	0	371	G	8.2
1	0	2124	C	7.9
2	R	94	GLN	7.9
4	7	73	HIS	7.9
1	0	1106	A	7.9
1	0	1427	G	7.8
4	7	53	GLU	7.7
1	0	1074	G	7.7
1	0	1099	A	7.6
2	R	68	PHE	7.6
1	0	730	C	7.5
1	0	1103	C	7.5
1	0	940	G	7.4
1	0	1866	G	7.4
1	0	1114	A	7.4
2	R	89	GLU	7.4
4	7	102	GLU	7.4
1	0	1107	A	7.4
1	0	2094	C	7.2
1	0	1907	C	7.2
1	0	2081	U	7.1
1	0	2123	G	7.1
1	0	2780	A	7.0
1	0	1095	A	6.9
1	0	2120	C	6.9
4	7	90	VAL	6.9
1	0	1083	C	6.8
1	0	1506	C	6.8
3	W	11	ALA	6.7
4	7	109	THR	6.6
1	0	556	A	6.6
3	W	51	ALA	6.5
1	0	1552	C	6.5
1	0	1073	G	6.5

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Mol	Chain	Res	Type	RSRZ
1	0	2125	C	6.5
1	0	1064	C	6.4
1	0	1894	U	6.4
1	0	1104	G	6.4
4	7	22	VAL	6.4
1	0	1184	G	6.3
1	0	2290	A	6.3
1	0	1110	G	6.3
1	0	1733	U	6.2
4	7	83	LEU	6.2
1	0	1058	G	6.1
1	0	1097	A	6.1
1	0	891	A	6.1
1	0	1734	C	6.1
1	0	1098	G	6.0
1	0	1121	G	6.0
1	0	2137	G	6.0
1	0	1554	G	5.9
1	0	2095	G	5.9
1	0	1087	C	5.9
1	0	1086	C	5.9
1	0	1085	G	5.8
1	0	1092	U	5.8
1	0	1902	A	5.8
1	0	2118	A	5.7
2	R	57	ASN	5.7
1	0	1082	G	5.7
2	R	15	LYS	5.6
1	0	1057	A	5.6
1	0	1871	G	5.6
1	0	1897	C	5.6
4	7	78	LEU	5.6
1	0	2139	G	5.6
1	0	1505	U	5.5
1	0	1525	A	5.5
1	0	372	U	5.5
1	0	2140	G	5.5
1	0	1076	U	5.5
1	0	1895	A	5.4
4	7	103	PHE	5.4
1	0	1078	A	5.3
1	0	1090	C	5.3

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Mol	Chain	Res	Type	RSRZ
1	0	1091	C	5.3
1	0	624	A	5.3
1	0	2093	G	5.3
3	W	58	ALA	5.3
1	0	1903	C	5.3
1	0	1189	G	5.2
1	0	1524	C	5.2
1	0	1188	A	5.2
3	W	53	LEU	5.2
4	7	92	PRO	5.2
1	0	1183	C	5.2
1	0	1185	C	5.2
1	0	1069	G	5.2
1	0	2731	G	5.2
1	0	1111	C	5.2
1	0	2091	C	5.2
1	0	2135	C	5.2
1	0	1893	G	5.2
4	7	81	LEU	5.2
1	0	373	A	5.1
1	0	1088	A	5.1
4	7	96	GLN	5.1
1	0	2096	U	5.1
4	7	16	SER	5.1
1	0	2136	G	5.1
1	0	2109	A	5.0
1	0	1109	A	5.0
1	0	1100	G	5.0
1	0	1553	G	5.0
4	7	79	ARG	4.9
1	0	296	A	4.9
4	7	66	ARG	4.9
1	0	1122	A	4.9
1	0	2103	G	4.8
2	R	55	THR	4.8
1	0	913	A	4.8
1	0	726	G	4.8
1	0	1556	A	4.8
1	0	1904	G	4.7
1	0	1905	G	4.7
2	R	54	SER	4.7
4	7	18	PRO	4.7

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Mol	Chain	Res	Type	RSRZ
1	0	2160	C	4.7
1	0	1071	U	4.7
4	7	34	ALA	4.7
1	0	1089	C	4.6
1	0	1093	U	4.6
4	7	94	ASP	4.6
1	0	912	A	4.6
1	0	1065	A	4.6
4	7	93	GLN	4.6
1	0	1094	C	4.5
1	0	1912	G	4.5
2	R	2	SER	4.5
1	0	248	A	4.4
1	0	1115	C	4.4
1	0	2106	G	4.4
4	7	46	LYS	4.4
1	0	2082	C	4.4
3	W	36	GLN	4.4
3	W	52	GLN	4.4
1	0	1432	G	4.3
1	0	2170	C	4.3
1	0	666	U	4.3
1	0	1436	G	4.3
1	0	1549	C	4.3
1	0	2165	A	4.3
1	0	1055	A	4.3
2	R	91	LEU	4.3
3	W	43	VAL	4.3
1	0	1550	C	4.3
1	0	2086	U	4.3
1	0	2164	G	4.3
1	0	1865	C	4.2
1	0	2104	G	4.2
3	W	54	ASN	4.2
2	R	56	MET	4.2
1	0	667	U	4.2
1	0	1126	A	4.2
1	0	2117	A	4.1
1	0	1060	C	4.1
1	0	890	U	4.1
1	0	2770	A	4.1
3	W	41	HIS	4.1

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Mol	Chain	Res	Type	RSRZ
1	0	2781	G	4.1
4	7	43	ARG	4.1
1	0	1955	G	4.1
1	0	1909	U	4.0
1	0	2134	U	4.0
1	0	1049	C	4.0
1	0	1892	C	4.0
1	0	1096	A	4.0
1	0	1435	G	4.0
1	0	1068	A	4.0
4	7	82	GLY	4.0
1	0	1557	G	4.0
1	0	2198	U	4.0
1	0	1499	A	3.9
2	R	64	ARG	3.9
4	7	113	VAL	3.9
1	0	1847	G	3.9
2	R	3	HIS	3.9
3	W	56	VAL	3.9
1	0	1921	A	3.9
1	0	1913	G	3.9
2	R	5	ASP	3.9
3	W	40	PRO	3.9
2	R	40	ASP	3.9
1	0	1520	G	3.9
1	0	1067	G	3.8
1	0	2289	A	3.8
1	0	2774	U	3.8
1	0	1191	G	3.8
1	0	1548	U	3.8
1	0	300	C	3.8
1	0	2381	A	3.8
1	0	729	A	3.8
1	0	1896	A	3.8
1	0	1108	U	3.7
2	R	87	SER	3.7
2	R	14	GLU	3.7
1	0	1077	U	3.7
1	0	728	G	3.7
1	0	1910	A	3.7
1	0	1102	G	3.7
4	7	80	GLU	3.6

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Mol	Chain	Res	Type	RSRZ
1	0	2167	A	3.6
1	0	1523	A	3.6
3	W	20	ALA	3.6
1	0	2087	U	3.6
2	R	59	PRO	3.6
1	0	1515	U	3.5
1	0	297	A	3.5
1	0	1516	A	3.5
1	0	1105	U	3.5
4	7	47	ALA	3.5
1	0	1059	A	3.5
1	0	1048	U	3.5
1	0	1123	G	3.5
1	0	725	C	3.5
1	0	2174	G	3.5
1	0	1546	C	3.4
1	0	2105	U	3.4
3	W	8	ASN	3.4
1	0	1117	G	3.4
1	0	1125	G	3.4
1	0	1936	A	3.4
1	0	1954	A	3.4
1	0	295	C	3.4
1	0	1521	U	3.4
1	0	1101	U	3.3
1	0	2285	U	3.3
1	0	1080	A	3.3
1	0	2119	A	3.3
4	7	42	PHE	3.3
1	0	2168	A	3.3
1	0	2265	A	3.3
1	0	2090	U	3.2
1	0	304	A	3.2
1	0	2089	C	3.2
2	R	45	ALA	3.2
1	0	2190	A	3.2
3	W	59	GLU	3.2
1	0	1119	U	3.2
1	0	1528	C	3.2
3	W	15	ALA	3.2
2	R	83	ALA	3.1
2	R	44	GLN	3.1

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Mol	Chain	Res	Type	RSRZ
1	0	1124	U	3.1
2	R	36	THR	3.1
1	0	2138	U	3.1
2	R	41	ALA	3.1
1	0	1858	C	3.1
1	0	100	G	3.1
1	0	1600	U	3.1
1	0	1081	A	3.1
3	W	38	ALA	3.1
1	0	731	A	3.1
1	0	2189	A	3.1
1	0	1051	U	3.1
1	0	1900	U	3.1
1	0	1906	U	3.1
1	0	518	A	3.0
1	0	911	A	3.0
4	7	107	GLY	3.0
1	0	148	C	3.0
1	0	1732	U	3.0
1	0	2110	G	3.0
1	0	2284	U	3.0
1	0	1864	G	3.0
1	0	2133	G	3.0
3	W	34	ALA	3.0
1	0	541	C	3.0
1	0	1430	G	2.9
3	W	37	LEU	2.9
1	0	1431	U	2.9
3	W	47	ARG	2.9
1	0	2085	G	2.9
1	0	1498	G	2.9
1	0	1603	A	2.9
1	0	1438	G	2.9
1	0	1831	G	2.8
1	0	2287	G	2.8
4	7	4	ILE	2.8
4	7	41	GLY	2.8
4	7	95	VAL	2.8
4	7	68	ARG	2.8
1	0	2773	G	2.8
2	R	62	ARG	2.8
1	0	1495	G	2.8

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Mol	Chain	Res	Type	RSRZ
1	0	1867	A	2.8
1	0	2877	A	2.8
1	0	1547	U	2.8
1	0	1842	G	2.8
1	0	1953	A	2.8
4	7	11	VAL	2.8
1	0	135	U	2.8
1	0	2169	A	2.8
1	0	1857	G	2.7
1	0	1844	C	2.7
1	0	1066	G	2.7
1	0	2122	G	2.7
1	0	1437	A	2.7
4	7	24	ARG	2.7
4	7	40	PRO	2.7
1	0	2157	C	2.7
2	R	20	MET	2.7
4	7	5	SER	2.6
1	0	301	C	2.6
4	7	37	VAL	2.6
3	W	19	ASP	2.6
1	0	665	A	2.6
1	0	2449	G	2.6
1	0	2121	U	2.6
3	W	4	SER	2.6
4	7	9	ASN	2.6
1	0	1079	G	2.6
1	0	1916	G	2.6
1	0	969	U	2.6
1	0	400	U	2.5
1	0	1602	G	2.5
2	R	65	VAL	2.5
1	0	136	A	2.5
1	0	1917	C	2.5
3	W	39	GLN	2.5
1	0	1063	C	2.5
2	R	18	SER	2.5
1	0	727	U	2.5
1	0	2108	G	2.5
1	0	303	C	2.5
4	7	76	GLN	2.5
2	R	24	VAL	2.5

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Mol	Chain	Res	Type	RSRZ
1	0	1113	C	2.4
1	0	1555	A	2.4
1	0	2298	U	2.4
1	0	2162	C	2.4
1	0	1503	G	2.4
1	0	1031	C	2.4
4	7	27	ASP	2.4
4	7	7	GLU	2.4
1	0	1428	G	2.4
1	0	1843	U	2.4
1	0	1890	G	2.4
2	R	4	TYR	2.4
2	R	16	ALA	2.4
1	0	2166	G	2.3
1	0	1118	G	2.3
4	7	101	PHE	2.3
1	0	788	G	2.3
1	0	1425	G	2.3
1	0	1841	G	2.3
2	R	17	TYR	2.3
1	0	2158	C	2.3
2	R	43	GLN	2.3
1	0	101	A	2.3
1	0	941	U	2.3
1	0	1922	U	2.3
3	W	35	GLY	2.3
1	0	1056	U	2.3
1	0	363	G	2.2
1	0	1459	U	2.2
1	0	1889	G	2.2
1	0	542	A	2.2
4	7	8	GLY	2.2
1	0	1023	U	2.2
1	0	612	G	2.2
1	0	1879	G	2.2
2	R	35	LYS	2.2
1	0	1044	U	2.2
1	0	1497	C	2.2
1	0	2163	U	2.2
2	R	42	ILE	2.2
1	0	1469	U	2.2
1	0	1519	G	2.2

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Mol	Chain	Res	Type	RSRZ
1	0	1812	U	2.2
1	0	2795	A	2.2
1	0	724	C	2.2
1	0	625	A	2.2
1	0	557	U	2.2
1	0	2447	G	2.1
4	7	88	ALA	2.1
1	0	1127	C	2.1
1	0	414	A	2.1
2	R	53	ILE	2.1
1	0	1551	U	2.1
2	R	26	SER	2.1
1	0	887	G	2.1
1	0	1932	G	2.1
1	0	2171	U	2.1
2	R	86	GLN	2.1
1	0	2581	A	2.1
1	0	416	U	2.1
1	0	1594	U	2.1
1	0	1830	C	2.1
1	0	2097	A	2.0
1	0	1735	G	2.0
2	R	85	GLY	2.0
1	0	554	U	2.0
2	R	46	PHE	2.0
2	R	31	PRO	2.0
1	0	2728	A	2.0
1	0	151	G	2.0

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

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

6.3 Carbohydrates [i](#)

There are no carbohydrates in this entry.

6.4 Ligands [i](#)

There are no ligands in this entry.

6.5 Other polymers [i](#)

There are no such residues in this entry.