



Full wwPDB X-ray Structure Validation Report ⓘ

May 16, 2020 – 12:28 pm BST

PDB ID : 1NKW
Title : Crystal Structure Of The Large Ribosomal Subunit From *Deinococcus Radiodurans*
Authors : Harms, J.M.; Schlutzen, F.; Zarivach, R.; Bashan, A.; Gat, S.; Agmon, I.; Bartels, H.; Franceschi, F.; Yonath, A.
Deposited on : 2003-01-05
Resolution : 3.10 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

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

MolProbity	:	4.02b-467
Xtriage (Phenix)	:	NOT EXECUTED
EDS	:	NOT EXECUTED
Percentile statistics	:	20191225.v01 (using entries in the PDB archive December 25th 2019)
Ideal geometry (proteins)	:	Engh & Huber (2001)
Ideal geometry (DNA, RNA)	:	Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP)	:	2.11

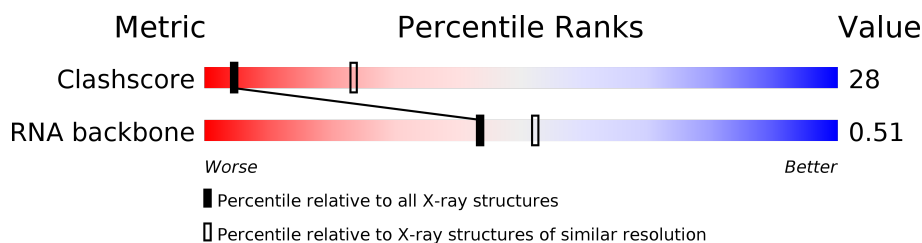
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.10 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
Clashscore	141614	1184 (3.10-3.10)
RNA backbone	3102	1116 (3.40-2.80)





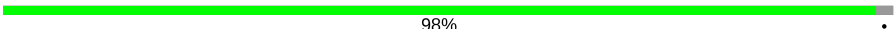


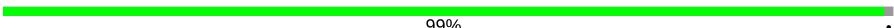
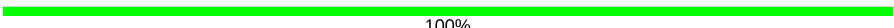




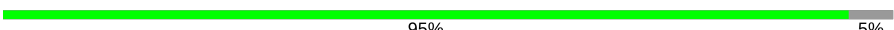
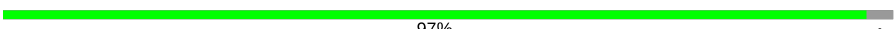


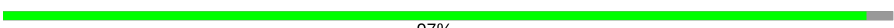

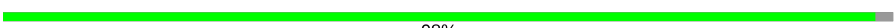
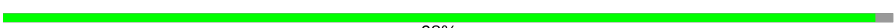

The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively.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

Note EDS was not executed.

Mol	Chain	Length	Quality of chain
1	0	2880	
2	9	124	
3	A	275	
4	B	211	
5	C	205	
6	D	180	
7	E	212	
8	F	146	
9	G	144	

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Mol	Chain	Length	Quality of chain
10	H	174	 82% 18%
11	I	134	 99% .
12	J	156	 90% 10%
13	K	142	 87% . 13%
14	L	116	 98% .
15	M	114	 97% .
16	N	166	 74% . 25%
17	O	118	 99% .
18	P	100	 100%
19	Q	134	 97% .
20	R	95	 98% .
21	S	115	 98% .
22	T	253	 88% 12%
23	U	91	 95% 5%
24	W	67	 97% .
25	X	55	 100%
26	Y	73	 100%
27	Z	60	 97% .
28	1	82	 65% 35%
29	2	47	 98% .
30	3	64	 98% .
31	4	36	 97% .

2 Entry composition

There are 31 unique types of molecules in this entry. The entry contains 65300 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

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

- Molecule 2 is a RNA chain called 5S ribosomal RNA.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	9	118	Total	C	N	O	P	0	0	0
			2519	1124	464	813	118			

- Molecule 3 is a protein called 50S ribosomal protein L2.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
3	A	270	Total	C	0	0	270
			270	270			

- Molecule 4 is a protein called 50S ribosomal protein L3.

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

- Molecule 5 is a protein called 50S ribosomal protein L4.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
5	C	197	Total	C	0	0	197
			197	197			

- Molecule 6 is a protein called 50S ribosomal protein L5.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
6	D	178	Total	C	0	0	178
			178	178			

- Molecule 7 is a protein called 50S ribosomal protein L6.

Mol	Chain	Residues	Atoms		ZeroOcc	AltConf	Trace
7	E	177	Total	C	0	0	177
			177	177			

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

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

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

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

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

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

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

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

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

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

- Molecule 13 is a protein called 50S ribosomal protein L16.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- Molecule 22 is a protein called general stress protein CTC.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

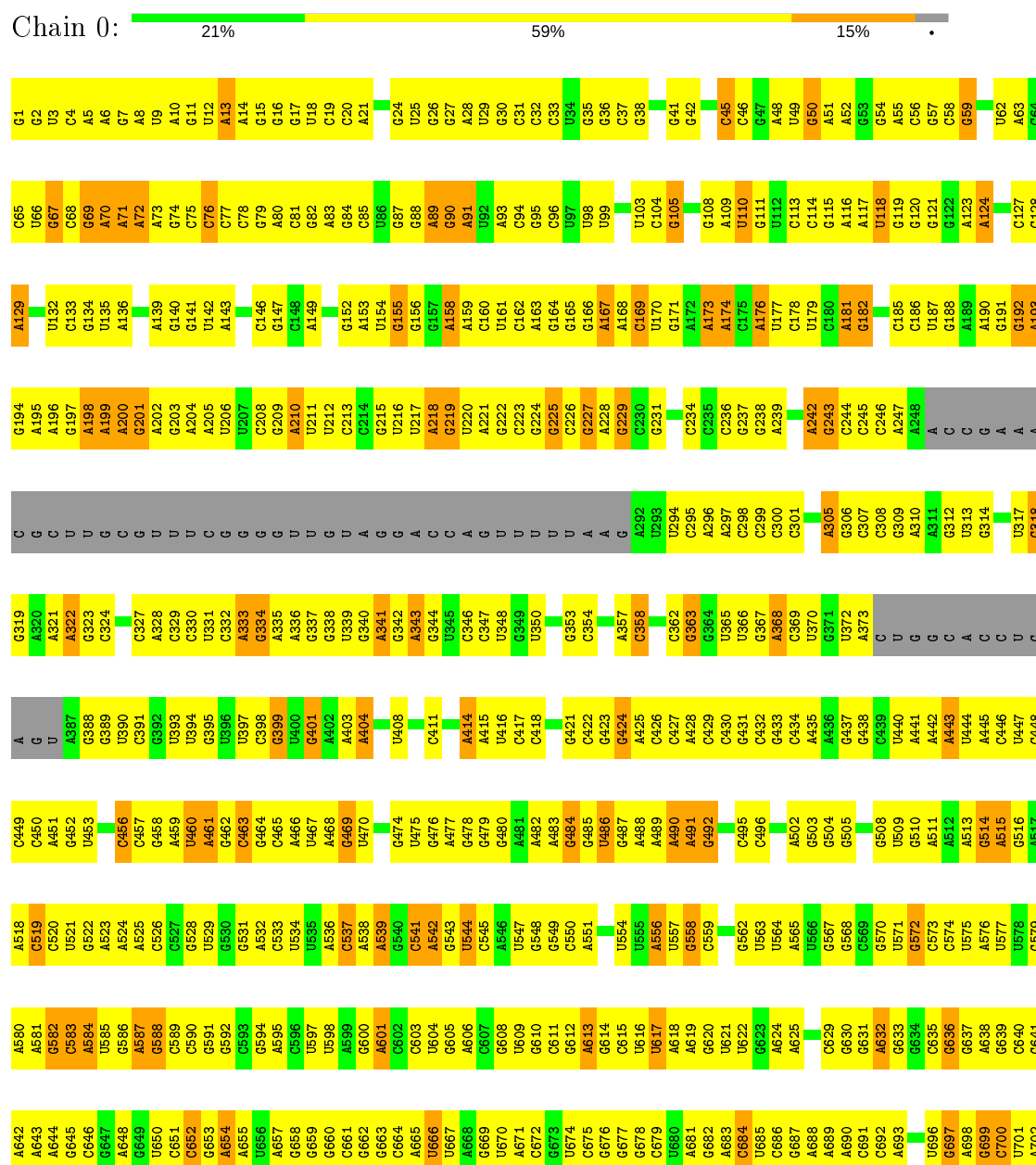
Mol	Chain	Residues	Atoms	ZeroOcc	AltConf	Trace
31	4	35	Total C 35 35	0	0	35

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. Residues are color-coded according to the number of geometric quality criteria for which they contain at least one outlier: green = 0, yellow = 1, orange = 2 and red = 3 or more. Stretches of 2 or more consecutive residues without any outlier are shown as a green connector. Residues present in the sample, but not in the model, are shown in grey.

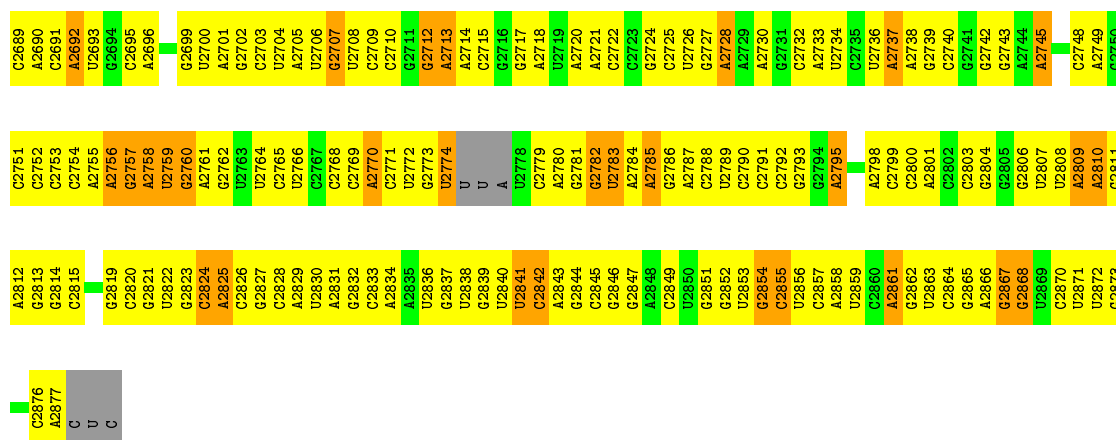
Note EDS was not executed.

• Molecule 1: 23S ribosomal RNA



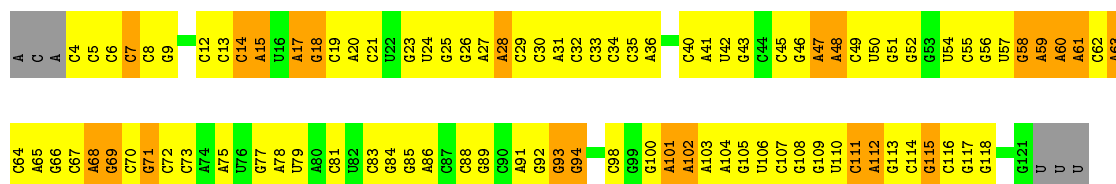


U2626	G2562	U2498	G2362	U2291	G2217	A	G2093	C2026	A1961	A1901	C1824	G1761	U1697
G2627	U2563	C2499	G2363	U2296	G2218	U	C2094	C2027	C1962	A1902	C1825	C1762	C1698
G2628	U2564	U2501	G2364	G2297	A2220	A	G2095	G2095	G1963	C1903	G1826	G1763	A1699
C2630	C2565	G2502	U2365	G2298	U2221	C2157	U2096	U2030	A1964	G1904	U1827	A1764	
C2631	G2566	G2503	U2369	U2299	G2225	C2158	A2159	G2032	A2031	U1965	C1830	C1765	C1703
U2682	U2567	G2504	G2370	G2300	A2226	C2160	G	C2033	C1966	U1906	G1831	U1766	G1704
A2633	A2568	G2505	A2371	A2301	G2227	C2161	U	A2034	U1967	C1907	U1768	U1767	U1705
G2634	C2570	G2372	A2372	C2302	U2228	C2162	A		G1968	C1908	U1769	A1706	A1706
A2512	G2511	G2375	G2375	C2303	G2229	U2163	A		G1969	U1909	U1770	U1768	A1707
G2512	G2510	A2307	A2306	A2306	G2230	U2164	G2103	G2038	A1970	A1910	C1835	U1770	C1708
G2512	G2509	G2377	A2307	A2307	C2233	A2165	G2104	G2039	C1971	A1911	C1836	A1771	U1709
G2512	G2508	G2378	A2308	A2308	G2234	A2166	G2105	A2040	C1972	G1912	G1837	C1772	U1710
G2512	G2507	G2379	A2309	A2309	G2235	A2167	G2106	A2041	C1973	G1913	G1838	C1773	C1711
G2512	G2506	G2380	G2310	G2310	G2236	A2168	G2107	A2042	U1974	U1914	A1839	A1774	G1712
G2512	G2505	G2381	U2311	U2311	G2237	A2169		A2043	G1975	A1915	A1840	A1775	G1713
G2512	G2504	G2382	U2312	U2312	C2240	U2170	G2110	G2044	U1976	G1916	G1841	A1776	A1714
G2512	G2503	G2383	G2313	G2313	U2241	U2171	C	A2045	C1977	C1917	G1842	A1777	A1715
G2512	G2502	G2384	A2314	A2314	C2242	U2172	C	A2046	U1978	G1918	U1843	A1778	A1716
G2512	G2501	G2385	A2315	A2315	C2243	U2173	U	C2047	C1979	A1919	C1844	C1779	A1717
G2512	G2500	G2386	G2316	G2316	C2244	U2174	G	G2050	A1980	A1920	A1845	A1780	A1718
G2512	G2499	G2387	G2317	G2317	A2245	A2175		U2051	C1982	U1921	G1846	C1781	G1719
G2512	G2498	G2388	U2318	U2318	A2246	U2176	G	G2052	G1989	C1924	G1849	C1782	G1721
G2512	G2497	G2389	G2319	G2319	U2247	U2177	A2117	G2053	U1990	G1925	G1850	A1785	U1723
G2512	G2496	G2390	G2320	G2320	A2248	U2178	A2118	A2054	C1991	U1926	A1851	C1786	G1724
G2512	G2495	G2391	G2321	G2321	U2249	U2179	A2119	A2055	G1992	U1927		U1787	C1725
G2512	G2494	G2392	U2322	U2322	U2251	U2180	U2120	G2056	G1993	G1928	G1854	C1788	C1726
G2512	G2493	G2393	G2323	G2323	A2252	A2181	U2121	C2057	C1994	U1929	G1855	U1789	G1727
G2512	G2492	G2394	U2324	U2324	G2255	A2182	G2123	U2058	C1995	C1930	G1856	G1790	A1728
G2512	G2491	G2395	A2325	A2325	U2256	C2184	G2124	U2059	A1996	G1931	G1857	C1791	C1729
G2512	G2490	G2396	G2326	G2326	U2257	U2185	C2125	A2060	A1997	G1932	C1858	C1792	G1730
G2512	G2489	G2397	U2327	U2327	G2261	U2186	U		A1998	G1933		A1799	G1731
G2512	G2488	G2398	G2328	G2328	C2262	A2191	U	A2063	U1999	U1934	A1860	U1793	C1732
G2512	G2487	G2399	G2329	G2329	C2263	U2192	U	A2064	U2000	A1935	G1861	U1733	U1733
G2512	G2486	G2400	G2330	G2330	C2264	C2193	G	A2065	G2001	A1936	C1862	G1734	G1734
G2512	G2485	G2401	A2331	A2331	A2265	C2194	G	G2066	A2002	G1937	U1863	C1801	G1735
G2512	G2484	G2402	U2335	U2335	A2266	A2194		U2067	A2003	U1938	G1864	C1801	G1736
G2512	G2483	G2403	G2336	G2336	A2267	C2195	G2132	C2068	U2004	U1939	C1865	A1802	U1737
G2512	G2482	G2404	A2337	A2337	G2268	U2196	G2133	U2069	U2005	C1940	G1866	U1803	U1738
G2512	G2481	G2405	U2342	U2342	G2269	U2197	U2134	G2070	G2006	C1941	A1867	U1804	G1739
G2512	G2480	G2406	G2343	G2343	U2271	U2198	C2135	G2071	G2007	G1942	A1868	G1805	G1740
G2512	G2479	G2407	U2344	U2344	A2272	G2200	G2137	C2072	C2008	A1943	A1869	G1806	G1741
G2512	G2478	G2408	G2345	G2345	A2273	G2201	U2138	A2073	U2009	C1944	U1870	A1807	G1742
G2512	G2477	G2409	A2346	A2346	C2274	G2202	G2139	G2076	U2011	U1946	G1871	C1808	C1743
G2512	G2476	G2410	G2347	G2347	U2275	A2204	G2140	G2077	A2012	G1947	A1872	G1809	
G2512	G2475	G2411	A2348	A2348	A2276	G2205	A	U2078	A2013	C1948	U1810	G1747	G1747
G2512	G2474	G2412	U2349	U2349	A2277	C2206	G	A2079	A2014	A1949	U1811	U1748	U1748
G2512	G2473	G2413	G2350	G2350	A2278	C2207	C	U2080	G2015	C1950	U1812	G1749	G1749
G2512	G2472	G2414	A2351	A2351	G2279	U2208	A	U2081	A2016	G1951	A1813	A1750	A1750
G2512	G2471	G2415	G2352	G2352	A2280	G2209	A	C2082	U2017	A1952	G1814	U1751	U1751
G2512	G2470	G2416	A2353	A2353	C2281	G2210	A	G2083	C2018	A1953	G1815	U1752	U1752
G2512	G2469	G2417	G2354	G2354	U2285	C2211	C	G2084	C2019	A1954	G1816	A1753	A1753
G2512	G2468	G2418	G2355	G2355	U2286	U2212	G	G2085	G2020	G1955	G1817	G1754	G1754
G2512	G2467	G2419	A2356	A2356	G2287	U2213	U	U2086	G2021	G1956	G1818	G1755	G1755
G2512	G2466	G2420	A2357	A2357	G2288	G2214	G		C2022	C1957	U1819	C1756	C1756
G2512	G2465	G2421	G2361	G2361	A2289	G2215	A	U2090	C2023	G1958	G1820	C1757	C1757
G2512	G2464	G2422			A2290	G2216		U2091	G2024	U1959	A1821	C1758	C1758
G2512	G2463	G2423						U2092	A2025	U1960	G1822	G1759	G1759
G2512	G2462	G2424									G1823	G1760	G1760



- Molecule 2: 5S ribosomal RNA

Chain 9: 18% 59% 19% 5%



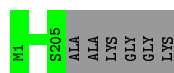
- Molecule 3: 50S ribosomal protein L2

Chain A: 98%



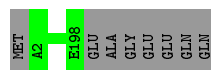
- Molecule 4: 50S ribosomal protein L3

Chain B: 97%



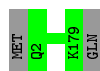
- Molecule 5: 50S ribosomal protein L4

Chain C: 96%



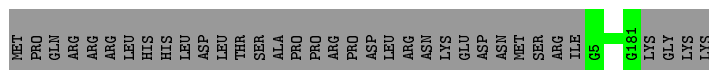
- Molecule 6: 50S ribosomal protein L5

Chain D: 99%



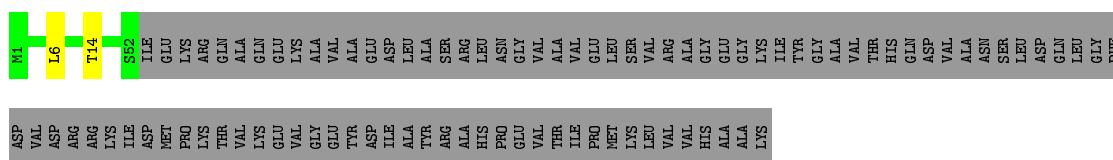
- Molecule 7: 50S ribosomal protein L6

Chain E: 83% 17%



- Molecule 8: 50S ribosomal protein L9

Chain F: 34% 64%



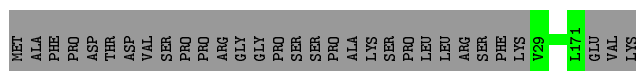
- Molecule 9: 50S ribosomal protein L11

Chain G: 99%



- Molecule 10: 50S ribosomal protein L13

Chain H: 82% 18%



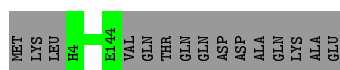
- Molecule 11: 50S ribosomal protein L14

Chain I: 99%




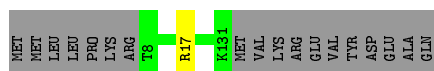
- Molecule 12: 50S ribosomal protein L15

Chain J: 90% 10%



- Molecule 13: 50S ribosomal protein L16

Chain K:  87% 13%



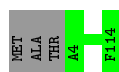
- Molecule 14: 50S ribosomal protein L17

Chain L:  98%



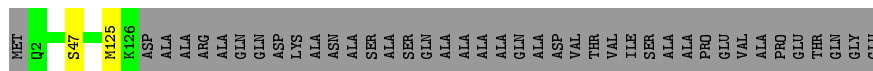
- Molecule 15: 50S ribosomal protein L18

Chain M:  97%



- Molecule 16: 50S ribosomal protein L19

Chain N:  74% 25%



- Molecule 17: 50S ribosomal protein L20

Chain O:  99%



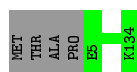
- Molecule 18: 50S ribosomal protein L21

Chain P:  100%

There are no outlier residues recorded for this chain.

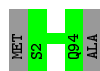
- Molecule 19: 50S ribosomal protein L22

Chain Q:  97%



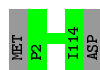
- Molecule 20: 50S ribosomal protein L23

Chain R:  98%



- Molecule 21: 50S ribosomal protein L24

Chain S: 98% .



- Molecule 22: general stress protein CTC

Chain T: 88% 12%



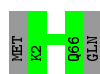
- Molecule 23: 50S ribosomal protein L27

Chain U: 95% 5%



- Molecule 24: 50S ribosomal protein L29

Chain W: 97% .



- Molecule 25: 50S ribosomal protein L30

Chain X: 100%

There are no outlier residues recorded for this chain.

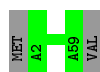
- Molecule 26: 50S ribosomal protein L31

Chain Y: 100%

There are no outlier residues recorded for this chain.

- Molecule 27: 50S ribosomal protein L32

Chain Z: 97% .



- Molecule 28: 50S ribosomal protein L33

Chain 1:  65% 35%

MET PHE LEU LEU ARG GLN ALA LEU GLY ALA THR PHE PRO VAL PRO GLY ASP GLN ARG GLY GLY CYS LYS GLU SER ILE MET A2 K54 VAL

- Molecule 29: 50S ribosomal protein L34

Chain 2:  98% .

M4 D46 GLU

- Molecule 30: 50S ribosomal protein L35

Chain 3:  98% .

MET P2 R64

- Molecule 31: 50S ribosomal protein L36

Chain 4:  97% .

MET K2 Q36



4 Data and refinement statistics

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

Property	Value	Source
Space group	I 2 2 2	Depositor
Cell constants a, b, c, α , β , γ	170.00 Å 410.00 Å 697.00 Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	15.00 – 3.10	Depositor
% Data completeness (in resolution range)	(Not available) (15.00-3.10)	Depositor
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
Refinement program	CNS	Depositor
R, R_{free}	0.240 , 0.274	Depositor
Estimated twinning fraction	No twinning to report.	Xtriage
Total number of atoms	65300	wwPDB-VP
Average B, all atoms (Å ²)	47.0	wwPDB-VP

5 Model quality [i](#)

5.1 Standard geometry [i](#)

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	0.25	0/66467	0.70	6/103673 (0.0%)
2	9	0.59	0/2816	0.81	1/4388 (0.0%)
All	All	0.27	0/69283	0.70	7/108061 (0.0%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	0	0	5

There are no bond length outliers.

All (7) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	9	94	G	N9-C1'-C2'	-6.58	104.76	112.00
1	0	2428	U	N1-C1'-C2'	6.19	122.04	114.00
1	0	1279	G	N9-C1'-C2'	5.63	121.32	114.00
1	0	843	G	C2'-C3'-O3'	5.44	122.40	113.70
1	0	2660	C	N1-C1'-C2'	5.26	120.84	114.00
1	0	1264	C	N1-C1'-C2'	5.24	120.81	114.00
1	0	1342	U	N1-C1'-C2'	5.21	120.77	114.00

There are no chirality outliers.

All (5) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	0	1264	C	Sidechain
1	0	1342	U	Sidechain
1	0	2251	U	Sidechain
1	0	2668	U	Sidechain

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Mol	Chain	Res	Type	Group
1	0	788	G	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	2555	1
2	9	2519	0	1285	147	0
3	A	270	0	0	0	0
4	B	205	0	0	0	0
5	C	197	0	0	0	0
6	D	178	0	0	0	0
7	E	177	0	0	0	0
8	F	52	0	0	1	0
9	G	143	0	0	0	0
10	H	143	0	0	0	0
11	I	132	0	0	0	0
12	J	141	0	0	0	0
13	K	124	0	0	1	0
14	L	114	0	0	0	0
15	M	111	0	0	0	0
16	N	125	0	0	1	1
17	O	117	0	0	0	0
18	P	100	0	0	0	0
19	Q	130	0	0	0	0
20	R	93	0	0	0	0
21	S	113	0	0	0	0
22	T	223	0	0	0	0
23	U	86	0	0	0	0
24	W	65	0	0	0	0
25	X	55	0	0	0	0
26	Y	73	0	0	0	0
27	Z	58	0	0	0	0
28	1	53	0	0	0	0
29	2	46	0	0	0	0
30	3	63	0	0	0	0
31	4	35	0	0	0	0
All	All	65300	0	31202	2696	1

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 28.

All (2696) 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)
1:0:1679:U:H2'	1:0:1680:U:H5''	1.22	1.12
1:0:362:C:H2'	1:0:363:G:H4'	1.34	1.10
1:0:918:A:H2'	1:0:919:U:H5''	1.29	1.10
1:0:2548:G:H2'	1:0:2549:G:H5''	1.10	1.09
1:0:2058:U:H1'	1:0:2576:G:H21	1.08	1.08
1:0:1908:C:H2'	1:0:1909:U:H4'	1.25	1.08
1:0:1976:U:H2'	1:0:1977:C:H5'	1.28	1.08
1:0:2014:A:H62	1:0:2477:C:H1'	1.17	1.06
1:0:2548:G:C2'	1:0:2549:G:H5''	1.85	1.06
1:0:940:G:H3'	1:0:941:U:C5'	1.86	1.05
1:0:940:G:H3'	1:0:941:U:H5''	1.06	1.05
1:0:2299:A:H5'	1:0:2300:G:C4	1.91	1.05
1:0:1900:U:O2'	1:0:1946:U:H5'	1.55	1.05
1:0:1458:A:H3'	1:0:1459:U:C5'	1.85	1.04
1:0:104:C:H2'	1:0:105:G:H5''	1.35	1.04
1:0:716:U:H2'	1:0:717:G:O4'	1.55	1.03
1:0:2081:U:H2'	1:0:2082:C:H5''	1.36	1.02
1:0:2266:A:N6	1:0:2323:U:H1'	1.74	1.01
1:0:1073:G:H2'	1:0:1074:G:H4'	1.40	0.99
1:0:2038:C:H2'	1:0:2483:U:H4'	1.41	0.99
1:0:1900:U:H2'	1:0:1901:A:O4'	1.61	0.99
1:0:2414:A:H2'	1:0:2415:G:H5''	1.44	0.99
1:0:1679:U:C2'	1:0:1680:U:H5''	1.92	0.99
1:0:1900:U:H3'	1:0:1901:A:H8	1.23	0.98
1:0:468:A:O2'	1:0:469:G:H4'	1.63	0.98
1:0:2059:U:H2'	1:0:2060:A:H5''	1.44	0.98
1:0:75:C:H2'	1:0:76:C:H5''	1.44	0.97
1:0:1458:A:H3'	1:0:1459:U:H5''	1.47	0.96
1:0:1747:G:H4'	1:0:1749:G:H1'	1.46	0.96
1:0:2761:A:H5''	1:0:2762:G:H5'	1.47	0.96
1:0:688:A:H62	1:0:816:U:H3	1.14	0.95
1:0:941:U:H2'	1:0:942:U:O4'	1.64	0.95
1:0:616:U:H2'	1:0:617:U:H5''	1.46	0.95
1:0:1748:U:H3	1:0:1753:A:H2	1.11	0.94
1:0:2014:A:N6	1:0:2477:C:H1'	1.82	0.94
1:0:1900:U:H3'	1:0:1901:A:C8	2.02	0.94
2:9:54:U:H2'	2:9:55:C:C6	2.03	0.94

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2425:G:H2'	1:0:2480:C:H5	1.32	0.94
1:0:1621:C:H4'	1:0:1626:A:C6	2.03	0.94
1:0:2509:A:H2'	1:0:2510:A:H5''	1.50	0.93
1:0:1432:G:H21	1:0:1596:A:H62	1.07	0.93
1:0:1656:U:H2'	1:0:1657:A:H5''	1.50	0.93
1:0:1804:U:H2'	1:0:1805:G:H8	1.33	0.93
2:9:25:G:H2'	2:9:26:G:O4'	1.69	0.92
1:0:1463:A:H1'	1:0:1543:G:H22	1.34	0.92
2:9:84:G:H2'	2:9:85:G:H8	1.34	0.92
1:0:1280:U:H3	1:0:1996:A:H62	1.09	0.92
1:0:28:A:H61	1:0:522:G:H4'	1.35	0.92
1:0:976:C:H5'	1:0:2252:A:H1'	1.49	0.91
1:0:763:A:H2	1:0:765:C:H1'	1.35	0.90
1:0:792:U:H2'	1:0:793:G:H5'	1.53	0.90
1:0:857:U:H2'	1:0:858:G:H5'	1.52	0.90
1:0:1438:G:H2'	1:0:1439:G:O4'	1.73	0.89
1:0:2623:A:H2'	1:0:2624:G:O4'	1.71	0.89
2:9:100:G:H2'	2:9:101:A:O4'	1.72	0.89
1:0:508:G:H1	1:0:516:G:H22	1.20	0.89
1:0:317:U:H2'	1:0:318:G:H5''	1.54	0.89
1:0:2266:A:H61	1:0:2323:U:H1'	1.37	0.89
1:0:2380:U:H2'	1:0:2381:A:H5'	1.53	0.89
1:0:1976:U:C2'	1:0:1977:C:H5'	2.03	0.88
2:9:67:C:H2'	2:9:68:A:H5'	1.54	0.88
1:0:929:A:H3'	1:0:930:A:H5''	1.53	0.88
1:0:1088:A:H2'	1:0:1089:C:O4'	1.74	0.88
2:9:42:U:H2'	2:9:45:C:H41	1.35	0.88
1:0:841:G:H2'	1:0:842:A:C8	2.07	0.88
2:9:4:C:H2'	2:9:5:C:C6	2.08	0.88
1:0:317:U:H3	1:0:321:A:H62	1.22	0.87
1:0:2872:U:H2'	1:0:2873:G:C8	2.10	0.87
1:0:762:A:H2'	1:0:763:A:H8	1.38	0.87
1:0:940:G:C3'	1:0:941:U:H5''	2.01	0.87
1:0:1299:A:H2'	1:0:1301:U:OP2	1.72	0.87
1:0:2096:U:H2'	1:0:2097:A:H5''	1.53	0.87
1:0:1463:A:H1'	1:0:1543:G:N2	1.88	0.87
1:0:2636:A:H62	1:0:2643:G:H21	1.22	0.87
1:0:2691:C:H3'	1:0:2692:A:H5''	1.57	0.87
1:0:88:G:H3'	1:0:89:A:H5''	1.57	0.87
1:0:1032:A:H2'	1:0:1033:G:H4'	1.56	0.86
1:0:1791:C:H2'	1:0:1792:C:H5''	1.55	0.86

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2270:U:O2'	1:0:2353:G:H1'	1.76	0.86
1:0:658:G:H4'	1:0:2331:A:H5'	1.57	0.86
1:0:847:C:H41	1:0:955:G:H21	1.19	0.86
1:0:58:C:H3'	1:0:59:G:H5''	1.55	0.86
1:0:1312:G:H5'	1:0:1314:A:H1'	1.55	0.86
1:0:1459:U:H2'	1:0:1475:U:O2'	1.75	0.86
1:0:2510:A:H61	1:0:2641:A:H61	1.21	0.86
1:0:2198:U:H3'	1:0:2199:C:H5''	1.57	0.85
2:9:102:A:C2'	2:9:103:A:H5'	2.06	0.85
1:0:2672:U:H2'	1:0:2673:G:H8	1.40	0.85
1:0:590:C:H2'	1:0:591:G:C8	2.10	0.85
1:0:2474:G:H2'	1:0:2475:C:O4'	1.76	0.85
1:0:215:G:H21	1:0:632:A:H8	1.20	0.85
1:0:1182:U:H2'	1:0:1183:C:H5''	1.57	0.85
1:0:1966:C:H4'	1:0:2585:C:H4'	1.56	0.85
1:0:1252:C:C2'	1:0:1253:C:H5''	2.06	0.85
1:0:103:U:H2'	1:0:104:C:C6	2.11	0.85
1:0:813:A:H1'	1:0:815:A:H4'	1.59	0.84
1:0:2755:A:O2'	1:0:2756:A:H5'	1.75	0.84
1:0:2770:A:H4'	1:0:2867:G:H22	1.42	0.84
1:0:2861:A:H2'	1:0:2862:G:H8	1.43	0.84
1:0:762:A:H2'	1:0:763:A:C8	2.13	0.84
1:0:2476:A:HO2'	1:0:2477:C:H5	0.87	0.84
1:0:2674:C:H2'	1:0:2675:U:H6	1.43	0.84
2:9:67:C:C2'	2:9:68:A:H5'	2.07	0.84
1:0:357:A:H2'	1:0:358:C:H5'	1.59	0.83
1:0:1252:C:H2'	1:0:1253:C:H5''	1.61	0.83
1:0:2476:A:O2'	1:0:2477:C:H5	1.61	0.83
1:0:558:G:H5''	1:0:559:C:C5	2.13	0.83
2:9:102:A:O2'	2:9:103:A:H5'	1.77	0.83
1:0:1976:U:H2'	1:0:1977:C:C5'	2.09	0.83
1:0:681:A:H2'	1:0:683:A:N7	1.93	0.83
1:0:2058:U:H1'	1:0:2576:G:N2	1.93	0.83
1:0:2318:U:H2'	1:0:2319:G:H8	1.44	0.83
1:0:2409:A:H2'	1:0:2410:U:H5'	1.58	0.82
1:0:652:C:H42	1:0:657:A:H61	1.24	0.82
1:0:187:U:H2'	1:0:188:G:H8	1.44	0.82
1:0:2499:C:H41	1:0:2521:A:H2	1.25	0.82
1:0:547:U:H2'	1:0:548:G:C8	2.14	0.82
1:0:1242:A:H2'	1:0:1243:G:C8	2.14	0.82
1:0:1656:U:C2'	1:0:1657:A:H5''	2.08	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:460:U:N3	1:0:592:G:H1'	1.94	0.82
1:0:918:A:C2'	1:0:919:U:H5''	2.07	0.82
1:0:922:A:H2'	1:0:923:A:H8	1.41	0.82
1:0:1922:U:H1'	1:0:2570:C:O2'	1.79	0.82
2:9:93:G:H2'	2:9:94:G:H8	1.42	0.82
1:0:1295:U:H2'	1:0:1296:G:H5'	1.60	0.82
1:0:556:A:H2'	1:0:557:U:H5'	1.58	0.82
1:0:1181:C:H3'	1:0:1182:U:H5''	1.59	0.81
1:0:367:G:H2'	1:0:368:A:H5''	1.62	0.81
1:0:759:C:H1'	1:0:761:G:H21	1.45	0.81
1:0:1608:U:H2'	1:0:1609:G:H8	1.45	0.81
1:0:37:C:H2'	1:0:38:G:H8	1.45	0.81
1:0:2861:A:H2'	1:0:2862:G:C8	2.16	0.81
1:0:1982:C:H4'	1:0:2703:C:O2	1.80	0.81
1:0:28:A:N6	1:0:522:G:H4'	1.96	0.81
1:0:734:G:H2'	1:0:735:G:H8	1.43	0.81
1:0:635:C:H2'	1:0:636:G:H5''	1.60	0.81
2:9:92:G:H2'	2:9:93:G:H5'	1.62	0.81
1:0:1325:U:H4'	1:0:1326:U:C6	2.15	0.81
1:0:641:G:H4'	1:0:651:C:O2'	1.80	0.81
1:0:2262:C:H2'	1:0:2263:C:O4'	1.81	0.81
2:9:12:C:H2'	2:9:13:C:O4'	1.81	0.81
1:0:1055:A:C2	1:0:1121:G:H2'	2.16	0.81
1:0:1223:G:H21	1:0:1225:G:H21	1.29	0.81
1:0:651:C:H2'	1:0:652:C:H5''	1.61	0.81
2:9:7:C:O2'	2:9:8:C:H5'	1.80	0.81
1:0:1040:A:H2'	1:0:1041:G:H5'	1.59	0.81
1:0:1587:A:H2'	1:0:1588:A:C8	2.16	0.81
1:0:1922:U:O2	1:0:2571:G:H5'	1.81	0.80
1:0:1348:C:H2'	1:0:1349:A:C8	2.16	0.80
1:0:170:U:H2'	1:0:171:G:H8	1.45	0.80
1:0:1267:A:H5''	1:0:1268:U:O5'	1.81	0.80
1:0:1710:U:H3	1:0:1821:A:H61	1.26	0.80
1:0:1202:U:H2'	1:0:1203:A:H8	1.45	0.80
1:0:2616:U:H2'	1:0:2617:G:O4'	1.81	0.80
1:0:613:A:H2'	1:0:614:G:H8	1.46	0.80
1:0:1774:A:H5'	1:0:2587:G:H4'	1.62	0.80
1:0:727:U:H2'	1:0:728:G:H5''	1.64	0.80
1:0:104:C:C2'	1:0:105:G:H5''	2.13	0.79
1:0:1284:G:N3	1:0:1633:C:H5'	1.97	0.79
1:0:2491:C:H2'	1:0:2492:G:O4'	1.81	0.79

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:37:C:H2'	1:0:38:G:C8	2.16	0.79
1:0:930:A:H3'	1:0:931:G:C8	2.17	0.79
1:0:2030:U:H2'	1:0:2031:A:H8	1.46	0.79
1:0:75:C:C2'	1:0:76:C:H5''	2.11	0.79
2:9:28:A:C2	2:9:29:C:H1'	2.18	0.79
1:0:1479:G:H2'	1:0:1480:G:H8	1.46	0.79
1:0:70:A:O3'	1:0:71:A:H3'	1.82	0.79
1:0:1066:G:H2'	1:0:1067:G:H4'	1.65	0.79
1:0:1445:A:H2'	1:0:1446:U:O4'	1.82	0.79
1:0:1313:U:H1'	1:0:1642:G:N2	1.97	0.79
1:0:922:A:H2'	1:0:923:A:C8	2.17	0.79
1:0:1319:C:H2'	1:0:1320:A:H8	1.45	0.79
1:0:2038:C:H2'	1:0:2483:U:C4'	2.13	0.79
2:9:65:A:H2'	2:9:66:G:C8	2.17	0.79
1:0:1825:C:O2'	1:0:1826:U:H5'	1.83	0.79
1:0:2081:U:C2'	1:0:2082:C:H5''	2.13	0.79
1:0:792:U:C2'	1:0:793:G:H5'	2.11	0.79
1:0:930:A:H3'	1:0:931:G:H8	1.45	0.79
1:0:1463:A:C1'	1:0:1543:G:H22	1.96	0.79
1:0:2414:A:C2'	1:0:2415:G:H5''	2.12	0.79
1:0:1750:A:H1'	1:0:2690:A:C2	2.18	0.79
1:0:2034:A:H5'	1:0:2557:G:O4'	1.83	0.79
1:0:2498:U:H5''	1:0:2499:C:OP1	1.82	0.79
1:0:2158:C:H2'	1:0:2159:A:H8	1.48	0.78
1:0:1223:G:N2	1:0:1225:G:H21	1.80	0.78
1:0:1974:U:H2'	1:0:1975:G:H5''	1.65	0.78
1:0:2315:A:O2'	1:0:2364:C:H5''	1.83	0.78
1:0:50:G:H2'	1:0:117:A:C2	2.18	0.78
1:0:1608:U:H2'	1:0:1609:G:C8	2.19	0.78
1:0:1715:A:O2'	1:0:1716:G:H3'	1.83	0.78
1:0:1911:A:H2'	1:0:1912:G:H5'	1.66	0.78
1:0:2324:G:O2'	1:0:2325:A:H5''	1.83	0.78
1:0:1921:A:H2'	1:0:1922:U:H5''	1.65	0.78
1:0:2652:G:H2'	1:0:2653:A:H8	1.48	0.78
1:0:820:U:H2'	1:0:821:A:H8	1.49	0.78
2:9:78:A:H2'	2:9:79:U:C6	2.19	0.78
1:0:2015:G:H22	1:0:2038:C:H1'	1.49	0.78
1:0:1789:U:H2'	1:0:1790:G:H5'	1.66	0.78
2:9:92:G:C2'	2:9:93:G:H5'	2.14	0.78
2:9:58:G:H4'	2:9:59:A:H5'	1.64	0.78
1:0:1886:G:H2'	1:0:1887:G:H8	1.46	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:953:G:H1'	1:0:1203:A:H2	1.49	0.77
1:0:1791:C:H1'	1:0:1793:A:H5'	1.67	0.77
1:0:2437:G:N1	1:0:2469:G:H2'	1.98	0.77
1:0:331:U:H2'	1:0:332:C:H5''	1.65	0.77
1:0:541:C:H42	1:0:572:G:H8	1.32	0.77
1:0:2308:A:H2'	1:0:2309:G:C8	2.19	0.77
1:0:2510:A:N6	1:0:2641:A:H61	1.83	0.77
1:0:2736:U:O2'	1:0:2737:A:H5'	1.85	0.77
2:9:69:G:H2'	2:9:70:C:O4'	1.84	0.77
1:0:404:A:H1'	1:0:424:G:O2'	1.83	0.77
1:0:2605:C:H2'	1:0:2606:G:O4'	1.84	0.77
1:0:509:U:H2'	1:0:510:G:H5'	1.66	0.77
1:0:612:G:O3'	1:0:613:A:H4'	1.85	0.77
1:0:616:U:C2'	1:0:617:U:H5''	2.14	0.77
2:9:65:A:H2'	2:9:66:G:H8	1.50	0.77
1:0:19:C:H5'	1:0:563:U:OP1	1.85	0.77
1:0:2324:G:H4'	1:0:2326:C:H5''	1.67	0.77
1:0:1479:G:H2'	1:0:1480:G:C8	2.21	0.76
1:0:2811:G:H2'	1:0:2812:A:C8	2.20	0.76
1:0:1091:C:H2'	1:0:1092:U:C6	2.20	0.76
1:0:1763:G:H2'	1:0:1764:A:H4'	1.66	0.76
1:0:2555:G:H3'	1:0:2555:G:OP1	1.85	0.76
1:0:669:G:H2'	1:0:670:U:C6	2.21	0.76
1:0:1474:A:N3	1:0:1474:A:H3'	2.00	0.76
1:0:1811:A:H1'	1:0:1813:A:C5	2.20	0.76
1:0:873:U:C2	1:0:2246:A:H5''	2.19	0.76
1:0:2329:C:H2'	1:0:2330:G:O4'	1.85	0.76
1:0:2633:A:H61	1:0:2646:C:N4	1.82	0.76
1:0:321:A:H2'	1:0:323:G:N7	1.99	0.76
1:0:2308:A:H2'	1:0:2309:G:H8	1.48	0.76
1:0:2836:U:H2'	1:0:2837:G:C8	2.19	0.76
2:9:77:G:H2'	2:9:78:A:O4'	1.84	0.76
1:0:2320:G:H2'	1:0:2321:C:O4'	1.83	0.76
1:0:873:U:H1'	1:0:2246:A:OP1	1.86	0.76
1:0:1697:U:H2'	1:0:1698:C:O4'	1.86	0.76
1:0:174:A:C4'	1:0:2051:U:H2'	2.16	0.76
1:0:689:A:H8	1:0:2052:G:H21	1.32	0.76
1:0:1036:G:H1'	1:0:1145:C:C4'	2.16	0.76
1:0:2447:G:H22	1:0:2460:G:H2'	1.51	0.76
1:0:547:U:H2'	1:0:548:G:H8	1.51	0.76
1:0:1763:G:N2	1:0:1765:C:H5''	2.00	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:427:C:H2'	1:0:428:A:H8	1.51	0.75
1:0:462:G:H2'	1:0:463:C:H5''	1.68	0.75
1:0:734:G:H2'	1:0:735:G:C8	2.20	0.75
1:0:2836:U:H2'	1:0:2837:G:H8	1.51	0.75
1:0:1471:G:H1	1:0:2682:C:H42	1.31	0.75
1:0:1280:U:H3	1:0:1996:A:N6	1.83	0.75
1:0:2569:A:H2'	1:0:2570:C:C6	2.20	0.75
1:0:2829:A:H2'	1:0:2830:U:O4'	1.87	0.75
1:0:2321:C:H2'	1:0:2322:U:O4'	1.87	0.75
1:0:77:C:H2'	1:0:78:C:C6	2.22	0.75
1:0:2053:G:H2'	1:0:2054:A:C8	2.22	0.75
1:0:2199:C:H2'	1:0:2200:G:H8	1.52	0.75
1:0:2268:G:H5''	1:0:2363:G:O2'	1.86	0.75
1:0:800:U:H3'	1:0:804:C:H41	1.52	0.75
1:0:162:C:H2'	1:0:163:A:C8	2.21	0.75
1:0:1727:C:H4'	1:0:2833:C:N3	2.02	0.75
1:0:2456:U:H1'	1:0:2460:G:H22	1.50	0.75
1:0:699:G:H21	1:0:700:C:H5''	1.51	0.75
1:0:1055:A:H2	1:0:1121:G:H2'	1.52	0.74
1:0:1195:U:H2'	1:0:1196:G:C8	2.23	0.74
1:0:416:U:H5''	1:0:417:C:H5'	1.68	0.74
1:0:1691:G:H21	1:0:1694:A:H61	1.34	0.74
1:0:2199:C:H2'	1:0:2200:G:C8	2.21	0.74
1:0:1807:A:O2'	1:0:1808:C:H4'	1.88	0.74
1:0:2176:U:H2'	1:0:2177:U:O4'	1.88	0.74
1:0:705:C:H2'	1:0:706:A:C8	2.22	0.74
1:0:1388:C:H2'	1:0:1389:C:H6	1.52	0.74
1:0:763:A:C2	1:0:765:C:H1'	2.22	0.74
1:0:632:A:H2'	1:0:633:G:O4'	1.88	0.74
1:0:218:A:O2'	1:0:219:G:H4'	1.88	0.74
1:0:2279:G:H2'	1:0:2280:A:H8	1.52	0.74
1:0:652:C:H42	1:0:657:A:N6	1.84	0.74
1:0:929:A:H2'	1:0:930:A:H4'	1.70	0.74
1:0:1035:G:H21	1:0:1155:G:H4'	1.52	0.74
1:0:118:U:H1'	1:0:143:A:C8	2.23	0.74
1:0:1598:C:H2'	1:0:1599:G:O4'	1.87	0.74
1:0:1068:A:H2'	1:0:1069:G:C8	2.23	0.74
1:0:1695:U:H2'	1:0:1696:C:O4'	1.88	0.74
1:0:870:C:H2'	1:0:871:U:C6	2.23	0.74
1:0:1197:U:H2'	1:0:1198:C:O4'	1.88	0.73
1:0:1869:A:H2'	1:0:1870:U:O4'	1.88	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:441:A:H2'	1:0:442:A:O4'	1.88	0.73
1:0:813:A:O2'	1:0:815:A:H5'	1.86	0.73
1:0:1654:A:H4'	1:0:2690:A:O2'	1.87	0.73
1:0:760:U:O2	1:0:1997:A:H1'	1.88	0.73
1:0:2437:G:H2'	1:0:2469:G:N1	2.02	0.73
1:0:2469:G:H5''	1:0:2470:U:OP1	1.87	0.73
1:0:486:U:H4'	1:0:520:C:H5'	1.70	0.73
1:0:1036:G:H1'	1:0:1145:C:H4'	1.70	0.73
2:9:31:A:H2'	2:9:32:C:O4'	1.89	0.73
1:0:1958:G:H2'	1:0:1959:U:C6	2.23	0.73
1:0:613:A:H2'	1:0:614:G:C8	2.23	0.73
1:0:1225:G:H2'	1:0:1249:G:H22	1.53	0.73
1:0:1284:G:C4	1:0:1633:C:H5'	2.23	0.73
1:0:2158:C:H2'	1:0:2159:A:C8	2.24	0.73
1:0:460:U:H3	1:0:592:G:H1'	1.52	0.73
1:0:1440:G:H1'	1:0:1588:A:N6	2.02	0.73
1:0:190:A:H2'	1:0:191:G:C8	2.24	0.72
1:0:523:A:H4'	1:0:1230:C:H5'	1.72	0.72
2:9:48:A:O2'	2:9:49:C:H5'	1.88	0.72
1:0:208:C:H2'	1:0:209:G:H5'	1.70	0.72
1:0:815:A:H2'	1:0:816:U:O4'	1.88	0.72
1:0:2839:G:H2'	1:0:2840:U:C6	2.23	0.72
1:0:163:A:H2'	1:0:164:G:H8	1.54	0.72
1:0:2083:G:H2'	1:0:2084:G:C8	2.24	0.72
1:0:2409:A:C2'	1:0:2410:U:H5'	2.19	0.72
1:0:652:C:N4	1:0:657:A:H61	1.87	0.72
1:0:681:A:C6	1:0:683:A:H2'	2.24	0.72
1:0:2274:C:H2'	1:0:2275:U:H5''	1.70	0.72
1:0:1685:A:H1'	1:0:1686:A:C2	2.25	0.72
1:0:2781:G:H2'	1:0:2782:G:O4'	1.90	0.72
1:0:2569:A:H2'	1:0:2570:C:H6	1.53	0.72
1:0:870:C:H2'	1:0:871:U:H6	1.54	0.72
1:0:1698:C:O2'	1:0:1753:A:H2'	1.89	0.71
1:0:2781:G:H2'	1:0:2782:G:C1'	2.20	0.71
1:0:313:U:H2'	1:0:314:G:C8	2.24	0.71
1:0:930:A:H5'	1:0:931:G:N7	2.05	0.71
1:0:591:G:H2'	1:0:592:G:H8	1.55	0.71
1:0:651:C:C2'	1:0:652:C:H5''	2.20	0.71
1:0:890:U:H2'	1:0:891:A:C8	2.25	0.71
1:0:1304:U:O2'	1:0:1305:C:H5'	1.89	0.71
1:0:1949:A:O2'	1:0:2572:U:H5'	1.90	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:459:A:H1'	1:0:461:A:N6	2.05	0.71
2:9:61:A:O5'	2:9:61:A:H8	1.73	0.71
1:0:109:A:H2'	1:0:110:U:H5''	1.70	0.71
1:0:2185:U:H2'	1:0:2186:G:C8	2.24	0.71
1:0:1851:A:H61	1:0:1867:A:H1'	1.55	0.71
1:0:2005:U:H2'	1:0:2595:C:O2'	1.90	0.71
1:0:2674:C:H2'	1:0:2675:U:C6	2.26	0.71
1:0:69:G:H5''	1:0:70:A:OP1	1.91	0.71
1:0:1789:U:O2'	1:0:1793:A:H1'	1.90	0.71
1:0:1560:A:H2'	1:0:1561:A:O4'	1.91	0.71
2:9:28:A:H3'	2:9:29:C:H6	1.55	0.71
2:9:36:A:H2'	2:9:46:G:O6	1.90	0.71
1:0:1690:U:H2'	1:0:1691:G:H5'	1.73	0.71
1:0:187:U:H2'	1:0:188:G:C8	2.25	0.71
1:0:2266:A:C2	1:0:2268:G:H1'	2.26	0.71
1:0:2390:A:H2'	1:0:2391:A:H8	1.56	0.71
1:0:1312:G:H5''	1:0:1313:U:C5'	2.20	0.70
1:0:1547:U:H2'	1:0:1548:U:C6	2.26	0.70
1:0:1653:C:H2'	1:0:1654:A:C8	2.25	0.70
1:0:1994:U:H2'	1:0:1995:G:H5'	1.73	0.70
1:0:2549:G:H2'	1:0:2550:C:O4'	1.91	0.70
1:0:2708:U:H2'	1:0:2709:C:C6	2.26	0.70
1:0:490:A:O2'	1:0:491:A:H5'	1.90	0.70
1:0:1067:G:H21	1:0:1115:C:N4	1.89	0.70
1:0:2549:G:C2	1:0:2550:C:H1'	2.26	0.70
1:0:939:C:H2'	1:0:940:G:C8	2.27	0.70
1:0:2425:G:H2'	1:0:2480:C:C5	2.22	0.70
1:0:1804:U:H2'	1:0:1805:G:C8	2.23	0.70
1:0:88:G:H3'	1:0:89:A:C5'	2.21	0.70
1:0:2548:G:H2'	1:0:2549:G:C5'	2.05	0.70
1:0:951:G:C3'	1:0:952:A:H5''	2.21	0.70
1:0:1908:C:H2'	1:0:1909:U:C4'	2.16	0.70
1:0:2085:G:H2'	1:0:2086:U:C6	2.26	0.70
1:0:871:U:O2	1:0:2247:A:H2'	1.92	0.70
1:0:942:U:C2'	1:0:943:U:H5'	2.22	0.70
2:9:71:G:N2	2:9:72:C:H1'	2.07	0.70
1:0:245:C:H5'	1:0:372:U:O2'	1.92	0.70
1:0:618:A:H2'	1:0:619:A:O4'	1.91	0.70
1:0:1953:A:H1'	1:0:1955:G:C1'	2.20	0.70
1:0:2469:G:H4'	1:0:2470:U:C5	2.27	0.70
1:0:2787:A:O2'	1:0:2788:C:H5'	1.92	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:84:G:O2'	2:9:85:G:H5'	1.91	0.70
1:0:1194:U:H2'	1:0:1195:U:C6	2.26	0.70
1:0:1371:G:H1'	1:0:1386:A:N6	2.07	0.70
1:0:1436:G:H21	1:0:1514:C:H1'	1.55	0.70
1:0:1791:C:O2'	1:0:1793:A:H5'	1.92	0.70
1:0:76:C:H6	1:0:76:C:H5'	1.56	0.70
1:0:462:G:H2'	1:0:463:C:C5'	2.22	0.69
1:0:1588:A:H2'	1:0:1589:G:H8	1.56	0.69
1:0:1139:A:O2'	1:0:2495:G:H4'	1.92	0.69
1:0:2521:A:H5'	1:0:2522:G:OP1	1.91	0.69
1:0:2273:C:H2'	1:0:2274:C:C6	2.27	0.69
1:0:2841:U:H1'	1:0:2843:A:H1'	1.73	0.69
1:0:2609:G:H21	1:0:2866:A:H2	1.39	0.69
2:9:4:C:H2'	2:9:5:C:H6	1.57	0.69
1:0:1889:G:H2'	1:0:1890:G:C8	2.27	0.69
1:0:2466:G:H2'	1:0:2467:A:C8	2.28	0.69
1:0:979:A:H2'	1:0:980:G:O4'	1.92	0.69
1:0:141:G:H2'	1:0:142:U:C6	2.28	0.69
1:0:2057:U:H2'	1:0:2058:U:C6	2.28	0.69
1:0:663:G:H2'	1:0:664:C:O4'	1.92	0.69
1:0:951:G:H2'	1:0:952:A:H5''	1.73	0.69
1:0:2713:A:H2'	1:0:2714:A:H8	1.57	0.69
1:0:487:G:H1'	1:0:515:A:C2	2.27	0.69
1:0:2164:G:H2'	1:0:2165:A:H8	1.58	0.69
2:9:6:C:H2'	2:9:7:C:C6	2.26	0.69
1:0:1325:U:H4'	1:0:1326:U:C5	2.28	0.69
1:0:1502:G:O2'	1:0:1503:G:H5'	1.93	0.69
1:0:2437:G:H2'	1:0:2469:G:H1	1.58	0.69
1:0:2713:A:H2'	1:0:2714:A:C8	2.28	0.69
1:0:2783:U:O2'	1:0:2784:A:H4'	1.91	0.69
1:0:414:A:H2'	1:0:415:A:O4'	1.93	0.69
1:0:964:A:H2'	1:0:965:G:H8	1.57	0.69
1:0:1466:C:H2'	1:0:1467:U:O4'	1.92	0.69
1:0:2083:G:H2'	1:0:2084:G:H8	1.58	0.69
1:0:2495:G:H2'	1:0:2496:C:O4'	1.93	0.69
1:0:1271:C:H2'	1:0:1272:G:C8	2.27	0.69
1:0:1644:G:O2'	1:0:1645:U:H5'	1.93	0.69
1:0:2044:G:C8	1:0:2482:A:H1'	2.28	0.69
1:0:2770:A:C5'	1:0:2867:G:H1	2.06	0.69
1:0:1259:A:C2'	1:0:1260:A:H5'	2.23	0.68
1:0:1376:C:H2'	1:0:1377:G:O4'	1.92	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2202:G:H2'	1:0:2203:G:O4'	1.93	0.68
1:0:2691:C:H3'	1:0:2692:A:C5'	2.22	0.68
1:0:487:G:H1'	1:0:515:A:H2	1.56	0.68
1:0:2122:G:H2'	1:0:2123:G:C8	2.29	0.68
1:0:2425:G:O2'	1:0:2426:G:H5'	1.93	0.68
1:0:792:U:H2'	1:0:793:G:C5'	2.22	0.68
1:0:824:U:H2'	1:0:825:C:H5''	1.75	0.68
2:9:84:G:H2'	2:9:85:G:C8	2.22	0.68
1:0:1587:A:H2'	1:0:1588:A:H8	1.56	0.68
1:0:1838:G:H2'	1:0:1839:A:H5'	1.75	0.68
1:0:1975:G:N2	1:0:1978:U:H5	1.90	0.68
1:0:1086:C:H2'	1:0:1087:C:H5''	1.74	0.68
1:0:133:C:H2'	1:0:134:G:O4'	1.93	0.68
1:0:1591:U:H2'	1:0:1592:U:O4'	1.93	0.68
1:0:1429:A:H62	1:0:1601:U:H5''	1.59	0.68
1:0:2030:U:H2'	1:0:2031:A:C8	2.28	0.68
1:0:239:A:H4'	1:0:620:G:H5'	1.75	0.68
1:0:1467:U:H3'	1:0:1468:A:C5'	2.23	0.68
1:0:2510:A:H61	1:0:2641:A:N6	1.91	0.68
1:0:427:C:H2'	1:0:428:A:C8	2.28	0.68
1:0:574:C:H4'	1:0:1266:G:O6	1.93	0.68
1:0:683:A:H5''	1:0:684:C:OP1	1.94	0.68
1:0:2491:C:H2'	1:0:2492:G:C4'	2.23	0.68
1:0:2672:U:H2'	1:0:2673:G:C8	2.27	0.68
1:0:1191:G:H2'	1:0:1192:A:H8	1.59	0.68
1:0:168:A:H2'	1:0:169:C:C6	2.29	0.68
1:0:2198:U:C3'	1:0:2199:C:H5''	2.24	0.68
1:0:1854:G:H1	1:0:1863:U:H3	1.39	0.68
1:0:826:U:O2'	1:0:1238:A:H1'	1.94	0.68
1:0:976:C:H5'	1:0:2252:A:C1'	2.23	0.68
1:0:1073:G:H3'	1:0:1074:G:H5''	1.76	0.67
1:0:114:C:H4'	1:0:124:A:O2'	1.93	0.67
1:0:1346:C:P	1:0:1346:C:H6	2.18	0.67
1:0:1763:G:H21	1:0:1765:C:H5''	1.60	0.67
1:0:2757:G:H5'	1:0:2761:A:H1'	1.77	0.67
1:0:770:U:O2'	1:0:771:C:H5'	1.94	0.67
1:0:1588:A:H2'	1:0:1589:G:C8	2.30	0.67
1:0:1958:G:H2'	1:0:1959:U:H6	1.60	0.67
1:0:2299:A:H5''	1:0:2300:G:O5'	1.94	0.67
1:0:2811:G:H2'	1:0:2812:A:H8	1.58	0.67
1:0:1319:C:H2'	1:0:1320:A:C8	2.29	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2785:A:H2'	1:0:2786:G:O4'	1.95	0.67
1:0:1811:A:H1'	1:0:1813:A:C4	2.29	0.67
1:0:2470:U:H2'	1:0:2471:U:H6	1.59	0.67
1:0:1681:A:C2	1:0:2706:U:H1'	2.30	0.67
1:0:2764:U:H2'	1:0:2765:C:C6	2.29	0.67
1:0:1029:C:H3'	1:0:1030:U:H5''	1.76	0.67
1:0:1352:G:H2'	1:0:1353:A:C8	2.28	0.67
1:0:1204:G:H2'	1:0:1205:G:C8	2.29	0.67
1:0:2119:A:O2'	1:0:2120:C:H5'	1.94	0.67
1:0:1101:U:H3	1:0:1113:C:H1'	1.59	0.67
1:0:1356:G:H5''	1:0:1614:C:OP2	1.95	0.67
1:0:1826:U:O2'	1:0:1952:A:H2'	1.94	0.67
1:0:216:U:H5''	1:0:601:A:N6	2.10	0.67
1:0:58:C:H3'	1:0:59:G:C5'	2.23	0.67
1:0:1312:G:H5''	1:0:1313:U:H5''	1.77	0.67
1:0:1333:G:N7	1:0:1342:U:H5'	2.09	0.67
1:0:1432:G:N2	1:0:1596:A:H62	1.89	0.67
1:0:953:G:H2'	1:0:954:U:C6	2.30	0.67
1:0:1287:A:N1	1:0:1661:C:O2'	2.27	0.67
1:0:13:A:H1'	1:0:536:A:N6	2.09	0.67
1:0:139:A:H2'	1:0:140:G:H8	1.60	0.67
1:0:1617:G:H2'	1:0:1618:U:H5'	1.76	0.67
1:0:185:C:O2'	1:0:186:C:H5'	1.95	0.67
1:0:2721:A:H2'	1:0:2722:C:O4'	1.95	0.67
1:0:2872:U:H2'	1:0:2873:G:H8	1.59	0.67
1:0:697:G:H1	1:0:807:A:H2	1.38	0.67
1:0:942:U:O2'	1:0:943:U:H5'	1.95	0.67
1:0:1302:C:O2'	1:0:1343:C:H4'	1.94	0.66
1:0:2038:C:H5'	1:0:2039:G:H5''	1.77	0.66
1:0:109:A:C3'	1:0:110:U:H5''	2.24	0.66
1:0:459:A:N6	1:0:484:G:H1'	2.09	0.66
1:0:564:U:H2'	1:0:565:A:C8	2.30	0.66
1:0:1352:G:H2'	1:0:1353:A:H8	1.59	0.66
1:0:2507:U:O2'	1:0:2508:G:H3'	1.95	0.66
1:0:2751:C:H2'	1:0:2752:C:H6	1.60	0.66
2:9:29:C:H2'	2:9:30:C:C6	2.31	0.66
1:0:109:A:C2'	1:0:110:U:H5''	2.26	0.66
1:0:1101:U:N3	1:0:1113:C:H1'	2.10	0.66
1:0:2532:G:C2	1:0:2533:U:H1'	2.31	0.66
1:0:357:A:H3'	1:0:358:C:O4'	1.96	0.66
2:9:40:C:H2'	2:9:41:A:O4'	1.96	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:174:A:H2	1:0:2413:A:H62	1.40	0.66
1:0:2768:C:H1'	1:0:2784:A:N7	2.11	0.66
1:0:451:A:H2'	1:0:452:G:C8	2.31	0.66
1:0:1065:A:H2'	1:0:1066:G:H8	1.59	0.66
1:0:2770:A:H5'	1:0:2867:G:H1	1.61	0.66
1:0:2870:C:H2'	1:0:2871:U:H6	1.60	0.66
1:0:62:U:H2'	1:0:63:A:C8	2.30	0.66
1:0:1480:G:H2'	1:0:1481:U:H5'	1.78	0.66
1:0:9:U:H3	1:0:2608:A:N6	1.94	0.66
1:0:1196:G:C2'	1:0:1197:U:H5'	2.25	0.66
1:0:165:G:H4'	1:0:1378:A:C2	2.31	0.66
1:0:2498:U:OP1	1:0:2498:U:H3'	1.95	0.66
1:0:2560:G:H2'	1:0:2560:G:N3	2.11	0.66
1:0:2770:A:C4'	1:0:2867:G:H22	2.09	0.66
1:0:597:U:H3	1:0:683:A:HO2'	1.43	0.66
1:0:614:G:H2'	1:0:615:C:H6	1.60	0.66
1:0:657:A:H2'	1:0:658:G:C8	2.31	0.66
1:0:2422:C:O2'	1:0:2423:G:H5'	1.95	0.66
1:0:2436:U:H2'	1:0:2437:G:O4'	1.96	0.66
1:0:2678:C:H2'	1:0:2679:G:H8	1.60	0.66
1:0:37:C:H4'	1:0:463:C:OP1	1.94	0.66
2:9:62:C:N4	2:9:63:A:H62	1.93	0.66
1:0:17:G:H2'	1:0:18:U:C6	2.32	0.65
1:0:1911:A:C2'	1:0:1912:G:H5'	2.26	0.65
1:0:162:C:H4'	1:0:195:A:H4'	1.76	0.65
1:0:2177:U:H2'	1:0:2178:U:C6	2.30	0.65
1:0:2375:G:H2'	1:0:2376:G:H8	1.60	0.65
1:0:483:A:H2'	1:0:484:G:H5'	1.79	0.65
1:0:71:A:N6	1:0:110:U:H4'	2.11	0.65
1:0:114:C:O2'	1:0:124:A:H1'	1.97	0.65
1:0:2678:C:H2'	1:0:2679:G:C8	2.31	0.65
1:0:1514:C:H5'	1:0:1593:C:C5'	2.26	0.65
1:0:174:A:O4'	1:0:2051:U:H2'	1.97	0.65
1:0:639:G:H2'	1:0:640:C:C6	2.31	0.65
1:0:968:C:H41	1:0:970:A:H1'	1.61	0.65
1:0:1727:C:H4'	1:0:2833:C:C2	2.31	0.65
1:0:313:U:H2'	1:0:314:G:H8	1.62	0.65
1:0:699:G:H5'	1:0:700:C:OP2	1.95	0.65
1:0:1918:G:H1'	1:0:1947:G:C2	2.31	0.65
1:0:2273:C:H2'	1:0:2274:C:H6	1.61	0.65
1:0:837:U:H1'	1:0:2337:A:N7	2.10	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2456:U:H1'	1:0:2460:G:N2	2.11	0.65
1:0:2595:C:H2'	1:0:2596:C:C6	2.32	0.65
1:0:520:C:O2'	1:0:1249:G:H5'	1.97	0.65
1:0:820:U:H2'	1:0:821:A:C8	2.30	0.65
1:0:1095:A:H2'	1:0:1096:A:O4'	1.97	0.65
1:0:2053:G:H2'	1:0:2054:A:H8	1.59	0.65
1:0:2761:A:C5'	1:0:2762:G:H5'	2.23	0.65
1:0:616:U:H2'	1:0:617:U:C5'	2.24	0.65
1:0:705:C:H2'	1:0:706:A:H8	1.61	0.65
1:0:2463:G:O2'	1:0:2464:G:H5'	1.97	0.65
1:0:475:U:H2'	1:0:476:G:O4'	1.96	0.65
1:0:1295:U:C2'	1:0:1296:G:H5'	2.27	0.65
1:0:2407:G:H5'	1:0:2408:G:C2	2.31	0.65
1:0:2546:G:H2'	1:0:2547:C:H6	1.62	0.65
1:0:2866:A:H2'	1:0:2867:G:O4'	1.97	0.65
1:0:338:G:C2'	1:0:339:U:H5'	2.27	0.65
1:0:1125:G:O2'	1:0:1126:A:H5'	1.96	0.65
1:0:1452:U:H5''	1:0:1533:G:H5'	1.79	0.65
1:0:2800:C:H2'	1:0:2801:A:O4'	1.96	0.65
1:0:944:A:H2'	1:0:945:G:O4'	1.97	0.65
2:9:115:G:O2'	2:9:116:C:H5'	1.97	0.65
1:0:1181:C:C3'	1:0:1182:U:H5''	2.27	0.64
1:0:2427:A:H5'	1:0:2428:U:H5''	1.78	0.64
1:0:646:C:O2	1:0:650:U:H4'	1.98	0.64
1:0:1353:A:H5''	1:0:1354:A:N7	2.12	0.64
1:0:1972:G:H2'	1:0:1973:C:O4'	1.97	0.64
1:0:2503:G:H2'	1:0:2504:G:H5''	1.78	0.64
1:0:1583:A:H8	1:0:1583:A:O5'	1.80	0.64
1:0:2243:C:H2'	1:0:2244:C:O4'	1.97	0.64
1:0:659:G:H2'	1:0:660:G:H8	1.61	0.64
1:0:958:G:H2'	1:0:959:C:C6	2.32	0.64
1:0:1440:G:H1'	1:0:1588:A:H61	1.61	0.64
1:0:1707:A:N7	1:0:1714:A:H2	1.95	0.64
1:0:1843:U:H2'	1:0:1844:C:H6	1.62	0.64
1:0:2788:C:O2'	1:0:2789:U:H5'	1.98	0.64
1:0:659:G:H2'	1:0:660:G:C8	2.33	0.64
1:0:719:A:H2'	1:0:720:A:O4'	1.97	0.64
1:0:777:A:H62	1:0:1767:G:H1'	1.62	0.64
1:0:81:C:H2'	1:0:82:G:O4'	1.97	0.64
1:0:2020:G:H2'	1:0:2021:G:C8	2.32	0.64
1:0:2082:C:H2'	1:0:2083:G:O4'	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:236:C:H2'	1:0:237:G:H8	1.63	0.64
1:0:1680:U:O2'	1:0:2665:G:H4'	1.97	0.64
1:0:2761:A:H5''	1:0:2762:G:C5'	2.26	0.64
2:9:42:U:C2'	2:9:45:C:H41	2.08	0.64
1:0:1055:A:OP1	1:0:1057:A:H5'	1.98	0.64
1:0:146:C:H2'	1:0:147:G:C8	2.33	0.64
1:0:2299:A:H5'	1:0:2300:G:C5	2.32	0.64
1:0:2353:G:H2'	1:0:2354:G:C8	2.33	0.64
1:0:2764:U:H2'	1:0:2765:C:H6	1.62	0.64
1:0:689:A:C8	1:0:2422:C:H1'	2.33	0.64
1:0:103:U:H2'	1:0:104:C:H6	1.57	0.64
1:0:2005:U:H5''	1:0:2006:G:OP1	1.97	0.64
1:0:2307:A:H2'	1:0:2308:A:C8	2.33	0.64
1:0:2617:G:HO2'	1:0:2618:A:H8	1.41	0.64
1:0:425:A:H2'	1:0:426:C:O4'	1.97	0.64
2:9:63:A:H2'	2:9:64:C:H6	1.63	0.64
1:0:312:G:OP1	1:0:312:G:H4'	1.98	0.64
1:0:346:C:O2'	1:0:347:C:H5'	1.98	0.64
1:0:888:G:H2'	1:0:889:C:O4'	1.97	0.64
1:0:1245:G:H2'	1:0:1246:G:H8	1.62	0.64
1:0:1271:C:H2'	1:0:1272:G:H8	1.63	0.64
1:0:128:C:H2'	1:0:129:A:C4'	2.28	0.64
1:0:1991:C:H2'	1:0:1992:G:H8	1.63	0.64
1:0:210:A:N6	1:0:442:A:H61	1.95	0.64
1:0:459:A:H1'	1:0:461:A:H62	1.61	0.64
1:0:951:G:C2'	1:0:952:A:H5''	2.28	0.64
1:0:929:A:HO2'	2:9:101:A:H4'	1.63	0.64
1:0:2011:U:H2'	1:0:2012:A:C8	2.33	0.63
1:0:2261:G:H4'	1:0:2262:C:OP2	1.96	0.63
1:0:1311:C:H5'	1:0:1315:A:N6	2.13	0.63
1:0:1747:G:H4'	1:0:1749:G:C1'	2.27	0.63
1:0:1288:A:H62	1:0:1309:G:H4'	1.62	0.63
1:0:1333:G:C5	1:0:1342:U:H5'	2.34	0.63
1:0:1680:U:O2'	1:0:1681:A:H5''	1.99	0.63
1:0:931:G:N2	1:0:2247:A:H5''	2.13	0.63
1:0:1040:A:C2'	1:0:1041:G:H5'	2.27	0.63
1:0:1437:A:O2'	1:0:1438:G:H5'	1.98	0.63
1:0:1680:U:H6	1:0:1680:U:H5'	1.63	0.63
1:0:174:A:H4'	1:0:2051:U:H2'	1.79	0.63
1:0:2642:G:O2'	1:0:2643:G:H5'	1.98	0.63
1:0:2754:C:H2'	1:0:2755:A:C8	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:759:C:H1'	1:0:761:G:N2	2.11	0.63
1:0:223:C:H4'	1:0:398:C:H1'	1.81	0.63
1:0:1558:C:C2'	1:0:1559:G:H5'	2.28	0.63
1:0:165:G:H2'	1:0:166:G:O4'	1.99	0.63
1:0:2001:G:H2'	1:0:2002:A:C8	2.32	0.63
1:0:773:G:C2'	1:0:774:A:H5'	2.28	0.63
1:0:1500:U:H3	1:0:1520:G:H22	1.45	0.63
1:0:1529:C:H2'	1:0:1530:U:O4'	1.98	0.63
1:0:2173:G:H2'	1:0:2174:G:O4'	1.98	0.63
1:0:1194:U:H2'	1:0:1195:U:C5	2.33	0.63
1:0:213:C:H42	1:0:238:G:H1	1.46	0.63
1:0:2546:G:H2'	1:0:2547:C:C6	2.33	0.63
1:0:2691:C:C3'	1:0:2692:A:H5''	2.28	0.63
1:0:1226:A:C2	1:0:1250:A:H1'	2.34	0.62
1:0:1411:C:H2'	1:0:1412:C:H6	1.64	0.62
1:0:2162:C:H2'	1:0:2163:U:C6	2.34	0.62
1:0:575:U:H2'	1:0:576:A:C8	2.34	0.62
1:0:644:A:H2'	1:0:645:G:H5'	1.80	0.62
1:0:840:U:H4'	1:0:841:G:C2	2.34	0.62
1:0:215:G:N2	1:0:632:A:H8	1.96	0.62
1:0:2686:C:H2'	1:0:2687:G:C8	2.34	0.62
1:0:73:A:H5''	1:0:73:A:N3	2.14	0.62
1:0:782:U:H2'	1:0:783:G:C8	2.35	0.62
1:0:821:A:O2'	1:0:1267:A:H4'	1.99	0.62
1:0:843:G:O2'	1:0:844:G:OP1	2.17	0.62
1:0:932:G:H2'	1:0:933:G:C8	2.34	0.62
2:9:18:G:H2'	2:9:19:C:H6	1.63	0.62
2:9:30:C:O5'	2:9:30:C:H6	1.80	0.62
1:0:1267:A:H5''	1:0:1268:U:C5'	2.28	0.62
1:0:1953:A:H1'	1:0:1955:G:H1'	1.79	0.62
1:0:761:G:O6	1:0:764:A:H4'	2.00	0.62
1:0:995:A:H5''	1:0:996:C:H5	1.64	0.62
1:0:1073:G:H2'	1:0:1074:G:C4'	2.24	0.62
1:0:1858:C:H2'	1:0:1859:A:H8	1.64	0.62
1:0:2437:G:H1	1:0:2469:G:H2'	1.61	0.62
1:0:2475:C:H2'	1:0:2476:A:O4'	1.99	0.62
1:0:2670:C:H4'	1:0:2846:G:O2'	2.00	0.62
1:0:2779:C:H2'	1:0:2780:A:C8	2.35	0.62
1:0:2803:C:O2'	1:0:2804:G:H5'	2.00	0.62
1:0:775:U:H4'	1:0:776:G:C8	2.34	0.62
1:0:800:U:H3'	1:0:804:C:N4	2.15	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:813:A:N3	1:0:813:A:H2'	2.13	0.62
1:0:1371:G:H1'	1:0:1386:A:H62	1.65	0.62
1:0:1374:G:N2	1:0:1384:G:H1'	2.15	0.62
1:0:2105:U:H2'	1:0:2106:G:C8	2.34	0.62
1:0:651:C:C3'	1:0:652:C:H5''	2.29	0.62
1:0:990:A:H3'	1:0:991:A:C5'	2.30	0.62
1:0:1004:A:H2'	1:0:1005:U:C5'	2.29	0.62
1:0:1253:C:H2'	1:0:1254:G:O4'	1.98	0.62
1:0:1748:U:N3	1:0:1753:A:H2	1.92	0.62
1:0:1837:G:H2'	1:0:1838:G:H8	1.63	0.62
1:0:2558:C:H2'	1:0:2559:U:O4'	1.99	0.62
1:0:2634:G:H2'	1:0:2643:G:O6	1.99	0.62
1:0:936:A:H2'	1:0:937:C:C6	2.35	0.62
1:0:1561:A:H2'	1:0:1562:G:O4'	2.00	0.62
1:0:1571:G:OP2	1:0:1571:G:H3'	1.99	0.62
1:0:2195:C:H2'	1:0:2196:U:H5'	1.80	0.62
1:0:24:G:H2'	1:0:25:U:C6	2.34	0.62
1:0:2782:G:H3'	1:0:2783:U:H5''	1.81	0.62
1:0:1182:U:C2'	1:0:1183:C:H5''	2.29	0.62
1:0:1996:A:O2'	1:0:1997:A:H5'	1.99	0.62
1:0:2274:C:H2'	1:0:2275:U:C5'	2.29	0.62
1:0:2054:A:H2	1:0:2419:C:H41	1.46	0.62
1:0:692:C:H2'	1:0:693:A:H8	1.64	0.62
1:0:94:C:H2'	1:0:95:G:O4'	2.00	0.62
1:0:1057:A:H3'	1:0:1058:G:C5'	2.30	0.62
1:0:1196:G:H2'	1:0:1197:U:H5'	1.81	0.62
1:0:1301:U:H2'	1:0:1664:G:H21	1.63	0.62
1:0:1816:G:O2'	1:0:1817:U:H5'	1.98	0.62
1:0:1843:U:H2'	1:0:1844:C:C6	2.35	0.62
1:0:2499:C:N4	1:0:2521:A:H2	1.98	0.62
1:0:509:U:H3	1:0:513:A:H62	1.47	0.62
1:0:5:A:H2'	1:0:6:A:H8	1.64	0.62
2:9:114:C:O5'	2:9:114:C:H6	1.82	0.62
1:0:1054:C:H2'	1:0:1055:A:H5'	1.82	0.61
1:0:153:A:H2'	1:0:154:U:C5	2.35	0.61
1:0:1540:C:H2'	1:0:1541:G:O4'	1.99	0.61
1:0:1621:C:H2'	1:0:1622:G:O4'	2.00	0.61
1:0:2617:G:H21	1:0:2758:A:H62	1.47	0.61
1:0:347:C:H2'	1:0:348:U:O4'	2.00	0.61
1:0:2538:C:O2'	1:0:2539:C:H5'	2.00	0.61
1:0:1300:A:C2	1:0:1666:G:H4'	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1604:A:H2'	1:0:1605:A:O4'	2.00	0.61
1:0:1974:U:C2'	1:0:1975:G:H5''	2.30	0.61
1:0:2045:A:H62	1:0:2482:A:H61	1.46	0.61
1:0:2618:A:C2	1:0:2619:G:H1'	2.35	0.61
1:0:452:G:H2'	1:0:453:U:O4'	2.00	0.61
2:9:56:G:H2'	2:9:57:U:O4'	1.99	0.61
1:0:108:G:H2'	1:0:109:A:C8	2.36	0.61
1:0:1242:A:H2'	1:0:1243:G:H8	1.65	0.61
1:0:2194:A:C2'	1:0:2195:C:H5''	2.31	0.61
1:0:317:U:C2'	1:0:318:G:H5''	2.27	0.61
1:0:1252:C:O2'	1:0:1253:C:H5''	2.00	0.61
1:0:1517:C:H2'	1:0:1518:C:C6	2.35	0.61
1:0:1739:G:H2'	1:0:1740:G:H8	1.66	0.61
1:0:362:C:C2'	1:0:363:G:H4'	2.22	0.61
1:0:726:G:H2'	1:0:727:U:O4'	1.99	0.61
1:0:1284:G:C2	1:0:1633:C:H5'	2.35	0.61
1:0:208:C:C2'	1:0:209:G:H5'	2.30	0.61
1:0:367:G:C2'	1:0:368:A:H5''	2.31	0.61
1:0:541:C:N4	1:0:572:G:H8	1.98	0.61
1:0:755:C:H2'	1:0:756:C:H6	1.66	0.61
1:0:764:A:H2'	1:0:764:A:N3	2.16	0.61
1:0:1137:A:H5''	1:0:1138:A:OP1	2.01	0.61
1:0:1937:G:N3	1:0:2530:C:H5'	2.15	0.61
1:0:2549:G:N2	1:0:2550:C:H1'	2.14	0.61
1:0:536:A:C2	1:0:2605:C:H1'	2.35	0.61
1:0:437:G:O2'	1:0:438:G:H5'	2.01	0.61
1:0:1313:U:H4'	1:0:1314:A:O5'	2.01	0.61
1:0:1336:G:H2'	1:0:1337:G:H5'	1.83	0.61
1:0:1994:U:C2'	1:0:1995:G:H5'	2.31	0.61
1:0:2059:U:H2'	1:0:2060:A:C5'	2.24	0.61
1:0:788:G:H2'	1:0:807:A:C5	2.36	0.61
1:0:1683:G:H2'	1:0:1684:G:H5'	1.81	0.61
1:0:931:G:C2'	1:0:932:G:H5'	2.31	0.61
2:9:14:C:H4'	2:9:17:A:H61	1.65	0.61
2:9:62:C:N4	2:9:63:A:N6	2.48	0.61
1:0:1217:U:H2'	1:0:1218:C:C6	2.35	0.61
1:0:1227:A:H4'	1:0:1252:C:H4'	1.83	0.61
1:0:1348:C:H2'	1:0:1349:A:H8	1.65	0.61
1:0:1624:A:H2'	1:0:1625:A:H5'	1.82	0.61
1:0:2363:G:H5''	1:0:2365:U:OP1	2.01	0.61
1:0:796:A:H5''	1:0:2568:A:OP1	2.01	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2618:A:C6	1:0:2619:G:H1'	2.35	0.61
1:0:932:G:H2'	1:0:933:G:O4'	2.00	0.61
1:0:170:U:H2'	1:0:171:G:C8	2.31	0.60
1:0:1778:U:H4'	1:0:2568:A:O3'	2.01	0.60
1:0:2324:G:N3	1:0:2326:C:H5	1.99	0.60
1:0:612:G:H4'	1:0:613:A:O2'	2.01	0.60
1:0:79:G:H2'	1:0:80:A:C8	2.35	0.60
2:9:58:G:H4'	2:9:59:A:C5'	2.29	0.60
1:0:1821:A:H3'	1:0:1822:C:H6	1.67	0.60
1:0:2544:A:H2'	1:0:2545:A:H1'	1.83	0.60
1:0:759:C:C1'	1:0:761:G:H21	2.12	0.60
1:0:1162:A:H2'	1:0:1163:C:O4'	2.01	0.60
1:0:1329:U:H5'	1:0:1405:A:H1'	1.82	0.60
1:0:1418:C:H2'	1:0:1419:G:H8	1.66	0.60
1:0:1687:C:H1'	1:0:1976:U:O2	2.01	0.60
1:0:2642:G:H2'	1:0:2643:G:O4'	2.00	0.60
1:0:813:A:H1'	1:0:815:A:C4'	2.30	0.60
1:0:109:A:H3'	1:0:110:U:H5''	1.82	0.60
1:0:1250:A:O2'	1:0:1251:G:H4'	2.01	0.60
1:0:1436:G:H2'	1:0:1437:A:C8	2.37	0.60
1:0:2276:C:O2'	1:0:2277:A:H5'	2.01	0.60
1:0:401:G:H2'	1:0:403:A:N7	2.16	0.60
1:0:36:G:C1'	1:0:462:G:H21	2.14	0.60
2:9:113:G:H2'	2:9:114:C:C6	2.36	0.60
1:0:1010:U:H2'	1:0:1011:A:C8	2.36	0.60
1:0:1491:C:H2'	1:0:1492:A:H8	1.66	0.60
1:0:755:C:H5'	1:0:1692:C:O2'	2.02	0.60
1:0:2225:G:H2'	1:0:2226:A:H8	1.66	0.60
1:0:2398:U:H2'	1:0:2399:C:C6	2.36	0.60
1:0:2820:C:H2'	1:0:2821:G:H8	1.66	0.60
1:0:585:U:H2'	1:0:586:G:C8	2.36	0.60
1:0:642:A:H2'	1:0:643:A:C8	2.36	0.60
1:0:929:A:O2'	2:9:101:A:H4'	2.01	0.60
1:0:1313:U:H5'	1:0:1314:A:N3	2.17	0.60
1:0:334:G:N3	1:0:344:G:H1'	2.17	0.60
1:0:927:C:H2'	1:0:928:G:O4'	2.00	0.60
1:0:1259:A:O2'	1:0:1260:A:H5'	2.02	0.60
1:0:1602:G:O3'	1:0:1603:A:H8	1.84	0.60
1:0:1677:C:O2'	1:0:1678:G:H5'	2.01	0.60
1:0:1730:G:H2'	1:0:1731:C:C6	2.37	0.60
2:9:42:U:O5'	2:9:42:U:H6	1.83	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1001:A:H5'	1:0:1168:G:OP1	2.01	0.60
1:0:1861:G:O2'	1:0:1862:C:H5'	2.01	0.60
1:0:1998:A:H2'	1:0:1999:U:H5'	1.84	0.60
1:0:2052:G:O2'	1:0:2053:G:H5'	2.01	0.60
1:0:2096:U:C2'	1:0:2097:A:H5''	2.27	0.60
1:0:212:U:O2'	1:0:213:C:H5'	2.02	0.60
1:0:2299:A:H5'	1:0:2300:G:N9	2.17	0.60
1:0:987:G:H5'	1:0:1167:A:N6	2.17	0.60
1:0:152:G:H2'	1:0:153:A:O4'	2.02	0.60
1:0:1825:C:C2'	1:0:1826:U:H5'	2.32	0.60
1:0:192:G:C1'	1:0:193:A:H4'	2.32	0.60
1:0:15:G:N2	1:0:2027:C:O2'	2.35	0.60
1:0:1065:A:H2'	1:0:1066:G:C8	2.37	0.60
1:0:1336:G:C2'	1:0:1337:G:H5'	2.32	0.60
1:0:153:A:H2'	1:0:154:U:C6	2.37	0.60
1:0:176:A:H3'	1:0:177:U:C5	2.37	0.60
1:0:2640:G:H2'	1:0:2641:A:C8	2.37	0.60
1:0:2633:A:H4'	1:0:2634:G:O5'	2.02	0.59
1:0:597:U:H2'	1:0:598:U:C6	2.36	0.59
1:0:681:A:N6	1:0:683:A:H2'	2.17	0.59
1:0:871:U:H1'	1:0:2248:A:H5''	1.82	0.59
1:0:1429:A:N6	1:0:1602:G:H5'	2.18	0.59
1:0:1760:G:O2'	1:0:1761:G:H5'	2.02	0.59
1:0:2240:C:H2'	1:0:2241:U:C5'	2.32	0.59
1:0:422:C:H2'	1:0:423:G:O4'	2.03	0.59
2:9:102:A:H2'	2:9:103:A:H5'	1.84	0.59
1:0:14:A:C2	1:0:2604:G:O2'	2.55	0.59
1:0:330:C:C2'	1:0:331:U:H5'	2.32	0.59
1:0:36:G:H1'	1:0:462:G:H21	1.66	0.59
1:0:857:U:C2'	1:0:858:G:H5'	2.28	0.59
1:0:2238:G:H1'	1:0:2406:C:C2	2.38	0.59
1:0:246:C:H42	1:0:247:A:H62	1.50	0.59
1:0:2756:A:N6	1:0:2762:G:H1'	2.16	0.59
1:0:308:C:H2'	1:0:309:G:O4'	2.02	0.59
1:0:428:A:H2'	1:0:429:C:H6	1.68	0.59
1:0:608:G:H2'	1:0:609:U:C6	2.38	0.59
1:0:66:U:H2'	1:0:67:G:C8	2.36	0.59
1:0:66:U:H2'	1:0:67:G:H8	1.67	0.59
1:0:669:G:H2'	1:0:670:U:H6	1.67	0.59
1:0:1485:U:H2'	1:0:1486:A:C8	2.38	0.59
1:0:1962:C:C2'	1:0:1963:G:H5'	2.32	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:202:A:C2	1:0:203:G:H1'	2.38	0.59
1:0:1949:A:H1'	1:0:2572:U:H4'	1.84	0.59
1:0:300:C:H2'	1:0:301:C:H5'	1.83	0.59
1:0:810:U:H2'	1:0:811:G:H8	1.66	0.59
1:0:931:G:O2'	1:0:932:G:H5'	2.01	0.59
1:0:2240:C:H2'	1:0:2241:U:H5'	1.84	0.59
1:0:847:C:H2'	1:0:848:A:C8	2.37	0.59
1:0:1374:G:O2'	1:0:2193:C:H1'	2.03	0.59
1:0:2210:C:H2'	1:0:2211:U:O4'	2.03	0.59
1:0:1936:A:O2'	1:0:2538:C:H1'	2.03	0.59
1:0:1225:G:H2'	1:0:1249:G:N2	2.18	0.59
1:0:159:A:O2'	1:0:160:C:H5'	2.02	0.59
1:0:1683:G:C2'	1:0:1684:G:H5'	2.32	0.59
1:0:2380:U:C2'	1:0:2381:A:H5'	2.30	0.59
1:0:2609:G:N2	1:0:2866:A:H2	2.01	0.59
1:0:474:G:N2	1:0:476:G:H3'	2.17	0.59
1:0:542:A:H2'	1:0:543:G:H5'	1.84	0.59
1:0:597:U:H2'	1:0:598:U:H6	1.67	0.59
1:0:685:U:O2'	1:0:686:C:H5'	2.02	0.59
1:0:781:G:H2'	1:0:782:U:O4'	2.03	0.59
1:0:953:G:H2'	1:0:954:U:H6	1.67	0.59
2:9:55:C:O5'	2:9:55:C:H6	1.85	0.59
1:0:1102:G:H2'	1:0:1103:C:H6	1.66	0.59
1:0:2177:U:H2'	1:0:2178:U:H6	1.67	0.59
1:0:2194:A:H2'	1:0:2195:C:H5''	1.85	0.59
2:9:78:A:H2'	2:9:79:U:C5	2.38	0.59
1:0:1116:U:H2'	1:0:1117:G:C8	2.38	0.59
1:0:12:U:H2'	1:0:13:A:O4'	2.02	0.59
1:0:1458:A:C3'	1:0:1459:U:H5''	2.28	0.59
1:0:1323:G:H1'	1:0:1627:C:C5'	2.33	0.59
1:0:2010:G:H2'	1:0:2011:U:C6	2.37	0.59
1:0:2390:A:H2'	1:0:2391:A:C8	2.38	0.59
1:0:2556:A:C2	1:0:2593:A:H2	2.21	0.59
1:0:542:A:H5''	1:0:542:A:H8	1.68	0.59
1:0:831:G:C2'	1:0:832:A:H5''	2.33	0.59
1:0:1710:U:H3	1:0:1821:A:N6	2.00	0.58
1:0:1999:U:H2'	1:0:2000:U:O4'	2.02	0.58
1:0:2163:U:H2'	1:0:2164:G:C8	2.38	0.58
1:0:2756:A:C6	1:0:2762:G:H1'	2.38	0.58
1:0:732:G:O5'	1:0:732:G:H8	1.86	0.58
1:0:1288:A:H62	1:0:1309:G:C4'	2.17	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1495:G:H2'	1:0:1496:G:C8	2.38	0.58
1:0:1763:G:H2'	1:0:1764:A:C4'	2.33	0.58
1:0:242:A:N6	1:0:441:A:N7	2.51	0.58
1:0:445:A:O2'	1:0:446:C:H5'	2.03	0.58
1:0:538:A:H2'	1:0:539:A:H5''	1.83	0.58
2:9:111:C:H5''	2:9:112:A:O5'	2.03	0.58
1:0:2169:A:C2'	1:0:2170:C:H5'	2.33	0.58
1:0:2470:U:H2'	1:0:2471:U:C6	2.38	0.58
1:0:777:A:N6	1:0:1767:G:H1'	2.18	0.58
1:0:612:G:O3'	1:0:613:A:C4'	2.52	0.58
1:0:2447:G:N2	1:0:2460:G:H2'	2.18	0.58
1:0:831:G:H2'	1:0:832:A:H5''	1.84	0.58
2:9:20:A:O2'	2:9:21:C:H5'	2.03	0.58
1:0:1000:G:P	1:0:1168:G:H4'	2.44	0.58
1:0:1245:G:H2'	1:0:1246:G:C8	2.38	0.58
1:0:139:A:H2'	1:0:140:G:C8	2.38	0.58
1:0:1837:G:H2'	1:0:1838:G:C8	2.38	0.58
1:0:1830:C:H42	1:0:1881:U:H3'	1.69	0.58
1:0:2012:A:C5	1:0:2014:A:H5'	2.37	0.58
1:0:2324:G:N2	1:0:2361:G:C4	2.72	0.58
1:0:922:A:H62	13:K:17:ARG:CA	2.17	0.58
1:0:982:C:H4'	1:0:994:A:O2'	2.03	0.58
2:9:18:G:H2'	2:9:19:C:C6	2.38	0.58
1:0:1184:G:H2'	1:0:1185:C:H5''	1.86	0.58
1:0:195:A:H2'	1:0:196:A:O4'	2.04	0.58
1:0:990:A:H3'	1:0:991:A:H5''	1.86	0.58
1:0:1004:A:H2'	1:0:1005:U:H5''	1.84	0.58
1:0:984:A:H1'	1:0:1202:U:C5	2.39	0.58
1:0:1669:A:N6	1:0:1670:G:H21	2.02	0.58
1:0:1962:C:O2'	1:0:1963:G:H5'	2.04	0.58
1:0:203:G:O2'	1:0:204:A:H5'	2.02	0.58
1:0:478:G:O2'	1:0:479:G:H5'	2.04	0.58
1:0:1257:U:H2'	1:0:1258:G:C8	2.39	0.58
1:0:141:G:H2'	1:0:142:U:H6	1.69	0.58
1:0:1641:C:H2'	1:0:1642:G:O4'	2.03	0.58
1:0:2491:C:H3'	1:0:2492:G:H5''	1.85	0.58
1:0:330:C:O2'	1:0:331:U:H5'	2.03	0.58
1:0:443:A:O2'	1:0:444:U:H5'	2.03	0.58
1:0:755:C:O2'	1:0:756:C:H5'	2.04	0.58
1:0:968:C:N4	1:0:970:A:H1'	2.19	0.58
1:0:1204:G:H2'	1:0:1205:G:H8	1.69	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1594:U:H2'	1:0:1595:A:H8	1.69	0.58
1:0:2318:U:H2'	1:0:2319:G:C8	2.32	0.58
1:0:2557:G:H2'	1:0:2557:G:N3	2.17	0.58
1:0:2686:C:H2'	1:0:2687:G:H8	1.69	0.58
1:0:41:G:O2'	1:0:42:G:H5'	2.04	0.58
1:0:788:G:H5''	1:0:790:A:H1'	1.86	0.58
1:0:83:A:H8	1:0:83:A:O5'	1.87	0.58
1:0:931:G:H2'	1:0:932:G:H5'	1.86	0.58
1:0:1407:G:H2'	1:0:1408:A:C8	2.38	0.57
1:0:1771:A:C8	1:0:1772:C:H5	2.22	0.57
1:0:1849:G:O5'	1:0:1849:G:H8	1.87	0.57
1:0:2395:C:H2'	1:0:2396:C:H5''	1.85	0.57
1:0:2717:G:H2'	1:0:2718:A:H8	1.69	0.57
1:0:746:G:O6	1:0:774:A:H2'	2.03	0.57
1:0:1291:G:O2'	1:0:1292:A:H5'	2.04	0.57
1:0:2522:G:H21	1:0:2625:U:H5''	1.69	0.57
1:0:584:A:O2'	1:0:585:U:H5'	2.04	0.57
1:0:604:U:H2'	1:0:605:G:C8	2.39	0.57
1:0:1333:G:N2	1:0:1344:C:H41	2.03	0.57
1:0:1707:A:H2'	1:0:1708:C:H5'	1.86	0.57
1:0:1830:C:N4	1:0:1881:U:H3'	2.19	0.57
1:0:1915:A:H2'	1:0:1916:G:O4'	2.05	0.57
1:0:225:G:C5'	1:0:226:C:H5'	2.34	0.57
1:0:2651:U:O2'	1:0:2652:G:H5'	2.04	0.57
1:0:1920:A:C4	1:0:1922:U:H5	2.21	0.57
1:0:2104:G:H2'	1:0:2105:U:C6	2.40	0.57
1:0:2104:G:H2'	1:0:2105:U:H6	1.69	0.57
1:0:929:A:H8	1:0:2247:A:H61	1.52	0.57
1:0:369:C:H2'	1:0:370:U:O4'	2.05	0.57
1:0:482:A:O2'	1:0:483:A:H5'	2.04	0.57
1:0:616:U:C3'	1:0:617:U:H5''	2.34	0.57
1:0:1029:C:C3'	1:0:1030:U:H5''	2.35	0.57
1:0:999:A:H4'	1:0:1166:A:N1	2.19	0.57
1:0:1312:G:C5'	1:0:1314:A:H1'	2.32	0.57
1:0:1685:A:O2'	1:0:1686:A:H3'	2.05	0.57
1:0:1856:U:H2'	1:0:1857:G:O4'	2.05	0.57
1:0:2117:A:N6	1:0:2139:G:H21	2.03	0.57
1:0:298:C:H2'	1:0:299:C:H6	1.69	0.57
1:0:328:A:O2'	1:0:329:C:H5'	2.03	0.57
1:0:810:U:H2'	1:0:811:G:C8	2.40	0.57
1:0:1664:G:O5'	1:0:1665:C:OP1	2.22	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1886:G:H2'	1:0:1887:G:C8	2.36	0.57
1:0:2733:A:O2'	1:0:2734:U:H5'	2.05	0.57
1:0:631:G:H5''	1:0:632:A:OP1	2.04	0.57
1:0:702:A:N3	1:0:792:U:H1'	2.18	0.57
1:0:1624:A:C2'	1:0:1625:A:H5'	2.34	0.57
1:0:202:A:H2'	1:0:203:G:O4'	2.05	0.57
1:0:2814:G:H1	1:0:2853:U:H3	1.52	0.57
1:0:852:U:H6	1:0:852:U:O5'	1.87	0.57
1:0:868:U:H2'	1:0:869:C:C6	2.40	0.57
1:0:871:U:H1'	1:0:2248:A:C5'	2.35	0.57
1:0:1440:G:H3'	1:0:1441:A:C5'	2.35	0.57
1:0:1764:A:C2'	1:0:1765:C:H5'	2.35	0.57
1:0:195:A:N1	1:0:212:U:H4'	2.20	0.57
1:0:2394:G:H2'	1:0:2395:C:C6	2.40	0.57
1:0:2461:G:H2'	1:0:2462:C:O4'	2.03	0.57
1:0:2759:U:H6	1:0:2759:U:O5'	1.87	0.57
1:0:583:C:O2'	1:0:584:A:OP2	2.18	0.57
1:0:697:G:O2'	1:0:698:A:H5'	2.05	0.57
1:0:1196:G:H2'	1:0:1197:U:C5'	2.34	0.57
1:0:1531:C:H2'	1:0:1532:A:H5'	1.85	0.57
1:0:1579:G:H2'	1:0:1580:C:C6	2.40	0.57
1:0:193:A:H2'	1:0:194:G:O4'	2.04	0.57
1:0:2371:A:H2'	1:0:2372:A:O4'	2.04	0.57
1:0:653:G:H2'	1:0:654:A:H4'	1.86	0.57
1:0:687:G:O2'	1:0:688:A:H5'	2.05	0.57
1:0:790:A:O2'	1:0:791:G:H5'	2.05	0.57
1:0:1441:A:N3	1:0:1441:A:H2'	2.20	0.57
1:0:1590:C:H6	1:0:1590:C:O5'	1.88	0.57
1:0:2800:C:O2'	1:0:2801:A:H5'	2.05	0.57
1:0:2870:C:H2'	1:0:2871:U:C6	2.40	0.57
1:0:591:G:H2'	1:0:592:G:C8	2.39	0.57
1:0:978:U:H2'	1:0:979:A:C8	2.40	0.57
2:9:102:A:OP2	2:9:102:A:H8	1.88	0.57
1:0:1312:G:H4'	1:0:1314:A:N3	2.20	0.56
1:0:1558:C:H2'	1:0:1559:G:H5'	1.85	0.56
1:0:1933:G:H8	1:0:1933:G:O5'	1.87	0.56
1:0:2070:G:H2'	1:0:2071:G:O4'	2.04	0.56
1:0:2196:U:H2'	1:0:2197:U:C6	2.40	0.56
1:0:242:A:O2'	1:0:243:G:O4'	2.23	0.56
1:0:2563:U:H2'	1:0:2564:U:H3'	1.87	0.56
1:0:2712:G:H3'	1:0:2713:A:H5'	1.87	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:482:A:C2'	1:0:483:A:H5'	2.35	0.56
1:0:83:A:N1	1:0:98:U:H1'	2.20	0.56
1:0:1332:G:O2'	1:0:1333:G:H5'	2.05	0.56
1:0:1430:G:H2'	1:0:1431:U:C6	2.40	0.56
1:0:1540:C:O2'	1:0:1541:G:H5'	2.04	0.56
1:0:1373:G:H1	1:0:2192:U:H3	1.51	0.56
1:0:223:C:O2'	1:0:398:C:H4'	2.05	0.56
1:0:745:C:H2'	1:0:746:G:C5'	2.35	0.56
1:0:824:U:H2'	1:0:825:C:C5'	2.35	0.56
1:0:843:G:H8	1:0:843:G:OP1	1.87	0.56
2:9:34:C:C2'	2:9:35:C:H5'	2.35	0.56
1:0:2511:G:H2'	1:0:2512:A:O4'	2.05	0.56
1:0:2662:C:H42	1:0:2707:G:H21	1.53	0.56
1:0:688:A:H1'	1:0:2422:C:O2'	2.05	0.56
1:0:692:C:H2'	1:0:693:A:C8	2.39	0.56
1:0:847:C:H2'	1:0:848:A:H8	1.69	0.56
1:0:1164:C:H2'	1:0:1165:G:O4'	2.06	0.56
1:0:1459:U:H6	1:0:1459:U:O5'	1.88	0.56
1:0:1467:U:H3'	1:0:1468:A:H5'	1.86	0.56
1:0:1528:C:H2'	1:0:1529:C:H5''	1.88	0.56
1:0:1779:C:H2'	1:0:1780:A:O4'	2.05	0.56
1:0:2058:U:H4'	1:0:2575:U:O2	2.05	0.56
1:0:718:A:O2'	1:0:719:A:H5'	2.04	0.56
2:9:93:G:H2'	2:9:94:G:C8	2.32	0.56
1:0:1057:A:H3'	1:0:1058:G:H5''	1.87	0.56
1:0:1790:G:C8	1:0:1811:A:N6	2.74	0.56
1:0:1943:A:H2'	1:0:1944:C:H5'	1.88	0.56
1:0:2369:U:H2'	1:0:2370:G:C8	2.40	0.56
1:0:2751:C:H2'	1:0:2752:C:C6	2.39	0.56
1:0:411:C:OP1	1:0:2073:A:H1'	2.05	0.56
1:0:1026:U:H2'	1:0:1027:C:C6	2.41	0.56
1:0:1075:C:H2'	1:0:1076:U:O4'	2.06	0.56
1:0:170:U:H5'	1:0:815:A:H2	1.70	0.56
1:0:1699:A:N6	1:0:1723:U:H3	2.04	0.56
1:0:1790:G:H4'	1:0:1791:C:C5	2.41	0.56
1:0:190:A:H2'	1:0:191:G:H8	1.70	0.56
1:0:20:C:O2'	1:0:21:A:H5'	2.05	0.56
1:0:2633:A:H5''	1:0:2634:G:OP1	2.05	0.56
1:0:2658:A:O2'	1:0:2659:C:H5'	2.05	0.56
1:0:2841:U:H1'	1:0:2843:A:C1'	2.35	0.56
1:0:294:U:H2'	1:0:295:C:C6	2.41	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:745:C:H2'	1:0:746:G:H5'	1.87	0.56
1:0:931:G:H2'	1:0:932:G:C5'	2.36	0.56
2:9:34:C:H2'	2:9:35:C:O4'	2.05	0.56
1:0:1380:C:C2'	1:0:1381:G:H5'	2.36	0.56
1:0:1480:G:C2'	1:0:1481:U:H5'	2.36	0.56
1:0:1719:G:O2'	1:0:1720:G:H5'	2.05	0.56
1:0:1914:U:O2'	1:0:1915:A:H5'	2.06	0.56
1:0:2458:U:OP1	1:0:2516:U:H1'	2.05	0.56
1:0:2636:A:H62	1:0:2643:G:N2	1.97	0.56
1:0:2709:C:H2'	1:0:2710:C:C6	2.40	0.56
1:0:2841:U:O2	1:0:2843:A:H1'	2.05	0.56
1:0:502:A:H2'	1:0:503:G:H5'	1.88	0.56
1:0:492:G:H22	1:0:519:C:H42	1.52	0.56
1:0:629:C:C2'	1:0:630:G:H5'	2.35	0.56
1:0:839:U:C4	1:0:841:G:H1'	2.41	0.56
1:0:1791:C:H42	1:0:1809:G:H22	1.54	0.56
1:0:524:A:O2'	1:0:525:A:H5'	2.05	0.56
1:0:957:G:O2'	1:0:958:G:H5'	2.06	0.56
2:9:59:A:H2'	2:9:60:A:H5'	1.87	0.56
2:9:62:C:C4	2:9:63:A:N7	2.74	0.56
1:0:1456:C:O2'	1:0:1457:A:H5'	2.05	0.56
1:0:1556:A:H2'	1:0:1557:G:H8	1.71	0.56
1:0:1730:G:H2'	1:0:1731:C:H6	1.70	0.56
1:0:226:C:H4'	1:0:227:G:C8	2.41	0.56
1:0:2433:G:O2'	1:0:2434:G:H5'	2.06	0.56
1:0:837:U:H2'	1:0:838:A:O4'	2.05	0.56
1:0:1151:U:H5''	1:0:1153:A:OP1	2.06	0.56
1:0:1790:G:HO2'	1:0:1791:C:H5	1.54	0.56
1:0:474:G:H22	1:0:476:G:H3'	1.70	0.56
1:0:657:A:H8	1:0:657:A:O5'	1.89	0.56
1:0:1912:G:H3'	1:0:1912:G:N3	2.21	0.56
1:0:2021:G:H2'	1:0:2022:C:C6	2.41	0.56
1:0:2307:A:H2'	1:0:2308:A:H8	1.71	0.56
1:0:2492:G:H2'	1:0:2493:U:H6	1.70	0.56
1:0:745:C:C2'	1:0:746:G:H5'	2.36	0.56
2:9:101:A:H2'	2:9:102:A:C8	2.41	0.56
2:9:17:A:H1'	2:9:112:A:C8	2.40	0.56
1:0:162:C:H2'	1:0:163:A:H8	1.69	0.55
1:0:798:G:O2'	1:0:1770:U:H4'	2.06	0.55
1:0:1854:G:H2'	1:0:1855:G:H8	1.71	0.55
1:0:191:G:O2'	1:0:192:G:H5'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1672:A:C2	1:0:2032:G:H5''	2.41	0.55
1:0:2377:U:H2'	1:0:2378:G:C8	2.41	0.55
1:0:2407:G:H5''	1:0:2408:G:OP1	2.06	0.55
1:0:2544:A:H5''	1:0:2545:A:OP2	2.06	0.55
1:0:805:G:H2'	1:0:2419:C:N3	2.21	0.55
1:0:1979:C:H6	1:0:1979:C:OP1	1.89	0.55
1:0:475:U:H1'	1:0:801:A:N1	2.21	0.55
2:9:32:C:H4'	2:9:60:A:H2	1.70	0.55
1:0:1139:A:H1'	1:0:2495:G:O2'	2.05	0.55
1:0:1223:G:H21	1:0:1225:G:N2	2.01	0.55
1:0:1442:C:N4	1:0:1585:A:C8	2.74	0.55
1:0:1592:U:O5'	1:0:1592:U:H6	1.89	0.55
1:0:1838:G:C2'	1:0:1839:A:H5'	2.35	0.55
1:0:1938:U:O2'	1:0:1939:U:H5'	2.07	0.55
1:0:2160:C:H2'	1:0:2161:C:C6	2.42	0.55
1:0:2855:C:O2'	1:0:2856:U:H5'	2.07	0.55
1:0:840:U:H4'	1:0:841:G:N2	2.20	0.55
1:0:1685:A:N6	1:0:1691:G:C4	2.75	0.55
1:0:1684:G:H2'	1:0:1974:U:O4	2.06	0.55
1:0:2327:U:H2'	1:0:2328:G:H8	1.71	0.55
1:0:2426:G:O6	1:0:2479:U:H2'	2.07	0.55
1:0:2825:A:H2'	1:0:2826:C:C6	2.42	0.55
1:0:514:G:N3	1:0:514:G:H2'	2.22	0.55
1:0:1743:C:H41	16:N:125:MET:CA	2.18	0.55
1:0:1087:C:H2'	1:0:1088:A:O4'	2.06	0.55
1:0:1392:U:C2'	1:0:1393:G:H5'	2.36	0.55
1:0:1514:C:H5'	1:0:1593:C:H5''	1.88	0.55
1:0:1782:A:H62	1:0:1820:G:H2'	1.71	0.55
1:0:10:A:H2'	1:0:11:G:C8	2.42	0.55
1:0:1229:C:H2'	1:0:1230:C:H6	1.70	0.55
1:0:1259:A:H2'	1:0:1260:A:H5'	1.88	0.55
1:0:1691:G:H21	1:0:1694:A:N6	2.01	0.55
1:0:1789:U:C2'	1:0:1790:G:H5'	2.35	0.55
1:0:2394:G:H2'	1:0:2395:C:H6	1.71	0.55
1:0:581:A:C2	1:0:582:G:H1'	2.42	0.55
1:0:876:A:H4'	2:9:103:A:N3	2.21	0.55
1:0:1473:U:H4'	1:0:1474:A:C5	2.41	0.55
1:0:216:U:H2'	1:0:217:U:O4'	2.05	0.55
1:0:604:U:H2'	1:0:605:G:H8	1.71	0.55
1:0:612:G:H4'	1:0:613:A:H4'	1.88	0.55
1:0:706:A:H2'	1:0:707:U:C6	2.42	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1132:C:H2'	1:0:1133:G:O4'	2.05	0.55
1:0:1313:U:H4'	1:0:1314:A:O4'	2.06	0.55
1:0:1459:U:H6	1:0:1459:U:P	2.30	0.55
1:0:781:G:H5'	1:0:1638:G:H4'	1.89	0.55
1:0:2117:A:H62	1:0:2139:G:H21	1.54	0.55
1:0:2404:A:P	1:0:2406:C:H5'	2.47	0.55
1:0:2633:A:N6	1:0:2646:C:H42	2.04	0.55
1:0:2677:U:O2'	1:0:2678:C:H5'	2.07	0.55
1:0:2810:A:H2	1:0:2853:U:C5	2.25	0.55
1:0:1020:A:H2'	1:0:1021:A:C8	2.42	0.55
1:0:1196:G:H2'	1:0:1197:U:O4'	2.07	0.55
1:0:1226:A:H2'	1:0:1227:A:C8	2.42	0.55
1:0:1442:C:N4	1:0:1585:A:H8	2.05	0.55
1:0:243:G:H2'	1:0:244:C:O4'	2.07	0.55
1:0:297:A:H2'	1:0:298:C:C6	2.42	0.55
1:0:1791:C:H1'	1:0:1793:A:C5'	2.35	0.55
1:0:2052:G:C2'	1:0:2053:G:H5'	2.37	0.55
1:0:2195:C:C2'	1:0:2196:U:H5'	2.37	0.55
1:0:2230:G:C8	1:0:2476:A:N6	2.74	0.55
1:0:2535:C:H2'	1:0:2536:G:O4'	2.07	0.55
1:0:636:G:H2'	1:0:637:G:H5'	1.89	0.55
1:0:678:G:O2'	1:0:679:C:H5'	2.07	0.55
1:0:756:C:H2'	1:0:757:U:C6	2.42	0.55
2:9:42:U:H2'	2:9:45:C:N4	2.16	0.55
1:0:1534:A:O2'	1:0:1535:C:H5'	2.07	0.54
1:0:1323:G:H1'	1:0:1627:C:H5''	1.87	0.54
1:0:1900:U:C3'	1:0:1901:A:H8	2.09	0.54
1:0:1956:G:H2'	1:0:1957:C:C6	2.42	0.54
1:0:2026:C:H2'	1:0:2027:C:H6	1.71	0.54
1:0:2633:A:N6	1:0:2646:C:N4	2.53	0.54
1:0:393:U:H2'	1:0:394:U:H6	1.71	0.54
1:0:577:U:H2'	1:0:579:G:OP2	2.06	0.54
1:0:677:G:H4'	1:0:952:A:P	2.47	0.54
1:0:696:U:O5'	1:0:696:U:H6	1.90	0.54
1:0:1341:G:H2'	1:0:1343:C:C5	2.42	0.54
1:0:1418:C:H2'	1:0:1419:G:C8	2.42	0.54
1:0:1430:G:H22	1:0:1599:G:H1'	1.72	0.54
1:0:1736:C:H2'	1:0:1737:G:C8	2.41	0.54
1:0:1949:A:H1'	1:0:2572:U:C4'	2.37	0.54
1:0:2038:C:H2'	1:0:2483:U:C5'	2.37	0.54
1:0:323:G:OP2	1:0:343:A:H5'	2.06	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:93:A:O2'	1:0:94:C:H5'	2.06	0.54
1:0:1218:C:H2'	1:0:1219:C:O4'	2.07	0.54
1:0:736:G:H2'	1:0:737:C:C6	2.42	0.54
1:0:1038:U:H2'	1:0:1039:A:H8	1.71	0.54
1:0:221:A:H2'	1:0:222:G:H5'	1.89	0.54
1:0:2414:A:C3'	1:0:2415:G:H5''	2.38	0.54
1:0:2448:A:H2'	1:0:2449:G:O4'	2.07	0.54
1:0:319:G:H1'	1:0:511:A:O4'	2.06	0.54
1:0:1091:C:H2'	1:0:1092:U:H6	1.68	0.54
1:0:1392:U:H2'	1:0:1393:G:H5'	1.90	0.54
1:0:1411:C:H2'	1:0:1412:C:C6	2.43	0.54
1:0:1661:C:H2'	1:0:1662:G:C8	2.43	0.54
1:0:1785:A:H2'	1:0:1786:C:H6	1.73	0.54
1:0:1871:G:H2'	1:0:1871:G:N3	2.23	0.54
1:0:2313:G:H2'	1:0:2314:A:H5'	1.89	0.54
1:0:239:A:C2	1:0:443:A:H1'	2.43	0.54
1:0:2495:G:H2'	1:0:2496:C:C6	2.42	0.54
1:0:572:G:OP2	1:0:581:A:H5'	2.07	0.54
1:0:703:A:O2'	1:0:704:G:H5'	2.06	0.54
1:0:752:G:H5'	1:0:753:U:OP1	2.08	0.54
1:0:751:G:H1'	1:0:772:G:N2	2.23	0.54
2:9:62:C:N3	2:9:63:A:N7	2.55	0.54
2:9:71:G:N2	2:9:72:C:C1'	2.70	0.54
1:0:114:C:H2'	1:0:115:G:C8	2.43	0.54
1:0:1162:A:O2'	1:0:1163:C:H5'	2.07	0.54
1:0:1280:U:H2'	1:0:1280:U:O2	2.07	0.54
1:0:1787:U:H2'	1:0:1788:C:H6	1.72	0.54
1:0:1959:U:H2'	1:0:1960:A:C8	2.42	0.54
1:0:2045:A:N6	1:0:2482:A:H61	2.05	0.54
1:0:2396:C:O2'	1:0:2397:A:H5'	2.08	0.54
1:0:2433:G:H2'	1:0:2434:G:H8	1.73	0.54
1:0:2580:C:H5''	1:0:2581:A:OP2	2.06	0.54
1:0:2585:C:H2'	1:0:2586:G:O4'	2.07	0.54
1:0:2624:G:H4'	1:0:2712:G:O2'	2.08	0.54
1:0:54:G:H2'	1:0:55:A:H8	1.72	0.54
1:0:1251:G:H2'	1:0:1252:C:O4'	2.08	0.54
1:0:1314:A:N7	1:0:1316:G:C8	2.76	0.54
1:0:1651:U:H5''	1:0:1652:G:OP2	2.07	0.54
1:0:2033:C:H2'	1:0:2034:A:C1'	2.38	0.54
1:0:2301:A:H2'	1:0:2302:G:O4'	2.08	0.54
1:0:2523:G:H1'	1:0:2625:U:H5'	1.89	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:635:C:C2'	1:0:636:G:H5''	2.34	0.54
1:0:1312:G:H4'	1:0:1314:A:C4	2.42	0.54
1:0:1783:G:O6	1:0:1820:G:H1'	2.08	0.54
1:0:456:C:H2'	1:0:457:C:H6	1.73	0.54
1:0:629:C:O2'	1:0:630:G:H5'	2.07	0.54
1:0:786:U:H2'	1:0:787:A:H5'	1.90	0.54
1:0:1223:G:N1	1:0:1250:A:N7	2.56	0.54
1:0:1399:C:H2'	1:0:1400:A:C8	2.43	0.54
1:0:1865:C:H2'	1:0:1866:G:O4'	2.08	0.54
1:0:1760:G:H1'	1:0:1941:C:OP1	2.08	0.54
1:0:41:G:H2'	1:0:42:G:H8	1.73	0.54
1:0:657:A:H2'	1:0:658:G:H8	1.71	0.54
1:0:773:G:H2'	1:0:774:A:H5'	1.90	0.54
1:0:1009:C:O5'	1:0:1009:C:H6	1.89	0.54
1:0:1083:C:H42	1:0:1103:C:H41	1.54	0.54
1:0:1293:A:O2'	1:0:1294:G:H5'	2.08	0.54
1:0:1611:U:H2'	1:0:1612:U:O4'	2.08	0.54
1:0:1741:G:O2'	1:0:1742:G:H5'	2.07	0.54
1:0:2040:A:H2'	1:0:2041:A:H8	1.73	0.54
1:0:2321:C:C2'	1:0:2322:U:H5'	2.38	0.54
1:0:2830:U:H2'	1:0:2831:A:H8	1.73	0.54
1:0:477:A:H2'	1:0:478:G:H5'	1.90	0.54
1:0:1039:A:N3	1:0:2465:G:O2'	2.37	0.53
1:0:1347:C:O2'	1:0:1348:C:H5'	2.06	0.53
1:0:1714:A:C5	1:0:1715:A:N6	2.73	0.53
1:0:1872:A:H2'	1:0:1873:A:H8	1.73	0.53
1:0:225:G:H5'	1:0:226:C:H5'	1.90	0.53
1:0:2447:G:O5'	1:0:2447:G:H8	1.91	0.53
1:0:2466:G:H2'	1:0:2467:A:H8	1.72	0.53
1:0:2769:C:H2'	1:0:2770:A:H5'	1.89	0.53
1:0:338:G:H2'	1:0:339:U:H5'	1.89	0.53
1:0:763:A:H5''	1:0:1631:C:N4	2.23	0.53
1:0:811:G:O2'	1:0:812:G:H5'	2.08	0.53
1:0:941:U:H4'	1:0:941:U:OP1	2.06	0.53
1:0:964:A:H2'	1:0:965:G:C8	2.41	0.53
1:0:1494:G:H2'	1:0:1495:G:O4'	2.08	0.53
1:0:1699:A:C5	1:0:1748:U:H1'	2.43	0.53
1:0:176:A:H3'	1:0:177:U:H5	1.72	0.53
1:0:2375:G:H2'	1:0:2376:G:C8	2.43	0.53
1:0:2559:U:H2'	1:0:2560:G:H5'	1.90	0.53
1:0:2658:A:H2'	1:0:2659:C:O4'	2.08	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2685:A:H4'	1:0:2826:C:H4'	1.90	0.53
1:0:298:C:H2'	1:0:299:C:C6	2.42	0.53
1:0:1032:A:C2'	1:0:1033:G:H4'	2.34	0.53
1:0:1196:G:H2'	1:0:1197:U:C4'	2.38	0.53
1:0:1212:U:H2'	1:0:1213:U:C6	2.43	0.53
1:0:1436:G:N2	1:0:1514:C:H1'	2.20	0.53
1:0:1626:A:OP2	1:0:1626:A:C8	2.61	0.53
1:0:2261:G:H5''	1:0:2262:C:O5'	2.08	0.53
1:0:671:A:H2'	1:0:672:C:C6	2.44	0.53
1:0:1290:A:H2'	1:0:1291:G:C8	2.43	0.53
1:0:13:A:O2'	1:0:14:A:C2	2.61	0.53
1:0:186:C:H2'	1:0:187:U:O4'	2.09	0.53
1:0:2202:G:H3'	1:0:2203:G:C8	2.44	0.53
1:0:2396:C:C2'	1:0:2397:A:H5'	2.38	0.53
1:0:2737:A:H2'	1:0:2738:A:H5'	1.90	0.53
1:0:2753:C:H2'	1:0:2754:C:H6	1.73	0.53
1:0:357:A:C2'	1:0:358:C:H5'	2.35	0.53
1:0:362:C:C4	1:0:363:G:H1'	2.43	0.53
1:0:1227:A:C4'	1:0:1252:C:H4'	2.38	0.53
1:0:1388:C:H2'	1:0:1389:C:C6	2.40	0.53
1:0:1462:C:O2'	1:0:1560:A:H1'	2.09	0.53
1:0:1725:C:H2'	1:0:1726:C:H6	1.74	0.53
1:0:1785:A:H2'	1:0:1786:C:C6	2.44	0.53
1:0:2383:C:H2'	1:0:2384:G:O4'	2.08	0.53
1:0:2559:U:C2'	1:0:2560:G:H5'	2.38	0.53
1:0:1750:A:H4'	1:0:2695:C:O4'	2.09	0.53
1:0:837:U:H2'	1:0:838:A:C8	2.44	0.53
1:0:1166:A:C3'	1:0:1167:A:H5''	2.38	0.53
1:0:1479:G:N2	1:0:1543:G:N2	2.57	0.53
1:0:14:A:H62	1:0:15:G:N2	2.06	0.53
1:0:1789:U:HO2'	1:0:1793:A:H1'	1.71	0.53
1:0:2608:A:O2'	1:0:2609:G:H5'	2.08	0.53
1:0:2727:G:C2'	1:0:2728:A:H5''	2.39	0.53
1:0:915:C:H2'	1:0:916:U:C6	2.44	0.53
1:0:1036:G:H1'	1:0:1145:C:O4'	2.07	0.53
1:0:1272:G:H2'	1:0:1273:G:H8	1.74	0.53
1:0:1356:G:H1'	1:0:1613:G:C2	2.44	0.53
1:0:1679:U:C3'	1:0:1680:U:H5''	2.39	0.53
1:0:239:A:C5'	1:0:620:G:H5'	2.39	0.53
1:0:608:G:O2'	1:0:609:U:H5'	2.09	0.53
1:0:66:U:C2	1:0:67:G:N7	2.77	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:813:A:O2'	1:0:814:G:H8	1.90	0.53
1:0:953:G:H1'	1:0:1203:A:C2	2.37	0.53
1:0:1339:U:O4	1:0:1664:G:H1'	2.09	0.53
1:0:1342:U:H5''	1:0:1343:C:H5	1.74	0.53
1:0:775:U:O2	1:0:1445:A:H5''	2.08	0.53
1:0:1461:C:H2'	1:0:1462:C:C6	2.44	0.53
1:0:2233:C:O2'	1:0:2234:G:H5'	2.09	0.53
1:0:2669:C:O2	1:0:2669:C:H2'	2.08	0.53
1:0:2770:A:H4'	1:0:2867:G:N2	2.17	0.53
1:0:333:A:O2'	1:0:350:U:H2'	2.08	0.53
1:0:639:G:H2'	1:0:640:C:H6	1.73	0.53
1:0:688:A:O2'	1:0:689:A:H5'	2.09	0.53
1:0:733:G:O2'	1:0:734:G:H5'	2.09	0.53
2:9:85:G:C2'	2:9:86:A:H5'	2.38	0.53
1:0:1921:A:C2'	1:0:1922:U:H5''	2.38	0.53
1:0:1940:C:H2'	1:0:1941:C:H6	1.74	0.53
1:0:2076:G:H2'	1:0:2077:G:C8	2.44	0.53
1:0:2627:G:H2'	1:0:2628:C:O4'	2.08	0.53
1:0:2717:G:H2'	1:0:2718:A:C8	2.43	0.53
1:0:1179:A:H2'	1:0:1180:A:C8	2.43	0.53
1:0:187:U:H1'	1:0:1379:A:C2	2.43	0.53
1:0:18:U:O2'	1:0:563:U:H5''	2.09	0.53
1:0:2026:C:H2'	1:0:2027:C:C6	2.44	0.53
1:0:2122:G:H2'	1:0:2123:G:H8	1.74	0.53
1:0:2783:U:H2'	1:0:2784:A:O4'	2.09	0.53
1:0:343:A:N6	1:0:346:C:C5	2.77	0.53
1:0:570:G:C2'	1:0:571:U:H5''	2.39	0.53
1:0:1241:G:O2'	1:0:1242:A:H5'	2.09	0.52
1:0:1307:U:H2'	1:0:1308:C:O4'	2.09	0.52
1:0:1429:A:H1'	1:0:1603:A:C6	2.44	0.52
1:0:1923:U:H2'	1:0:1923:U:O2	2.08	0.52
1:0:2469:G:H4'	1:0:2470:U:H5	1.73	0.52
1:0:2503:G:C2'	1:0:2504:G:H5''	2.39	0.52
1:0:630:G:H8	1:0:630:G:O5'	1.91	0.52
2:9:23:G:C6	2:9:24:U:C4	2.98	0.52
1:0:1086:C:C2'	1:0:1087:C:H5''	2.37	0.52
1:0:1485:U:H2'	1:0:1486:A:H8	1.73	0.52
1:0:2024:U:O5'	1:0:2024:U:H6	1.92	0.52
1:0:2182:A:H2'	1:0:2183:C:O4'	2.10	0.52
2:9:72:C:H2'	2:9:73:C:O4'	2.10	0.52
1:0:1463:A:H1'	1:0:1543:G:C2	2.44	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1956:G:H2'	1:0:1957:C:H6	1.73	0.52
1:0:2048:C:H2'	1:0:2049:C:O4'	2.09	0.52
1:0:2583:U:O2'	1:0:2584:U:H5'	2.08	0.52
1:0:2617:G:O2'	1:0:2618:A:H8	1.92	0.52
1:0:27:G:O2'	1:0:28:A:O4'	2.27	0.52
1:0:365:U:H2'	1:0:366:U:C6	2.44	0.52
1:0:931:G:C5'	2:9:83:C:H1'	2.40	0.52
1:0:1739:G:H2'	1:0:1740:G:C8	2.44	0.52
1:0:115:G:H8	1:0:115:G:O5'	1.93	0.52
1:0:1195:U:H2'	1:0:1196:G:H8	1.75	0.52
1:0:1537:U:H2'	1:0:1538:A:C8	2.44	0.52
1:0:1621:C:O2'	1:0:1626:A:N7	2.41	0.52
1:0:1802:A:O2'	1:0:1803:G:H5'	2.09	0.52
1:0:2169:A:O2'	1:0:2170:C:H5'	2.10	0.52
1:0:2633:A:C2	1:0:2644:A:H5''	2.44	0.52
1:0:2739:G:H2'	1:0:2740:C:O4'	2.09	0.52
1:0:698:A:C1'	1:0:700:C:H41	2.23	0.52
2:9:41:A:H8	2:9:41:A:O5'	1.93	0.52
1:0:2011:U:H2'	1:0:2012:A:H8	1.75	0.52
1:0:2225:G:C2	1:0:2405:A:H1'	2.45	0.52
1:0:2503:G:C3'	1:0:2504:G:H5''	2.39	0.52
1:0:2788:C:H2'	1:0:2789:U:H6	1.74	0.52
1:0:331:U:C2'	1:0:332:C:H5''	2.38	0.52
1:0:353:G:H2'	1:0:354:C:C6	2.44	0.52
1:0:484:G:O2'	1:0:485:G:H5'	2.10	0.52
1:0:635:C:O2	1:0:670:U:H4'	2.10	0.52
1:0:699:G:H3'	1:0:699:G:N3	2.25	0.52
1:0:782:U:H2'	1:0:783:G:H8	1.72	0.52
1:0:886:A:H2'	1:0:887:G:O4'	2.10	0.52
1:0:974:U:H2'	1:0:975:C:O4'	2.09	0.52
1:0:1038:U:N3	1:0:2467:A:H5'	2.24	0.52
1:0:785:U:H5'	1:0:1368:G:O2'	2.09	0.52
1:0:2274:C:C2'	1:0:2275:U:H5''	2.39	0.52
1:0:824:U:H4'	1:0:1264:C:H1'	1.90	0.52
1:0:1301:U:H5''	1:0:1302:C:OP1	2.10	0.52
1:0:1312:G:H5''	1:0:1313:U:H5'	1.90	0.52
1:0:13:A:H1'	1:0:536:A:H62	1.71	0.52
1:0:1594:U:H2'	1:0:1595:A:C8	2.45	0.52
1:0:228:A:C5	1:0:229:G:H1'	2.44	0.52
1:0:2705:A:O2'	1:0:2706:U:C6	2.53	0.52
1:0:534:U:H4'	1:0:564:U:H4'	1.91	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:640:C:H5''	1:0:660:G:O2'	2.09	0.52
1:0:84:G:O2'	1:0:85:C:H5'	2.09	0.52
1:0:859:U:H4'	1:0:860:U:C5	2.45	0.52
1:0:1073:G:C2'	1:0:1074:G:H4'	2.27	0.52
1:0:1102:G:H2'	1:0:1103:C:C6	2.43	0.52
1:0:2725:C:H2'	1:0:2726:U:C6	2.45	0.52
1:0:461:A:N3	1:0:461:A:H2'	2.23	0.52
1:0:839:U:H5''	1:0:2408:G:P	2.49	0.52
1:0:50:G:H2'	1:0:117:A:N1	2.25	0.52
1:0:1226:A:C4	1:0:1250:A:N3	2.78	0.52
1:0:1440:G:H3'	1:0:1441:A:H5'	1.90	0.52
1:0:1479:G:N2	1:0:1543:G:H21	2.08	0.52
1:0:1356:G:C4'	1:0:1613:G:H2'	2.40	0.52
1:0:169:C:H2'	1:0:170:U:H5'	1.91	0.52
1:0:1920:A:N6	1:0:1923:U:C6	2.78	0.52
1:0:1970:G:O2'	1:0:1971:C:H5'	2.10	0.52
1:0:964:A:H1'	1:0:2245:A:OP2	2.10	0.52
1:0:2407:G:H4'	1:0:2408:G:C5	2.45	0.52
1:0:2633:A:H2	1:0:2644:A:H5''	1.74	0.52
1:0:738:G:H2'	1:0:739:G:O4'	2.10	0.52
1:0:115:G:C6	1:0:117:A:N6	2.78	0.51
1:0:984:A:H2	1:0:1200:G:H1	1.58	0.51
1:0:1202:U:H2'	1:0:1203:A:C8	2.35	0.51
1:0:1253:C:C2'	1:0:1254:G:H5'	2.39	0.51
1:0:1696:C:O2	1:0:1972:G:N2	2.43	0.51
1:0:2015:G:N2	1:0:2038:C:H1'	2.21	0.51
1:0:69:G:H4'	1:0:70:A:O5'	2.11	0.51
1:0:757:U:H2'	1:0:758:G:O4'	2.10	0.51
1:0:765:C:O2'	1:0:766:A:O4'	2.28	0.51
1:0:978:U:H2'	1:0:979:A:H8	1.75	0.51
1:0:1058:G:H2'	1:0:1121:G:H1	1.76	0.51
1:0:987:G:O2'	1:0:1166:A:O2'	2.26	0.51
1:0:1372:A:H2'	1:0:1373:G:H5'	1.93	0.51
1:0:1699:A:C6	1:0:1748:U:H1'	2.45	0.51
1:0:872:G:O2'	1:0:2247:A:C4	2.63	0.51
1:0:2402:U:H5'	1:0:2404:A:N7	2.25	0.51
1:0:550:C:H2'	1:0:551:A:C8	2.46	0.51
1:0:633:G:H8	1:0:633:G:O5'	1.92	0.51
1:0:887:G:O2'	1:0:888:G:H5'	2.10	0.51
1:0:974:U:H5'	1:0:2476:A:OP1	2.11	0.51
2:9:116:C:H2'	2:9:117:G:O4'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1226:A:N1	1:0:1250:A:H1'	2.25	0.51
1:0:1256:C:H2'	1:0:1257:U:C6	2.46	0.51
1:0:147:G:O5'	1:0:147:G:H8	1.92	0.51
1:0:1514:C:H2'	1:0:1515:U:O4'	2.10	0.51
1:0:2501:U:O2'	1:0:2626:U:H5''	2.11	0.51
1:0:2857:C:H2'	1:0:2858:A:O5'	2.11	0.51
1:0:446:C:H2'	1:0:447:U:O4'	2.10	0.51
1:0:670:U:O2'	1:0:671:A:H5'	2.10	0.51
1:0:912:A:H2'	1:0:913:A:H8	1.76	0.51
1:0:1040:A:H2'	1:0:1041:G:C5'	2.35	0.51
1:0:15:G:H2'	1:0:16:G:H5'	1.93	0.51
1:0:1764:A:H2'	1:0:1765:C:H5'	1.93	0.51
1:0:1943:A:C2'	1:0:1944:C:H5'	2.40	0.51
1:0:2311:U:HO2'	1:0:2312:A:H8	1.58	0.51
1:0:2542:U:H2'	1:0:2544:A:OP2	2.11	0.51
1:0:2772:U:O2'	1:0:2773:G:H5'	2.10	0.51
1:0:951:G:H3'	1:0:952:A:H5''	1.91	0.51
1:0:1141:U:O5'	1:0:1141:U:H6	1.94	0.51
1:0:1473:U:H4'	1:0:1474:A:C8	2.46	0.51
1:0:1789:U:O2	1:0:1793:A:H2	1.93	0.51
1:0:1851:A:N6	1:0:1867:A:H1'	2.25	0.51
1:0:2511:G:N2	1:0:2642:G:O2'	2.44	0.51
1:0:2668:U:P	1:0:2699:G:H22	2.34	0.51
1:0:2759:U:H4'	1:0:2760:G:O5'	2.11	0.51
1:0:2840:U:C6	1:0:2841:U:H5	2.28	0.51
2:9:78:A:H2'	2:9:79:U:H6	1.73	0.51
1:0:1010:U:H2'	1:0:1011:A:H8	1.75	0.51
1:0:1124:U:H2'	1:0:1125:G:H8	1.76	0.51
1:0:1814:G:H2'	1:0:1815:G:C8	2.46	0.51
1:0:1827:G:H1'	1:0:1914:U:N3	2.26	0.51
1:0:2560:G:H4'	1:0:2561:G:C8	2.46	0.51
1:0:2665:G:H2'	1:0:2666:U:O4'	2.11	0.51
1:0:504:G:O2'	1:0:505:G:H5'	2.11	0.51
1:0:5:A:H2'	1:0:6:A:C8	2.44	0.51
1:0:1253:C:H2'	1:0:1254:G:H5'	1.92	0.51
1:0:1451:C:H2'	1:0:1452:U:C6	2.46	0.51
1:0:1666:G:H2'	1:0:1667:A:H8	1.75	0.51
1:0:1698:C:O2'	1:0:1753:A:C2'	2.57	0.51
1:0:2396:C:H6	1:0:2396:C:H5'	1.75	0.51
1:0:2409:A:H2'	1:0:2410:U:C5'	2.36	0.51
1:0:2541:U:H2'	1:0:2542:U:O4'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2709:C:H2'	1:0:2710:C:H6	1.76	0.51
1:0:515:A:C2'	1:0:516:G:H5'	2.41	0.51
1:0:975:C:O5'	1:0:975:C:H6	1.94	0.51
2:9:42:U:C2	2:9:45:C:C5	2.99	0.51
1:0:1008:G:O2'	1:0:1009:C:H5'	2.10	0.51
1:0:1429:A:H61	1:0:1602:G:H5'	1.74	0.51
1:0:1729:C:H2'	1:0:1730:G:C8	2.46	0.51
1:0:1782:A:N6	1:0:1820:G:H2'	2.26	0.51
1:0:1807:A:H1'	1:0:1809:G:N7	2.25	0.51
1:0:1835:C:H2'	1:0:1836:C:C6	2.46	0.51
1:0:2230:G:H8	1:0:2476:A:N6	2.09	0.51
1:0:2341:G:O2'	1:0:2342:U:H5'	2.11	0.51
1:0:2790:C:H2'	1:0:2791:C:H6	1.75	0.51
1:0:416:U:C5'	1:0:417:C:H5'	2.38	0.51
1:0:525:A:H2'	1:0:526:C:O4'	2.10	0.51
1:0:1715:A:HO2'	1:0:1716:G:H3'	1.76	0.51
1:0:1940:C:H2'	1:0:1941:C:C6	2.46	0.51
1:0:1969:G:O2'	1:0:1970:G:H5'	2.11	0.51
1:0:2402:U:H5'	1:0:2404:A:C5	2.46	0.51
1:0:580:A:N3	1:0:582:G:N7	2.58	0.51
1:0:76:C:H2'	1:0:77:C:C6	2.45	0.51
1:0:843:G:H3'	1:0:843:G:OP1	2.11	0.51
1:0:95:G:H2'	1:0:96:C:C6	2.46	0.51
2:9:26:G:N7	2:9:58:G:C4	2.78	0.51
2:9:6:C:H2'	2:9:7:C:H6	1.72	0.51
2:9:71:G:C2'	2:9:72:C:H5'	2.41	0.51
1:0:1003:C:O2'	1:0:1004:A:H5'	2.10	0.51
1:0:10:A:H2'	1:0:11:G:H8	1.75	0.51
1:0:1296:G:H2'	1:0:1298:G:OP2	2.11	0.51
1:0:1380:C:H2'	1:0:1381:G:H5'	1.93	0.51
1:0:1424:U:H2'	1:0:1425:G:C8	2.45	0.51
2:9:4:C:H2'	2:9:5:C:C5	2.43	0.51
1:0:1004:A:H2'	1:0:1005:U:H5'	1.93	0.50
1:0:1064:C:H2'	1:0:1065:A:C8	2.46	0.50
1:0:1345:G:H5''	1:0:1346:C:OP1	2.11	0.50
1:0:1472:C:HO2'	1:0:1474:A:H8	1.58	0.50
1:0:1944:C:H2'	1:0:1945:C:O4'	2.11	0.50
1:0:2324:G:HO2'	1:0:2325:A:H5''	1.76	0.50
1:0:2044:G:N7	1:0:2480:C:H4'	2.26	0.50
1:0:2487:G:O3'	1:0:2534:U:H5'	2.10	0.50
1:0:2613:A:O2'	1:0:2614:A:H5'	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2813:G:C2'	1:0:2814:G:H5'	2.41	0.50
1:0:29:U:H2'	1:0:30:G:C8	2.46	0.50
1:0:509:U:H3	1:0:513:A:N6	2.09	0.50
1:0:923:A:N3	1:0:923:A:H2'	2.26	0.50
1:0:931:G:H5'	2:9:83:C:H1'	1.92	0.50
1:0:1001:A:C3'	1:0:1002:C:H5''	2.42	0.50
1:0:1679:U:H2'	1:0:1680:U:C5'	2.16	0.50
1:0:1680:U:C5'	1:0:1680:U:H6	2.25	0.50
1:0:1690:U:C2'	1:0:1691:G:H5'	2.41	0.50
1:0:1823:G:H2'	1:0:1824:C:C6	2.46	0.50
1:0:2059:U:C2'	1:0:2060:A:H5''	2.28	0.50
1:0:221:A:C2'	1:0:222:G:H5'	2.42	0.50
1:0:2396:C:H2'	1:0:2397:A:H5'	1.93	0.50
1:0:2504:G:O4'	1:0:2721:A:H2	1.94	0.50
1:0:701:U:O2'	1:0:702:A:H5'	2.12	0.50
1:0:771:C:O2'	1:0:772:G:H5'	2.11	0.50
2:9:50:U:H2'	2:9:51:G:C8	2.45	0.50
1:0:1007:A:H2'	1:0:1008:G:H8	1.75	0.50
1:0:1171:A:H2'	1:0:1172:U:C6	2.46	0.50
1:0:1226:A:H2'	1:0:1227:A:H8	1.76	0.50
1:0:1278:A:H4'	1:0:1279:G:O5'	2.11	0.50
1:0:1429:A:N6	1:0:1601:U:H5''	2.24	0.50
1:0:2047:C:H5''	1:0:2047:C:H6	1.76	0.50
1:0:2034:A:N6	1:0:2593:A:N7	2.60	0.50
1:0:788:G:H5''	1:0:789:G:OP1	2.10	0.50
1:0:1011:A:N6	1:0:1165:G:H2'	2.27	0.50
1:0:2432:A:H4'	1:0:2551:A:O2'	2.11	0.50
1:0:322:A:H1'	1:0:343:A:C5	2.47	0.50
1:0:365:U:H2'	1:0:366:U:H6	1.76	0.50
1:0:735:G:O2'	1:0:736:G:H5'	2.11	0.50
1:0:929:A:H3'	1:0:930:A:C5'	2.36	0.50
1:0:1310:C:O2'	1:0:1315:A:N1	2.41	0.50
1:0:1402:G:H2'	1:0:1403:U:O4'	2.12	0.50
1:0:2842:C:H5''	1:0:2842:C:H6	1.77	0.50
1:0:2770:A:H5''	1:0:2867:G:H1	1.75	0.50
1:0:782:U:HO2'	1:0:1392:U:H5	1.60	0.50
2:9:111:C:H5''	2:9:112:A:H4'	1.93	0.50
1:0:132:U:H2'	1:0:133:C:C6	2.47	0.50
1:0:14:A:N6	1:0:15:G:C2	2.80	0.50
1:0:763:A:C5'	1:0:1631:C:H42	2.24	0.50
1:0:1920:A:C5	1:0:1922:U:H5	2.29	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1141:U:OP2	1:0:2549:G:N2	2.44	0.50
1:0:542:A:H62	1:0:570:G:H21	1.60	0.50
1:0:543:G:H2'	1:0:544:U:C6	2.47	0.50
2:9:29:C:H2'	2:9:30:C:C5	2.45	0.50
1:0:1000:G:OP1	1:0:1168:G:H4'	2.12	0.50
1:0:1439:G:N2	1:0:1590:C:H42	2.10	0.50
1:0:1541:G:H22	1:0:1561:A:N6	2.09	0.50
1:0:1685:A:N6	1:0:1691:G:N3	2.60	0.50
1:0:2042:A:H3'	1:0:2042:A:H8	1.77	0.50
1:0:2411:A:H8	1:0:2411:A:O5'	1.93	0.50
1:0:2555:G:O4'	1:0:2558:C:H5	1.95	0.50
1:0:403:A:H5''	1:0:404:A:OP1	2.11	0.50
1:0:428:A:H2'	1:0:429:C:C6	2.47	0.50
1:0:1021:A:O5'	1:0:1021:A:H8	1.95	0.50
1:0:1799:A:C8	1:0:1800:A:N7	2.80	0.50
1:0:1888:C:H2'	1:0:1913:G:C5	2.47	0.50
1:0:2839:G:C5	1:0:2840:U:C4	3.00	0.50
1:0:520:C:H2'	1:0:521:U:O4'	2.12	0.50
1:0:744:C:N4	1:0:745:C:H41	2.10	0.50
1:0:26:G:O3'	1:0:1273:G:H4'	2.12	0.50
1:0:127:C:H5''	1:0:1615:C:O2'	2.11	0.50
1:0:1756:C:H2'	1:0:1757:C:C6	2.47	0.50
1:0:222:G:O2'	1:0:223:C:H5'	2.11	0.50
1:0:2617:G:N2	1:0:2755:A:H2'	2.27	0.50
1:0:2824:C:H1'	1:0:2843:A:C2	2.46	0.50
1:0:394:U:O2'	1:0:395:G:H5'	2.12	0.50
1:0:457:C:O2'	1:0:458:G:H5'	2.12	0.50
1:0:486:U:C4'	1:0:520:C:H5'	2.41	0.50
1:0:830:C:H2'	1:0:831:G:H8	1.77	0.50
2:9:105:G:C2	2:9:106:U:C4	2.99	0.50
1:0:119:G:H1'	1:0:129:A:C2	2.47	0.49
1:0:2005:U:H2'	1:0:2595:C:HO2'	1.75	0.49
1:0:2034:A:H5'	1:0:2557:G:C4'	2.41	0.49
1:0:2217:G:N3	1:0:2217:G:H3'	2.27	0.49
1:0:2754:C:H2'	1:0:2755:A:H8	1.76	0.49
1:0:333:A:HO2'	1:0:350:U:H2'	1.76	0.49
1:0:630:G:H5''	1:0:631:G:OP2	2.12	0.49
1:0:861:G:N2	1:0:943:U:O2'	2.45	0.49
1:0:1101:U:H3	1:0:1113:C:C1'	2.24	0.49
1:0:1717:A:H2'	1:0:1718:A:H5'	1.94	0.49
1:0:1821:A:H5''	1:0:1822:C:C5	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2080:U:H2'	1:0:2081:U:C6	2.47	0.49
1:0:2507:U:HO2'	1:0:2508:G:H8	1.59	0.49
1:0:322:A:H2	1:0:342:G:OP2	1.95	0.49
1:0:752:G:H8	1:0:752:G:OP2	1.95	0.49
1:0:946:U:O2'	1:0:947:C:H5'	2.12	0.49
1:0:1424:U:H2'	1:0:1425:G:H8	1.77	0.49
1:0:1457:A:O2'	1:0:1458:A:H5'	2.13	0.49
1:0:1622:G:H4'	1:0:1624:A:N3	2.27	0.49
1:0:178:C:H2'	1:0:179:U:C6	2.47	0.49
1:0:2039:G:H2'	1:0:2039:G:N3	2.28	0.49
1:0:2162:C:H2'	1:0:2163:U:H6	1.77	0.49
1:0:305:A:H2'	1:0:306:G:H5'	1.92	0.49
1:0:424:G:N7	1:0:2385:U:N3	2.60	0.49
1:0:45:C:H2'	1:0:46:C:C6	2.47	0.49
1:0:930:A:H4'	1:0:930:A:OP1	2.11	0.49
2:9:104:A:C2	2:9:105:G:H1'	2.47	0.49
1:0:1090:C:O2'	1:0:1091:C:H5'	2.12	0.49
1:0:1482:U:H1'	1:0:1562:G:N2	2.27	0.49
1:0:1685:A:C2	1:0:1976:U:C2	3.01	0.49
1:0:1768:U:O2'	1:0:1769:U:H5'	2.12	0.49
1:0:1818:G:H2'	1:0:1819:U:C6	2.47	0.49
1:0:202:A:O2'	1:0:234:C:H4'	2.12	0.49
1:0:2396:C:H2'	1:0:2397:A:C5'	2.42	0.49
1:0:2618:A:N1	1:0:2619:G:H1'	2.28	0.49
1:0:2742:G:O2'	1:0:2743:G:H5'	2.13	0.49
1:0:589:C:O2'	1:0:590:C:H5'	2.12	0.49
1:0:746:G:N7	1:0:774:A:C5	2.80	0.49
2:9:111:C:H5''	2:9:112:A:C5'	2.42	0.49
1:0:1023:U:H1'	1:0:1154:A:C8	2.47	0.49
1:0:1182:U:H2'	1:0:1183:C:C5'	2.35	0.49
1:0:1302:C:C6	1:0:1302:C:OP1	2.65	0.49
1:0:1354:A:H2'	1:0:1410:U:O2	2.12	0.49
1:0:1724:C:H1'	1:0:1747:G:C4	2.48	0.49
1:0:1771:A:H8	1:0:1772:C:H5	1.60	0.49
1:0:1784:C:O2'	1:0:1785:A:H5'	2.12	0.49
1:0:1950:C:H2'	1:0:1951:G:O4'	2.12	0.49
1:0:2245:A:C4	1:0:2251:U:O4	2.66	0.49
1:0:2587:G:H8	1:0:2587:G:O5'	1.95	0.49
1:0:305:A:C2'	1:0:306:G:H5'	2.43	0.49
1:0:353:G:H2'	1:0:354:C:H6	1.77	0.49
1:0:490:A:N7	1:0:492:G:H1'	2.27	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:90:G:H3'	1:0:91:A:C5'	2.42	0.49
1:0:1234:C:O2'	1:0:1235:C:H5'	2.13	0.49
1:0:1482:U:H2'	1:0:1483:G:H8	1.77	0.49
1:0:1625:A:C8	1:0:1632:A:H1'	2.48	0.49
1:0:1715:A:HO2'	1:0:1716:G:H8	1.60	0.49
1:0:338:G:O2'	1:0:339:U:H5'	2.13	0.49
1:0:486:U:C2'	1:0:487:G:H5'	2.43	0.49
1:0:1952:A:O2'	1:0:1955:G:N2	2.45	0.49
1:0:1964:A:OP1	1:0:1965:U:OP2	2.30	0.49
1:0:195:A:C2'	1:0:196:A:H5'	2.43	0.49
1:0:2055:G:O2'	1:0:2056:C:H5'	2.12	0.49
1:0:2301:A:C2	1:0:2302:G:H1'	2.48	0.49
1:0:2428:U:O2	1:0:2428:U:H2'	2.12	0.49
1:0:246:C:N4	1:0:247:A:H62	2.09	0.49
1:0:2572:U:H2'	1:0:2573:C:H6	1.77	0.49
1:0:389:G:H2'	1:0:390:U:C6	2.48	0.49
1:0:450:C:H2'	1:0:451:A:C8	2.48	0.49
1:0:644:A:C2'	1:0:645:G:H5'	2.41	0.49
1:0:1147:G:O2'	1:0:1148:G:H5'	2.12	0.49
1:0:1399:C:O2'	1:0:1400:A:H5'	2.13	0.49
1:0:1692:C:H2'	1:0:1693:A:H5'	1.95	0.49
1:0:2204:A:O2'	1:0:2205:C:OP2	2.28	0.49
1:0:388:G:O2'	1:0:389:G:H5'	2.13	0.49
1:0:860:U:O2	1:0:860:U:H2'	2.11	0.49
1:0:952:A:O2'	1:0:1204:G:H4'	2.13	0.49
1:0:968:C:C2	1:0:2438:A:H5'	2.48	0.49
2:9:28:A:OP2	2:9:29:C:H5	1.95	0.49
1:0:1101:U:C2	1:0:1113:C:H1'	2.48	0.49
1:0:1295:U:H2'	1:0:1296:G:C5'	2.39	0.49
1:0:2447:G:C8	1:0:2455:A:N6	2.75	0.49
1:0:2038:C:C2'	1:0:2483:U:H4'	2.28	0.49
1:0:515:A:H2'	1:0:516:G:H5'	1.95	0.49
1:0:661:C:O2'	1:0:662:G:H5'	2.12	0.49
2:9:23:G:C2	2:9:24:U:C2	3.01	0.49
2:9:28:A:H3'	2:9:29:C:C6	2.43	0.49
1:0:1787:U:H2'	1:0:1788:C:C6	2.48	0.49
1:0:1871:G:C2'	1:0:1871:G:N3	2.76	0.49
1:0:221:A:H2'	1:0:222:G:C5'	2.43	0.49
1:0:2286:G:H21	1:0:2290:A:H62	1.61	0.49
1:0:321:A:H2'	1:0:323:G:C8	2.48	0.49
1:0:430:C:H2'	1:0:431:G:C8	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:482:A:H2'	1:0:483:A:O4'	2.13	0.49
1:0:657:A:H2'	1:0:658:G:O4'	2.12	0.49
1:0:745:C:O2'	1:0:746:G:H5'	2.13	0.49
1:0:799:C:O2'	1:0:800:U:H5'	2.13	0.49
1:0:984:A:O2'	1:0:1201:G:H1'	2.13	0.49
2:9:36:A:H8	2:9:36:A:O5'	1.96	0.49
1:0:1021:A:H1'	1:0:1164:C:H1'	1.94	0.48
1:0:1039:A:H61	1:0:1136:G:H2'	1.77	0.48
1:0:2002:A:C2	1:0:2003:A:H1'	2.48	0.48
1:0:216:U:H6	1:0:216:U:O5'	1.95	0.48
1:0:305:A:H2'	1:0:306:G:C5'	2.43	0.48
1:0:464:G:H8	1:0:464:G:O5'	1.96	0.48
1:0:26:G:H1'	1:0:525:A:H61	1.78	0.48
2:9:67:C:C3'	2:9:68:A:H5'	2.43	0.48
2:9:92:G:C3'	2:9:93:G:H5'	2.42	0.48
1:0:1221:C:H6	1:0:1221:C:O5'	1.96	0.48
1:0:1373:G:H2'	1:0:1374:G:H5'	1.95	0.48
1:0:1917:C:H2'	1:0:1918:G:O4'	2.13	0.48
1:0:1992:G:O2'	1:0:1993:G:H5'	2.13	0.48
1:0:2019:C:H5'	1:0:2019:C:H6	1.78	0.48
1:0:2019:C:O2'	1:0:2020:G:H5'	2.13	0.48
1:0:337:G:H2'	1:0:338:G:H8	1.77	0.48
1:0:587:A:H2'	1:0:588:G:H5''	1.96	0.48
1:0:789:G:H1'	1:0:806:A:N7	2.28	0.48
1:0:995:A:H5''	1:0:996:C:C5	2.47	0.48
2:9:71:G:H2'	2:9:72:C:H5'	1.95	0.48
2:9:89:G:N2	2:9:91:A:C8	2.81	0.48
1:0:1468:A:P	1:0:1468:A:H8	2.36	0.48
1:0:1550:C:H6	1:0:1550:C:O5'	1.97	0.48
1:0:1725:C:O2'	1:0:1726:C:H5'	2.13	0.48
1:0:1727:C:H4'	1:0:2833:C:O2	2.12	0.48
1:0:2012:A:C6	1:0:2014:A:H5'	2.49	0.48
1:0:2177:U:O2'	1:0:2178:U:H5'	2.13	0.48
1:0:510:G:H8	1:0:510:G:O5'	1.97	0.48
1:0:542:A:H62	1:0:570:G:N2	2.10	0.48
1:0:864:C:O2'	1:0:865:A:H5'	2.14	0.48
1:0:1317:G:O2'	1:0:1318:A:H5'	2.13	0.48
1:0:1519:G:O2'	1:0:1520:G:H5'	2.12	0.48
1:0:1541:G:N2	1:0:1562:G:N2	2.61	0.48
1:0:1662:G:O5'	1:0:1662:G:H8	1.96	0.48
1:0:1691:G:N2	1:0:1694:A:H61	2.06	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1707:A:N7	1:0:1714:A:C2	2.79	0.48
1:0:2214:G:O2'	1:0:2215:C:H5'	2.14	0.48
1:0:2544:A:H2'	1:0:2545:A:C1'	2.43	0.48
1:0:796:A:H4'	1:0:2567:G:O3'	2.13	0.48
1:0:2655:C:O2'	1:0:2656:G:H5'	2.12	0.48
1:0:2700:U:H2'	1:0:2701:A:H8	1.77	0.48
1:0:429:C:H2'	1:0:430:C:O4'	2.12	0.48
1:0:457:C:C2'	1:0:458:G:H5'	2.44	0.48
2:9:107:C:C6	2:9:107:C:H3'	2.47	0.48
2:9:63:A:H2'	2:9:64:C:C6	2.47	0.48
1:0:1558:C:H2'	1:0:1559:G:C5'	2.44	0.48
1:0:1811:A:H2'	1:0:1811:A:N3	2.28	0.48
1:0:2225:G:O2'	1:0:2226:A:H5'	2.14	0.48
1:0:2655:C:H2'	1:0:2656:G:O4'	2.14	0.48
1:0:2863:U:H2'	1:0:2864:C:H6	1.77	0.48
1:0:541:C:H2'	1:0:541:C:O2	2.12	0.48
1:0:605:G:H2'	1:0:606:A:C8	2.49	0.48
1:0:749:C:H2'	1:0:750:C:C6	2.48	0.48
1:0:789:G:H4'	1:0:790:A:C8	2.49	0.48
1:0:968:C:H41	1:0:970:A:C1'	2.25	0.48
1:0:2246:A:H2'	1:0:2246:A:N3	2.29	0.48
1:0:2302:G:N2	1:0:2314:A:H2	2.12	0.48
1:0:2523:G:H2'	1:0:2524:G:H8	1.78	0.48
1:0:542:A:N6	1:0:570:G:H21	2.12	0.48
1:0:643:A:O2'	1:0:644:A:H5'	2.12	0.48
1:0:65:C:C2'	1:0:66:U:H5'	2.43	0.48
1:0:788:G:N2	1:0:801:A:OP2	2.46	0.48
1:0:974:U:H2'	1:0:975:C:C6	2.48	0.48
2:9:85:G:O2'	2:9:86:A:H5'	2.13	0.48
1:0:1206:G:H2'	1:0:1207:G:H8	1.79	0.48
1:0:1287:A:C5	1:0:1315:A:C2	3.02	0.48
1:0:1316:G:H8	1:0:1316:G:OP2	1.97	0.48
1:0:1512:A:O5'	1:0:1512:A:H8	1.96	0.48
1:0:2378:G:N2	1:0:2397:A:H1'	2.29	0.48
1:0:242:A:O2'	1:0:243:G:P	2.71	0.48
1:0:2683:C:H6	1:0:2683:C:O5'	1.97	0.48
1:0:2733:A:H2'	1:0:2734:U:O4'	2.12	0.48
1:0:333:A:H2'	1:0:350:U:O2	2.14	0.48
1:0:581:A:N3	1:0:582:G:H1'	2.29	0.48
1:0:68:C:O2	1:0:68:C:H2'	2.13	0.48
2:9:32:C:H4'	2:9:60:A:C2	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:91:A:O5'	2:9:91:A:H8	1.97	0.48
1:0:1459:U:H3'	1:0:1459:U:OP1	2.13	0.48
1:0:1491:C:H2'	1:0:1492:A:C8	2.47	0.48
1:0:1791:C:H2'	1:0:1792:C:C5'	2.37	0.48
1:0:2302:G:H2'	1:0:2303:C:H5'	1.96	0.48
1:0:451:A:H2'	1:0:452:G:H8	1.74	0.48
1:0:495:C:H2'	1:0:496:C:C6	2.49	0.48
1:0:73:A:H4'	1:0:74:G:C1'	2.43	0.48
1:0:837:U:H2'	1:0:838:A:H8	1.78	0.48
1:0:942:U:H2'	1:0:943:U:O4'	2.13	0.48
1:0:1062:G:C5	1:0:1063:C:H5	2.32	0.48
1:0:1066:G:C2'	1:0:1067:G:H4'	2.41	0.48
1:0:1333:G:N2	1:0:1344:C:N4	2.61	0.48
1:0:1663:C:O5'	1:0:1663:C:H6	1.97	0.48
1:0:2795:A:H2'	1:0:2795:A:N3	2.29	0.48
1:0:430:C:H2'	1:0:431:G:O4'	2.14	0.48
1:0:480:G:O5'	1:0:480:G:H8	1.97	0.48
1:0:843:G:H5'	1:0:956:A:H1'	1.96	0.48
1:0:987:G:H4'	1:0:1167:A:N7	2.28	0.48
1:0:1401:G:HO2'	1:0:1540:C:HO2'	1.61	0.48
1:0:1425:G:H2'	1:0:1426:U:C6	2.49	0.48
1:0:1654:A:H4'	1:0:2690:A:HO2'	1.77	0.48
1:0:1732:U:H2'	1:0:1733:U:O5'	2.14	0.48
1:0:2008:C:O5'	1:0:2008:C:H6	1.95	0.48
1:0:2828:C:O2'	1:0:2829:A:H5'	2.14	0.48
1:0:297:A:H2'	1:0:298:C:H6	1.78	0.48
1:0:38:G:H1	1:0:453:U:H3	1.60	0.48
1:0:397:U:H2'	1:0:398:C:H6	1.79	0.48
1:0:470:U:C5	1:0:480:G:N2	2.81	0.48
1:0:73:A:H4'	1:0:74:G:O4'	2.14	0.48
1:0:929:A:H2'	1:0:930:A:C4'	2.41	0.48
2:9:42:U:H3'	2:9:43:G:H5''	1.96	0.48
1:0:1267:A:H5''	1:0:1268:U:H5'	1.96	0.47
1:0:1453:A:H2'	1:0:1454:U:H5'	1.96	0.47
1:0:1653:C:O2	1:0:1751:A:H2	1.97	0.47
1:0:1846:A:H2'	1:0:1847:G:O4'	2.14	0.47
1:0:2166:G:O2'	1:0:2167:A:H5'	2.13	0.47
1:0:2182:A:H3'	1:0:2183:C:C6	2.49	0.47
1:0:2384:G:H2'	1:0:2390:A:H62	1.79	0.47
1:0:2397:A:H2'	1:0:2398:U:O4'	2.14	0.47
1:0:2446:C:H2'	1:0:2447:G:C8	2.49	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1937:G:N3	1:0:2530:C:C5'	2.77	0.47
1:0:2555:G:N3	1:0:2555:G:H2'	2.29	0.47
1:0:2484:G:C8	1:0:2555:G:N2	2.82	0.47
1:0:1778:U:H5'	1:0:2568:A:O2'	2.14	0.47
1:0:957:G:N2	1:0:983:G:H1'	2.29	0.47
1:0:1416:A:O2'	1:0:1417:C:H5'	2.13	0.47
1:0:1781:C:H2'	1:0:1782:A:C8	2.48	0.47
1:0:181:A:H5''	1:0:182:G:OP1	2.13	0.47
1:0:1994:U:H2'	1:0:1995:G:C5'	2.43	0.47
1:0:295:C:N4	1:0:296:A:N6	2.62	0.47
1:0:573:C:H2'	1:0:574:C:O4'	2.14	0.47
1:0:733:G:H2'	1:0:734:G:H8	1.79	0.47
1:0:1487:C:H2'	1:0:1488:G:H8	1.79	0.47
1:0:1706:A:N6	1:0:1714:A:H2'	2.29	0.47
1:0:1848:U:H2'	1:0:1849:G:O4'	2.14	0.47
1:0:1976:U:H2'	1:0:1976:U:O2	2.14	0.47
1:0:2617:G:H22	1:0:2755:A:H2'	1.80	0.47
1:0:222:G:H1'	1:0:397:U:O2	2.14	0.47
1:0:544:U:H2'	1:0:545:C:O4'	2.14	0.47
1:0:70:A:P	1:0:110:U:H2'	2.54	0.47
1:0:843:G:C8	1:0:843:G:OP1	2.66	0.47
2:9:35:C:H2'	2:9:36:A:O4'	2.14	0.47
1:0:1066:G:H3'	1:0:1067:G:H5''	1.97	0.47
1:0:1905:G:H2'	1:0:1906:U:O4'	2.14	0.47
1:0:1979:C:H2'	1:0:1979:C:O2	2.13	0.47
1:0:2047:C:H1'	1:0:2429:A:C2	2.49	0.47
1:0:2079:A:H2'	1:0:2080:U:C6	2.49	0.47
1:0:2324:G:N7	1:0:2351:G:C2	2.82	0.47
1:0:2560:G:O6	1:0:2589:C:H5	1.97	0.47
1:0:9:U:H3	1:0:2608:A:H62	1.62	0.47
1:0:2712:G:H5'	1:0:2713:A:C8	2.50	0.47
1:0:486:U:H2'	1:0:487:G:H5'	1.97	0.47
1:0:575:U:H2'	1:0:576:A:H8	1.77	0.47
1:0:4:C:O2'	1:0:5:A:H5'	2.13	0.47
1:0:721:C:H2'	1:0:722:C:C6	2.49	0.47
1:0:699:G:N2	1:0:801:A:C2	2.72	0.47
1:0:833:A:N3	1:0:954:U:O2'	2.48	0.47
1:0:860:U:H2'	1:0:861:G:H5'	1.96	0.47
2:9:117:G:O2'	2:9:118:G:H5'	2.14	0.47
2:9:8:C:O2'	2:9:9:G:H5'	2.14	0.47
1:0:1001:A:H3'	1:0:1002:C:H5''	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1012:A:H61	1:0:1165:G:H1'	1.80	0.47
1:0:2212:U:H2'	1:0:2213:G:C8	2.50	0.47
1:0:2245:A:C2'	1:0:2246:A:OP2	2.61	0.47
1:0:2490:U:H2'	1:0:2491:C:C6	2.49	0.47
1:0:2651:U:H2'	1:0:2652:G:O4'	2.14	0.47
1:0:2652:G:H2'	1:0:2653:A:C8	2.39	0.47
1:0:2671:C:O2'	1:0:2672:U:H5'	2.14	0.47
1:0:2838:U:O2'	1:0:2839:G:H5'	2.15	0.47
1:0:757:U:H4'	1:0:1675:C:H4'	1.97	0.47
1:0:859:U:H4'	1:0:860:U:H5	1.79	0.47
2:9:34:C:H6	2:9:34:C:O5'	1.98	0.47
1:0:1171:A:H2'	1:0:1172:U:H6	1.78	0.47
1:0:1671:A:O4'	1:0:2798:A:H5'	2.15	0.47
1:0:1947:G:O5'	1:0:1947:G:H8	1.97	0.47
1:0:2058:U:H5'	1:0:2576:G:H1'	1.97	0.47
1:0:942:U:H2'	1:0:943:U:C4'	2.45	0.47
1:0:986:A:H2'	1:0:987:G:H5'	1.96	0.47
1:0:1356:G:H4'	1:0:1613:G:H2'	1.96	0.47
1:0:1989:C:O5'	1:0:1989:C:H6	1.98	0.47
1:0:2523:G:H2'	1:0:2524:G:O4'	2.14	0.47
1:0:750:C:H2'	1:0:751:G:H8	1.79	0.47
2:9:108:G:H2'	2:9:109:G:H8	1.79	0.47
1:0:2298:U:O4	2:9:15:A:N6	2.48	0.47
1:0:1028:G:H2'	1:0:1029:C:O4'	2.14	0.47
1:0:1110:G:H2'	1:0:1111:C:C6	2.49	0.47
1:0:118:U:H5''	1:0:120:G:OP2	2.15	0.47
1:0:1199:U:H3'	1:0:1200:G:H5''	1.97	0.47
1:0:1304:U:C2'	1:0:1305:C:H5'	2.44	0.47
1:0:1359:G:H8	1:0:1359:G:H5'	1.79	0.47
1:0:1363:C:H2'	1:0:1364:C:O4'	2.14	0.47
1:0:1449:C:O2'	1:0:1450:G:H5'	2.13	0.47
1:0:158:A:H2'	1:0:159:A:O4'	2.14	0.47
1:0:1857:G:H2'	1:0:1859:A:OP2	2.14	0.47
1:0:192:G:H4'	1:0:193:A:O5'	2.15	0.47
1:0:28:A:O3'	1:0:460:U:O4	2.33	0.47
1:0:445:A:C2'	1:0:446:C:H5'	2.45	0.47
1:0:70:A:OP2	1:0:111:G:O5'	2.33	0.47
1:0:787:A:C2'	1:0:788:G:C8	2.97	0.47
2:9:88:C:H2'	2:9:89:G:O4'	2.15	0.47
1:0:1715:A:N3	1:0:1717:A:O4'	2.48	0.47
1:0:1930:C:C4	1:0:1931:G:N7	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2042:A:H3'	1:0:2042:A:C8	2.50	0.47
1:0:2094:C:C4	1:0:2103:G:H1'	2.50	0.47
1:0:2426:G:O2'	1:0:2427:A:P	2.73	0.47
1:0:2426:G:C6	1:0:2479:U:H2'	2.50	0.47
1:0:2660:C:O2'	1:0:2661:G:H5'	2.15	0.47
1:0:2713:A:O2'	1:0:2714:A:H5'	2.15	0.47
1:0:80:A:H2'	1:0:81:C:C6	2.49	0.47
2:9:24:U:H2'	2:9:25:G:O5'	2.14	0.47
1:0:1783:G:C6	1:0:1820:G:H1'	2.50	0.47
1:0:1793:A:H2'	1:0:1794:A:C8	2.50	0.47
1:0:1961:A:O2'	1:0:1962:C:H5'	2.15	0.47
1:0:2090:U:H2'	1:0:2091:C:H6	1.79	0.47
1:0:2169:A:H2'	1:0:2170:C:H5'	1.97	0.47
1:0:433:G:N2	1:0:434:C:H1'	2.30	0.47
1:0:1135:C:H2'	1:0:1136:G:H8	1.80	0.47
1:0:1263:G:O2'	1:0:1264:C:P	2.73	0.47
1:0:12:U:C2'	1:0:13:A:H5'	2.45	0.47
1:0:1323:G:H1'	1:0:1627:C:H5'	1.97	0.47
1:0:1792:C:H6	1:0:1792:C:O5'	1.97	0.47
1:0:1934:U:O2	1:0:1936:A:H8	1.98	0.47
1:0:201:G:C2	1:0:202:A:C4	3.03	0.47
1:0:2447:G:N2	1:0:2461:G:OP2	2.48	0.47
1:0:2791:C:C2	1:0:2806:G:N2	2.83	0.47
1:0:398:C:O2'	1:0:401:G:N2	2.47	0.47
1:0:612:G:C4'	1:0:613:A:H4'	2.46	0.47
1:0:712:A:H2'	1:0:713:G:O4'	2.15	0.47
1:0:763:A:H5''	1:0:1631:C:H42	1.80	0.47
1:0:940:G:C3'	1:0:941:U:C5'	2.76	0.47
2:9:42:U:O4	2:9:45:C:OP2	2.33	0.47
1:0:1519:G:H2'	1:0:1520:G:C8	2.50	0.46
1:0:1552:C:H2'	1:0:1553:G:O4'	2.15	0.46
1:0:1657:A:H2'	1:0:1658:A:O4'	2.16	0.46
1:0:1754:G:OP1	1:0:1754:G:H4'	2.14	0.46
1:0:2202:G:H3'	1:0:2203:G:H8	1.80	0.46
1:0:2204:A:H1'	1:0:2205:C:C5	2.50	0.46
1:0:2209:G:H2'	1:0:2210:C:H6	1.81	0.46
1:0:2395:C:C2'	1:0:2396:C:H5''	2.46	0.46
1:0:2687:G:H2'	1:0:2688:G:O4'	2.16	0.46
1:0:65:C:O2'	1:0:66:U:H5'	2.15	0.46
1:0:682:G:H4'	1:0:816:U:OP1	2.15	0.46
1:0:955:G:H5'	1:0:956:A:C5'	2.45	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:68:A:C2	2:9:110:U:C4	3.03	0.46
1:0:1362:A:O5'	1:0:1362:A:H8	1.98	0.46
1:0:167:A:H2'	1:0:168:A:O4'	2.14	0.46
1:0:1801:C:H1'	1:0:2207:G:O2'	2.14	0.46
1:0:192:G:C4'	1:0:193:A:H4'	2.44	0.46
1:0:2266:A:H62	1:0:2323:U:H1'	1.70	0.46
1:0:2449:G:O6	1:0:2455:A:H2	1.98	0.46
1:0:2607:C:H3'	1:0:2608:A:C5'	2.45	0.46
1:0:2618:A:C5	1:0:2619:G:H1'	2.50	0.46
1:0:537:C:C6	1:0:2759:U:H2'	2.50	0.46
1:0:2800:C:O5'	1:0:2800:C:H6	1.97	0.46
1:0:764:A:N3	1:0:764:A:C2'	2.78	0.46
1:0:889:C:O2'	1:0:890:U:H5'	2.16	0.46
2:9:45:C:H42	2:9:47:A:H62	1.63	0.46
1:0:1436:G:H8	1:0:1436:G:O5'	1.98	0.46
1:0:1523:A:O5'	1:0:1523:A:H8	1.98	0.46
1:0:1543:G:H2'	1:0:1544:A:O4'	2.14	0.46
1:0:1763:G:N2	1:0:1765:C:C5'	2.75	0.46
1:0:796:A:H2	1:0:1770:U:H5'	1.80	0.46
1:0:1783:G:H1'	1:0:1822:C:P	2.55	0.46
1:0:1980:A:O2'	1:0:1981:A:H5'	2.16	0.46
1:0:2319:G:H2'	1:0:2320:G:C8	2.51	0.46
1:0:2560:G:C2'	1:0:2560:G:N3	2.77	0.46
1:0:2630:C:O2'	1:0:2631:C:H5'	2.16	0.46
1:0:2841:U:O2'	1:0:2842:C:H5'	2.16	0.46
1:0:514:G:N3	1:0:514:G:C2'	2.78	0.46
1:0:813:A:O2'	1:0:815:A:C5'	2.59	0.46
1:0:1132:C:O2'	1:0:1133:G:H5'	2.16	0.46
1:0:1213:U:N3	1:0:1260:A:C2	2.84	0.46
1:0:2015:G:OP2	1:0:2433:G:O2'	2.32	0.46
1:0:2055:G:H2'	1:0:2056:C:O4'	2.15	0.46
1:0:2335:U:H2'	1:0:2336:G:O4'	2.16	0.46
1:0:2504:G:C2	1:0:2518:C:C2	3.04	0.46
1:0:2519:C:O2	1:0:2720:A:H2	1.98	0.46
1:0:2607:C:H3'	1:0:2608:A:H5'	1.97	0.46
1:0:2770:A:C5'	1:0:2867:G:H22	2.29	0.46
1:0:509:U:C2'	1:0:510:G:H5'	2.42	0.46
1:0:80:A:O2'	1:0:81:C:H5'	2.16	0.46
2:9:30:C:O5'	2:9:30:C:C6	2.64	0.46
2:9:5:C:H2'	2:9:6:C:O4'	2.15	0.46
1:0:117:A:H5'	1:0:118:U:O5'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1519:G:H2'	1:0:1520:G:H8	1.81	0.46
1:0:1538:A:O2'	1:0:1539:U:H5'	2.16	0.46
1:0:161:U:H5'	1:0:193:A:N1	2.31	0.46
1:0:1630:A:H8	1:0:1630:A:OP2	1.98	0.46
1:0:163:A:H2'	1:0:164:G:C8	2.42	0.46
1:0:1982:C:H5''	1:0:2703:C:O2'	2.15	0.46
1:0:2032:G:O2'	1:0:2033:C:H5'	2.15	0.46
1:0:2773:G:H3'	1:0:2774:U:H5''	1.97	0.46
1:0:431:G:H2'	1:0:432:C:C6	2.50	0.46
1:0:488:A:H2'	1:0:489:A:C8	2.51	0.46
1:0:513:A:C4	1:0:515:A:N7	2.83	0.46
1:0:774:A:H3'	1:0:774:A:H8	1.80	0.46
1:0:8:A:H2'	1:0:9:U:C6	2.50	0.46
1:0:1025:A:O2'	1:0:1026:U:H5'	2.16	0.46
1:0:1039:A:N6	1:0:1136:G:H2'	2.31	0.46
1:0:1363:C:H2'	1:0:1364:C:C6	2.51	0.46
1:0:15:G:C2'	1:0:16:G:H5'	2.46	0.46
1:0:174:A:H4'	1:0:2052:G:OP2	2.16	0.46
1:0:1955:G:H2'	1:0:1956:G:H5'	1.97	0.46
1:0:2219:U:O2'	1:0:2220:A:H5'	2.15	0.46
1:0:2327:U:H2'	1:0:2328:G:C8	2.51	0.46
1:0:2345:A:H2'	1:0:2346:G:H5'	1.97	0.46
1:0:2426:G:O2'	1:0:2427:A:OP2	2.27	0.46
1:0:2474:G:O5'	1:0:2474:G:H8	1.99	0.46
1:0:2862:G:O2'	1:0:2863:U:H5'	2.15	0.46
1:0:295:C:N4	1:0:296:A:H62	2.14	0.46
1:0:603:C:H2'	1:0:604:U:C6	2.51	0.46
1:0:1004:A:C2'	1:0:1005:U:H5''	2.46	0.46
1:0:1253:C:H2'	1:0:1254:G:C5'	2.46	0.46
1:0:1572:C:H2'	1:0:1573:G:C5'	2.46	0.46
1:0:1664:G:H4'	1:0:1665:C:OP1	2.16	0.46
1:0:197:G:H2'	1:0:440:U:O4	2.14	0.46
1:0:2136:G:H2'	1:0:2137:G:C8	2.51	0.46
1:0:2324:G:C4'	1:0:2326:C:H5''	2.43	0.46
1:0:2377:U:H2'	1:0:2378:G:H8	1.81	0.46
1:0:239:A:H4'	1:0:620:G:C5'	2.43	0.46
1:0:2610:G:H5'	1:0:2866:A:H4'	1.97	0.46
2:9:23:G:H2'	2:9:24:U:C6	2.51	0.46
2:9:51:G:O2'	2:9:52:G:H5'	2.15	0.46
1:0:1548:U:H2'	1:0:1549:C:C6	2.50	0.46
1:0:1554:G:H2'	1:0:1555:A:O4'	2.16	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:763:A:C5'	1:0:1631:C:N4	2.78	0.46
1:0:1750:A:C8	1:0:2675:U:H1'	2.50	0.46
1:0:2170:C:H2'	1:0:2171:U:O4'	2.16	0.46
1:0:727:U:C2'	1:0:728:G:H5''	2.40	0.46
1:0:814:G:H3'	1:0:815:A:C5'	2.46	0.46
1:0:843:G:H5'	1:0:956:A:C1'	2.46	0.46
1:0:1141:U:O2'	1:0:1142:G:OP1	2.26	0.46
1:0:1801:C:H1'	1:0:2208:U:H5'	1.98	0.46
1:0:2281:C:O5'	1:0:2281:C:H6	1.99	0.46
1:0:2454:C:H5''	1:0:2455:A:OP2	2.16	0.46
1:0:1645:U:O2	1:0:2677:U:H4'	2.16	0.46
1:0:2813:G:O2'	1:0:2814:G:H5'	2.15	0.46
1:0:224:G:H4'	1:0:399:G:C5	2.51	0.46
1:0:1239:A:O5'	1:0:1239:A:H8	1.99	0.46
1:0:1278:A:O2'	1:0:1279:G:P	2.74	0.46
1:0:1350:G:H2'	1:0:1351:G:H8	1.81	0.46
1:0:1666:G:H2'	1:0:1667:A:C8	2.51	0.46
1:0:1721:G:O2'	1:0:1722:G:H5'	2.15	0.46
1:0:1764:A:H62	1:0:1821:A:H1'	1.81	0.46
1:0:1802:A:H2'	1:0:1803:G:O4'	2.16	0.46
1:0:1872:A:H2'	1:0:1873:A:C8	2.50	0.46
1:0:2803:C:C2'	1:0:2804:G:H5'	2.46	0.46
1:0:2876:C:H2'	1:0:2877:A:O4'	2.16	0.46
1:0:336:A:H2'	1:0:337:G:O4'	2.15	0.46
1:0:393:U:O2'	1:0:394:U:H5'	2.16	0.46
1:0:421:G:O2'	1:0:422:C:H5'	2.16	0.46
1:0:750:C:O2'	1:0:751:G:H5'	2.15	0.46
1:0:83:A:H5''	1:0:84:G:OP1	2.16	0.46
1:0:931:G:H8	1:0:931:G:O5'	1.98	0.46
2:9:94:G:H2'	2:9:94:G:N3	2.30	0.46
1:0:1368:G:N2	1:0:1390:G:H1'	2.31	0.45
1:0:1643:A:H1'	1:0:1657:A:C2	2.51	0.45
1:0:1683:G:H2'	1:0:1684:G:C5'	2.46	0.45
1:0:1672:A:N1	1:0:2032:G:H5''	2.31	0.45
1:0:2783:U:OP1	1:0:2783:U:O4'	2.34	0.45
1:0:2814:G:O2'	1:0:2815:C:H5'	2.15	0.45
1:0:2841:U:O2'	1:0:2842:C:C5'	2.64	0.45
1:0:825:C:O2'	1:0:826:U:H5'	2.16	0.45
1:0:1038:U:H2'	1:0:1039:A:C8	2.50	0.45
1:0:1223:G:O2'	1:0:1224:A:OP2	2.31	0.45
1:0:1337:G:H1'	1:0:1632:A:N6	2.31	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1452:U:O2'	1:0:1453:A:H5'	2.16	0.45
1:0:1636:G:H2'	1:0:1637:U:C6	2.52	0.45
1:0:1721:G:H2'	1:0:1722:G:O4'	2.16	0.45
1:0:2015:G:O2'	1:0:2016:A:OP1	2.31	0.45
1:0:1872:A:H1'	1:0:2070:G:H5'	1.97	0.45
1:0:2164:G:H2'	1:0:2165:A:C8	2.45	0.45
1:0:2455:A:C2'	1:0:2456:U:H5'	2.46	0.45
1:0:1038:U:C4	1:0:2467:A:H5'	2.51	0.45
1:0:322:A:H2'	1:0:322:A:N3	2.31	0.45
1:0:651:C:C3'	1:0:652:C:C5'	2.93	0.45
1:0:770:U:C2'	1:0:771:C:H5'	2.45	0.45
1:0:835:U:H2'	1:0:836:G:C8	2.51	0.45
1:0:1685:A:H2'	1:0:1686:A:OP2	2.16	0.45
1:0:1685:A:H2	1:0:1687:C:C2	2.33	0.45
1:0:1740:G:O2'	1:0:1741:G:H5'	2.16	0.45
1:0:1870:U:O5'	1:0:1870:U:H6	1.99	0.45
1:0:2093:G:H2'	1:0:2094:C:H6	1.81	0.45
1:0:218:A:H5'	1:0:220:U:H1'	1.99	0.45
1:0:2657:G:O2'	1:0:2658:A:H5'	2.16	0.45
1:0:2748:C:H2'	1:0:2749:A:O4'	2.17	0.45
2:9:112:A:H2'	2:9:113:G:C8	2.51	0.45
2:9:92:G:H2'	2:9:93:G:C5'	2.39	0.45
1:0:1066:G:H3'	1:0:1067:G:C5'	2.46	0.45
1:0:1343:C:O2'	1:0:1344:C:H5'	2.16	0.45
1:0:1383:C:O2'	1:0:1384:G:H5'	2.16	0.45
1:0:1981:A:H4'	1:0:2704:U:O2'	2.16	0.45
1:0:2094:C:N4	1:0:2103:G:N3	2.65	0.45
1:0:2306:A:H2'	1:0:2307:A:C8	2.52	0.45
1:0:2343:C:H2'	1:0:2344:G:O4'	2.16	0.45
1:0:2032:G:N2	1:0:2599:U:C2	2.84	0.45
1:0:674:U:H2'	1:0:675:C:C6	2.52	0.45
1:0:1398:G:O2'	1:0:1399:C:H5'	2.17	0.45
1:0:1884:A:O2'	1:0:1885:C:H5'	2.17	0.45
1:0:1927:U:H2'	1:0:1927:U:O2	2.16	0.45
1:0:2354:G:N2	1:0:2357:A:OP2	2.46	0.45
1:0:2392:G:H2'	1:0:2393:G:O4'	2.17	0.45
1:0:2515:G:H2'	1:0:2516:U:C6	2.52	0.45
1:0:2625:U:H6	1:0:2625:U:O5'	2.00	0.45
1:0:2687:G:O2'	1:0:2688:G:H5'	2.16	0.45
1:0:2790:C:H2'	1:0:2791:C:C6	2.51	0.45
1:0:2844:G:C2'	1:0:2845:C:H5'	2.46	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:4:C:H2'	1:0:5:A:C8	2.52	0.45
1:0:608:G:H2'	1:0:609:U:H6	1.79	0.45
1:0:952:A:H2'	1:0:953:G:O4'	2.16	0.45
1:0:1087:C:C2'	1:0:1088:A:H5'	2.47	0.45
1:0:1090:C:H2'	1:0:1091:C:O4'	2.17	0.45
1:0:1135:C:H2'	1:0:1136:G:C8	2.52	0.45
1:0:1982:C:H5''	1:0:2703:C:HO2'	1.80	0.45
1:0:2245:A:H2'	1:0:2246:A:OP2	2.17	0.45
1:0:839:U:H5''	1:0:2408:G:OP2	2.17	0.45
1:0:3:U:H6	1:0:3:U:O5'	1.99	0.45
1:0:41:G:H2'	1:0:42:G:C8	2.52	0.45
1:0:538:A:C2'	1:0:539:A:H5''	2.46	0.45
1:0:689:A:C2'	1:0:690:A:H5'	2.47	0.45
1:0:1288:A:H2'	1:0:1289:A:O4'	2.17	0.45
1:0:1621:C:H4'	1:0:1626:A:N6	2.29	0.45
1:0:1672:A:C2	1:0:1673:C:H1'	2.51	0.45
1:0:2225:G:H2'	1:0:2226:A:C8	2.48	0.45
1:0:2509:A:C2'	1:0:2510:A:H5''	2.34	0.45
1:0:2727:G:H2'	1:0:2728:A:H5''	1.98	0.45
1:0:305:A:H2'	1:0:306:G:O4'	2.16	0.45
1:0:755:C:H2'	1:0:756:C:C6	2.49	0.45
1:0:768:U:H5'	1:0:1285:A:N1	2.32	0.45
2:9:114:C:O5'	2:9:114:C:C6	2.67	0.45
1:0:1184:G:C2'	1:0:1185:C:H5''	2.46	0.45
1:0:1622:G:H5''	1:0:1624:A:O4'	2.17	0.45
1:0:1775:A:H5''	1:0:1776:A:OP1	2.17	0.45
1:0:1972:G:O2'	1:0:1973:C:H5'	2.16	0.45
1:0:2473:G:N2	1:0:2474:G:C4	2.85	0.45
1:0:2535:C:C2'	1:0:2536:G:H5'	2.46	0.45
1:0:2522:G:C4	1:0:2745:A:H2'	2.52	0.45
1:0:456:C:O2'	1:0:457:C:H5'	2.15	0.45
1:0:929:A:C3'	1:0:930:A:H5''	2.35	0.45
1:0:1440:G:C6	1:0:1441:A:N7	2.84	0.45
1:0:1639:U:O2'	1:0:1640:C:H5'	2.17	0.45
1:0:2205:C:C2'	1:0:2206:C:H5'	2.47	0.45
1:0:2724:G:O2'	1:0:2725:C:H5'	2.17	0.45
1:0:200:A:N6	1:0:435:A:N1	2.65	0.45
2:9:104:A:C8	2:9:105:G:N7	2.85	0.45
1:0:1496:G:H1	1:0:1527:G:H1	1.65	0.45
1:0:1662:G:H5''	1:0:1663:C:O4'	2.16	0.45
1:0:1713:G:N7	1:0:1714:A:N7	2.65	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:579:G:H2'	1:0:2013:A:N7	2.31	0.45
1:0:1181:C:H6	1:0:1181:C:O5'	2.00	0.44
1:0:1625:A:H3'	1:0:1625:A:N3	2.32	0.44
1:0:1703:C:H2'	1:0:1704:G:O4'	2.17	0.44
1:0:1756:C:H2'	1:0:1757:C:H6	1.82	0.44
1:0:1854:G:O2'	1:0:1855:G:H5'	2.17	0.44
1:0:238:G:O4'	1:0:618:A:H2	1.99	0.44
1:0:2493:U:O2	1:0:2549:G:O6	2.35	0.44
1:0:2622:G:O2'	1:0:2623:A:H5'	2.16	0.44
1:0:562:G:H2'	1:0:563:U:O4'	2.17	0.44
1:0:587:A:H8	1:0:587:A:OP2	2.00	0.44
1:0:75:C:H2'	1:0:76:C:C5'	2.32	0.44
1:0:1072:U:O5'	1:0:1072:U:H6	1.99	0.44
1:0:1077:U:H6	1:0:1077:U:O5'	2.00	0.44
1:0:1540:C:H2'	1:0:1541:G:H8	1.83	0.44
1:0:1300:A:H2	1:0:1666:G:H4'	1.81	0.44
1:0:580:A:C8	1:0:2013:A:N6	2.85	0.44
1:0:2311:U:O2'	1:0:2312:A:H8	2.00	0.44
1:0:2404:A:O2'	1:0:2405:A:OP2	2.27	0.44
1:0:1470:G:N2	1:0:2684:A:H1'	2.33	0.44
1:0:2726:U:H3'	1:0:2727:G:H8	1.82	0.44
1:0:367:G:C3'	1:0:368:A:H5''	2.46	0.44
1:0:831:G:H5'	1:0:852:U:OP1	2.17	0.44
1:0:830:C:O2'	1:0:852:U:H5''	2.16	0.44
1:0:991:A:O5'	1:0:991:A:H8	2.00	0.44
1:0:1449:C:C2'	1:0:1450:G:H5'	2.47	0.44
1:0:1714:A:H5'	1:0:1715:A:O5'	2.18	0.44
1:0:2042:A:C2	1:0:2482:A:N7	2.85	0.44
1:0:2638:G:H8	1:0:2638:G:O5'	2.00	0.44
1:0:573:C:O2'	1:0:574:C:H5'	2.17	0.44
1:0:65:C:H2'	1:0:66:U:O4'	2.17	0.44
1:0:689:A:H8	1:0:2052:G:N2	2.08	0.44
1:0:704:G:O2'	1:0:705:C:H5'	2.17	0.44
1:0:81:C:H4'	1:0:307:C:H5'	1.99	0.44
1:0:967:G:N3	1:0:970:A:C8	2.86	0.44
2:9:73:C:O2	2:9:109:G:C2	2.70	0.44
2:9:33:C:H2'	2:9:34:C:C6	2.52	0.44
2:9:64:C:N4	2:9:65:A:C6	2.86	0.44
1:0:1300:A:C2	1:0:1301:U:C2	3.06	0.44
1:0:1322:G:H21	1:0:1627:C:H5'	1.83	0.44
1:0:1346:C:P	1:0:1346:C:C6	3.05	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1558:C:H2'	1:0:1559:G:O4'	2.18	0.44
1:0:158:A:C2	1:0:447:U:H4'	2.51	0.44
1:0:1858:C:H2'	1:0:1859:A:C8	2.49	0.44
1:0:198:A:O2'	1:0:199:A:P	2.76	0.44
1:0:2093:G:H2'	1:0:2094:C:C6	2.53	0.44
1:0:2484:G:C2'	1:0:2485:U:H5''	2.47	0.44
1:0:2585:C:O2'	1:0:2586:G:H5'	2.17	0.44
1:0:450:C:H2'	1:0:451:A:H8	1.82	0.44
1:0:611:C:O2'	1:0:614:G:H5''	2.18	0.44
1:0:749:C:H2'	1:0:750:C:H6	1.81	0.44
1:0:932:G:H2'	1:0:933:G:H8	1.82	0.44
1:0:1190:C:H2'	1:0:1191:G:C8	2.53	0.44
1:0:1388:C:O2'	1:0:1389:C:H5'	2.18	0.44
1:0:1556:A:H2'	1:0:1557:G:C8	2.51	0.44
1:0:181:A:H4'	1:0:182:G:OP1	2.16	0.44
1:0:1904:G:O2'	1:0:1905:G:H5'	2.17	0.44
1:0:192:G:O2'	1:0:193:A:C5'	2.66	0.44
1:0:2033:C:H2'	1:0:2034:A:O4'	2.18	0.44
1:0:204:A:N1	1:0:2386:G:H1'	2.33	0.44
1:0:2496:C:C4	1:0:2521:A:C5	3.06	0.44
1:0:2594:U:H5'	1:0:2594:U:C6	2.53	0.44
1:0:2858:A:H3'	1:0:2859:U:H5'	1.99	0.44
1:0:491:A:H2	1:0:509:U:O2	2.00	0.44
1:0:556:A:C2'	1:0:557:U:H5'	2.38	0.44
1:0:583:C:O2'	1:0:584:A:P	2.76	0.44
1:0:675:C:H2'	1:0:676:G:H8	1.83	0.44
1:0:717:G:H1'	1:0:740:A:H61	1.82	0.44
2:9:61:A:O5'	2:9:61:A:C8	2.60	0.44
1:0:1034:U:H2'	1:0:1035:G:O4'	2.17	0.44
1:0:1410:U:HO2'	1:0:1411:C:P	2.41	0.44
1:0:1680:U:O2'	1:0:1681:A:C5'	2.64	0.44
1:0:1714:A:H5''	1:0:1715:A:C8	2.53	0.44
1:0:1826:U:O2	1:0:1953:A:N7	2.51	0.44
1:0:2702:G:C5	1:0:2703:C:C4	3.05	0.44
1:0:879:A:H2'	1:0:879:A:N3	2.33	0.44
2:9:104:A:C4	2:9:105:G:C8	3.06	0.44
1:0:1123:G:O2'	1:0:1124:U:H5'	2.18	0.44
1:0:1255:A:H2'	1:0:1256:C:C6	2.53	0.44
1:0:1300:A:C2	1:0:1666:G:C4'	3.01	0.44
1:0:1686:A:H2'	1:0:1687:C:H5'	1.99	0.44
1:0:1734:C:C5	1:0:1735:G:H1'	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1947:G:H5''	1:0:1948:C:OP1	2.18	0.44
1:0:2009:U:O5'	1:0:2009:U:H6	2.00	0.44
1:0:2264:C:H2'	1:0:2265:A:H5'	2.00	0.44
1:0:1937:G:H21	1:0:2530:C:H5''	1.82	0.44
1:0:78:C:H2'	1:0:79:G:H5'	2.00	0.44
1:0:1198:C:O5'	1:0:1199:U:H4'	2.18	0.44
1:0:1327:C:OP1	1:0:1345:G:H5'	2.18	0.44
1:0:1411:C:H2'	1:0:1412:C:O4'	2.18	0.44
1:0:1572:C:H2'	1:0:1573:G:H5'	1.99	0.44
1:0:1920:A:N6	1:0:1923:U:H6	2.16	0.44
1:0:204:A:C6	1:0:2386:G:H1'	2.53	0.44
1:0:2064:U:H2'	1:0:2065:A:H8	1.83	0.44
1:0:2070:G:H8	1:0:2070:G:O5'	2.00	0.44
1:0:2495:G:C2'	1:0:2496:C:O4'	2.65	0.44
1:0:2680:U:H3'	1:0:2681:A:H5'	2.00	0.44
1:0:483:A:H2'	1:0:484:G:C5'	2.46	0.44
1:0:701:U:H4'	1:0:1771:A:C2	2.53	0.44
1:0:1112:U:H2'	1:0:1113:C:C6	2.53	0.44
1:0:1365:U:H1'	1:0:1586:A:H2	1.83	0.44
1:0:1827:G:C8	1:0:1952:A:C8	3.06	0.44
1:0:1922:U:O2'	1:0:2571:G:H1'	2.18	0.44
1:0:2783:U:H2'	1:0:2784:A:C4'	2.48	0.44
1:0:357:A:H2'	1:0:357:A:N3	2.31	0.44
1:0:832:A:H2	1:0:954:U:H1'	1.81	0.44
1:0:676:G:O2'	1:0:951:G:H4'	2.18	0.44
1:0:1234:C:H2'	1:0:1235:C:H6	1.83	0.43
1:0:1370:U:O2'	1:0:1371:G:H5'	2.18	0.43
1:0:1437:A:C2'	1:0:1438:G:H5'	2.48	0.43
1:0:1440:G:C3'	1:0:1441:A:C5'	2.96	0.43
1:0:146:C:N4	1:0:152:G:H1	2.16	0.43
1:0:2241:U:H2'	1:0:2242:C:C6	2.53	0.43
1:0:2408:G:H3'	1:0:2409:A:C5'	2.48	0.43
1:0:533:C:H2'	1:0:534:U:O4'	2.18	0.43
1:0:83:A:C2	1:0:98:U:H1'	2.52	0.43
1:0:1166:A:C2'	1:0:1167:A:H5''	2.49	0.43
1:0:1707:A:C2'	1:0:1708:C:H5'	2.48	0.43
1:0:1920:A:C6	1:0:1922:U:C5	3.06	0.43
1:0:2171:U:H6	1:0:2171:U:O5'	1.99	0.43
1:0:2279:G:H2'	1:0:2280:A:C8	2.42	0.43
1:0:2438:A:N6	1:0:2473:G:C6	2.87	0.43
1:0:2459:C:H2'	1:0:2460:G:H5'	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:559:C:H6	1:0:559:C:O5'	2.00	0.43
1:0:595:A:H62	1:0:1264:C:H42	1.65	0.43
1:0:929:A:C2	2:9:81:C:O2	2.71	0.43
1:0:1010:U:C2	1:0:1168:G:N2	2.87	0.43
1:0:1053:G:O5'	1:0:1053:G:H8	2.01	0.43
1:0:1226:A:C1'	1:0:1250:A:H2	2.31	0.43
1:0:1257:U:H2'	1:0:1258:G:H8	1.81	0.43
1:0:1268:U:H5'	1:0:1269:G:H5''	1.99	0.43
1:0:1697:U:O2	1:0:1755:G:H4'	2.18	0.43
1:0:1751:A:H2'	1:0:1752:U:O4'	2.18	0.43
1:0:1778:U:O2'	1:0:1779:C:H5'	2.18	0.43
1:0:1947:G:P	1:0:1947:G:H8	2.41	0.43
1:0:2302:G:C2'	1:0:2303:C:H5'	2.48	0.43
1:0:2824:C:C2'	1:0:2825:A:OP2	2.66	0.43
1:0:926:C:H2'	1:0:927:C:H5'	2.00	0.43
1:0:940:G:N7	1:0:941:U:C6	2.87	0.43
1:0:947:C:H2'	1:0:948:C:O4'	2.18	0.43
1:0:1001:A:N3	1:0:1167:A:H2	2.17	0.43
1:0:1229:C:H2'	1:0:1230:C:C6	2.52	0.43
1:0:1234:C:H2'	1:0:1235:C:C6	2.54	0.43
1:0:1781:C:H2'	1:0:1782:A:N7	2.33	0.43
1:0:1859:A:H2'	1:0:1860:A:C8	2.53	0.43
1:0:1915:A:N1	1:0:1956:G:H1'	2.33	0.43
1:0:2033:C:C4	1:0:2034:A:C6	3.05	0.43
1:0:2526:U:C5	1:0:2545:A:N7	2.87	0.43
1:0:329:C:O2'	1:0:330:C:H5'	2.18	0.43
1:0:567:G:O2'	1:0:568:G:H5'	2.19	0.43
1:0:90:G:H3'	1:0:91:A:H5'	2.00	0.43
2:9:48:A:C5	2:9:49:C:C5	3.06	0.43
1:0:1164:C:O2'	1:0:1165:G:H5'	2.19	0.43
1:0:1457:A:H2'	1:0:1458:A:O4'	2.19	0.43
1:0:220:U:H2'	1:0:221:A:H8	1.84	0.43
1:0:2588:U:H5'	1:0:2589:C:OP2	2.19	0.43
1:0:2621:G:O2'	1:0:2622:G:H5'	2.19	0.43
1:0:2813:G:H2'	1:0:2814:G:H5'	2.00	0.43
1:0:2769:C:O2'	1:0:2866:A:N1	2.44	0.43
1:0:31:C:H2'	1:0:32:C:H6	1.83	0.43
1:0:337:G:H2'	1:0:338:G:C8	2.54	0.43
1:0:58:C:H1'	1:0:72:A:C8	2.54	0.43
2:9:88:C:H2'	2:9:89:G:C8	2.53	0.43
1:0:1328:C:O2'	1:0:1329:U:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1487:C:H6	1:0:1487:C:O5'	2.02	0.43
1:0:1809:G:O5'	1:0:1809:G:H8	2.01	0.43
1:0:1906:U:H2'	1:0:1907:C:C6	2.54	0.43
1:0:1920:A:C2	1:0:1922:U:H5	2.37	0.43
1:0:1922:U:H1'	1:0:2570:C:HO2'	1.81	0.43
1:0:1947:G:H2'	1:0:1950:C:OP1	2.18	0.43
1:0:2093:G:O5'	1:0:2093:G:H8	2.02	0.43
1:0:994:A:N7	1:0:995:A:N3	2.66	0.43
2:9:59:A:H2'	2:9:60:A:C5'	2.48	0.43
1:0:1243:G:C6	1:0:1244:U:N3	2.86	0.43
1:0:1429:A:P	1:0:1429:A:H8	2.41	0.43
1:0:1471:G:H1	1:0:2682:C:N4	2.08	0.43
1:0:1558:C:O2'	1:0:1559:G:H5'	2.18	0.43
1:0:1704:G:O5'	1:0:1704:G:H8	2.01	0.43
1:0:1759:A:C6	1:0:1968:G:C6	3.07	0.43
1:0:1855:G:H4'	1:0:2390:A:H4'	2.00	0.43
1:0:2321:C:O2'	1:0:2353:G:H5''	2.17	0.43
1:0:2701:A:H2'	1:0:2702:G:O4'	2.18	0.43
1:0:2809:A:N7	1:0:2854:G:N7	2.66	0.43
1:0:2820:C:H6	1:0:2820:C:O5'	2.01	0.43
1:0:658:G:H4'	1:0:2331:A:C5'	2.37	0.43
1:0:874:A:H2'	1:0:874:A:N3	2.34	0.43
1:0:1005:U:O2	1:0:1007:A:N7	2.51	0.43
1:0:12:U:O2'	1:0:13:A:H5'	2.19	0.43
1:0:1333:G:C6	1:0:1342:U:H5'	2.54	0.43
1:0:1840:A:H2'	1:0:1841:G:H5'	2.00	0.43
1:0:2044:G:C8	1:0:2480:C:H4'	2.53	0.43
1:0:2554:C:O5'	1:0:2554:C:H6	2.02	0.43
1:0:2770:A:H5'	1:0:2867:G:N1	2.33	0.43
1:0:2784:A:H3'	1:0:2785:A:H8	1.83	0.43
1:0:28:A:H5''	1:0:460:U:C4	2.54	0.43
1:0:636:G:H2'	1:0:637:G:C5'	2.49	0.43
1:0:788:G:N2	1:0:800:U:O3'	2.51	0.43
1:0:796:A:C2	1:0:1770:U:H5'	2.54	0.43
1:0:167:A:N6	1:0:812:G:O2'	2.39	0.43
1:0:1821:A:H5''	1:0:1822:C:H5	1.82	0.43
1:0:192:G:O2'	1:0:193:A:OP2	2.34	0.43
1:0:1975:G:HO2'	1:0:1976:U:P	2.41	0.43
1:0:201:G:H2'	1:0:202:A:C8	2.53	0.43
1:0:2124:C:O2'	1:0:2125:C:H5'	2.19	0.43
1:0:2315:A:HO2'	1:0:2364:C:H5''	1.83	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2619:G:C6	1:0:2755:A:C2	3.07	0.43
1:0:2826:C:N4	1:0:2827:G:C6	2.87	0.43
1:0:531:G:O2'	1:0:532:A:H5'	2.19	0.43
1:0:538:A:C3'	1:0:539:A:H5''	2.49	0.43
1:0:542:A:C8	1:0:542:A:H3'	2.54	0.43
1:0:570:G:H2'	1:0:571:U:H5''	2.01	0.43
1:0:632:A:H3'	1:0:632:A:N3	2.33	0.43
1:0:73:A:H4'	1:0:74:G:H1'	2.00	0.43
1:0:928:G:H2'	1:0:929:A:O5'	2.19	0.43
1:0:1226:A:O2'	1:0:1227:A:H5'	2.19	0.43
1:0:1300:A:H61	1:0:1992:G:N2	2.17	0.43
1:0:1800:A:H5''	1:0:1801:C:OP1	2.18	0.43
1:0:1834:G:N2	1:0:1835:C:H1'	2.33	0.43
1:0:2097:A:H5'	1:0:2105:U:OP1	2.19	0.43
1:0:2215:C:H2'	1:0:2216:G:O4'	2.19	0.43
1:0:2422:C:C2	1:0:2423:G:C8	3.07	0.43
1:0:502:A:C2'	1:0:503:G:H5'	2.49	0.43
2:9:108:G:H8	2:9:108:G:O5'	2.01	0.43
1:0:1105:U:O2	1:0:1107:A:N7	2.51	0.42
1:0:128:C:H2'	1:0:129:A:C5'	2.49	0.42
1:0:1385:C:H2'	1:0:1386:A:O4'	2.18	0.42
1:0:16:G:O2'	1:0:17:G:H5'	2.19	0.42
1:0:701:U:H4'	1:0:1771:A:H2	1.83	0.42
1:0:2019:C:H2'	1:0:2020:G:O5'	2.19	0.42
1:0:426:C:H6	1:0:426:C:O5'	2.00	0.42
1:0:475:U:C4	1:0:476:G:C6	3.07	0.42
2:9:72:C:O2'	2:9:73:C:H5'	2.19	0.42
2:9:7:C:H2'	2:9:8:C:C6	2.54	0.42
1:0:1447:U:H1'	1:0:1577:G:H22	1.82	0.42
1:0:1487:C:H2'	1:0:1488:G:C8	2.53	0.42
1:0:1353:A:C2	1:0:1618:U:C4	3.08	0.42
1:0:781:G:H5'	1:0:1638:G:C4'	2.49	0.42
1:0:1790:G:O3'	1:0:1791:C:H6	2.02	0.42
1:0:161:U:H5'	1:0:193:A:C2	2.54	0.42
1:0:2030:U:O2'	1:0:2031:A:H5'	2.19	0.42
1:0:2163:U:H2'	1:0:2164:G:H8	1.83	0.42
1:0:2268:G:H5''	1:0:2363:G:HO2'	1.82	0.42
1:0:2270:U:H6	1:0:2270:U:O5'	2.02	0.42
1:0:2273:C:O5'	1:0:2273:C:H6	2.02	0.42
1:0:689:A:H1'	1:0:2422:C:O4'	2.19	0.42
1:0:2597:G:O2'	1:0:2598:C:H5'	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2856:U:O5'	1:0:2856:U:H6	2.01	0.42
1:0:421:G:H2'	1:0:422:C:C6	2.54	0.42
1:0:691:C:O2'	1:0:692:C:H5'	2.19	0.42
1:0:697:G:O2'	1:0:801:A:N6	2.53	0.42
1:0:774:A:C8	1:0:774:A:H3'	2.53	0.42
1:0:935:C:O2'	1:0:936:A:H5'	2.18	0.42
2:9:108:G:H2'	2:9:109:G:C8	2.55	0.42
1:0:113:C:N4	1:0:114:C:H41	2.17	0.42
1:0:1212:U:H2'	1:0:1213:U:H6	1.83	0.42
1:0:1477:C:H1'	1:0:2681:A:C2	2.54	0.42
1:0:1548:U:C4	1:0:1549:C:N4	2.87	0.42
1:0:1579:G:H2'	1:0:1580:C:H6	1.83	0.42
1:0:1625:A:O2'	1:0:1632:A:H4'	2.20	0.42
1:0:1820:G:H4'	1:0:1821:A:OP1	2.19	0.42
1:0:2133:G:H2'	1:0:2134:U:C6	2.54	0.42
1:0:2478:C:H2'	1:0:2479:U:H5'	2.01	0.42
1:0:2650:G:O2'	1:0:2651:U:H5'	2.18	0.42
1:0:2695:C:H2'	1:0:2696:A:H8	1.85	0.42
1:0:2728:A:C2	1:0:2736:U:H1'	2.53	0.42
1:0:358:C:H6	1:0:358:C:O5'	2.01	0.42
1:0:448:C:H2'	1:0:449:C:H5'	2.00	0.42
1:0:54:G:N2	1:0:114:C:C2	2.88	0.42
1:0:68:C:C2	1:0:72:A:N3	2.87	0.42
1:0:999:A:HO2'	1:0:1166:A:H2	1.63	0.42
1:0:1167:A:H5'	1:0:1168:G:N7	2.34	0.42
1:0:1219:C:O5'	1:0:1219:C:H6	2.01	0.42
1:0:1371:G:O2'	1:0:1386:A:N6	2.52	0.42
1:0:1422:C:H2'	1:0:1423:A:C8	2.54	0.42
1:0:1435:G:N2	1:0:1512:A:C2	2.88	0.42
1:0:1482:U:H2'	1:0:1483:G:C8	2.54	0.42
1:0:1618:U:H2'	1:0:1619:A:H5'	2.01	0.42
1:0:1643:A:H2'	1:0:1644:G:H8	1.84	0.42
1:0:1903:C:H2'	1:0:1904:G:C8	2.54	0.42
1:0:1924:C:H2'	1:0:1925:C:O4'	2.19	0.42
1:0:1017:C:O2'	1:0:1018:C:H5'	2.18	0.42
1:0:1323:G:C1'	1:0:1627:C:H5''	2.49	0.42
1:0:1821:A:H3'	1:0:1822:C:C6	2.50	0.42
1:0:1933:G:O5'	1:0:1933:G:C8	2.69	0.42
1:0:2066:G:H2'	1:0:2067:U:O4'	2.20	0.42
1:0:873:U:N3	1:0:2246:A:H5''	2.35	0.42
1:0:2820:C:O2'	1:0:2821:G:H5'	2.18	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:160:C:O2'	1:0:445:A:N3	2.49	0.42
1:0:788:G:H5'	1:0:790:A:N3	2.35	0.42
2:9:107:C:C6	2:9:107:C:C3'	3.03	0.42
1:0:1155:G:H2'	1:0:1156:U:O4'	2.20	0.42
1:0:587:A:H5''	1:0:1268:U:O3'	2.19	0.42
1:0:1478:U:H2'	1:0:1479:G:C8	2.55	0.42
1:0:2265:A:H5''	1:0:2266:A:O4'	2.20	0.42
1:0:2347:C:N4	1:0:2361:G:H1	2.18	0.42
1:0:2468:G:H2'	1:0:2469:G:O4'	2.20	0.42
1:0:2642:G:H2'	1:0:2643:G:C5'	2.49	0.42
1:0:483:A:C2'	1:0:484:G:H5'	2.47	0.42
2:9:104:A:C8	2:9:105:G:C8	3.07	0.42
8:F:6:LEU:CA	8:F:14:THR:CA	2.98	0.42
1:0:1004:A:C2'	1:0:1005:U:C5'	2.97	0.42
1:0:1087:C:H2'	1:0:1088:A:H5'	2.01	0.42
1:0:1121:G:O5'	1:0:1121:G:H8	2.02	0.42
1:0:121:G:O3'	1:0:1389:C:H4'	2.20	0.42
1:0:1276:U:H2'	1:0:1277:G:O4'	2.19	0.42
1:0:1310:C:OP1	1:0:2689:C:H4'	2.19	0.42
1:0:1322:G:N2	1:0:1627:C:H5'	2.34	0.42
1:0:1322:G:O2'	1:0:1323:G:H5'	2.19	0.42
1:0:1436:G:H2'	1:0:1437:A:H8	1.82	0.42
1:0:1957:C:O2'	1:0:1958:G:H5'	2.19	0.42
1:0:2007:G:H2'	1:0:2008:C:C6	2.54	0.42
1:0:2106:G:H2'	1:0:2107:G:C8	2.55	0.42
1:0:2119:A:H2'	1:0:2120:C:H6	1.83	0.42
1:0:225:G:N7	1:0:227:G:N3	2.68	0.42
1:0:2636:A:N6	1:0:2643:G:H21	2.02	0.42
1:0:2695:C:H2'	1:0:2696:A:C8	2.54	0.42
1:0:2714:A:H2'	1:0:2715:C:O4'	2.19	0.42
1:0:542:A:C2'	1:0:543:G:H5'	2.50	0.42
1:0:56:C:H6	1:0:56:C:O5'	2.03	0.42
1:0:587:A:OP1	1:0:1268:U:O2'	2.30	0.42
1:0:597:U:N3	1:0:683:A:O2'	2.36	0.42
1:0:1136:G:C5	1:0:1137:A:N7	2.87	0.42
1:0:1239:A:O5'	1:0:1239:A:C8	2.73	0.42
1:0:1350:G:H2'	1:0:1351:G:C8	2.55	0.42
1:0:136:A:H8	1:0:136:A:O5'	2.03	0.42
1:0:1390:G:H8	1:0:1390:G:O5'	2.02	0.42
1:0:1764:A:C2	1:0:1960:A:N1	2.88	0.42
1:0:1806:G:C5	1:0:1807:A:N7	2.88	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2459:C:C2'	1:0:2460:G:H5'	2.50	0.42
1:0:2429:A:H5''	1:0:2476:A:C6	2.54	0.42
1:0:2534:U:H6	1:0:2534:U:O5'	2.02	0.42
1:0:365:U:O2'	1:0:366:U:H5'	2.20	0.42
1:0:369:C:O2'	1:0:370:U:H5'	2.19	0.42
1:0:460:U:H5'	1:0:461:A:OP2	2.20	0.42
1:0:541:C:HO2'	1:0:542:A:P	2.42	0.42
1:0:957:G:H2'	1:0:958:G:H8	1.85	0.42
1:0:1354:A:O2'	1:0:1355:A:OP1	2.31	0.42
1:0:1413:U:H2'	1:0:1414:G:C8	2.55	0.42
1:0:1545:G:O2'	1:0:1546:C:H5'	2.19	0.42
1:0:2011:U:O5'	1:0:2011:U:H6	2.02	0.42
1:0:2081:U:H2'	1:0:2082:C:C5'	2.26	0.42
1:0:221:A:O2'	1:0:222:G:H5'	2.19	0.42
1:0:2296:U:H3'	1:0:2297:G:H8	1.84	0.42
1:0:658:G:C4'	1:0:2331:A:H5'	2.40	0.42
1:0:2769:C:H5''	1:0:2770:A:C8	2.55	0.42
1:0:639:G:O2'	1:0:640:C:H5'	2.20	0.42
1:0:615:C:O2'	1:0:671:A:H4'	2.19	0.42
1:0:827:C:O2'	1:0:828:C:H5'	2.20	0.42
1:0:873:U:H2'	1:0:874:A:H5'	2.02	0.42
2:9:88:C:H2'	2:9:89:G:H8	1.84	0.42
1:0:1466:C:C2'	1:0:1467:U:O4'	2.66	0.42
1:0:1429:A:C6	1:0:1602:G:H5'	2.54	0.42
1:0:2069:U:H6	1:0:2069:U:O5'	2.03	0.42
1:0:2298:U:H4'	1:0:2299:A:C8	2.55	0.42
1:0:236:C:H2'	1:0:237:G:C8	2.49	0.42
1:0:2570:C:H2'	1:0:2571:G:C8	2.55	0.42
1:0:2799:C:H2'	1:0:2800:C:O4'	2.19	0.42
1:0:541:C:OP1	1:0:570:G:N1	2.53	0.42
1:0:777:A:N6	1:0:1766:U:N3	2.68	0.42
1:0:867:G:H2'	1:0:868:U:C6	2.55	0.42
1:0:911:A:O5'	1:0:911:A:H8	2.02	0.42
1:0:960:U:H2'	1:0:961:G:C8	2.54	0.42
2:9:42:U:H3'	2:9:43:G:C5'	2.50	0.42
1:0:1766:U:H2'	1:0:1767:G:O4'	2.20	0.41
1:0:1791:C:H42	1:0:1809:G:N2	2.15	0.41
1:0:2059:U:OP2	1:0:2217:G:N2	2.41	0.41
1:0:2321:C:H2'	1:0:2322:U:H5'	2.01	0.41
1:0:2409:A:O2'	1:0:2410:U:H5'	2.19	0.41
1:0:2034:A:N6	1:0:2593:A:C8	2.88	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2832:G:N2	1:0:2834:A:H3'	2.35	0.41
1:0:32:C:H2'	1:0:33:C:C6	2.55	0.41
1:0:393:U:H2'	1:0:394:U:C6	2.53	0.41
1:0:614:G:H2'	1:0:615:C:C6	2.48	0.41
1:0:853:C:H4'	1:0:1206:G:H4'	2.00	0.41
1:0:1168:G:H8	1:0:1168:G:O5'	2.04	0.41
1:0:1531:C:H6	1:0:1531:C:O5'	2.04	0.41
1:0:1619:A:N3	1:0:1619:A:O5'	2.52	0.41
1:0:2068:C:H2'	1:0:2069:U:C6	2.55	0.41
1:0:2214:G:C6	1:0:2215:C:C4	3.08	0.41
1:0:2362:G:C2'	1:0:2363:G:O5'	2.68	0.41
1:0:2407:G:H4'	1:0:2408:G:C4	2.56	0.41
1:0:2844:G:H2'	1:0:2845:C:H5'	2.02	0.41
1:0:321:A:C4	1:0:341:A:C6	3.07	0.41
1:0:393:U:H2'	1:0:394:U:O4'	2.19	0.41
1:0:610:G:C6	1:0:671:A:C2	3.08	0.41
1:0:689:A:H2'	1:0:690:A:H5'	2.02	0.41
1:0:1023:U:H1'	1:0:1154:A:N7	2.35	0.41
1:0:1174:G:H2'	1:0:1175:A:C8	2.55	0.41
1:0:594:G:C4	1:0:1264:C:N4	2.88	0.41
1:0:1678:G:O2'	1:0:1679:U:H5'	2.19	0.41
1:0:1920:A:C5	1:0:1922:U:C5	3.08	0.41
1:0:1923:U:H5'	1:0:1924:C:OP1	2.20	0.41
1:0:2002:A:H2'	1:0:2003:A:O5'	2.19	0.41
1:0:2173:G:O2'	1:0:2174:G:H5'	2.19	0.41
1:0:2592:U:O2'	1:0:2593:A:OP1	2.35	0.41
1:0:2705:A:C2'	1:0:2706:U:O5'	2.68	0.41
1:0:548:G:O2'	1:0:549:G:H5'	2.20	0.41
1:0:584:A:OP2	1:0:2038:C:C5	2.73	0.41
1:0:658:G:H1'	1:0:2330:G:C5'	2.51	0.41
1:0:962:C:C4	1:0:963:G:N7	2.89	0.41
1:0:981:C:H2'	1:0:982:C:C6	2.55	0.41
1:0:9:U:O2'	1:0:10:A:H5'	2.20	0.41
1:0:1252:C:H2'	1:0:1253:C:C5'	2.42	0.41
1:0:1256:C:H2'	1:0:1257:U:O4'	2.19	0.41
1:0:128:C:H2'	1:0:129:A:H5''	2.03	0.41
1:0:1543:G:H2'	1:0:1544:A:C5'	2.48	0.41
1:0:1641:C:H3'	1:0:1642:G:H8	1.84	0.41
1:0:1841:G:H8	1:0:1841:G:O5'	2.03	0.41
1:0:2391:A:H2'	1:0:2392:G:O4'	2.20	0.41
1:0:342:G:HO2'	1:0:343:A:P	2.44	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:485:G:O6	1:0:520:C:N4	2.54	0.41
1:0:528:G:O2'	1:0:529:U:H5'	2.21	0.41
1:0:605:G:H2'	1:0:606:A:H8	1.84	0.41
1:0:619:A:H2'	1:0:620:G:C8	2.55	0.41
1:0:67:G:C6	1:0:72:A:C2	3.08	0.41
1:0:76:C:H6	1:0:76:C:C5'	2.29	0.41
1:0:1166:A:H2'	1:0:1167:A:H5''	2.02	0.41
1:0:1312:G:H2'	1:0:1643:A:N6	2.35	0.41
1:0:1426:U:H2'	1:0:1427:G:O4'	2.21	0.41
1:0:1547:U:H2'	1:0:1548:U:H6	1.81	0.41
1:0:1612:U:H2'	1:0:1613:G:C8	2.55	0.41
1:0:1678:G:H2'	1:0:1679:U:O4'	2.20	0.41
1:0:1681:A:H8	1:0:1681:A:H5'	1.86	0.41
1:0:1941:C:O2'	1:0:1942:G:H5'	2.21	0.41
1:0:203:G:H4'	1:0:234:C:O2'	2.20	0.41
1:0:224:G:H4'	1:0:399:G:C6	2.56	0.41
1:0:2822:U:H2'	1:0:2823:G:H5'	2.01	0.41
1:0:614:G:N2	1:0:670:U:O2'	2.53	0.41
1:0:828:C:H2'	1:0:829:C:H6	1.84	0.41
2:9:63:A:O2'	2:9:64:C:H5'	2.19	0.41
1:0:1849:G:N2	1:0:1869:A:N6	2.68	0.41
1:0:192:G:O2'	1:0:193:A:H5''	2.20	0.41
1:0:2347:C:H2'	1:0:2348:A:C8	2.56	0.41
1:0:2543:A:OP1	1:0:2627:G:H4'	2.20	0.41
1:0:2633:A:H5'	1:0:2635:U:O4'	2.20	0.41
1:0:665:A:H3'	1:0:666:U:H5''	2.01	0.41
1:0:813:A:O2'	1:0:814:G:C8	2.72	0.41
2:9:100:G:C2'	2:9:101:A:H5'	2.51	0.41
2:9:28:A:N3	2:9:28:A:H2'	2.35	0.41
2:9:8:C:OP1	2:9:63:A:H5'	2.21	0.41
1:0:1151:U:H5''	1:0:1153:A:H5'	2.03	0.41
1:0:128:C:H2'	1:0:129:A:O4'	2.20	0.41
1:0:155:G:O2'	1:0:156:G:H5'	2.21	0.41
1:0:1571:G:H2'	1:0:1572:C:O4'	2.21	0.41
1:0:1641:C:H3'	1:0:1642:G:C8	2.55	0.41
1:0:1817:U:H2'	1:0:1818:G:O4'	2.21	0.41
1:0:1910:A:C2	1:0:1911:A:C2	3.09	0.41
1:0:1917:C:O2'	1:0:1918:G:H5'	2.19	0.41
1:0:195:A:H2'	1:0:196:A:H5'	2.02	0.41
1:0:2063:A:H2'	1:0:2064:U:O4'	2.21	0.41
1:0:2296:U:H3'	1:0:2297:G:C8	2.56	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2769:C:C2'	1:0:2770:A:H5'	2.51	0.41
1:0:2791:C:C2	1:0:2792:C:C5	3.09	0.41
1:0:2785:A:H62	1:0:2865:G:H21	1.69	0.41
1:0:465:C:H1'	1:0:468:A:C5	2.55	0.41
1:0:57:G:N2	1:0:69:G:C4	2.89	0.41
2:9:75:A:N6	2:9:106:U:C4	2.88	0.41
2:9:6:C:C4	2:9:7:C:N4	2.88	0.41
1:0:1502:G:H2'	1:0:1503:G:O4'	2.21	0.41
1:0:1753:A:H3'	1:0:1753:A:H8	1.85	0.41
1:0:1765:C:O5'	1:0:1765:C:H6	2.03	0.41
1:0:1955:G:O2'	1:0:1956:G:H5''	2.20	0.41
1:0:1:G:H2'	1:0:2:G:O4'	2.21	0.41
1:0:203:G:H5'	1:0:234:C:H4'	2.03	0.41
1:0:2240:C:H2'	1:0:2241:U:H5''	2.01	0.41
1:0:222:G:N2	1:0:231:G:H1'	2.36	0.41
1:0:2321:C:H2'	1:0:2322:U:C5'	2.51	0.41
1:0:2356:A:O2'	1:0:2357:A:H5'	2.21	0.41
1:0:2431:C:O2'	1:0:2432:A:H5'	2.20	0.41
1:0:2605:C:H2'	1:0:2606:G:C8	2.56	0.41
1:0:2851:G:H2'	1:0:2852:G:O4'	2.20	0.41
1:0:29:U:H3'	1:0:29:U:C6	2.56	0.41
1:0:310:A:H2	1:0:330:C:O2	2.03	0.41
1:0:425:A:N7	1:0:2390:A:H2	2.19	0.41
1:0:490:A:N7	1:0:492:G:N3	2.67	0.41
1:0:516:G:H8	1:0:516:G:H3'	1.85	0.41
1:0:56:C:H2'	1:0:57:G:O4'	2.21	0.41
1:0:792:U:O2'	1:0:793:G:H5'	2.20	0.41
1:0:1047:G:O2'	1:0:1048:U:H5'	2.21	0.41
1:0:1010:U:H5''	1:0:1165:G:O6	2.21	0.41
1:0:1252:C:O5'	1:0:1252:C:H6	2.04	0.41
1:0:1576:G:H2'	1:0:1577:G:O4'	2.20	0.41
1:0:1725:C:C2	1:0:1742:G:N2	2.89	0.41
1:0:1790:G:O2'	1:0:1791:C:H5	2.03	0.41
1:0:1845:A:N6	1:0:1872:A:N7	2.69	0.41
1:0:211:U:O2'	1:0:212:U:H5'	2.21	0.41
1:0:2271:C:O2'	1:0:2354:G:H4'	2.21	0.41
1:0:2404:A:OP1	1:0:2406:C:H5'	2.21	0.41
1:0:2475:C:H2'	1:0:2476:A:C4'	2.51	0.41
1:0:2552:C:H6	1:0:2552:C:O5'	2.03	0.41
1:0:2592:U:H4'	1:0:2593:A:OP1	2.21	0.41
1:0:1990:U:H4'	1:0:2799:C:H4'	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:212:U:O2	1:0:443:A:H2	2.03	0.41
1:0:488:A:OP1	1:0:488:A:H8	2.04	0.41
2:9:103:A:N7	2:9:104:A:N7	2.69	0.41
1:0:1153:A:C2	1:0:1155:G:C6	3.09	0.41
1:0:1183:C:O2'	1:0:1184:G:H5'	2.21	0.41
1:0:1409:U:O5'	1:0:1409:U:H6	2.03	0.41
1:0:226:C:H4'	1:0:227:G:H8	1.83	0.41
1:0:2766:U:O5'	1:0:2766:U:H6	2.04	0.41
1:0:2782:G:OP2	1:0:2782:G:H8	2.03	0.41
1:0:294:U:H2'	1:0:295:C:H6	1.85	0.41
1:0:459:A:C6	1:0:484:G:H1'	2.56	0.41
1:0:635:C:O2'	1:0:670:U:H5''	2.21	0.41
1:0:80:A:H2'	1:0:81:C:O4'	2.21	0.41
1:0:839:U:OP1	1:0:2408:G:OP2	2.38	0.41
1:0:843:G:O2'	1:0:844:G:P	2.78	0.41
1:0:845:U:O2'	1:0:846:A:H5'	2.21	0.41
2:9:23:G:H2'	2:9:24:U:O4'	2.21	0.41
1:0:1086:C:C3'	1:0:1087:C:H5''	2.51	0.41
1:0:119:G:N2	1:0:129:A:H1'	2.36	0.41
1:0:1715:A:H1'	1:0:1717:A:O4'	2.21	0.41
1:0:1807:A:H5'	1:0:1809:G:O4'	2.21	0.41
1:0:2040:A:H2'	1:0:2041:A:C8	2.53	0.41
1:0:2535:C:H2'	1:0:2536:G:C5'	2.51	0.41
1:0:2523:G:H5'	1:0:2624:G:N7	2.36	0.41
1:0:2819:G:H2'	1:0:2820:C:C6	2.56	0.41
1:0:2867:G:O3'	1:0:2868:G:H4'	2.21	0.41
1:0:342:G:H2'	1:0:343:A:C5'	2.51	0.41
1:0:610:G:H2'	1:0:611:C:O4'	2.20	0.41
1:0:762:A:O2'	1:0:1633:C:H1'	2.20	0.41
1:0:788:G:H2'	1:0:807:A:N7	2.34	0.41
1:0:7:G:O2'	1:0:8:A:H5'	2.20	0.41
1:0:836:G:H2'	1:0:837:U:C6	2.56	0.41
1:0:1299:A:C6	1:0:1302:C:C4	3.09	0.40
1:0:1613:G:H5''	1:0:1614:C:H5'	2.02	0.40
1:0:1619:A:C2	1:0:1620:C:C5	3.09	0.40
1:0:1849:G:H2'	1:0:1850:G:C8	2.56	0.40
1:0:1963:G:C5	1:0:1965:U:N3	2.90	0.40
1:0:2157:C:H2'	1:0:2158:C:C6	2.56	0.40
1:0:2204:A:O2'	1:0:2205:C:P	2.79	0.40
1:0:179:U:H1'	1:0:228:A:H2	1.86	0.40
1:0:2488:G:H2'	1:0:2489:C:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2523:G:H2'	1:0:2524:G:C8	2.56	0.40
1:0:2853:U:C2'	1:0:2854:G:O5'	2.70	0.40
1:0:459:A:C4	1:0:466:A:N7	2.89	0.40
1:0:474:G:C6	1:0:478:G:O6	2.74	0.40
1:0:622:U:O5'	1:0:622:U:H6	2.04	0.40
1:0:646:C:O2'	1:0:650:U:H5''	2.22	0.40
1:0:698:A:H1'	1:0:700:C:H41	1.83	0.40
1:0:984:A:H1'	1:0:1202:U:C6	2.56	0.40
1:0:1116:U:O2'	1:0:1117:G:H5'	2.21	0.40
1:0:1486:A:H2'	1:0:1487:C:C6	2.56	0.40
1:0:1664:G:OP2	1:0:1664:G:H3'	2.21	0.40
1:0:173:A:N3	1:0:173:A:H2'	2.37	0.40
1:0:1753:A:H3'	1:0:1753:A:C8	2.56	0.40
1:0:1856:U:OP1	1:0:2389:G:O2'	2.37	0.40
1:0:1956:G:H5'	1:0:1956:G:H8	1.85	0.40
1:0:2095:G:H2'	1:0:2096:U:H5''	2.03	0.40
1:0:2560:G:O6	1:0:2589:C:C5	2.74	0.40
1:0:2579:A:H2'	1:0:2580:C:C6	2.56	0.40
1:0:2642:G:C2'	1:0:2643:G:H5'	2.51	0.40
1:0:2618:A:C2	1:0:2758:A:C1'	3.04	0.40
1:0:390:U:C4	1:0:391:C:N4	2.90	0.40
1:0:487:G:O3'	1:0:511:A:N6	2.54	0.40
1:0:516:G:C8	1:0:516:G:H3'	2.56	0.40
1:0:740:A:O2'	1:0:741:G:H5'	2.21	0.40
1:0:75:C:C3'	1:0:76:C:H5''	2.51	0.40
1:0:787:A:H2'	1:0:788:G:C8	2.56	0.40
1:0:929:A:OP1	1:0:929:A:H4'	2.20	0.40
1:0:958:G:H2'	1:0:959:C:C5	2.56	0.40
1:0:968:C:N4	1:0:970:A:C1'	2.83	0.40
1:0:1064:C:H6	1:0:1064:C:O5'	2.05	0.40
1:0:1194:U:HO2'	1:0:1195:U:C5'	2.34	0.40
1:0:1259:A:H2'	1:0:1260:A:C5'	2.50	0.40
1:0:1459:U:C6	1:0:1459:U:P	3.13	0.40
1:0:1339:U:H5	1:0:1664:G:HO2'	1.64	0.40
1:0:1685:A:C2'	1:0:1686:A:OP2	2.68	0.40
1:0:1687:C:O2'	1:0:1977:C:H4'	2.22	0.40
1:0:1715:A:C2	1:0:1717:A:C8	3.09	0.40
1:0:1919:A:C6	1:0:1928:G:C4	3.10	0.40
1:0:1962:C:H2'	1:0:1963:G:H5'	2.04	0.40
1:0:2275:U:H6	1:0:2275:U:H3'	1.86	0.40
1:0:2661:G:H2'	1:0:2662:C:O4'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2669:C:C2'	1:0:2669:C:O2	2.70	0.40
1:0:1310:C:P	1:0:2689:C:H4'	2.62	0.40
1:0:2784:A:H3'	1:0:2785:A:C8	2.57	0.40
1:0:299:C:H2'	1:0:300:C:C5	2.56	0.40
1:0:600:G:H3'	1:0:601:A:H5''	2.03	0.40
1:0:936:A:O2'	1:0:937:C:H5'	2.21	0.40
1:0:1141:U:O2'	1:0:1142:G:P	2.80	0.40
1:0:1220:G:N2	1:0:1253:C:C5	2.90	0.40
1:0:1250:A:O2'	1:0:1251:G:C4'	2.69	0.40
1:0:1666:G:C6	1:0:1992:G:O6	2.74	0.40
1:0:1918:G:H4'	1:0:1920:A:C2	2.56	0.40
1:0:1883:A:C2	1:0:1953:A:N6	2.90	0.40
1:0:2179:C:C2	1:0:2180:U:H1'	2.57	0.40
1:0:2343:C:O2'	1:0:2344:G:H5'	2.21	0.40
1:0:2809:A:N6	1:0:2854:G:C4	2.90	0.40
1:0:324:C:H6	1:0:324:C:O5'	2.03	0.40
1:0:327:C:O2'	1:0:328:A:H5'	2.21	0.40
1:0:539:A:C5	1:0:2025:A:C2	3.09	0.40
1:0:620:G:H2'	1:0:621:U:C6	2.57	0.40
1:0:625:A:H8	1:0:625:A:O5'	2.04	0.40
1:0:747:A:H2'	1:0:748:A:O4'	2.21	0.40
1:0:119:G:H2'	1:0:120:G:H8	1.85	0.40
1:0:1474:A:C3'	1:0:1474:A:N3	2.78	0.40
1:0:1279:G:O2'	1:0:1995:G:N1	2.54	0.40
1:0:2290:A:H2'	1:0:2291:U:H5'	2.03	0.40
1:0:2630:C:H2'	1:0:2631:C:H6	1.87	0.40
1:0:2633:A:H4'	1:0:2634:G:H4'	2.04	0.40
1:0:2708:U:H2'	1:0:2709:C:H6	1.84	0.40
1:0:2781:G:C2'	1:0:2782:G:O4'	2.64	0.40
1:0:51:A:H2'	1:0:52:A:C8	2.56	0.40
1:0:737:C:H2'	1:0:738:G:O4'	2.21	0.40
1:0:829:C:C4	1:0:1206:G:N1	2.90	0.40
1:0:843:G:O2'	1:0:844:G:H5'	2.22	0.40
1:0:931:G:N2	1:0:2247:A:C5'	2.83	0.40
2:9:12:C:H3'	2:9:13:C:H6	1.85	0.40

All (1) symmetry-related close contacts are listed below. The label for Atom-2 includes the symmetry operator and encoded unit-cell translations to be applied.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1552:C:OP1	16:N:47:SER:CA[8_455]	1.97	0.23

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%)	523 (18%)	48 (1%)
2	9	117/124 (94%)	23 (19%)	1 (0%)
All	All	2874/3004 (95%)	546 (18%)	49 (1%)

All (546) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	0	13	A
1	0	35	G
1	0	45	C
1	0	48	A
1	0	49	U
1	0	50	G
1	0	59	G
1	0	67	G
1	0	70	A
1	0	71	A
1	0	72	A
1	0	76	C
1	0	87	G
1	0	89	A
1	0	90	G
1	0	91	A
1	0	99	U
1	0	105	G
1	0	110	U
1	0	116	A
1	0	118	U
1	0	123	A
1	0	124	A

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Mol	Chain	Res	Type
1	0	129	A
1	0	135	U
1	0	149	A
1	0	155	G
1	0	158	A
1	0	167	A
1	0	169	C
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
1	0	200	A
1	0	201	G
1	0	205	A
1	0	206	U
1	0	210	A
1	0	218	A
1	0	219	G
1	0	225	G
1	0	227	G
1	0	229	G
1	0	242	A
1	0	243	G
1	0	305	A
1	0	318	G
1	0	322	A
1	0	333	A
1	0	334	G
1	0	335	A
1	0	340	G
1	0	341	A
1	0	343	A
1	0	358	C
1	0	363	G
1	0	368	A
1	0	373	A
1	0	399	G
1	0	401	G
1	0	404	A

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Mol	Chain	Res	Type
1	0	408	U
1	0	414	A
1	0	418	C
1	0	424	G
1	0	443	A
1	0	456	C
1	0	460	U
1	0	461	A
1	0	463	C
1	0	467	U
1	0	469	G
1	0	484	G
1	0	486	U
1	0	490	A
1	0	491	A
1	0	492	G
1	0	514	G
1	0	515	A
1	0	518	A
1	0	519	C
1	0	537	C
1	0	539	A
1	0	541	C
1	0	542	A
1	0	544	U
1	0	554	U
1	0	556	A
1	0	558	G
1	0	572	G
1	0	582	G
1	0	583	C
1	0	584	A
1	0	587	A
1	0	588	G
1	0	601	A
1	0	613	A
1	0	617	U
1	0	624	A
1	0	632	A
1	0	636	G
1	0	638	A
1	0	648	A

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Mol	Chain	Res	Type
1	0	652	C
1	0	654	A
1	0	655	A
1	0	666	U
1	0	667	U
1	0	684	C
1	0	697	G
1	0	699	G
1	0	700	C
1	0	728	G
1	0	740	A
1	0	742	G
1	0	743	A
1	0	753	U
1	0	760	U
1	0	766	A
1	0	774	A
1	0	776	G
1	0	778	G
1	0	789	G
1	0	790	A
1	0	794	A
1	0	796	A
1	0	797	A
1	0	798	G
1	0	803	C
1	0	806	A
1	0	807	A
1	0	813	A
1	0	815	A
1	0	818	G
1	0	819	C
1	0	825	C
1	0	832	A
1	0	840	U
1	0	841	G
1	0	843	G
1	0	844	G
1	0	859	U
1	0	873	U
1	0	874	A
1	0	879	A

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Mol	Chain	Res	Type
1	0	919	U
1	0	922	A
1	0	926	C
1	0	930	A
1	0	931	G
1	0	941	U
1	0	943	U
1	0	944	A
1	0	952	A
1	0	957	G
1	0	968	C
1	0	969	U
1	0	970	A
1	0	972	C
1	0	973	U
1	0	984	A
1	0	985	G
1	0	994	A
1	0	996	C
1	0	1002	C
1	0	1005	U
1	0	1006	C
1	0	1019	U
1	0	1022	A
1	0	1023	U
1	0	1024	G
1	0	1030	U
1	0	1032	A
1	0	1033	G
1	0	1036	G
1	0	1037	U
1	0	1044	U
1	0	1045	G
1	0	1055	A
1	0	1056	U
1	0	1057	A
1	0	1067	G
1	0	1073	G
1	0	1074	G
1	0	1075	C
1	0	1081	A
1	0	1082	G

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Mol	Chain	Res	Type
1	0	1083	C
1	0	1087	C
1	0	1090	C
1	0	1099	A
1	0	1130	U
1	0	1137	A
1	0	1138	A
1	0	1139	A
1	0	1142	G
1	0	1145	C
1	0	1146	G
1	0	1149	G
1	0	1155	G
1	0	1166	A
1	0	1167	A
1	0	1168	G
1	0	1182	U
1	0	1183	C
1	0	1185	C
1	0	1194	U
1	0	1195	U
1	0	1199	U
1	0	1200	G
1	0	1209	G
1	0	1224	A
1	0	1233	A
1	0	1234	C
1	0	1253	C
1	0	1261	G
1	0	1262	U
1	0	1264	C
1	0	1266	G
1	0	1267	A
1	0	1268	U
1	0	1269	G
1	0	1278	A
1	0	1279	G
1	0	1281	A
1	0	1284	G
1	0	1285	A
1	0	1286	U
1	0	1288	A

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Mol	Chain	Res	Type
1	0	1289	A
1	0	1302	C
1	0	1314	A
1	0	1316	G
1	0	1324	G
1	0	1327	C
1	0	1334	A
1	0	1338	G
1	0	1339	U
1	0	1342	U
1	0	1343	C
1	0	1346	C
1	0	1354	A
1	0	1355	A
1	0	1356	G
1	0	1359	G
1	0	1381	G
1	0	1391	A
1	0	1392	U
1	0	1397	A
1	0	1398	G
1	0	1411	C
1	0	1430	G
1	0	1433	A
1	0	1439	G
1	0	1441	A
1	0	1442	C
1	0	1443	G
1	0	1459	U
1	0	1465	G
1	0	1466	C
1	0	1467	U
1	0	1468	A
1	0	1469	U
1	0	1470	G
1	0	1473	U
1	0	1474	A
1	0	1475	U
1	0	1476	G
1	0	1482	U
1	0	1489	C
1	0	1490	U

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Mol	Chain	Res	Type
1	0	1496	G
1	0	1505	U
1	0	1509	A
1	0	1513	U
1	0	1524	C
1	0	1529	C
1	0	1532	A
1	0	1544	A
1	0	1552	C
1	0	1563	U
1	0	1571	G
1	0	1573	G
1	0	1574	A
1	0	1583	A
1	0	1585	A
1	0	1618	U
1	0	1623	C
1	0	1624	A
1	0	1625	A
1	0	1626	A
1	0	1631	C
1	0	1635	G
1	0	1648	C
1	0	1652	G
1	0	1657	A
1	0	1663	C
1	0	1664	G
1	0	1665	C
1	0	1670	G
1	0	1671	A
1	0	1680	U
1	0	1681	A
1	0	1685	A
1	0	1686	A
1	0	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

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Mol	Chain	Res	Type
1	0	1717	A
1	0	1718	A
1	0	1724	C
1	0	1748	U
1	0	1749	G
1	0	1750	A
1	0	1754	G
1	0	1755	G
1	0	1764	A
1	0	1771	A
1	0	1772	C
1	0	1773	C
1	0	1775	A
1	0	1776	A
1	0	1778	U
1	0	1791	C
1	0	1792	C
1	0	1800	A
1	0	1801	C
1	0	1802	A
1	0	1807	A
1	0	1808	C
1	0	1809	G
1	0	1811	A
1	0	1813	A
1	0	1821	A
1	0	1830	C
1	0	1831	G
1	0	1840	A
1	0	1884	A
1	0	1889	G
1	0	1908	C
1	0	1909	U
1	0	1920	A
1	0	1922	U
1	0	1924	C
1	0	1926	U
1	0	1927	U
1	0	1928	G
1	0	1938	U
1	0	1939	U
1	0	1948	C

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Mol	Chain	Res	Type
1	0	1949	A
1	0	1950	C
1	0	1953	A
1	0	1954	A
1	0	1955	G
1	0	1956	G
1	0	1964	A
1	0	1974	U
1	0	1976	U
1	0	1979	C
1	0	1980	A
1	0	2003	A
1	0	2004	U
1	0	2006	G
1	0	2014	A
1	0	2015	G
1	0	2016	A
1	0	2019	C
1	0	2034	A
1	0	2038	C
1	0	2044	G
1	0	2045	A
1	0	2051	U
1	0	2052	G
1	0	2060	A
1	0	2076	G
1	0	2082	C
1	0	2094	C
1	0	2096	U
1	0	2118	A
1	0	2119	A
1	0	2140	G
1	0	2162	C
1	0	2168	A
1	0	2181	A
1	0	2191	A
1	0	2195	C
1	0	2199	C
1	0	2205	C
1	0	2218	G
1	0	2229	G
1	0	2238	G

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Mol	Chain	Res	Type
1	0	2241	U
1	0	2245	A
1	0	2246	A
1	0	2247	A
1	0	2255	G
1	0	2262	C
1	0	2265	A
1	0	2268	G
1	0	2285	U
1	0	2286	G
1	0	2287	G
1	0	2288	A
1	0	2298	U
1	0	2299	A
1	0	2300	G
1	0	2301	A
1	0	2313	G
1	0	2314	A
1	0	2315	A
1	0	2316	G
1	0	2325	A
1	0	2326	C
1	0	2362	G
1	0	2364	C
1	0	2369	U
1	0	2378	G
1	0	2381	A
1	0	2385	U
1	0	2389	G
1	0	2396	C
1	0	2402	U
1	0	2403	C
1	0	2405	A
1	0	2406	C
1	0	2407	G
1	0	2408	G
1	0	2409	A
1	0	2415	G
1	0	2419	C
1	0	2420	C
1	0	2427	A
1	0	2428	U

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Mol	Chain	Res	Type
1	0	2437	G
1	0	2438	A
1	0	2448	A
1	0	2455	A
1	0	2457	A
1	0	2470	U
1	0	2473	G
1	0	2476	A
1	0	2477	C
1	0	2481	G
1	0	2482	A
1	0	2483	U
1	0	2484	G
1	0	2485	U
1	0	2492	G
1	0	2499	C
1	0	2504	G
1	0	2508	G
1	0	2521	A
1	0	2522	G
1	0	2533	U
1	0	2545	A
1	0	2546	G
1	0	2549	G
1	0	2558	C
1	0	2561	G
1	0	2565	C
1	0	2578	G
1	0	2581	A
1	0	2582	G
1	0	2588	U
1	0	2591	C
1	0	2593	A
1	0	2594	U
1	0	2608	A
1	0	2609	G
1	0	2613	A
1	0	2625	U
1	0	2633	A
1	0	2634	G
1	0	2661	G
1	0	2669	C

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Mol	Chain	Res	Type
1	0	2670	C
1	0	2681	A
1	0	2692	A
1	0	2693	U
1	0	2707	G
1	0	2712	G
1	0	2713	A
1	0	2728	A
1	0	2730	A
1	0	2732	C
1	0	2737	A
1	0	2745	A
1	0	2756	A
1	0	2757	G
1	0	2758	A
1	0	2760	G
1	0	2770	A
1	0	2771	C
1	0	2774	U
1	0	2782	G
1	0	2783	U
1	0	2785	A
1	0	2793	G
1	0	2795	A
1	0	2807	U
1	0	2808	U
1	0	2809	A
1	0	2810	A
1	0	2825	A
1	0	2841	U
1	0	2842	C
1	0	2847	G
1	0	2849	C
1	0	2854	G
1	0	2855	C
1	0	2861	A
1	0	2867	G
1	0	2868	G
2	9	7	C
2	9	14	C
2	9	15	A
2	9	17	A

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Mol	Chain	Res	Type
2	9	18	G
2	9	27	A
2	9	28	A
2	9	47	A
2	9	48	A
2	9	59	A
2	9	60	A
2	9	61	A
2	9	63	A
2	9	68	A
2	9	69	G
2	9	71	G
2	9	93	G
2	9	98	C
2	9	101	A
2	9	102	A
2	9	111	C
2	9	112	A
2	9	115	G

All (49) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	0	69	G
1	0	71	A
1	0	173	A
1	0	181	A
1	0	192	G
1	0	198	A
1	0	242	A
1	0	541	C
1	0	583	C
1	0	765	C
1	0	805	G
1	0	843	G
1	0	972	C
1	0	1141	U
1	0	1193	G
1	0	1194	U
1	0	1223	G
1	0	1263	G
1	0	1278	A

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Mol	Chain	Res	Type
1	0	1313	U
1	0	1354	A
1	0	1410	U
1	0	1495	G
1	0	1634	A
1	0	1651	U
1	0	1664	G
1	0	1685	A
1	0	1820	G
1	0	1938	U
1	0	1975	G
1	0	2005	U
1	0	2015	G
1	0	2018	G
1	0	2093	G
1	0	2161	C
1	0	2204	A
1	0	2228	U
1	0	2245	A
1	0	2261	G
1	0	2377	U
1	0	2404	A
1	0	2426	G
1	0	2437	G
1	0	2592	U
1	0	2633	A
1	0	2660	C
1	0	2759	U
1	0	2824	C
2	9	58	G

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

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

5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

5.6 Ligand geometry

There are no ligands in this entry.

5.7 Other polymers

There are no such residues in this entry.

5.8 Polymer linkage issues

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

EDS was not executed - this section is therefore empty.

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

EDS was not executed - this section is therefore empty.

6.3 Carbohydrates ⓘ

EDS was not executed - this section is therefore empty.

6.4 Ligands ⓘ

EDS was not executed - this section is therefore empty.

6.5 Other polymers ⓘ

EDS was not executed - this section is therefore empty.