



Full wwPDB X-ray Structure Validation Report ⓘ

May 16, 2020 – 05:40 am BST

PDB ID : 1NWY
Title : COMPLEX OF THE LARGE RIBOSOMAL SUBUNIT FROM DEINOCOC-
CUS RADIODURANS WITH AZITHROMYCIN
Authors : Schlutzen, F.; Harms, J.; Franceschi, F.; Hansen, H.A.S.; Bartels, H.; Zari-
vach, R.; Yonath, A.
Deposited on : 2003-02-07
Resolution : 3.30 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
Mogul : 1.8.5 (274361), CSD as541be (2020)
Xtriage (Phenix) : **NOT EXECUTED**
EDS : **NOT EXECUTED**
buster-report : 1.1.7 (2018)
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

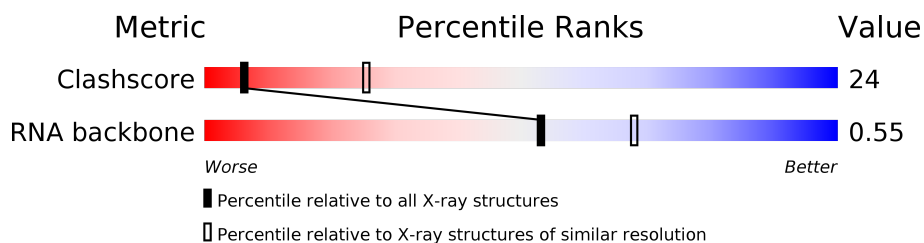
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.30 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	1205 (3.34-3.26)
RNA backbone	3102	1117 (3.70-2.90)
















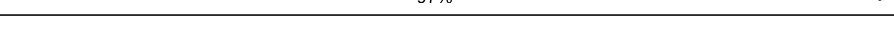
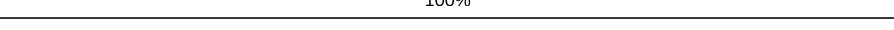
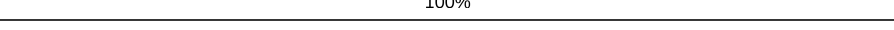
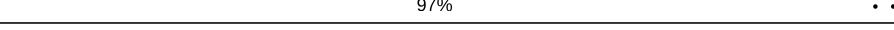
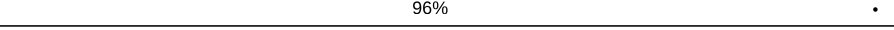
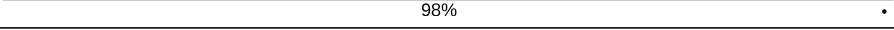
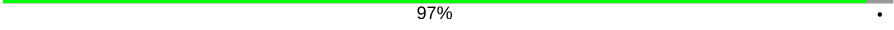
The table below summarises the geometric issues observed across the polymeric chains and their fit to the electron density. The red, orange, yellow and green segments on the lower bar indicate the fraction of residues that contain outliers for ≥ 3 , 2, 1 and 0 types of geometric quality criteria respectively. 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	274	
4	B	211	
5	C	204	
6	D	180	
7	E	185	
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	141	 87% . 12%
14	L	116	 97% ..
15	M	113	 97% ..
16	N	166	 75% . 25%
17	O	118	 99% .
18	P	100	 100%
19	Q	134	 97% .
20	R	94	 99% .
21	S	115	 98% .
22	T	237	 94% 6%
23	U	91	 95% 5%
24	W	67	 97% .
25	X	55	 100%
26	Y	73	 100%
27	Z	59	 97% ..
28	1	55	 96% .
29	2	47	 98% .
30	3	65	 97% .
31	4	37	 95% 5%

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

Mol	Type	Chain	Res	Chirality	Geometry	Clashes	Electron density
32	ZIT	0	2881	-	-	X	-
32	ZIT	0	2882	-	-	X	-

2 Entry composition

There are 32 unique types of molecules in this entry. The entry contains 65404 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

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

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

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

- Molecule 3 is a protein called ribosomal protein L2.

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

- Molecule 4 is a protein called ribosomal protein L3.

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

- Molecule 5 is a protein called ribosomal protein L4.

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

- Molecule 6 is a protein called ribosomal protein L5.

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

- Molecule 7 is a protein called ribosomal protein L6.

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

- Molecule 8 is a protein called ribosomal protein L9.

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

- Molecule 9 is a protein called ribosomal protein L11.

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

- Molecule 10 is a protein called ribosomal protein L13.

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

- Molecule 11 is a protein called ribosomal protein L14.

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

- Molecule 12 is a protein called ribosomal protein L15.

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

- Molecule 13 is a protein called ribosomal protein L16.

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

- Molecule 14 is a protein called ribosomal protein L17.

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

- Molecule 15 is a protein called ribosomal protein L18.

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

- Molecule 16 is a protein called ribosomal protein L19.

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

- Molecule 17 is a protein called ribosomal protein L20.

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

- Molecule 18 is a protein called ribosomal protein L21.

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

- Molecule 19 is a protein called ribosomal protein L22.

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

- Molecule 20 is a protein called ribosomal protein L23.

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

- Molecule 21 is a protein called ribosomal protein L24.

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

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

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

- Molecule 23 is a protein called ribosomal protein L27.

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

- Molecule 24 is a protein called ribosomal protein L29.

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

- Molecule 25 is a protein called ribosomal protein L30.

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

- Molecule 26 is a protein called ribosomal protein L31.

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

- Molecule 27 is a protein called ribosomal protein L32.

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

- Molecule 28 is a protein called ribosomal protein L33.

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

- Molecule 29 is a protein called ribosomal protein L34.

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

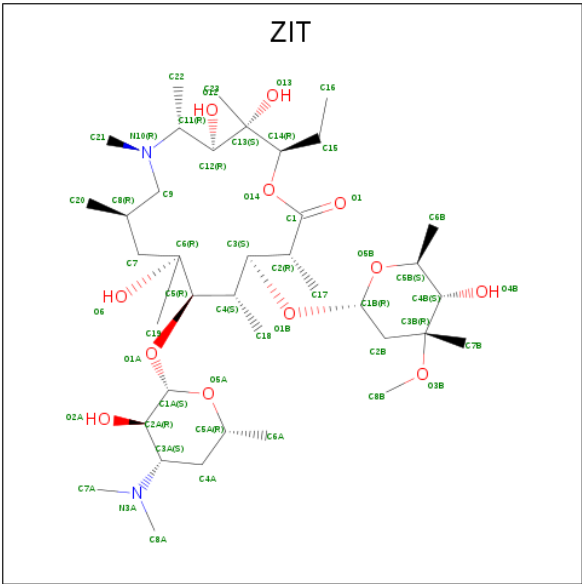
- Molecule 30 is a protein called ribosomal protein L35.

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

- Molecule 31 is a protein called ribosomal protein L36.

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

- Molecule 32 is AZITHROMYCIN (three-letter code: ZIT) (formula: C₃₈H₇₂N₂O₁₂).



Mol	Chain	Residues	Atoms	ZeroOcc	AltConf
32	0	1	Total C N O 52 38 2 12	0	0

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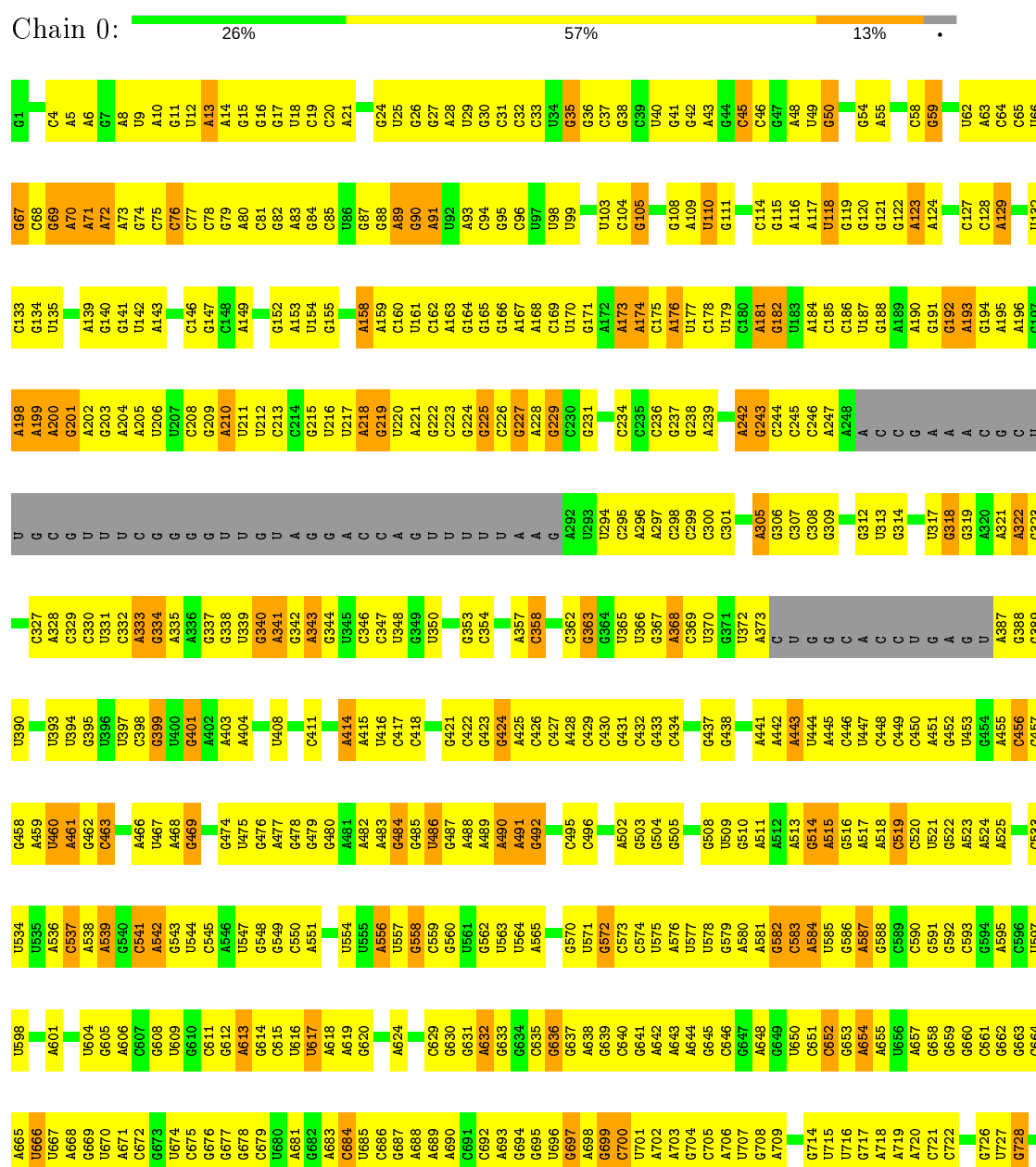
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	N	O		
32	0	1	52	38	2	12	0	0

3 Residue-property plots

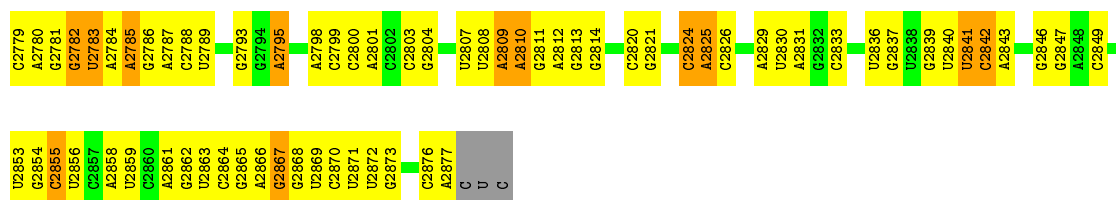
These plots are drawn for all protein, RNA and DNA chains in the entry. The first graphic for a chain summarises the proportions of the various outlier classes displayed in the second graphic. The second graphic shows the sequence view annotated by issues in geometry. Residues are color-coded according 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.

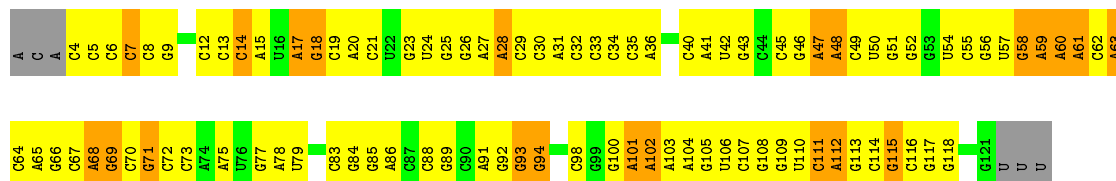
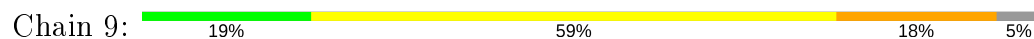
• Molecule 1: 23S RIBOSOMAL RRNA



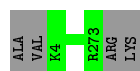
G2717	U2651	A2581	G2449	G2378	U2228	G2306	U2228	C2162	U2030	C1962	U1900	A1821	G1760
A2718	G2652	G2582	A2450	G2379	G2229	A2306	G2229	U2163	A2031	G1963	U1900	C1822	G1760
	A2653			U2380	G2230	A2307	G2230	G2164	G2032	A1964	A1901	G1823	G1761
A2721	G2655	C2585	C2454	U2381	G2231	A2308	G2231	A2165		U1965	A1902	G1824	G1762
G2722	G2656	G2586	U2455	C2382	G2232	G2309	G2232	G2166	G2035	G1904	G1903	U1826	G1763
G2723	G2657	G2587	A2456	C2383	G2233	G2310	G2233	A2167	A2036	G1905	G1904	G1827	A1764
A2658	A2658	U2588	A2457	G2384	G2234	U2311	G2234	A2168	G2037	U1969	G1906		C1765
G2725	G2659	C2589	U2458	U2385		A2312		A2169	C2038	G1970	U1906		U1766
U2726	G2660	C2591	G2459		G2238	G2313	G2238	C2170	G2039	G1971	C1907	C1830	U1767
G2727	G2661	U2592	G2460	A2391	C2239	A2314	C2239	U2171		G1972	C1908	G1831	U1768
G2728	G2662	A2593	G2461		C2240	A2315	C2240	U2172	A2043	C1973	U1909		U1769
A2729			G2462	G2394	U2241	G2316	U2241	G2173	G2044	U1974	U1909	G1835	U1770
A2730	G2665	C2596	G2463	C2395	C2443	U2318	C2443	G2174	A2045	U1975	A1910	G1836	U1771
A2731	U2666	G2597	G2464	C2396	C2444	G2319	C2444	A2175	C2046	U1976	A1911	G1837	C1772
G2732	G2667	C2598	G2465	A2397	A2445	G2320	A2445	U2176	G2047	C1977	A1912	G1838	C1773
A2733	U2668	C2599	A2467	U2398	G2321	G2321	G2321	U2177	C2048	U1978	U1914	A1839	A1774
U2734	G2669	A2600	G2468	C2399	U2322	G2322	A2446	U2178		C1979	A1915	A1840	A1775
G2735	G2670		G2469		U2323	U2323	A2447	C2179	U2051	A1980	G1916	G1841	A1776
U2736	G2671	G2604	U2470	U2402	U2324	G2324	U2448	U2180	A2052	A1981	C1917	G1842	A1777
U2737	U2672	C2605	U2471	C2403	G2325	U2325	U2449	A2181	G2053	C1982	G1918	U1843	U1778
A2738	G2673	G2606		A2404	U2326	A2326	U2450	A2182	A2054		A1919	C1844	
G2739	G2674	C2607	G2474	A2405	U2327	A2404	U2451	C2183	G2055	U1990	A1920	A1845	C1781
C2740	U2675	A2608	C2475	G2406	U2328	G2328	U2452	C2184	C2056	C1991	A1921	A1846	A1782
G2741	G2676	G2609	A2476	G2407	A2543	G2329	C2453	U2185	U2057	G1992	U1922	G1847	G1783
G2742	U2677	G2610	C2477	G2408	G2255	G2330	C2454	G2186	U2058	G1993	C1924	U1848	C1784
G2743	G2678		C2478	U2409		A2331	G2255		U2059	U1994	G1924	G1849	A1785
A2744	G2679	A2613	U2479	U2410	G2261	U2332	G2261	A2191	A2060	G1995	G1925	G1850	C1786
A2745	U2680	U2614	G2480	A2413	C2262	U2336	C2262	C2193	U2064	A1996	U1926	A1851	U1787
		U2615	G2481	A2414	C2263	G2336	C2263	C2194	A2065	A1997	U1927		U1788
C2748	G2682	U2616	A2482		C2264	A2337	C2264	C2195	G2066	U1999	G1928		U1789
A2749		G2617	U2483	U2417	A2265		A2265	U2196	U2067	G2000	G1933	U1855	G1790
G2750	A2685	A2618	G2484	U2418	A2266	G2341	A2266	U2197		G2001	U1934	G1857	C1791
C2751	G2686	G2619	U2485	U2419	G2267	U2342	A2267	U2198	G2070	A2002	A1935	C1858	C1792
G2752	G2687	G2620	G2486	C2419	G2268	G2343	G2268	C2199	G2071	A2003	A1936	A1859	A1794
C2753	G2688	G2621	G2487		G2269	G2344	G2269	G2201	G2072	U2004	G1937	A1860	
C2754	G2689	G2622	G2488	C2422	U2270	A2345	G2270	G2202	A2073	U2005	U1938	A1861	G1797
A2755	G2690	A2623	C2489	G2423		G2346		G2203	U2074	G2006	U1939	C1862	G1798
A2756	G2691	G2624	U2490	G2424	G2273	G2347	C2273	A2204	G2075		C1940	U1863	A1799
G2757	U2692	U2625	C2491	G2425	C2274	A2348	C2274	G2205	G2076		G1941	A1800	A1800
U2758	U2693	U2626	G2492	G2426	U2275	G2351	U2275	C2206	G2077	G2010	G1942	C1865	C1801
U2759	G2694	G2627	G2493	A2427	C2276	G2352	C2276	C2207	A2078	G2011	A1943	G1866	A1802
G2760	C2695	C2628	C2494	U2428	A2277	A2353	A2277	U2208	U2080	A2012	C1944	A1867	G1803
A2761	A2696	U2629	G2495	A2429	G2278	G2354	G2278	A2209	U2081	A2013	C1945	U1804	U1804
G2762		C2630	G2496	A2430	G2279	G2354	G2279	G2210	C2082	A2014	U1946	A1869	G1806
U2763	U2700	G2631	A2497	C2431	A2280		A2280	C2211	G2083	G2015	G1947	U1870	A1807
U2764	A2701	U2632	U2498	A2432	U2285	G2361	U2285	U2211	G2084	A2016	C1948	A1871	C1808
C2765	G2702	G2633	C2499	G2433	G2286	G2362	G2286	U2212	G2085	U2017	A1949	A1872	G1809
	G2703	G2634	C2500	G2434	G2287	G2363	G2287	G2213	G2086	G2018	G1950	A1873	
U2704	U2704	U2635	U2501	C2435	A2288	U2365	A2288	G2214		C2019	G1951		U1810
A2705	A2705	A2636		U2436	A2289		A2289	G2215		G2020	A1952		A1811
	U2706		G2503	U2437		U2369		G2216	U2090	G2021	A1953		G1882
G2707	G2707	G2504	G2504	A2438	A2290	G2371	A2290	G2217	C2091	C2022	A1954		A1812
U2708	U2708	A2641		C2443		A2372	U2298	G2218	U2092	G2023	G1955	A1884	A1813
G2709	G2709	G2642	G2505	A2444	U2299	A2372	U2299	U2219	G2093	U2024	G1956	G1885	G1814
C2710	C2710	G2643	G2506	C2445	G2300		G2300	G2094	C2094	A2025	C1957	G1886	G1815
G2711	G2711	A2644	A2509	G2446	A2301	C2158	A2301	G2095	G2095	G2026	G1958	G1887	U1817
G2712	G2712	C2645	G2510	G2447	G2302	A2159	G2302	U2096	U2096	C2027	U1959	G1888	U1818
A2713	A2713	G2646	G2511	G2448	A2303	C2160	A2303	A2097	G	G2028	A1960	G1889	U1819
A2714	A2714		A2512	U2377	C2303	C2161	C2303	C2227		G2029	A1961	G1890	G1820



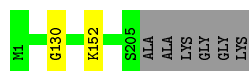
- Molecule 2: 5S RIBOSOMAL RRNA



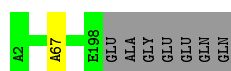
- Molecule 3: ribosomal protein L2



- Molecule 4: ribosomal protein L3



- Molecule 5: ribosomal protein L4



- Molecule 6: ribosomal protein L5

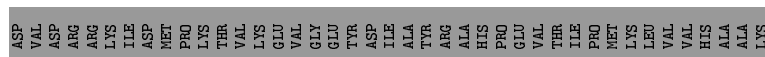
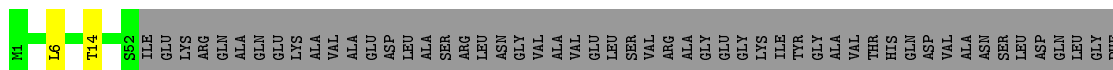


- Molecule 7: ribosomal protein L6





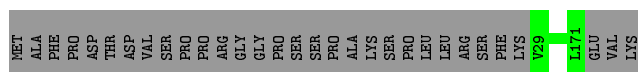
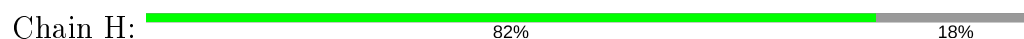
- Molecule 8: ribosomal protein L9



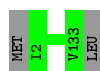
- Molecule 9: ribosomal protein L11



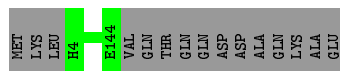
- Molecule 10: ribosomal protein L13



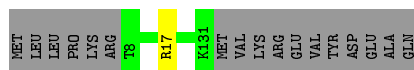
- Molecule 11: ribosomal protein L14



- Molecule 12: ribosomal protein L15



- Molecule 13: ribosomal protein L16



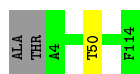
- Molecule 14: ribosomal protein L17

Chain L:  97% ..



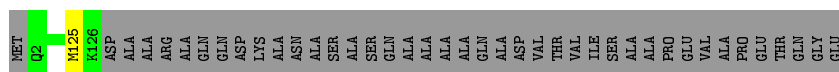
- Molecule 15: ribosomal protein L18

Chain M:  97% ..



- Molecule 16: ribosomal protein L19

Chain N:  75% . 25%



- Molecule 17: ribosomal protein L20

Chain O:  99% .



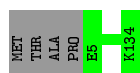
- Molecule 18: ribosomal protein L21

Chain P:  100%

There are no outlier residues recorded for this chain.

- Molecule 19: ribosomal protein L22

Chain Q:  97% .



- Molecule 20: ribosomal protein L23

Chain R:  99% .



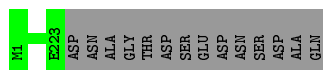
- Molecule 21: ribosomal protein L24

Chain S:  98% .



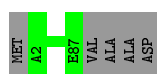
- Molecule 22: general stress protein Ctc

Chain T: 94% 6%



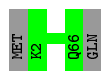
- Molecule 23: ribosomal protein L27

Chain U: 95% 5%



- Molecule 24: ribosomal protein L29

Chain W: 97% .



- Molecule 25: ribosomal protein L30

Chain X: 100%

There are no outlier residues recorded for this chain.

- Molecule 26: ribosomal protein L31

Chain Y: 100%

There are no outlier residues recorded for this chain.

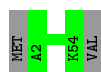
- Molecule 27: ribosomal protein L32

Chain Z: 97% ..



- Molecule 28: ribosomal protein L33

Chain 1: 96% .



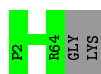
- Molecule 29: ribosomal protein L34

Chain 2:  98% .



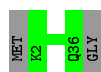
- Molecule 30: ribosomal protein L35

Chain 3:  97% .



- Molecule 31: ribosomal protein L36

Chain 4:  95% 5%



4 Data and refinement statistics

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

Property	Value	Source
Space group	I 2 2 2	Depositor
Cell constants a, b, c, α , β , γ	170.80 Å 409.50 Å 695.70 Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	15.00 – 3.30	Depositor
% Data completeness (in resolution range)	(Not available) (15.00-3.30)	Depositor
R_{merge}	(Not available)	Depositor
R_{sym}	0.11	Depositor
Refinement program	CNS	Depositor
R, R_{free}	0.279 , 0.304	Depositor
Estimated twinning fraction	No twinning to report.	Xtriage
Total number of atoms	65404	wwPDB-VP
Average B, all atoms (Å ²)	46.0	wwPDB-VP

5 Model quality [i](#)

5.1 Standard geometry [i](#)

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	0	0.23	0/66467	0.67	0/103673
2	9	0.59	0/2816	0.81	1/4388 (0.0%)
All	All	0.26	0/69283	0.67	1/108061 (0.0%)

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

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

There are no bond length outliers.

All (1) bond angle outliers are listed below:

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

There are no chirality outliers.

All (1) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	0	1342	U	Sidechain

5.2 Too-close contacts [i](#)

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

the asymmetric unit, whereas Symm-Clashes lists symmetry related clashes.

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	0	59359	0	29917	2160	0
2	9	2519	0	1285	147	0
3	A	270	0	0	0	0
4	B	205	0	0	3	0
5	C	197	0	0	1	0
6	D	178	0	0	1	0
7	E	177	0	0	1	0
8	F	52	0	0	1	0
9	G	143	0	0	0	0
10	H	143	0	0	0	0
11	I	132	0	0	0	0
12	J	141	0	0	0	0
13	K	124	0	0	1	0
14	L	114	0	0	1	0
15	M	111	0	0	1	0
16	N	125	0	0	1	0
17	O	117	0	0	0	0
18	P	100	0	0	0	0
19	Q	130	0	0	0	0
20	R	93	0	0	0	0
21	S	113	0	0	0	0
22	T	223	0	0	0	0
23	U	86	0	0	0	0
24	W	65	0	0	0	0
25	X	55	0	0	0	0
26	Y	73	0	0	0	0
27	Z	58	0	0	1	0
28	1	53	0	0	0	0
29	2	46	0	0	0	0
30	3	63	0	0	0	0
31	4	35	0	0	0	0
32	0	104	0	144	47	0
All	All	65404	0	31346	2342	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 24.

All (2342) 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)
32:0:2882:ZIT:H6A1	32:0:2882:ZIT:C6B	1.61	1.30
32:0:2881:ZIT:H6A1	32:0:2881:ZIT:C6B	1.61	1.29
1:0:1679:U:H2'	1:0:1680:U:H5''	1.27	1.16
1:0:2058:U:H1'	1:0:2576:G:H21	1.10	1.14
1:0:2548:G:H2'	1:0:2549:G:H5''	1.26	1.14
32:0:2881:ZIT:C6A	32:0:2881:ZIT:C6B	2.28	1.11
32:0:2882:ZIT:C6A	32:0:2882:ZIT:C6B	2.28	1.11
32:0:2882:ZIT:H6B1	32:0:2882:ZIT:C6A	1.82	1.10
1:0:1908:C:H2'	1:0:1909:U:H4'	1.30	1.09
1:0:1966:C:H4'	1:0:2585:C:H4'	1.22	1.09
32:0:2881:ZIT:H6B1	32:0:2881:ZIT:C6A	1.82	1.08
1:0:940:G:H3'	1:0:941:U:H5''	1.08	1.08
1:0:764:A:N1	32:0:2882:ZIT:H201	1.67	1.07
1:0:764:A:C2	32:0:2882:ZIT:H201	1.89	1.07
1:0:1747:G:H4'	1:0:1749:G:H1'	1.34	1.05
1:0:362:C:H2'	1:0:363:G:H4'	1.39	1.05
1:0:104:C:H2'	1:0:105:G:H5''	1.35	1.03
1:0:940:G:H3'	1:0:941:U:C5'	1.89	1.03
32:0:2882:ZIT:C19	32:0:2882:ZIT:O5A	2.06	1.03
32:0:2881:ZIT:O5A	32:0:2881:ZIT:C19	2.06	1.02
1:0:918:A:H2'	1:0:919:U:H5''	1.35	1.02
1:0:1458:A:H3'	1:0:1459:U:C5'	1.91	1.01
1:0:1976:U:H2'	1:0:1977:C:H5'	1.37	1.00
1:0:929:A:H3'	1:0:930:A:H5''	1.44	0.99
1:0:1280:U:H3	1:0:1996:A:H62	1.06	0.99
1:0:1073:G:H2'	1:0:1074:G:H4'	1.43	0.98
1:0:1182:U:H2'	1:0:1183:C:H5''	1.43	0.97
1:0:1900:U:O2'	1:0:1946:U:H5'	1.64	0.97
1:0:2081:U:H2'	1:0:2082:C:H5''	1.44	0.96
1:0:2299:A:H5'	1:0:2300:G:C4	2.00	0.96
1:0:688:A:H62	1:0:816:U:H3	1.13	0.96
1:0:2266:A:N6	1:0:2323:U:H1'	1.81	0.95
1:0:1679:U:C2'	1:0:1680:U:H5''	1.96	0.94
1:0:75:C:H2'	1:0:76:C:H5''	1.49	0.94
1:0:1432:G:H21	1:0:1596:A:H62	1.13	0.94
2:9:54:U:H2'	2:9:55:C:C6	2.03	0.94
1:0:2599:U:H2'	1:0:2600:A:H5''	1.47	0.94
1:0:1656:U:H2'	1:0:1657:A:H5''	1.50	0.94
1:0:2476:A:HO2'	1:0:2477:C:H5	0.95	0.93
1:0:941:U:H2'	1:0:942:U:O4'	1.69	0.93
1:0:2548:G:C2'	1:0:2549:G:H5''	1.98	0.93
1:0:2380:U:H2'	1:0:2381:A:H5'	1.49	0.92

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:58:C:H3'	1:0:59:G:H5''	1.50	0.92
2:9:25:G:H2'	2:9:26:G:O4'	1.69	0.92
32:0:2881:ZIT:C6A	32:0:2881:ZIT:H6B2	1.98	0.92
2:9:84:G:H2'	2:9:85:G:H8	1.34	0.92
1:0:508:G:H1	1:0:516:G:H22	1.18	0.91
32:0:2882:ZIT:C6A	32:0:2882:ZIT:H6B2	1.98	0.91
1:0:317:U:H2'	1:0:318:G:H5''	1.51	0.91
1:0:847:C:H41	1:0:955:G:H21	1.17	0.90
1:0:2266:A:H61	1:0:2323:U:H1'	1.32	0.90
1:0:2198:U:H3'	1:0:2199:C:H5''	1.53	0.90
1:0:716:U:H2'	1:0:717:G:O4'	1.71	0.90
32:0:2881:ZIT:H192	32:0:2881:ZIT:O5A	1.72	0.89
1:0:28:A:H61	1:0:522:G:H4'	1.37	0.89
32:0:2882:ZIT:H6B1	32:0:2882:ZIT:H6A1	0.91	0.89
2:9:100:G:H2'	2:9:101:A:O4'	1.72	0.89
32:0:2881:ZIT:H6B1	32:0:2881:ZIT:H6A1	0.90	0.89
32:0:2882:ZIT:H192	32:0:2882:ZIT:O5A	1.72	0.89
1:0:752:G:H5'	1:0:1775:A:H61	1.38	0.89
1:0:763:A:H2	1:0:765:C:H1'	1.37	0.89
2:9:67:C:H2'	2:9:68:A:H5'	1.54	0.88
2:9:42:U:H2'	2:9:45:C:H41	1.35	0.88
1:0:1791:C:H2'	1:0:1792:C:H5''	1.54	0.88
1:0:317:U:H3	1:0:321:A:H62	1.20	0.88
2:9:4:C:H2'	2:9:5:C:C6	2.08	0.88
1:0:2059:U:H2'	1:0:2060:A:H5''	1.54	0.87
1:0:2096:U:H2'	1:0:2097:A:H5''	1.54	0.87
1:0:2014:A:H62	1:0:2477:C:H1'	1.36	0.87
1:0:367:G:H2'	1:0:368:A:H5''	1.57	0.87
1:0:651:C:H2'	1:0:652:C:H5''	1.57	0.87
1:0:1312:G:H5'	1:0:1314:A:H1'	1.56	0.87
1:0:2691:C:H3'	1:0:2692:A:H5''	1.57	0.86
1:0:1748:U:H3	1:0:1753:A:H2	1.23	0.86
1:0:2636:A:H62	1:0:2643:G:H21	1.23	0.86
1:0:857:U:H2'	1:0:858:G:H5'	1.57	0.86
1:0:818:G:H22	1:0:2051:U:H5''	1.39	0.86
1:0:2014:A:N6	1:0:2477:C:H1'	1.90	0.85
1:0:2737:A:H61	7:E:60:LYS:CA	1.88	0.85
2:9:102:A:C2'	2:9:103:A:H5'	2.06	0.85
1:0:1252:C:C2'	1:0:1253:C:H5''	2.06	0.85
1:0:1621:C:H4'	1:0:1626:A:C6	2.12	0.85
1:0:1252:C:H2'	1:0:1253:C:H5''	1.59	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2510:A:H61	1:0:2641:A:H61	1.24	0.85
1:0:1900:U:H2'	1:0:1901:A:O4'	1.77	0.85
1:0:2509:A:H2'	1:0:2510:A:H5''	1.59	0.85
1:0:2598:C:H4'	4:B:152:LYS:CA	2.07	0.84
1:0:976:C:H5'	1:0:2252:A:H1'	1.57	0.84
1:0:658:G:H4'	1:0:2331:A:H5'	1.60	0.84
2:9:67:C:C2'	2:9:68:A:H5'	2.07	0.84
1:0:2324:G:H4'	1:0:2326:C:H5''	1.60	0.84
1:0:616:U:H2'	1:0:617:U:H5''	1.58	0.83
1:0:762:A:H2'	1:0:763:A:H8	1.41	0.83
1:0:1922:U:H1'	1:0:2570:C:O2'	1.79	0.83
1:0:2623:A:H2'	1:0:2624:G:O4'	1.76	0.83
1:0:1463:A:H1'	1:0:1543:G:H22	1.40	0.83
1:0:1458:A:H3'	1:0:1459:U:H5''	1.60	0.83
1:0:755:C:H5'	1:0:1692:C:O2'	1.78	0.83
1:0:1976:U:C2'	1:0:1977:C:H5'	2.07	0.83
2:9:102:A:O2'	2:9:103:A:H5'	1.77	0.83
1:0:88:G:H3'	1:0:89:A:H5''	1.61	0.83
1:0:2599:U:C2'	1:0:2600:A:H5''	2.09	0.82
2:9:93:G:H2'	2:9:94:G:H8	1.42	0.82
1:0:641:G:H4'	1:0:651:C:O2'	1.79	0.82
1:0:1922:U:O2	1:0:2571:G:H5'	1.79	0.82
1:0:929:A:H2'	1:0:930:A:H4'	1.62	0.81
1:0:2058:U:H1'	1:0:2576:G:N2	1.94	0.81
1:0:2498:U:H5''	1:0:2499:C:OP1	1.80	0.81
1:0:1181:C:H3'	1:0:1182:U:H5''	1.59	0.81
1:0:1438:G:H2'	1:0:1439:G:O4'	1.81	0.81
1:0:1900:U:H3'	1:0:1901:A:H8	1.43	0.81
1:0:1974:U:H2'	1:0:1975:G:H5''	1.62	0.81
2:9:92:G:H2'	2:9:93:G:H5'	1.62	0.81
2:9:12:C:H2'	2:9:13:C:O4'	1.81	0.81
1:0:542:A:H2'	1:0:543:G:H5'	1.63	0.81
2:9:7:C:O2'	2:9:8:C:H5'	1.80	0.81
1:0:1463:A:H1'	1:0:1543:G:N2	1.95	0.81
1:0:922:A:H2'	1:0:923:A:H8	1.46	0.81
1:0:556:A:H2'	1:0:557:U:H5'	1.62	0.80
1:0:681:A:H2'	1:0:683:A:N7	1.95	0.80
1:0:762:A:H2'	1:0:763:A:C8	2.16	0.80
1:0:798:G:H2'	1:0:799:C:H5'	1.62	0.80
1:0:70:A:O3'	1:0:71:A:H3'	1.80	0.80
1:0:2755:A:O2'	1:0:2756:A:H5'	1.80	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1804:U:H2'	1:0:1805:G:H8	1.46	0.80
1:0:1791:C:H1'	1:0:1793:A:H5'	1.64	0.80
1:0:1182:U:C2'	1:0:1183:C:H5''	2.12	0.80
1:0:1223:G:H21	1:0:1225:G:H21	1.30	0.80
1:0:1715:A:O2'	1:0:1716:G:H3'	1.82	0.80
1:0:2499:C:H41	1:0:2521:A:H2	1.26	0.80
1:0:168:A:H2'	1:0:169:C:C6	2.17	0.80
1:0:764:A:C6	32:0:2882:ZIT:H201	2.16	0.80
1:0:558:G:H5''	1:0:559:C:C5	2.16	0.79
1:0:930:A:H3'	1:0:931:G:H8	1.46	0.79
2:9:28:A:C2	2:9:29:C:H1'	2.18	0.79
1:0:1656:U:C2'	1:0:1657:A:H5''	2.12	0.79
1:0:547:U:H2'	1:0:548:G:C8	2.17	0.79
2:9:65:A:H2'	2:9:66:G:C8	2.17	0.79
1:0:873:U:C2	1:0:2246:A:H5''	2.17	0.79
1:0:2872:U:H2'	1:0:2873:G:C8	2.18	0.79
1:0:1886:G:H2'	1:0:1887:G:H8	1.46	0.79
1:0:1811:A:H1'	1:0:1813:A:C5	2.18	0.79
1:0:590:C:H2'	1:0:591:G:C8	2.17	0.79
1:0:652:C:H42	1:0:657:A:H61	1.27	0.79
1:0:873:U:H1'	1:0:2246:A:OP1	1.83	0.79
1:0:792:U:H2'	1:0:793:G:H5'	1.64	0.78
1:0:635:C:H2'	1:0:636:G:H5''	1.64	0.78
1:0:2672:U:H2'	1:0:2673:G:H8	1.47	0.78
1:0:689:A:H8	1:0:2052:G:H21	1.28	0.78
1:0:1088:A:H2'	1:0:1089:C:O4'	1.83	0.78
1:0:1900:U:H3'	1:0:1901:A:C8	2.19	0.78
1:0:416:U:H5''	1:0:417:C:H5'	1.65	0.78
2:9:78:A:H2'	2:9:79:U:C6	2.19	0.78
1:0:1807:A:O2'	1:0:1808:C:H4'	1.83	0.78
1:0:357:A:H2'	1:0:358:C:H5'	1.63	0.78
1:0:1299:A:H2'	1:0:1301:U:OP2	1.82	0.78
1:0:187:U:H2'	1:0:188:G:H8	1.49	0.78
2:9:92:G:C2'	2:9:93:G:H5'	2.14	0.78
1:0:1195:U:H2'	1:0:1196:G:C8	2.19	0.78
1:0:1319:C:H2'	1:0:1320:A:H8	1.47	0.78
1:0:2474:G:H2'	1:0:2475:C:O4'	1.84	0.78
2:9:58:G:H4'	2:9:59:A:H5'	1.64	0.78
1:0:764:A:C2	32:0:2882:ZIT:C20	2.65	0.77
1:0:1086:C:H2'	1:0:1087:C:H5''	1.64	0.77
1:0:218:A:O2'	1:0:219:G:H4'	1.84	0.77

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1697:U:H2'	1:0:1698:C:O4'	1.84	0.77
1:0:2861:A:H2'	1:0:2862:G:H8	1.49	0.77
1:0:2447:G:H22	1:0:2460:G:H2'	1.49	0.77
2:9:69:G:H2'	2:9:70:C:O4'	1.84	0.77
1:0:1032:A:H2'	1:0:1033:G:H4'	1.63	0.77
1:0:613:A:H2'	1:0:614:G:H8	1.49	0.77
1:0:1825:C:O2'	1:0:1826:U:H5'	1.85	0.77
1:0:2437:G:N1	1:0:2469:G:H2'	2.00	0.77
1:0:2559:U:H5'	4:B:130:GLY:CA	2.15	0.77
2:9:65:A:H2'	2:9:66:G:H8	1.50	0.77
1:0:918:A:C2'	1:0:919:U:H5''	2.11	0.77
1:0:1066:G:H2'	1:0:1067:G:H4'	1.67	0.77
1:0:2262:C:H2'	1:0:2263:C:O4'	1.85	0.77
1:0:75:C:C2'	1:0:76:C:H5''	2.15	0.77
1:0:1459:U:H2'	1:0:1475:U:O2'	1.84	0.76
1:0:951:G:H2'	1:0:952:A:H5''	1.65	0.76
1:0:1911:A:H2'	1:0:1912:G:H5'	1.67	0.76
1:0:2770:A:H4'	1:0:2867:G:H22	1.49	0.76
1:0:1608:U:H2'	1:0:1609:G:H8	1.51	0.76
1:0:2320:G:H2'	1:0:2321:C:O4'	1.85	0.76
1:0:103:U:H2'	1:0:104:C:C6	2.20	0.76
1:0:1242:A:H2'	1:0:1243:G:C8	2.21	0.76
1:0:2006:G:H4'	1:0:2596:C:O2'	1.86	0.76
2:9:77:G:H2'	2:9:78:A:O4'	1.84	0.76
32:0:2882:ZIT:H193	32:0:2882:ZIT:O5A	1.85	0.76
1:0:37:C:H2'	1:0:38:G:C8	2.20	0.76
1:0:169:C:H2'	1:0:170:U:H5'	1.68	0.76
1:0:2633:A:H61	1:0:2646:C:N4	1.83	0.75
1:0:215:G:H21	1:0:632:A:H8	1.31	0.75
1:0:37:C:H2'	1:0:38:G:H8	1.52	0.75
1:0:2436:U:H2'	1:0:2437:G:O4'	1.86	0.75
1:0:468:A:O2'	1:0:469:G:H4'	1.86	0.75
1:0:1763:G:H2'	1:0:1764:A:H4'	1.68	0.75
1:0:585:U:H2'	1:0:586:G:C8	2.20	0.75
1:0:1036:G:H1'	1:0:1145:C:C4'	2.16	0.75
1:0:404:A:H1'	1:0:424:G:O2'	1.85	0.75
1:0:1036:G:H1'	1:0:1145:C:H4'	1.68	0.75
1:0:2861:A:H2'	1:0:2862:G:C8	2.22	0.75
1:0:930:A:H3'	1:0:931:G:C8	2.22	0.75
1:0:1440:G:H1'	1:0:1588:A:N6	2.01	0.75
1:0:1587:A:H2'	1:0:1588:A:C8	2.22	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:547:U:H2'	1:0:548:G:H8	1.51	0.75
1:0:1035:G:H21	1:0:1155:G:H4'	1.50	0.75
1:0:1055:A:C2	1:0:1121:G:H2'	2.22	0.74
1:0:2652:G:H2'	1:0:2653:A:H8	1.50	0.74
1:0:2426:G:H22	1:0:2431:C:N4	1.85	0.74
1:0:104:C:C2'	1:0:105:G:H5''	2.13	0.74
32:0:2881:ZIT:O5A	32:0:2881:ZIT:H193	1.85	0.74
1:0:727:U:H2'	1:0:728:G:H5''	1.70	0.74
1:0:797:A:C5	1:0:805:G:H1'	2.22	0.74
1:0:2498:U:OP1	1:0:2498:U:H3'	1.87	0.74
1:0:2616:U:H2'	1:0:2617:G:O4'	1.87	0.74
1:0:1223:G:N2	1:0:1225:G:H21	1.85	0.74
1:0:114:C:H4'	1:0:124:A:O2'	1.88	0.74
1:0:2270:U:O2'	1:0:2353:G:H1'	1.88	0.74
1:0:1463:A:C1'	1:0:1543:G:H22	2.01	0.74
1:0:2329:C:H2'	1:0:2330:G:O4'	1.87	0.74
1:0:28:A:N6	1:0:522:G:H4'	2.02	0.74
1:0:922:A:H2'	1:0:923:A:C8	2.22	0.74
1:0:1348:C:H2'	1:0:1349:A:C8	2.22	0.73
1:0:1750:A:H1'	1:0:2690:A:C2	2.23	0.73
1:0:2532:G:C2	1:0:2533:U:H1'	2.23	0.73
1:0:1681:A:C2	1:0:2706:U:H1'	2.23	0.73
1:0:1608:U:H2'	1:0:1609:G:C8	2.24	0.73
1:0:1284:G:C4	1:0:1633:C:H5'	2.23	0.73
1:0:2299:A:H5'	1:0:2300:G:C5	2.23	0.73
2:9:31:A:H2'	2:9:32:C:O4'	1.89	0.73
1:0:2318:U:H2'	1:0:2319:G:H8	1.51	0.73
1:0:821:A:O2'	1:0:1267:A:H4'	1.89	0.73
1:0:940:G:C3'	1:0:941:U:H5''	2.04	0.73
1:0:1747:G:H4'	1:0:1749:G:C1'	2.18	0.73
32:0:2882:ZIT:H162	32:0:2882:ZIT:O13	1.86	0.73
1:0:612:G:O3'	1:0:613:A:H4'	1.89	0.73
1:0:2268:G:H5''	1:0:2363:G:O2'	1.89	0.73
1:0:1471:G:H1	1:0:2682:C:H42	1.35	0.73
1:0:763:A:C2	1:0:765:C:H1'	2.23	0.72
2:9:48:A:O2'	2:9:49:C:H5'	1.88	0.72
1:0:1202:U:H2'	1:0:1203:A:H8	1.53	0.72
1:0:2492:G:H1	1:0:2550:C:H42	1.36	0.72
1:0:1982:C:H4'	1:0:2703:C:O2	1.88	0.72
1:0:841:G:H2'	1:0:842:A:C8	2.25	0.72
1:0:792:U:C2'	1:0:793:G:H5'	2.19	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2669:C:H41	14:L:15:SER:CA	2.03	0.72
1:0:162:C:H2'	1:0:163:A:C8	2.23	0.72
1:0:2456:U:H1'	1:0:2460:G:H22	1.54	0.72
1:0:81:C:H2'	1:0:82:G:O4'	1.90	0.72
1:0:1295:U:H2'	1:0:1296:G:H5'	1.71	0.71
1:0:1267:A:H5''	1:0:1268:U:O5'	1.88	0.71
1:0:208:C:H2'	1:0:209:G:H5'	1.69	0.71
1:0:1445:A:H2'	1:0:1446:U:O4'	1.90	0.71
1:0:2674:C:H2'	1:0:2675:U:H6	1.54	0.71
2:9:61:A:O5'	2:9:61:A:H8	1.73	0.71
1:0:1654:A:H4'	1:0:2690:A:O2'	1.89	0.71
1:0:2503:G:H2'	1:0:2504:G:H5''	1.70	0.71
1:0:2559:U:C5'	4:B:130:GLY:CA	2.68	0.71
1:0:2670:C:H4'	1:0:2846:G:O2'	1.91	0.71
1:0:1040:A:H2'	1:0:1041:G:H5'	1.70	0.71
1:0:1225:G:H2'	1:0:1249:G:H22	1.53	0.71
1:0:1429:A:H62	1:0:1601:U:H5''	1.55	0.71
1:0:1976:U:H2'	1:0:1977:C:C5'	2.17	0.71
1:0:19:C:H5'	1:0:563:U:OP1	1.90	0.71
1:0:2324:G:O2'	1:0:2325:A:H5''	1.90	0.71
1:0:2431:C:O2'	1:0:2485:U:H4'	1.91	0.71
1:0:58:C:H3'	1:0:59:G:C5'	2.19	0.71
1:0:651:C:C2'	1:0:652:C:H5''	2.20	0.71
1:0:331:U:H2'	1:0:332:C:H5''	1.72	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
1:0:2176:U:H2'	1:0:2177:U:O4'	1.91	0.71
1:0:1466:C:H2'	1:0:1467:U:O4'	1.89	0.71
1:0:2185:U:H2'	1:0:2186:G:C8	2.26	0.71
1:0:2198:U:C3'	1:0:2199:C:H5''	2.21	0.71
1:0:2565:C:H4'	1:0:2566:A:H5'	1.71	0.71
32:0:2882:ZIT:C6B	32:0:2882:ZIT:C5A	2.69	0.71
1:0:2321:C:H2'	1:0:2322:U:O4'	1.91	0.70
1:0:618:A:H2'	1:0:619:A:O4'	1.89	0.70
1:0:1479:G:H2'	1:0:1480:G:H8	1.55	0.70
1:0:460:U:N3	1:0:592:G:H1'	2.06	0.70
1:0:2315:A:O2'	1:0:2364:C:H5''	1.91	0.70
1:0:613:A:H2'	1:0:614:G:C8	2.26	0.70
1:0:162:C:H4'	1:0:195:A:H4'	1.71	0.70
1:0:760:U:O2	1:0:1997:A:H1'	1.91	0.70
1:0:953:G:H1'	1:0:1203:A:H2	1.55	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1854:G:H1	1:0:1863:U:H3	1.37	0.70
2:9:71:G:N2	2:9:72:C:H1'	2.07	0.70
1:0:1068:A:H2'	1:0:1069:G:C8	2.27	0.70
1:0:1617:G:H2'	1:0:1618:U:H5'	1.72	0.70
1:0:1284:G:N3	1:0:1633:C:H5'	2.07	0.70
32:0:2881:ZIT:C5A	32:0:2881:ZIT:C6B	2.69	0.70
1:0:523:A:H4'	1:0:1230:C:H5'	1.74	0.70
1:0:1479:G:H2'	1:0:1480:G:C8	2.27	0.70
1:0:1436:G:H21	1:0:1514:C:H1'	1.57	0.70
1:0:1598:C:H2'	1:0:1599:G:O4'	1.91	0.70
1:0:1689:U:C2	1:0:2561:G:H5'	2.27	0.70
1:0:2599:U:C3'	1:0:2600:A:H5''	2.22	0.70
2:9:84:G:O2'	2:9:85:G:H5'	1.91	0.70
1:0:1789:U:H2'	1:0:1790:G:H5'	1.74	0.70
1:0:2202:G:H2'	1:0:2203:G:O4'	1.92	0.70
1:0:236:C:H2'	1:0:237:G:H8	1.57	0.70
1:0:2469:G:H5''	1:0:2470:U:OP1	1.91	0.70
1:0:2841:U:H1'	1:0:2843:A:H1'	1.72	0.70
1:0:245:C:H5'	1:0:372:U:O2'	1.91	0.70
1:0:734:G:H2'	1:0:735:G:H8	1.57	0.69
1:0:788:G:N2	1:0:800:U:H2'	2.07	0.69
1:0:109:A:C3'	1:0:110:U:H5''	2.22	0.69
1:0:2836:U:H2'	1:0:2837:G:C8	2.26	0.69
2:9:4:C:H2'	2:9:5:C:H6	1.57	0.69
1:0:109:A:H2'	1:0:110:U:H5''	1.72	0.69
1:0:486:U:H4'	1:0:520:C:H5'	1.74	0.69
1:0:541:C:H42	1:0:572:G:H8	1.40	0.69
1:0:652:C:H42	1:0:657:A:N6	1.89	0.69
1:0:1091:C:H2'	1:0:1092:U:C6	2.27	0.69
1:0:1869:A:H2'	1:0:1870:U:O4'	1.92	0.69
1:0:2510:A:N6	1:0:2641:A:H61	1.89	0.69
1:0:964:A:H2'	1:0:965:G:H8	1.57	0.69
1:0:1280:U:H3	1:0:1996:A:N6	1.85	0.69
1:0:814:G:H3'	1:0:815:A:H5'	1.73	0.69
1:0:2836:U:H2'	1:0:2837:G:H8	1.57	0.69
1:0:616:U:C2'	1:0:617:U:H5''	2.22	0.69
2:9:6:C:H2'	2:9:7:C:C6	2.26	0.69
1:0:1653:C:H2'	1:0:1654:A:C8	2.28	0.69
1:0:1695:U:H2'	1:0:1696:C:O4'	1.93	0.69
1:0:688:A:N6	1:0:816:U:H3	1.88	0.69
1:0:931:G:N2	1:0:2247:A:H5''	2.08	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2432:A:H4'	1:0:2551:A:O2'	1.93	0.69
1:0:50:G:H2'	1:0:117:A:C2	2.28	0.69
1:0:939:C:H2'	1:0:940:G:C8	2.28	0.69
1:0:462:G:H2'	1:0:463:C:C5'	2.22	0.69
1:0:69:G:H5''	1:0:70:A:OP1	1.93	0.69
1:0:1194:U:H2'	1:0:1195:U:C6	2.28	0.68
1:0:2308:A:H2'	1:0:2309:G:C8	2.28	0.68
1:0:2466:G:H2'	1:0:2467:A:C8	2.28	0.68
1:0:1672:A:C2	1:0:2032:G:H4'	2.28	0.68
2:9:84:G:H2'	2:9:85:G:C8	2.22	0.68
1:0:216:U:H5''	1:0:601:A:N6	2.08	0.68
1:0:187:U:H2'	1:0:188:G:C8	2.28	0.68
1:0:1325:U:H4'	1:0:1326:U:C6	2.28	0.68
1:0:1467:U:H3'	1:0:1468:A:C5'	2.23	0.68
1:0:317:U:C2'	1:0:318:G:H5''	2.24	0.68
1:0:2757:G:H5'	1:0:2761:A:H1'	1.75	0.68
1:0:77:C:H2'	1:0:78:C:C6	2.29	0.68
1:0:1953:A:H1'	1:0:1955:G:C1'	2.23	0.68
1:0:459:A:H1'	1:0:461:A:N6	2.08	0.68
1:0:490:A:O2'	1:0:491:A:H5'	1.93	0.68
1:0:1474:A:N3	1:0:1474:A:H3'	2.09	0.68
1:0:71:A:N6	1:0:110:U:H4'	2.09	0.68
1:0:1727:C:H4'	1:0:2833:C:N3	2.09	0.67
1:0:2761:A:H5''	1:0:2762:G:H5'	1.77	0.67
1:0:1197:U:H2'	1:0:1198:C:O4'	1.94	0.67
1:0:1791:C:O2'	1:0:1793:A:H5'	1.94	0.67
1:0:1966:C:H4'	1:0:2585:C:C4'	2.14	0.67
1:0:2199:C:H2'	1:0:2200:G:C8	2.29	0.67
1:0:2491:C:H3'	1:0:2492:G:H5''	1.77	0.67
1:0:239:A:H4'	1:0:620:G:H5'	1.75	0.67
1:0:13:A:H1'	1:0:536:A:N6	2.08	0.67
1:0:2469:G:H4'	1:0:2470:U:C5	2.30	0.67
1:0:1949:A:O2'	1:0:2572:U:H5'	1.95	0.67
1:0:2829:A:H2'	1:0:2830:U:O4'	1.95	0.67
1:0:1312:G:H5''	1:0:1313:U:C5'	2.25	0.67
1:0:1762:C:O2'	1:0:1777:A:H1'	1.95	0.67
1:0:652:C:N4	1:0:657:A:H61	1.92	0.67
1:0:951:G:C2'	1:0:952:A:H5''	2.24	0.67
1:0:1271:C:H2'	1:0:1272:G:C8	2.30	0.67
1:0:1588:A:H2'	1:0:1589:G:H8	1.59	0.67
1:0:2708:U:H2'	1:0:2709:C:C6	2.30	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2781:G:H2'	1:0:2782:G:O4'	1.94	0.67
1:0:2691:C:H3'	1:0:2692:A:C5'	2.24	0.67
1:0:1302:C:O2'	1:0:1343:C:H4'	1.94	0.66
1:0:170:U:H2'	1:0:171:G:H8	1.60	0.66
1:0:313:U:H2'	1:0:314:G:C8	2.29	0.66
1:0:820:U:H1'	1:0:2424:G:OP1	1.95	0.66
1:0:1763:G:N2	1:0:1765:C:H5''	2.10	0.66
32:0:2882:ZIT:O13	32:0:2882:ZIT:C16	2.43	0.66
1:0:1547:U:H2'	1:0:1548:U:C6	2.30	0.66
2:9:29:C:H2'	2:9:30:C:C6	2.31	0.66
1:0:1029:C:H3'	1:0:1030:U:H5''	1.76	0.66
1:0:999:A:H4'	1:0:1166:A:N1	2.11	0.66
1:0:1325:U:H4'	1:0:1326:U:C5	2.30	0.66
1:0:118:U:H1'	1:0:143:A:C8	2.31	0.66
1:0:2274:C:H2'	1:0:2275:U:H5''	1.75	0.66
1:0:2785:A:H2'	1:0:2786:G:O4'	1.96	0.66
1:0:427:C:H2'	1:0:428:A:H8	1.59	0.66
1:0:951:G:C3'	1:0:952:A:H5''	2.25	0.66
1:0:1371:G:H1'	1:0:1386:A:N6	2.10	0.66
1:0:1440:G:H1'	1:0:1588:A:H61	1.59	0.66
1:0:2674:C:H2'	1:0:2675:U:C6	2.31	0.66
2:9:40:C:H2'	2:9:41:A:O4'	1.96	0.66
1:0:1452:U:H5''	1:0:1533:G:H5'	1.78	0.66
1:0:2390:A:H2'	1:0:2391:A:H8	1.60	0.66
1:0:2523:G:H1'	1:0:2625:U:H5'	1.77	0.66
1:0:699:G:H21	1:0:700:C:H5''	1.60	0.66
1:0:734:G:H2'	1:0:735:G:C8	2.30	0.66
1:0:88:G:H3'	1:0:89:A:C5'	2.24	0.66
1:0:930:A:H5'	1:0:931:G:N7	2.10	0.66
1:0:9:U:H3	1:0:2608:A:N6	1.93	0.66
1:0:109:A:C2'	1:0:110:U:H5''	2.26	0.66
1:0:2308:A:H2'	1:0:2309:G:H8	1.59	0.66
1:0:2476:A:O2'	1:0:2477:C:H5	1.73	0.66
1:0:705:C:H2'	1:0:706:A:C8	2.31	0.66
1:0:2783:U:O2'	1:0:2784:A:H4'	1.95	0.66
1:0:797:A:H2'	1:0:805:G:O4'	1.95	0.66
1:0:1851:A:H61	1:0:1867:A:H1'	1.60	0.66
1:0:2081:U:C2'	1:0:2082:C:H5''	2.21	0.66
1:0:2811:G:H2'	1:0:2812:A:C8	2.31	0.66
1:0:564:U:H2'	1:0:565:A:C8	2.31	0.66
1:0:942:U:C2'	1:0:943:U:H5'	2.26	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:62:C:N4	2:9:63:A:H62	1.93	0.66
1:0:1301:U:H2'	1:0:1664:G:H21	1.61	0.65
1:0:2375:G:H2'	1:0:2376:G:H8	1.60	0.65
1:0:367:G:C2'	1:0:368:A:H5''	2.26	0.65
1:0:1055:A:H2	1:0:1121:G:H2'	1.60	0.65
1:0:2158:C:H2'	1:0:2159:A:H8	1.61	0.65
1:0:2605:C:H2'	1:0:2606:G:O4'	1.95	0.65
1:0:632:A:H2'	1:0:633:G:O4'	1.96	0.65
1:0:694:G:H2'	1:0:695:G:H8	1.61	0.65
1:0:2491:C:H2'	1:0:2492:G:C4'	2.26	0.65
1:0:2522:G:H21	1:0:2625:U:H5''	1.61	0.65
1:0:1811:A:H1'	1:0:1813:A:C4	2.31	0.65
1:0:1480:G:H2'	1:0:1481:U:H5'	1.78	0.65
1:0:1958:G:H2'	1:0:1959:U:C6	2.31	0.65
1:0:2510:A:H61	1:0:2641:A:N6	1.95	0.65
1:0:818:G:N2	1:0:2051:U:H5''	2.09	0.65
1:0:2199:C:H2'	1:0:2200:G:H8	1.61	0.65
1:0:2279:G:H2'	1:0:2280:A:H8	1.61	0.65
1:0:2579:A:H2'	1:0:2580:C:C6	2.30	0.65
1:0:2240:C:H2'	1:0:2241:U:H5'	1.78	0.65
1:0:2491:C:H2'	1:0:2492:G:O4'	1.97	0.65
1:0:1529:C:H2'	1:0:1530:U:O4'	1.97	0.65
1:0:509:U:H2'	1:0:510:G:H5'	1.77	0.65
1:0:190:A:H2'	1:0:191:G:C8	2.32	0.65
1:0:2122:G:H2'	1:0:2123:G:C8	2.32	0.65
2:9:115:G:O2'	2:9:116:C:H5'	1.97	0.65
1:0:1388:C:H2'	1:0:1389:C:H6	1.62	0.64
1:0:492:G:H22	1:0:519:C:H42	1.43	0.64
1:0:669:G:H2'	1:0:670:U:C6	2.32	0.64
1:0:17:G:H2'	1:0:18:U:C6	2.33	0.64
1:0:459:A:N6	1:0:484:G:H1'	2.12	0.64
1:0:995:A:H5''	1:0:996:C:H5	1.62	0.64
1:0:2609:G:H21	1:0:2866:A:H2	1.46	0.64
1:0:1181:C:C3'	1:0:1182:U:H5''	2.28	0.64
1:0:1561:A:H2'	1:0:1562:G:O4'	1.98	0.64
1:0:1804:U:H2'	1:0:1805:G:C8	2.31	0.64
1:0:2437:G:H2'	1:0:2469:G:N1	2.12	0.64
1:0:1838:G:H2'	1:0:1839:A:H5'	1.80	0.64
1:0:2261:G:H4'	1:0:2262:C:OP2	1.95	0.64
1:0:1680:U:O2'	1:0:2665:G:H4'	1.97	0.64
1:0:414:A:H2'	1:0:415:A:O4'	1.97	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:42:U:C2'	2:9:45:C:H41	2.08	0.64
1:0:2273:C:H2'	1:0:2274:C:C6	2.32	0.64
1:0:840:U:H4'	1:0:841:G:C2	2.33	0.64
1:0:114:C:O2'	1:0:124:A:H1'	1.97	0.64
1:0:509:U:H3	1:0:513:A:H62	1.44	0.64
1:0:890:U:H2'	1:0:891:A:C8	2.32	0.64
1:0:929:A:C3'	1:0:930:A:H5''	2.26	0.64
2:9:63:A:H2'	2:9:64:C:H6	1.63	0.64
1:0:1591:U:H2'	1:0:1592:U:O4'	1.98	0.64
1:0:2158:C:H2'	1:0:2159:A:C8	2.33	0.64
1:0:820:U:H2'	1:0:821:A:H8	1.62	0.64
1:0:109:A:H3'	1:0:110:U:H5''	1.78	0.64
1:0:1495:G:H2'	1:0:1496:G:C8	2.32	0.64
1:0:1502:G:O2'	1:0:1503:G:H5'	1.98	0.64
1:0:987:G:H5'	1:0:1167:A:N6	2.13	0.64
1:0:1029:C:C3'	1:0:1030:U:H5''	2.28	0.63
1:0:2082:C:H2'	1:0:2083:G:O4'	1.98	0.63
1:0:2395:C:H2'	1:0:2396:C:H5''	1.80	0.63
1:0:2478:C:H2'	1:0:2479:U:H5'	1.80	0.63
1:0:968:C:H41	1:0:970:A:H1'	1.63	0.63
1:0:520:C:O2'	1:0:1249:G:H5'	1.99	0.63
1:0:1073:G:H3'	1:0:1074:G:H5''	1.81	0.63
1:0:208:C:C2'	1:0:209:G:H5'	2.28	0.63
1:0:2480:C:H4'	1:0:2482:A:C4'	2.29	0.63
1:0:2507:U:O2'	1:0:2508:G:H3'	1.98	0.63
1:0:168:A:H2'	1:0:169:C:H6	1.63	0.63
1:0:1139:A:O2'	1:0:2495:G:H4'	1.98	0.63
1:0:2770:A:C4'	1:0:2867:G:H22	2.12	0.63
1:0:2866:A:H2'	1:0:2867:G:O4'	1.99	0.63
1:0:427:C:H2'	1:0:428:A:C8	2.33	0.63
1:0:824:U:H4'	1:0:1264:C:H1'	1.80	0.63
1:0:1587:A:H2'	1:0:1588:A:H8	1.63	0.63
1:0:792:U:H2'	1:0:793:G:C5'	2.26	0.63
1:0:1004:A:H2'	1:0:1005:U:H5''	1.80	0.63
1:0:139:A:H2'	1:0:140:G:H8	1.64	0.63
1:0:1911:A:C2'	1:0:1912:G:H5'	2.29	0.63
1:0:1974:U:C2'	1:0:1975:G:H5''	2.29	0.63
1:0:2380:U:C2'	1:0:2381:A:H5'	2.26	0.63
1:0:163:A:H2'	1:0:164:G:H8	1.64	0.63
1:0:165:G:H2'	1:0:166:G:O4'	1.99	0.63
1:0:1918:G:H1'	1:0:1947:G:C2	2.33	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:174:A:C4'	1:0:2051:U:H2'	2.29	0.63
1:0:2057:U:H2'	1:0:2058:U:C6	2.34	0.63
1:0:2787:A:O2'	1:0:2788:C:H5'	1.99	0.63
1:0:1268:U:H5'	1:0:1269:G:H5''	1.81	0.63
1:0:1376:C:H2'	1:0:1377:G:O4'	1.99	0.63
1:0:1641:C:H2'	1:0:1642:G:O4'	1.99	0.63
1:0:2456:U:H1'	1:0:2460:G:N2	2.13	0.63
1:0:2781:G:H2'	1:0:2782:G:C1'	2.29	0.63
1:0:441:A:H2'	1:0:442:A:O4'	1.99	0.63
1:0:2633:A:H2	1:0:2644:A:H5''	1.64	0.62
1:0:401:G:H2'	1:0:403:A:N7	2.14	0.62
1:0:1473:U:H4'	1:0:1474:A:C5	2.34	0.62
1:0:1972:G:H2'	1:0:1973:C:O4'	1.99	0.62
1:0:2012:A:C5	1:0:2014:A:H5'	2.35	0.62
1:0:2085:G:H2'	1:0:2086:U:C6	2.34	0.62
1:0:184:A:H4'	1:0:812:G:H4'	1.81	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
1:0:1789:U:O2'	1:0:1793:A:H1'	2.00	0.62
1:0:2521:A:H5'	1:0:2522:G:OP1	1.98	0.62
1:0:2839:G:H2'	1:0:2840:U:C6	2.33	0.62
1:0:1054:C:H2'	1:0:1055:A:H5'	1.81	0.62
1:0:1329:U:H5'	1:0:1405:A:H1'	1.80	0.62
1:0:2495:G:H2'	1:0:2496:C:C6	2.35	0.62
1:0:1743:C:H41	16:N:125:MET:CA	2.11	0.62
1:0:1204:G:H2'	1:0:1205:G:C8	2.34	0.62
1:0:1313:U:H1'	1:0:1642:G:N2	2.14	0.62
1:0:2273:C:H2'	1:0:2274:C:H6	1.65	0.62
1:0:2475:C:H2'	1:0:2476:A:O4'	1.99	0.62
1:0:644:A:H2'	1:0:645:G:H5'	1.81	0.62
1:0:5:A:H2'	1:0:6:A:H8	1.63	0.62
1:0:1257:U:H2'	1:0:1258:G:C8	2.35	0.62
1:0:1319:C:H2'	1:0:1320:A:C8	2.32	0.62
1:0:1707:A:N7	1:0:1714:A:H2	1.98	0.62
1:0:2672:U:H2'	1:0:2673:G:C8	2.33	0.62
1:0:338:G:C2'	1:0:339:U:H5'	2.29	0.62
1:0:223:C:H4'	1:0:398:C:H1'	1.81	0.62
1:0:2770:A:C5'	1:0:2867:G:H1	2.13	0.62
1:0:1560:A:H2'	1:0:1561:A:O4'	2.00	0.62
1:0:2011:U:H2'	1:0:2012:A:C8	2.35	0.62
1:0:2377:U:H2'	1:0:2378:G:C8	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:782:U:H2'	1:0:783:G:C8	2.35	0.62
1:0:927:C:H2'	1:0:928:G:O4'	1.99	0.62
2:9:114:C:O5'	2:9:114:C:H6	1.82	0.62
1:0:1191:G:H2'	1:0:1192:A:H8	1.65	0.61
1:0:1528:C:H2'	1:0:1529:C:H5''	1.82	0.61
1:0:1429:A:N6	1:0:1602:G:H5'	2.15	0.61
1:0:2001:G:H2'	1:0:2002:A:C8	2.35	0.61
1:0:210:A:N6	1:0:442:A:H61	1.97	0.61
1:0:888:G:H2'	1:0:889:C:O4'	2.00	0.61
1:0:942:U:O2'	1:0:943:U:H5'	2.00	0.61
1:0:2598:C:H2'	1:0:2599:U:C6	2.35	0.61
32:0:2881:ZIT:C6A	32:0:2881:ZIT:H193	2.30	0.61
1:0:460:U:H3	1:0:592:G:H1'	1.64	0.61
1:0:1352:G:H2'	1:0:1353:A:C8	2.35	0.61
1:0:550:C:H2'	1:0:551:A:C8	2.36	0.61
2:9:56:G:H2'	2:9:57:U:O4'	1.99	0.61
1:0:1690:U:H2'	1:0:1691:G:H5'	1.81	0.61
1:0:1730:G:H2'	1:0:1731:C:C6	2.35	0.61
1:0:1760:G:O2'	1:0:1761:G:H5'	2.01	0.61
1:0:321:A:H2'	1:0:323:G:N7	2.15	0.61
1:0:483:A:H2'	1:0:484:G:H5'	1.82	0.61
1:0:614:G:H2'	1:0:615:C:H6	1.64	0.61
1:0:1057:A:H3'	1:0:1058:G:C5'	2.31	0.61
1:0:2764:U:H2'	1:0:2765:C:C6	2.36	0.61
32:0:2881:ZIT:C5A	32:0:2881:ZIT:H6B2	2.30	0.61
32:0:2882:ZIT:H6B2	32:0:2882:ZIT:C5A	2.30	0.61
1:0:683:A:H5''	1:0:684:C:OP1	2.01	0.61
1:0:929:A:H2'	1:0:930:A:C4'	2.31	0.61
1:0:141:G:H2'	1:0:142:U:C6	2.36	0.61
1:0:1717:A:H2'	1:0:1718:A:H5'	1.81	0.61
1:0:1921:A:H2'	1:0:1922:U:H5''	1.81	0.61
1:0:2686:C:H2'	1:0:2687:G:C8	2.35	0.61
1:0:857:U:C2'	1:0:858:G:H5'	2.31	0.61
1:0:1196:G:C2'	1:0:1197:U:H5'	2.30	0.61
1:0:1937:G:N3	1:0:2530:C:H5'	2.16	0.61
1:0:2721:A:H2'	1:0:2722:C:O4'	2.01	0.61
1:0:697:G:H1	1:0:807:A:H2	1.47	0.61
1:0:870:C:H2'	1:0:871:U:C6	2.36	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
1:0:1194:U:H2'	1:0:1195:U:C5	2.35	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:775:U:O2	1:0:1445:A:H5''	2.00	0.61
1:0:1588:A:H2'	1:0:1589:G:C8	2.36	0.61
1:0:202:A:H2'	1:0:203:G:O4'	2.01	0.61
1:0:2713:A:H2'	1:0:2714:A:C8	2.36	0.61
1:0:574:C:H4'	1:0:1266:G:O6	2.01	0.61
1:0:657:A:H2'	1:0:658:G:C8	2.36	0.61
1:0:1225:G:H2'	1:0:1249:G:N2	2.16	0.60
1:0:146:C:H2'	1:0:147:G:C8	2.36	0.60
1:0:1514:C:H5'	1:0:1593:C:C5'	2.31	0.60
1:0:1710:U:H3	1:0:1821:A:H61	1.48	0.60
1:0:2437:G:H1	1:0:2469:G:H2'	1.64	0.60
1:0:2872:U:H2'	1:0:2873:G:H8	1.63	0.60
2:9:58:G:H4'	2:9:59:A:C5'	2.29	0.60
1:0:2633:A:H5''	1:0:2634:G:OP1	2.02	0.60
1:0:639:G:H2'	1:0:640:C:C6	2.36	0.60
1:0:798:G:C2'	1:0:799:C:H5'	2.30	0.60
1:0:2463:G:O2'	1:0:2464:G:H5'	2.01	0.60
1:0:62:U:H2'	1:0:63:A:C8	2.36	0.60
1:0:976:C:H5'	1:0:2252:A:C1'	2.31	0.60
1:0:2177:U:H2'	1:0:2178:U:C6	2.35	0.60
32:0:2881:ZIT:H5A1	32:0:2881:ZIT:H6B2	1.83	0.60
32:0:2882:ZIT:C6A	32:0:2882:ZIT:H193	2.30	0.60
2:9:113:G:H2'	2:9:114:C:C6	2.36	0.60
1:0:1889:G:H2'	1:0:1890:G:C8	2.37	0.60
1:0:2617:G:H21	1:0:2758:A:H62	1.48	0.60
1:0:2770:A:H5'	1:0:2867:G:H1	1.66	0.60
1:0:330:C:O2'	1:0:331:U:H5'	2.00	0.60
1:0:973:U:H4'	1:0:2475:C:O2'	2.01	0.60
1:0:2713:A:H2'	1:0:2714:A:H8	1.67	0.60
1:0:542:A:C2'	1:0:543:G:H5'	2.32	0.60
1:0:1295:U:C2'	1:0:1296:G:H5'	2.31	0.60
1:0:2194:A:C2'	1:0:2195:C:H5''	2.32	0.60
1:0:538:A:H2'	1:0:539:A:H5''	1.82	0.60
2:9:42:U:O5'	2:9:42:U:H6	1.83	0.60
1:0:1086:C:C2'	1:0:1087:C:H5''	2.29	0.60
1:0:1782:A:H62	1:0:1820:G:H2'	1.67	0.60
1:0:2398:U:H2'	1:0:2399:C:C6	2.36	0.60
1:0:2754:C:H2'	1:0:2755:A:C8	2.36	0.60
1:0:108:G:H2'	1:0:109:A:C8	2.37	0.60
1:0:1184:G:H2'	1:0:1185:C:H5''	1.83	0.60
1:0:2173:G:H2'	1:0:2174:G:O4'	2.01	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2768:C:H1'	1:0:2784:A:N7	2.17	0.60
1:0:797:A:C4	1:0:805:G:H1'	2.36	0.60
1:0:174:A:O4'	1:0:2051:U:H2'	2.01	0.59
1:0:2096:U:C2'	1:0:2097:A:H5''	2.28	0.59
1:0:2307:A:H2'	1:0:2308:A:C8	2.36	0.59
1:0:2691:C:C3'	1:0:2692:A:H5''	2.31	0.59
1:0:2736:U:O2'	1:0:2737:A:H5'	2.02	0.59
1:0:411:C:OP1	1:0:2073:A:H1'	2.02	0.59
1:0:1540:C:H2'	1:0:1541:G:O4'	2.02	0.59
1:0:2240:C:H2'	1:0:2241:U:C5'	2.31	0.59
1:0:761:G:O6	1:0:764:A:H4'	2.03	0.59
2:9:102:A:H2'	2:9:103:A:H5'	1.84	0.59
1:0:1517:C:H2'	1:0:1518:C:C6	2.37	0.59
32:0:2882:ZIT:H5A1	32:0:2882:ZIT:H6B2	1.83	0.59
1:0:1067:G:H21	1:0:1115:C:N4	2.00	0.59
1:0:1312:G:H4'	1:0:1314:A:C4	2.37	0.59
1:0:2119:A:O2'	1:0:2120:C:H5'	2.01	0.59
1:0:2800:C:H2'	1:0:2801:A:O4'	2.02	0.59
1:0:1672:A:C2	1:0:1673:C:H1'	2.38	0.59
1:0:1790:G:H4'	1:0:1791:C:C5	2.38	0.59
1:0:2083:G:H2'	1:0:2084:G:C8	2.37	0.59
1:0:837:U:H1'	1:0:2337:A:N7	2.17	0.59
1:0:1604:A:H2'	1:0:1605:A:O4'	2.02	0.59
1:0:694:G:H2'	1:0:695:G:C8	2.37	0.59
1:0:1055:A:OP1	1:0:1057:A:H5'	2.03	0.59
1:0:2274:C:H2'	1:0:2275:U:C5'	2.32	0.59
1:0:1259:A:O2'	1:0:1260:A:H5'	2.03	0.59
1:0:1707:A:H2'	1:0:1708:C:H5'	1.84	0.59
1:0:1837:G:H2'	1:0:1838:G:H8	1.67	0.59
1:0:451:A:H2'	1:0:452:G:C8	2.38	0.59
1:0:843:G:O2'	1:0:844:G:OP1	2.21	0.59
2:9:55:C:O5'	2:9:55:C:H6	1.85	0.59
1:0:2163:U:H2'	1:0:2164:G:C8	2.38	0.59
1:0:2299:A:H5''	1:0:2300:G:O5'	2.03	0.59
1:0:2678:C:H2'	1:0:2679:G:C8	2.38	0.59
1:0:340:G:H1'	1:0:488:A:H1'	1.84	0.59
1:0:581:A:C2	1:0:582:G:H1'	2.38	0.59
2:9:78:A:H2'	2:9:79:U:C5	2.38	0.59
1:0:1245:G:H2'	1:0:1246:G:H8	1.67	0.59
1:0:1259:A:C2'	1:0:1260:A:H5'	2.32	0.59
1:0:2422:C:H2'	1:0:2423:G:H8	1.68	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:770:U:O2'	1:0:771:C:H5'	2.02	0.59
1:0:775:U:H4'	1:0:776:G:C8	2.38	0.59
1:0:1312:G:C5'	1:0:1314:A:H1'	2.30	0.58
1:0:313:U:H2'	1:0:314:G:H8	1.68	0.58
1:0:646:C:O2	1:0:650:U:H4'	2.03	0.58
1:0:979:A:H2'	1:0:980:G:O4'	2.03	0.58
1:0:982:C:H4'	1:0:994:A:O2'	2.02	0.58
1:0:1065:A:H2'	1:0:1066:G:H8	1.67	0.58
1:0:1644:G:O2'	1:0:1645:U:H5'	2.04	0.58
1:0:1679:U:C3'	1:0:1680:U:H5''	2.33	0.58
1:0:2466:G:H2'	1:0:2467:A:H8	1.67	0.58
1:0:66:U:H2'	1:0:67:G:C8	2.38	0.58
1:0:681:A:C6	1:0:683:A:H2'	2.39	0.58
1:0:752:G:H5'	1:0:1775:A:N6	2.16	0.58
2:9:111:C:H5''	2:9:112:A:O5'	2.03	0.58
1:0:1252:C:O2'	1:0:1253:C:H5''	2.03	0.58
1:0:1691:G:H21	1:0:1694:A:H61	1.51	0.58
1:0:1004:A:H2'	1:0:1005:U:C5'	2.32	0.58
1:0:2478:C:C2'	1:0:2479:U:H5'	2.34	0.58
1:0:1949:A:H1'	1:0:2572:U:H4'	1.86	0.58
1:0:705:C:H2'	1:0:706:A:H8	1.68	0.58
1:0:76:C:H6	1:0:76:C:H5'	1.68	0.58
1:0:1217:U:H2'	1:0:1218:C:C6	2.37	0.58
1:0:1304:U:O2'	1:0:1305:C:H5'	2.02	0.58
1:0:2437:G:H2'	1:0:2469:G:H1	1.67	0.58
1:0:2660:C:O2'	1:0:2661:G:H5'	2.04	0.58
1:0:425:A:H2'	1:0:426:C:O4'	2.02	0.58
2:9:20:A:O2'	2:9:21:C:H5'	2.03	0.58
1:0:1436:G:N2	1:0:1514:C:H1'	2.19	0.58
1:0:2779:C:H2'	1:0:2780:A:C8	2.39	0.58
2:9:18:G:H2'	2:9:19:C:C6	2.38	0.58
1:0:114:C:H2'	1:0:115:G:C8	2.39	0.58
1:0:1253:C:H2'	1:0:1254:G:O4'	2.03	0.58
1:0:1336:G:H2'	1:0:1337:G:H5'	1.86	0.58
1:0:1537:U:H2'	1:0:1538:A:C8	2.39	0.58
1:0:1975:G:N2	1:0:1978:U:H5	2.00	0.58
1:0:357:A:H3'	1:0:358:C:O4'	2.04	0.58
1:0:445:A:O2'	1:0:446:C:H5'	2.04	0.58
1:0:595:A:H62	1:0:1264:C:H42	1.52	0.58
1:0:133:C:H2'	1:0:134:G:O4'	2.03	0.58
1:0:1699:A:N6	1:0:1723:U:H3	2.02	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1991:C:H2'	1:0:1992:G:H8	1.68	0.58
1:0:2164:G:H2'	1:0:2165:A:H8	1.69	0.58
1:0:2318:U:H2'	1:0:2319:G:C8	2.36	0.58
1:0:616:U:C3'	1:0:617:U:H5''	2.34	0.58
1:0:754:G:N2	1:0:770:U:H1'	2.18	0.58
1:0:1196:G:H2'	1:0:1197:U:O4'	2.03	0.58
1:0:462:G:H2'	1:0:463:C:H5''	1.84	0.58
1:0:764:A:H2'	1:0:764:A:N3	2.19	0.58
1:0:1057:A:H3'	1:0:1058:G:H5''	1.86	0.58
1:0:226:C:H4'	1:0:227:G:C8	2.38	0.58
1:0:2470:U:H2'	1:0:2471:U:H6	1.68	0.58
32:0:2882:ZIT:H5A1	32:0:2882:ZIT:C6B	2.34	0.58
1:0:312:G:OP1	1:0:312:G:H4'	2.03	0.58
1:0:459:A:H1'	1:0:461:A:H62	1.67	0.58
1:0:871:U:H1'	1:0:2248:A:H5''	1.85	0.58
1:0:1346:C:P	1:0:1346:C:H6	2.27	0.57
1:0:1791:C:H1'	1:0:1793:A:C5'	2.33	0.57
1:0:1830:C:H42	1:0:1881:U:H3'	1.69	0.57
1:0:1994:U:H2'	1:0:1995:G:H5'	1.86	0.57
1:0:2194:A:H2'	1:0:2195:C:H5''	1.86	0.57
32:0:2881:ZIT:H5A1	32:0:2881:ZIT:C6B	2.34	0.57
1:0:487:G:H1'	1:0:515:A:C2	2.39	0.57
1:0:663:G:H2'	1:0:664:C:O4'	2.03	0.57
1:0:944:A:H2'	1:0:945:G:O4'	2.04	0.57
1:0:1333:G:C6	1:0:1342:U:H5'	2.38	0.57
1:0:1480:G:C2'	1:0:1481:U:H5'	2.34	0.57
1:0:175:C:H1'	1:0:2413:A:H61	1.69	0.57
1:0:2020:G:H2'	1:0:2021:G:C8	2.39	0.57
1:0:2737:A:H2'	1:0:2738:A:H5'	1.85	0.57
1:0:2782:G:H3'	1:0:2783:U:H5''	1.86	0.57
1:0:2788:C:O2'	1:0:2789:U:H5'	2.04	0.57
1:0:1195:U:H2'	1:0:1196:G:H8	1.69	0.57
1:0:1278:A:H4'	1:0:1279:G:O5'	2.04	0.57
1:0:1763:G:H2'	1:0:1764:A:C4'	2.34	0.57
1:0:2390:A:H2'	1:0:2391:A:C8	2.39	0.57
1:0:2727:G:C2'	1:0:2728:A:H5''	2.34	0.57
1:0:369:C:H2'	1:0:370:U:O4'	2.04	0.57
1:0:1418:C:H2'	1:0:1419:G:H8	1.69	0.57
1:0:1558:C:C2'	1:0:1559:G:H5'	2.34	0.57
1:0:1583:A:H8	1:0:1583:A:O5'	1.87	0.57
1:0:1621:C:H2'	1:0:1622:G:O4'	2.05	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1785:A:H2'	1:0:1786:C:C6	2.39	0.57
1:0:2488:G:H2'	1:0:2489:C:C6	2.39	0.57
1:0:2799:C:H2'	1:0:2800:C:O4'	2.04	0.57
1:0:1313:U:C4	1:0:1651:U:H5'	2.40	0.57
1:0:1816:G:O2'	1:0:1817:U:H5'	2.05	0.57
1:0:2044:G:H21	1:0:2045:A:H62	1.52	0.57
1:0:2589:C:H1'	32:0:2881:ZIT:H7B2	1.86	0.57
1:0:777:A:H62	1:0:1767:G:H1'	1.69	0.57
1:0:1290:A:H2'	1:0:1291:G:C8	2.40	0.57
1:0:203:G:O2'	1:0:204:A:H5'	2.04	0.57
1:0:2243:C:H2'	1:0:2244:C:O4'	2.04	0.57
1:0:941:U:H4'	1:0:941:U:OP1	2.04	0.57
1:0:165:G:H4'	1:0:1378:A:C2	2.39	0.57
1:0:1664:G:O5'	1:0:1665:C:OP1	2.22	0.57
1:0:2005:U:H5''	1:0:2006:G:OP1	2.03	0.57
1:0:54:G:H2'	1:0:55:A:H8	1.70	0.57
1:0:936:A:H2'	1:0:937:C:C6	2.40	0.57
1:0:1271:C:H2'	1:0:1272:G:H8	1.68	0.57
1:0:1736:C:H2'	1:0:1737:G:C8	2.39	0.57
1:0:185:C:O2'	1:0:186:C:H5'	2.04	0.57
1:0:2492:G:H2'	1:0:2493:U:H6	1.70	0.57
1:0:2633:A:C2	1:0:2644:A:H5''	2.39	0.57
1:0:2841:U:H1'	1:0:2843:A:C1'	2.35	0.57
1:0:659:G:H2'	1:0:660:G:C8	2.40	0.57
1:0:1312:G:H4'	1:0:1314:A:N3	2.20	0.57
1:0:1392:U:H2'	1:0:1393:G:H5'	1.87	0.57
1:0:1729:C:H2'	1:0:1730:G:C8	2.40	0.57
1:0:2503:G:C2'	1:0:2504:G:H5''	2.34	0.57
1:0:2607:C:H3'	1:0:2608:A:H5'	1.86	0.57
1:0:2756:A:C6	1:0:2762:G:H1'	2.39	0.57
1:0:334:G:N3	1:0:344:G:H1'	2.20	0.57
1:0:36:G:H1'	1:0:462:G:H21	1.69	0.57
1:0:958:G:H2'	1:0:959:C:C6	2.40	0.57
1:0:1311:C:H5'	1:0:1315:A:N6	2.20	0.57
1:0:1336:G:C2'	1:0:1337:G:H5'	2.35	0.57
1:0:1958:G:H2'	1:0:1959:U:H6	1.70	0.57
2:9:102:A:OP2	2:9:102:A:H8	1.88	0.57
1:0:1182:U:C3'	1:0:1183:C:H5''	2.34	0.56
1:0:1825:C:C2'	1:0:1826:U:H5'	2.35	0.56
1:0:1727:C:H4'	1:0:2833:C:C2	2.40	0.56
1:0:758:G:N2	1:0:765:C:O2	2.38	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:128:C:H2'	1:0:129:A:C4'	2.35	0.56
1:0:195:A:N1	1:0:212:U:H4'	2.20	0.56
1:0:2261:G:H5''	1:0:2262:C:O5'	2.04	0.56
1:0:2422:C:H2'	1:0:2423:G:C8	2.40	0.56
1:0:2769:C:H2'	1:0:2770:A:H5'	1.86	0.56
1:0:929:A:O2'	2:9:101:A:H4'	2.05	0.56
2:9:34:C:C2'	2:9:35:C:H5'	2.35	0.56
1:0:1039:A:H61	1:0:1136:G:H2'	1.70	0.56
1:0:1322:G:H21	1:0:1627:C:H5'	1.70	0.56
1:0:1698:C:O2'	1:0:1753:A:H2'	2.06	0.56
1:0:2266:A:C2	1:0:2268:G:H1'	2.40	0.56
1:0:475:U:H2'	1:0:476:G:O4'	2.05	0.56
1:0:577:U:H2'	1:0:579:G:OP2	2.05	0.56
1:0:831:G:C2'	1:0:832:A:H5''	2.36	0.56
1:0:978:U:H2'	1:0:979:A:C8	2.40	0.56
1:0:1677:C:O2'	1:0:1678:G:H5'	2.04	0.56
1:0:604:U:H2'	1:0:605:G:C8	2.40	0.56
2:9:93:G:H2'	2:9:94:G:C8	2.32	0.56
1:0:1196:G:H2'	1:0:1197:U:H5'	1.87	0.56
1:0:1313:U:H4'	1:0:1314:A:O5'	2.05	0.56
1:0:1441:A:N3	1:0:1441:A:H2'	2.21	0.56
1:0:1374:G:O2'	1:0:2193:C:H1'	2.06	0.56
1:0:2642:G:O2'	1:0:2643:G:H5'	2.06	0.56
1:0:2686:C:H2'	1:0:2687:G:H8	1.70	0.56
1:0:572:G:OP2	1:0:581:A:H5'	2.06	0.56
1:0:703:A:O2'	1:0:704:G:H5'	2.05	0.56
1:0:178:C:H2'	1:0:179:U:C6	2.40	0.56
1:0:2490:U:H2'	1:0:2491:C:C6	2.40	0.56
1:0:2495:G:H2'	1:0:2496:C:O4'	2.06	0.56
1:0:2538:C:O2'	1:0:2539:C:H5'	2.06	0.56
1:0:452:G:H2'	1:0:453:U:O4'	2.06	0.56
2:9:34:C:H2'	2:9:35:C:O4'	2.05	0.56
1:0:1095:A:H2'	1:0:1096:A:O4'	2.05	0.56
1:0:12:U:H2'	1:0:13:A:O4'	2.05	0.56
1:0:1333:G:N2	1:0:1344:C:H41	2.04	0.56
1:0:1430:G:H22	1:0:1599:G:H1'	1.71	0.56
1:0:1790:G:HO2'	1:0:1791:C:H5	1.52	0.56
1:0:1826:U:O2'	1:0:1952:A:H2'	2.05	0.56
1:0:2489:C:H41	1:0:2554:C:H42	1.54	0.56
1:0:2633:A:N6	1:0:2646:C:H42	2.04	0.56
1:0:308:C:H2'	1:0:309:G:O4'	2.06	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:653:G:H2'	1:0:654:A:H4'	1.86	0.56
1:0:1288:A:H62	1:0:1309:G:C4'	2.19	0.56
1:0:1300:A:C2	1:0:1666:G:H4'	2.41	0.56
1:0:1312:G:H5''	1:0:1313:U:H5'	1.86	0.56
1:0:1356:G:H5''	1:0:1614:C:OP2	2.05	0.56
1:0:2105:U:H2'	1:0:2106:G:C8	2.41	0.56
1:0:2549:G:N2	1:0:2550:C:H1'	2.21	0.56
1:0:746:G:O6	1:0:774:A:H2'	2.05	0.56
1:0:847:C:H2'	1:0:848:A:C8	2.40	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
1:0:1683:G:C2'	1:0:1684:G:H5'	2.35	0.56
1:0:753:U:H5'	1:0:1775:A:H62	1.69	0.56
1:0:191:G:O2'	1:0:192:G:H5'	2.06	0.56
1:0:2162:C:H2'	1:0:2163:U:C6	2.41	0.56
1:0:2425:G:H2'	1:0:2480:C:N4	2.20	0.56
1:0:24:G:H2'	1:0:25:U:C6	2.40	0.56
1:0:692:C:H2'	1:0:693:A:H8	1.71	0.56
1:0:692:C:H2'	1:0:693:A:C8	2.40	0.56
1:0:719:A:H2'	1:0:720:A:O4'	2.06	0.56
1:0:931:G:O2'	1:0:932:G:H5'	2.06	0.56
1:0:1323:G:H1'	1:0:1627:C:H5''	1.87	0.56
1:0:1764:A:C2'	1:0:1765:C:H5'	2.35	0.56
1:0:1843:U:H2'	1:0:1844:C:C6	2.41	0.56
1:0:2080:U:H2'	1:0:2081:U:C6	2.41	0.56
1:0:346:C:O2'	1:0:347:C:H5'	2.05	0.56
1:0:223:C:O2'	1:0:398:C:H4'	2.06	0.56
1:0:871:U:H1'	1:0:2248:A:C5'	2.36	0.56
1:0:953:G:H2'	1:0:954:U:C6	2.41	0.56
1:0:1162:A:H2'	1:0:1163:C:O4'	2.06	0.56
1:0:1245:G:H2'	1:0:1246:G:C8	2.40	0.56
1:0:1333:G:HO2'	1:0:1334:A:H8	1.52	0.56
1:0:1594:U:H2'	1:0:1595:A:H8	1.71	0.56
1:0:1763:G:H21	1:0:1765:C:H5''	1.71	0.56
1:0:1953:A:H1'	1:0:1955:G:H1'	1.87	0.56
1:0:2210:C:H2'	1:0:2211:U:O4'	2.06	0.56
1:0:2429:A:H5''	1:0:2476:A:C6	2.41	0.56
1:0:2678:C:H2'	1:0:2679:G:H8	1.69	0.56
1:0:2811:G:H2'	1:0:2812:A:H8	1.71	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1021:A:H1'	1:0:1164:C:H1'	1.88	0.55
1:0:1226:A:C2	1:0:1250:A:H1'	2.41	0.55
1:0:1439:G:N2	1:0:1590:C:H42	2.04	0.55
1:0:1467:U:H3'	1:0:1468:A:H5'	1.88	0.55
1:0:1865:C:H2'	1:0:1866:G:O4'	2.06	0.55
1:0:337:G:H2'	1:0:338:G:H8	1.71	0.55
1:0:738:G:H2'	1:0:739:G:O4'	2.06	0.55
1:0:1010:U:H2'	1:0:1011:A:C8	2.41	0.55
1:0:1348:C:H2'	1:0:1349:A:H8	1.68	0.55
1:0:1949:A:H1'	1:0:2572:U:C4'	2.36	0.55
1:0:2426:G:O6	1:0:2479:U:H2'	2.06	0.55
1:0:2870:C:H2'	1:0:2871:U:H6	1.71	0.55
1:0:868:U:H2'	1:0:869:C:C6	2.41	0.55
2:9:32:C:H4'	2:9:60:A:H2	1.70	0.55
1:0:1038:U:H2'	1:0:1039:A:H8	1.70	0.55
1:0:10:A:H2'	1:0:11:G:C8	2.42	0.55
1:0:153:A:H2'	1:0:154:U:C6	2.41	0.55
1:0:1920:A:C4	1:0:1922:U:H5	2.25	0.55
1:0:2618:A:C6	1:0:2619:G:H1'	2.41	0.55
1:0:826:U:O2'	1:0:1238:A:H1'	2.06	0.55
1:0:990:A:H3'	1:0:991:A:C5'	2.36	0.55
1:0:1782:A:N6	1:0:1820:G:H2'	2.21	0.55
1:0:216:U:H2'	1:0:217:U:O4'	2.06	0.55
1:0:2803:C:O2'	1:0:2804:G:H5'	2.06	0.55
1:0:831:G:H2'	1:0:832:A:H5''	1.87	0.55
1:0:839:U:C4	1:0:841:G:H1'	2.41	0.55
1:0:929:A:H3'	1:0:930:A:C5'	2.30	0.55
1:0:1164:C:H2'	1:0:1165:G:O4'	2.07	0.55
1:0:1436:G:H2'	1:0:1437:A:C8	2.42	0.55
1:0:1785:A:H2'	1:0:1786:C:H6	1.71	0.55
1:0:2177:U:H2'	1:0:2178:U:H6	1.71	0.55
1:0:813:A:O2'	1:0:815:A:H5'	2.06	0.55
1:0:2404:A:P	1:0:2406:C:H5'	2.47	0.55
1:0:2636:A:H62	1:0:2643:G:N2	1.99	0.55
1:0:820:U:H2'	1:0:821:A:C8	2.41	0.55
1:0:1789:U:C2'	1:0:1790:G:H5'	2.37	0.55
1:0:1821:A:H3'	1:0:1822:C:H6	1.72	0.55
1:0:677:G:H4'	1:0:952:A:P	2.46	0.55
1:0:2058:U:H4'	1:0:2575:U:O2	2.07	0.55
1:0:2276:C:O2'	1:0:2277:A:H5'	2.05	0.55
1:0:243:G:H2'	1:0:244:C:O4'	2.07	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1943:A:H2'	1:0:1944:C:H5'	1.88	0.55
1:0:2642:G:H2'	1:0:2643:G:O4'	2.05	0.55
1:0:38:G:H1	1:0:453:U:H3	1.53	0.55
1:0:788:G:C2	1:0:800:U:H2'	2.42	0.55
1:0:1500:U:H3	1:0:1520:G:H22	1.55	0.55
1:0:162:C:H2'	1:0:163:A:H8	1.69	0.55
1:0:1861:G:O2'	1:0:1862:C:H5'	2.07	0.55
1:0:192:G:C1'	1:0:193:A:H4'	2.37	0.55
1:0:2770:A:H4'	1:0:2867:G:N2	2.21	0.55
1:0:330:C:C2'	1:0:331:U:H5'	2.36	0.55
1:0:514:G:N3	1:0:514:G:H2'	2.22	0.55
1:0:824:U:H2'	1:0:825:C:H5''	1.89	0.55
2:9:42:U:H2'	2:9:45:C:N4	2.16	0.55
1:0:1101:U:N3	1:0:1113:C:H1'	2.23	0.54
1:0:1251:G:H2'	1:0:1252:C:O4'	2.07	0.54
1:0:785:U:H5'	1:0:1368:G:O2'	2.07	0.54
1:0:2756:A:N6	1:0:2762:G:H1'	2.21	0.54
1:0:591:G:H2'	1:0:592:G:H8	1.71	0.54
1:0:1040:A:C2'	1:0:1041:G:H5'	2.36	0.54
1:0:1116:U:H2'	1:0:1117:G:C8	2.42	0.54
1:0:1312:G:H5''	1:0:1313:U:H5''	1.88	0.54
1:0:1352:G:H2'	1:0:1353:A:H8	1.70	0.54
1:0:2083:G:H2'	1:0:2084:G:H8	1.73	0.54
1:0:2195:C:H2'	1:0:2196:U:H5'	1.87	0.54
1:0:225:G:C5'	1:0:226:C:H5'	2.37	0.54
1:0:2830:U:H2'	1:0:2831:A:H8	1.73	0.54
1:0:2841:U:O2	1:0:2843:A:H1'	2.06	0.54
1:0:2855:C:O2'	1:0:2856:U:H5'	2.07	0.54
1:0:437:G:O2'	1:0:438:G:H5'	2.06	0.54
1:0:932:G:H2'	1:0:933:G:C8	2.42	0.54
1:0:213:C:H42	1:0:238:G:H1	1.54	0.54
1:0:2544:A:H2'	1:0:2545:A:H1'	1.89	0.54
1:0:2633:A:H61	1:0:2646:C:H42	1.55	0.54
1:0:929:A:HO2'	2:9:101:A:H4'	1.73	0.54
1:0:1065:A:H2'	1:0:1066:G:C8	2.42	0.54
1:0:1125:G:O2'	1:0:1126:A:H5'	2.07	0.54
1:0:1250:A:O2'	1:0:1251:G:H4'	2.07	0.54
1:0:1291:G:O2'	1:0:1292:A:H5'	2.07	0.54
1:0:1837:G:H2'	1:0:1838:G:C8	2.42	0.54
1:0:2315:A:HO2'	1:0:2364:C:H5''	1.72	0.54
1:0:2565:C:H4'	1:0:2566:A:C5'	2.38	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:536:A:C2	1:0:2605:C:H1'	2.42	0.54
32:0:2881:ZIT:H6B2	32:0:2881:ZIT:H6A3	1.87	0.54
1:0:477:A:H2'	1:0:478:G:H5'	1.90	0.54
1:0:964:A:H2'	1:0:965:G:C8	2.40	0.54
1:0:1124:U:H2'	1:0:1125:G:H8	1.73	0.54
1:0:1531:C:H2'	1:0:1532:A:H5'	1.89	0.54
1:0:2369:U:H2'	1:0:2370:G:C8	2.43	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
1:0:1242:A:H2'	1:0:1243:G:H8	1.72	0.54
1:0:2535:C:H2'	1:0:2536:G:O4'	2.08	0.54
1:0:2618:A:C2	1:0:2619:G:H1'	2.43	0.54
1:0:36:G:C1'	1:0:462:G:H21	2.20	0.54
1:0:319:G:H1'	1:0:511:A:O4'	2.07	0.54
1:0:575:U:H2'	1:0:576:A:C8	2.43	0.54
1:0:671:A:H2'	1:0:672:C:C6	2.43	0.54
1:0:1451:C:H2'	1:0:1452:U:C6	2.43	0.54
1:0:2447:G:N2	1:0:2460:G:H2'	2.20	0.54
1:0:338:G:O2'	1:0:339:U:H5'	2.08	0.54
1:0:616:U:H2'	1:0:617:U:C5'	2.34	0.54
1:0:1854:G:H2'	1:0:1855:G:H8	1.72	0.54
1:0:1998:A:H2'	1:0:1999:U:H5'	1.88	0.54
1:0:2015:G:N3	1:0:2015:G:H2'	2.21	0.54
1:0:2759:U:H6	1:0:2759:U:O5'	1.90	0.54
1:0:504:G:O2'	1:0:505:G:H5'	2.08	0.54
1:0:659:G:H2'	1:0:660:G:H8	1.72	0.54
1:0:1392:U:C2'	1:0:1393:G:H5'	2.38	0.54
1:0:1440:G:H3'	1:0:1441:A:H5'	1.90	0.54
1:0:1482:U:H2'	1:0:1483:G:H8	1.73	0.54
1:0:1685:A:H1'	1:0:1686:A:C2	2.43	0.54
1:0:2685:A:H4'	1:0:2826:C:H4'	1.90	0.54
1:0:2783:U:H2'	1:0:2784:A:O4'	2.08	0.54
1:0:687:G:O2'	1:0:688:A:H5'	2.07	0.54
1:0:1223:G:H21	1:0:1225:G:N2	2.04	0.54
1:0:1374:G:N2	1:0:1384:G:H1'	2.23	0.54
1:0:586:G:OP1	1:0:2481:G:H2'	2.08	0.54
1:0:328:A:O2'	1:0:329:C:H5'	2.07	0.54
1:0:153:A:H2'	1:0:154:U:C5	2.44	0.53
1:0:1602:G:O3'	1:0:1603:A:H8	1.91	0.53
1:0:2426:G:H22	1:0:2431:C:H41	1.53	0.53
1:0:66:U:H2'	1:0:67:G:H8	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1075:C:H2'	1:0:1076:U:O4'	2.09	0.53
1:0:1748:U:N3	1:0:1753:A:H2	2.01	0.53
1:0:1962:C:O2'	1:0:1963:G:H5'	2.07	0.53
1:0:2321:C:C2'	1:0:2322:U:H5'	2.38	0.53
1:0:239:A:C2	1:0:443:A:H1'	2.43	0.53
1:0:215:G:N2	1:0:632:A:H8	2.04	0.53
1:0:635:C:C2'	1:0:636:G:H5''	2.36	0.53
1:0:968:C:N4	1:0:970:A:H1'	2.24	0.53
1:0:139:A:H2'	1:0:140:G:C8	2.43	0.53
1:0:1739:G:H2'	1:0:1740:G:H8	1.74	0.53
1:0:1915:A:H2'	1:0:1916:G:O4'	2.09	0.53
1:0:2343:C:H2'	1:0:2344:G:O4'	2.08	0.53
1:0:2395:C:C2'	1:0:2396:C:H5''	2.39	0.53
1:0:242:A:O2'	1:0:243:G:O4'	2.27	0.53
1:0:2640:G:H2'	1:0:2641:A:C8	2.44	0.53
1:0:755:C:H1'	1:0:1693:A:H4'	1.90	0.53
1:0:94:C:H2'	1:0:95:G:O4'	2.09	0.53
1:0:1337:G:H1'	1:0:1632:A:N6	2.24	0.53
1:0:1669:A:N6	1:0:1670:G:H21	2.05	0.53
1:0:1684:G:H2'	1:0:1974:U:O4	2.07	0.53
1:0:15:G:N2	1:0:2027:C:O2'	2.41	0.53
1:0:202:A:O2'	1:0:234:C:H4'	2.09	0.53
1:0:2546:G:H2'	1:0:2547:C:C6	2.43	0.53
1:0:2607:C:H3'	1:0:2608:A:C5'	2.38	0.53
1:0:1196:G:H2'	1:0:1197:U:C4'	2.38	0.53
1:0:1333:G:C5	1:0:1342:U:H5'	2.44	0.53
1:0:159:A:O2'	1:0:160:C:H5'	2.08	0.53
1:0:2026:C:H2'	1:0:2027:C:H6	1.73	0.53
1:0:2461:G:H2'	1:0:2462:C:O4'	2.08	0.53
1:0:2634:G:H2'	1:0:2643:G:O6	2.09	0.53
1:0:1137:A:H5''	1:0:1138:A:OP1	2.09	0.53
1:0:13:A:H1'	1:0:536:A:H62	1.72	0.53
1:0:1683:G:H2'	1:0:1684:G:H5'	1.91	0.53
1:0:1871:G:N3	1:0:1871:G:H2'	2.24	0.53
1:0:2592:U:H2'	1:0:2593:A:H5'	1.90	0.53
1:0:475:U:O4	1:0:801:A:C5	2.62	0.53
1:0:1196:G:H2'	1:0:1197:U:C5'	2.38	0.53
1:0:1323:G:H1'	1:0:1627:C:C5'	2.39	0.53
1:0:1914:U:O2'	1:0:1915:A:H5'	2.09	0.53
1:0:1373:G:H1	1:0:2192:U:H3	1.56	0.53
1:0:651:C:C3'	1:0:652:C:H5''	2.39	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:85:G:C2'	2:9:86:A:H5'	2.38	0.53
1:0:1380:C:C2'	1:0:1381:G:H5'	2.39	0.53
1:0:1418:C:H2'	1:0:1419:G:C8	2.43	0.53
1:0:1514:C:H5'	1:0:1593:C:H5''	1.91	0.53
1:0:1741:G:O2'	1:0:1742:G:H5'	2.09	0.53
1:0:1823:G:H2'	1:0:1824:C:C6	2.44	0.53
1:0:1943:A:C2'	1:0:1944:C:H5'	2.39	0.53
1:0:2324:G:C4'	1:0:2326:C:H5''	2.37	0.53
1:0:2733:A:O2'	1:0:2734:U:H5'	2.09	0.53
1:0:584:A:O2'	1:0:585:U:H5'	2.08	0.53
1:0:1102:G:H2'	1:0:1103:C:H6	1.74	0.53
1:0:1268:U:C5	5:C:67:ALA:CA	2.92	0.53
1:0:1429:A:N6	1:0:1601:U:H5''	2.23	0.53
1:0:1830:C:N4	1:0:1881:U:H3'	2.24	0.53
1:0:1917:C:H2'	1:0:1918:G:O4'	2.09	0.53
1:0:1872:A:H1'	1:0:2070:G:H5'	1.91	0.53
1:0:2383:C:H2'	1:0:2384:G:O4'	2.09	0.53
1:0:2407:G:H5'	1:0:2408:G:C2	2.44	0.53
1:0:586:G:H5'	1:0:2481:G:C2	2.44	0.53
1:0:1459:U:O5'	1:0:1459:U:H6	1.91	0.52
1:0:1571:G:OP2	1:0:1571:G:H3'	2.08	0.52
1:0:1811:A:O2'	1:0:1812:U:H5''	2.09	0.52
1:0:193:A:H2'	1:0:194:G:O4'	2.09	0.52
1:0:1999:U:H2'	1:0:2000:U:O4'	2.09	0.52
1:0:2021:G:H2'	1:0:2022:C:C6	2.43	0.52
1:0:2026:C:H2'	1:0:2027:C:C6	2.44	0.52
1:0:2377:U:H2'	1:0:2378:G:H8	1.74	0.52
1:0:9:U:H3	1:0:2608:A:H62	1.57	0.52
1:0:2627:G:H2'	1:0:2628:C:O4'	2.09	0.52
1:0:2662:C:H42	1:0:2707:G:H21	1.56	0.52
1:0:294:U:H2'	1:0:295:C:C6	2.44	0.52
2:9:23:G:C6	2:9:24:U:C4	2.98	0.52
1:0:1558:C:H2'	1:0:1559:G:H5'	1.90	0.52
1:0:1680:U:O2'	1:0:1681:A:H5''	2.09	0.52
1:0:1814:G:H2'	1:0:1815:G:C8	2.45	0.52
1:0:246:C:H42	1:0:247:A:H62	1.56	0.52
1:0:543:G:H2'	1:0:544:U:C6	2.45	0.52
1:0:726:G:H2'	1:0:727:U:O4'	2.08	0.52
1:0:76:C:H2'	1:0:77:C:C6	2.43	0.52
1:0:852:U:H6	1:0:852:U:O5'	1.92	0.52
1:0:876:A:H4'	2:9:103:A:N3	2.24	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:72:C:H2'	2:9:73:C:O4'	2.10	0.52
1:0:1371:G:H1'	1:0:1386:A:H62	1.74	0.52
1:0:1886:G:H2'	1:0:1887:G:C8	2.36	0.52
1:0:2617:G:HO2'	1:0:2618:A:H8	1.55	0.52
1:0:2825:A:H2'	1:0:2826:C:C6	2.45	0.52
1:0:167:A:N6	1:0:812:G:O2'	2.35	0.52
1:0:932:G:H2'	1:0:933:G:O4'	2.08	0.52
1:0:1166:A:C3'	1:0:1167:A:H5''	2.40	0.52
1:0:1313:U:H5'	1:0:1314:A:N3	2.25	0.52
1:0:1316:G:OP2	1:0:1316:G:H8	1.93	0.52
1:0:2029:G:H2'	1:0:2030:U:C6	2.43	0.52
1:0:2633:A:N6	1:0:2646:C:N4	2.55	0.52
1:0:1661:C:H2'	1:0:1662:G:C8	2.44	0.52
1:0:2327:U:H2'	1:0:2328:G:H8	1.74	0.52
1:0:2424:G:H2'	1:0:2425:G:O4'	2.10	0.52
1:0:837:U:H2'	1:0:838:A:C8	2.45	0.52
1:0:887:G:O2'	1:0:888:G:H5'	2.10	0.52
2:9:41:A:H8	2:9:41:A:O5'	1.93	0.52
1:0:10:A:H2'	1:0:11:G:H8	1.74	0.52
1:0:1204:G:H2'	1:0:1205:G:H8	1.74	0.52
1:0:1835:C:H2'	1:0:1836:C:C6	2.45	0.52
1:0:1994:U:C2'	1:0:1995:G:H5'	2.40	0.52
1:0:2429:A:OP1	1:0:2476:A:H2'	2.09	0.52
1:0:2599:U:H2'	1:0:2600:A:C5'	2.30	0.52
1:0:2633:A:H4'	1:0:2634:G:O5'	2.09	0.52
1:0:482:A:O2'	1:0:483:A:H5'	2.10	0.52
1:0:8:A:H2'	1:0:9:U:C6	2.44	0.52
1:0:2324:G:N2	1:0:2361:G:C4	2.78	0.52
1:0:2375:G:H2'	1:0:2376:G:C8	2.44	0.52
1:0:2487:G:O3'	1:0:2534:U:H5'	2.09	0.52
1:0:2756:A:H4'	1:0:2758:A:OP1	2.09	0.52
1:0:93:A:O2'	1:0:94:C:H5'	2.09	0.52
1:0:152:G:H2'	1:0:153:A:O4'	2.09	0.52
1:0:1556:A:H2'	1:0:1557:G:H8	1.75	0.52
1:0:2169:A:C2'	1:0:2170:C:H5'	2.40	0.52
1:0:2169:A:O2'	1:0:2170:C:H5'	2.10	0.52
1:0:929:A:H8	1:0:2247:A:H61	1.56	0.52
1:0:2363:G:H5''	1:0:2365:U:OP1	2.10	0.52
1:0:2705:A:O2'	1:0:2706:U:C6	2.60	0.52
1:0:5:A:H2'	1:0:6:A:C8	2.43	0.52
1:0:1036:G:H1'	1:0:1145:C:O4'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2394:G:H2'	1:0:2395:C:C6	2.45	0.52
1:0:2809:A:O2'	1:0:2810:A:H5'	2.10	0.52
1:0:696:U:O5'	1:0:696:U:H6	1.93	0.52
1:0:847:C:H2'	1:0:848:A:H8	1.74	0.52
1:0:1039:A:N6	1:0:1136:G:H2'	2.25	0.52
1:0:1288:A:H62	1:0:1309:G:H4'	1.75	0.52
1:0:174:A:H4'	1:0:2052:G:OP2	2.10	0.52
1:0:1912:G:H3'	1:0:1912:G:N3	2.25	0.52
1:0:202:A:C2	1:0:203:G:H1'	2.45	0.52
1:0:2324:G:N3	1:0:2326:C:H5	2.08	0.52
1:0:362:C:C4	1:0:363:G:H1'	2.45	0.52
1:0:41:G:H2'	1:0:42:G:H8	1.75	0.52
1:0:1083:C:H42	1:0:1103:C:H41	1.56	0.51
1:0:1151:U:H5''	1:0:1153:A:OP1	2.10	0.51
1:0:1416:A:O2'	1:0:1417:C:H5'	2.10	0.51
1:0:1485:U:H2'	1:0:1486:A:C8	2.45	0.51
1:0:1491:C:H2'	1:0:1492:A:H8	1.75	0.51
1:0:1843:U:H2'	1:0:1844:C:H6	1.74	0.51
1:0:1996:A:O2'	1:0:1997:A:H5'	2.09	0.51
1:0:2265:A:H5''	1:0:2266:A:O4'	2.10	0.51
1:0:2492:G:H1	1:0:2550:C:N4	2.04	0.51
1:0:389:G:H2'	1:0:390:U:C6	2.44	0.51
1:0:608:G:H2'	1:0:609:U:C6	2.45	0.51
1:0:1272:G:H2'	1:0:1273:G:H8	1.76	0.51
1:0:2035:G:H2'	1:0:2036:G:C8	2.46	0.51
1:0:2353:G:H2'	1:0:2354:G:C8	2.46	0.51
1:0:35:G:O4'	1:0:466:A:H1'	2.10	0.51
1:0:922:A:H62	13:K:17:ARG:CA	2.24	0.51
1:0:978:U:H2'	1:0:979:A:H8	1.76	0.51
2:9:116:C:H2'	2:9:117:G:O4'	2.10	0.51
1:0:1293:A:O2'	1:0:1294:G:H5'	2.10	0.51
1:0:1621:C:H4'	1:0:1626:A:N6	2.24	0.51
1:0:1944:C:H2'	1:0:1945:C:O4'	2.10	0.51
1:0:174:A:C2	1:0:2413:A:N6	2.78	0.51
1:0:2541:U:H2'	1:0:2542:U:O4'	2.10	0.51
1:0:2560:G:H2'	1:0:2561:G:C8	2.45	0.51
1:0:583:C:O2'	1:0:584:A:OP2	2.27	0.51
1:0:95:G:H2'	1:0:96:C:C6	2.46	0.51
1:0:1662:G:H5''	1:0:1663:C:O4'	2.11	0.51
1:0:2717:G:H2'	1:0:2718:A:H8	1.75	0.51
1:0:430:C:H2'	1:0:431:G:C8	2.45	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:604:U:H2'	1:0:605:G:H8	1.74	0.51
1:0:1010:U:H2'	1:0:1011:A:H8	1.76	0.51
1:0:119:G:H1'	1:0:129:A:C2	2.45	0.51
1:0:1692:C:H2'	1:0:1693:A:H5'	1.91	0.51
1:0:2035:G:H2'	1:0:2036:G:H8	1.75	0.51
1:0:2301:A:H2'	1:0:2302:G:O4'	2.11	0.51
1:0:300:C:H2'	1:0:301:C:H5'	1.92	0.51
1:0:484:G:O2'	1:0:485:G:H5'	2.11	0.51
1:0:678:G:O2'	1:0:679:C:H5'	2.11	0.51
1:0:706:A:H2'	1:0:707:U:C6	2.46	0.51
1:0:782:U:H2'	1:0:783:G:H8	1.72	0.51
2:9:78:A:H2'	2:9:79:U:H6	1.73	0.51
1:0:1241:G:O2'	1:0:1242:A:H5'	2.10	0.51
1:0:1714:A:H3'	1:0:1715:A:C8	2.45	0.51
1:0:2503:G:C3'	1:0:2504:G:H5''	2.40	0.51
1:0:2633:A:H5'	1:0:2635:U:O4'	2.11	0.51
1:0:2658:A:O2'	1:0:2659:C:H5'	2.11	0.51
1:0:859:U:H4'	1:0:860:U:C5	2.46	0.51
1:0:931:G:C2'	1:0:932:G:H5'	2.40	0.51
1:0:103:U:H2'	1:0:104:C:H6	1.72	0.51
1:0:984:A:H2	1:0:1200:G:H1	1.57	0.51
1:0:1540:C:O2'	1:0:1541:G:H5'	2.10	0.51
1:0:1579:G:H2'	1:0:1580:C:C6	2.45	0.51
1:0:15:G:H2'	1:0:16:G:H5'	1.93	0.51
1:0:781:G:H5'	1:0:1638:G:H4'	1.93	0.51
1:0:1856:U:H2'	1:0:1857:G:O4'	2.11	0.51
1:0:579:G:H2'	1:0:2013:A:N7	2.25	0.51
1:0:29:U:H2'	1:0:30:G:C8	2.46	0.51
1:0:773:G:C2'	1:0:774:A:H5'	2.41	0.51
1:0:830:C:H2'	1:0:831:G:H8	1.76	0.51
1:0:837:U:H2'	1:0:838:A:O4'	2.10	0.51
1:0:886:A:H2'	1:0:887:G:O4'	2.11	0.51
2:9:42:U:C2	2:9:45:C:C5	2.99	0.51
1:0:1818:G:H2'	1:0:1819:U:C6	2.46	0.51
1:0:2613:A:O2'	1:0:2614:A:H5'	2.10	0.51
1:0:1218:C:H2'	1:0:1219:C:O4'	2.10	0.51
1:0:1227:A:H4'	1:0:1252:C:H4'	1.93	0.51
1:0:1590:C:H6	1:0:1590:C:O5'	1.94	0.51
1:0:1611:U:H2'	1:0:1612:U:O4'	2.10	0.51
1:0:1790:G:C8	1:0:1811:A:N6	2.79	0.51
1:0:2053:G:H2'	1:0:2054:A:C8	2.46	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2076:G:H2'	1:0:2077:G:C8	2.46	0.51
1:0:2408:G:H3'	1:0:2409:A:C5'	2.41	0.51
1:0:2487:G:H2'	1:0:2488:G:C8	2.45	0.51
1:0:952:A:O2'	1:0:1204:G:H4'	2.11	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
1:0:1424:U:H2'	1:0:1425:G:C8	2.45	0.51
1:0:1592:U:O5'	1:0:1592:U:H6	1.94	0.51
1:0:1838:G:C2'	1:0:1839:A:H5'	2.39	0.51
1:0:2246:A:H2'	1:0:2246:A:N3	2.26	0.51
1:0:2870:C:H2'	1:0:2871:U:C6	2.46	0.51
1:0:612:G:H4'	1:0:613:A:O2'	2.10	0.51
2:9:4:C:H2'	2:9:5:C:C5	2.43	0.51
1:0:1132:C:H2'	1:0:1133:G:O4'	2.10	0.50
1:0:1000:G:P	1:0:1168:G:H4'	2.51	0.50
1:0:1179:A:H2'	1:0:1180:A:C8	2.45	0.50
1:0:1457:A:O2'	1:0:1458:A:H5'	2.11	0.50
1:0:753:U:H5'	1:0:1775:A:N6	2.26	0.50
1:0:2425:G:HO2'	1:0:2428:U:H5	1.57	0.50
32:0:2882:ZIT:H6B2	32:0:2882:ZIT:H6A3	1.88	0.50
1:0:974:U:H5'	1:0:2476:A:OP1	2.11	0.50
1:0:1066:G:H3'	1:0:1067:G:H5''	1.93	0.50
1:0:1226:A:H2'	1:0:1227:A:C8	2.46	0.50
1:0:520:C:H2'	1:0:521:U:O4'	2.11	0.50
2:9:50:U:H2'	2:9:51:G:C8	2.45	0.50
1:0:1770:U:H2'	1:0:1774:A:H62	1.77	0.50
1:0:2160:C:H2'	1:0:2161:C:C6	2.47	0.50
1:0:2651:U:O2'	1:0:2652:G:H5'	2.12	0.50
1:0:2751:C:H2'	1:0:2752:C:H6	1.75	0.50
1:0:37:C:H4'	1:0:463:C:OP1	2.12	0.50
1:0:534:U:H4'	1:0:564:U:H4'	1.92	0.50
1:0:636:G:H2'	1:0:637:G:H5'	1.94	0.50
1:0:1411:C:H2'	1:0:1412:C:H6	1.75	0.50
1:0:1624:A:H2'	1:0:1625:A:H5'	1.94	0.50
1:0:2772:U:O2'	1:0:2773:G:H5'	2.11	0.50
1:0:2770:A:C5'	1:0:2867:G:H22	2.25	0.50
1:0:322:A:H2'	1:0:322:A:N3	2.26	0.50
1:0:357:A:C2'	1:0:358:C:H5'	2.37	0.50
1:0:502:A:H2'	1:0:503:G:H5'	1.93	0.50
1:0:644:A:C2'	1:0:645:G:H5'	2.41	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:685:U:O2'	1:0:686:C:H5'	2.11	0.50
1:0:790:A:O2'	1:0:791:G:H5'	2.10	0.50
1:0:1101:U:H3	1:0:1113:C:H1'	1.77	0.50
1:0:1572:C:H2'	1:0:1573:G:C5'	2.42	0.50
1:0:1848:U:H2'	1:0:1849:G:O4'	2.12	0.50
1:0:2238:G:H1'	1:0:2406:C:C2	2.47	0.50
1:0:2458:U:OP1	1:0:2516:U:H1'	2.12	0.50
1:0:2546:G:H2'	1:0:2547:C:H6	1.76	0.50
1:0:630:G:H8	1:0:630:G:O5'	1.94	0.50
1:0:923:A:N3	1:0:923:A:H2'	2.26	0.50
2:9:111:C:H5''	2:9:112:A:H4'	1.93	0.50
1:0:1090:C:O2'	1:0:1091:C:H5'	2.11	0.50
1:0:1411:C:H2'	1:0:1412:C:C6	2.47	0.50
1:0:1625:A:C8	1:0:1632:A:H1'	2.46	0.50
1:0:174:A:H4'	1:0:2051:U:H2'	1.93	0.50
1:0:2104:G:H2'	1:0:2105:U:C6	2.47	0.50
1:0:2717:G:H2'	1:0:2718:A:C8	2.46	0.50
1:0:860:U:O2	1:0:860:U:H2'	2.11	0.50
2:9:29:C:H2'	2:9:30:C:C5	2.45	0.50
1:0:1199:U:H3'	1:0:1200:G:H5''	1.93	0.50
1:0:1229:C:H2'	1:0:1230:C:H6	1.77	0.50
1:0:1287:A:N1	1:0:1661:C:O2'	2.40	0.50
1:0:1313:U:H4'	1:0:1314:A:O4'	2.11	0.50
1:0:1430:G:H2'	1:0:1431:U:C6	2.47	0.50
1:0:1514:C:H2'	1:0:1515:U:O4'	2.11	0.50
1:0:1594:U:H2'	1:0:1595:A:C8	2.47	0.50
1:0:2341:G:O2'	1:0:2342:U:H5'	2.12	0.50
1:0:2609:G:N2	1:0:2866:A:H2	2.09	0.50
1:0:41:G:O2'	1:0:42:G:H5'	2.12	0.50
1:0:75:C:H2'	1:0:76:C:C5'	2.33	0.50
1:0:1026:U:H2'	1:0:1027:C:C6	2.47	0.50
1:0:1038:U:N3	1:0:2467:A:H5'	2.25	0.50
1:0:1440:G:H3'	1:0:1441:A:C5'	2.41	0.50
1:0:14:A:C2	1:0:2604:G:O2'	2.65	0.50
1:0:2170:C:H2'	1:0:2171:U:O4'	2.12	0.50
1:0:456:C:H2'	1:0:457:C:H6	1.77	0.50
1:0:509:U:H3	1:0:513:A:N6	2.09	0.50
1:0:597:U:H2'	1:0:598:U:C6	2.46	0.50
1:0:73:A:H5''	1:0:73:A:N3	2.26	0.50
1:0:1333:G:O2'	1:0:1334:A:H8	1.95	0.50
1:0:1399:C:H2'	1:0:1400:A:C8	2.47	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1429:A:H1'	1:0:1603:A:C6	2.46	0.50
1:0:18:U:O2'	1:0:563:U:H5''	2.12	0.50
1:0:1982:C:H5''	1:0:2703:C:O2'	2.12	0.50
1:0:2396:C:C2'	1:0:2397:A:H5'	2.41	0.50
1:0:611:C:O2'	1:0:614:G:H5''	2.12	0.50
2:9:105:G:C2	2:9:106:U:C4	2.99	0.50
1:0:1310:C:OP1	1:0:2689:C:H4'	2.11	0.49
1:0:1315:A:H5''	1:0:1316:G:OP1	2.11	0.49
1:0:1353:A:H5''	1:0:1354:A:N7	2.26	0.49
1:0:221:A:H2'	1:0:222:G:H5'	1.94	0.49
1:0:2709:C:H2'	1:0:2710:C:C6	2.47	0.49
1:0:337:G:H2'	1:0:338:G:C8	2.47	0.49
1:0:765:C:O2'	1:0:766:A:O4'	2.30	0.49
1:0:1058:G:H2'	1:0:1121:G:H1	1.77	0.49
1:0:1872:A:H2'	1:0:1873:A:H8	1.77	0.49
1:0:2052:G:O2'	1:0:2053:G:H5'	2.12	0.49
1:0:2195:C:C2'	1:0:2196:U:H5'	2.42	0.49
1:0:956:A:C6	1:0:2427:A:H1'	2.47	0.49
1:0:2680:U:H3'	1:0:2681:A:H5'	1.95	0.49
1:0:541:C:N4	1:0:572:G:H8	2.06	0.49
1:0:681:A:N6	1:0:683:A:H2'	2.27	0.49
1:0:1001:A:C3'	1:0:1002:C:H5''	2.42	0.49
1:0:2544:A:H5''	1:0:2545:A:OP2	2.12	0.49
1:0:2608:A:O2'	1:0:2609:G:H5'	2.11	0.49
1:0:2733:A:H2'	1:0:2734:U:O4'	2.11	0.49
1:0:329:C:O2'	1:0:330:C:H5'	2.11	0.49
2:9:104:A:C2	2:9:105:G:H1'	2.47	0.49
1:0:1345:G:H5''	1:0:1346:C:OP1	2.12	0.49
1:0:212:U:O2'	1:0:213:C:H5'	2.12	0.49
1:0:2212:U:H2'	1:0:2213:G:C8	2.47	0.49
1:0:2395:C:H2'	1:0:2396:C:C5'	2.43	0.49
1:0:2598:C:H2'	1:0:2599:U:H6	1.77	0.49
1:0:2764:U:H2'	1:0:2765:C:H6	1.75	0.49
2:9:111:C:H5''	2:9:112:A:C5'	2.42	0.49
1:0:1073:G:H2'	1:0:1074:G:C4'	2.29	0.49
1:0:1284:G:C2	1:0:1633:C:H5'	2.47	0.49
1:0:1703:C:H2'	1:0:1704:G:O4'	2.12	0.49
1:0:1807:A:H1'	1:0:1809:G:N7	2.27	0.49
1:0:1979:C:H6	1:0:1979:C:OP1	1.95	0.49
1:0:2196:U:H2'	1:0:2197:U:C6	2.47	0.49
1:0:228:A:C5	1:0:229:G:H1'	2.47	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:242:A:N6	1:0:441:A:N7	2.60	0.49
1:0:298:C:H2'	1:0:299:C:H6	1.78	0.49
1:0:474:G:N2	1:0:476:G:H3'	2.27	0.49
1:0:701:U:O2'	1:0:702:A:H5'	2.13	0.49
1:0:1166:A:C2'	1:0:1167:A:H5''	2.42	0.49
1:0:1380:C:H2'	1:0:1381:G:H5'	1.95	0.49
1:0:1534:A:O2'	1:0:1535:C:H5'	2.12	0.49
1:0:1479:G:N2	1:0:1543:G:H21	2.11	0.49
1:0:2431:C:O2'	1:0:2432:A:H5'	2.12	0.49
1:0:2544:A:H2'	1:0:2545:A:C1'	2.42	0.49
1:0:2655:C:O2'	1:0:2656:G:H5'	2.11	0.49
1:0:298:C:H2'	1:0:299:C:C6	2.46	0.49
1:0:338:G:H2'	1:0:339:U:H5'	1.94	0.49
1:0:1212:U:H2'	1:0:1213:U:C6	2.48	0.49
1:0:1730:G:H2'	1:0:1731:C:H6	1.76	0.49
1:0:1821:A:H5''	1:0:1822:C:C5	2.47	0.49
1:0:1980:A:O2'	1:0:1981:A:H5'	2.13	0.49
1:0:956:A:N7	1:0:2427:A:C2	2.81	0.49
1:0:1936:A:O2'	1:0:2538:C:H1'	2.13	0.49
1:0:29:U:O5'	1:0:29:U:H6	1.96	0.49
1:0:443:A:O2'	1:0:444:U:H5'	2.12	0.49
1:0:45:C:H2'	1:0:46:C:C6	2.48	0.49
1:0:749:C:H2'	1:0:750:C:O4'	2.12	0.49
1:0:79:G:H2'	1:0:80:A:C8	2.46	0.49
2:9:59:A:C4	6:D:27:ALA:CA	2.94	0.49
2:9:116:C:O2'	15:M:50:THR:CA	2.60	0.49
1:0:132:U:H2'	1:0:133:C:C6	2.48	0.49
1:0:1687:C:H1'	1:0:1976:U:O2	2.13	0.49
1:0:2122:G:H2'	1:0:2123:G:H8	1.77	0.49
1:0:2754:C:H2'	1:0:2755:A:H8	1.77	0.49
1:0:478:G:O2'	1:0:479:G:H5'	2.13	0.49
1:0:585:U:O2'	1:0:2481:G:C6	2.65	0.49
1:0:782:U:HO2'	1:0:1392:U:H5	1.60	0.49
2:9:28:A:OP2	2:9:29:C:H5	1.95	0.49
1:0:1429:A:H61	1:0:1602:G:H5'	1.78	0.49
1:0:1811:A:N3	1:0:1811:A:H2'	2.27	0.49
1:0:1888:C:H2'	1:0:1913:G:C5	2.48	0.49
1:0:2371:A:H2'	1:0:2372:A:O4'	2.12	0.49
1:0:2523:G:H1'	1:0:2625:U:C5'	2.42	0.49
1:0:2742:G:O2'	1:0:2743:G:H5'	2.13	0.49
1:0:333:A:O2'	1:0:350:U:H2'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:583:C:O2'	1:0:584:A:P	2.71	0.49
1:0:605:G:H2'	1:0:606:A:C8	2.48	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
1:0:931:G:C5'	2:9:83:C:H1'	2.43	0.49
1:0:1073:G:C2'	1:0:1074:G:H4'	2.30	0.49
1:0:1288:A:H2'	1:0:1289:A:O4'	2.13	0.49
1:0:1341:G:H2'	1:0:1343:C:C5	2.48	0.49
1:0:2010:G:H2'	1:0:2011:U:C6	2.48	0.49
1:0:446:C:H2'	1:0:447:U:O4'	2.13	0.49
2:9:36:A:H8	2:9:36:A:O5'	1.96	0.49
1:0:1482:U:H2'	1:0:1483:G:C8	2.48	0.48
1:0:1947:G:H2'	1:0:1950:C:OP1	2.13	0.48
1:0:220:U:H2'	1:0:221:A:H8	1.78	0.48
1:0:2565:C:H4'	1:0:2566:A:OP1	2.12	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
1:0:1347:C:O2'	1:0:1348:C:H5'	2.12	0.48
1:0:2572:U:H2'	1:0:2573:C:H6	1.78	0.48
1:0:2761:A:C5'	1:0:2762:G:H5'	2.44	0.48
1:0:764:A:N6	32:0:2882:ZIT:H92	2.28	0.48
1:0:870:C:H2'	1:0:871:U:H6	1.77	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
1:0:1686:A:H2'	1:0:1687:C:H5'	1.96	0.48
1:0:1940:C:H2'	1:0:1941:C:C6	2.48	0.48
1:0:612:G:H4'	1:0:613:A:H4'	1.94	0.48
1:0:65:C:H2'	1:0:66:U:O4'	2.13	0.48
1:0:956:A:C5	1:0:2427:A:N3	2.82	0.48
1:0:1087:C:H2'	1:0:1088:A:O4'	2.13	0.48
1:0:1622:G:H4'	1:0:1624:A:N3	2.29	0.48
1:0:1791:C:H2'	1:0:1792:C:C5'	2.37	0.48
1:0:2059:U:H2'	1:0:2060:A:C5'	2.36	0.48
1:0:2117:A:H62	1:0:2139:G:H21	1.61	0.48
1:0:2225:G:H2'	1:0:2226:A:H8	1.79	0.48
1:0:2671:C:O2'	1:0:2672:U:H5'	2.13	0.48
1:0:388:G:O2'	1:0:389:G:H5'	2.13	0.48
1:0:777:A:N6	1:0:1767:G:H1'	2.27	0.48
1:0:80:A:H2'	1:0:81:C:C6	2.48	0.48
1:0:974:U:H2'	1:0:975:C:C6	2.47	0.48
2:9:107:C:C6	2:9:107:C:H3'	2.47	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:63:A:H2'	2:9:64:C:C6	2.47	0.48
1:0:1424:U:H2'	1:0:1425:G:H8	1.78	0.48
1:0:2217:G:H3'	1:0:2217:G:N3	2.28	0.48
1:0:2459:C:H2'	1:0:2460:G:H5'	1.95	0.48
1:0:2508:G:H5''	1:0:2509:A:H5''	1.95	0.48
1:0:805:G:N7	1:0:2419:C:H1'	2.29	0.48
1:0:814:G:H3'	1:0:815:A:C5'	2.43	0.48
1:0:837:U:H2'	1:0:838:A:H8	1.77	0.48
1:0:1038:U:H2'	1:0:1039:A:C8	2.47	0.48
1:0:1023:U:H1'	1:0:1154:A:C8	2.48	0.48
1:0:117:A:H5'	1:0:118:U:O5'	2.14	0.48
1:0:1339:U:O4	1:0:1664:G:H1'	2.14	0.48
1:0:1402:G:H2'	1:0:1403:U:O4'	2.13	0.48
1:0:1432:G:N2	1:0:1596:A:H62	1.95	0.48
1:0:1626:A:OP2	1:0:1626:A:C8	2.66	0.48
1:0:1955:G:H2'	1:0:1956:G:H5'	1.94	0.48
1:0:2469:G:H4'	1:0:2470:U:H5	1.77	0.48
1:0:2468:G:H2'	1:0:2469:G:O4'	2.14	0.48
1:0:2712:G:H5'	1:0:2713:A:C8	2.49	0.48
1:0:2795:A:H2'	1:0:2795:A:N3	2.28	0.48
1:0:322:A:H1'	1:0:343:A:C5	2.49	0.48
1:0:347:C:H2'	1:0:348:U:O4'	2.14	0.48
1:0:702:A:N3	1:0:792:U:H1'	2.28	0.48
1:0:843:G:H8	1:0:843:G:OP1	1.96	0.48
1:0:990:A:H3'	1:0:991:A:H5''	1.96	0.48
2:9:85:G:O2'	2:9:86:A:H5'	2.13	0.48
1:0:1001:A:H62	1:0:1200:G:H1'	1.79	0.48
1:0:1307:U:H2'	1:0:1308:C:O4'	2.13	0.48
1:0:1442:C:N4	1:0:1585:A:C8	2.82	0.48
1:0:195:A:H2'	1:0:196:A:O4'	2.14	0.48
1:0:2011:U:H2'	1:0:2012:A:H8	1.79	0.48
1:0:539:A:H62	1:0:2024:U:H3	1.61	0.48
1:0:2093:G:H2'	1:0:2094:C:C6	2.49	0.48
1:0:2447:G:O5'	1:0:2447:G:H8	1.96	0.48
1:0:2820:C:H2'	1:0:2821:G:H8	1.78	0.48
1:0:717:G:H1'	1:0:740:A:H61	1.79	0.48
2:9:32:C:H4'	2:9:60:A:C2	2.47	0.48
2:9:91:A:O5'	2:9:91:A:H8	1.97	0.48
1:0:1327:C:OP1	1:0:1345:G:H5'	2.14	0.48
1:0:1458:A:C3'	1:0:1459:U:H5''	2.38	0.48
1:0:1461:C:H2'	1:0:1462:C:C6	2.49	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1541:G:H22	1:0:1561:A:N6	2.11	0.48
1:0:1756:C:H2'	1:0:1757:C:C6	2.49	0.48
1:0:242:A:O2'	1:0:243:G:P	2.72	0.48
1:0:486:U:C4'	1:0:520:C:H5'	2.43	0.48
1:0:581:A:N3	1:0:582:G:H1'	2.28	0.48
1:0:657:A:H8	1:0:657:A:O5'	1.96	0.48
1:0:781:G:H2'	1:0:782:U:O4'	2.13	0.48
1:0:860:U:H2'	1:0:861:G:H5'	1.95	0.48
1:0:942:U:H2'	1:0:943:U:O4'	2.14	0.48
1:0:1226:A:N1	1:0:1250:A:H1'	2.29	0.48
1:0:13:A:O2'	1:0:14:A:C2	2.67	0.48
1:0:1740:G:O2'	1:0:1741:G:H5'	2.14	0.48
1:0:1969:G:O2'	1:0:1970:G:H5'	2.14	0.48
1:0:2117:A:N6	1:0:2139:G:H21	2.11	0.48
1:0:2311:U:HO2'	1:0:2312:A:H8	1.60	0.48
1:0:2426:G:N2	1:0:2431:C:H41	2.11	0.48
1:0:2810:A:H2	1:0:2853:U:C5	2.31	0.48
1:0:614:G:H2'	1:0:615:C:C6	2.47	0.48
1:0:788:G:H5'	1:0:790:A:N3	2.29	0.48
1:0:788:G:H5''	1:0:790:A:H1'	1.95	0.48
1:0:995:A:H5''	1:0:996:C:C5	2.47	0.48
1:0:1066:G:H3'	1:0:1067:G:C5'	2.44	0.48
1:0:1162:A:O2'	1:0:1163:C:H5'	2.13	0.48
1:0:1425:G:H2'	1:0:1426:U:C6	2.49	0.48
1:0:15:G:C2'	1:0:16:G:H5'	2.44	0.48
1:0:1721:G:O2'	1:0:1722:G:H5'	2.13	0.48
1:0:1858:C:H2'	1:0:1859:A:H8	1.79	0.48
1:0:1906:U:H2'	1:0:1907:C:C6	2.49	0.48
1:0:2038:C:H5'	1:0:2039:G:H5''	1.96	0.48
1:0:2480:C:H4'	1:0:2482:A:H4'	1.94	0.48
1:0:1139:A:H1'	1:0:2496:C:H5'	1.96	0.48
1:0:2665:G:H2'	1:0:2666:U:O4'	2.14	0.48
1:0:353:G:H2'	1:0:354:C:C6	2.48	0.48
1:0:562:G:H2'	1:0:563:U:O4'	2.14	0.48
1:0:585:U:H2'	1:0:586:G:H8	1.76	0.48
1:0:915:C:H2'	1:0:916:U:C6	2.49	0.48
1:0:953:G:H1'	1:0:1203:A:C2	2.42	0.48
2:9:42:U:H3'	2:9:43:G:H5''	1.96	0.48
1:0:1630:A:H8	1:0:1630:A:OP2	1.97	0.47
1:0:2070:G:H2'	1:0:2071:G:O4'	2.14	0.47
1:0:839:U:H5'	1:0:2407:G:H2'	1.96	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:537:C:C6	1:0:2759:U:H2'	2.48	0.47
1:0:2800:C:O2'	1:0:2801:A:H5'	2.14	0.47
1:0:521:U:H5''	1:0:1248:G:H4'	1.96	0.47
1:0:633:G:H8	1:0:633:G:O5'	1.97	0.47
1:0:735:G:O2'	1:0:736:G:H5'	2.14	0.47
1:0:736:G:H2'	1:0:737:C:C6	2.49	0.47
1:0:824:U:H2'	1:0:825:C:C5'	2.43	0.47
1:0:968:C:C2	1:0:2438:A:H5'	2.49	0.47
1:0:1007:A:H2'	1:0:1008:G:H8	1.79	0.47
1:0:1257:U:H2'	1:0:1258:G:H8	1.77	0.47
1:0:1764:A:H2'	1:0:1765:C:H5'	1.94	0.47
1:0:1783:G:O6	1:0:1820:G:H1'	2.14	0.47
1:0:2396:C:O2'	1:0:2397:A:H5'	2.14	0.47
1:0:1750:A:H4'	1:0:2695:C:O4'	2.14	0.47
1:0:297:A:H2'	1:0:298:C:C6	2.49	0.47
1:0:365:U:H2'	1:0:366:U:C6	2.49	0.47
1:0:1032:A:C2'	1:0:1033:G:H4'	2.39	0.47
1:0:1301:U:H5''	1:0:1302:C:OP1	2.14	0.47
1:0:147:G:O5'	1:0:147:G:H8	1.97	0.47
1:0:1666:G:H2'	1:0:1667:A:H8	1.77	0.47
1:0:1959:U:H2'	1:0:1960:A:C8	2.49	0.47
1:0:2182:A:H2'	1:0:2183:C:O4'	2.14	0.47
1:0:964:A:H1'	1:0:2245:A:OP2	2.14	0.47
1:0:2396:C:H2'	1:0:2397:A:H5'	1.96	0.47
1:0:2658:A:H2'	1:0:2659:C:O4'	2.14	0.47
1:0:524:A:O2'	1:0:525:A:H5'	2.13	0.47
1:0:587:A:OP2	1:0:587:A:H8	1.98	0.47
1:0:592:G:H2'	1:0:593:C:C6	2.49	0.47
1:0:926:C:H2'	1:0:927:C:H5'	1.96	0.47
2:9:35:C:H2'	2:9:36:A:O4'	2.14	0.47
1:0:1141:U:O5'	1:0:1141:U:H6	1.98	0.47
1:0:1166:A:H2'	1:0:1167:A:H5''	1.95	0.47
1:0:1456:C:O2'	1:0:1457:A:H5'	2.14	0.47
1:0:1956:G:H2'	1:0:1957:C:C6	2.49	0.47
1:0:195:A:C2'	1:0:196:A:H5'	2.44	0.47
1:0:236:C:H2'	1:0:237:G:C8	2.43	0.47
1:0:2459:C:C2'	1:0:2460:G:H5'	2.45	0.47
1:0:2814:G:H1	1:0:2853:U:H3	1.62	0.47
1:0:305:A:H2'	1:0:306:G:O4'	2.14	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:192:G:H4'	1:0:193:A:O5'	2.14	0.47
1:0:2094:C:C4	1:0:2103:G:H1'	2.50	0.47
2:9:34:C:O5'	2:9:34:C:H6	1.98	0.47
1:0:1102:G:H2'	1:0:1103:C:C6	2.48	0.47
1:0:1141:U:O2'	1:0:1142:G:OP1	2.28	0.47
1:0:1184:G:C2'	1:0:1185:C:H5''	2.44	0.47
1:0:1407:G:H2'	1:0:1408:A:C8	2.49	0.47
1:0:1719:G:O2'	1:0:1720:G:H5'	2.14	0.47
1:0:1857:G:H2'	1:0:1859:A:OP2	2.14	0.47
1:0:1915:A:N1	1:0:1956:G:H1'	2.29	0.47
1:0:1141:U:OP2	1:0:2549:G:N2	2.47	0.47
1:0:457:C:O2'	1:0:458:G:H5'	2.13	0.47
1:0:482:A:C2'	1:0:483:A:H5'	2.45	0.47
1:0:1437:A:O2'	1:0:1438:G:H5'	2.14	0.47
1:0:1487:C:H2'	1:0:1488:G:H8	1.80	0.47
1:0:1365:U:H1'	1:0:1586:A:H2	1.79	0.47
1:0:2384:G:H2'	1:0:2390:A:H62	1.80	0.47
1:0:2433:G:H2'	1:0:2434:G:H8	1.80	0.47
1:0:2617:G:O2'	1:0:2618:A:H8	1.97	0.47
1:0:2727:G:H2'	1:0:2728:A:H5''	1.96	0.47
1:0:657:A:H2'	1:0:658:G:H8	1.78	0.47
1:0:578:U:OP1	1:0:956:A:N6	2.48	0.47
2:9:108:G:H2'	2:9:109:G:H8	1.79	0.47
1:0:1253:C:H2'	1:0:1254:G:H5'	1.96	0.47
1:0:1322:G:N2	1:0:1627:C:H5'	2.28	0.47
1:0:1787:U:H2'	1:0:1788:C:C6	2.50	0.47
1:0:1957:C:O2'	1:0:1958:G:H5'	2.14	0.47
1:0:2245:A:C2'	1:0:2246:A:OP2	2.62	0.47
1:0:2739:G:H2'	1:0:2740:C:O4'	2.15	0.47
1:0:2862:G:O2'	1:0:2863:U:H5'	2.15	0.47
1:0:428:A:H2'	1:0:429:C:H6	1.79	0.47
1:0:605:G:H2'	1:0:606:A:H8	1.80	0.47
1:0:640:C:H5''	1:0:660:G:O2'	2.13	0.47
2:9:88:C:H2'	2:9:89:G:O4'	2.15	0.47
1:0:1253:C:C2'	1:0:1254:G:H5'	2.44	0.47
1:0:1317:G:O2'	1:0:1318:A:H5'	2.14	0.47
1:0:1668:G:O2'	1:0:1669:A:H5'	2.15	0.47
1:0:2204:A:H1'	1:0:2205:C:C5	2.49	0.47
1:0:2560:G:H2'	1:0:2561:G:H8	1.80	0.47
1:0:305:A:C2'	1:0:306:G:H5'	2.45	0.47
1:0:397:U:H2'	1:0:398:C:H6	1.79	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:785:U:O2'	1:0:786:U:H5'	2.15	0.47
1:0:805:G:N2	1:0:2056:C:H4'	2.29	0.47
2:9:24:U:H2'	2:9:25:G:O5'	2.14	0.47
1:0:1373:G:H2'	1:0:1374:G:H5'	1.97	0.47
1:0:4:C:H2'	1:0:5:A:C8	2.50	0.47
1:0:538:A:C2'	1:0:539:A:H5''	2.43	0.47
1:0:1066:G:C2'	1:0:1067:G:H4'	2.43	0.47
1:0:1802:A:H2'	1:0:1803:G:O4'	2.15	0.47
1:0:181:A:H5''	1:0:182:G:OP1	2.14	0.47
1:0:1940:C:H2'	1:0:1941:C:H6	1.80	0.47
1:0:2404:A:O2'	1:0:2405:A:OP2	2.28	0.47
1:0:2446:C:H2'	1:0:2447:G:C8	2.50	0.47
1:0:2470:U:H2'	1:0:2471:U:C6	2.50	0.47
1:0:422:C:H2'	1:0:423:G:O4'	2.15	0.47
1:0:550:C:H2'	1:0:551:A:H8	1.80	0.47
1:0:912:A:H2'	1:0:913:A:H8	1.80	0.47
2:9:42:U:O4	2:9:45:C:OP2	2.33	0.47
1:0:1680:U:H6	1:0:1680:U:H5'	1.80	0.46
1:0:1871:G:C2'	1:0:1871:G:N3	2.78	0.46
1:0:1970:G:O2'	1:0:1971:C:H5'	2.15	0.46
1:0:211:U:O2'	1:0:212:U:H5'	2.15	0.46
1:0:2204:A:O2'	1:0:2205:C:OP2	2.30	0.46
1:0:2286:G:H21	1:0:2290:A:H62	1.63	0.46
1:0:2484:G:C6	32:0:2881:ZIT:H7B1	2.50	0.46
1:0:2490:U:H2'	1:0:2491:C:H6	1.79	0.46
1:0:2483:U:H1'	1:0:2551:A:C2	2.50	0.46
1:0:2624:G:H4'	1:0:2712:G:O2'	2.15	0.46
1:0:2617:G:N2	1:0:2755:A:H2'	2.30	0.46
1:0:450:C:H2'	1:0:451:A:C8	2.51	0.46
1:0:461:A:N3	1:0:461:A:H2'	2.30	0.46
1:0:786:U:H2'	1:0:787:A:H5'	1.96	0.46
2:9:68:A:C2	2:9:110:U:C4	3.03	0.46
1:0:1442:C:N4	1:0:1585:A:H8	2.13	0.46
1:0:1621:C:O2'	1:0:1626:A:N7	2.45	0.46
1:0:1793:A:H2'	1:0:1794:A:C8	2.50	0.46
1:0:2227:C:H2'	1:0:2228:U:H5'	1.97	0.46
1:0:2396:C:H6	1:0:2396:C:H5'	1.80	0.46
1:0:246:C:N4	1:0:247:A:H62	2.13	0.46
1:0:2488:G:H2'	1:0:2489:C:H6	1.79	0.46
1:0:2588:U:O2'	1:0:2589:C:OP1	2.32	0.46
1:0:2785:A:H62	1:0:2865:G:H21	1.63	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2830:U:H2'	1:0:2831:A:C8	2.51	0.46
1:0:429:C:H2'	1:0:430:C:O4'	2.15	0.46
1:0:433:G:N2	1:0:434:C:H1'	2.30	0.46
1:0:538:A:C3'	1:0:539:A:H5''	2.45	0.46
1:0:83:A:N1	1:0:98:U:H1'	2.31	0.46
2:9:45:C:H42	2:9:47:A:H62	1.63	0.46
1:0:1139:A:H1'	1:0:2495:G:O2'	2.15	0.46
1:0:2566:A:H2'	1:0:2567:G:H5'	1.96	0.46
1:0:31:C:H5''	1:0:1252:C:OP1	2.14	0.46
1:0:487:G:H1'	1:0:515:A:H2	1.79	0.46
1:0:612:G:O3'	1:0:613:A:C4'	2.59	0.46
1:0:631:G:H5''	1:0:632:A:OP1	2.16	0.46
1:0:815:A:H2'	1:0:816:U:O4'	2.14	0.46
1:0:1715:A:H1'	1:0:1717:A:O4'	2.15	0.46
1:0:225:G:H5'	1:0:226:C:H5'	1.97	0.46
1:0:2402:U:H5'	1:0:2404:A:C5	2.51	0.46
1:0:2225:G:C2	1:0:2405:A:H1'	2.50	0.46
1:0:2425:G:H2'	1:0:2480:C:H41	1.80	0.46
1:0:2858:A:H3'	1:0:2859:U:H5'	1.97	0.46
1:0:514:G:N3	1:0:514:G:C2'	2.78	0.46
1:0:732:G:O5'	1:0:732:G:H8	1.99	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
1:0:1206:G:H2'	1:0:1207:G:H8	1.80	0.46
1:0:1337:G:H4'	1:0:1632:A:N7	2.31	0.46
1:0:2015:G:O2'	1:0:2016:A:OP1	2.27	0.46
1:0:2523:G:H2'	1:0:2524:G:O4'	2.16	0.46
1:0:2533:U:H2'	1:0:2534:U:C6	2.51	0.46
1:0:393:U:H2'	1:0:394:U:H6	1.80	0.46
1:0:488:A:H2'	1:0:489:A:C8	2.51	0.46
1:0:619:A:H2'	1:0:620:G:C8	2.50	0.46
1:0:65:C:C2'	1:0:66:U:H5'	2.45	0.46
1:0:69:G:H4'	1:0:70:A:O5'	2.16	0.46
1:0:1472:C:HO2'	1:0:1474:A:H8	1.62	0.46
1:0:1496:G:H1	1:0:1527:G:H1	1.64	0.46
1:0:1669:A:H2'	1:0:1670:G:H4'	1.97	0.46
1:0:1671:A:O4'	1:0:2798:A:H5'	2.16	0.46
1:0:170:U:H2'	1:0:171:G:C8	2.45	0.46
1:0:1964:A:OP1	1:0:1965:U:OP2	2.33	0.46
1:0:2407:G:H5''	1:0:2408:G:OP1	2.15	0.46
1:0:2599:U:H3'	1:0:2600:A:H5''	1.95	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:515:A:C2'	1:0:516:G:H5'	2.46	0.46
1:0:591:G:H2'	1:0:592:G:C8	2.49	0.46
1:0:646:C:O2'	1:0:650:U:H5''	2.16	0.46
1:0:788:G:N2	1:0:800:U:C2'	2.78	0.46
1:0:84:G:O2'	1:0:85:C:H5'	2.15	0.46
1:0:1002:C:O5'	1:0:1002:C:H6	1.99	0.46
1:0:984:A:H1'	1:0:1202:U:C5	2.51	0.46
1:0:1216:G:H2'	1:0:1217:U:O4'	2.16	0.46
1:0:1221:C:H6	1:0:1221:C:O5'	1.99	0.46
1:0:1624:A:C2'	1:0:1625:A:H5'	2.44	0.46
1:0:221:A:N6	1:0:231:G:H21	2.14	0.46
1:0:2559:U:H5	1:0:2560:G:H21	1.63	0.46
1:0:299:C:H2'	1:0:300:C:C5	2.51	0.46
1:0:482:A:H2'	1:0:483:A:O4'	2.16	0.46
1:0:931:G:H2'	1:0:932:G:C5'	2.46	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
1:0:1034:U:H4'	1:0:1134:C:OP1	2.15	0.46
1:0:1277:G:H2'	1:0:1997:A:N6	2.31	0.46
1:0:1447:U:H1'	1:0:1577:G:H22	1.79	0.46
1:0:1478:U:H2'	1:0:1479:G:C8	2.51	0.46
1:0:1714:A:C5	1:0:1715:A:N6	2.79	0.46
1:0:872:G:O2'	1:0:2247:A:C4	2.69	0.46
1:0:394:U:O2'	1:0:395:G:H5'	2.16	0.46
1:0:40:U:H2'	1:0:41:G:C8	2.51	0.46
1:0:635:C:O2	1:0:670:U:H4'	2.16	0.46
1:0:643:A:O2'	1:0:644:A:H5'	2.15	0.46
1:0:764:A:N3	1:0:764:A:C2'	2.79	0.46
1:0:788:G:H5''	1:0:789:G:OP1	2.15	0.46
1:0:839:U:H5''	1:0:2408:G:P	2.55	0.46
1:0:1001:A:H3'	1:0:1002:C:H5''	1.98	0.46
1:0:115:G:C6	1:0:117:A:N6	2.84	0.46
1:0:1494:G:H2'	1:0:1495:G:O4'	2.16	0.46
1:0:1356:G:H1'	1:0:1613:G:C2	2.51	0.46
1:0:1715:A:HO2'	1:0:1716:G:H8	1.64	0.46
1:0:1827:G:H1'	1:0:1914:U:N3	2.31	0.46
1:0:1918:G:H4'	1:0:1920:A:C2	2.51	0.46
1:0:2093:G:H2'	1:0:2094:C:H6	1.80	0.46
1:0:2245:A:H2'	1:0:2246:A:OP2	2.16	0.46
1:0:2397:A:H2'	1:0:2398:U:O4'	2.16	0.46
1:0:2511:G:N2	1:0:2642:G:O2'	2.49	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2687:G:O2'	1:0:2688:G:H5'	2.16	0.46
1:0:2751:C:H2'	1:0:2752:C:C6	2.50	0.46
1:0:458:G:H4'	1:0:461:A:C4	2.51	0.46
1:0:490:A:N7	1:0:492:G:H1'	2.31	0.46
1:0:642:A:H2'	1:0:643:A:C8	2.51	0.46
1:0:745:C:C2'	1:0:746:G:H5'	2.46	0.46
1:0:750:C:H2'	1:0:751:G:C8	2.49	0.46
1:0:974:U:H2'	1:0:975:C:O4'	2.16	0.46
1:0:1226:A:H2'	1:0:1227:A:H8	1.80	0.46
1:0:1322:G:O2'	1:0:1323:G:H5'	2.16	0.46
1:0:1356:G:H4'	1:0:1613:G:H2'	1.98	0.46
1:0:1784:C:O2'	1:0:1785:A:H5'	2.16	0.46
1:0:2225:G:O2'	1:0:2226:A:H5'	2.16	0.46
1:0:2264:C:H2'	1:0:2265:A:H5'	1.98	0.46
1:0:2321:C:O2'	1:0:2353:G:H5''	2.16	0.46
1:0:2417:U:H1'	1:0:2419:C:N4	2.31	0.46
1:0:2047:C:H42	1:0:2425:G:H22	1.63	0.46
1:0:2592:U:C2'	1:0:2593:A:H5'	2.45	0.46
1:0:367:G:C3'	1:0:368:A:H5''	2.46	0.46
1:0:544:U:H2'	1:0:545:C:O4'	2.16	0.46
1:0:840:U:H4'	1:0:841:G:N2	2.30	0.46
2:9:94:G:H2'	2:9:94:G:N3	2.30	0.46
1:0:455:A:H4'	1:0:1214:C:O2'	2.15	0.45
1:0:141:G:H2'	1:0:142:U:H6	1.81	0.45
1:0:1685:A:N6	1:0:1691:G:N3	2.64	0.45
1:0:1790:G:O3'	1:0:1791:C:H6	1.99	0.45
1:0:1952:A:O2'	1:0:1955:G:N2	2.49	0.45
1:0:20:C:H2'	1:0:21:A:H8	1.81	0.45
1:0:2753:C:H2'	1:0:2754:C:H6	1.79	0.45
1:0:2045:A:H61	32:0:2881:ZIT:H6A2	1.82	0.45
1:0:1001:A:H5'	1:0:1168:G:OP1	2.17	0.45
1:0:1333:G:N2	1:0:1344:C:N4	2.64	0.45
1:0:1787:U:H2'	1:0:1788:C:H6	1.81	0.45
1:0:1855:G:H4'	1:0:2390:A:H4'	1.98	0.45
1:0:239:A:C5'	1:0:620:G:H5'	2.46	0.45
1:0:462:G:H2'	1:0:463:C:H5'	1.98	0.45
1:0:942:U:H2'	1:0:943:U:C4'	2.46	0.45
1:0:677:G:H4'	1:0:951:G:O3'	2.16	0.45
1:0:981:C:H2'	1:0:982:C:C6	2.51	0.45
1:0:1147:G:O2'	1:0:1148:G:H5'	2.16	0.45
1:0:1739:G:H2'	1:0:1740:G:C8	2.51	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:190:A:H2'	1:0:191:G:H8	1.81	0.45
1:0:1923:U:H2'	1:0:1923:U:O2	2.17	0.45
1:0:583:C:C4	1:0:2016:A:H4'	2.52	0.45
1:0:2028:C:O2'	1:0:2029:G:H5'	2.16	0.45
1:0:2053:G:H2'	1:0:2054:A:H8	1.81	0.45
1:0:871:U:O2	1:0:2247:A:H2'	2.16	0.45
1:0:2307:A:H2'	1:0:2308:A:H8	1.79	0.45
1:0:2324:G:HO2'	1:0:2325:A:H5''	1.81	0.45
1:0:2511:G:H2'	1:0:2512:A:O4'	2.17	0.45
1:0:2617:G:H22	1:0:2755:A:H2'	1.82	0.45
1:0:674:U:H2'	1:0:675:C:C6	2.52	0.45
1:0:718:A:O2'	1:0:719:A:H5'	2.14	0.45
1:0:733:G:O2'	1:0:734:G:H5'	2.17	0.45
1:0:745:C:H2'	1:0:746:G:H5'	1.99	0.45
1:0:810:U:H2'	1:0:811:G:C8	2.51	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
1:0:1171:A:H2'	1:0:1172:U:C6	2.52	0.45
1:0:50:G:H2'	1:0:117:A:N1	2.30	0.45
1:0:1715:A:HO2'	1:0:1716:G:H3'	1.81	0.45
1:0:2396:C:H2'	1:0:2397:A:C5'	2.46	0.45
1:0:2652:G:H2'	1:0:2653:A:C8	2.40	0.45
1:0:305:A:H2'	1:0:306:G:H5'	1.97	0.45
1:0:669:G:H2'	1:0:670:U:H6	1.80	0.45
1:0:986:A:H2'	1:0:987:G:H5'	1.98	0.45
1:0:195:A:H2'	1:0:196:A:H5'	1.98	0.45
1:0:2019:C:H5'	1:0:2019:C:H6	1.82	0.45
1:0:2039:G:N2	27:Z:5:PRO:CA	2.79	0.45
1:0:2459:C:H2'	1:0:2460:G:O4'	2.17	0.45
1:0:2504:G:O4'	1:0:2721:A:H2	1.99	0.45
1:0:2713:A:O2'	1:0:2714:A:H5'	2.16	0.45
1:0:745:C:H2'	1:0:746:G:C5'	2.47	0.45
1:0:1278:A:O2'	1:0:1279:G:P	2.75	0.45
1:0:1473:U:H4'	1:0:1474:A:C8	2.52	0.45
1:0:1482:U:H1'	1:0:1562:G:N2	2.31	0.45
1:0:1538:A:O2'	1:0:1539:U:H5'	2.17	0.45
1:0:1479:G:N2	1:0:1543:G:N2	2.64	0.45
1:0:1821:A:H3'	1:0:1822:C:C6	2.52	0.45
1:0:1947:G:H5''	1:0:1948:C:OP1	2.16	0.45
1:0:20:C:O2'	1:0:21:A:H5'	2.15	0.45
1:0:675:C:H2'	1:0:676:G:H8	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:721:C:H2'	1:0:722:C:C6	2.52	0.45
1:0:757:U:O2'	1:0:758:G:H5'	2.16	0.45
1:0:1388:C:H2'	1:0:1389:C:C6	2.47	0.45
1:0:1766:U:H2'	1:0:1767:G:O4'	2.17	0.45
1:0:1789:U:O2	1:0:1793:A:H2	1.99	0.45
1:0:1854:G:O2'	1:0:1855:G:H5'	2.16	0.45
1:0:1950:C:H2'	1:0:1951:G:O4'	2.16	0.45
1:0:2249:U:H2'	1:0:2250:G:H5'	1.99	0.45
1:0:2274:C:C2'	1:0:2275:U:H5''	2.46	0.45
1:0:2407:G:H4'	1:0:2408:G:C5	2.52	0.45
1:0:362:C:C2'	1:0:363:G:H4'	2.27	0.45
1:0:70:A:OP2	1:0:111:G:O5'	2.34	0.45
1:0:930:A:H4'	1:0:930:A:OP1	2.15	0.45
1:0:931:G:H2'	1:0:932:G:H5'	1.99	0.45
2:9:114:C:O5'	2:9:114:C:C6	2.67	0.45
1:0:341:A:H1'	1:0:1223:G:O6	2.17	0.45
1:0:1227:A:C4'	1:0:1252:C:H4'	2.47	0.45
1:0:824:U:O2'	1:0:1264:C:O4'	2.34	0.45
1:0:1429:A:C6	1:0:1602:G:H5'	2.50	0.45
1:0:1356:G:C4'	1:0:1613:G:H2'	2.47	0.45
1:0:1666:G:H2'	1:0:1667:A:C8	2.52	0.45
1:0:1849:G:O5'	1:0:1849:G:H8	2.00	0.45
1:0:2523:G:H2'	1:0:2524:G:H8	1.82	0.45
1:0:322:A:H2	1:0:342:G:OP2	2.00	0.45
1:0:393:U:O2'	1:0:394:U:H5'	2.17	0.45
1:0:665:A:H3'	1:0:666:U:H5''	1.97	0.45
1:0:889:C:O2'	1:0:890:U:H5'	2.17	0.45
1:0:957:G:N2	1:0:983:G:H1'	2.32	0.45
1:0:1699:A:C6	1:0:1748:U:H1'	2.52	0.45
1:0:1706:A:N6	1:0:1714:A:H2'	2.32	0.45
1:0:1846:A:H2'	1:0:1847:G:O4'	2.17	0.45
1:0:1933:G:H8	1:0:1933:G:O5'	2.00	0.45
1:0:2046:C:O2'	1:0:2564:U:H1'	2.16	0.45
1:0:2104:G:H2'	1:0:2105:U:H6	1.81	0.45
1:0:403:A:H5''	1:0:404:A:OP1	2.17	0.45
1:0:486:U:H2'	1:0:487:G:H5'	1.99	0.45
1:0:560:G:H21	1:0:1233:A:H2	1.65	0.45
1:0:843:G:HO2'	1:0:844:G:P	2.39	0.45
2:9:104:A:C8	2:9:105:G:N7	2.85	0.45
1:0:1449:C:O2'	1:0:1450:G:H5'	2.17	0.45
1:0:2044:G:H21	1:0:2045:A:N6	2.14	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2410:U:H6	1:0:2410:U:O5'	2.00	0.45
1:0:2478:C:H2'	1:0:2479:U:C5'	2.47	0.45
1:0:2841:U:O2'	1:0:2842:C:H5'	2.17	0.45
1:0:807:A:H2'	1:0:808:C:C6	2.52	0.45
1:0:1008:G:O2'	1:0:1009:C:H5'	2.17	0.44
1:0:115:G:H8	1:0:115:G:O5'	2.00	0.44
1:0:127:C:H5''	1:0:1615:C:O2'	2.16	0.44
1:0:1363:C:H2'	1:0:1364:C:O4'	2.17	0.44
1:0:1884:A:O2'	1:0:1885:C:H5'	2.17	0.44
1:0:2024:U:H2'	1:0:2025:A:C8	2.52	0.44
1:0:2163:U:H2'	1:0:2164:G:H8	1.82	0.44
1:0:2347:C:H2'	1:0:2348:A:C8	2.52	0.44
1:0:2454:C:H42	1:0:2508:G:H22	1.65	0.44
1:0:2633:A:H4'	1:0:2634:G:H4'	1.98	0.44
1:0:343:A:N6	1:0:346:C:C5	2.85	0.44
1:0:750:C:H2'	1:0:751:G:H8	1.82	0.44
1:0:930:A:H5'	1:0:931:G:C8	2.52	0.44
1:0:1064:C:H2'	1:0:1065:A:C8	2.52	0.44
1:0:1512:A:O5'	1:0:1512:A:H8	1.99	0.44
1:0:1540:C:H2'	1:0:1541:G:H8	1.83	0.44
1:0:1685:A:H2	1:0:1687:C:C2	2.35	0.44
1:0:1802:A:O2'	1:0:1803:G:H5'	2.16	0.44
1:0:225:G:H3'	1:0:226:C:H5'	2.00	0.44
1:0:2480:C:H5''	1:0:2482:A:H5'	1.98	0.44
1:0:2483:U:H2'	1:0:2484:G:H5'	1.98	0.44
1:0:2487:G:H2'	1:0:2488:G:H8	1.82	0.44
1:0:2748:C:H2'	1:0:2749:A:O4'	2.18	0.44
1:0:1132:C:O2'	1:0:1133:G:H5'	2.18	0.44
1:0:1426:U:H2'	1:0:1427:G:O4'	2.17	0.44
1:0:1459:U:H2'	1:0:1475:U:HO2'	1.80	0.44
1:0:2002:A:C2	1:0:2003:A:H1'	2.53	0.44
1:0:2039:G:C2	1:0:2556:A:H1'	2.52	0.44
1:0:2784:A:H3'	1:0:2785:A:H8	1.82	0.44
1:0:416:U:C5'	1:0:417:C:H5'	2.42	0.44
1:0:424:G:N7	1:0:2385:U:N3	2.65	0.44
1:0:81:C:H4'	1:0:307:C:H5'	1.98	0.44
1:0:839:U:OP1	1:0:2408:G:OP2	2.35	0.44
1:0:83:A:H8	1:0:83:A:O5'	2.00	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

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1541:G:N2	1:0:1562:G:N2	2.65	0.44
1:0:1462:C:O2'	1:0:1560:A:H1'	2.17	0.44
1:0:1840:A:H2'	1:0:1841:G:H5'	1.99	0.44
1:0:538:A:N1	1:0:2026:C:H5''	2.32	0.44
1:0:1672:A:C2	1:0:2032:G:H5''	2.53	0.44
1:0:1937:G:H21	1:0:2530:C:H5''	1.82	0.44
1:0:2569:A:H2'	1:0:2570:C:O4'	2.18	0.44
1:0:758:G:O2'	1:0:761:G:O2'	2.34	0.44
1:0:859:U:H4'	1:0:860:U:H5	1.82	0.44
1:0:960:U:H2'	1:0:961:G:C8	2.52	0.44
1:0:118:U:H5''	1:0:120:G:OP2	2.17	0.44
1:0:1223:G:N1	1:0:1250:A:N7	2.66	0.44
1:0:187:U:H1'	1:0:1379:A:C2	2.53	0.44
1:0:161:U:H5'	1:0:193:A:N1	2.33	0.44
1:0:1750:A:C8	1:0:2675:U:H1'	2.53	0.44
1:0:1748:U:N3	1:0:1753:A:C2	2.75	0.44
1:0:1872:A:H2'	1:0:1873:A:C8	2.52	0.44
1:0:2136:G:H2'	1:0:2137:G:C8	2.53	0.44
1:0:2177:U:O2'	1:0:2178:U:H5'	2.18	0.44
1:0:2202:G:H3'	1:0:2203:G:C8	2.53	0.44
1:0:2215:C:H2'	1:0:2216:G:O4'	2.18	0.44
1:0:2770:A:H5''	1:0:2867:G:H1	1.81	0.44
1:0:570:G:C2'	1:0:571:U:H5''	2.48	0.44
1:0:608:G:O2'	1:0:609:U:H5'	2.18	0.44
2:9:61:A:O5'	2:9:61:A:C8	2.60	0.44
1:0:128:C:H2'	1:0:129:A:H5''	2.00	0.44
1:0:1295:U:H2'	1:0:1296:G:C5'	2.43	0.44
1:0:1707:A:C2'	1:0:1708:C:H5'	2.48	0.44
1:0:1792:C:H6	1:0:1792:C:O5'	2.00	0.44
1:0:1849:G:H21	1:0:1868:A:H62	1.65	0.44
1:0:2569:A:H2'	1:0:2570:C:C6	2.52	0.44
1:0:323:G:OP2	1:0:343:A:H5'	2.18	0.44
1:0:533:C:H2'	1:0:534:U:O4'	2.18	0.44
1:0:768:U:H5'	1:0:1285:A:N1	2.33	0.44
2:9:104:A:C4	2:9:105:G:C8	3.06	0.44
1:0:1040:A:H2'	1:0:1041:G:C5'	2.43	0.44
1:0:1363:C:H2'	1:0:1364:C:C6	2.53	0.44
1:0:1669:A:H61	1:0:1670:G:H21	1.66	0.44
1:0:1938:U:O2'	1:0:1939:U:H5'	2.18	0.44
1:0:2166:G:O2'	1:0:2167:A:H5'	2.17	0.44
1:0:2182:A:H3'	1:0:2183:C:C6	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:221:A:C2'	1:0:222:G:H5'	2.47	0.44
1:0:2535:C:C2'	1:0:2536:G:H5'	2.47	0.44
1:0:2685:A:H5''	1:0:2826:C:H5''	2.00	0.44
1:0:2695:C:H2'	1:0:2696:A:C8	2.52	0.44
1:0:2725:C:H2'	1:0:2726:U:C6	2.53	0.44
1:0:2783:U:H2'	1:0:2784:A:C4'	2.47	0.44
1:0:32:C:H2'	1:0:33:C:C6	2.53	0.44
1:0:484:G:H2'	1:0:485:G:O4'	2.17	0.44
1:0:789:G:H4'	1:0:790:A:C8	2.52	0.44
1:0:957:G:O2'	1:0:958:G:H5'	2.17	0.44
1:0:1135:C:H2'	1:0:1136:G:H8	1.83	0.44
1:0:1229:C:H2'	1:0:1230:C:C6	2.53	0.44
1:0:1947:G:P	1:0:1947:G:H8	2.40	0.44
1:0:2054:A:H2'	1:0:2055:G:H8	1.81	0.44
1:0:2064:U:H2'	1:0:2065:A:H8	1.83	0.44
1:0:2070:G:H2'	1:0:2071:G:C8	2.52	0.44
1:0:2090:U:H2'	1:0:2091:C:H6	1.83	0.44
1:0:2321:C:H2'	1:0:2322:U:H5'	1.99	0.44
1:0:940:G:C3'	1:0:941:U:C5'	2.79	0.44
1:0:1310:C:P	1:0:2689:C:H4'	2.58	0.44
1:0:158:A:H2'	1:0:159:A:C8	2.52	0.44
1:0:1654:A:H4'	1:0:2690:A:HO2'	1.80	0.44
1:0:1710:U:O5'	1:0:1710:U:H6	2.00	0.44
1:0:1724:C:H1'	1:0:1747:G:C4	2.53	0.44
1:0:1962:C:C2'	1:0:1963:G:H5'	2.47	0.44
1:0:222:G:O2'	1:0:223:C:H5'	2.18	0.44
1:0:2327:U:H2'	1:0:2328:G:C8	2.53	0.44
1:0:2474:G:O5'	1:0:2474:G:H8	2.01	0.44
1:0:1680:U:HO2'	1:0:2665:G:H4'	1.82	0.44
1:0:2610:G:H5'	1:0:2866:A:H4'	1.99	0.44
1:0:486:U:C2'	1:0:487:G:H5'	2.48	0.44
1:0:26:G:H1'	1:0:525:A:H61	1.83	0.44
1:0:1012:A:H61	1:0:1165:G:H1'	1.82	0.43
1:0:1000:G:OP1	1:0:1168:G:H4'	2.18	0.43
1:0:1485:U:H2'	1:0:1486:A:H8	1.82	0.43
1:0:1622:G:H5''	1:0:1624:A:O4'	2.18	0.43
1:0:1685:A:C2	1:0:1976:U:C2	3.06	0.43
1:0:2070:G:H2'	1:0:2071:G:H8	1.83	0.43
1:0:2712:G:H3'	1:0:2713:A:H5'	1.99	0.43
1:0:27:G:HO2'	1:0:28:A:H8	1.65	0.43
32:0:2881:ZIT:H6A2	32:0:2881:ZIT:H193	2.00	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:508:G:H22	1:0:516:G:N2	2.16	0.43
1:0:541:C:H2'	1:0:541:C:O2	2.18	0.43
1:0:697:G:O2'	1:0:698:A:H5'	2.17	0.43
1:0:1263:G:O2'	1:0:1264:C:P	2.76	0.43
1:0:1781:C:H2'	1:0:1782:A:C8	2.53	0.43
1:0:2079:A:H2'	1:0:2080:U:C6	2.53	0.43
1:0:2633:A:OP1	1:0:2635:U:H1'	2.18	0.43
1:0:2695:C:H2'	1:0:2696:A:H8	1.83	0.43
1:0:630:G:H5''	1:0:631:G:OP2	2.18	0.43
1:0:632:A:H3'	1:0:632:A:N3	2.33	0.43
1:0:758:G:N2	1:0:766:A:C5	2.86	0.43
1:0:83:A:H5''	1:0:84:G:OP1	2.18	0.43
1:0:929:A:C3'	1:0:930:A:C5'	2.95	0.43
1:0:968:C:H41	1:0:970:A:C1'	2.30	0.43
1:0:1011:A:N6	1:0:1165:G:H2'	2.33	0.43
1:0:1528:C:C2'	1:0:1529:C:H5''	2.47	0.43
1:0:1572:C:H2'	1:0:1573:G:H5''	1.99	0.43
1:0:1685:A:H61	1:0:1693:A:N6	2.16	0.43
1:0:1801:C:H1'	1:0:2207:G:O2'	2.17	0.43
1:0:1908:C:H2'	1:0:1909:U:C4'	2.22	0.43
1:0:1974:U:H2'	1:0:1975:G:C5'	2.42	0.43
1:0:2106:G:H2'	1:0:2107:G:C8	2.53	0.43
1:0:2219:U:O2'	1:0:2220:A:H5'	2.19	0.43
32:0:2882:ZIT:H192	32:0:2882:ZIT:C1A	2.49	0.43
1:0:629:C:C2'	1:0:630:G:H5'	2.48	0.43
1:0:951:G:H3'	1:0:952:A:H5''	1.99	0.43
1:0:1226:A:C4	1:0:1250:A:N3	2.86	0.43
1:0:1300:A:H2	1:0:1666:G:H4'	1.80	0.43
1:0:163:A:H2'	1:0:164:G:C8	2.50	0.43
1:0:1783:G:H1'	1:0:1822:C:P	2.59	0.43
1:0:2214:G:O2'	1:0:2215:C:H5'	2.19	0.43
1:0:2324:G:N7	1:0:2351:G:C2	2.86	0.43
1:0:2433:G:O2'	1:0:2434:G:H5'	2.19	0.43
1:0:698:A:C1'	1:0:700:C:H41	2.30	0.43
2:9:48:A:C5	2:9:49:C:C5	3.06	0.43
1:0:1572:C:C2'	1:0:1573:G:H5''	2.48	0.43
1:0:1764:A:H62	1:0:1821:A:H1'	1.83	0.43
1:0:192:G:O2'	1:0:193:A:OP2	2.33	0.43
1:0:2055:G:O2'	1:0:2056:C:H5'	2.18	0.43
1:0:2095:G:H2'	1:0:2096:U:H5''	2.01	0.43
1:0:2252:A:H2'	1:0:2253:A:C8	2.54	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2319:G:H2'	1:0:2320:G:C8	2.54	0.43
1:0:2335:U:H2'	1:0:2336:G:O4'	2.19	0.43
1:0:737:C:H2'	1:0:738:G:O4'	2.18	0.43
1:0:784:U:H2'	1:0:785:U:C6	2.54	0.43
2:9:88:C:H2'	2:9:89:G:C8	2.53	0.43
1:0:1155:G:H2'	1:0:1156:U:O4'	2.19	0.43
1:0:1256:C:H2'	1:0:1257:U:C6	2.54	0.43
1:0:1422:C:H2'	1:0:1423:A:C8	2.54	0.43
1:0:1554:G:H2'	1:0:1555:A:C8	2.53	0.43
1:0:1558:C:H2'	1:0:1559:G:C5'	2.49	0.43
1:0:1558:C:H2'	1:0:1559:G:O4'	2.19	0.43
1:0:158:A:H2'	1:0:159:A:O4'	2.19	0.43
1:0:1625:A:H2'	1:0:1625:A:N3	2.33	0.43
1:0:1699:A:H61	1:0:1723:U:H3	1.65	0.43
1:0:1981:A:H4'	1:0:2704:U:O2'	2.18	0.43
1:0:873:U:N3	1:0:2246:A:H5''	2.34	0.43
1:0:2448:A:H2'	1:0:2449:G:O4'	2.19	0.43
1:0:295:C:N4	1:0:296:A:N6	2.67	0.43
1:0:305:A:H2'	1:0:306:G:C5'	2.48	0.43
1:0:431:G:H2'	1:0:432:C:C6	2.54	0.43
1:0:714:G:O2'	1:0:715:U:H5'	2.18	0.43
1:0:746:G:N7	1:0:774:A:C5	2.86	0.43
2:9:59:A:H2'	2:9:60:A:C5'	2.48	0.43
1:0:1296:G:H2'	1:0:1298:G:OP2	2.19	0.43
1:0:1820:G:H4'	1:0:1821:A:OP1	2.18	0.43
1:0:203:G:H4'	1:0:234:C:O2'	2.18	0.43
1:0:2066:G:H2'	1:0:2067:U:O4'	2.19	0.43
1:0:2345:A:H2'	1:0:2346:G:H5'	2.01	0.43
1:0:2621:G:O2'	1:0:2622:G:H5'	2.19	0.43
1:0:2863:U:H2'	1:0:2864:C:H6	1.84	0.43
1:0:2876:C:H2'	1:0:2877:A:O4'	2.19	0.43
1:0:580:A:N3	1:0:582:G:N7	2.66	0.43
1:0:65:C:O2'	1:0:66:U:H5'	2.19	0.43
1:0:1086:C:C3'	1:0:1087:C:H5''	2.48	0.43
1:0:1448:A:H2'	1:0:1449:C:C6	2.54	0.43
1:0:1455:C:H2'	1:0:1456:C:C6	2.54	0.43
1:0:1776:A:N6	1:0:1778:U:H1'	2.33	0.43
1:0:2205:C:O2'	1:0:2206:C:H5'	2.18	0.43
1:0:2618:A:N1	1:0:2619:G:H1'	2.34	0.43
1:0:2655:C:H2'	1:0:2656:G:O4'	2.19	0.43
1:0:2727:G:O2'	1:0:2728:A:H5''	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:353:G:H2'	1:0:354:C:H6	1.83	0.43
1:0:41:G:H2'	1:0:42:G:C8	2.53	0.43
1:0:456:C:O2'	1:0:457:C:H5'	2.18	0.43
1:0:1020:A:H2'	1:0:1021:A:C8	2.54	0.43
1:0:1350:G:H2'	1:0:1351:G:H8	1.84	0.43
1:0:2306:A:H2'	1:0:2307:A:C8	2.54	0.43
1:0:2449:G:H2'	1:0:2450:A:H8	1.83	0.43
1:0:2800:C:O5'	1:0:2800:C:H6	2.02	0.43
1:0:426:C:H6	1:0:426:C:O5'	2.01	0.43
1:0:952:A:H2'	1:0:953:G:O4'	2.19	0.43
1:0:1021:A:O5'	1:0:1021:A:H8	2.02	0.43
1:0:1091:C:H2'	1:0:1092:U:H6	1.79	0.43
1:0:192:G:O2'	1:0:193:A:C5'	2.67	0.43
1:0:2124:C:O2'	1:0:2125:C:H5'	2.18	0.43
1:0:2491:C:H2'	1:0:2492:G:H4'	1.98	0.43
1:0:2651:U:H2'	1:0:2652:G:O4'	2.19	0.43
1:0:2783:U:OP1	1:0:2783:U:O4'	2.37	0.43
1:0:708:G:H2'	1:0:709:A:H8	1.84	0.43
1:0:757:U:H3	1:0:766:A:H61	1.67	0.43
2:9:108:G:H8	2:9:108:G:O5'	2.01	0.43
1:0:1302:C:C6	1:0:1302:C:OP1	2.71	0.42
1:0:1474:A:H2'	1:0:1476:G:OP1	2.19	0.42
1:0:1543:G:H2'	1:0:1544:A:C5'	2.49	0.42
1:0:14:A:N6	1:0:15:G:C2	2.86	0.42
1:0:763:A:C5'	1:0:1631:C:H42	2.32	0.42
1:0:2302:G:N2	1:0:2314:A:H2	2.16	0.42
1:0:81:C:H4'	1:0:307:C:C5'	2.48	0.42
1:0:428:A:H2'	1:0:429:C:C6	2.54	0.42
1:0:556:A:C2'	1:0:557:U:H5'	2.40	0.42
1:0:699:G:H5'	1:0:700:C:OP2	2.18	0.42
1:0:798:G:OP2	1:0:805:G:H5''	2.19	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
1:0:781:G:H5'	1:0:1638:G:C4'	2.49	0.42
1:0:1725:C:O2'	1:0:1726:C:H5'	2.20	0.42
1:0:2585:C:H2'	1:0:2586:G:C8	2.54	0.42
1:0:708:G:H2'	1:0:709:A:C8	2.54	0.42
1:0:812:G:H2'	1:0:813:A:C8	2.54	0.42
1:0:864:C:O2'	1:0:865:A:H5'	2.20	0.42
1:0:975:C:O5'	1:0:975:C:H6	2.02	0.42
1:0:977:G:H5''	1:0:2251:U:O2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:108:G:H2'	2:9:109:G:C8	2.55	0.42
1:0:1168:G:H2'	1:0:1169:C:C6	2.54	0.42
1:0:1258:G:H2'	1:0:1259:A:C8	2.54	0.42
1:0:26:G:O3'	1:0:1273:G:H4'	2.19	0.42
1:0:1302:C:P	1:0:1302:C:H6	2.41	0.42
1:0:1552:C:H2'	1:0:1553:G:O4'	2.20	0.42
1:0:1769:U:H3	1:0:1778:U:H3	1.65	0.42
1:0:1790:G:O2'	1:0:1791:C:H5	2.00	0.42
1:0:1801:C:H1'	1:0:2208:U:H5'	2.01	0.42
1:0:1859:A:H2'	1:0:1860:A:C8	2.53	0.42
1:0:1934:U:O2	1:0:1936:A:H8	2.01	0.42
1:0:2205:C:C2'	1:0:2206:C:H5'	2.50	0.42
1:0:2501:U:O2'	1:0:2626:U:H5''	2.19	0.42
1:0:2677:U:O2'	1:0:2678:C:H5'	2.20	0.42
1:0:2759:U:H4'	1:0:2760:G:O5'	2.19	0.42
1:0:2770:A:H5'	1:0:2867:G:H22	1.84	0.42
1:0:2788:C:H2'	1:0:2789:U:H6	1.84	0.42
1:0:548:G:O2'	1:0:549:G:H5'	2.19	0.42
1:0:1028:G:H2'	1:0:1029:C:O4'	2.19	0.42
1:0:1123:G:O2'	1:0:1124:U:H5'	2.20	0.42
1:0:1398:G:O2'	1:0:1399:C:H5'	2.19	0.42
1:0:2233:C:O2'	1:0:2234:G:H5'	2.19	0.42
1:0:2517:C:O2'	1:0:2518:C:H5'	2.19	0.42
1:0:2562:G:H2'	1:0:2563:U:O4'	2.19	0.42
1:0:27:G:O2'	1:0:28:A:O4'	2.35	0.42
1:0:421:G:O2'	1:0:422:C:H5'	2.20	0.42
1:0:515:A:H2'	1:0:516:G:H5'	2.01	0.42
1:0:661:C:O2'	1:0:662:G:H5'	2.20	0.42
1:0:689:A:C2'	1:0:690:A:H5'	2.50	0.42
1:0:759:C:C1'	1:0:761:G:H21	2.33	0.42
1:0:825:C:O2'	1:0:826:U:H5'	2.20	0.42
1:0:1110:G:H2'	1:0:1111:C:C6	2.53	0.42
1:0:1135:C:H2'	1:0:1136:G:C8	2.54	0.42
1:0:1001:A:N6	1:0:1200:G:H1'	2.34	0.42
1:0:1455:C:H2'	1:0:1456:C:H6	1.85	0.42
1:0:1566:G:O2'	1:0:1567:A:H5'	2.20	0.42
1:0:1679:U:H2'	1:0:1680:U:C5'	2.20	0.42
1:0:1972:G:O2'	1:0:1973:C:H5'	2.19	0.42
1:0:2059:U:C2'	1:0:2060:A:H5''	2.38	0.42
1:0:2475:C:H2'	1:0:2476:A:C4'	2.50	0.42
1:0:2662:C:N4	1:0:2707:G:H21	2.16	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:537:C:N1	1:0:2759:U:H2'	2.35	0.42
32:0:2881:ZIT:H192	32:0:2881:ZIT:C1A	2.48	0.42
1:0:460:U:H5'	1:0:461:A:OP2	2.19	0.42
2:9:107:C:C6	2:9:107:C:C3'	3.03	0.42
1:0:1259:A:H2'	1:0:1260:A:H5'	2.00	0.42
1:0:1310:C:O2'	1:0:1315:A:N1	2.49	0.42
1:0:173:A:N3	1:0:173:A:H2'	2.35	0.42
1:0:1821:A:H5''	1:0:1822:C:H5	1.82	0.42
1:0:186:C:H2'	1:0:187:U:O4'	2.20	0.42
1:0:1920:A:N6	1:0:1923:U:C6	2.87	0.42
1:0:1921:A:C2'	1:0:1922:U:H5''	2.46	0.42
1:0:1938:U:O2'	1:0:1939:U:OP1	2.31	0.42
1:0:2075:U:H1'	1:0:2204:A:C2	2.55	0.42
1:0:2710:C:O2'	1:0:2711:G:H5'	2.20	0.42
1:0:2724:G:O2'	1:0:2725:C:H5'	2.20	0.42
32:0:2882:ZIT:H6A2	32:0:2882:ZIT:H193	2.00	0.42
32:0:2882:ZIT:H5B1	32:0:2882:ZIT:H5A1	2.02	0.42
1:0:421:G:H2'	1:0:422:C:C6	2.55	0.42
1:0:63:A:O2'	1:0:64:C:H5'	2.19	0.42
1:0:798:G:H2'	1:0:799:C:C5'	2.41	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
1:0:1223:G:O2'	1:0:1224:A:OP2	2.35	0.42
1:0:1308:C:H2'	1:0:1309:G:C8	2.54	0.42
1:0:1806:G:C5	1:0:1807:A:N7	2.88	0.42
1:0:192:G:C4'	1:0:193:A:H4'	2.49	0.42
1:0:2630:C:H2'	1:0:2631:C:C6	2.55	0.42
1:0:333:A:HO2'	1:0:350:U:H2'	1.83	0.42
1:0:445:A:C2'	1:0:446:C:H5'	2.49	0.42
1:0:459:A:C4	1:0:466:A:N7	2.88	0.42
1:0:759:C:H1'	1:0:761:G:H21	1.85	0.42
1:0:1619:A:N3	1:0:1619:A:O5'	2.52	0.42
1:0:1653:C:O2	1:0:1751:A:H2	2.03	0.42
1:0:1714:A:H5''	1:0:1715:A:H8	1.85	0.42
1:0:226:C:H4'	1:0:227:G:H8	1.83	0.42
1:0:2321:C:H2'	1:0:2322:U:C5'	2.50	0.42
1:0:2402:U:H5'	1:0:2404:A:N7	2.34	0.42
1:0:1937:G:N3	1:0:2530:C:C5'	2.81	0.42
1:0:597:U:H2'	1:0:598:U:H6	1.82	0.42
1:0:670:U:O2'	1:0:671:A:H5'	2.20	0.42
1:0:1851:A:N6	1:0:1867:A:H1'	2.31	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1870:U:O5'	1:0:1870:U:H6	2.02	0.42
1:0:2048:C:H1'	1:0:2428:U:C2	2.55	0.42
1:0:2302:G:C2'	1:0:2303:C:H5'	2.50	0.42
1:0:90:G:H3'	1:0:91:A:C5'	2.50	0.42
2:9:88:C:H2'	2:9:89:G:H8	1.84	0.42
1:0:1029:C:H2'	1:0:1030:U:H5''	2.02	0.42
1:0:1167:A:H5'	1:0:1168:G:N7	2.34	0.42
1:0:1332:G:O2'	1:0:1333:G:H5'	2.20	0.42
1:0:1491:C:H2'	1:0:1492:A:C8	2.53	0.42
1:0:1545:G:O2'	1:0:1546:C:H5'	2.19	0.42
1:0:161:U:H2'	1:0:162:C:C6	2.54	0.42
1:0:176:A:H3'	1:0:177:U:C5	2.55	0.42
1:0:1791:C:C1'	1:0:1793:A:H5'	2.43	0.42
1:0:1814:G:H2'	1:0:1815:G:H8	1.84	0.42
1:0:690:A:H4'	1:0:2053:G:O2'	2.20	0.42
1:0:2561:G:H2'	1:0:2562:G:C8	2.55	0.42
1:0:570:G:H2'	1:0:571:U:H5''	2.02	0.42
1:0:573:C:O2'	1:0:574:C:H5'	2.20	0.42
1:0:651:C:C3'	1:0:652:C:C5'	2.98	0.42
1:0:688:A:O2'	1:0:689:A:H5'	2.20	0.42
1:0:698:A:H1'	1:0:700:C:H41	1.85	0.42
1:0:777:A:N6	1:0:1766:U:N3	2.68	0.42
2:9:42:U:H3'	2:9:43:G:C5'	2.50	0.42
1:0:1023:U:H1'	1:0:1154:A:N7	2.35	0.41
1:0:1253:C:H2'	1:0:1254:G:C5'	2.50	0.41
1:0:1459:U:H3'	1:0:1459:U:OP1	2.19	0.41
1:0:167:A:H2'	1:0:168:A:O4'	2.19	0.41
1:0:1725:C:H2'	1:0:1726:C:H6	1.85	0.41
1:0:1921:A:C3'	1:0:1922:U:H5''	2.50	0.41
1:0:2565:C:O5'	1:0:2566:A:OP1	2.38	0.41
1:0:2627:G:O2'	1:0:2628:C:H5'	2.20	0.41
32:0:2882:ZIT:C5B	32:0:2882:ZIT:H5A1	2.50	0.41
1:0:393:U:H2'	1:0:394:U:O4'	2.19	0.41
1:0:224:G:H4'	1:0:399:G:C5	2.55	0.41
1:0:495:C:H2'	1:0:496:C:C6	2.55	0.41
1:0:658:G:H4'	1:0:2331:A:C5'	2.39	0.41
1:0:717:G:H1'	1:0:740:A:N6	2.35	0.41
1:0:792:U:O2'	1:0:793:G:H5'	2.20	0.41
1:0:1025:A:O2'	1:0:1026:U:H5'	2.20	0.41
1:0:1904:G:O2'	1:0:1905:G:H5'	2.19	0.41
1:0:1991:C:H2'	1:0:1992:G:C8	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:198:A:O2'	1:0:199:A:OP2	2.36	0.41
1:0:2245:A:C4	1:0:2251:U:O4	2.73	0.41
1:0:2425:G:O2'	1:0:2426:G:H5'	2.20	0.41
1:0:430:C:H2'	1:0:431:G:O4'	2.20	0.41
1:0:480:G:O5'	1:0:480:G:H8	2.03	0.41
1:0:66:U:C2	1:0:67:G:N7	2.89	0.41
1:0:58:C:H1'	1:0:72:A:C8	2.55	0.41
1:0:953:G:H2'	1:0:954:U:H6	1.85	0.41
1:0:1003:C:O2'	1:0:1004:A:H5'	2.20	0.41
1:0:1487:C:H2'	1:0:1488:G:C8	2.54	0.41
1:0:1581:C:N4	1:0:1583:A:H1'	2.36	0.41
1:0:1727:C:H4'	1:0:2833:C:O2	2.20	0.41
1:0:1797:C:H2'	1:0:1798:G:O4'	2.20	0.41
1:0:181:A:H4'	1:0:182:G:OP1	2.18	0.41
1:0:1960:A:H2'	1:0:1961:A:C8	2.55	0.41
1:0:2054:A:H61	1:0:2417:U:H3	1.67	0.41
1:0:2178:U:H2'	1:0:2179:C:C6	2.55	0.41
1:0:2230:G:H2'	1:0:2231:G:C8	2.56	0.41
1:0:2574:G:N2	1:0:2577:A:OP2	2.53	0.41
1:0:2630:C:H2'	1:0:2631:C:H6	1.85	0.41
1:0:2700:U:H2'	1:0:2701:A:H8	1.85	0.41
1:0:327:C:O2'	1:0:328:A:H5'	2.20	0.41
1:0:758:G:H2'	1:0:759:C:H5'	2.02	0.41
1:0:1009:C:O5'	1:0:1009:C:H6	2.02	0.41
1:0:1721:G:H2'	1:0:1722:G:O4'	2.21	0.41
1:0:2162:C:H2'	1:0:2163:U:H6	1.85	0.41
1:0:2362:G:C2'	1:0:2363:G:O5'	2.69	0.41
1:0:2572:U:H2'	1:0:2573:C:C6	2.56	0.41
1:0:573:C:H2'	1:0:574:C:O4'	2.20	0.41
1:0:646:C:HO2'	1:0:650:U:H5''	1.84	0.41
1:0:666:U:H2'	1:0:668:A:P	2.60	0.41
1:0:854:G:H2'	1:0:855:G:C8	2.55	0.41
1:0:128:C:H2'	1:0:129:A:C5'	2.50	0.41
1:0:1612:U:H2'	1:0:1613:G:C8	2.55	0.41
1:0:1699:A:C5	1:0:1748:U:H1'	2.55	0.41
1:0:1976:U:H2'	1:0:1976:U:O2	2.19	0.41
1:0:2490:U:O4	1:0:2553:G:O6	2.39	0.41
1:0:2778:U:O2'	1:0:2779:C:H5'	2.21	0.41
1:0:2824:C:C2'	1:0:2825:A:OP2	2.68	0.41
1:0:365:U:H2'	1:0:366:U:H6	1.85	0.41
1:0:612:G:C4'	1:0:613:A:H4'	2.51	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:9:63:A:O2'	2:9:64:C:H5'	2.19	0.41
1:0:1016:C:H2'	1:0:1017:C:C6	2.56	0.41
1:0:1471:G:H1	1:0:2682:C:N4	2.10	0.41
1:0:1664:G:OP2	1:0:1664:G:H3'	2.20	0.41
1:0:1783:G:C6	1:0:1820:G:H1'	2.56	0.41
1:0:2447:G:C8	1:0:2455:A:N6	2.81	0.41
1:0:2636:A:N6	1:0:2643:G:H21	2.03	0.41
32:0:2881:ZIT:H5A1	32:0:2881:ZIT:C5B	2.50	0.41
1:0:357:A:H2'	1:0:357:A:N3	2.34	0.41
1:0:541:C:HO2'	1:0:542:A:P	2.44	0.41
1:0:929:A:C2	1:0:930:A:H1'	2.56	0.41
2:9:100:G:C2'	2:9:101:A:H5'	2.51	0.41
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
1:0:1034:U:H2'	1:0:1035:G:O4'	2.20	0.41
1:0:1572:C:H2'	1:0:1573:G:H5'	2.03	0.41
1:0:1714:A:H5'	1:0:1715:A:O5'	2.21	0.41
1:0:1756:C:H2'	1:0:1757:C:H6	1.85	0.41
1:0:1923:U:H4'	1:0:1948:C:N4	2.36	0.41
1:0:2229:G:H2'	1:0:2475:C:OP1	2.21	0.41
1:0:2443:C:H2'	1:0:2444:C:C6	2.56	0.41
1:0:2592:U:H5''	1:0:2593:A:C2	2.55	0.41
1:0:762:A:O2'	1:0:1633:C:H1'	2.21	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
1:0:1328:C:O2'	1:0:1329:U:H5'	2.21	0.41
1:0:1556:A:H2'	1:0:1557:G:C8	2.54	0.41
1:0:1751:A:H2'	1:0:1752:U:O4'	2.21	0.41
1:0:1883:A:C2	1:0:1953:A:N6	2.89	0.41
1:0:2024:U:H6	1:0:2024:U:O5'	2.04	0.41
1:0:2204:A:O2'	1:0:2205:C:P	2.79	0.41
1:0:221:A:H2'	1:0:222:G:C5'	2.50	0.41
1:0:2249:U:C2'	1:0:2250:G:H5'	2.51	0.41
1:0:2279:G:H2'	1:0:2280:A:C8	2.48	0.41
32:0:2881:ZIT:H5A1	32:0:2881:ZIT:H5B1	2.02	0.41
1:0:35:G:O4'	1:0:466:A:C1'	2.69	0.41
1:0:42:G:H2'	1:0:43:A:O4'	2.20	0.41
1:0:492:G:H2'	1:0:517:A:C2	2.56	0.41
1:0:4:C:O2'	1:0:5:A:H5'	2.20	0.41
1:0:639:G:H2'	1:0:640:C:H6	1.82	0.41
1:0:996:C:H2'	1:0:997:C:C6	2.55	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1661:C:H2'	1:0:1662:G:H8	1.86	0.41
1:0:1665:C:H2'	1:0:1666:G:O4'	2.21	0.41
1:0:16:G:O2'	1:0:17:G:H5'	2.21	0.41
1:0:1903:C:H2'	1:0:1904:G:C8	2.55	0.41
1:0:2302:G:H2'	1:0:2303:C:H5'	2.02	0.41
1:0:2784:A:H3'	1:0:2785:A:C8	2.56	0.41
1:0:448:C:H2'	1:0:449:C:H5'	2.02	0.41
1:0:80:A:O2'	1:0:81:C:H5'	2.21	0.41
2:9:103:A:N7	2:9:104:A:N7	2.69	0.41
1:0:1234:C:O2'	1:0:1235:C:H5'	2.20	0.41
1:0:1440:G:C3'	1:0:1441:A:C5'	2.99	0.41
1:0:1471:G:O2'	1:0:1472:C:H5'	2.21	0.41
1:0:1486:A:H2'	1:0:1487:C:C6	2.55	0.41
1:0:763:A:H5'	1:0:1631:C:H42	1.86	0.41
1:0:218:A:O2'	1:0:219:G:C4'	2.64	0.41
1:0:2455:A:C2'	1:0:2456:U:H5'	2.50	0.41
1:0:2058:U:H5'	1:0:2576:G:H1'	2.03	0.41
1:0:2622:G:O2'	1:0:2623:A:H5'	2.20	0.41
1:0:2728:A:C2	1:0:2736:U:H1'	2.56	0.41
1:0:1990:U:H4'	1:0:2799:C:H4'	2.02	0.41
1:0:353:G:O2'	1:0:354:C:H5'	2.21	0.41
1:0:629:C:O2'	1:0:630:G:H5'	2.21	0.41
1:0:676:G:O2'	1:0:951:G:H4'	2.20	0.41
2:9:23:G:H2'	2:9:24:U:O4'	2.21	0.41
1:0:1625:A:C2'	1:0:1625:A:N3	2.84	0.41
1:0:1714:A:H3'	1:0:1715:A:N7	2.36	0.41
1:0:2006:G:H2'	1:0:2007:G:H8	1.86	0.41
1:0:2313:G:H2'	1:0:2314:A:H5'	2.03	0.41
1:0:2449:G:O6	1:0:2455:A:H2	2.04	0.41
1:0:1645:U:O2	1:0:2677:U:H4'	2.21	0.41
1:0:2813:G:O2'	1:0:2814:G:H5'	2.21	0.41
1:0:744:C:N4	1:0:745:C:H41	2.19	0.41
1:0:1459:U:P	1:0:1459:U:H6	2.44	0.40
1:0:2227:C:C2'	1:0:2228:U:H5'	2.51	0.40
1:0:2394:G:H2'	1:0:2395:C:H6	1.84	0.40
1:0:2668:U:H5'	1:0:2669:C:H5'	2.02	0.40
1:0:2841:U:O2'	1:0:2842:C:C5'	2.69	0.40
1:0:2869:U:O5'	1:0:2869:U:H6	2.05	0.40
1:0:474:G:H22	1:0:476:G:H3'	1.85	0.40
1:0:727:U:C2'	1:0:728:G:H5'	2.46	0.40
1:0:67:G:C6	1:0:72:A:C2	3.08	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1221:C:H2'	1:0:1222:G:C8	2.56	0.40
1:0:121:G:O3'	1:0:1389:C:H4'	2.21	0.40
1:0:1576:G:H2'	1:0:1577:G:O4'	2.22	0.40
1:0:1789:U:HO2'	1:0:1793:A:H1'	1.84	0.40
1:0:2181:A:H2'	1:0:2182:A:H5'	2.02	0.40
1:0:2542:U:H2'	1:0:2544:A:OP2	2.22	0.40
1:0:509:U:C2'	1:0:510:G:H5'	2.50	0.40
1:0:771:C:O2'	1:0:772:G:H5'	2.21	0.40
1:0:867:G:H2'	1:0:868:U:C6	2.56	0.40
1:0:1073:G:H3'	1:0:1074:G:C5'	2.51	0.40
1:0:1383:C:O2'	1:0:1384:G:H5'	2.21	0.40
1:0:1528:C:C3'	1:0:1529:C:H5''	2.51	0.40
1:0:1569:A:C6	1:0:1571:G:H1'	2.57	0.40
1:0:1715:A:C2	1:0:1717:A:C8	3.09	0.40
1:0:1791:C:H1'	1:0:1793:A:O4'	2.21	0.40
1:0:2204:A:H4'	1:0:2205:C:O4'	2.21	0.40
1:0:317:U:C3'	1:0:318:G:H5''	2.51	0.40
1:0:340:G:C1'	1:0:488:A:H1'	2.51	0.40
1:0:68:C:C2	1:0:72:A:N3	2.89	0.40
1:0:68:C:O2	1:0:68:C:H2'	2.21	0.40
1:0:73:A:H4'	1:0:74:G:C1'	2.51	0.40
1:0:861:G:N2	1:0:943:U:O2'	2.54	0.40
1:0:1190:C:H2'	1:0:1191:G:C8	2.57	0.40
1:0:122:G:C2'	1:0:123:A:H5''	2.52	0.40
1:0:1358:C:H2'	1:0:1359:G:H5'	2.03	0.40
1:0:1519:G:O2'	1:0:1520:G:H5'	2.21	0.40
1:0:1323:G:C1'	1:0:1627:C:H5''	2.52	0.40
1:0:1791:C:C2'	1:0:1792:C:H5''	2.39	0.40
1:0:201:G:C2	1:0:202:A:C4	3.10	0.40
1:0:1281:A:H4'	1:0:2592:U:O2	2.21	0.40
32:0:2882:ZIT:H162	32:0:2882:ZIT:HO13	1.83	0.40
1:0:200:A:N6	1:0:387:A:O2'	2.54	0.40
1:0:398:C:O2'	1:0:401:G:N2	2.54	0.40
1:0:451:A:H2'	1:0:452:G:H8	1.83	0.40
1:0:616:U:H3'	1:0:617:U:H5''	2.03	0.40
1:0:829:C:O2'	1:0:830:C:H5'	2.21	0.40
1:0:831:G:H5'	1:0:852:U:OP1	2.21	0.40
1:0:931:G:H5'	2:9:83:C:H1'	2.03	0.40
1:0:1403:U:O2	1:0:1408:A:N6	2.54	0.40
1:0:1473:U:H4'	1:0:1474:A:C4	2.56	0.40
1:0:2138:U:H2'	1:0:2139:G:H5'	2.04	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:215:G:H2'	1:0:216:U:C6	2.57	0.40
1:0:2240:C:C2'	1:0:2241:U:C5'	2.97	0.40
1:0:2570:C:H2'	1:0:2571:G:C8	2.57	0.40
2:9:12:C:H3'	2:9:13:C:H6	1.85	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

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

5.3.2 Protein sidechains [i](#)

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

5.3.3 RNA [i](#)

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	0	2757/2880 (95%)	485 (17%)	43 (1%)
2	9	117/124 (94%)	23 (19%)	1 (0%)
All	All	2874/3004 (95%)	508 (17%)	44 (1%)

All (508) 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

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Mol	Chain	Res	Type
1	0	87	G
1	0	89	A
1	0	90	G
1	0	91	A
1	0	99	U
1	0	105	G
1	0	110	U
1	0	116	A
1	0	118	U
1	0	123	A
1	0	129	A
1	0	135	U
1	0	149	A
1	0	155	G
1	0	158	A
1	0	173	A
1	0	174	A
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

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Mol	Chain	Res	Type
1	0	343	A
1	0	358	C
1	0	363	G
1	0	368	A
1	0	373	A
1	0	399	G
1	0	401	G
1	0	408	U
1	0	414	A
1	0	418	C
1	0	424	G
1	0	443	A
1	0	456	C
1	0	460	U
1	0	461	A
1	0	463	C
1	0	467	U
1	0	469	G
1	0	484	G
1	0	486	U
1	0	490	A
1	0	491	A
1	0	492	G
1	0	514	G
1	0	515	A
1	0	518	A
1	0	519	C
1	0	537	C
1	0	539	A
1	0	541	C
1	0	542	A
1	0	554	U
1	0	556	A
1	0	558	G
1	0	572	G
1	0	582	G
1	0	583	C
1	0	584	A
1	0	587	A
1	0	588	G
1	0	613	A
1	0	617	U

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Mol	Chain	Res	Type
1	0	624	A
1	0	632	A
1	0	636	G
1	0	638	A
1	0	648	A
1	0	652	C
1	0	654	A
1	0	655	A
1	0	666	U
1	0	667	U
1	0	684	C
1	0	697	G
1	0	699	G
1	0	700	C
1	0	728	G
1	0	740	A
1	0	742	G
1	0	743	A
1	0	760	U
1	0	765	C
1	0	766	A
1	0	776	G
1	0	778	G
1	0	789	G
1	0	790	A
1	0	794	A
1	0	796	A
1	0	797	A
1	0	798	G
1	0	803	C
1	0	804	C
1	0	805	G
1	0	806	A
1	0	807	A
1	0	813	A
1	0	815	A
1	0	818	G
1	0	825	C
1	0	832	A
1	0	840	U
1	0	841	G
1	0	843	G

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Mol	Chain	Res	Type
1	0	844	G
1	0	859	U
1	0	873	U
1	0	874	A
1	0	919	U
1	0	922	A
1	0	926	C
1	0	930	A
1	0	931	G
1	0	941	U
1	0	943	U
1	0	944	A
1	0	952	A
1	0	957	G
1	0	968	C
1	0	969	U
1	0	970	A
1	0	972	C
1	0	973	U
1	0	984	A
1	0	985	G
1	0	994	A
1	0	996	C
1	0	1002	C
1	0	1005	U
1	0	1006	C
1	0	1019	U
1	0	1022	A
1	0	1023	U
1	0	1024	G
1	0	1030	U
1	0	1032	A
1	0	1033	G
1	0	1036	G
1	0	1037	U
1	0	1044	U
1	0	1055	A
1	0	1056	U
1	0	1057	A
1	0	1067	G
1	0	1073	G
1	0	1074	G

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Mol	Chain	Res	Type
1	0	1075	C
1	0	1081	A
1	0	1082	G
1	0	1083	C
1	0	1087	C
1	0	1090	C
1	0	1099	A
1	0	1130	U
1	0	1137	A
1	0	1138	A
1	0	1142	G
1	0	1145	C
1	0	1146	G
1	0	1155	G
1	0	1166	A
1	0	1167	A
1	0	1168	G
1	0	1182	U
1	0	1183	C
1	0	1185	C
1	0	1194	U
1	0	1195	U
1	0	1199	U
1	0	1200	G
1	0	1224	A
1	0	1225	G
1	0	1234	C
1	0	1253	C
1	0	1261	G
1	0	1262	U
1	0	1264	C
1	0	1266	G
1	0	1267	A
1	0	1268	U
1	0	1269	G
1	0	1278	A
1	0	1279	G
1	0	1284	G
1	0	1285	A
1	0	1286	U
1	0	1288	A
1	0	1289	A

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Mol	Chain	Res	Type
1	0	1302	C
1	0	1314	A
1	0	1316	G
1	0	1324	G
1	0	1327	C
1	0	1334	A
1	0	1338	G
1	0	1339	U
1	0	1342	U
1	0	1343	C
1	0	1346	C
1	0	1354	A
1	0	1355	A
1	0	1356	G
1	0	1359	G
1	0	1391	A
1	0	1392	U
1	0	1397	A
1	0	1398	G
1	0	1411	C
1	0	1430	G
1	0	1433	A
1	0	1441	A
1	0	1442	C
1	0	1443	G
1	0	1459	U
1	0	1465	G
1	0	1466	C
1	0	1468	A
1	0	1469	U
1	0	1470	G
1	0	1473	U
1	0	1474	A
1	0	1475	U
1	0	1476	G
1	0	1482	U
1	0	1490	U
1	0	1496	G
1	0	1505	U
1	0	1509	A
1	0	1513	U
1	0	1524	C

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Mol	Chain	Res	Type
1	0	1529	C
1	0	1544	A
1	0	1552	C
1	0	1571	G
1	0	1573	G
1	0	1574	A
1	0	1583	A
1	0	1585	A
1	0	1618	U
1	0	1623	C
1	0	1624	A
1	0	1625	A
1	0	1626	A
1	0	1631	C
1	0	1635	G
1	0	1648	C
1	0	1652	G
1	0	1657	A
1	0	1664	G
1	0	1665	C
1	0	1670	G
1	0	1671	A
1	0	1680	U
1	0	1681	A
1	0	1685	A
1	0	1686	A
1	0	1691	G
1	0	1692	C
1	0	1699	A
1	0	1710	U
1	0	1712	G
1	0	1713	G
1	0	1715	A
1	0	1717	A
1	0	1718	A
1	0	1724	C
1	0	1748	U
1	0	1749	G
1	0	1750	A
1	0	1754	G
1	0	1755	G
1	0	1764	A

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Mol	Chain	Res	Type
1	0	1771	A
1	0	1772	C
1	0	1773	C
1	0	1778	U
1	0	1791	C
1	0	1792	C
1	0	1800	A
1	0	1801	C
1	0	1802	A
1	0	1807	A
1	0	1808	C
1	0	1811	A
1	0	1813	A
1	0	1821	A
1	0	1831	G
1	0	1840	A
1	0	1884	A
1	0	1889	G
1	0	1909	U
1	0	1920	A
1	0	1922	U
1	0	1924	C
1	0	1926	U
1	0	1927	U
1	0	1928	G
1	0	1938	U
1	0	1939	U
1	0	1948	C
1	0	1949	A
1	0	1950	C
1	0	1954	A
1	0	1955	G
1	0	1956	G
1	0	1964	A
1	0	1974	U
1	0	1976	U
1	0	1979	C
1	0	2003	A
1	0	2004	U
1	0	2006	G
1	0	2014	A
1	0	2015	G

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Mol	Chain	Res	Type
1	0	2016	A
1	0	2019	C
1	0	2038	C
1	0	2043	A
1	0	2044	G
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	2230	G
1	0	2238	G
1	0	2241	U
1	0	2245	A
1	0	2246	A
1	0	2247	A
1	0	2255	G
1	0	2262	C
1	0	2265	A
1	0	2268	G
1	0	2285	U
1	0	2286	G
1	0	2287	G
1	0	2288	A
1	0	2298	U
1	0	2299	A
1	0	2300	G
1	0	2301	A

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Mol	Chain	Res	Type
1	0	2313	G
1	0	2314	A
1	0	2315	A
1	0	2316	G
1	0	2325	A
1	0	2326	C
1	0	2362	G
1	0	2364	C
1	0	2369	U
1	0	2378	G
1	0	2385	U
1	0	2396	C
1	0	2402	U
1	0	2403	C
1	0	2405	A
1	0	2406	C
1	0	2407	G
1	0	2408	G
1	0	2409	A
1	0	2414	A
1	0	2427	A
1	0	2428	U
1	0	2438	A
1	0	2448	A
1	0	2455	A
1	0	2457	A
1	0	2470	U
1	0	2476	A
1	0	2477	C
1	0	2482	A
1	0	2484	G
1	0	2492	G
1	0	2499	C
1	0	2504	G
1	0	2508	G
1	0	2522	G
1	0	2533	U
1	0	2545	A
1	0	2546	G
1	0	2549	G
1	0	2560	G
1	0	2561	G

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Mol	Chain	Res	Type
1	0	2565	C
1	0	2566	A
1	0	2578	G
1	0	2581	A
1	0	2582	G
1	0	2588	U
1	0	2589	C
1	0	2590	U
1	0	2591	C
1	0	2600	A
1	0	2608	A
1	0	2609	G
1	0	2625	U
1	0	2633	A
1	0	2634	G
1	0	2661	G
1	0	2670	C
1	0	2681	A
1	0	2692	A
1	0	2693	U
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

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Mol	Chain	Res	Type
1	0	2809	A
1	0	2810	A
1	0	2825	A
1	0	2841	U
1	0	2842	C
1	0	2847	G
1	0	2849	C
1	0	2854	G
1	0	2855	C
1	0	2867	G
1	0	2868	G
2	9	7	C
2	9	14	C
2	9	15	A
2	9	17	A
2	9	18	G
2	9	27	A
2	9	28	A
2	9	47	A
2	9	48	A
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 (44) 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

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Mol	Chain	Res	Type
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	843	G
1	0	1141	U
1	0	1193	G
1	0	1194	U
1	0	1223	G
1	0	1263	G
1	0	1278	A
1	0	1313	U
1	0	1354	A
1	0	1410	U
1	0	1495	G
1	0	1634	A
1	0	1651	U
1	0	1664	G
1	0	1685	A
1	0	1820	G
1	0	1938	U
1	0	1975	G
1	0	2015	G
1	0	2018	G
1	0	2093	G
1	0	2161	C
1	0	2204	A
1	0	2245	A
1	0	2261	G
1	0	2377	U
1	0	2404	A
1	0	2560	G
1	0	2565	C
1	0	2588	U
1	0	2633	A
1	0	2759	U
1	0	2824	C
2	9	58	G

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

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

5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

5.6 Ligand geometry [i](#)

2 ligands are modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	$\# Z > 2$	Counts	RMSZ	$\# Z > 2$
32	ZIT	0	2882	-	54,54,54	0.84	2 (3%)	82,83,83	1.27	5 (6%)
32	ZIT	0	2881	-	54,54,54	0.84	1 (1%)	82,83,83	1.27	6 (7%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
32	ZIT	0	2882	-	-	5/72/107/107	0/3/3/3
32	ZIT	0	2881	-	-	3/72/107/107	0/3/3/3

All (3) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
32	0	2881	ZIT	C3A-N3A	-2.32	1.42	1.48
32	0	2882	ZIT	C3A-N3A	-2.23	1.42	1.48
32	0	2882	ZIT	C1A-C2A	2.04	1.58	1.52

All (11) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
32	0	2882	ZIT	C1A-O1A-C5	-7.16	103.82	116.25
32	0	2881	ZIT	C1A-O1A-C5	-7.09	103.94	116.25
32	0	2881	ZIT	C4A-C3A-C2A	-3.16	105.42	109.97
32	0	2882	ZIT	C4A-C3A-C2A	-3.12	105.47	109.97
32	0	2882	ZIT	O1B-C3-C4	2.68	111.45	108.22
32	0	2881	ZIT	O1B-C3-C4	2.59	111.34	108.22
32	0	2882	ZIT	C5A-C4A-C3A	2.18	114.27	110.46
32	0	2881	ZIT	C5A-C4A-C3A	2.10	114.14	110.46
32	0	2882	ZIT	C17-C2-C3	2.08	117.62	112.92
32	0	2881	ZIT	C17-C2-C3	2.08	117.62	112.92
32	0	2881	ZIT	O14-C14-C13	-2.06	103.93	107.29

There are no chirality outliers.

All (8) torsion outliers are listed below:

Mol	Chain	Res	Type	Atoms
32	0	2882	ZIT	C13-C14-C15-C16
32	0	2882	ZIT	O5A-C1A-O1A-C5
32	0	2881	ZIT	O5A-C1A-O1A-C5
32	0	2882	ZIT	O14-C14-C15-C16
32	0	2882	ZIT	C4-C5-O1A-C1A
32	0	2881	ZIT	C4-C5-O1A-C1A
32	0	2882	ZIT	C6-C5-O1A-C1A
32	0	2881	ZIT	C6-C5-O1A-C1A

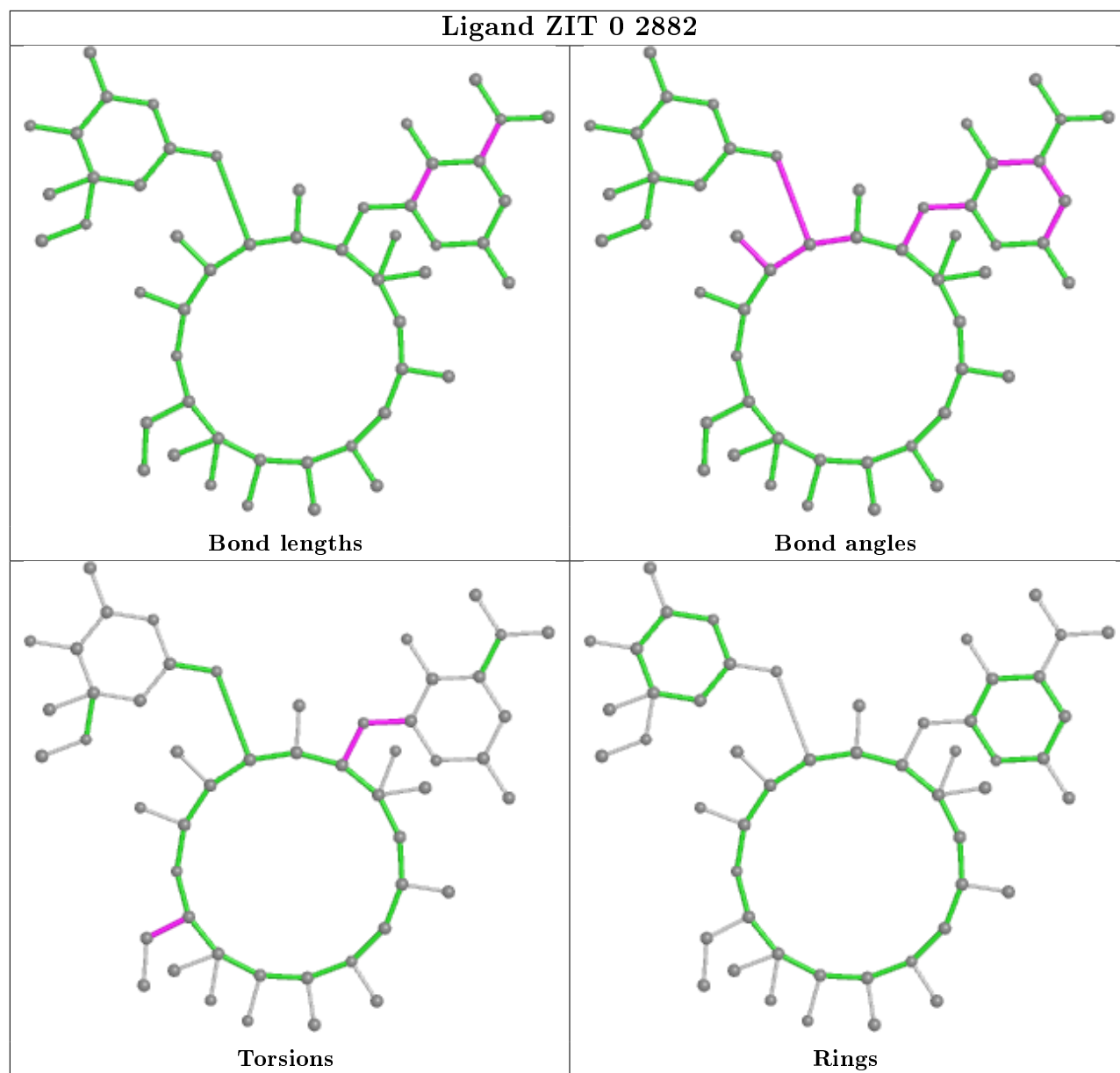
There are no ring outliers.

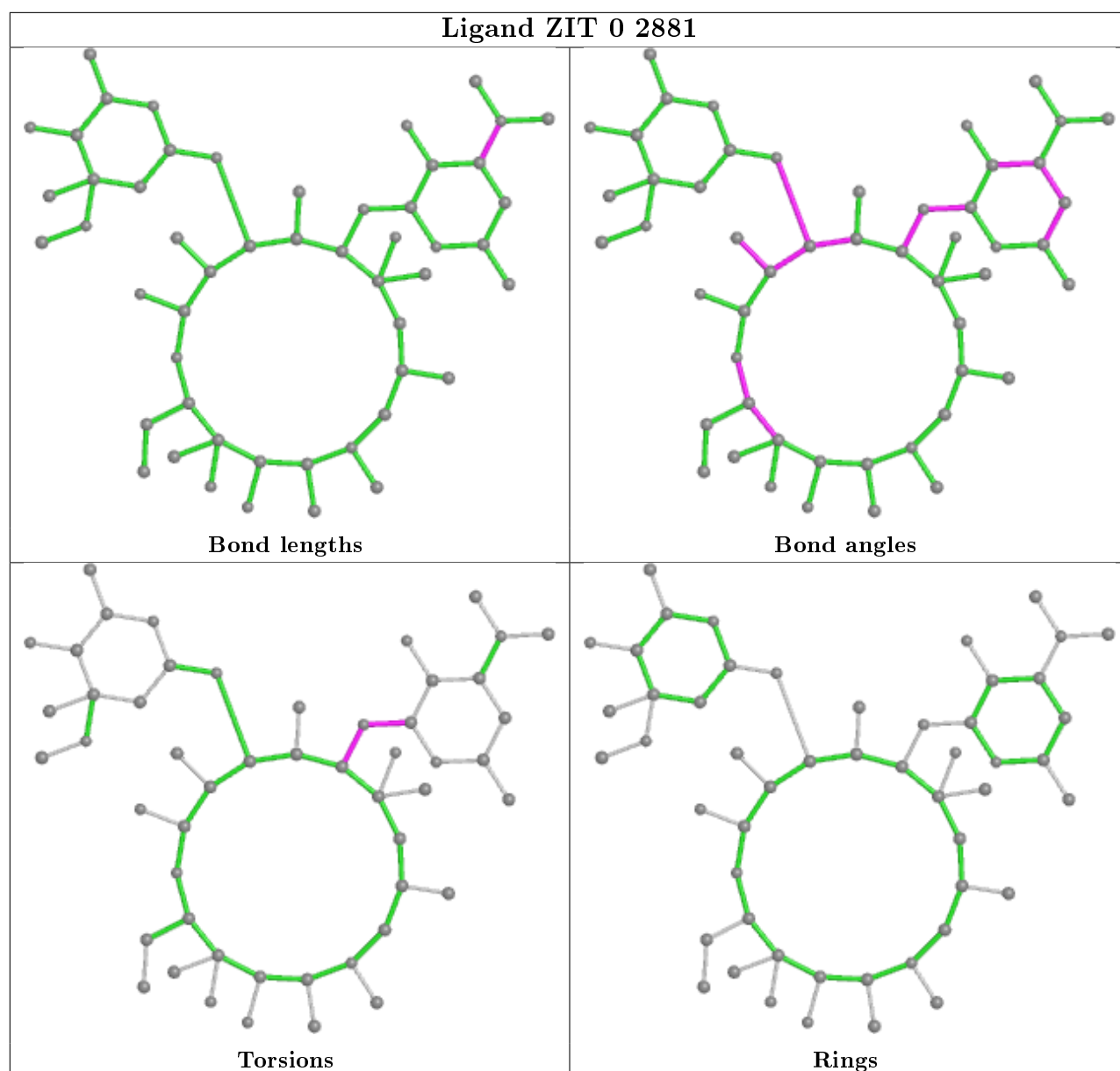
2 monomers are involved in 47 short contacts:

Mol	Chain	Res	Type	Clashes	Symm-Clashes
32	0	2882	ZIT	26	0
32	0	2881	ZIT	21	0

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

equivalents in the CSD to analyse the geometry.





5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data ⓘ

6.1 Protein, DNA and RNA chains ⓘ

EDS was not executed - this section is therefore empty.

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

EDS was not executed - this section is therefore empty.

6.3 Carbohydrates ⓘ

EDS was not executed - this section is therefore empty.

6.4 Ligands ⓘ

EDS was not executed - this section is therefore empty.

6.5 Other polymers ⓘ

EDS was not executed - this section is therefore empty.