



Full wwPDB X-ray Structure Validation Report ⓘ

Jan 31, 2016 – 09:31 PM GMT

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

This is a Full wwPDB X-ray Structure Validation Report for a publicly released PDB entry.
We welcome your comments at validation@mail.wwpdb.org
A user guide is available at
<http://wwpdb.org/validation/2016/XrayValidationReportHelp>
with specific help available everywhere you see the ⓘ symbol.

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

MolProbity : 4.02b-467
Mogul : 1.7 (RC4), CSD as536be (2015)
Xtriage (Phenix) : **NOT EXECUTED**
EDS : **NOT EXECUTED**
Percentile statistics : 20151230.v01 (using entries in the PDB archive December 30th 2015)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : trunk26865

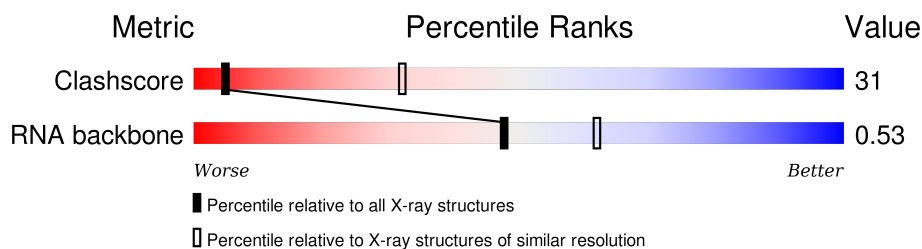
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.40 Å.

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



Metric	Whole archive (#Entries)	Similar resolution (#Entries, resolution range(Å))
Clashscore	102246	1611 (3.50-3.30)
RNA backbone	2183	1041 (4.00-2.80)

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

Note EDS was not executed.

Mol	Chain	Length	Quality of chain
1	0	2880	

2 Entry composition [i](#)

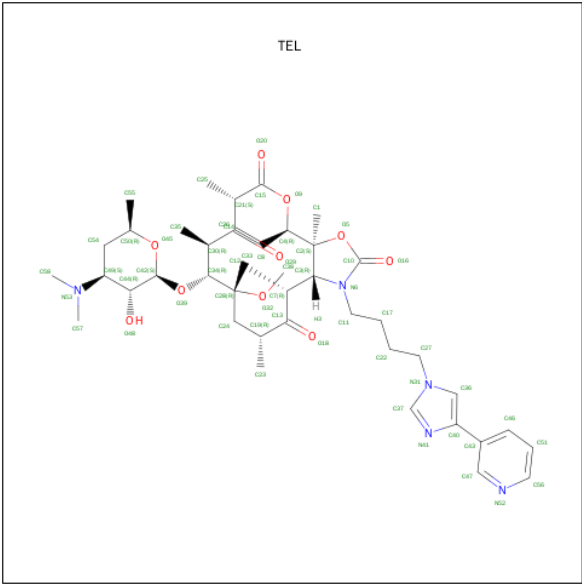
There are 2 unique types of molecules in this entry. The entry contains 58817 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
			Total	C	N	O	P			
1	0	2738	58759	26211	10836	18975	2737	0	0	0

- Molecule 2 is TELITHROMYCIN (three-letter code: TEL) (formula: C₄₃H₆₅N₅O₁₀).



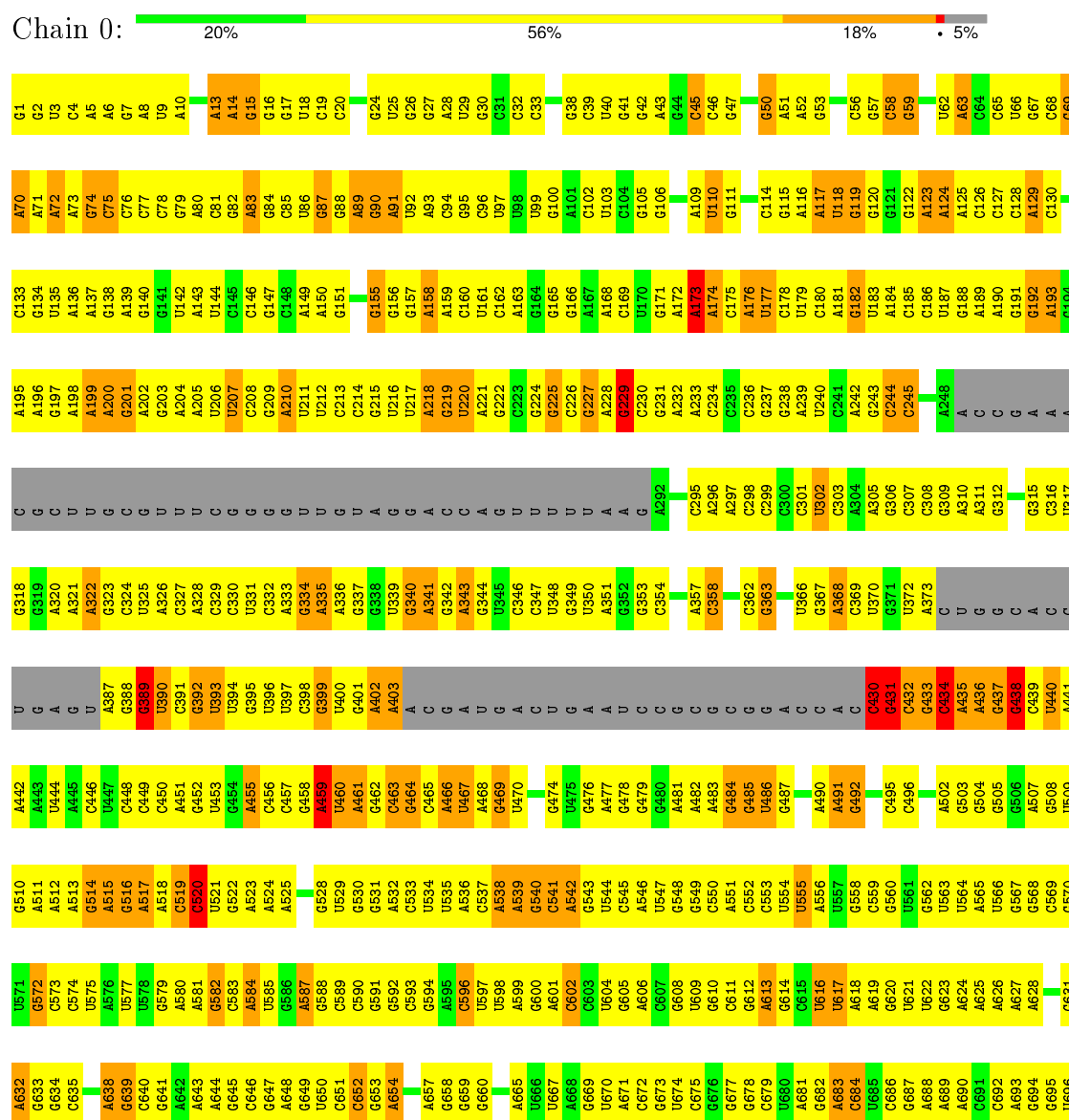
Mol	Chain	Residues	Atoms				ZeroOcc	AltConf
			Total	C	N	O		
2	0	1	58	43	5	10	0	0

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

Note EDS was not executed.

• Molecule 1: 23S RIBOSOMAL RNA





G2741	C2678	A2544	C2480	U2410	A2348	A2277	U2212	G	U2081	G2015	C1948		A1811	A1751
G2742	G2679	A2545	G2481	A2411	G2349	A2278	G2213	G	C2082	A2016	A1949		A1812	A1751
G2743	U2680	G2546	A2482	A2412	G2350	G2279	G2214	C	G2083	U2017	C1950		A1813	A1752
G2744	A2681	C2547	U2483	A2413	G2351	A2280		A	G2084	G2018	G1951		A1814	A1753
G2745		G2548	G2484	A2414	A2352	C2281	G2217	A	G2085	G2019	A1952		G1815	G1754
G2746		G2549	U2485		G2353	C2282	G2218	C	U2086	G2020	A1953		G1816	G1755
G2747		C2550	C2486	A2418	G2354	G2283	U2219	G	U2087	G2021	A1954		U1817	C1756
G2748		A2551	G2487	C2419	A2355	U2284		G	U2088	G2022	G1955		G1818	C1757
A2749		C2552	G2488	C2420	A2356	U2285	U2222	U		C2023	G1956		U1819	C1758
C2753		G2553	C2489	C2421	A2357	G2286	U2223	A	C2091	U2024	C1957		A1820	A1759
C2754		C2554	U2490	C2422	C2358	G2287	U2224	G	U2092	A2025	G1958		A1821	G1760
A2755		G2555	G2491	G2423	C2359	A2288	G2225	A	G2093	G2026	U1959		G1822	G1761
A2756		A2556	G2492	G2424	C2360		A2226	A	C2094	C2027			G1823	G1762
A2757		G2557	G2493	G2425	G2361	C2292	C2227	U	G2095	C2028	C1962		C1824	G1763
G2758		U2558	C2494	G2426	G2362		U2228	A	U2096	G2029	G1963		C1825	A1764
U2759		G2559	G2495	A2427	G2363	U2296	U2229	C1517	A2097	U2030	A1964		U1826	C1765
G2760		C2560	C2496	U2428	C2364	G2297	G2230	C2158		A2031	U1965		G1827	U1766
A2761		G2561	A2497	U2429	C2372	U2298	G2231	A2159	G	G2032			C1828	G1767
G2762		C2565	U2498	A2430	C2373	A2299	G2232	C2160	A	C2033			G1829	
U2763		A2566	C2499	C2431	G2366	G2300		C2161	U	A2034			C1830	
G2764		G2567	C2500	A2432	G2367	A2301	G2235	C2162	A	G2035			G1831	U1771
C2765		A2568		G2433	G2370	C2302	U2236	A2168		C2038			G1832	A1771
U2766		A2569	G2505	G2434	A2371	C2303	C2237		G2104	G1905			G1833	C1772
C2767		C2570	C2506	C2435	C2372		G2238		U2105	U1906			C1773	C1773
U2704		G2571	G2508	U2436	C2373	A2306	C2239		G2106	C1908			G1834	A1774
A2705		U2572	A2509	G2437	C2374	A2307	C2240		G2107	U1909			C1835	A1775
C2770		C2573	C2510	C2438		A2308	U2241		G2108	C1910				A1776
U2771		G2574	A2512	U2439	U2377	G2309	C2242		A2109	G1911			G1838	U1777
G2772		U2575	G2513	C2441	G2378	A2310	C2243		G2110	A2112			A1839	A1778
G2773		G2576	G2514	C2442	U2380	U2311	C2244		C	U1914			C1779	A1780
U2774		A2577	G2515	C2443	A2381	G2312	A2245		U	C1915			A1846	C1781
U		G2578	G2516	C2446	C2382	G2313	A2246		G	C2047			G1847	A1782
U2778		C2579	U2517	G2447	C2383	A2314	A2247		U	C2048			U1848	G1783
C2779		A2580	C2518	U2448	G2384	A2315	U2248		C	C2049			G1849	C1784
A2780		G2581	C2519	G2449	U2385	G2316	G2250		G	U2051			G1852	A1785
G2781		U2582	G2520	A2450	G2386		U2251		A2117	U2052			G1853	C1786
G2782		C2583	A2521	G2451	U2387	C2321	A2252		A2118	G2053			G1854	U1787
U2783		U2584	A2522	C2455	G2388	U2322	A2253		A2119	U2054			U1855	C1788
A2784		G2585	G2523	U2456	G2389	U2323	C2254		C2120	U1923			G1856	U1789
G2785		G2586	G2524	G2457	A2390	A2324	G2255		G2122	C1925				C1791
C2791		U2587	A2525	A2457	A2391	A2325	G2256		G2123	U1926			A1859	A1793
A2792		U2588	U2526	G2460	G2392	U2327	A2257		C2124	U2058			A1860	A1794
C2793		C2589	G2527	G2461	G2393	G2328	C2260		C2125	U2059			G1861	C1795
G2794		U2590	G2528	C2462	G2394	C2329	G2261		U	A2060			C1862	
C2795		C2591	G2529	C2463	C2395	G2330	G2262		U	C2061			A1869	U1870
U2796		A2592	U2530	G2464	C2396		C2263		U	G2001			U1871	G1803
G2797		G2593	U2531	G2465	A2397	A2326	G2264		U	A2002			A1872	U1804
A2798		U2594	G2532	G2466	U2398	U2327	C2265		G	A2003			A1873	G1805
C2799			U2533	G2467	C2399	G2336	A2266			U2004			G1874	G1806
G2799		G2597	U2534	A2467	G2400	A2337	A2267			G2005			C1875	A1807
C2780		C2598	C2535	G2468	A2401	C2338	G2268			U1938			C1876	G1808
A2795		U2599	G2536	G2469	U2402	A2339	G2269			U1939			C1877	U1810
C2796		A2600	C2537	U2470	C2403	C2340	G2270			C2008			A1878	
G2797			C2538	U2471	A2404	C2341	U2271			G1942			G1879	
A2798		C2605	C2539	C2475	A2405	C2343	G2272			A1943			C1872	
C2799		G2606	A2540	A2476	G2406	G2344	U2208			C1944			C1875	
A2801		C2607	U2541	C2477	G2407	A2345	G2209			A2012			C1876	
		A2608	U2542	C2478	G2408	G2346	C2210			U1946			C1877	
		G2609	A2543	U2479	A2409	C2347	U2211			A2014			C1878	

[illegible]

4 Data and refinement statistics

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

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

5 Model quality [i](#)

5.1 Standard geometry [i](#)

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

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	$\# Z > 5$	RMSZ	$\# Z > 5$
1	0	0.77	20/65792 (0.0%)	0.71	28/102613 (0.0%)

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

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

All (20) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	0	762	A	O3'-P	-8.05	1.51	1.61
1	0	1410	U	N1-C2	6.70	1.44	1.38
1	0	2493	U	N1-C2	-6.33	1.32	1.38
1	0	1276	U	N1-C2	6.27	1.44	1.38
1	0	2555	G	C5-C6	-6.20	1.36	1.42
1	0	950	G	C5-C6	6.14	1.48	1.42
1	0	2039	G	C5-C6	-5.70	1.36	1.42
1	0	2523	G	C5-C6	-5.65	1.36	1.42
1	0	2505	G	C5-C6	5.32	1.47	1.42
1	0	2699	G	C5-C6	-5.26	1.37	1.42
1	0	764	A	P-O5'	5.25	1.65	1.59
1	0	464	G	N9-C4	-5.24	1.33	1.38
1	0	841	G	C5-C6	-5.21	1.37	1.42
1	0	1781	C	N1-C2	-5.16	1.34	1.40
1	0	1746	A	C5-C6	-5.15	1.36	1.41
1	0	1985	G	C5-C6	-5.12	1.37	1.42
1	0	2046	C	N1-C2	-5.08	1.35	1.40
1	0	1283	C	N1-C2	-5.08	1.35	1.40

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	0	765	C	N1-C2	-5.06	1.35	1.40
1	0	2592	U	O3'-P	-5.05	1.55	1.61

All (28) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	1182	U	O4'-C1'-N1	13.88	119.30	108.20
1	0	2044	G	P-O3'-C3'	11.50	133.50	119.70
1	0	765	C	N1-C1'-C2'	11.09	128.42	114.00
1	0	2001	G	N9-C1'-C2'	-9.80	101.22	112.00
1	0	2041	A	OP1-P-OP2	-6.87	109.30	119.60
1	0	764	A	OP1-P-OP2	-6.83	109.36	119.60
1	0	2042	A	OP1-P-OP2	-6.79	109.41	119.60
1	0	438	G	N9-C1'-C2'	6.69	122.69	114.00
1	0	2046	C	OP1-P-OP2	-6.65	109.63	119.60
1	0	763	A	OP1-P-OP2	-6.54	109.79	119.60
1	0	2044	G	OP1-P-OP2	-6.53	109.81	119.60
1	0	430	C	C5'-C4'-O4'	-6.44	101.37	109.10
1	0	765	C	O4'-C1'-N1	6.44	113.36	108.20
1	0	2040	A	OP1-P-OP2	-6.42	109.97	119.60
1	0	1618	U	C5'-C4'-O4'	-6.42	101.40	109.10
1	0	2045	A	OP1-P-OP2	-6.20	110.30	119.60
1	0	765	C	OP1-P-OP2	-5.99	110.62	119.60
1	0	765	C	C2-N1-C1'	-5.86	112.35	118.80
1	0	765	C	C5'-C4'-O4'	5.86	116.13	109.10
1	0	434	C	N1-C1'-C2'	5.59	121.26	114.00
1	0	765	C	C6-N1-C1'	5.54	127.45	120.80
1	0	438	G	C1'-O4'-C4'	-5.38	105.60	109.90
1	0	173	A	C2'-C3'-O3'	5.36	122.28	113.70
1	0	438	G	O4'-C1'-N9	5.36	112.49	108.20
1	0	765	C	N1-C2-O2	-5.22	115.77	118.90
1	0	765	C	O4'-C4'-C3'	-5.19	98.81	104.00
1	0	459	A	N9-C1'-C2'	5.14	120.68	114.00
1	0	2041	A	P-O3'-C3'	5.03	125.74	119.70

There are no chirality outliers.

All (28) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	0	1036	G	Sidechain
1	0	1475	U	Sidechain
1	0	1619	A	Sidechain

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Mol	Chain	Res	Type	Group
1	0	1632	A	Sidechain
1	0	1774	A	Sidechain
1	0	2051	U	Sidechain
1	0	229	G	Sidechain
1	0	2439	U	Sidechain
1	0	2625	U	Sidechain
1	0	2660	C	Sidechain
1	0	2700	U	Sidechain
1	0	2706	U	Sidechain
1	0	2712	G	Sidechain
1	0	2762	G	Sidechain
1	0	389	G	Sidechain
1	0	431	G	Sidechain
1	0	438	G	Sidechain
1	0	459	A	Sidechain
1	0	520	C	Sidechain
1	0	555	U	Sidechain
1	0	707	U	Sidechain
1	0	788	G	Sidechain
1	0	796	A	Sidechain
1	0	804	C	Sidechain
1	0	814	G	Sidechain
1	0	871	U	Sidechain
1	0	873	U	Sidechain
1	0	956	A	Sidechain

5.2 Too-close contacts ⓘ

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

Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
1	0	58759	0	29615	2745	0
2	0	58	0	65	11	0
All	All	58817	0	29680	2746	0

The all-atom clashscore is defined as the number of clashes found per 1000 atoms (including hydrogen atoms). The all-atom clashscore for this structure is 31.

All (2746) close contacts within the same asymmetric unit are listed below, sorted by their clash magnitude.

Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:940:G:H3'	1:0:941:U:H5''	1.24	1.18
1:0:752:G:H5'	1:0:1775:A:H61	1.07	1.13
1:0:1572:C:H2'	1:0:1573:G:H5''	1.21	1.10
1:0:2451:G:H1'	1:0:2457:A:H61	1.16	1.09
1:0:387:A:H5'	1:0:436:A:H62	1.07	1.08
1:0:588:G:H4'	1:0:2001:G:C4'	1.85	1.06
1:0:1656:U:H2'	1:0:1657:A:H5''	1.38	1.05
1:0:2841:U:H1'	1:0:2843:A:H1'	1.34	1.04
1:0:2496:C:H42	1:0:2546:G:H1	1.05	1.02
1:0:436:A:H4'	1:0:437:G:H5''	1.42	1.01
1:0:2198:U:H3'	1:0:2199:C:H5''	1.39	1.01
1:0:2498:U:H5''	1:0:2499:C:OP1	1.59	1.00
1:0:2771:C:H42	1:0:2780:A:N6	1.59	1.00
1:0:588:G:C4'	1:0:2001:G:H4'	1.92	0.99
1:0:1449:C:H2'	1:0:1450:G:H5''	1.44	0.98
1:0:951:G:H2'	1:0:952:A:H5''	1.46	0.98
1:0:681:A:H2'	1:0:683:A:H62	1.27	0.98
1:0:321:A:O2'	1:0:322:A:H3'	1.62	0.98
1:0:588:G:H4'	1:0:2001:G:H4'	0.98	0.96
1:0:430:C:H4'	1:0:2386:G:N2	1.81	0.95
1:0:1673:C:N4	1:0:1987:G:H1	1.64	0.95
1:0:983:G:OP2	1:0:985:G:H5''	1.65	0.94
1:0:1747:G:H4'	1:0:1749:G:H1'	1.49	0.94
1:0:2660:C:O2'	1:0:2661:G:H5'	1.66	0.94
1:0:1572:C:C2'	1:0:1573:G:H5''	1.96	0.94
1:0:681:A:H2'	1:0:683:A:N6	1.81	0.94
1:0:794:A:H5'	1:0:795:A:H5''	1.48	0.94
1:0:614:G:N2	1:0:634:G:H22	1.65	0.94
1:0:616:U:H2'	1:0:617:U:H5''	1.50	0.93
1:0:317:U:H3	1:0:321:A:H62	1.07	0.93
1:0:1855:G:H4'	1:0:2390:A:H4'	1.51	0.93
1:0:2194:A:H3'	1:0:2195:C:H5''	1.48	0.92
1:0:430:C:H4'	1:0:2386:G:H21	1.35	0.92
1:0:1823:G:H1	1:0:1957:C:H42	1.10	0.92
1:0:1673:C:H42	1:0:1987:G:H1	1.09	0.92
1:0:1294:G:H1	1:0:1302:C:H42	1.09	0.92
1:0:752:G:H5'	1:0:1775:A:N6	1.85	0.92
1:0:2380:U:H2'	1:0:2381:A:H5'	1.51	0.92
1:0:2395:C:H2'	1:0:2396:C:H5''	1.51	0.92
1:0:2771:C:H42	1:0:2780:A:H61	0.93	0.91
1:0:614:G:H22	1:0:634:G:N2	1.67	0.91
1:0:1937:G:H1'	1:0:2530:C:H4'	1.49	0.91

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1791:C:H2'	1:0:1792:C:H5''	1.50	0.91
1:0:614:G:H22	1:0:634:G:H22	1.11	0.91
1:0:317:U:H3	1:0:321:A:N6	1.68	0.90
1:0:683:A:OP2	1:0:683:A:H3'	1.71	0.90
1:0:321:A:HO2'	1:0:322:A:H8	0.94	0.90
1:0:2804:G:H2'	1:0:2805:G:H5''	1.53	0.90
1:0:1651:U:H5''	1:0:1652:G:OP2	1.72	0.90
1:0:387:A:C5'	1:0:436:A:H62	1.86	0.89
1:0:2388:G:H2'	1:0:2389:G:O4'	1.73	0.89
1:0:2119:A:N6	1:0:2138:U:H3	1.71	0.89
1:0:1108:U:H2'	1:0:1109:A:H5'	1.54	0.89
1:0:2043:A:H1'	1:0:2481:G:H1'	1.52	0.89
1:0:1656:U:C2'	1:0:1657:A:H5''	2.03	0.88
1:0:1452:U:H3	1:0:1569:A:H62	1.18	0.88
1:0:1029:C:H2'	1:0:1030:U:H5''	1.55	0.88
1:0:2378:G:H1	1:0:2396:C:H42	1.18	0.88
1:0:588:G:HO2'	1:0:2001:G:HO2'	1.20	0.88
1:0:613:A:H2'	1:0:614:G:H8	1.36	0.88
1:0:2063:A:H61	1:0:2219:U:H3	0.92	0.88
1:0:387:A:H5'	1:0:436:A:N6	1.88	0.87
1:0:990:A:H5'	1:0:991:A:H5''	1.56	0.87
1:0:2043:A:H1'	1:0:2481:G:C1'	2.05	0.86
1:0:2063:A:N6	1:0:2219:U:H3	1.72	0.86
1:0:2532:G:H3'	1:0:2533:U:H5''	1.57	0.86
1:0:2311:U:H4'	1:0:2315:A:H61	1.36	0.86
1:0:27:G:H1'	1:0:523:A:N6	1.91	0.86
1:0:1908:C:H2'	1:0:1909:U:H4'	1.57	0.86
1:0:2841:U:H1'	1:0:2843:A:C1'	2.06	0.86
1:0:804:C:O2	1:0:804:C:H2'	1.76	0.86
1:0:2268:G:H5''	1:0:2363:G:O2'	1.76	0.85
1:0:68:C:H1'	1:0:72:A:H1'	1.59	0.85
1:0:1776:A:H4'	1:0:1965:U:O2'	1.76	0.85
1:0:2410:U:O2	1:0:2412:A:H8	1.58	0.85
1:0:2119:A:H61	1:0:2138:U:H3	1.20	0.85
1:0:875:G:H2'	1:0:876:A:O4'	1.76	0.85
1:0:204:A:N6	1:0:2386:G:H1'	1.91	0.85
1:0:1949:A:H1'	1:0:2572:U:H5'	1.58	0.85
1:0:2469:G:H5''	1:0:2470:U:OP1	1.76	0.85
1:0:1679:U:H2'	1:0:1680:U:H5'	1.58	0.85
1:0:1182:U:H2'	1:0:1183:C:H5''	1.58	0.85
1:0:334:G:N3	1:0:344:G:H1'	1.93	0.84

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:942:U:H2'	1:0:943:U:O4'	1.76	0.84
1:0:1029:C:N4	1:0:1153:A:H61	1.74	0.84
1:0:200:A:N6	1:0:435:A:H62	1.76	0.84
1:0:1916:G:H1	1:0:1950:C:H42	1.25	0.84
1:0:2085:G:H22	1:0:2171:U:H1'	1.42	0.84
1:0:362:C:H2'	1:0:363:G:H4'	1.60	0.84
1:0:940:G:H3'	1:0:941:U:C5'	2.06	0.84
1:0:1900:U:H4'	1:0:1946:U:H4'	1.58	0.84
1:0:588:G:H2'	1:0:589:C:C6	2.13	0.84
1:0:1582:A:H2'	1:0:1583:A:H5'	1.59	0.83
1:0:846:A:H62	1:0:955:G:N2	1.75	0.83
1:0:2380:U:C2'	1:0:2381:A:H5'	2.09	0.83
1:0:1900:U:H2'	1:0:1901:A:O4'	1.78	0.83
1:0:1791:C:H1'	1:0:1793:A:H5'	1.60	0.82
1:0:2081:U:H2'	1:0:2082:C:H5''	1.60	0.82
1:0:1449:C:C2'	1:0:1450:G:H5''	2.09	0.82
1:0:918:A:H3'	1:0:919:U:H5''	1.60	0.82
1:0:2549:G:H2'	1:0:2550:C:O4'	1.79	0.82
1:0:2824:C:H2'	1:0:2824:C:O2	1.79	0.82
1:0:1634:A:H4'	1:0:1635:G:OP1	1.77	0.81
1:0:1329:U:H5'	1:0:1405:A:H1'	1.61	0.81
1:0:2442:C:H42	1:0:2466:G:H1	1.25	0.81
1:0:114:C:O2'	1:0:124:A:H1'	1.80	0.81
1:0:1039:A:N6	1:0:1136:G:H2'	1.96	0.81
1:0:2599:U:H2'	1:0:2600:A:H5''	1.61	0.81
1:0:162:C:H5'	1:0:195:A:H1'	1.62	0.81
1:0:765:C:O2'	1:0:766:A:OP2	1.97	0.81
1:0:1911:A:H2'	1:0:1912:G:H5'	1.63	0.81
1:0:796:A:H4'	1:0:2568:A:OP1	1.81	0.81
1:0:834:A:H62	1:0:983:G:H21	1.29	0.81
1:0:202:A:H2'	1:0:203:G:O4'	1.79	0.81
1:0:109:A:H2'	1:0:110:U:H5''	1.63	0.81
1:0:204:A:H62	1:0:2386:G:H1'	1.44	0.80
1:0:2680:U:C5'	1:0:2681:A:H5''	2.11	0.80
1:0:490:A:H2'	1:0:491:A:H3'	1.63	0.80
1:0:1001:A:H5''	1:0:1168:G:OP2	1.81	0.80
1:0:2456:U:H1'	1:0:2460:G:H1	1.47	0.80
1:0:431:G:O6	1:0:433:G:N2	2.15	0.80
1:0:613:A:H2'	1:0:614:G:C8	2.16	0.80
1:0:1930:C:H42	1:0:1942:G:H1	1.29	0.80
1:0:929:A:H3'	1:0:930:A:H5''	1.64	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:864:C:H1'	1:0:940:G:H22	1.47	0.79
1:0:2266:A:H61	1:0:2323:U:H1'	1.47	0.79
1:0:2771:C:N4	1:0:2780:A:H61	1.77	0.79
1:0:2436:U:H2'	1:0:2437:G:O4'	1.82	0.79
1:0:244:C:H2'	1:0:245:C:H5''	1.64	0.79
1:0:689:A:H8	1:0:2052:G:H21	1.31	0.79
1:0:2382:C:H42	1:0:2393:G:H1	1.28	0.79
1:0:2418:A:H5''	1:0:2419:C:OP1	1.83	0.79
1:0:759:C:O2	1:0:2590:U:H4'	1.83	0.79
1:0:611:C:O2'	1:0:614:G:H5''	1.83	0.79
1:0:490:A:O2'	1:0:491:A:H5'	1.82	0.78
1:0:2804:G:C2'	1:0:2805:G:H5''	2.13	0.78
1:0:1860:A:H2'	1:0:1861:G:H5'	1.64	0.78
1:0:2378:G:H1	1:0:2396:C:N4	1.82	0.78
1:0:2451:G:H1'	1:0:2457:A:N6	1.97	0.78
1:0:1811:A:H5''	1:0:1812:U:OP1	1.83	0.78
1:0:653:G:H2'	1:0:654:A:H4'	1.64	0.77
1:0:587:A:H2'	1:0:588:G:H5''	1.67	0.77
1:0:109:A:C3'	1:0:110:U:H5''	2.13	0.77
1:0:165:G:H2'	1:0:166:G:O4'	1.85	0.77
1:0:27:G:H1'	1:0:523:A:H62	1.49	0.77
1:0:2329:C:H2'	1:0:2330:G:O4'	1.84	0.77
1:0:1139:A:H1'	1:0:2495:G:O2'	1.84	0.77
1:0:38:G:H1	1:0:453:U:H3	1.31	0.77
1:0:393:U:H2'	1:0:394:U:O4'	1.84	0.77
1:0:681:A:C2'	1:0:683:A:H62	1.97	0.77
1:0:1706:A:N7	1:0:1717:A:N1	2.32	0.77
1:0:192:G:H1'	1:0:193:A:H4'	1.66	0.77
1:0:396:U:H2'	1:0:398:C:N4	1.99	0.77
1:0:1955:G:C2'	1:0:1956:G:H5'	2.15	0.77
1:0:243:G:C6	1:0:244:C:H1'	2.19	0.77
1:0:1683:G:H2'	1:0:1684:G:O4'	1.84	0.77
1:0:2034:A:C5'	1:0:2557:G:H5''	2.15	0.77
1:0:460:U:N3	1:0:592:G:H1'	2.00	0.77
1:0:2669:C:O2	1:0:2669:C:H2'	1.83	0.76
1:0:552:C:H2'	1:0:553:C:H5'	1.67	0.76
1:0:1856:U:H5'	1:0:2389:G:O2'	1.85	0.76
1:0:1823:G:H1	1:0:1957:C:N4	1.83	0.76
1:0:926:C:H2'	1:0:927:C:H5'	1.67	0.76
1:0:225:G:O5'	1:0:226:C:H5'	1.85	0.76
1:0:2599:U:C2'	1:0:2600:A:H5''	2.15	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1528:C:H3'	1:0:1529:C:H5''	1.65	0.76
1:0:1955:G:O2'	1:0:1956:G:H5'	1.84	0.76
1:0:574:C:H4'	1:0:1266:G:O6	1.85	0.76
1:0:2797:G:H2'	1:0:2798:A:H5''	1.68	0.76
1:0:2812:A:H2'	1:0:2813:G:C8	2.20	0.76
1:0:2476:A:O2'	1:0:2477:C:H5'	1.86	0.76
1:0:2228:U:H4'	1:0:2254:C:H5	1.51	0.76
1:0:1294:G:H1	1:0:1302:C:N4	1.83	0.76
1:0:1302:C:O2'	1:0:1343:C:H4'	1.86	0.76
1:0:2266:A:N6	1:0:2323:U:H1'	2.01	0.76
1:0:210:A:H61	1:0:442:A:H61	1.34	0.76
1:0:1073:G:H2'	1:0:1074:G:C4'	2.15	0.76
1:0:168:A:H2'	1:0:169:C:C6	2.20	0.76
1:0:2672:U:H2'	1:0:2673:G:H8	1.50	0.75
1:0:951:G:C2'	1:0:952:A:H5''	2.15	0.75
1:0:2475:C:H2'	1:0:2476:A:O4'	1.86	0.75
1:0:1921:A:H2'	1:0:1922:U:H5''	1.66	0.75
1:0:1998:A:H2'	1:0:1999:U:H5'	1.67	0.75
1:0:2377:U:H2'	1:0:2378:G:H8	1.50	0.75
1:0:460:U:C4	1:0:592:G:H1'	2.21	0.75
1:0:437:G:H2'	1:0:438:G:H4'	1.68	0.75
1:0:760:U:O2	1:0:1997:A:H1'	1.85	0.75
1:0:940:G:C3'	1:0:941:U:H5''	2.13	0.75
1:0:2310:G:H2'	1:0:2311:U:O4'	1.86	0.75
1:0:1778:U:H5'	1:0:2568:A:O2'	1.86	0.75
1:0:128:C:H2'	1:0:129:A:H5''	1.67	0.75
1:0:328:A:O2'	1:0:329:C:H5'	1.87	0.75
1:0:918:A:C3'	1:0:919:U:H5''	2.16	0.75
1:0:468:A:H1'	1:0:470:U:C2	2.22	0.75
1:0:596:C:H1'	1:0:684:C:O4'	1.86	0.75
1:0:109:A:C2'	1:0:110:U:H5''	2.17	0.75
1:0:687:G:O2'	1:0:688:A:H5'	1.87	0.75
1:0:1680:U:HO2'	1:0:1681:A:H8	1.35	0.74
1:0:400:U:H4'	1:0:401:G:C8	2.22	0.74
1:0:826:U:O2'	1:0:1238:A:H1'	1.87	0.74
1:0:777:A:H62	1:0:1767:G:H1'	1.52	0.74
1:0:700:C:H1'	1:0:801:A:H5'	1.69	0.74
1:0:1528:C:C3'	1:0:1529:C:H5''	2.17	0.74
1:0:1529:C:H2'	1:0:1530:U:O4'	1.86	0.74
1:0:2194:A:C3'	1:0:2195:C:H5''	2.17	0.74
1:0:929:A:N7	1:0:2247:A:N1	2.36	0.74

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:964:A:H2'	1:0:965:G:H8	1.52	0.74
1:0:1066:G:H3'	1:0:1067:G:H5''	1.68	0.74
1:0:2395:C:C2'	1:0:2396:C:H5''	2.17	0.74
1:0:1088:A:H2'	1:0:1089:C:O4'	1.87	0.74
1:0:987:G:H2'	1:0:988:G:H8	1.50	0.74
1:0:514:G:N3	1:0:514:G:H2'	2.01	0.74
1:0:2377:U:H2'	1:0:2378:G:C8	2.23	0.74
1:0:633:G:H2'	1:0:634:G:C8	2.23	0.73
1:0:2483:U:H5'	1:0:2484:G:OP2	1.89	0.73
1:0:2686:C:H2'	1:0:2687:G:C8	2.24	0.73
1:0:1043:A:H2	1:0:1133:G:H22	1.37	0.73
1:0:2788:C:O2'	1:0:2789:U:H5'	1.87	0.73
1:0:339:U:O2	1:0:339:U:H2'	1.88	0.73
1:0:1299:A:H2'	1:0:1301:U:OP2	1.88	0.73
1:0:1260:A:HO2'	1:0:1261:G:P	2.12	0.73
1:0:942:U:H2'	1:0:943:U:C4'	2.18	0.73
1:0:840:U:H4'	1:0:841:G:C2	2.24	0.73
1:0:1923:U:H5'	1:0:1924:C:OP1	1.89	0.73
1:0:1149:G:H22	1:0:1154:A:C1'	2.01	0.72
1:0:542:A:H2'	1:0:543:G:H5'	1.69	0.72
1:0:2811:G:H2'	1:0:2812:A:C8	2.24	0.72
1:0:214:C:H2'	1:0:215:G:H8	1.54	0.72
1:0:1337:G:H1'	1:0:1632:A:N6	2.04	0.72
1:0:485:G:O2'	1:0:486:U:OP1	2.06	0.72
1:0:1326:U:O2	1:0:1326:U:H2'	1.89	0.72
1:0:1373:G:H2'	1:0:1374:G:H5'	1.71	0.72
1:0:311:A:H1'	1:0:330:C:H1'	1.70	0.72
1:0:1795:C:H2'	1:0:1796:A:H8	1.53	0.72
1:0:2680:U:H5'	1:0:2681:A:H5''	1.72	0.72
1:0:825:C:H1'	1:0:1263:G:C2	2.25	0.72
1:0:717:G:H1'	1:0:740:A:H61	1.53	0.72
1:0:930:A:OP1	1:0:930:A:H4'	1.90	0.72
1:0:2041:A:H61	2:0:2881:TEL:C58	2.02	0.72
1:0:816:U:H2'	1:0:817:A:H5'	1.70	0.72
1:0:482:A:C2'	1:0:483:A:H5'	2.20	0.72
1:0:1979:C:H2'	1:0:1980:A:O4'	1.88	0.72
1:0:369:C:H2'	1:0:370:U:O4'	1.90	0.72
1:0:1578:U:H2'	1:0:1579:G:C8	2.25	0.72
1:0:1918:G:H1'	1:0:1947:G:N2	2.05	0.72
1:0:1582:A:C2'	1:0:1583:A:H5'	2.19	0.71
1:0:1016:C:H1'	1:0:1154:A:N3	2.05	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2532:G:C3'	1:0:2533:U:H5''	2.20	0.71
1:0:2700:U:H3	1:0:2848:A:H62	1.38	0.71
1:0:1149:G:H22	1:0:1154:A:H1'	1.53	0.71
1:0:324:C:H2'	1:0:325:U:O4'	1.90	0.71
1:0:1055:A:N1	1:0:1122:A:H5'	2.06	0.71
1:0:2814:G:H2'	1:0:2815:C:C6	2.26	0.71
1:0:541:C:H42	1:0:572:G:H4'	1.56	0.71
1:0:2593:A:O2'	1:0:2594:U:H5'	1.90	0.71
1:0:1263:G:O2'	1:0:1264:C:OP1	2.07	0.71
1:0:1795:C:H2'	1:0:1796:A:C8	2.25	0.71
1:0:2299:A:H5'	1:0:2300:G:C4	2.26	0.71
1:0:1982:C:H4'	1:0:2703:C:O2	1.90	0.71
1:0:197:G:H1'	1:0:211:U:H1'	1.71	0.71
1:0:864:C:H1'	1:0:940:G:N2	2.04	0.71
1:0:2660:C:H2'	1:0:2660:C:O2	1.89	0.71
1:0:766:A:H2'	1:0:767:G:C8	2.26	0.71
1:0:1719:G:H2'	1:0:1720:G:H8	1.56	0.71
1:0:430:C:H6	1:0:430:C:H5''	1.56	0.71
1:0:984:A:H1'	1:0:1202:U:C4	2.25	0.71
1:0:616:U:C2'	1:0:617:U:H5''	2.20	0.71
1:0:1345:G:H5''	1:0:1346:C:OP2	1.90	0.71
1:0:1252:C:O2'	1:0:1253:C:H5''	1.91	0.71
1:0:1712:G:N3	1:0:1712:G:H3'	2.05	0.71
1:0:1177:U:H2'	1:0:1178:C:C6	2.25	0.71
1:0:88:G:H3'	1:0:89:A:H5''	1.73	0.71
1:0:2599:U:C3'	1:0:2600:A:H5''	2.21	0.71
1:0:2404:A:H5''	1:0:2405:A:H5''	1.73	0.71
1:0:2727:G:C2'	1:0:2728:A:H5''	2.21	0.71
1:0:1729:C:H2'	1:0:1730:G:C8	2.26	0.71
1:0:1007:A:H2'	1:0:1008:G:H8	1.55	0.70
1:0:2198:U:C3'	1:0:2199:C:H5''	2.19	0.70
1:0:484:G:O2'	1:0:485:G:H5'	1.91	0.70
1:0:1073:G:H2'	1:0:1074:G:H4'	1.71	0.70
1:0:1252:C:C2'	1:0:1253:C:H5''	2.20	0.70
1:0:200:A:N6	1:0:435:A:N6	2.39	0.70
1:0:1466:C:H2'	1:0:1467:U:O4'	1.92	0.70
1:0:1681:A:C2	1:0:2706:U:H1'	2.26	0.70
1:0:2447:G:H1	1:0:2460:G:H2'	1.56	0.70
1:0:700:C:O2	1:0:800:U:O3'	2.09	0.70
1:0:1541:G:H1	1:0:1562:G:H1	1.38	0.70
1:0:588:G:H2'	1:0:589:C:C5	2.26	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2812:A:H2'	1:0:2813:G:H8	1.56	0.70
1:0:2713:A:H2'	1:0:2714:A:C8	2.26	0.70
1:0:826:U:H2'	1:0:827:C:C6	2.26	0.70
1:0:540:G:C6	1:0:2005:U:H5''	2.27	0.70
1:0:2686:C:H2'	1:0:2687:G:H8	1.55	0.70
1:0:1154:A:O2'	1:0:1155:G:OP1	2.08	0.70
1:0:1680:U:H1'	1:0:2665:G:O2'	1.91	0.70
1:0:16:G:O2'	1:0:17:G:H5'	1.92	0.70
1:0:841:G:H2'	1:0:842:A:C8	2.26	0.70
1:0:218:A:N1	1:0:232:A:H5''	2.07	0.70
1:0:2565:C:H2'	1:0:2566:A:C8	2.27	0.70
1:0:1356:G:H5''	1:0:1614:C:OP2	1.92	0.70
1:0:1791:C:O2'	1:0:1793:A:H5'	1.92	0.70
1:0:296:A:H2'	1:0:297:A:H8	1.57	0.69
1:0:2754:C:H2'	1:0:2755:A:H8	1.57	0.69
1:0:1026:U:H2'	1:0:1027:C:C6	2.26	0.69
1:0:742:G:H5'	1:0:743:A:H5''	1.73	0.69
1:0:343:A:N6	1:0:346:C:C5	2.60	0.69
1:0:1918:G:H2'	1:0:1945:C:H42	1.57	0.69
1:0:1912:G:N3	1:0:1912:G:H2'	2.06	0.69
1:0:1655:C:OP1	1:0:2690:A:H5'	1.90	0.69
1:0:52:A:H62	1:0:115:G:H21	1.39	0.69
1:0:765:C:O2'	1:0:766:A:P	2.50	0.69
1:0:937:C:H2'	1:0:938:G:O4'	1.92	0.69
1:0:2692:A:N3	1:0:2692:A:H2'	2.07	0.69
1:0:677:G:H1'	1:0:951:G:H5''	1.75	0.69
1:0:1195:U:H2'	1:0:1196:G:C8	2.28	0.69
1:0:871:U:O2	1:0:2247:A:H2'	1.93	0.69
1:0:651:C:C2'	1:0:652:C:H5''	2.22	0.69
1:0:2137:G:H2'	1:0:2138:U:C6	2.28	0.69
1:0:990:A:C5'	1:0:991:A:H5''	2.22	0.69
1:0:1147:G:H2'	1:0:1148:G:H8	1.57	0.69
1:0:2721:A:H61	1:0:2743:G:H1'	1.57	0.69
1:0:2447:G:O2'	1:0:2448:A:H5''	1.93	0.69
1:0:181:A:H5''	1:0:182:G:OP1	1.93	0.69
1:0:482:A:H2'	1:0:483:A:H5'	1.73	0.69
1:0:1429:A:H1'	1:0:1603:A:C6	2.28	0.69
1:0:1854:G:H2'	1:0:1855:G:H8	1.57	0.69
1:0:1978:U:H3'	1:0:1979:C:H5''	1.74	0.69
1:0:658:G:H2'	1:0:659:G:H8	1.57	0.69
1:0:192:G:C1'	1:0:193:A:H4'	2.23	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:590:C:H2'	1:0:591:G:C8	2.28	0.69
1:0:119:G:H4'	1:0:142:U:H2'	1.75	0.69
1:0:474:G:N2	1:0:476:G:H3'	2.07	0.69
1:0:431:G:H2'	1:0:432:C:O5'	1.93	0.68
1:0:644:A:H2'	1:0:645:G:H5'	1.73	0.68
1:0:2059:U:H5''	1:0:2217:G:H1	1.58	0.68
1:0:2404:A:H5'	1:0:2406:C:O4'	1.94	0.68
1:0:2708:U:H2'	1:0:2709:C:C6	2.28	0.68
1:0:218:A:H4'	1:0:219:G:O5'	1.94	0.68
1:0:598:U:H2'	1:0:599:A:C8	2.29	0.68
1:0:1032:A:H3'	1:0:1033:G:H5''	1.75	0.68
1:0:818:G:N1	1:0:2050:G:O2'	2.27	0.68
1:0:56:C:H2'	1:0:57:G:O4'	1.93	0.68
1:0:1234:C:O2'	1:0:1235:C:H5'	1.92	0.68
1:0:952:A:H2'	1:0:953:G:C8	2.28	0.68
1:0:552:C:C2'	1:0:553:C:H5'	2.23	0.68
1:0:2238:G:H4'	1:0:2407:G:OP2	1.93	0.68
1:0:2652:G:H2'	1:0:2653:A:H8	1.58	0.68
1:0:2240:C:H1'	1:0:2367:A:H1'	1.75	0.68
1:0:244:C:C2'	1:0:245:C:H5''	2.23	0.68
1:0:1315:A:H5''	1:0:1316:G:OP2	1.94	0.68
1:0:1626:A:H5''	1:0:1627:C:OP2	1.94	0.68
1:0:1337:G:H4'	1:0:1632:A:H62	1.59	0.68
1:0:2311:U:H4'	1:0:2315:A:N6	2.09	0.68
1:0:688:A:H1'	1:0:2422:C:O2'	1.94	0.68
1:0:1706:A:H2'	1:0:1707:A:O4'	1.94	0.68
1:0:716:U:H2'	1:0:717:G:O4'	1.93	0.68
1:0:81:C:H5'	1:0:306:G:O2'	1.94	0.68
1:0:1608:U:H2'	1:0:1609:G:H8	1.58	0.68
1:0:1036:G:H1'	1:0:1145:C:H4'	1.74	0.68
1:0:2309:G:H1	1:0:2364:C:N4	1.89	0.68
1:0:2702:G:H2'	1:0:2703:C:C6	2.28	0.68
1:0:2081:U:C2'	1:0:2082:C:H5''	2.24	0.68
1:0:1368:G:H2'	1:0:1369:G:H8	1.57	0.68
1:0:933:G:H2'	1:0:934:G:H8	1.58	0.68
1:0:1922:U:O2	1:0:2571:G:H4'	1.94	0.68
1:0:309:G:H21	1:0:351:A:H62	1.41	0.68
1:0:1655:C:H5''	1:0:2689:C:O2'	1.93	0.68
1:0:718:A:H62	1:0:739:G:H1'	1.58	0.68
1:0:366:U:H2'	1:0:367:G:H8	1.58	0.67
1:0:1514:C:H5'	1:0:1593:C:H5''	1.75	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1766:U:H2'	1:0:1767:G:O4'	1.94	0.67
1:0:1937:G:H1'	1:0:2530:C:C4'	2.22	0.67
1:0:699:G:H5'	1:0:700:C:OP2	1.94	0.67
1:0:591:G:H2'	1:0:592:G:C8	2.28	0.67
1:0:1549:C:H2'	1:0:1550:C:O4'	1.93	0.67
1:0:1161:U:H2'	1:0:1162:A:H8	1.60	0.67
1:0:15:G:H22	1:0:536:A:H2	1.42	0.67
1:0:1202:U:H2'	1:0:1203:A:H8	1.60	0.67
1:0:1582:A:H62	1:0:1584:G:H21	1.40	0.67
1:0:2041:A:H61	2:0:2881:TEL:H582	1.58	0.67
1:0:1777:A:O2'	1:0:1778:U:OP1	2.12	0.67
1:0:1859:A:H2'	1:0:1860:A:H8	1.60	0.67
1:0:2736:U:O2'	1:0:2737:A:H5'	1.95	0.67
1:0:594:G:C6	1:0:1264:C:N4	2.55	0.67
1:0:831:G:H21	1:0:1203:A:H62	1.41	0.67
1:0:109:A:H3'	1:0:110:U:H5''	1.76	0.67
1:0:815:A:O2'	1:0:816:U:H5'	1.95	0.67
1:0:2033:C:H2'	1:0:2034:A:O4'	1.94	0.67
1:0:368:A:H2'	1:0:369:C:O4'	1.94	0.67
1:0:389:G:C8	1:0:389:G:H3'	2.30	0.67
1:0:1222:G:H1'	1:0:1251:G:N2	2.09	0.67
1:0:1029:C:C2'	1:0:1030:U:H5''	2.24	0.67
1:0:2410:U:O2	1:0:2412:A:C8	2.44	0.67
1:0:1930:C:N4	1:0:1942:G:H1	1.92	0.67
1:0:2432:A:H4'	1:0:2551:A:O2'	1.95	0.67
1:0:1021:A:H1'	1:0:1164:C:H1'	1.77	0.67
1:0:1141:U:O2'	1:0:1142:G:OP1	2.12	0.67
1:0:1247:U:H2'	1:0:1248:G:O4'	1.95	0.67
1:0:1883:A:N3	1:0:1953:A:N7	2.43	0.67
1:0:2369:U:H2'	1:0:2370:G:H8	1.59	0.67
1:0:38:G:H2'	1:0:39:C:C6	2.30	0.66
1:0:73:A:H2'	1:0:73:A:N3	2.10	0.66
1:0:2245:A:O2'	1:0:2246:A:OP2	2.11	0.66
1:0:1911:A:C2'	1:0:1912:G:H5'	2.25	0.66
1:0:1288:A:H2'	1:0:1289:A:O4'	1.95	0.66
1:0:139:A:H2'	1:0:140:G:H8	1.58	0.66
1:0:1804:U:H2'	1:0:1805:G:H8	1.60	0.66
1:0:2675:U:H2'	1:0:2676:G:C8	2.29	0.66
1:0:2521:A:H5'	1:0:2522:G:OP1	1.95	0.66
1:0:2396:C:H2'	1:0:2397:A:H5'	1.77	0.66
1:0:1223:G:H5'	1:0:1225:G:O4'	1.95	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1182:U:C2'	1:0:1183:C:H5''	2.25	0.66
1:0:741:G:H5'	1:0:742:G:OP2	1.94	0.66
1:0:1071:U:H2'	1:0:1072:U:H5'	1.77	0.66
1:0:1679:U:C2'	1:0:1680:U:H5'	2.26	0.66
1:0:1634:A:O2'	1:0:1635:G:H5'	1.95	0.66
1:0:541:C:H42	1:0:572:G:C4'	2.08	0.66
1:0:2429:A:H5''	1:0:2476:A:H62	1.60	0.66
1:0:1958:G:H2'	1:0:1959:U:C6	2.31	0.66
1:0:865:A:H2'	1:0:866:U:C6	2.30	0.66
1:0:2274:C:H2'	1:0:2275:U:H5'	1.77	0.66
1:0:2816:C:H1'	1:0:2852:G:H22	1.59	0.66
1:0:589:C:H5'	1:0:2001:G:O2'	1.96	0.66
1:0:1083:C:N3	1:0:1103:C:C5	2.63	0.66
1:0:340:G:H5'	1:0:341:A:OP1	1.95	0.66
1:0:2402:U:H4'	1:0:2404:A:N7	2.10	0.66
1:0:336:A:H2'	1:0:337:G:C8	2.31	0.66
1:0:2804:G:C3'	1:0:2805:G:H5''	2.25	0.66
1:0:762:A:O2'	1:0:1633:C:H1'	1.95	0.66
1:0:1561:A:H2'	1:0:1562:G:O4'	1.96	0.66
1:0:772:G:H2'	1:0:773:G:H8	1.61	0.65
1:0:681:A:C2'	1:0:683:A:N6	2.55	0.65
1:0:2048:C:H2'	1:0:2049:C:H6	1.61	0.65
1:0:1776:A:H4'	1:0:1965:U:HO2'	1.60	0.65
1:0:2483:U:H3'	1:0:2484:G:H5''	1.77	0.65
1:0:1218:C:H2'	1:0:1219:C:C6	2.32	0.65
1:0:2782:G:H2'	1:0:2783:U:H5'	1.77	0.65
1:0:1198:C:OP1	1:0:1199:U:H1'	1.96	0.65
1:0:1625:A:N3	1:0:1625:A:H2'	2.11	0.65
1:0:759:C:H5'	1:0:761:G:H1'	1.78	0.65
1:0:542:A:C2'	1:0:543:G:H5'	2.25	0.65
1:0:78:C:H2'	1:0:79:G:H8	1.61	0.65
1:0:1458:A:H3'	1:0:1459:U:C5'	2.25	0.65
1:0:1435:G:H2'	1:0:1436:G:H8	1.59	0.65
1:0:1572:C:H2'	1:0:1573:G:C5'	2.14	0.65
1:0:2778:U:H2'	1:0:2779:C:C6	2.30	0.65
1:0:1662:G:H5''	1:0:1663:C:H5'	1.77	0.65
1:0:389:G:H8	1:0:389:G:H3'	1.59	0.65
1:0:2526:U:H2'	1:0:2527:G:C8	2.31	0.65
1:0:430:C:C4'	1:0:2386:G:N2	2.56	0.65
1:0:2034:A:H5'	1:0:2557:G:H5''	1.78	0.65
1:0:843:G:N3	1:0:2427:A:N6	2.44	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:728:G:H2'	1:0:729:A:O4'	1.96	0.65
1:0:983:G:H3'	1:0:984:A:H5''	1.79	0.65
1:0:2398:U:H2'	1:0:2399:C:C6	2.32	0.65
1:0:1407:G:H2'	1:0:1408:A:O4'	1.96	0.65
1:0:2324:G:O2'	1:0:2325:A:OP2	2.12	0.65
1:0:2651:U:O2'	1:0:2652:G:H5'	1.96	0.65
1:0:133:C:H2'	1:0:134:G:O4'	1.96	0.65
1:0:1552:C:H2'	1:0:1553:G:H5'	1.79	0.65
1:0:2312:A:H1'	1:0:2314:A:C5	2.32	0.65
1:0:2034:A:H5''	1:0:2557:G:H5''	1.78	0.65
1:0:457:C:H2'	1:0:458:G:O4'	1.96	0.65
1:0:2020:G:H2'	1:0:2021:G:C8	2.31	0.65
1:0:1358:C:H2'	1:0:1359:G:H5'	1.79	0.65
1:0:2334:C:C3'	1:0:2335:U:H5''	2.27	0.65
1:0:534:U:O2'	1:0:535:U:H5'	1.97	0.65
1:0:2824:C:H4'	1:0:2825:A:H5'	1.79	0.65
1:0:1807:A:H1'	1:0:1809:G:C8	2.32	0.65
1:0:1353:A:N3	1:0:1353:A:H2'	2.11	0.65
1:0:175:C:H1'	1:0:2413:A:H61	1.62	0.64
1:0:430:C:H6	1:0:430:C:C5'	2.09	0.64
1:0:1725:C:N4	1:0:1741:G:H1	1.95	0.64
1:0:984:A:H1'	1:0:1202:U:C5	2.32	0.64
1:0:1681:A:H61	1:0:1979:C:N4	1.96	0.64
1:0:1230:C:H2'	1:0:1231:A:H8	1.62	0.64
1:0:1086:C:H2'	1:0:1087:C:H5''	1.78	0.64
1:0:874:A:H2'	1:0:875:G:O4'	1.97	0.64
1:0:2261:G:H4'	1:0:2262:C:OP2	1.95	0.64
1:0:1058:G:H2'	1:0:1121:G:H1	1.63	0.64
1:0:587:A:C2'	1:0:588:G:H5''	2.27	0.64
1:0:1791:C:C2'	1:0:1792:C:H5''	2.26	0.64
1:0:789:G:H1'	1:0:806:A:C6	2.33	0.64
1:0:813:A:N3	1:0:813:A:H2'	2.12	0.64
1:0:540:G:O6	1:0:2006:G:OP1	2.16	0.64
1:0:1078:A:H2'	1:0:1079:G:H8	1.62	0.64
1:0:1303:U:H2'	1:0:1304:U:C6	2.32	0.64
1:0:1223:G:N3	1:0:1225:G:N3	2.46	0.64
1:0:1764:A:N7	1:0:1821:A:H1'	2.12	0.64
1:0:1955:G:H2'	1:0:1956:G:H8	1.62	0.64
1:0:2633:A:O2'	1:0:2634:G:H4'	1.98	0.64
1:0:2560:G:N3	1:0:2560:G:H3'	2.12	0.64
1:0:2389:G:H2'	1:0:2390:A:C8	2.33	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2671:C:H2'	1:0:2672:U:C6	2.32	0.64
1:0:2091:C:H2'	1:0:2092:U:O4'	1.97	0.64
1:0:1937:G:N3	1:0:2530:C:H5''	2.13	0.64
1:0:1948:C:OP2	1:0:1949:A:H3'	1.97	0.64
1:0:2713:A:H2'	1:0:2714:A:H8	1.61	0.64
1:0:781:G:N2	1:0:1392:U:H1'	2.13	0.64
1:0:1299:A:O2'	1:0:1300:A:OP1	2.15	0.64
1:0:1680:U:O2'	1:0:1681:A:H8	1.80	0.64
1:0:765:C:HO2'	1:0:766:A:P	2.20	0.64
1:0:2096:U:H3'	1:0:2097:A:H5''	1.80	0.64
1:0:952:A:O2'	1:0:1204:G:H4'	1.99	0.63
1:0:367:G:C3'	1:0:368:A:H5''	2.28	0.63
1:0:1437:A:H2'	1:0:1438:G:H8	1.62	0.63
1:0:1332:G:N1	1:0:1333:G:N2	2.46	0.63
1:0:1337:G:C4'	1:0:1632:A:H62	2.12	0.63
1:0:873:U:H3	1:0:930:A:N6	1.96	0.63
1:0:1225:G:H2'	1:0:1249:G:N2	2.13	0.63
1:0:2191:A:H2'	1:0:2192:U:OP1	1.99	0.63
1:0:651:C:H2'	1:0:652:C:H5''	1.78	0.63
1:0:2274:C:H2'	1:0:2275:U:C5'	2.28	0.63
1:0:2549:G:O2'	1:0:2550:C:H5'	1.98	0.63
1:0:2334:C:H2'	1:0:2335:U:H5''	1.81	0.63
1:0:1886:G:H2'	1:0:1887:G:H8	1.63	0.63
1:0:1451:C:H2'	1:0:1452:U:H6	1.62	0.63
1:0:2382:C:N4	1:0:2393:G:H1	1.95	0.63
1:0:1141:U:O2	1:0:2008:C:H5''	1.99	0.63
1:0:2517:C:H2'	1:0:2518:C:C6	2.34	0.63
1:0:1299:A:HO2'	1:0:1300:A:P	2.22	0.63
1:0:1345:G:C5	1:0:1625:A:N6	2.66	0.63
1:0:2299:A:H5'	1:0:2300:G:C5	2.34	0.63
1:0:1242:A:O2'	1:0:1243:G:H5'	1.99	0.63
1:0:68:C:O2	1:0:68:C:H2'	1.99	0.63
1:0:1588:A:H2'	1:0:1589:G:H8	1.64	0.63
1:0:2426:G:H1'	1:0:2480:C:C5	2.34	0.63
1:0:2428:U:O2	1:0:2428:U:H2'	1.98	0.63
1:0:2495:G:H2'	1:0:2496:C:O4'	1.98	0.63
1:0:321:A:O2'	1:0:322:A:H8	1.74	0.63
1:0:612:G:O3'	1:0:613:A:H4'	1.99	0.63
1:0:2043:A:O2'	1:0:2481:G:O4'	2.17	0.63
1:0:1679:U:O2	1:0:2666:U:H5''	1.99	0.63
1:0:1982:C:H5''	1:0:2703:C:O2'	1.98	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1161:U:H2'	1:0:1162:A:C8	2.34	0.63
1:0:2384:G:H5''	1:0:2385:U:H5''	1.79	0.63
1:0:1725:C:H42	1:0:1741:G:H1	1.47	0.62
1:0:2687:G:O2'	1:0:2688:G:H5'	1.99	0.62
1:0:1791:C:H1'	1:0:1793:A:C5'	2.29	0.62
1:0:2261:G:H5''	1:0:2262:C:O5'	1.98	0.62
1:0:1380:C:H2'	1:0:1381:G:H5'	1.80	0.62
1:0:2380:U:H2'	1:0:2381:A:C5'	2.28	0.62
1:0:1259:A:O2'	1:0:1260:A:H5'	1.99	0.62
1:0:550:C:H2'	1:0:551:A:C8	2.34	0.62
1:0:200:A:H62	1:0:435:A:H62	1.47	0.62
1:0:323:G:H2'	1:0:324:C:C6	2.34	0.62
1:0:2753:C:H2'	1:0:2754:C:C6	2.35	0.62
1:0:2754:C:H2'	1:0:2755:A:C8	2.34	0.62
1:0:7:G:H2'	1:0:8:A:C8	2.34	0.62
1:0:2756:A:O2'	1:0:2757:G:OP2	2.15	0.62
1:0:2763:U:H2'	1:0:2764:U:O4'	1.99	0.62
1:0:2672:U:H2'	1:0:2673:G:C8	2.33	0.62
1:0:1029:C:N4	1:0:1153:A:N6	2.46	0.62
1:0:198:A:H62	1:0:439:C:H42	1.46	0.62
1:0:210:A:N6	1:0:442:A:H61	1.98	0.62
1:0:1089:C:H2'	1:0:1099:A:O4'	2.00	0.62
1:0:1218:C:H2'	1:0:1219:C:H6	1.64	0.62
1:0:1698:C:H4'	1:0:1699:A:OP1	2.00	0.62
1:0:1416:A:O2'	1:0:1417:C:H5'	1.98	0.62
1:0:1871:G:N3	1:0:1871:G:H3'	2.14	0.62
1:0:2746:G:N3	1:0:2746:G:H2'	2.13	0.62
1:0:1981:A:H4'	1:0:2704:U:H4'	1.80	0.62
1:0:574:C:C4'	1:0:1266:G:O6	2.47	0.62
1:0:1719:G:H2'	1:0:1720:G:C8	2.35	0.62
1:0:2565:C:H2'	1:0:2566:A:H8	1.62	0.62
1:0:645:G:H2'	1:0:646:C:C6	2.35	0.62
1:0:2024:U:H2'	1:0:2025:A:C8	2.34	0.62
1:0:2870:C:H2'	1:0:2871:U:C6	2.35	0.62
1:0:1114:A:H2'	1:0:1115:C:O4'	1.98	0.62
1:0:1900:U:H4'	1:0:1946:U:C4'	2.30	0.62
1:0:788:G:N2	1:0:801:A:OP2	2.33	0.62
1:0:168:A:H2'	1:0:169:C:H6	1.62	0.62
1:0:2343:C:H2'	1:0:2344:G:O4'	1.99	0.62
1:0:562:G:H2'	1:0:563:U:C6	2.35	0.62
1:0:2:G:H2'	1:0:3:U:C6	2.33	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2691:C:H3'	1:0:2692:A:H5''	1.81	0.62
1:0:597:U:H2'	1:0:598:U:C6	2.34	0.62
1:0:1782:A:N6	1:0:1820:G:H2'	2.14	0.62
1:0:2049:C:H2'	1:0:2050:G:H5'	1.82	0.62
1:0:396:U:H2'	1:0:398:C:H41	1.63	0.62
1:0:214:C:H2'	1:0:215:G:C8	2.34	0.62
1:0:367:G:H3'	1:0:368:A:H5''	1.81	0.62
1:0:2870:C:H2'	1:0:2871:U:H6	1.65	0.62
1:0:1869:A:H2'	1:0:1870:U:O4'	2.00	0.62
1:0:707:U:OP1	1:0:1585:A:H1'	2.00	0.62
1:0:431:G:N1	1:0:432:C:N4	2.48	0.62
1:0:222:G:N2	1:0:231:G:H1'	2.15	0.62
1:0:1555:A:H2'	1:0:1556:A:C8	2.35	0.62
1:0:538:A:C2	1:0:2025:A:H2'	2.35	0.62
1:0:1194:U:H2'	1:0:1195:U:C6	2.34	0.62
1:0:2533:U:H2'	1:0:2534:U:C6	2.34	0.62
1:0:1278:A:O2'	1:0:1279:G:H4'	2.00	0.62
1:0:2824:C:C2'	1:0:2824:C:O2	2.46	0.62
1:0:2266:A:HO2'	1:0:2267:A:H8	1.48	0.62
1:0:699:G:C5'	1:0:700:C:OP2	2.48	0.62
1:0:837:U:H2'	1:0:838:A:C8	2.34	0.62
1:0:431:G:C6	1:0:433:G:N2	2.67	0.61
1:0:2495:G:H2'	1:0:2496:C:C1'	2.30	0.61
1:0:873:U:O2	1:0:2247:A:O5'	2.17	0.61
1:0:1979:C:O2'	1:0:1980:A:H5'	2.00	0.61
1:0:330:C:H2'	1:0:331:U:H6	1.64	0.61
1:0:1102:G:N1	1:0:1112:U:H1'	2.15	0.61
1:0:978:U:H2'	1:0:979:A:C8	2.35	0.61
1:0:569:C:N4	1:0:570:G:C6	2.67	0.61
1:0:2520:A:H1'	1:0:2744:A:H2	1.65	0.61
1:0:244:C:C3'	1:0:245:C:H5''	2.30	0.61
1:0:2728:A:N1	1:0:2736:U:H1'	2.14	0.61
1:0:1338:G:H4'	1:0:1339:U:OP1	1.99	0.61
1:0:2262:C:H2'	1:0:2263:C:O4'	2.00	0.61
1:0:1288:A:H62	1:0:1309:G:C4'	2.13	0.61
1:0:834:A:H62	1:0:983:G:N2	1.97	0.61
1:0:1764:A:H2'	1:0:1765:C:H5'	1.81	0.61
1:0:1033:G:O2'	1:0:1034:U:P	2.58	0.61
1:0:2059:U:C5'	1:0:2217:G:H1	2.13	0.61
1:0:495:C:H2'	1:0:496:C:C6	2.35	0.61
1:0:2692:A:O4'	1:0:2692:A:OP1	2.19	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2243:C:H2'	1:0:2244:C:O4'	2.01	0.61
1:0:1720:G:O2'	1:0:1721:G:H5'	2.00	0.61
1:0:14:A:N3	1:0:14:A:H2'	2.14	0.61
1:0:564:U:H2'	1:0:565:A:C8	2.34	0.61
1:0:2391:A:H2'	1:0:2392:G:O4'	1.99	0.61
1:0:1354:A:H62	1:0:1407:G:H1	1.48	0.61
1:0:1392:U:H2'	1:0:1392:U:O2	2.00	0.61
1:0:2096:U:C3'	1:0:2097:A:H5''	2.31	0.61
1:0:822:G:O2'	1:0:823:U:H5'	2.00	0.61
1:0:2658:A:O2'	1:0:2659:C:H5'	2.01	0.61
1:0:1975:G:H22	1:0:1979:C:H5	1.47	0.61
1:0:541:C:H42	1:0:572:G:C5'	2.14	0.61
1:0:1617:G:H2'	1:0:1618:U:H5'	1.82	0.61
1:0:158:A:H1'	1:0:448:C:H5'	1.83	0.61
1:0:2105:U:H2'	1:0:2106:G:C8	2.35	0.61
1:0:987:G:H2'	1:0:988:G:C8	2.33	0.61
1:0:2351:G:N3	1:0:2351:G:H2'	2.15	0.61
1:0:2477:C:H3'	1:0:2477:C:H6	1.65	0.61
1:0:2727:G:O2'	1:0:2728:A:H5''	1.99	0.61
1:0:879:A:H2'	1:0:879:A:N3	2.16	0.61
1:0:2748:C:H2'	1:0:2749:A:H8	1.65	0.61
1:0:1775:A:H8	1:0:1775:A:O5'	1.83	0.61
1:0:1997:A:H2'	1:0:1998:A:C8	2.36	0.61
1:0:796:A:H2'	1:0:796:A:N3	2.14	0.61
1:0:460:U:H3	1:0:592:G:H1'	1.66	0.61
1:0:1429:A:O2'	1:0:1430:G:H4'	2.00	0.61
1:0:809:C:H2'	1:0:810:U:C6	2.35	0.61
1:0:665:A:N3	1:0:665:A:H2'	2.15	0.61
1:0:987:G:H5'	1:0:1167:A:N6	2.16	0.60
1:0:1790:G:H4'	1:0:1791:C:C6	2.37	0.60
1:0:804:C:O2	1:0:804:C:C2'	2.45	0.60
1:0:65:C:H2'	1:0:66:U:O4'	2.01	0.60
1:0:1582:A:C3'	1:0:1583:A:H5'	2.30	0.60
1:0:824:U:H1'	1:0:1264:C:O2	2.00	0.60
1:0:706:A:H2'	1:0:707:U:C6	2.37	0.60
1:0:1281:A:H2'	1:0:1282:A:O4'	2.01	0.60
1:0:1621:C:O4'	1:0:1626:A:N1	2.33	0.60
1:0:2225:G:H2'	1:0:2226:A:C8	2.36	0.60
1:0:674:U:H2'	1:0:675:C:O4'	2.02	0.60
1:0:1172:U:H2'	1:0:1173:G:H8	1.64	0.60
1:0:2487:G:H2'	1:0:2488:G:H8	1.65	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:388:G:P	1:0:436:A:H61	2.24	0.60
1:0:466:A:C2'	1:0:467:U:OP2	2.49	0.60
1:0:330:C:H2'	1:0:331:U:C6	2.36	0.60
1:0:468:A:O2'	1:0:469:G:H4'	2.01	0.60
1:0:2498:U:OP2	1:0:2498:U:H3'	2.00	0.60
1:0:73:A:O3'	1:0:74:G:H4'	2.00	0.60
1:0:1474:A:N3	1:0:1474:A:H3'	2.16	0.60
1:0:216:U:H2'	1:0:217:U:O4'	2.01	0.60
1:0:2867:G:H2'	1:0:2867:G:N3	2.16	0.60
1:0:510:G:H2'	1:0:512:A:OP2	2.00	0.60
1:0:2463:G:H2'	1:0:2464:G:H8	1.65	0.60
1:0:1932:G:H3'	1:0:1933:G:C8	2.36	0.60
1:0:2000:U:H3'	1:0:2001:G:H5''	1.83	0.60
1:0:2496:C:H2'	1:0:2497:A:H5''	1.84	0.60
1:0:2136:G:H2'	1:0:2137:G:C8	2.36	0.60
1:0:2322:U:O2'	1:0:2323:U:H5'	2.02	0.60
1:0:1223:G:H5''	1:0:1224:A:OP1	2.02	0.60
1:0:688:A:H2'	1:0:689:A:N3	2.15	0.60
1:0:1057:A:H3'	1:0:1058:G:C5'	2.32	0.60
1:0:357:A:H2'	1:0:358:C:H5'	1.84	0.60
1:0:1532:A:H2'	1:0:1533:G:C8	2.37	0.60
1:0:1725:C:H2'	1:0:1726:C:H6	1.67	0.60
1:0:1016:C:H1'	1:0:1154:A:C2	2.37	0.60
1:0:872:G:O2'	1:0:873:U:H5''	2.01	0.60
1:0:460:U:H4'	1:0:461:A:OP2	2.01	0.60
1:0:827:C:O2'	1:0:828:C:H5'	2.01	0.60
1:0:1184:G:H2'	1:0:1185:C:H5'	1.84	0.60
1:0:658:G:H2'	1:0:659:G:C8	2.37	0.60
1:0:579:G:H2'	1:0:2013:A:N7	2.16	0.60
1:0:2432:A:H2'	1:0:2433:G:H8	1.65	0.60
1:0:644:A:C2'	1:0:645:G:H5'	2.32	0.60
1:0:1886:G:H2'	1:0:1887:G:C8	2.37	0.60
1:0:2425:G:H2'	1:0:2480:C:H5	1.67	0.60
1:0:2278:A:H61	1:0:2296:U:H3	1.49	0.60
1:0:1700:C:H2'	1:0:1701:C:C6	2.36	0.60
1:0:857:U:H2'	1:0:858:G:O4'	2.02	0.60
1:0:573:C:HO2'	1:0:1266:G:H1	1.50	0.60
1:0:311:A:H1'	1:0:330:C:C1'	2.31	0.60
1:0:436:A:H4'	1:0:437:G:C5'	2.26	0.59
1:0:1999:U:H2'	1:0:2000:U:O4'	2.02	0.59
1:0:1621:C:O4'	1:0:1626:A:C2	2.55	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2309:G:H1	1:0:2364:C:H42	1.49	0.59
1:0:787:A:H2'	1:0:788:G:N7	2.17	0.59
1:0:1244:U:H2'	1:0:1245:G:C8	2.37	0.59
1:0:1353:A:H5''	1:0:1354:A:N7	2.16	0.59
1:0:2633:A:H5''	1:0:2634:G:OP1	2.02	0.59
1:0:792:U:O2'	1:0:793:G:H5'	2.01	0.59
1:0:2659:C:H2'	1:0:2660:C:H6	1.66	0.59
1:0:66:U:H2'	1:0:67:G:C8	2.36	0.59
1:0:1326:U:O2	1:0:1326:U:C2'	2.49	0.59
1:0:2384:G:H5''	1:0:2385:U:C5'	2.32	0.59
1:0:1175:A:H2'	1:0:1176:U:C6	2.38	0.59
1:0:633:G:H2'	1:0:634:G:H8	1.66	0.59
1:0:68:C:H2'	1:0:69:G:C8	2.36	0.59
1:0:802:A:N3	1:0:802:A:H2'	2.16	0.59
1:0:2500:C:H4'	1:0:2544:A:O4'	2.03	0.59
1:0:820:U:H2'	1:0:821:A:H8	1.67	0.59
1:0:1904:G:H2'	1:0:1905:G:O4'	2.02	0.59
1:0:2386:G:H2'	1:0:2386:G:N3	2.17	0.59
1:0:834:A:N6	1:0:983:G:H21	1.99	0.59
1:0:998:C:H1'	1:0:1012:A:H1'	1.84	0.59
1:0:1376:C:H2'	1:0:1377:G:C8	2.37	0.59
1:0:1139:A:H1'	1:0:2495:G:HO2'	1.66	0.59
1:0:1298:G:O6	1:0:1342:U:C6	2.56	0.59
1:0:1225:G:H2'	1:0:1249:G:H22	1.67	0.59
1:0:2469:G:H4'	1:0:2470:U:O5'	2.03	0.59
1:0:2483:U:H3'	1:0:2484:G:C5'	2.33	0.59
1:0:956:A:O2'	1:0:957:G:P	2.60	0.59
1:0:1578:U:H2'	1:0:1579:G:H8	1.66	0.59
1:0:2652:G:O2'	1:0:2653:A:H5'	2.02	0.59
1:0:1391:A:O2'	1:0:1392:U:P	2.60	0.59
1:0:2863:U:H2'	1:0:2864:C:C6	2.37	0.59
1:0:757:U:H2'	1:0:758:G:H5'	1.85	0.59
1:0:1304:U:O2'	1:0:1305:C:H5'	2.03	0.59
1:0:2312:A:H1'	1:0:2314:A:N7	2.17	0.59
1:0:824:U:C1'	1:0:1264:C:O2	2.50	0.59
1:0:1110:G:H2'	1:0:1111:C:C6	2.38	0.59
1:0:759:C:C5'	1:0:761:G:H1'	2.33	0.59
1:0:2680:U:H5''	1:0:2681:A:H5''	1.83	0.59
1:0:244:C:H2'	1:0:245:C:O4'	2.03	0.59
1:0:1437:A:O2'	1:0:1515:U:H4'	2.02	0.59
1:0:333:A:O2'	1:0:350:U:H2'	2.02	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2321:C:H2'	1:0:2322:U:O4'	2.03	0.59
1:0:872:G:O2'	1:0:2247:A:H1'	2.03	0.59
1:0:698:A:H1'	1:0:700:C:C5	2.38	0.59
1:0:1325:U:H5'	1:0:1326:U:C6	2.38	0.59
1:0:1949:A:H1'	1:0:2572:U:C5'	2.30	0.59
1:0:233:A:H2'	1:0:234:C:C6	2.38	0.59
1:0:1548:U:H3	1:0:1554:G:H1	1.49	0.59
1:0:2015:G:O2'	1:0:2016:A:OP1	2.18	0.59
1:0:986:A:H2'	1:0:987:G:H5'	1.84	0.58
1:0:1764:A:OP1	1:0:1820:G:H3'	2.02	0.58
1:0:161:U:H2'	1:0:162:C:C6	2.37	0.58
1:0:468:A:C2'	1:0:469:G:H4'	2.33	0.58
1:0:1222:G:H1'	1:0:1251:G:H22	1.68	0.58
1:0:336:A:H2'	1:0:337:G:H8	1.67	0.58
1:0:2629:U:H2'	1:0:2630:C:C6	2.37	0.58
1:0:2356:A:H2'	1:0:2357:A:C8	2.38	0.58
1:0:2185:U:H2'	1:0:2186:G:C8	2.38	0.58
1:0:647:G:H4'	1:0:649:G:O3'	2.03	0.58
1:0:2326:C:H42	1:0:2350:G:N2	2.00	0.58
1:0:693:A:H2'	1:0:694:G:C8	2.37	0.58
1:0:2107:G:H2'	1:0:2108:G:H8	1.67	0.58
1:0:2843:A:N6	1:0:2844:G:C6	2.72	0.58
1:0:1764:A:N7	1:0:1821:A:C1'	2.66	0.58
1:0:2395:C:H2'	1:0:2396:C:C5'	2.29	0.58
1:0:2061:C:H5'	1:0:2413:A:H4'	1.85	0.58
1:0:2083:G:H22	1:0:2172:U:H3	1.51	0.58
1:0:2607:C:H3'	1:0:2608:A:H5''	1.85	0.58
1:0:569:C:N4	1:0:570:G:O6	2.36	0.58
1:0:2624:G:H4'	1:0:2712:G:H2'	1.84	0.58
1:0:1180:A:O2'	1:0:1181:C:H5'	2.03	0.58
1:0:67:G:N2	1:0:73:A:H8	2.01	0.58
1:0:1633:C:O2'	1:0:1634:A:H3'	2.04	0.58
1:0:801:A:O2'	1:0:802:A:P	2.61	0.58
1:0:457:C:O2'	1:0:458:G:H5'	2.04	0.58
1:0:3:U:H2'	1:0:4:C:C6	2.38	0.58
1:0:2555:G:N3	1:0:2555:G:H2'	2.17	0.58
1:0:1980:A:O2'	1:0:1981:A:H5'	2.03	0.58
1:0:165:G:O2'	1:0:166:G:H5'	2.04	0.58
1:0:1865:C:H2'	1:0:1866:G:O4'	2.03	0.58
1:0:597:U:H3	1:0:683:A:HO2'	1.47	0.58
1:0:855:G:O2'	1:0:856:A:H5'	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:787:A:H2'	1:0:788:G:C8	2.39	0.58
1:0:1860:A:C2'	1:0:1861:G:H5'	2.33	0.58
1:0:543:G:H2'	1:0:544:U:C6	2.39	0.58
1:0:389:G:C8	1:0:389:G:C3'	2.87	0.58
1:0:1212:U:H2'	1:0:1213:U:C6	2.39	0.58
1:0:86:U:H1'	1:0:95:G:N2	2.18	0.58
1:0:847:C:N4	1:0:955:G:N2	2.52	0.58
1:0:1337:G:H1'	1:0:1632:A:H61	1.67	0.58
1:0:877:G:H2'	1:0:878:C:C6	2.38	0.58
1:0:2484:G:H5'	2:0:2881:TEL:H571	1.85	0.58
1:0:590:C:H2'	1:0:591:G:H8	1.66	0.58
1:0:128:C:C2'	1:0:129:A:H5''	2.33	0.58
1:0:2544:A:H2'	1:0:2545:A:C1'	2.33	0.58
1:0:1001:A:H3'	1:0:1002:C:H5''	1.86	0.58
1:0:1821:A:H3'	1:0:1822:C:C6	2.38	0.58
1:0:1927:U:H4'	1:0:1938:U:O2'	2.04	0.58
1:0:2269:G:H2'	1:0:2270:U:O4'	2.03	0.58
1:0:70:A:H5'	1:0:71:A:OP1	2.03	0.58
1:0:199:A:OP1	1:0:438:G:O6	2.21	0.58
1:0:1299:A:N6	1:0:1302:C:N4	2.52	0.58
1:0:1337:G:C1'	1:0:1632:A:N6	2.66	0.58
1:0:2326:C:O2'	1:0:2327:U:H5'	2.04	0.58
1:0:1465:G:H2'	1:0:1466:C:O4'	2.03	0.58
1:0:224:G:H1'	1:0:399:G:O6	2.04	0.58
1:0:2432:A:H4'	1:0:2551:A:HO2'	1.67	0.58
1:0:782:U:H2'	1:0:783:G:H8	1.68	0.58
1:0:1378:A:H2'	1:0:1379:A:C8	2.39	0.58
1:0:1955:G:H2'	1:0:1956:G:H5'	1.86	0.58
1:0:788:G:H2'	1:0:807:A:C5	2.39	0.58
1:0:697:G:N2	1:0:807:A:H2	2.02	0.58
1:0:651:C:C3'	1:0:652:C:H5''	2.34	0.58
1:0:605:G:C2	1:0:606:A:C5	2.91	0.58
1:0:2493:U:H2'	1:0:2494:C:C6	2.39	0.58
1:0:62:U:H5'	1:0:63:A:OP1	2.04	0.58
1:0:861:G:H1'	1:0:944:A:N3	2.18	0.57
1:0:1464:A:H2'	1:0:1465:G:O4'	2.04	0.57
1:0:1438:G:H2'	1:0:1439:G:H5'	1.85	0.57
1:0:755:C:H2'	1:0:756:C:C6	2.39	0.57
1:0:2158:C:H2'	1:0:2159:A:C8	2.37	0.57
1:0:2121:U:H2'	1:0:2122:G:C8	2.38	0.57
1:0:763:A:H5''	1:0:1631:C:H42	1.68	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:114:C:H2'	1:0:115:G:O4'	2.03	0.57
1:0:210:A:H61	1:0:442:A:N6	2.02	0.57
1:0:2369:U:H2'	1:0:2370:G:C8	2.40	0.57
1:0:1829:C:H42	1:0:1886:G:H1	1.52	0.57
1:0:670:U:H2'	1:0:671:A:C8	2.39	0.57
1:0:2690:A:OP1	1:0:2692:A:OP2	2.22	0.57
1:0:2350:G:H2'	1:0:2351:G:H8	1.68	0.57
1:0:871:U:H2'	1:0:871:U:O2	2.03	0.57
1:0:1953:A:O2'	1:0:1955:G:O4'	2.21	0.57
1:0:2334:C:H3'	1:0:2335:U:H5''	1.87	0.57
1:0:2491:C:C3'	1:0:2492:G:H5''	2.34	0.57
1:0:1139:A:H61	1:0:2497:A:H61	1.50	0.57
1:0:1194:U:H2'	1:0:1195:U:H6	1.70	0.57
1:0:717:G:H1'	1:0:740:A:N6	2.18	0.57
1:0:641:G:H4'	1:0:651:C:O2'	2.04	0.57
1:0:2615:U:H3	1:0:2762:G:H1	1.52	0.57
1:0:861:G:C8	1:0:862:A:N7	2.72	0.57
1:0:1265:G:C2	1:0:1266:G:N2	2.72	0.57
1:0:867:G:O2'	1:0:868:U:H5'	2.05	0.57
1:0:1393:G:H1'	1:0:1585:A:N6	2.19	0.57
1:0:322:A:H2'	1:0:342:G:OP1	2.04	0.57
1:0:2532:G:H2'	1:0:2533:U:O4'	2.04	0.57
1:0:68:C:C1'	1:0:72:A:H1'	2.34	0.57
1:0:87:G:N3	1:0:87:G:H2'	2.20	0.57
1:0:468:A:H2'	1:0:469:G:H4'	1.86	0.57
1:0:639:G:H2'	1:0:640:C:C6	2.40	0.57
1:0:2390:A:O2'	1:0:2391:A:H5'	2.05	0.57
1:0:852:U:H2'	1:0:853:C:C6	2.39	0.57
1:0:1793:A:H2'	1:0:1794:A:C8	2.38	0.57
1:0:514:G:C2'	1:0:514:G:N3	2.66	0.57
1:0:1395:A:H2'	1:0:1396:C:O4'	2.05	0.57
1:0:1136:G:C6	1:0:1137:A:N6	2.73	0.57
1:0:2442:C:N4	1:0:2466:G:H1	2.01	0.57
1:0:2034:A:N6	1:0:2593:A:N7	2.51	0.57
1:0:2334:C:C2'	1:0:2335:U:H5''	2.34	0.57
1:0:1758:C:O2'	1:0:1759:A:H5'	2.05	0.57
1:0:2672:U:H5'	1:0:2844:G:N2	2.19	0.57
1:0:677:G:O2'	1:0:678:G:H5'	2.04	0.57
1:0:552:C:H2'	1:0:553:C:C5'	2.35	0.57
1:0:449:C:H2'	1:0:450:C:H6	1.69	0.57
1:0:2056:C:O2'	1:0:2057:U:H5'	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:797:A:H5'	1:0:798:G:OP1	2.05	0.57
1:0:580:A:N3	1:0:582:G:N7	2.53	0.57
1:0:1554:G:H2'	1:0:1555:A:C8	2.39	0.57
1:0:747:A:H2'	1:0:748:A:O4'	2.05	0.57
1:0:1069:G:O2'	1:0:1070:G:H5'	2.03	0.57
1:0:531:G:H2'	1:0:532:A:C8	2.40	0.57
1:0:723:C:H2'	1:0:724:C:C6	2.40	0.57
1:0:435:A:N1	1:0:436:A:N3	2.53	0.56
1:0:1200:G:H2'	1:0:1201:G:O4'	2.05	0.56
1:0:1103:C:H2'	1:0:1104:G:C8	2.40	0.56
1:0:1785:A:O2'	1:0:1883:A:H2'	2.05	0.56
1:0:202:A:C2	1:0:203:G:H1'	2.41	0.56
1:0:1313:U:O2'	1:0:1314:A:P	2.64	0.56
1:0:2048:C:H2'	1:0:2049:C:C6	2.40	0.56
1:0:1981:A:O2'	1:0:2704:U:H1'	2.05	0.56
1:0:2512:A:H2'	1:0:2513:A:C8	2.40	0.56
1:0:1596:A:H2'	1:0:1597:A:O4'	2.05	0.56
1:0:1344:C:O2'	1:0:1345:G:H8	1.88	0.56
1:0:2478:C:H2'	1:0:2479:U:C6	2.41	0.56
1:0:2014:A:N7	1:0:2477:C:O2	2.39	0.56
1:0:2261:G:N2	1:0:2406:C:N3	2.51	0.56
1:0:439:C:H3'	1:0:440:U:C6	2.40	0.56
1:0:1286:U:H5''	1:0:1663:C:N4	2.19	0.56
1:0:1608:U:H2'	1:0:1609:G:C8	2.39	0.56
1:0:1021:A:N3	1:0:1164:C:H1'	2.20	0.56
1:0:1457:A:H2'	1:0:1458:A:O4'	2.04	0.56
1:0:1617:G:H2'	1:0:1618:U:C5'	2.36	0.56
1:0:2161:C:H2'	1:0:2162:C:C5	2.40	0.56
1:0:1655:C:H4'	1:0:2689:C:O2	2.06	0.56
1:0:2771:C:H5'	1:0:2867:G:H22	1.69	0.56
1:0:1811:A:H4'	1:0:1813:A:C8	2.39	0.56
1:0:45:C:OP2	1:0:192:G:H3'	2.05	0.56
1:0:1285:A:OP2	1:0:1663:C:H2'	2.05	0.56
1:0:1474:A:H2'	1:0:1475:U:H5'	1.88	0.56
1:0:2058:U:H5'	1:0:2576:G:H1'	1.87	0.56
1:0:391:C:H2'	1:0:392:G:H8	1.70	0.56
1:0:2397:A:H2'	1:0:2398:U:C6	2.41	0.56
1:0:2569:A:H2'	1:0:2570:C:C6	2.41	0.56
1:0:478:G:O2'	1:0:479:G:H5'	2.05	0.56
1:0:821:A:H2'	1:0:822:G:H8	1.70	0.56
1:0:1318:A:O2'	1:0:1319:C:H5'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1345:G:N3	1:0:1626:A:N7	2.53	0.56
1:0:69:G:O2'	1:0:70:A:P	2.64	0.56
1:0:2034:A:OP2	1:0:2034:A:H8	1.87	0.56
1:0:1102:G:H1	1:0:1112:U:H1'	1.70	0.56
1:0:2212:U:H2'	1:0:2213:G:C8	2.40	0.56
1:0:335:A:N6	1:0:349:G:O2'	2.37	0.56
1:0:2830:U:H2'	1:0:2831:A:H8	1.71	0.56
1:0:2780:A:N3	1:0:2780:A:H2'	2.20	0.56
1:0:346:C:O2	1:0:346:C:H2'	2.04	0.56
1:0:1340:C:H2'	1:0:1341:G:O4'	2.06	0.56
1:0:1922:U:H1'	1:0:2570:C:O2'	2.06	0.56
1:0:119:G:H2'	1:0:120:G:H8	1.70	0.56
1:0:1933:G:H8	1:0:1933:G:O5'	1.88	0.56
1:0:2824:C:H1'	1:0:2843:A:C2	2.40	0.56
1:0:2496:C:N4	1:0:2546:G:H1	1.89	0.56
1:0:1987:G:C2'	1:0:1988:A:H5'	2.36	0.56
1:0:1210:C:H2'	1:0:1211:G:C8	2.40	0.56
1:0:2429:A:H5''	1:0:2476:A:N6	2.20	0.56
1:0:1252:C:H2'	1:0:1253:C:H5''	1.87	0.56
1:0:879:A:H2'	1:0:880:C:C5'	2.36	0.56
1:0:694:G:H2'	1:0:695:G:C8	2.41	0.56
1:0:2624:G:H4'	1:0:2712:G:C2'	2.36	0.56
1:0:2624:G:H4'	1:0:2712:G:O2'	2.06	0.56
1:0:2229:G:H5''	1:0:2230:G:H5''	1.88	0.56
1:0:2498:U:C5'	1:0:2499:C:OP1	2.44	0.56
1:0:1964:A:OP1	1:0:1965:U:OP2	2.24	0.56
1:0:573:C:H2'	1:0:574:C:O4'	2.06	0.56
1:0:971:A:C2	1:0:2475:C:H1'	2.41	0.56
1:0:1073:G:H3'	1:0:1074:G:H5''	1.88	0.56
1:0:742:G:N2	1:0:1766:U:C6	2.74	0.56
1:0:563:U:H2'	1:0:564:U:C6	2.40	0.56
1:0:449:C:H2'	1:0:450:C:C6	2.40	0.56
1:0:682:G:N3	1:0:682:G:H2'	2.19	0.56
1:0:2198:U:H3'	1:0:2199:C:C5'	2.26	0.56
1:0:681:A:N6	1:0:683:A:H2'	2.21	0.56
1:0:324:C:H6	1:0:324:C:O5'	1.88	0.56
1:0:871:U:C2	1:0:2247:A:H2'	2.41	0.56
1:0:929:A:C3'	1:0:930:A:H5''	2.36	0.56
1:0:2085:G:H22	1:0:2171:U:C1'	2.15	0.56
1:0:117:A:H5'	1:0:118:U:OP1	2.06	0.56
1:0:2402:U:O2'	1:0:2404:A:H2'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:400:U:H4'	1:0:401:G:N9	2.20	0.56
1:0:1021:A:H1'	1:0:1164:C:C1'	2.35	0.56
1:0:455:A:H4'	1:0:1214:C:O2'	2.05	0.56
1:0:1044:U:H5'	1:0:1045:G:OP1	2.06	0.56
1:0:1797:C:H2'	1:0:1798:G:O4'	2.05	0.56
1:0:887:G:O2'	1:0:888:G:H5'	2.06	0.56
1:0:1537:U:H2'	1:0:1538:A:C8	2.40	0.56
1:0:2073:A:N6	1:0:2208:U:H3	2.03	0.56
1:0:2783:U:N3	1:0:2785:A:N6	2.54	0.55
1:0:1811:A:H1'	1:0:1813:A:C6	2.41	0.55
1:0:1226:A:H62	1:0:1249:G:H1'	1.72	0.55
1:0:1698:C:H5''	1:0:1699:A:OP2	2.06	0.55
1:0:979:A:H2'	1:0:980:G:C8	2.42	0.55
1:0:1378:A:H2'	1:0:1379:A:H8	1.71	0.55
1:0:1471:G:O2'	1:0:1472:C:H5'	2.07	0.55
1:0:503:G:H2'	1:0:504:G:O4'	2.05	0.55
1:0:2784:A:H3'	1:0:2784:A:OP1	2.05	0.55
1:0:2779:C:O2'	1:0:2780:A:H5'	2.06	0.55
1:0:2298:U:H4'	1:0:2299:A:N7	2.21	0.55
1:0:1962:C:O2'	1:0:1963:G:H5'	2.06	0.55
1:0:486:U:O2'	1:0:515:A:H1'	2.07	0.55
1:0:837:U:H2'	1:0:838:A:H8	1.72	0.55
1:0:2191:A:C2'	1:0:2192:U:OP1	2.54	0.55
1:0:219:G:C2'	1:0:220:U:OP2	2.55	0.55
1:0:781:G:H21	1:0:1392:U:H1'	1.70	0.55
1:0:2003:A:C2	1:0:2018:G:N2	2.74	0.55
1:0:1498:G:O2'	1:0:1499:A:H5'	2.06	0.55
1:0:1301:U:C4	1:0:1340:C:H1'	2.42	0.55
1:0:2796:A:H2'	1:0:2797:G:H8	1.70	0.55
1:0:2261:G:H1	1:0:2406:C:H42	1.52	0.55
1:0:1695:U:C2'	1:0:1696:C:H5'	2.36	0.55
1:0:1531:C:H2'	1:0:1532:A:H5'	1.88	0.55
1:0:1125:G:H2'	1:0:1126:A:C8	2.41	0.55
1:0:2655:C:H2'	1:0:2656:G:C8	2.41	0.55
1:0:1370:U:H2'	1:0:1371:G:O4'	2.06	0.55
1:0:2854:G:H2'	1:0:2854:G:N3	2.21	0.55
1:0:751:G:C2	1:0:752:G:H1'	2.41	0.55
1:0:1726:C:H1'	1:0:2835:A:H1'	1.89	0.55
1:0:1987:G:H2'	1:0:1988:A:H5'	1.89	0.55
1:0:2664:G:H2'	1:0:2665:G:H8	1.72	0.55
1:0:243:G:H3'	1:0:244:C:H5''	1.89	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2069:U:H2'	1:0:2070:G:H8	1.71	0.55
1:0:2496:C:C4	1:0:2521:A:C6	2.95	0.55
1:0:1196:G:C2'	1:0:1197:U:H5'	2.37	0.55
1:0:459:A:N6	1:0:484:G:H1'	2.21	0.55
1:0:510:G:N2	1:0:513:A:OP2	2.40	0.55
1:0:1414:G:H2'	1:0:1415:C:C6	2.42	0.55
1:0:95:G:H2'	1:0:96:C:C6	2.42	0.55
1:0:1594:U:H2'	1:0:1595:A:C8	2.41	0.55
1:0:941:U:OP1	1:0:941:U:H4'	2.05	0.55
1:0:58:C:H2'	1:0:59:G:O4'	2.07	0.55
1:0:1763:G:C6	1:0:1963:G:N2	2.74	0.55
1:0:1112:U:H2'	1:0:1113:C:C5	2.41	0.55
1:0:1603:A:H2'	1:0:1604:A:C8	2.42	0.55
1:0:1554:G:H2'	1:0:1555:A:H8	1.70	0.55
1:0:1626:A:H4'	1:0:1627:C:OP1	2.07	0.55
1:0:28:A:H61	1:0:522:G:H4'	1.71	0.55
1:0:2667:C:H42	1:0:2699:G:H3'	1.71	0.55
1:0:1468:A:H3'	1:0:1469:U:H5''	1.88	0.55
1:0:1015:U:H5'	1:0:1021:A:N6	2.22	0.55
1:0:820:U:H2'	1:0:821:A:C8	2.41	0.55
1:0:2674:C:H2'	1:0:2675:U:C6	2.42	0.55
1:0:2306:A:H2'	1:0:2307:A:C8	2.41	0.55
1:0:1942:G:H2'	1:0:1943:A:O4'	2.06	0.55
1:0:2796:A:H2'	1:0:2797:G:C8	2.43	0.55
1:0:441:A:H2'	1:0:442:A:O4'	2.06	0.55
1:0:1367:A:H2'	1:0:1368:G:O4'	2.07	0.55
1:0:308:C:H2'	1:0:309:G:O4'	2.07	0.55
1:0:1482:U:H2'	1:0:1483:G:C8	2.41	0.55
1:0:1818:G:H2'	1:0:1819:U:H6	1.72	0.54
1:0:1303:U:H2'	1:0:1304:U:H6	1.71	0.54
1:0:2252:A:H2'	1:0:2253:A:O4'	2.07	0.54
1:0:2437:G:O2'	1:0:2438:A:N7	2.34	0.54
1:0:2054:A:H2	1:0:2419:C:H41	1.54	0.54
1:0:2721:A:H2'	1:0:2722:C:O4'	2.07	0.54
1:0:1695:U:H2'	1:0:1696:C:H5'	1.90	0.54
1:0:1376:C:H2'	1:0:1377:G:H8	1.71	0.54
1:0:1213:U:H2'	1:0:1214:C:C6	2.42	0.54
1:0:2213:G:O2'	1:0:2214:G:H5'	2.06	0.54
1:0:2716:G:H2'	1:0:2717:G:H8	1.71	0.54
1:0:1774:A:O2'	1:0:2586:G:H1'	2.06	0.54
1:0:984:A:H2'	1:0:984:A:N3	2.21	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1345:G:N7	1:0:1625:A:N6	2.54	0.54
1:0:1790:G:C8	1:0:1811:A:N6	2.75	0.54
1:0:928:G:HO2'	1:0:929:A:H8	1.55	0.54
1:0:2668:U:O2	1:0:2693:U:O4'	2.24	0.54
1:0:2446:C:H2'	1:0:2447:G:O4'	2.07	0.54
1:0:718:A:C2	1:0:740:A:H1'	2.41	0.54
1:0:1587:A:H2'	1:0:1588:A:C8	2.42	0.54
1:0:1618:U:H3'	1:0:1619:A:H2	1.72	0.54
1:0:2018:G:O2'	1:0:2019:C:OP1	2.21	0.54
1:0:1479:G:H2'	1:0:1480:G:H8	1.72	0.54
1:0:1076:U:H2'	1:0:1077:U:O4'	2.06	0.54
1:0:433:G:H1'	1:0:434:C:C5	2.42	0.54
1:0:435:A:N1	1:0:436:A:C4	2.75	0.54
1:0:1260:A:O2'	1:0:1261:G:OP1	2.21	0.54
1:0:652:C:H5'	1:0:652:C:H6	1.72	0.54
1:0:1428:G:H5''	1:0:1429:A:H5'	1.89	0.54
1:0:2544:A:H2'	1:0:2545:A:H1'	1.88	0.54
1:0:391:C:H2'	1:0:392:G:C8	2.43	0.54
1:0:975:C:H6	1:0:975:C:O5'	1.90	0.54
1:0:435:A:H2'	1:0:436:A:O5'	2.08	0.54
1:0:2690:A:H3'	1:0:2691:C:H5'	1.89	0.54
1:0:1975:G:O2'	1:0:1976:U:P	2.65	0.54
1:0:395:G:H2'	1:0:396:U:H5'	1.90	0.54
1:0:2644:A:H2'	1:0:2645:C:C6	2.42	0.54
1:0:8:A:H2'	1:0:9:U:C6	2.43	0.54
1:0:2204:A:O2'	1:0:2205:C:P	2.65	0.54
1:0:1826:U:O2'	1:0:1952:A:H2'	2.07	0.54
1:0:2271:C:H4'	1:0:2354:G:O4'	2.08	0.54
1:0:1424:U:H2'	1:0:1425:G:C8	2.42	0.54
1:0:1831:G:O2'	1:0:1832:G:H5'	2.08	0.54
1:0:2507:U:HO2'	1:0:2508:G:H8	1.54	0.54
1:0:1276:U:H3	1:0:1999:U:H3	1.55	0.54
1:0:1451:C:H2'	1:0:1452:U:C6	2.41	0.54
1:0:1452:U:O2'	1:0:1453:A:H5'	2.08	0.54
1:0:459:A:O2'	1:0:461:A:N6	2.38	0.54
1:0:466:A:O3'	1:0:467:U:H4'	2.08	0.54
1:0:1618:U:H3'	1:0:1619:A:C2	2.43	0.54
1:0:2345:A:H2'	1:0:2346:G:O4'	2.08	0.54
1:0:239:A:H5'	1:0:619:A:O2'	2.07	0.54
1:0:2821:G:H2'	1:0:2822:U:O4'	2.07	0.54
1:0:2201:G:H2'	1:0:2202:G:H8	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:846:A:N6	1:0:955:G:N2	2.53	0.54
1:0:1781:C:H2'	1:0:1782:A:C5	2.43	0.54
1:0:1778:U:H4'	1:0:2568:A:O3'	2.08	0.54
1:0:788:G:N2	1:0:801:A:P	2.80	0.54
1:0:295:C:N4	1:0:296:A:H62	2.06	0.54
1:0:1315:A:H4'	1:0:1316:G:OP1	2.07	0.54
1:0:2072:C:H2'	1:0:2073:A:O4'	2.08	0.54
1:0:2109:A:H2'	1:0:2110:G:C8	2.42	0.54
1:0:2773:G:H1	1:0:2779:C:H42	1.56	0.54
1:0:2668:U:H4'	1:0:2669:C:H5''	1.90	0.54
1:0:459:A:H1'	1:0:461:A:N6	2.22	0.54
1:0:964:A:H2'	1:0:965:G:C8	2.38	0.54
1:0:2721:A:N6	1:0:2743:G:H1'	2.23	0.54
1:0:2492:G:H2'	1:0:2493:U:C6	2.42	0.54
1:0:817:A:H2'	1:0:819:C:C4	2.43	0.54
1:0:466:A:O2'	1:0:467:U:OP2	2.24	0.54
1:0:2014:A:N7	1:0:2477:C:H1'	2.23	0.54
1:0:2228:U:H4'	1:0:2254:C:C5	2.40	0.54
1:0:476:G:C6	1:0:477:A:N6	2.76	0.54
1:0:2204:A:O2'	1:0:2205:C:OP2	2.25	0.54
1:0:1825:C:O2'	1:0:1826:U:H5'	2.08	0.54
1:0:2053:G:H2'	1:0:2054:A:C8	2.43	0.54
1:0:80:A:H2'	1:0:81:C:C6	2.43	0.54
1:0:2002:A:C2'	1:0:2003:A:O5'	2.56	0.54
1:0:2357:A:H2'	1:0:2358:C:O4'	2.07	0.54
1:0:2282:G:H1	1:0:2292:C:H42	1.54	0.54
1:0:69:G:H4'	1:0:70:A:OP1	2.08	0.53
1:0:2086:U:H2'	1:0:2087:U:C6	2.43	0.53
1:0:1443:G:H1'	1:0:1584:G:N3	2.22	0.53
1:0:162:C:H2'	1:0:163:A:H8	1.73	0.53
1:0:700:C:H2'	1:0:701:U:C6	2.43	0.53
1:0:2726:U:H2'	1:0:2727:G:O4'	2.08	0.53
1:0:1804:U:H2'	1:0:1805:G:C8	2.41	0.53
1:0:621:U:H2'	1:0:622:U:C6	2.43	0.53
1:0:136:A:H2'	1:0:137:A:O4'	2.08	0.53
1:0:2299:A:H5'	1:0:2300:G:C8	2.43	0.53
1:0:2469:G:C5'	1:0:2470:U:OP1	2.54	0.53
1:0:2782:G:C2'	1:0:2783:U:H5'	2.39	0.53
1:0:550:C:H2'	1:0:551:A:H8	1.71	0.53
1:0:1821:A:H5''	1:0:1822:C:C5	2.44	0.53
1:0:2020:G:H2'	1:0:2021:G:H8	1.72	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1582:A:H3'	1:0:1583:A:C5'	2.38	0.53
1:0:195:A:H2'	1:0:196:A:O4'	2.08	0.53
1:0:574:C:H2'	1:0:575:U:C6	2.43	0.53
1:0:1253:C:H2'	1:0:1254:G:C5'	2.38	0.53
1:0:1417:C:O2'	1:0:1418:C:H5'	2.09	0.53
1:0:1617:G:H3'	1:0:1618:U:O2	2.08	0.53
1:0:2621:G:O2'	1:0:2622:G:H5'	2.08	0.53
1:0:1312:G:H4'	1:0:1314:A:N3	2.24	0.53
1:0:2696:A:H2'	1:0:2697:G:H8	1.72	0.53
1:0:1247:U:O2'	1:0:1248:G:H5'	2.09	0.53
1:0:1355:A:H1'	1:0:1410:U:H4'	1.90	0.53
1:0:538:A:H62	1:0:2759:U:H3	1.56	0.53
1:0:1697:U:H2'	1:0:1698:C:O4'	2.08	0.53
1:0:1244:U:H2'	1:0:1245:G:H8	1.73	0.53
1:0:1267:A:OP1	1:0:1269:G:H8	1.91	0.53
1:0:1846:A:H2'	1:0:1847:G:O4'	2.08	0.53
1:0:1669:A:N6	1:0:1670:G:C2	2.76	0.53
1:0:1033:G:O2'	1:0:1034:U:OP2	2.23	0.53
1:0:2085:G:H2'	1:0:2086:U:C6	2.42	0.53
1:0:1467:U:H3'	1:0:1468:A:H5'	1.89	0.53
1:0:178:C:H2'	1:0:179:U:H6	1.73	0.53
1:0:2432:A:H2'	1:0:2433:G:C8	2.44	0.53
1:0:742:G:H2'	1:0:742:G:N3	2.23	0.53
1:0:507:A:H2'	1:0:508:G:O4'	2.09	0.53
1:0:139:A:H2'	1:0:140:G:C8	2.41	0.53
1:0:159:A:H2'	1:0:160:C:C6	2.44	0.53
1:0:861:G:N2	1:0:943:U:HO2'	2.07	0.53
1:0:1327:C:P	1:0:1345:G:H5'	2.49	0.53
1:0:1336:G:C2'	1:0:1337:G:H5'	2.39	0.53
1:0:1685:A:O2'	1:0:1686:A:O5'	2.25	0.53
1:0:1938:U:O2'	1:0:1939:U:OP1	2.23	0.53
1:0:52:A:H2'	1:0:53:G:H5'	1.90	0.53
1:0:797:A:O2'	1:0:798:G:C8	2.61	0.53
1:0:653:G:H21	1:0:657:A:N6	2.06	0.53
1:0:2652:G:H2'	1:0:2653:A:C8	2.41	0.53
1:0:1459:U:H2'	1:0:1475:U:O2'	2.08	0.53
1:0:2069:U:H2'	1:0:2070:G:C8	2.44	0.53
1:0:1686:A:N3	1:0:1686:A:H2'	2.23	0.53
1:0:1807:A:O2'	1:0:1808:C:H4'	2.09	0.53
1:0:27:G:HO2'	1:0:28:A:H8	1.55	0.53
1:0:521:U:H2'	1:0:522:G:H5'	1.90	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1981:A:O3'	1:0:2704:U:H4'	2.09	0.53
1:0:2817:A:C2	1:0:2851:G:N1	2.76	0.53
1:0:2784:A:H4'	1:0:2786:G:N7	2.24	0.53
1:0:315:G:H2'	1:0:316:C:C6	2.44	0.53
1:0:1446:U:O2'	1:0:1447:U:H5'	2.09	0.53
1:0:1449:C:H2'	1:0:1450:G:C5'	2.29	0.53
1:0:701:U:O2'	1:0:1771:A:H2	1.90	0.53
1:0:176:A:H8	1:0:177:U:H5	1.57	0.53
1:0:2249:U:C2'	1:0:2250:G:H5'	2.39	0.53
1:0:1999:U:O2'	1:0:2000:U:H5'	2.08	0.53
1:0:2671:C:H2'	1:0:2672:U:H6	1.73	0.53
1:0:1681:A:H2	1:0:2706:U:H1'	1.70	0.53
1:0:956:A:HO2'	1:0:957:G:P	2.32	0.53
1:0:1380:C:C2'	1:0:1381:G:H5'	2.38	0.53
1:0:756:C:H2'	1:0:757:U:H6	1.73	0.53
1:0:1485:U:H2'	1:0:1486:A:C8	2.44	0.53
1:0:966:A:H2'	1:0:967:G:H5'	1.91	0.53
1:0:1816:G:H2'	1:0:1817:U:O4'	2.09	0.53
1:0:2301:A:H2'	1:0:2302:G:H5'	1.91	0.53
1:0:940:G:C8	1:0:941:U:H5''	2.44	0.53
1:0:2217:G:H5'	1:0:2218:G:N7	2.23	0.53
1:0:2535:C:H2'	1:0:2536:G:O4'	2.08	0.53
1:0:1883:A:H1'	1:0:1953:A:N7	2.24	0.53
1:0:789:G:N3	1:0:806:A:N6	2.56	0.53
1:0:2764:U:H2'	1:0:2765:C:C6	2.44	0.53
1:0:879:A:H2'	1:0:880:C:H5'	1.89	0.53
1:0:2487:G:H2'	1:0:2488:G:C8	2.44	0.53
1:0:2279:G:H2'	1:0:2280:A:C8	2.43	0.53
1:0:2612:G:H2'	1:0:2613:A:C8	2.43	0.53
1:0:1336:G:H2'	1:0:1337:G:H5'	1.91	0.52
1:0:1810:U:H4'	1:0:1813:A:H1'	1.91	0.52
1:0:1030:U:C2'	1:0:1031:C:H5'	2.39	0.52
1:0:2266:A:O2'	1:0:2267:A:H8	1.92	0.52
1:0:932:G:H2'	1:0:933:G:C8	2.44	0.52
1:0:2260:C:H2'	1:0:2261:G:C8	2.44	0.52
1:0:2526:U:C4	1:0:2545:A:N7	2.77	0.52
1:0:708:G:H1	1:0:780:U:H3	1.55	0.52
1:0:599:A:H2'	1:0:600:G:O4'	2.10	0.52
1:0:1001:A:N6	1:0:1200:G:O3'	2.42	0.52
1:0:831:G:H5'	1:0:852:U:OP1	2.10	0.52
1:0:1332:G:H2'	1:0:1333:G:O4'	2.09	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1036:G:C4	1:0:1145:C:O4'	2.63	0.52
1:0:67:G:H2'	1:0:68:C:O4'	2.08	0.52
1:0:1979:C:O4'	1:0:1979:C:OP1	2.28	0.52
1:0:2225:G:H1	1:0:2237:C:H42	1.57	0.52
1:0:839:U:OP1	1:0:2408:G:OP2	2.28	0.52
1:0:296:A:H2'	1:0:297:A:C8	2.43	0.52
1:0:778:G:H2'	1:0:779:U:C6	2.44	0.52
1:0:2175:A:H2'	1:0:2176:U:C6	2.44	0.52
1:0:1364:C:H2'	1:0:1365:U:C6	2.45	0.52
1:0:678:G:O2'	1:0:679:C:H5'	2.09	0.52
1:0:2044:G:H1'	1:0:2482:A:N1	2.25	0.52
1:0:2270:U:O2'	1:0:2353:G:H1'	2.10	0.52
1:0:57:G:N2	1:0:72:A:C8	2.77	0.52
1:0:2034:A:C6	1:0:2593:A:N6	2.77	0.52
1:0:1253:C:H2'	1:0:1254:G:H5'	1.92	0.52
1:0:316:C:O5'	1:0:316:C:H6	1.93	0.52
1:0:545:C:O2'	1:0:546:A:H5'	2.09	0.52
1:0:1671:A:O2'	1:0:1672:A:H5'	2.09	0.52
1:0:940:G:N7	1:0:941:U:C6	2.78	0.52
1:0:2265:A:H5''	1:0:2266:A:O4'	2.09	0.52
1:0:766:A:H2'	1:0:767:G:H8	1.73	0.52
1:0:2004:U:OP2	1:0:2005:U:H5	1.92	0.52
1:0:757:U:C2'	1:0:758:G:H5'	2.39	0.52
1:0:2745:A:N3	1:0:2745:A:H3'	2.25	0.52
1:0:437:G:H2'	1:0:438:G:C4'	2.37	0.52
1:0:436:A:H4'	1:0:437:G:OP1	2.08	0.52
1:0:1791:C:H1'	1:0:1793:A:C4'	2.40	0.52
1:0:727:U:H2'	1:0:728:G:H5''	1.90	0.52
1:0:2756:A:H4'	1:0:2758:A:OP1	2.09	0.52
1:0:324:C:C2'	1:0:325:U:H5'	2.39	0.52
1:0:1001:A:C3'	1:0:1002:C:H5''	2.40	0.52
1:0:1687:C:O2'	1:0:1977:C:H4'	2.09	0.52
1:0:651:C:C3'	1:0:652:C:C5'	2.88	0.52
1:0:773:G:H2'	1:0:774:A:H5'	1.90	0.52
1:0:532:A:H2'	1:0:533:C:C6	2.44	0.52
1:0:1479:G:H2'	1:0:1480:G:C8	2.44	0.52
1:0:2204:A:H1'	1:0:2205:C:C5	2.45	0.52
1:0:2510:A:H61	1:0:2641:A:H61	1.57	0.52
1:0:2609:G:H1'	1:0:2868:G:H1'	1.90	0.52
1:0:616:U:O4'	1:0:616:U:OP2	2.27	0.52
1:0:1764:A:C5	1:0:1821:A:H1'	2.45	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:930:A:N7	1:0:931:G:H1'	2.25	0.52
1:0:1442:C:H4'	1:0:1442:C:OP1	2.10	0.52
1:0:2041:A:O5'	1:0:2041:A:H8	1.92	0.52
1:0:2484:G:OP2	2:0:2881:TEL:H581	2.10	0.52
1:0:1761:G:H2'	1:0:1762:C:H5'	1.92	0.52
1:0:1260:A:O2'	1:0:1261:G:P	2.66	0.52
1:0:2817:A:C2	1:0:2851:G:C6	2.97	0.52
1:0:783:G:H1'	1:0:1392:U:O4	2.10	0.52
1:0:208:C:H2'	1:0:209:G:O4'	2.10	0.52
1:0:1783:G:H2'	1:0:1784:C:O4'	2.09	0.52
1:0:2407:G:H5''	1:0:2408:G:OP1	2.08	0.52
1:0:841:G:H3'	1:0:841:G:N3	2.24	0.52
1:0:222:G:H22	1:0:231:G:H1'	1.75	0.52
1:0:1532:A:H2'	1:0:1533:G:H8	1.74	0.52
1:0:531:G:H2'	1:0:532:A:H8	1.74	0.52
1:0:1322:G:O2'	1:0:1323:G:H5'	2.09	0.52
1:0:201:G:N7	1:0:432:C:H4'	2.25	0.52
1:0:2520:A:H4'	1:0:2744:A:N1	2.24	0.52
1:0:1823:G:C6	1:0:1824:C:N4	2.78	0.52
1:0:1624:A:C6	1:0:1627:C:C2	2.98	0.52
1:0:66:U:H2'	1:0:67:G:N7	2.25	0.52
1:0:2668:U:H5'	1:0:2669:C:OP1	2.10	0.52
1:0:1982:C:OP1	1:0:2704:U:H5'	2.09	0.52
1:0:1128:G:O2'	1:0:1129:A:H5'	2.10	0.52
1:0:1463:A:H1'	1:0:1543:G:N2	2.25	0.52
1:0:2677:U:O2'	1:0:2678:C:H5'	2.10	0.52
1:0:1982:C:OP1	1:0:2703:C:O2'	2.24	0.52
1:0:162:C:C5'	1:0:195:A:H1'	2.36	0.52
1:0:1067:G:N1	1:0:1113:C:OP2	2.43	0.52
1:0:1549:C:H3'	1:0:1550:C:C6	2.45	0.52
1:0:2024:U:O2'	1:0:2025:A:H5'	2.09	0.52
1:0:2758:A:O2'	1:0:2759:U:P	2.68	0.52
1:0:604:U:H2'	1:0:605:G:O4'	2.10	0.52
1:0:2586:G:H2'	1:0:2587:G:C8	2.45	0.52
1:0:1852:G:H2'	1:0:1853:C:C6	2.45	0.52
1:0:430:C:O2'	1:0:2386:G:C2	2.63	0.51
1:0:1280:U:H3	1:0:1996:A:H62	1.57	0.51
1:0:1724:C:O2	1:0:1725:C:C5	2.62	0.51
1:0:984:A:C2	1:0:1200:G:N1	2.75	0.51
1:0:2396:C:C2'	1:0:2397:A:H5'	2.40	0.51
1:0:1284:G:O2'	1:0:1633:C:H4'	2.10	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2235:G:O2'	1:0:2236:U:H5'	2.10	0.51
1:0:465:C:O2'	1:0:483:A:N6	2.43	0.51
1:0:1718:A:H2'	1:0:1719:G:H5'	1.92	0.51
1:0:1413:U:H2'	1:0:1414:G:C8	2.44	0.51
1:0:749:C:O5'	1:0:749:C:H6	1.94	0.51
1:0:1486:A:H2'	1:0:1487:C:C6	2.45	0.51
1:0:92:U:H2'	1:0:93:A:C8	2.45	0.51
1:0:1545:G:H2'	1:0:1546:C:H6	1.75	0.51
1:0:1337:G:O2'	1:0:1632:A:N6	2.44	0.51
1:0:122:G:O2'	1:0:123:A:H5''	2.10	0.51
1:0:393:U:H2'	1:0:394:U:C6	2.45	0.51
1:0:2007:G:H2'	1:0:2008:C:C6	2.46	0.51
1:0:638:A:O2'	1:0:639:G:H5'	2.11	0.51
1:0:2060:A:H61	1:0:2222:U:H3	1.58	0.51
1:0:487:G:H4'	1:0:511:A:H61	1.75	0.51
1:0:1998:A:C2'	1:0:1999:U:H5'	2.39	0.51
1:0:1823:G:H2'	1:0:1824:C:C6	2.45	0.51
1:0:1149:G:N2	1:0:1154:A:C4	2.79	0.51
1:0:460:U:C4'	1:0:461:A:OP2	2.58	0.51
1:0:1528:C:C2'	1:0:1529:C:H5''	2.41	0.51
1:0:839:U:H5''	1:0:2408:G:P	2.50	0.51
1:0:942:U:C2'	1:0:943:U:H5'	2.40	0.51
1:0:1573:G:O6	1:0:1574:A:N6	2.43	0.51
1:0:431:G:C2	1:0:432:C:H5	2.29	0.51
1:0:2218:G:N2	1:0:2219:U:H1'	2.25	0.51
1:0:1983:G:H2'	1:0:1984:A:C8	2.45	0.51
1:0:2014:A:H62	1:0:2477:C:H1'	1.75	0.51
1:0:441:A:C2'	1:0:442:A:H5'	2.41	0.51
1:0:513:A:H5''	1:0:514:G:OP1	2.11	0.51
1:0:1007:A:H2'	1:0:1008:G:C8	2.42	0.51
1:0:1603:A:H2'	1:0:1604:A:H8	1.76	0.51
1:0:1829:C:N4	1:0:1886:G:H1	2.08	0.51
1:0:2512:A:H2'	1:0:2513:A:H8	1.75	0.51
1:0:1716:G:O6	1:0:1754:G:H1'	2.11	0.51
1:0:2208:U:H2'	1:0:2209:G:H8	1.76	0.51
1:0:1670:G:H4'	1:0:1670:G:OP1	2.10	0.51
1:0:2372:A:O2'	1:0:2373:C:H5'	2.10	0.51
1:0:29:U:H2'	1:0:30:G:H8	1.73	0.51
1:0:846:A:H2'	1:0:847:C:C6	2.45	0.51
1:0:1777:A:HO2'	1:0:1778:U:P	2.33	0.51
1:0:1859:A:H2'	1:0:1860:A:C8	2.43	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1324:G:HO2'	1:0:1326:U:H5	1.56	0.51
1:0:1514:C:H5'	1:0:1593:C:C5'	2.41	0.51
1:0:627:A:H2'	1:0:628:A:C8	2.46	0.51
1:0:1787:U:H2'	1:0:1788:C:H6	1.75	0.51
1:0:1821:A:H3'	1:0:1822:C:H6	1.74	0.51
1:0:2352:A:H2'	1:0:2353:G:C8	2.45	0.51
1:0:460:U:O4	1:0:592:G:H1'	2.11	0.51
1:0:1355:A:O4'	1:0:1410:U:H1'	2.10	0.51
1:0:2348:A:N6	1:0:2361:G:H22	2.08	0.51
1:0:155:G:O2'	1:0:156:G:H5'	2.09	0.51
1:0:431:G:C2'	1:0:432:C:O5'	2.58	0.51
1:0:1623:C:H5'	1:0:1624:A:H5''	1.92	0.51
1:0:2173:G:H2'	1:0:2174:G:O4'	2.10	0.51
1:0:2039:G:OP2	1:0:2483:U:O5'	2.29	0.51
1:0:2680:U:H5'	1:0:2681:A:C5'	2.40	0.51
1:0:866:U:H2'	1:0:867:G:C8	2.45	0.51
1:0:357:A:OP2	1:0:358:C:H1'	2.11	0.51
1:0:1459:U:N3	1:0:1476:G:O5'	2.33	0.51
1:0:1415:C:O2'	1:0:1416:A:H5'	2.10	0.51
1:0:2002:A:H2'	1:0:2003:A:O5'	2.11	0.51
1:0:1875:C:H2'	1:0:1876:C:C6	2.44	0.51
1:0:1890:G:H2'	1:0:1891:C:C6	2.45	0.51
1:0:1739:G:H2'	1:0:1740:G:C8	2.46	0.51
1:0:853:C:N3	1:0:950:G:O6	2.44	0.51
1:0:1813:A:H2'	1:0:1814:G:C8	2.46	0.51
1:0:2021:G:O2'	1:0:2022:C:H5'	2.11	0.51
1:0:1477:C:O2'	1:0:2681:A:H1'	2.11	0.51
1:0:956:A:C2'	1:0:957:G:O5'	2.58	0.51
1:0:566:U:H2'	1:0:567:G:H8	1.76	0.51
1:0:503:G:H2'	1:0:504:G:C8	2.45	0.51
1:0:1948:C:C4	1:0:1949:A:N6	2.79	0.51
1:0:2664:G:O2'	1:0:2665:G:H5'	2.11	0.51
1:0:115:G:C2	1:0:117:A:N6	2.79	0.51
1:0:701:U:O2'	1:0:702:A:H5'	2.11	0.51
1:0:192:G:O2'	1:0:193:A:OP2	2.28	0.51
1:0:2553:G:O5'	1:0:2553:G:H8	1.93	0.51
1:0:974:U:H1'	1:0:2229:G:C2	2.46	0.51
1:0:2876:C:H2'	1:0:2877:A:H8	1.76	0.51
1:0:433:G:O2'	1:0:434:C:C6	2.63	0.51
1:0:986:A:N7	1:0:987:G:C8	2.79	0.51
1:0:2660:C:C2'	1:0:2660:C:O2	2.59	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2394:G:H2'	1:0:2395:C:C6	2.46	0.51
1:0:2530:C:H2'	1:0:2531:U:O4'	2.11	0.51
1:0:520:C:H2'	1:0:521:U:O4'	2.10	0.51
1:0:1582:A:H62	1:0:1584:G:N2	2.07	0.51
1:0:1133:G:O2'	1:0:1134:C:H5'	2.11	0.51
1:0:1354:A:H3'	1:0:1410:U:O2	2.11	0.51
1:0:2107:G:H2'	1:0:2108:G:C8	2.46	0.51
1:0:2249:U:H2'	1:0:2250:G:H5'	1.93	0.51
1:0:1787:U:H2'	1:0:1788:C:C6	2.46	0.51
1:0:1827:G:H1'	1:0:1914:U:O4	2.10	0.51
1:0:2210:C:H2'	1:0:2211:U:O4'	2.11	0.51
1:0:1938:U:O2	1:0:1938:U:H2'	2.09	0.50
1:0:805:G:O3'	1:0:806:A:O4'	2.29	0.50
1:0:2710:C:O2'	1:0:2711:G:H5'	2.12	0.50
1:0:2516:U:H2'	1:0:2517:C:C6	2.45	0.50
1:0:671:A:H2'	1:0:672:C:C6	2.46	0.50
1:0:2627:G:O2'	1:0:2628:C:H5'	2.11	0.50
1:0:2574:G:N2	1:0:2577:A:OP2	2.41	0.50
1:0:944:A:H2'	1:0:945:G:O4'	2.11	0.50
1:0:2390:A:H2'	1:0:2391:A:O4'	2.12	0.50
1:0:2121:U:H2'	1:0:2122:G:H8	1.76	0.50
1:0:2705:A:O2'	1:0:2706:U:C6	2.64	0.50
1:0:541:C:H42	1:0:572:G:H5''	1.76	0.50
1:0:2753:C:H2'	1:0:2754:C:H6	1.74	0.50
1:0:2491:C:H2'	1:0:2492:G:H5''	1.93	0.50
1:0:995:A:H5''	1:0:996:C:H5	1.75	0.50
1:0:625:A:N3	1:0:625:A:H2'	2.26	0.50
1:0:941:U:H2'	1:0:942:U:N1	2.26	0.50
1:0:1822:C:H2'	1:0:1823:G:C8	2.47	0.50
1:0:340:G:H4'	1:0:341:A:C5'	2.41	0.50
1:0:701:U:H4'	1:0:1771:A:C2	2.47	0.50
1:0:492:G:H2'	1:0:517:A:C2	2.46	0.50
1:0:2618:A:H1'	1:0:2758:A:C2	2.46	0.50
1:0:2716:G:O2'	1:0:2717:G:H5'	2.12	0.50
1:0:1877:C:H2'	1:0:1878:C:C6	2.46	0.50
1:0:914:C:H2'	1:0:915:C:C6	2.46	0.50
1:0:2522:G:H5''	1:0:2746:G:O3'	2.12	0.50
1:0:2669:C:H2'	1:0:2670:C:OP2	2.11	0.50
1:0:765:C:H4'	1:0:766:A:H5'	1.93	0.50
1:0:228:A:C5	1:0:229:G:H1'	2.46	0.50
1:0:539:A:H2'	1:0:540:G:OP2	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:218:A:O2'	1:0:219:G:P	2.69	0.50
1:0:7:G:H2'	1:0:8:A:H8	1.74	0.50
1:0:2765:C:H2'	1:0:2766:U:C6	2.46	0.50
1:0:1172:U:H2'	1:0:1173:G:C8	2.45	0.50
1:0:1645:U:H2'	1:0:1646:G:C8	2.46	0.50
1:0:462:G:H2'	1:0:463:C:H5'	1.92	0.50
1:0:1746:A:H2'	1:0:1747:G:H5'	1.94	0.50
1:0:322:A:H2'	1:0:342:G:P	2.51	0.50
1:0:1196:G:H2'	1:0:1197:U:H5'	1.93	0.50
1:0:1035:G:H21	1:0:1155:G:C4'	2.23	0.50
1:0:807:A:C6	1:0:808:C:C4	2.99	0.50
1:0:539:A:C2'	1:0:540:G:OP2	2.59	0.50
1:0:773:G:C2'	1:0:774:A:H5'	2.42	0.50
1:0:2:G:H2'	1:0:3:U:H6	1.76	0.50
1:0:2620:G:H2'	1:0:2621:G:H8	1.77	0.50
1:0:2519:C:C4	1:0:2520:A:N7	2.80	0.50
1:0:1299:A:O2'	1:0:1300:A:P	2.69	0.50
1:0:1789:U:C2	1:0:1811:A:H2	2.30	0.50
1:0:1036:G:N3	1:0:1145:C:O4'	2.45	0.50
1:0:768:U:H2'	1:0:769:C:O4'	2.12	0.50
1:0:109:A:H2'	1:0:110:U:C5'	2.40	0.50
1:0:688:A:O2'	1:0:2422:C:H4'	2.11	0.50
1:0:2551:A:N3	1:0:2551:A:H2'	2.26	0.50
1:0:2407:G:H5'	1:0:2408:G:C2	2.47	0.50
1:0:733:G:H2'	1:0:734:G:H8	1.76	0.50
1:0:2522:G:O4'	1:0:2746:G:H4'	2.12	0.50
1:0:2520:A:H1'	1:0:2744:A:C2	2.46	0.50
1:0:953:G:H2'	1:0:954:U:O4'	2.12	0.50
1:0:598:U:H2'	1:0:599:A:H8	1.72	0.50
1:0:857:U:O2'	1:0:858:G:H5'	2.11	0.50
1:0:2351:G:N2	1:0:2352:A:N9	2.60	0.50
1:0:813:A:O2'	1:0:815:A:H5'	2.12	0.50
1:0:577:U:H4'	1:0:956:A:N6	2.26	0.50
1:0:971:A:H2	1:0:2475:C:H1'	1.76	0.50
1:0:715:U:H2'	1:0:716:U:C6	2.46	0.50
1:0:1542:G:H21	1:0:1561:A:H62	1.59	0.50
1:0:14:A:H62	1:0:15:G:N2	2.10	0.50
1:0:32:C:H5'	1:0:1251:G:OP1	2.11	0.50
1:0:357:A:H3'	1:0:358:C:O4'	2.11	0.50
1:0:2018:G:O2'	1:0:2019:C:P	2.70	0.50
1:0:1447:U:H1'	1:0:1577:G:N2	2.26	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1685:A:HO2'	1:0:1686:A:P	2.33	0.50
1:0:2268:G:H5''	1:0:2363:G:HO2'	1.75	0.50
1:0:195:A:H2'	1:0:196:A:H5'	1.92	0.50
1:0:2756:A:O2'	1:0:2757:G:P	2.69	0.50
1:0:820:U:H1'	1:0:2424:G:OP1	2.11	0.50
1:0:2623:A:H2'	1:0:2624:G:O4'	2.11	0.50
1:0:1363:C:O2'	1:0:1364:C:H5'	2.11	0.50
1:0:1255:A:H2'	1:0:1256:C:C6	2.47	0.50
1:0:931:G:N1	1:0:2247:A:H5''	2.27	0.50
1:0:2796:A:HO2'	1:0:2801:A:H2	1.59	0.50
1:0:956:A:C2	1:0:2427:A:H1'	2.46	0.50
1:0:2014:A:H62	1:0:2477:C:C1'	2.25	0.50
1:0:567:G:O2'	1:0:568:G:H5'	2.12	0.50
1:0:2642:G:H2'	1:0:2643:G:O4'	2.11	0.50
1:0:1013:G:N2	1:0:1165:G:H1'	2.26	0.50
1:0:183:U:H2'	1:0:184:A:H8	1.77	0.50
1:0:2672:U:H5'	1:0:2844:G:H22	1.77	0.49
1:0:1166:A:C2'	1:0:1167:A:H5''	2.41	0.49
1:0:2307:A:H2'	1:0:2308:A:C8	2.47	0.49
1:0:143:A:O2'	1:0:144:U:H5'	2.12	0.49
1:0:357:A:H3'	1:0:358:C:C5'	2.42	0.49
1:0:2280:A:H2'	1:0:2281:C:C6	2.47	0.49
1:0:239:A:H5''	1:0:620:G:H5'	1.93	0.49
1:0:236:C:H2'	1:0:237:G:H8	1.77	0.49
1:0:2231:G:O2'	1:0:2232:G:H5'	2.12	0.49
1:0:677:G:C1'	1:0:951:G:H5''	2.40	0.49
1:0:982:C:H2'	1:0:983:G:O4'	2.12	0.49
1:0:2484:G:O4'	2:0:2881:TEL:H572	2.13	0.49
1:0:508:G:O2'	1:0:509:U:H5'	2.12	0.49
1:0:509:U:H2'	1:0:510:G:O4'	2.12	0.49
1:0:2852:G:C2'	1:0:2853:U:H5'	2.42	0.49
1:0:2016:A:N6	1:0:2019:C:N3	2.61	0.49
1:0:208:C:C2'	1:0:209:G:H5'	2.42	0.49
1:0:2030:U:O2'	1:0:2031:A:H5'	2.11	0.49
1:0:431:G:C4	1:0:432:C:C5	3.00	0.49
1:0:2677:U:H3	1:0:2688:G:H1	1.58	0.49
1:0:2197:U:H2'	1:0:2198:U:C6	2.48	0.49
1:0:681:A:H2'	1:0:683:A:C6	2.45	0.49
1:0:998:C:H2'	1:0:999:A:H5'	1.94	0.49
1:0:1296:G:H2'	1:0:1298:G:OP2	2.12	0.49
1:0:1691:G:H4'	1:0:1692:C:OP1	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:26:G:C6	1:0:27:G:N1	2.80	0.49
1:0:26:G:N1	1:0:27:G:N2	2.60	0.49
1:0:1916:G:H1	1:0:1950:C:N4	2.02	0.49
1:0:1582:A:H3'	1:0:1583:A:H5'	1.93	0.49
1:0:52:A:H62	1:0:115:G:N2	2.07	0.49
1:0:1614:C:H2'	1:0:1615:C:C6	2.46	0.49
1:0:643:A:O2'	1:0:644:A:H5'	2.12	0.49
1:0:389:G:C8	1:0:390:U:O4'	2.66	0.49
1:0:2748:C:H2'	1:0:2749:A:C8	2.47	0.49
1:0:1932:G:H3'	1:0:1933:G:N7	2.27	0.49
1:0:2388:G:H2'	1:0:2389:G:C1'	2.41	0.49
1:0:431:G:N3	1:0:432:C:H5	2.11	0.49
1:0:951:G:C3'	1:0:952:A:H5''	2.41	0.49
1:0:989:G:H2'	1:0:990:A:O4'	2.12	0.49
1:0:1921:A:C2'	1:0:1922:U:H5''	2.38	0.49
1:0:1778:U:OP2	1:0:1778:U:H3'	2.12	0.49
1:0:2228:U:C1'	1:0:2254:C:H41	2.25	0.49
1:0:717:G:H2'	1:0:739:G:N2	2.27	0.49
1:0:2714:A:H2'	1:0:2715:C:O4'	2.12	0.49
1:0:1473:U:H4'	1:0:1474:A:C5	2.47	0.49
1:0:1227:A:H2'	1:0:1228:G:O4'	2.12	0.49
1:0:947:C:H2'	1:0:948:C:C6	2.48	0.49
1:0:941:U:H2'	1:0:942:U:C6	2.47	0.49
1:0:339:U:C2'	1:0:339:U:O2	2.59	0.49
1:0:2049:C:H2'	1:0:2050:G:C5'	2.42	0.49
1:0:2082:C:H2'	1:0:2083:G:C8	2.48	0.49
1:0:2548:G:H2'	1:0:2549:G:H5'	1.93	0.49
1:0:761:G:H8	1:0:763:A:OP2	1.96	0.49
1:0:592:G:C6	1:0:593:C:N4	2.81	0.49
1:0:1066:G:C3'	1:0:1067:G:H5''	2.38	0.49
1:0:219:G:H2'	1:0:220:U:OP2	2.13	0.49
1:0:2783:U:H3	1:0:2785:A:N6	2.10	0.49
1:0:672:C:O2'	1:0:673:G:H5'	2.12	0.49
1:0:2161:C:O2'	1:0:2162:C:P	2.70	0.49
1:0:2060:A:N6	1:0:2222:U:H3	2.11	0.49
1:0:19:C:H2'	1:0:20:C:H6	1.76	0.49
1:0:203:G:N2	1:0:207:U:C4	2.80	0.49
1:0:833:A:N3	1:0:954:U:O2'	2.46	0.49
1:0:1937:G:H2'	1:0:1939:U:C4	2.47	0.49
1:0:485:G:O2'	1:0:486:U:P	2.69	0.49
1:0:1919:A:O4'	1:0:1923:U:C5	2.65	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1705:U:O4'	1:0:1718:A:N6	2.45	0.49
1:0:1540:C:H2'	1:0:1541:G:O4'	2.11	0.49
1:0:1175:A:H2'	1:0:1176:U:H6	1.78	0.49
1:0:2606:G:HO2'	1:0:2761:A:H2	1.60	0.49
1:0:2308:A:H2'	1:0:2309:G:C8	2.47	0.49
1:0:2245:A:H4'	1:0:2246:A:O5'	2.13	0.49
1:0:344:G:N3	1:0:344:G:H2'	2.28	0.49
1:0:190:A:H2'	1:0:191:G:C8	2.48	0.49
1:0:838:A:H2'	1:0:839:U:O4'	2.13	0.49
1:0:482:A:H2'	1:0:483:A:C5'	2.43	0.49
1:0:1872:A:O2'	1:0:1873:A:H5'	2.13	0.49
1:0:2347:C:H2'	1:0:2348:A:C8	2.47	0.49
1:0:1875:C:H2'	1:0:1876:C:H6	1.77	0.49
1:0:2093:G:O2'	1:0:2094:C:P	2.71	0.49
1:0:860:U:H3	1:0:945:G:N2	2.10	0.49
1:0:942:U:O5'	1:0:942:U:H6	1.95	0.49
1:0:173:A:H2	1:0:818:G:N3	2.10	0.49
1:0:1137:A:H4'	1:0:1138:A:H5''	1.95	0.49
1:0:39:C:H2'	1:0:40:U:C6	2.47	0.49
1:0:2795:A:C2'	1:0:2796:A:OP1	2.60	0.49
1:0:2800:C:H2'	1:0:2801:A:H5'	1.94	0.49
1:0:2433:G:N1	1:0:2478:C:N4	2.61	0.49
1:0:838:A:H4'	1:0:2407:G:C5	2.48	0.49
1:0:88:G:H3'	1:0:89:A:C5'	2.40	0.49
1:0:1147:G:H2'	1:0:1148:G:C8	2.43	0.49
1:0:2544:A:H2'	1:0:2545:A:O4'	2.13	0.49
1:0:566:U:H2'	1:0:567:G:C8	2.48	0.49
1:0:2203:G:H4'	1:0:2205:C:N3	2.28	0.49
1:0:2336:G:N2	1:0:2339:A:OP2	2.43	0.49
1:0:704:G:H2'	1:0:705:C:O4'	2.13	0.49
1:0:1764:A:C2'	1:0:1765:C:H5'	2.43	0.49
1:0:2062:U:H2'	1:0:2063:A:O4'	2.12	0.49
1:0:921:A:O2'	1:0:923:A:OP2	2.22	0.49
1:0:826:U:HO2'	1:0:1238:A:H1'	1.73	0.49
1:0:1368:G:H2'	1:0:1369:G:C8	2.44	0.49
1:0:1391:A:O2'	1:0:1392:U:C6	2.66	0.49
1:0:778:G:H2'	1:0:779:U:H6	1.78	0.49
1:0:2723:C:O2'	1:0:2724:G:H5'	2.13	0.49
1:0:1653:C:H2'	1:0:1654:A:C8	2.48	0.49
1:0:1293:A:H2'	1:0:1294:G:C8	2.47	0.49
1:0:70:A:H4'	1:0:72:A:OP2	2.13	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:50:G:H2'	1:0:117:A:N1	2.28	0.49
1:0:394:U:O5'	1:0:394:U:H6	1.96	0.49
1:0:2728:A:C6	1:0:2736:U:H1'	2.47	0.49
1:0:2559:U:C2'	1:0:2560:G:H5'	2.42	0.49
1:0:159:A:H1'	1:0:446:C:O2'	2.12	0.49
1:0:1310:C:H2'	1:0:1311:C:H6	1.76	0.49
1:0:2451:G:C1'	1:0:2457:A:H61	2.06	0.48
1:0:1973:C:H2'	1:0:1974:U:O4'	2.13	0.48
1:0:1226:A:N6	1:0:1249:G:H1'	2.28	0.48
1:0:520:C:O2'	1:0:1249:G:H5''	2.12	0.48
1:0:118:U:O2	1:0:143:A:N7	2.46	0.48
1:0:968:C:C2'	1:0:969:U:OP1	2.61	0.48
1:0:942:U:O2'	1:0:943:U:H5'	2.13	0.48
1:0:2671:C:H4'	1:0:2845:C:O2	2.13	0.48
1:0:614:G:N2	1:0:634:G:N2	2.38	0.48
1:0:2349:G:H2'	1:0:2350:G:O4'	2.13	0.48
1:0:2270:U:H5''	1:0:2359:U:O2'	2.12	0.48
1:0:69:G:H3'	1:0:111:G:O2'	2.13	0.48
1:0:2549:G:C2'	1:0:2550:C:H5'	2.43	0.48
1:0:2040:A:OP2	1:0:2483:U:OP1	2.31	0.48
1:0:459:A:N6	1:0:484:G:C1'	2.76	0.48
1:0:1494:G:O6	1:0:1529:C:N3	2.46	0.48
1:0:2427:A:OP2	1:0:2478:C:OP2	2.30	0.48
1:0:2407:G:H4'	1:0:2408:G:C4	2.48	0.48
1:0:621:U:H2'	1:0:622:U:H6	1.77	0.48
1:0:733:G:H2'	1:0:734:G:C8	2.48	0.48
1:0:125:A:H5''	1:0:126:C:C6	2.48	0.48
1:0:430:C:O2'	1:0:2386:G:N2	2.47	0.48
1:0:2397:A:H2'	1:0:2398:U:O4'	2.13	0.48
1:0:1964:A:H5''	1:0:1965:U:OP2	2.13	0.48
1:0:931:G:H2'	1:0:932:G:H5'	1.95	0.48
1:0:1918:G:C4	1:0:1945:C:N4	2.81	0.48
1:0:524:A:H1'	1:0:590:C:O2'	2.13	0.48
1:0:2816:C:H1'	1:0:2852:G:N2	2.28	0.48
1:0:78:C:H1'	1:0:357:A:N1	2.28	0.48
1:0:2542:U:H2'	1:0:2544:A:OP2	2.13	0.48
1:0:1408:A:H5''	1:0:1409:U:OP1	2.13	0.48
1:0:2869:U:H2'	1:0:2870:C:C6	2.48	0.48
1:0:978:U:H2'	1:0:979:A:H8	1.78	0.48
1:0:756:C:H2'	1:0:757:U:C6	2.48	0.48
1:0:2229:G:OP1	1:0:2229:G:H8	1.96	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2374:C:H42	1:0:2400:G:H1	1.61	0.48
1:0:1996:A:O2'	1:0:1997:A:H5'	2.13	0.48
1:0:2199:C:H2'	1:0:2200:G:C8	2.49	0.48
1:0:1783:G:H1	1:0:1820:G:H1'	1.78	0.48
1:0:2059:U:H5''	1:0:2217:G:N1	2.25	0.48
1:0:991:A:H2	1:0:2020:G:N3	2.11	0.48
1:0:2350:G:C2	1:0:2351:G:N7	2.82	0.48
1:0:2548:G:H2'	1:0:2549:G:C5'	2.43	0.48
1:0:697:G:C4	1:0:788:G:O6	2.66	0.48
1:0:191:G:O2'	1:0:192:G:H5'	2.13	0.48
1:0:1766:U:C2'	1:0:1767:G:H5'	2.43	0.48
1:0:138:G:H2'	1:0:139:A:C8	2.48	0.48
1:0:84:G:H2'	1:0:85:C:C6	2.48	0.48
1:0:388:G:OP2	1:0:388:G:H8	1.97	0.48
1:0:1999:U:C2'	1:0:2000:U:H5'	2.43	0.48
1:0:1038:U:C4	1:0:2467:A:H5'	2.49	0.48
1:0:838:A:H2'	1:0:839:U:C6	2.48	0.48
1:0:538:A:N6	1:0:2759:U:N3	2.61	0.48
1:0:2765:C:H2'	1:0:2766:U:H6	1.78	0.48
1:0:1531:C:C2'	1:0:1532:A:H5'	2.43	0.48
1:0:2205:C:O2'	1:0:2206:C:H5'	2.13	0.48
1:0:2076:G:C2	1:0:2181:A:N6	2.81	0.48
1:0:1299:A:N6	1:0:1302:C:C4	2.81	0.48
1:0:1033:G:HO2'	1:0:1034:U:P	2.33	0.48
1:0:1223:G:H5'	1:0:1225:G:C5'	2.43	0.48
1:0:65:C:C2'	1:0:66:U:H5'	2.44	0.48
1:0:67:G:C6	1:0:72:A:C2	3.01	0.48
1:0:742:G:H5'	1:0:743:A:C5'	2.42	0.48
1:0:221:A:H2'	1:0:222:G:H5'	1.94	0.48
1:0:1356:G:C5'	1:0:1614:C:OP2	2.62	0.48
1:0:81:C:H5''	1:0:307:C:H5'	1.96	0.48
1:0:638:A:C2'	1:0:639:G:H5'	2.44	0.48
1:0:92:U:H2'	1:0:93:A:O4'	2.14	0.48
1:0:1092:U:H2'	1:0:1093:U:C6	2.48	0.48
1:0:1854:G:H2'	1:0:1855:G:C8	2.44	0.48
1:0:1312:G:H5''	1:0:1313:U:OP1	2.13	0.48
1:0:1341:G:H2'	1:0:1343:C:C4	2.48	0.48
1:0:2548:G:C2'	1:0:2549:G:H5''	2.44	0.48
1:0:762:A:H2'	1:0:763:A:H8	1.78	0.48
1:0:2225:G:N2	1:0:2405:A:HO2'	2.12	0.48
1:0:2727:G:H2'	1:0:2728:A:H5''	1.94	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:81:C:C5'	1:0:307:C:H5'	2.44	0.48
1:0:2555:G:C2'	1:0:2555:G:N3	2.76	0.48
1:0:946:U:O5'	1:0:946:U:H6	1.96	0.48
1:0:961:G:H2'	1:0:962:C:C6	2.48	0.48
1:0:433:G:C2'	1:0:434:C:OP2	2.61	0.48
1:0:1313:U:O2'	1:0:1314:A:OP2	2.25	0.48
1:0:180:C:N3	1:0:181:A:C6	2.82	0.48
1:0:2011:U:H3	1:0:2016:A:N6	2.12	0.48
1:0:529:U:H2'	1:0:530:G:H8	1.78	0.48
1:0:1982:C:H5''	1:0:2703:C:C2'	2.43	0.48
1:0:1950:C:H2'	1:0:1951:G:H5'	1.94	0.48
1:0:2599:U:H3'	1:0:2600:A:H5''	1.95	0.48
1:0:698:A:C1'	1:0:700:C:C5	2.97	0.48
1:0:825:C:H1'	1:0:1263:G:N1	2.27	0.48
1:0:1712:G:N3	1:0:1712:G:C3'	2.75	0.48
1:0:2347:C:H2'	1:0:2348:A:O4'	2.14	0.48
1:0:882:C:H2'	1:0:883:A:O4'	2.14	0.48
1:0:1118:G:H2'	1:0:1119:U:C6	2.49	0.48
1:0:986:A:H2	1:0:1001:A:O4'	1.96	0.48
1:0:1327:C:OP1	1:0:1345:G:H5'	2.14	0.48
1:0:173:A:O2'	1:0:174:A:OP1	2.30	0.48
1:0:931:G:H1	1:0:2247:A:H5''	1.78	0.48
1:0:1922:U:O2'	1:0:2571:G:H1'	2.13	0.48
1:0:1955:G:O2'	1:0:1956:G:C5'	2.57	0.48
1:0:163:A:C2	1:0:188:G:C4	3.02	0.48
1:0:2448:A:H2'	1:0:2449:G:O4'	2.13	0.48
1:0:192:G:O2'	1:0:193:A:P	2.72	0.48
1:0:477:A:N3	1:0:696:U:H1'	2.28	0.48
1:0:772:G:H2'	1:0:773:G:C8	2.47	0.48
1:0:2555:G:H3'	1:0:2555:G:OP1	2.14	0.48
1:0:605:G:H2'	1:0:606:A:C8	2.48	0.48
1:0:502:A:H2'	1:0:503:G:H5'	1.95	0.48
1:0:2732:C:H3'	1:0:2733:A:H8	1.79	0.48
1:0:2695:C:H2'	1:0:2696:A:H8	1.78	0.47
1:0:1108:U:C2'	1:0:1109:A:H5'	2.34	0.47
1:0:876:A:H2'	1:0:877:G:C8	2.49	0.47
1:0:2548:G:O2'	1:0:2549:G:H5''	2.14	0.47
1:0:763:A:H5''	1:0:1631:C:N4	2.29	0.47
1:0:1923:U:HO2'	1:0:1924:C:H5	1.61	0.47
1:0:119:G:H2'	1:0:120:G:C8	2.49	0.47
1:0:2463:G:H2'	1:0:2464:G:C8	2.47	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:649:G:N1	1:0:660:G:N1	2.62	0.47
1:0:1605:A:H2'	1:0:1606:C:C6	2.49	0.47
1:0:2246:A:N3	1:0:2246:A:H3'	2.30	0.47
1:0:1679:U:H2'	1:0:1680:U:C5'	2.37	0.47
1:0:2597:G:H2'	1:0:2598:C:H6	1.79	0.47
1:0:594:G:N1	1:0:1264:C:N4	2.57	0.47
1:0:1055:A:H1'	1:0:1058:G:H1'	1.96	0.47
1:0:2764:U:H2'	1:0:2765:C:C5	2.49	0.47
1:0:1618:U:OP2	1:0:1619:A:N1	2.47	0.47
1:0:2157:C:H2'	1:0:2158:C:C6	2.49	0.47
1:0:1489:C:H3'	1:0:1490:U:H5'	1.97	0.47
1:0:1791:C:C1'	1:0:1793:A:H5'	2.38	0.47
1:0:2549:G:H5'	1:0:2549:G:H8	1.79	0.47
1:0:1040:A:C8	1:0:1041:G:C8	3.02	0.47
1:0:1528:C:H2'	1:0:1529:C:H5''	1.95	0.47
1:0:2650:G:O2'	1:0:2651:U:H5'	2.13	0.47
1:0:1545:G:H2'	1:0:1546:C:C6	2.48	0.47
1:0:1888:C:H2'	1:0:1913:G:C5	2.49	0.47
1:0:2605:C:H2'	1:0:2606:G:O4'	2.14	0.47
1:0:608:G:O2'	1:0:609:U:H5'	2.15	0.47
1:0:548:G:O2'	1:0:549:G:H5'	2.14	0.47
1:0:1641:C:H2'	1:0:1642:G:H5'	1.96	0.47
1:0:2001:G:H3'	1:0:2001:G:C8	2.50	0.47
1:0:1293:A:H2'	1:0:1294:G:H8	1.79	0.47
1:0:2377:U:O2'	1:0:2378:G:P	2.72	0.47
1:0:2532:G:H2'	1:0:2533:U:C4'	2.44	0.47
1:0:923:A:O4'	1:0:2243:C:H4'	2.15	0.47
1:0:2467:A:H2'	1:0:2468:G:H8	1.78	0.47
1:0:577:U:H4'	1:0:956:A:H61	1.79	0.47
1:0:839:U:H5'	1:0:2407:G:H2'	1.95	0.47
1:0:1435:G:H2'	1:0:1436:G:C8	2.45	0.47
1:0:2607:C:O2'	1:0:2762:G:OP1	2.33	0.47
1:0:1386:A:H2'	1:0:1387:G:O4'	2.14	0.47
1:0:803:C:H3'	1:0:803:C:H6	1.80	0.47
1:0:1293:A:O2'	1:0:1294:G:H5'	2.15	0.47
1:0:26:G:H2'	1:0:27:G:O4'	2.15	0.47
1:0:187:U:H2'	1:0:188:G:H8	1.79	0.47
1:0:178:C:O2'	1:0:179:U:H5'	2.13	0.47
1:0:1356:G:H1'	1:0:1613:G:C2	2.50	0.47
1:0:1407:G:O2'	1:0:1408:A:H5'	2.15	0.47
1:0:2073:A:H61	1:0:2208:U:H3	1.62	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1424:U:H2'	1:0:1425:G:H8	1.79	0.47
1:0:2876:C:H2'	1:0:2877:A:C8	2.49	0.47
1:0:939:C:N3	1:0:940:G:O6	2.48	0.47
1:0:200:A:C6	1:0:435:A:C5	3.03	0.47
1:0:831:G:N2	1:0:1203:A:H62	2.11	0.47
1:0:1975:G:O2'	1:0:1976:U:O5'	2.33	0.47
1:0:2080:U:H2'	1:0:2081:U:C6	2.49	0.47
1:0:690:A:H4'	1:0:2053:G:O2'	2.14	0.47
1:0:2629:U:H3	1:0:2649:A:H61	1.60	0.47
1:0:1574:A:C2	1:0:1576:G:H1'	2.49	0.47
1:0:1313:U:C4	1:0:1651:U:H1'	2.50	0.47
1:0:2200:G:H2'	1:0:2201:G:C8	2.49	0.47
1:0:1341:G:N2	1:0:1343:C:O2	2.48	0.47
1:0:320:A:N3	1:0:340:G:H2'	2.29	0.47
1:0:1629:G:H3'	1:0:1630:A:C5'	2.44	0.47
1:0:2598:C:H2'	1:0:2599:U:C6	2.50	0.47
1:0:195:A:C2'	1:0:196:A:H5'	2.44	0.47
1:0:398:C:H42	1:0:402:A:N6	2.13	0.47
1:0:593:C:H2'	1:0:594:G:C8	2.49	0.47
1:0:1073:G:C3'	1:0:1074:G:H5''	2.45	0.47
1:0:1086:C:O5'	1:0:1086:C:H6	1.97	0.47
1:0:2633:A:H4'	1:0:2634:G:OP1	2.14	0.47
1:0:1391:A:O2'	1:0:1392:U:O5'	2.32	0.47
1:0:782:U:H2'	1:0:783:G:C8	2.49	0.47
1:0:564:U:H2'	1:0:565:A:H8	1.80	0.47
1:0:2207:G:H2'	1:0:2208:U:O4'	2.14	0.47
1:0:2204:A:C2'	1:0:2205:C:OP2	2.63	0.47
1:0:1256:C:H2'	1:0:1257:U:C6	2.50	0.47
1:0:2760:G:H5'	1:0:2761:A:C8	2.50	0.47
1:0:301:C:H2'	1:0:302:U:O4'	2.14	0.47
1:0:2134:U:O5'	1:0:2134:U:H6	1.98	0.47
1:0:1736:C:H2'	1:0:1737:G:H8	1.79	0.47
1:0:105:G:O2'	1:0:106:G:H5'	2.14	0.47
1:0:1773:C:H1'	1:0:2588:U:O4'	2.15	0.47
1:0:203:G:O6	1:0:431:G:O3'	2.32	0.47
1:0:2386:G:C2	1:0:2387:U:C4	3.03	0.47
1:0:200:A:N1	1:0:435:A:N7	2.63	0.47
1:0:2496:C:C2	1:0:2521:A:N6	2.82	0.47
1:0:1820:G:H4'	1:0:1821:A:OP1	2.14	0.47
1:0:1806:G:O6	1:0:1807:A:N6	2.47	0.47
1:0:2061:C:O2'	1:0:2062:U:H5'	2.15	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1963:G:H2'	1:0:1964:A:OP1	2.15	0.47
1:0:788:G:H5'	1:0:790:A:N3	2.30	0.47
1:0:1259:A:C2'	1:0:1260:A:H5'	2.45	0.47
1:0:2225:G:N2	1:0:2405:A:O2'	2.48	0.47
1:0:1373:G:H1	1:0:2192:U:H3	1.63	0.47
1:0:1431:U:H5''	1:0:1604:A:H1'	1.97	0.47
1:0:2161:C:H2'	1:0:2162:C:C6	2.50	0.47
1:0:1906:U:H2'	1:0:1907:C:C6	2.50	0.47
1:0:1106:A:H2'	1:0:1107:A:C8	2.50	0.47
1:0:830:C:H3'	1:0:831:G:H8	1.80	0.47
1:0:1442:C:H3'	1:0:1443:G:C5'	2.45	0.47
1:0:2040:A:C6	1:0:2041:A:C6	3.03	0.47
1:0:459:A:C2	1:0:466:A:N7	2.83	0.47
1:0:2477:C:C6	1:0:2477:C:H3'	2.48	0.47
1:0:2225:G:H2'	1:0:2226:A:H8	1.80	0.47
1:0:2240:C:H2'	1:0:2241:U:H5'	1.96	0.47
1:0:2324:G:H4'	1:0:2325:A:O5'	2.15	0.47
1:0:673:G:H2'	1:0:674:U:C6	2.49	0.47
1:0:1480:G:C2'	1:0:1481:U:H5'	2.45	0.47
1:0:1207:G:H2'	1:0:1208:A:C8	2.50	0.47
1:0:387:A:H3'	1:0:388:G:C8	2.50	0.47
1:0:2695:C:O5'	1:0:2695:C:H6	1.97	0.47
1:0:1199:U:C5	1:0:1201:G:O6	2.68	0.47
1:0:853:C:C2	1:0:950:G:N1	2.83	0.47
1:0:2194:A:H2'	1:0:2195:C:O4'	2.15	0.47
1:0:1302:C:OP2	1:0:1302:C:H6	1.98	0.47
1:0:2351:G:N2	1:0:2352:A:C4	2.83	0.47
1:0:1949:A:N3	1:0:2572:U:O4'	2.48	0.47
1:0:1982:C:O2'	1:0:1983:G:H5'	2.15	0.47
1:0:1039:A:H1'	1:0:2466:G:O5'	2.15	0.47
1:0:1465:G:H2'	1:0:1466:C:C1'	2.45	0.47
1:0:580:A:H1'	1:0:582:G:N7	2.30	0.47
1:0:718:A:N6	1:0:739:G:H1'	2.26	0.47
1:0:295:C:N4	1:0:296:A:N6	2.62	0.47
1:0:2515:G:O2'	1:0:2516:U:H5'	2.15	0.47
1:0:1674:C:H2'	1:0:1675:C:C6	2.50	0.47
1:0:2387:U:C2'	1:0:2388:G:H5'	2.45	0.46
1:0:2658:A:H2'	1:0:2659:C:O4'	2.14	0.46
1:0:2534:U:H2'	1:0:2535:C:H5'	1.98	0.46
1:0:1949:A:N3	1:0:2571:G:O2'	2.40	0.46
1:0:1443:G:N3	1:0:1584:G:C2	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2441:U:H2'	1:0:2442:C:C6	2.49	0.46
1:0:2447:G:N1	1:0:2460:G:H2'	2.27	0.46
1:0:176:A:C8	1:0:177:U:H5	2.33	0.46
1:0:2228:U:H1'	1:0:2254:C:H41	1.79	0.46
1:0:1147:G:C4	1:0:1148:G:C8	3.03	0.46
1:0:357:A:C2'	1:0:358:C:H5'	2.45	0.46
1:0:1396:C:O5'	1:0:1396:C:H6	1.99	0.46
1:0:46:C:H2'	1:0:47:G:H8	1.80	0.46
1:0:2691:C:C3'	1:0:2692:A:H5''	2.46	0.46
1:0:1745:C:N3	1:0:2696:A:O2'	2.47	0.46
1:0:2499:C:C6	1:0:2546:G:H1'	2.49	0.46
1:0:983:G:P	1:0:985:G:H5''	2.53	0.46
1:0:616:U:C3'	1:0:617:U:H5''	2.45	0.46
1:0:2120:C:H42	1:0:2137:G:H1	1.61	0.46
1:0:919:U:N3	1:0:920:G:N7	2.63	0.46
1:0:2570:C:O2'	1:0:2571:G:H5'	2.15	0.46
1:0:2437:G:O2'	1:0:2439:U:O4	2.33	0.46
1:0:2597:G:H2'	1:0:2598:C:C6	2.50	0.46
1:0:1861:G:H2'	1:0:1862:C:O4'	2.15	0.46
1:0:658:G:H1'	1:0:2330:G:C5'	2.45	0.46
1:0:460:U:H5'	1:0:461:A:OP2	2.14	0.46
1:0:516:G:C2'	1:0:517:A:OP2	2.62	0.46
1:0:2477:C:C3'	1:0:2477:C:C6	2.98	0.46
1:0:540:G:N2	1:0:2004:U:O2'	2.49	0.46
1:0:1641:C:C2'	1:0:1642:G:H5'	2.45	0.46
1:0:1496:G:N2	1:0:1527:G:H22	2.12	0.46
1:0:1272:G:H2'	1:0:1273:G:H8	1.80	0.46
1:0:1030:U:H2'	1:0:1031:C:H5'	1.96	0.46
1:0:2570:C:H42	1:0:2582:G:H1	1.64	0.46
1:0:1629:G:N1	1:0:1633:C:N4	2.63	0.46
1:0:1468:A:O5'	1:0:1468:A:H8	1.98	0.46
1:0:389:G:C8	1:0:390:U:O2	2.69	0.46
1:0:538:A:N1	1:0:2025:A:H2'	2.29	0.46
1:0:863:C:H2'	1:0:864:C:O4'	2.15	0.46
1:0:200:A:C6	1:0:435:A:N6	2.84	0.46
1:0:2678:C:O2'	1:0:2679:G:H5'	2.16	0.46
1:0:2825:A:C2	1:0:2844:G:H4'	2.51	0.46
1:0:2824:C:O2'	1:0:2825:A:P	2.74	0.46
1:0:851:C:C4	1:0:952:A:N6	2.84	0.46
1:0:318:G:N2	1:0:321:A:C8	2.83	0.46
1:0:990:A:H5'	1:0:991:A:C5'	2.39	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2079:A:O2'	1:0:2080:U:H5'	2.15	0.46
1:0:474:G:H22	1:0:476:G:H3'	1.76	0.46
1:0:1217:U:H2'	1:0:1218:C:H6	1.81	0.46
1:0:2782:G:C2	1:0:2866:A:N6	2.84	0.46
1:0:2608:A:N6	1:0:2869:U:C2	2.82	0.46
1:0:1699:A:OP1	1:0:1716:G:N2	2.49	0.46
1:0:707:U:H5''	1:0:1585:A:C4	2.50	0.46
1:0:1278:A:HO2'	1:0:1279:G:P	2.39	0.46
1:0:1339:U:O2'	1:0:1993:G:H1'	2.16	0.46
1:0:2463:G:O2'	1:0:2464:G:H5'	2.15	0.46
1:0:755:C:O2'	1:0:756:C:H5'	2.16	0.46
1:0:2620:G:H2'	1:0:2621:G:C8	2.50	0.46
1:0:1872:A:O2'	1:0:2070:G:H5'	2.16	0.46
1:0:1129:A:H2'	1:0:1130:U:C6	2.50	0.46
1:0:583:C:H5''	1:0:584:A:C5'	2.45	0.46
1:0:2865:G:H8	1:0:2865:G:O5'	1.99	0.46
1:0:2867:G:C2'	1:0:2867:G:N3	2.79	0.46
1:0:1194:U:HO2'	1:0:1195:U:P	2.39	0.46
1:0:1302:C:C6	1:0:1302:C:OP2	2.69	0.46
1:0:1622:G:H5''	1:0:1624:A:O4'	2.16	0.46
1:0:2121:U:H3	1:0:2136:G:H1	1.64	0.46
1:0:2569:A:H2'	1:0:2570:C:H6	1.80	0.46
1:0:1983:G:H2'	1:0:1984:A:H8	1.81	0.46
1:0:157:G:O6	1:0:191:G:N7	2.48	0.46
1:0:402:A:OP2	1:0:403:A:OP2	2.33	0.46
1:0:2787:A:H2'	1:0:2788:C:C6	2.51	0.46
1:0:2559:U:H2'	1:0:2560:G:H5'	1.97	0.46
1:0:2655:C:H2'	1:0:2656:G:H8	1.79	0.46
1:0:622:U:H2'	1:0:623:G:O4'	2.16	0.46
1:0:1402:G:H2'	1:0:1403:U:O4'	2.16	0.46
1:0:1725:C:H2'	1:0:1726:C:C6	2.48	0.46
1:0:1686:A:H5''	1:0:2529:G:OP1	2.15	0.46
1:0:2043:A:C2'	1:0:2044:G:OP2	2.64	0.46
1:0:1964:A:H3'	1:0:1965:U:H5'	1.98	0.46
1:0:697:G:H2'	1:0:700:C:N4	2.30	0.46
1:0:176:A:O2'	1:0:177:U:OP1	2.32	0.46
1:0:439:C:H2'	1:0:439:C:O2	2.16	0.46
1:0:1373:G:C2'	1:0:1374:G:H5'	2.43	0.46
1:0:1253:C:C2'	1:0:1254:G:H5'	2.46	0.46
1:0:2721:A:H3'	1:0:2722:C:C6	2.51	0.46
1:0:85:C:O2'	1:0:86:U:H5'	2.15	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:886:A:H2'	1:0:887:G:O4'	2.16	0.46
1:0:2716:G:H2'	1:0:2717:G:C8	2.51	0.46
1:0:339:U:O4	1:0:342:G:H5''	2.16	0.46
1:0:1197:U:H2'	1:0:1198:C:O4'	2.15	0.46
1:0:1684:G:H2'	1:0:1974:U:O4	2.15	0.46
1:0:1693:A:H2	1:0:1976:U:OP1	1.99	0.46
1:0:2041:A:N6	2:0:2881:TEL:H582	2.30	0.46
1:0:243:G:H3'	1:0:244:C:C5'	2.46	0.46
1:0:958:G:H2'	1:0:959:C:C6	2.51	0.46
1:0:198:A:O4'	1:0:210:A:H1'	2.15	0.46
1:0:129:A:H2'	1:0:130:C:O4'	2.16	0.46
1:0:2722:C:H6	1:0:2722:C:O5'	1.98	0.46
1:0:1287:A:C2	1:0:1315:A:H2	2.34	0.46
1:0:1316:G:C2	1:0:1317:G:C8	3.03	0.46
1:0:1217:U:H2'	1:0:1218:C:C6	2.51	0.46
1:0:1456:C:H2'	1:0:1457:A:C8	2.51	0.46
1:0:1873:A:H2	1:0:2214:G:H1'	1.81	0.46
1:0:19:C:H2'	1:0:20:C:C6	2.50	0.46
1:0:2181:A:O5'	1:0:2181:A:H8	1.98	0.46
1:0:2133:G:H2'	1:0:2134:U:C6	2.50	0.46
1:0:1643:A:H2'	1:0:1644:G:H8	1.80	0.46
1:0:1834:G:H2'	1:0:1835:C:O4'	2.15	0.46
1:0:1724:C:H1'	1:0:1747:G:C4	2.50	0.46
1:0:681:A:O2'	1:0:683:A:N6	2.49	0.46
1:0:2447:G:O2'	1:0:2448:A:C5'	2.63	0.46
1:0:2430:A:P	1:0:2476:A:H61	2.38	0.46
1:0:2402:U:H4'	1:0:2404:A:C5	2.51	0.46
1:0:127:C:H2'	1:0:128:C:C6	2.50	0.46
1:0:1924:C:H2'	1:0:1925:C:O4'	2.16	0.46
1:0:1704:G:H1'	1:0:1719:G:N2	2.30	0.46
1:0:646:C:O2	1:0:650:U:H4'	2.15	0.46
1:0:1772:C:O2'	1:0:1773:C:H5'	2.15	0.46
1:0:713:G:H2'	1:0:714:G:O4'	2.15	0.46
1:0:24:G:H2'	1:0:25:U:C6	2.51	0.46
1:0:433:G:H2'	1:0:434:C:OP2	2.16	0.46
1:0:1651:U:C5'	1:0:1652:G:OP2	2.56	0.46
1:0:1955:G:H2'	1:0:1956:G:C8	2.48	0.46
1:0:796:A:H2	1:0:797:A:H4'	1.81	0.46
1:0:653:G:H21	1:0:657:A:H61	1.64	0.46
1:0:1435:G:O2'	1:0:1436:G:H5'	2.16	0.46
1:0:1358:C:H1'	1:0:1409:U:H3	1.81	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1885:C:H2'	1:0:1886:G:H5'	1.98	0.46
1:0:2279:G:H2'	1:0:2280:A:H8	1.81	0.46
1:0:751:G:H2'	1:0:752:G:O4'	2.16	0.46
1:0:2695:C:H2'	1:0:2696:A:C8	2.51	0.46
1:0:2744:A:N6	1:0:2746:G:C2	2.84	0.46
1:0:2197:U:H2'	1:0:2198:U:H6	1.81	0.46
1:0:1622:G:H4'	1:0:1624:A:N3	2.30	0.46
1:0:2080:U:H2'	1:0:2081:U:H6	1.81	0.46
1:0:796:A:N3	1:0:796:A:C2'	2.78	0.46
1:0:697:G:N2	1:0:807:A:C2	2.81	0.46
1:0:40:U:H2'	1:0:41:G:C8	2.51	0.46
1:0:1142:G:O6	1:0:2008:C:H1'	2.16	0.46
1:0:78:C:O2'	1:0:79:G:H5'	2.16	0.46
1:0:2756:A:H4'	1:0:2757:G:O5'	2.16	0.46
1:0:1696:C:H3'	1:0:1697:U:C6	2.51	0.46
1:0:1445:A:H2'	1:0:1446:U:C6	2.51	0.46
1:0:1059:A:H2	1:0:1123:G:N2	2.14	0.46
1:0:2828:C:O2'	1:0:2829:A:H5'	2.16	0.46
1:0:1522:C:H2'	1:0:1523:A:O4'	2.16	0.46
1:0:1750:A:C5'	1:0:2695:C:H1'	2.47	0.45
1:0:677:G:H4'	1:0:952:A:OP1	2.16	0.45
1:0:982:C:H2'	1:0:983:G:C8	2.51	0.45
1:0:1819:U:H2'	1:0:1820:G:O4'	2.15	0.45
1:0:67:G:C5	1:0:72:A:C2	3.03	0.45
1:0:439:C:H5''	1:0:440:U:H5	1.81	0.45
1:0:1055:A:OP1	1:0:1057:A:H5'	2.16	0.45
1:0:622:U:C2'	1:0:623:G:H5'	2.46	0.45
1:0:2767:C:H2'	1:0:2768:C:C6	2.51	0.45
1:0:2386:G:C2	1:0:2387:U:C5	3.05	0.45
1:0:987:G:C5'	1:0:1167:A:H62	2.29	0.45
1:0:162:C:H2'	1:0:163:A:C8	2.51	0.45
1:0:970:A:H2'	1:0:971:A:C8	2.51	0.45
1:0:821:A:H2'	1:0:822:G:C8	2.49	0.45
1:0:638:A:H2'	1:0:639:G:O4'	2.16	0.45
1:0:861:G:N2	1:0:943:U:C2'	2.79	0.45
1:0:2824:C:O2'	1:0:2825:A:O5'	2.33	0.45
1:0:2824:C:C2'	1:0:2825:A:OP2	2.64	0.45
1:0:2773:G:H1	1:0:2779:C:N4	2.13	0.45
1:0:341:A:N1	1:0:1223:G:N7	2.64	0.45
1:0:2484:G:N3	1:0:2485:U:H5	2.14	0.45
1:0:1928:G:O6	1:0:1943:A:N6	2.48	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:698:A:H1'	1:0:701:U:O4	2.17	0.45
1:0:1408:A:H2'	1:0:1411:C:N4	2.30	0.45
1:0:1086:C:C2'	1:0:1087:C:H5''	2.45	0.45
1:0:1376:C:H2'	1:0:1377:G:O4'	2.17	0.45
1:0:1068:A:H2'	1:0:1069:G:C8	2.51	0.45
1:0:2586:G:H2'	1:0:2587:G:O4'	2.15	0.45
1:0:2507:U:O2'	1:0:2508:G:H8	1.99	0.45
1:0:856:A:H2'	1:0:857:U:H5'	1.98	0.45
1:0:1029:C:C3'	1:0:1030:U:H5''	2.46	0.45
1:0:1763:G:N1	1:0:1963:G:N2	2.64	0.45
1:0:2410:U:H2'	1:0:2410:U:O2	2.15	0.45
1:0:2085:G:N2	1:0:2171:U:H1'	2.21	0.45
1:0:1467:U:H3'	1:0:1468:A:C5'	2.46	0.45
1:0:788:G:H21	1:0:801:A:P	2.40	0.45
1:0:1661:C:H2'	1:0:1662:G:H8	1.81	0.45
1:0:1392:U:O2	1:0:1392:U:C2'	2.65	0.45
1:0:1438:G:C2'	1:0:1439:G:H5'	2.45	0.45
1:0:1:G:H2'	1:0:2:G:C8	2.52	0.45
1:0:692:C:H2'	1:0:693:A:C8	2.51	0.45
1:0:1184:G:C2'	1:0:1185:C:H5'	2.47	0.45
1:0:703:A:O2'	1:0:704:G:H5'	2.16	0.45
1:0:1399:C:H2'	1:0:1400:A:C8	2.50	0.45
1:0:200:A:H62	1:0:435:A:N6	2.09	0.45
1:0:431:G:C4	1:0:432:C:H5	2.35	0.45
1:0:1818:G:H2'	1:0:1819:U:C6	2.52	0.45
1:0:1624:A:O2'	1:0:1625:A:H5'	2.17	0.45
1:0:1951:G:H4'	1:0:1956:G:H4'	1.99	0.45
1:0:192:G:O2'	1:0:193:A:H4'	2.16	0.45
1:0:459:A:H1'	1:0:466:A:H62	1.81	0.45
1:0:1993:G:O2'	1:0:1994:U:H5'	2.17	0.45
1:0:1618:U:C2	1:0:1618:U:O5'	2.69	0.45
1:0:2357:A:C2'	1:0:2358:C:H5'	2.47	0.45
1:0:1914:U:O2'	1:0:1915:A:H5'	2.16	0.45
1:0:946:U:O2'	1:0:947:C:H5'	2.17	0.45
1:0:1605:A:H2'	1:0:1606:C:H6	1.81	0.45
1:0:776:G:N3	1:0:776:G:H3'	2.32	0.45
1:0:2856:U:H2'	1:0:2857:C:C6	2.52	0.45
1:0:430:C:HO2'	1:0:2386:G:N2	2.15	0.45
1:0:387:A:C4'	1:0:436:A:H62	2.30	0.45
1:0:2396:C:H2'	1:0:2397:A:C5'	2.45	0.45
1:0:753:U:H1'	1:0:1964:A:C4	2.52	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:874:A:C2	1:0:875:G:H1'	2.51	0.45
1:0:2669:C:C2'	1:0:2670:C:OP2	2.65	0.45
1:0:1785:A:H2'	1:0:1786:C:C6	2.51	0.45
1:0:162:C:H4'	1:0:195:A:O2'	2.17	0.45
1:0:1929:U:H3	1:0:1943:A:N6	2.15	0.45
1:0:17:G:H2'	1:0:18:U:C6	2.51	0.45
1:0:2541:U:H2'	1:0:2542:U:O4'	2.17	0.45
1:0:780:U:O2'	1:0:781:G:H5'	2.17	0.45
1:0:706:A:H2'	1:0:707:U:O4'	2.16	0.45
1:0:882:C:C2	1:0:883:A:C8	3.05	0.45
1:0:1724:C:C2	1:0:1725:C:C5	3.05	0.45
1:0:1740:G:O2'	1:0:1741:G:H5'	2.17	0.45
1:0:1707:A:N7	1:0:1714:A:H2	2.15	0.45
1:0:192:G:H4'	1:0:193:A:O5'	2.17	0.45
1:0:395:G:C2'	1:0:396:U:H5'	2.47	0.45
1:0:2635:U:H3	1:0:2644:A:H8	1.64	0.45
1:0:625:A:H2'	1:0:626:A:H5'	1.99	0.45
1:0:2724:G:O2'	1:0:2725:C:H5'	2.17	0.45
1:0:1970:G:O2'	1:0:1971:C:H5'	2.16	0.45
1:0:1724:C:H1'	1:0:1747:G:N3	2.32	0.45
1:0:1302:C:O2'	1:0:1303:U:H5'	2.16	0.45
1:0:1223:G:C5'	1:0:1224:A:OP1	2.65	0.45
1:0:73:A:N6	1:0:87:G:OP2	2.40	0.45
1:0:1918:G:H1'	1:0:1947:G:C2	2.51	0.45
2:0:2881:TEL:H231	2:0:2881:TEL:H332	1.99	0.45
1:0:689:A:H2'	1:0:690:A:H5'	1.99	0.45
1:0:824:U:O4'	1:0:1264:C:O2	2.35	0.45
1:0:2239:C:H2'	1:0:2240:C:H6	1.82	0.45
1:0:2240:C:H2'	1:0:2241:U:C5'	2.47	0.45
1:0:1288:A:H2'	1:0:1289:A:C4'	2.46	0.45
1:0:1849:G:N2	1:0:1869:A:N6	2.64	0.45
1:0:2204:A:H4'	1:0:2205:C:O4'	2.17	0.45
1:0:2338:C:H2'	1:0:2339:A:C8	2.52	0.45
1:0:2827:G:H2'	1:0:2828:C:C6	2.52	0.45
1:0:775:U:H4'	1:0:776:G:C8	2.52	0.45
1:0:1500:U:H2'	1:0:1501:C:C6	2.52	0.45
1:0:861:G:N2	1:0:943:U:H2'	2.31	0.45
1:0:2694:G:H2'	1:0:2695:C:C6	2.52	0.45
1:0:854:G:H2'	1:0:855:G:C8	2.52	0.45
1:0:585:U:H5''	1:0:2482:A:OP1	2.17	0.45
1:0:1035:G:C6	1:0:1036:G:O6	2.70	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1035:G:H21	1:0:1155:G:H5'	1.82	0.45
1:0:173:A:C2	1:0:818:G:H1'	2.51	0.45
1:0:872:G:O2'	1:0:2247:A:N3	2.49	0.45
1:0:875:G:H3'	1:0:876:A:H8	1.81	0.45
1:0:1975:G:O4'	1:0:1977:C:H5	2.00	0.45
1:0:802:A:N3	1:0:802:A:C2'	2.80	0.45
1:0:1265:G:H2'	1:0:1266:G:O4'	2.16	0.45
1:0:2013:A:C2'	1:0:2014:A:OP2	2.64	0.45
1:0:582:G:N1	1:0:2014:A:OP2	2.44	0.45
1:0:737:C:H2'	1:0:738:G:O4'	2.17	0.45
1:0:2513:A:C2	1:0:2514:G:H1'	2.52	0.45
1:0:1830:C:N4	1:0:1881:U:H3'	2.32	0.45
1:0:1349:A:H2'	1:0:1350:G:C8	2.52	0.45
1:0:846:A:H62	1:0:955:G:H22	1.56	0.45
1:0:2380:U:O2'	1:0:2381:A:H5''	2.17	0.45
1:0:1149:G:N2	1:0:1154:A:H1'	2.28	0.45
1:0:1629:G:H3'	1:0:1630:A:H5''	1.99	0.45
1:0:813:A:H1'	1:0:815:A:H4'	1.98	0.45
1:0:740:A:H2'	1:0:741:G:O4'	2.17	0.45
1:0:2161:C:O2'	1:0:2162:C:OP1	2.30	0.45
1:0:1913:G:H2'	1:0:1914:U:OP2	2.16	0.45
1:0:150:A:H2'	1:0:151:G:H5'	1.99	0.45
1:0:631:G:H5''	1:0:632:A:OP1	2.17	0.45
1:0:430:C:C6	1:0:430:C:C5'	2.97	0.44
1:0:324:C:H2'	1:0:325:U:C5'	2.47	0.44
1:0:830:C:O2'	1:0:852:U:H5''	2.17	0.44
1:0:1621:C:O4'	1:0:1626:A:C6	2.70	0.44
1:0:2410:U:H2'	1:0:2412:A:OP2	2.16	0.44
1:0:2667:C:N4	1:0:2699:G:H3'	2.30	0.44
1:0:688:A:N7	1:0:816:U:O4	2.50	0.44
1:0:697:G:C5	1:0:788:G:O6	2.70	0.44
1:0:441:A:O2'	1:0:442:A:H5'	2.16	0.44
1:0:2005:U:O2'	1:0:2017:U:C2	2.70	0.44
1:0:81:C:H2'	1:0:82:G:O4'	2.16	0.44
1:0:1804:U:O2'	1:0:1805:G:H5'	2.17	0.44
1:0:2274:C:C2'	1:0:2275:U:C5'	2.95	0.44
1:0:2816:C:H2'	1:0:2817:A:C8	2.52	0.44
1:0:1474:A:H2'	1:0:1476:G:OP1	2.17	0.44
1:0:1406:A:O3'	1:0:1407:G:H8	2.00	0.44
1:0:2633:A:C4'	1:0:2634:G:OP1	2.65	0.44
1:0:1758:C:C2'	1:0:1759:A:H5'	2.47	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:208:C:H2'	1:0:209:G:H5'	1.99	0.44
1:0:1385:C:H2'	1:0:1386:A:H8	1.82	0.44
1:0:1388:C:H2'	1:0:1389:C:H6	1.81	0.44
1:0:1192:A:H2'	1:0:1193:G:H8	1.82	0.44
1:0:2455:A:H2'	1:0:2455:A:N3	2.32	0.44
1:0:873:U:C4	1:0:929:A:N6	2.85	0.44
1:0:1948:C:N4	1:0:1949:A:N6	2.65	0.44
1:0:2706:U:H2'	1:0:2706:U:O2	2.18	0.44
1:0:1528:C:H3'	1:0:1529:C:C5'	2.40	0.44
1:0:2239:C:H2'	1:0:2240:C:C6	2.52	0.44
1:0:2212:U:H2'	1:0:2213:G:H8	1.79	0.44
1:0:2585:C:O2'	1:0:2586:G:H5'	2.17	0.44
1:0:734:G:H2'	1:0:735:G:H8	1.81	0.44
1:0:2242:C:N4	1:0:2257:A:C6	2.85	0.44
1:0:2578:G:N2	1:0:2579:A:H1'	2.33	0.44
1:0:1625:A:O2'	1:0:1632:A:H4'	2.17	0.44
1:0:1083:C:N4	1:0:1103:C:C4	2.85	0.44
1:0:873:U:H1'	1:0:2246:A:H5''	2.00	0.44
1:0:2082:C:N4	1:0:2174:G:N2	2.65	0.44
1:0:653:G:H4'	1:0:2328:G:H4'	1.99	0.44
1:0:658:G:H1'	1:0:2330:G:H5''	1.99	0.44
1:0:226:C:H4'	1:0:227:G:C8	2.53	0.44
1:0:2800:C:C2'	1:0:2801:A:H5'	2.47	0.44
1:0:180:C:N3	1:0:181:A:N6	2.66	0.44
1:0:1216:G:O2'	1:0:1217:U:H5'	2.16	0.44
1:0:1355:A:H1'	1:0:1410:U:C4'	2.47	0.44
1:0:1391:A:O2'	1:0:1392:U:OP1	2.35	0.44
1:0:2505:G:H22	1:0:2517:C:H1'	1.83	0.44
1:0:756:C:H2'	1:0:757:U:O4'	2.17	0.44
1:0:1463:A:O2'	1:0:1543:G:N2	2.51	0.44
1:0:434:C:O2	1:0:434:C:C2'	2.66	0.44
1:0:1999:U:H6	1:0:1999:U:O5'	2.00	0.44
1:0:1001:A:N7	1:0:1200:G:H4'	2.33	0.44
1:0:1030:U:H2'	1:0:1031:C:O4'	2.18	0.44
1:0:2363:G:C2'	1:0:2364:C:OP1	2.66	0.44
1:0:26:G:C2	1:0:27:G:N2	2.85	0.44
1:0:402:A:H2'	1:0:403:A:O4'	2.17	0.44
1:0:591:G:H2'	1:0:592:G:H8	1.80	0.44
1:0:2797:G:H2'	1:0:2798:A:C5'	2.44	0.44
1:0:2013:A:H2'	1:0:2014:A:OP2	2.18	0.44
1:0:439:C:H3'	1:0:440:U:C5	2.53	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1711:C:H4'	1:0:1712:G:N2	2.32	0.44
1:0:2095:G:H2'	1:0:2096:U:H5''	1.99	0.44
1:0:4:C:O2'	1:0:5:A:H5'	2.17	0.44
1:0:1970:G:H2'	1:0:1971:C:C6	2.53	0.44
1:0:939:C:C4	1:0:940:G:O6	2.71	0.44
1:0:2609:G:O4'	1:0:2868:G:N3	2.51	0.44
1:0:1196:G:H2'	1:0:1197:U:C5'	2.48	0.44
1:0:2661:G:H2'	1:0:2662:C:O4'	2.18	0.44
1:0:2043:A:O2'	1:0:2481:G:O5'	2.36	0.44
1:0:1630:A:H8	1:0:1630:A:OP2	2.00	0.44
1:0:2467:A:H2'	1:0:2468:G:C8	2.53	0.44
1:0:192:G:O2'	1:0:193:A:C5'	2.65	0.44
1:0:926:C:H2'	1:0:926:C:O2	2.17	0.44
1:0:2227:C:H2'	1:0:2228:U:H5'	2.00	0.44
1:0:1142:G:H2'	1:0:1143:A:C8	2.53	0.44
1:0:2491:C:C2'	1:0:2492:G:H5''	2.47	0.44
1:0:239:A:H2'	1:0:240:U:O4'	2.17	0.44
1:0:236:C:H2'	1:0:237:G:C8	2.52	0.44
1:0:1310:C:H2'	1:0:1311:C:C6	2.52	0.44
1:0:1401:G:O2'	1:0:1402:G:H5'	2.17	0.44
1:0:2178:U:H2'	1:0:2179:C:H6	1.82	0.44
1:0:353:G:H2'	1:0:354:C:C6	2.52	0.44
1:0:1751:A:H2'	1:0:1752:U:C6	2.52	0.44
1:0:1312:G:O2'	1:0:1314:A:C2	2.66	0.44
1:0:2676:G:H2'	1:0:2677:U:C6	2.53	0.44
1:0:1199:U:H3'	1:0:1200:G:H5''	2.00	0.44
1:0:1321:A:N1	1:0:1624:A:N1	2.66	0.44
1:0:2299:A:H5'	1:0:2300:G:N9	2.32	0.44
1:0:2315:A:O2'	1:0:2364:C:H5''	2.17	0.44
1:0:2666:U:H2'	1:0:2667:C:O4'	2.18	0.44
1:0:2728:A:H2'	1:0:2729:A:O4'	2.17	0.44
1:0:1086:C:H2'	1:0:1087:C:C5'	2.46	0.44
1:0:1437:A:H2'	1:0:1438:G:C8	2.48	0.44
1:0:2343:C:H2'	1:0:2344:G:C8	2.53	0.44
1:0:2105:U:H2'	1:0:2106:G:H8	1.81	0.44
1:0:755:C:H2'	1:0:756:C:O4'	2.18	0.44
1:0:502:A:C2'	1:0:503:G:H5'	2.48	0.44
1:0:1257:U:O2'	1:0:1258:G:H5'	2.16	0.44
1:0:324:C:O2'	1:0:325:U:H5'	2.17	0.44
1:0:982:C:OP2	1:0:985:G:N1	2.50	0.44
1:0:1083:C:N4	1:0:1104:G:C6	2.85	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:742:G:N3	1:0:742:G:C2'	2.79	0.44
1:0:572:G:OP2	1:0:581:A:H5'	2.17	0.44
1:0:1514:C:H4'	1:0:1592:U:O2'	2.18	0.44
1:0:78:C:H2'	1:0:79:G:C8	2.48	0.44
1:0:2428:U:O2	1:0:2428:U:C2'	2.66	0.44
1:0:538:A:N6	1:0:2759:U:H3	2.15	0.44
1:0:5:A:H2'	1:0:6:A:H8	1.83	0.44
1:0:216:U:H2'	1:0:217:U:C6	2.53	0.44
1:0:620:G:H1	1:0:628:A:N6	2.15	0.44
1:0:1001:A:H2'	1:0:1002:C:H5''	1.99	0.44
1:0:1177:U:N3	1:0:1197:U:O2	2.51	0.44
1:0:1153:A:C2	1:0:1155:G:C6	3.06	0.44
1:0:1249:G:C2'	1:0:1250:A:OP2	2.66	0.44
1:0:2590:U:H1'	2:0:2881:TEL:H21	2.00	0.44
1:0:1929:U:H3	1:0:1943:A:H61	1.64	0.44
1:0:698:A:OP2	1:0:787:A:N1	2.51	0.44
1:0:224:G:C1'	1:0:399:G:O6	2.66	0.44
1:0:469:G:O2'	1:0:470:U:C5	2.70	0.44
1:0:1253:C:H2'	1:0:1254:G:O4'	2.17	0.44
1:0:357:A:C3'	1:0:358:C:H5'	2.47	0.44
1:0:1932:G:N3	1:0:1932:G:H2'	2.33	0.44
1:0:2010:G:O2'	1:0:2011:U:H5'	2.18	0.44
1:0:1866:G:O5'	1:0:1866:G:H8	2.00	0.44
1:0:968:C:H2'	1:0:969:U:OP1	2.17	0.44
1:0:547:U:H2'	1:0:548:G:H8	1.82	0.44
1:0:993:C:O5'	1:0:993:C:H6	2.01	0.44
1:0:200:A:C6	1:0:435:A:C6	3.05	0.44
1:0:2498:U:P	1:0:2498:U:H3'	2.58	0.44
1:0:2498:U:H5'	1:0:2546:G:N2	2.33	0.44
1:0:1194:U:O2'	1:0:1195:U:P	2.76	0.44
1:0:1333:G:N2	1:0:1344:C:N4	2.65	0.44
1:0:2122:G:H2'	1:0:2123:G:C8	2.52	0.44
1:0:1981:A:H4'	1:0:2704:U:O2'	2.18	0.44
1:0:189:A:O2'	1:0:190:A:H5'	2.17	0.44
1:0:2622:G:H2'	1:0:2623:A:O4'	2.18	0.44
1:0:503:G:H2'	1:0:504:G:H8	1.81	0.44
1:0:93:A:O2'	1:0:94:C:H5'	2.18	0.44
1:0:29:U:H6	1:0:29:U:O5'	2.01	0.44
1:0:2348:A:H61	1:0:2361:G:N2	2.16	0.44
1:0:1272:G:H2'	1:0:1273:G:C8	2.52	0.44
1:0:2828:C:H2'	1:0:2829:A:H8	1.83	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1052:C:O5'	1:0:1052:C:H6	2.00	0.44
1:0:1800:A:N3	1:0:1802:A:N1	2.66	0.44
1:0:2387:U:H2'	1:0:2388:G:H5'	2.00	0.43
1:0:2824:C:H1'	1:0:2843:A:C4	2.53	0.43
1:0:1821:A:H5''	1:0:1822:C:H5	1.82	0.43
1:0:2043:A:H1'	1:0:2481:G:O4'	2.17	0.43
1:0:1034:U:H2'	1:0:1035:G:H5'	2.00	0.43
1:0:52:A:C2'	1:0:53:G:H5'	2.48	0.43
1:0:1703:C:H2'	1:0:1704:G:O4'	2.18	0.43
1:0:16:G:C2'	1:0:17:G:H5'	2.48	0.43
1:0:2709:C:H2'	1:0:2710:C:C6	2.53	0.43
1:0:810:U:H2'	1:0:811:G:C8	2.52	0.43
1:0:1904:G:H2'	1:0:1905:G:C8	2.53	0.43
1:0:1013:G:H22	1:0:1165:G:H1'	1.83	0.43
1:0:326:A:H2'	1:0:327:C:O4'	2.18	0.43
1:0:436:A:C4'	1:0:437:G:OP1	2.65	0.43
1:0:587:A:C3'	1:0:588:G:H5''	2.48	0.43
1:0:855:G:H2'	1:0:856:A:O4'	2.18	0.43
1:0:2082:C:H2'	1:0:2083:G:H8	1.83	0.43
1:0:1474:A:C2'	1:0:1475:U:H5'	2.47	0.43
1:0:568:G:H2'	1:0:569:C:O4'	2.18	0.43
1:0:2002:A:H61	1:0:2018:G:H22	1.65	0.43
1:0:504:G:O2'	1:0:505:G:H5'	2.18	0.43
1:0:1445:A:H2'	1:0:1446:U:O4'	2.19	0.43
1:0:2875:C:O2'	1:0:2876:C:H5'	2.17	0.43
1:0:451:A:H2'	1:0:452:G:O4'	2.18	0.43
1:0:203:G:O2'	1:0:204:A:H5'	2.18	0.43
1:0:600:G:O6	1:0:602:C:N4	2.51	0.43
1:0:321:A:N1	1:0:323:G:H1'	2.34	0.43
1:0:1223:G:H5'	1:0:1225:G:H5'	1.99	0.43
1:0:2409:A:N7	1:0:2410:U:H5	2.16	0.43
1:0:2041:A:H61	2:0:2881:TEL:H581	1.78	0.43
1:0:2814:G:H2'	1:0:2815:C:H6	1.75	0.43
1:0:2015:G:C2'	1:0:2015:G:N3	2.81	0.43
1:0:1388:C:H2'	1:0:1389:C:C6	2.53	0.43
1:0:1052:C:H2'	1:0:1053:G:C8	2.53	0.43
1:0:2792:C:C3'	1:0:2793:G:H5''	2.48	0.43
1:0:317:U:N3	1:0:321:A:N6	2.49	0.43
1:0:1625:A:N3	1:0:1625:A:C2'	2.80	0.43
1:0:2377:U:O5'	1:0:2377:U:H6	2.01	0.43
1:0:2299:A:O2'	1:0:2312:A:N6	2.52	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:320:A:N7	1:0:341:A:N7	2.67	0.43
1:0:1779:C:H6	1:0:1779:C:O5'	2.01	0.43
1:0:1779:C:O2'	1:0:1780:A:H5'	2.18	0.43
1:0:490:A:C2'	1:0:491:A:H5'	2.47	0.43
1:0:815:A:H2'	1:0:816:U:O4'	2.19	0.43
1:0:190:A:H2'	1:0:191:G:H8	1.82	0.43
1:0:32:C:H2'	1:0:33:C:O4'	2.18	0.43
1:0:2817:A:N1	1:0:2851:G:C6	2.86	0.43
1:0:2343:C:O2'	1:0:2344:G:H5'	2.18	0.43
1:0:1838:G:H2'	1:0:1839:A:O4'	2.19	0.43
1:0:202:A:O2'	1:0:203:G:H5'	2.18	0.43
1:0:1984:A:H2'	1:0:1985:G:H8	1.82	0.43
1:0:788:G:H2'	1:0:807:A:C4	2.53	0.43
1:0:700:C:O4'	1:0:801:A:O4'	2.36	0.43
1:0:782:U:HO2'	1:0:1392:U:H6	1.65	0.43
1:0:2493:U:O2'	1:0:2494:C:H5'	2.18	0.43
1:0:1610:A:H2'	1:0:1611:U:C6	2.54	0.43
1:0:201:G:N2	1:0:202:A:C4	2.86	0.43
1:0:1654:A:H4'	1:0:2690:A:O2'	2.19	0.43
1:0:952:A:HO2'	1:0:1204:G:H4'	1.84	0.43
1:0:1029:C:H41	1:0:1153:A:H61	1.56	0.43
1:0:1154:A:C8	1:0:1154:A:H3'	2.54	0.43
1:0:1922:U:O2'	1:0:2571:G:C1'	2.66	0.43
1:0:457:C:H5'	1:0:1261:G:O6	2.19	0.43
1:0:516:G:H2'	1:0:517:A:OP2	2.19	0.43
1:0:1055:A:H61	1:0:1122:A:C5'	2.31	0.43
1:0:219:G:C2'	1:0:231:G:H1	2.30	0.43
1:0:1217:U:O2'	1:0:1218:C:H5'	2.19	0.43
1:0:1358:C:C2'	1:0:1359:G:H5'	2.47	0.43
1:0:1715:A:O2'	1:0:1716:G:C5'	2.67	0.43
1:0:1715:A:O2'	1:0:1716:G:H5''	2.18	0.43
1:0:1274:C:H6	1:0:1274:C:O5'	2.02	0.43
1:0:2178:U:H2'	1:0:2179:C:C6	2.53	0.43
1:0:1094:C:H2'	1:0:1096:A:OP2	2.19	0.43
1:0:935:C:O2'	1:0:936:A:H5'	2.19	0.43
1:0:935:C:H2'	1:0:936:A:H8	1.83	0.43
1:0:2694:G:OP1	1:0:2694:G:H8	2.01	0.43
1:0:1900:U:H3'	1:0:1901:A:H8	1.82	0.43
1:0:486:U:H6	1:0:486:U:OP2	2.01	0.43
1:0:738:G:H2'	1:0:739:G:O4'	2.18	0.43
1:0:1325:U:H5'	1:0:1326:U:H6	1.82	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2240:C:C1'	1:0:2367:A:H1'	2.45	0.43
1:0:82:G:O2'	1:0:83:A:H5'	2.19	0.43
1:0:1370:U:O2'	1:0:1371:G:H5'	2.18	0.43
1:0:2176:U:C2'	1:0:2177:U:H5'	2.49	0.43
1:0:915:C:H2'	1:0:916:U:C6	2.53	0.43
1:0:322:A:C6	1:0:339:U:O2	2.72	0.43
1:0:1625:A:H1'	1:0:1632:A:H1'	2.00	0.43
1:0:2082:C:H2'	1:0:2083:G:O4'	2.19	0.43
1:0:744:C:H2'	1:0:745:C:C6	2.53	0.43
1:0:1089:C:C2	1:0:1099:A:H4'	2.54	0.43
1:0:221:A:C2'	1:0:222:G:H5'	2.49	0.43
1:0:139:A:O2'	1:0:140:G:H5'	2.19	0.43
1:0:1458:A:C3'	1:0:1459:U:C5'	2.95	0.43
1:0:1444:C:H2'	1:0:1445:A:C8	2.54	0.43
1:0:1913:G:C2'	1:0:1914:U:OP2	2.67	0.43
1:0:1566:G:H2'	1:0:1567:A:C8	2.53	0.43
1:0:2790:C:H2'	1:0:2791:C:H6	1.84	0.43
1:0:942:U:H2'	1:0:943:U:C5'	2.49	0.43
1:0:830:C:C5	1:0:831:G:N7	2.86	0.43
1:0:1686:A:C2'	1:0:1686:A:N3	2.81	0.43
1:0:1790:G:HO2'	1:0:1791:C:H6	1.59	0.43
1:0:1083:C:N4	1:0:1104:G:O6	2.51	0.43
1:0:1908:C:C2'	1:0:1909:U:H4'	2.40	0.43
1:0:1912:G:C2'	1:0:1912:G:N3	2.78	0.43
1:0:2418:A:H5'	1:0:2420:C:OP2	2.18	0.43
1:0:2033:C:H2'	1:0:2034:A:C1'	2.48	0.43
1:0:1088:A:O2'	1:0:1089:C:H5'	2.19	0.43
1:0:367:G:H2'	1:0:368:A:H5''	2.00	0.43
1:0:1054:C:H2'	1:0:1055:A:H5'	2.00	0.43
1:0:1071:U:C2'	1:0:1072:U:H5'	2.47	0.43
1:0:695:G:N2	1:0:809:C:C2	2.86	0.43
1:0:2107:G:O2'	1:0:2108:G:H5'	2.19	0.43
1:0:2492:G:H2'	1:0:2493:U:O4'	2.18	0.43
1:0:1501:C:H2'	1:0:1502:G:O4'	2.18	0.43
1:0:2028:C:H2'	1:0:2029:G:O5'	2.17	0.43
1:0:750:C:H2'	1:0:751:G:O4'	2.18	0.43
1:0:202:A:N6	1:0:432:C:OP2	2.37	0.43
1:0:1738:U:O2'	1:0:1739:G:H5'	2.19	0.43
1:0:2519:C:C5	1:0:2520:A:N7	2.87	0.43
1:0:2196:U:H2'	1:0:2197:U:O4'	2.19	0.43
1:0:1204:G:H2'	1:0:1205:G:H8	1.84	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:596:C:C1'	1:0:684:C:O4'	2.63	0.43
1:0:1937:G:N3	1:0:2530:C:C5'	2.82	0.43
1:0:2123:G:H2'	1:0:2124:C:C6	2.54	0.43
1:0:930:A:N3	1:0:930:A:O4'	2.51	0.43
1:0:1582:A:C3'	1:0:1583:A:C5'	2.93	0.43
1:0:797:A:O2'	1:0:798:G:H8	2.02	0.43
1:0:807:A:C5	1:0:808:C:C4	3.07	0.43
1:0:957:G:O2'	1:0:958:G:H5'	2.19	0.43
1:0:128:C:C3'	1:0:129:A:H5''	2.48	0.43
1:0:1278:A:O2'	1:0:1279:G:P	2.76	0.43
1:0:1125:G:H2'	1:0:1126:A:H8	1.81	0.43
1:0:90:G:H3'	1:0:91:A:C5'	2.48	0.43
1:0:75:C:O5'	1:0:75:C:H6	2.01	0.43
1:0:860:U:H6	1:0:860:U:O5'	2.02	0.42
1:0:1655:C:H2'	1:0:1656:U:O4'	2.19	0.42
1:0:322:A:C2	1:0:346:C:C4	3.07	0.42
1:0:174:A:O2'	1:0:2223:U:OP1	2.29	0.42
1:0:2571:G:H2'	1:0:2572:U:C6	2.54	0.42
1:0:1975:G:HO2'	1:0:1976:U:P	2.42	0.42
1:0:1630:A:H2'	1:0:1631:C:H5'	2.01	0.42
1:0:2593:A:C2'	1:0:2594:U:H5'	2.48	0.42
1:0:515:A:H2'	1:0:516:G:H5'	2.00	0.42
1:0:481:A:H3'	1:0:482:A:C8	2.54	0.42
1:0:1316:G:C4	1:0:1317:G:C8	3.06	0.42
1:0:2023:C:H2'	1:0:2024:U:C6	2.54	0.42
1:0:880:C:OP1	1:0:881:U:OP2	2.37	0.42
1:0:102:C:H2'	1:0:103:U:O4'	2.19	0.42
1:0:434:C:C2'	1:0:435:A:OP2	2.66	0.42
1:0:2495:G:C2'	1:0:2496:C:O4'	2.65	0.42
1:0:2194:A:C3'	1:0:2195:C:C5'	2.95	0.42
1:0:1685:A:O2'	1:0:1686:A:P	2.77	0.42
1:0:2529:G:H2'	1:0:2530:C:H5'	2.01	0.42
1:0:931:G:H22	1:0:2247:A:C5'	2.32	0.42
1:0:1930:C:H2'	1:0:1931:G:H5'	2.01	0.42
1:0:697:G:C6	1:0:788:G:N7	2.88	0.42
1:0:193:A:N7	1:0:444:U:N3	2.67	0.42
1:0:956:A:O2'	1:0:957:G:OP1	2.36	0.42
1:0:469:G:O2'	1:0:470:U:H5	2.02	0.42
1:0:1730:G:O2'	1:0:1731:C:H5'	2.20	0.42
1:0:2763:U:O2'	1:0:2764:U:H5'	2.18	0.42
1:0:2584:U:H2'	1:0:2585:C:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1090:C:O2'	1:0:1091:C:H5'	2.18	0.42
1:0:1091:C:O2'	1:0:1092:U:H5'	2.19	0.42
1:0:1389:C:H2'	1:0:1390:G:O4'	2.19	0.42
1:0:2792:C:H2'	1:0:2793:G:O4'	2.18	0.42
1:0:1313:U:N3	1:0:1651:U:H1'	2.34	0.42
1:0:2867:G:HO2'	1:0:2868:G:P	2.42	0.42
1:0:987:G:C5'	1:0:1167:A:N6	2.81	0.42
1:0:1624:A:N6	1:0:1627:C:C2	2.87	0.42
1:0:2244:C:N3	1:0:2245:A:N6	2.68	0.42
1:0:2549:G:H2'	1:0:2550:C:C5'	2.49	0.42
1:0:789:G:H2'	1:0:790:A:OP2	2.18	0.42
1:0:746:G:OP2	1:0:774:A:N6	2.44	0.42
1:0:1473:U:H5'	1:0:1474:A:C8	2.54	0.42
1:0:2161:C:H2'	1:0:2162:C:H5	1.85	0.42
1:0:1485:U:O2	1:0:1538:A:H2	2.03	0.42
1:0:2506:C:O2'	1:0:2507:U:H5'	2.17	0.42
1:0:159:A:O2'	1:0:160:C:H5'	2.18	0.42
1:0:1611:U:O2'	1:0:1612:U:H5'	2.18	0.42
1:0:1419:G:O2'	1:0:1420:A:H5'	2.19	0.42
1:0:173:A:H61	1:0:844:G:H1'	1.83	0.42
1:0:1248:G:N1	1:0:1249:G:N2	2.68	0.42
1:0:177:U:OP2	1:0:178:C:OP2	2.37	0.42
1:0:2278:A:H2'	1:0:2279:G:C8	2.55	0.42
1:0:747:A:O2'	1:0:748:A:H5'	2.19	0.42
1:0:2276:C:H1'	1:0:2301:A:N3	2.35	0.42
1:0:2732:C:H3'	1:0:2733:A:C8	2.54	0.42
1:0:1461:C:H2'	1:0:1462:C:C6	2.54	0.42
1:0:431:G:C2	1:0:432:C:C5	3.07	0.42
1:0:1791:C:H2'	1:0:1792:C:C5'	2.35	0.42
1:0:1154:A:H3'	1:0:1154:A:H8	1.85	0.42
1:0:341:A:C2	1:0:1223:G:N7	2.88	0.42
1:0:195:A:H2'	1:0:196:A:C5'	2.50	0.42
1:0:195:A:H61	1:0:212:U:H4'	1.84	0.42
1:0:40:U:H2'	1:0:41:G:H8	1.84	0.42
1:0:192:G:HO2'	1:0:193:A:P	2.42	0.42
1:0:1440:G:H1'	1:0:1588:A:H61	1.84	0.42
1:0:1641:C:H2'	1:0:1642:G:C5'	2.50	0.42
1:0:2792:C:H2'	1:0:2793:G:H5''	2.02	0.42
1:0:2836:U:O2'	1:0:2837:G:H5'	2.19	0.42
1:0:1312:G:C4'	1:0:1314:A:N3	2.83	0.42
1:0:1194:U:O2'	1:0:1195:U:O5'	2.38	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:988:G:N3	1:0:1012:A:H2	2.18	0.42
1:0:1073:G:H2'	1:0:1074:G:C5'	2.48	0.42
1:0:1729:C:H2'	1:0:1730:G:H8	1.83	0.42
1:0:2274:C:H2'	1:0:2275:U:H5''	1.99	0.42
1:0:1459:U:O4	1:0:1476:G:H5''	2.19	0.42
1:0:2526:U:C5	1:0:2545:A:N7	2.88	0.42
1:0:2505:G:N1	1:0:2517:C:O2	2.52	0.42
1:0:2109:A:H2'	1:0:2110:G:H8	1.85	0.42
1:0:1365:U:H1'	1:0:1586:A:C2	2.55	0.42
1:0:1383:C:H2'	1:0:1384:G:O4'	2.20	0.42
1:0:1300:A:H2'	1:0:1300:A:N3	2.34	0.42
1:0:2446:C:H2'	1:0:2447:G:C1'	2.49	0.42
1:0:790:A:O2'	1:0:791:G:H5'	2.20	0.42
1:0:1717:A:O2'	1:0:1757:C:OP1	2.27	0.42
1:0:458:G:H4'	1:0:461:A:C4	2.54	0.42
1:0:172:A:N1	1:0:178:C:N3	2.68	0.42
1:0:230:C:H2'	1:0:231:G:O4'	2.19	0.42
1:0:1017:C:N3	1:0:1148:G:N1	2.68	0.42
1:0:2462:C:H2'	1:0:2463:G:H5'	2.02	0.42
1:0:2490:U:H2'	1:0:2491:C:C6	2.54	0.42
1:0:1872:A:H1'	1:0:2070:G:H5'	2.02	0.42
1:0:91:A:H2'	1:0:92:U:C6	2.54	0.42
1:0:76:C:H2'	1:0:77:C:C6	2.55	0.42
1:0:2539:C:N4	1:0:2540:A:N6	2.68	0.42
1:0:146:C:H2'	1:0:147:G:C8	2.54	0.42
1:0:1571:G:H2'	1:0:1572:C:O4'	2.20	0.42
1:0:1011:A:N6	1:0:1166:A:C8	2.88	0.42
1:0:1337:G:O2'	1:0:1632:A:C6	2.72	0.42
1:0:1108:U:H2'	1:0:1109:A:C5'	2.39	0.42
1:0:73:A:H2'	1:0:74:G:OP2	2.20	0.42
1:0:1894:U:H3	1:0:1901:A:H61	1.66	0.42
1:0:458:G:H4'	1:0:461:A:N3	2.35	0.42
1:0:1287:A:C2	1:0:1661:C:O2'	2.73	0.42
1:0:528:G:H2'	1:0:529:U:C6	2.54	0.42
1:0:238:G:O4'	1:0:618:A:H2	2.03	0.42
1:0:298:C:H2'	1:0:299:C:C6	2.55	0.42
1:0:387:A:O5'	1:0:436:A:N7	2.53	0.42
1:0:1749:G:H2'	1:0:1750:A:OP1	2.19	0.42
1:0:346:C:O2'	1:0:347:C:H5'	2.19	0.42
1:0:1029:C:N4	1:0:1153:A:C6	2.85	0.42
1:0:2087:U:H2'	1:0:2088:U:C6	2.54	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:461:A:H61	1:0:466:A:N6	2.17	0.42
1:0:742:G:N2	1:0:1766:U:C1'	2.83	0.42
1:0:1550:C:C2'	1:0:1551:U:O5'	2.68	0.42
1:0:879:A:H2'	1:0:880:C:O5'	2.20	0.42
1:0:1125:G:H2'	1:0:1126:A:O4'	2.18	0.42
1:0:2301:A:C2'	1:0:2302:G:H5'	2.50	0.42
1:0:2538:C:H2'	1:0:2539:C:H6	1.85	0.42
1:0:2696:A:H2'	1:0:2697:G:C8	2.53	0.42
1:0:1205:G:O2'	1:0:1206:G:H5'	2.20	0.42
1:0:174:A:H2'	1:0:175:C:O4'	2.20	0.42
1:0:1922:U:HO2'	1:0:2571:G:C1'	2.33	0.42
1:0:1883:A:H1'	1:0:1953:A:C8	2.55	0.42
1:0:1900:U:O2'	1:0:1946:U:C5'	2.68	0.42
1:0:801:A:HO2'	1:0:802:A:P	2.42	0.42
1:0:805:G:O6	1:0:2419:C:O4'	2.38	0.42
1:0:577:U:H5'	1:0:956:A:H62	1.85	0.42
1:0:1542:G:N2	1:0:1561:A:H62	2.18	0.42
1:0:1514:C:OP2	1:0:1593:C:H5''	2.19	0.42
1:0:1552:C:C2'	1:0:1553:G:H5'	2.50	0.42
1:0:2756:A:N6	1:0:2762:G:C4	2.88	0.42
1:0:332:C:H5''	1:0:333:A:OP2	2.20	0.42
1:0:914:C:H2'	1:0:915:C:H6	1.83	0.42
1:0:1271:C:H2'	1:0:1272:G:C8	2.55	0.42
1:0:1770:U:H3'	1:0:1770:U:H6	1.85	0.42
1:0:200:A:H1'	1:0:432:C:N3	2.35	0.41
1:0:2309:G:O2'	1:0:2310:G:H5'	2.19	0.41
1:0:244:C:H2'	1:0:245:C:C5'	2.41	0.41
1:0:2034:A:N6	1:0:2593:A:C5	2.88	0.41
1:0:180:C:H6	1:0:180:C:O5'	2.02	0.41
1:0:2526:U:H2'	1:0:2527:G:H8	1.81	0.41
1:0:310:A:C4	1:0:333:A:N6	2.88	0.41
1:0:1312:G:N2	1:0:1657:A:H5'	2.35	0.41
1:0:984:A:H2	1:0:1200:G:N1	2.15	0.41
1:0:634:G:O2'	1:0:635:C:H5'	2.20	0.41
1:0:2326:C:N4	1:0:2350:G:N2	2.68	0.41
1:0:73:A:O3'	1:0:74:G:C4'	2.66	0.41
1:0:1975:G:N2	1:0:1979:C:H5	2.13	0.41
1:0:1900:U:O2'	1:0:1946:U:H5''	2.19	0.41
1:0:1635:G:H2'	1:0:1635:G:N3	2.33	0.41
1:0:2038:C:OP1	1:0:2039:G:H4'	2.20	0.41
1:0:805:G:H5'	1:0:805:G:H8	1.85	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:817:A:H2'	1:0:819:C:N4	2.35	0.41
1:0:524:A:H2'	1:0:525:A:C8	2.55	0.41
1:0:439:C:H5''	1:0:440:U:C5	2.56	0.41
1:0:367:G:C2'	1:0:368:A:H5''	2.49	0.41
1:0:1548:U:H2'	1:0:1549:C:H6	1.85	0.41
1:0:1354:A:N6	1:0:1407:G:H1	2.14	0.41
1:0:2505:G:N1	1:0:2517:C:C2	2.88	0.41
1:0:1440:G:H3'	1:0:1441:A:C5'	2.50	0.41
1:0:2491:C:H42	1:0:2553:G:H1	1.67	0.41
1:0:298:C:H2'	1:0:299:C:H6	1.83	0.41
1:0:42:G:H2'	1:0:43:A:O4'	2.19	0.41
1:0:1899:A:O5'	1:0:1899:A:H8	2.03	0.41
1:0:1750:A:C8	1:0:2675:U:H1'	2.56	0.41
1:0:2496:C:C4	1:0:2521:A:N6	2.88	0.41
1:0:321:A:H4'	1:0:322:A:N7	2.36	0.41
1:0:346:C:O2	1:0:346:C:C2'	2.68	0.41
1:0:847:C:H41	1:0:955:G:N2	2.18	0.41
1:0:610:G:N2	1:0:614:G:O3'	2.53	0.41
1:0:2484:G:H5'	2:0:2881:TEL:C57	2.48	0.41
1:0:1762:C:O2'	1:0:1777:A:O4'	2.37	0.41
1:0:477:A:H1'	1:0:696:U:O4'	2.20	0.41
1:0:1550:C:H2'	1:0:1551:U:O5'	2.20	0.41
1:0:980:G:H2'	1:0:981:C:O4'	2.20	0.41
1:0:2281:C:O5'	1:0:2281:C:H6	2.04	0.41
1:0:2015:G:H2'	1:0:2015:G:N3	2.34	0.41
1:0:1872:A:H2'	1:0:1873:A:C8	2.56	0.41
1:0:1873:A:H4'	1:0:2069:U:H4'	2.02	0.41
1:0:1159:U:O2'	1:0:1160:C:H5'	2.20	0.41
1:0:2741:G:H2'	1:0:2742:G:C8	2.55	0.41
1:0:1739:G:H2'	1:0:1740:G:H8	1.85	0.41
1:0:1166:A:H2'	1:0:1167:A:H5''	2.02	0.41
1:0:1783:G:O2'	1:0:1784:C:H5'	2.20	0.41
1:0:1684:G:H2'	1:0:1685:A:OP2	2.20	0.41
1:0:1083:C:C4	1:0:1104:G:O6	2.73	0.41
1:0:58:C:O4'	1:0:72:A:C8	2.74	0.41
1:0:2698:G:H2'	1:0:2699:G:O4'	2.21	0.41
1:0:1945:C:O2'	1:0:1946:U:C6	2.73	0.41
1:0:114:C:O2'	1:0:115:G:H5'	2.21	0.41
1:0:1211:G:N2	1:0:1263:G:C4	2.88	0.41
1:0:593:C:O5'	1:0:593:C:H6	2.04	0.41
1:0:718:A:N6	1:0:739:G:O2'	2.52	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:16:G:HO2'	1:0:17:G:H5'	1.80	0.41
1:0:1221:C:H2'	1:0:1222:G:C8	2.55	0.41
1:0:1078:A:H2'	1:0:1079:G:C8	2.49	0.41
1:0:751:G:N3	1:0:752:G:H1'	2.35	0.41
1:0:846:A:H2'	1:0:847:C:H6	1.84	0.41
1:0:1685:A:N1	1:0:1691:G:H1'	2.36	0.41
1:0:2061:C:C5'	1:0:2413:A:H4'	2.50	0.41
1:0:1467:U:HO2'	1:0:2681:A:N6	2.18	0.41
1:0:2433:G:O6	1:0:2477:C:N4	2.54	0.41
1:0:197:G:OP2	1:0:439:C:OP2	2.38	0.41
1:0:742:G:N2	1:0:1766:U:N1	2.68	0.41
1:0:369:C:O2'	1:0:370:U:H5'	2.20	0.41
1:0:1316:G:C6	1:0:1317:G:N7	2.88	0.41
1:0:81:C:H4'	1:0:307:C:H5'	2.01	0.41
1:0:781:G:H2'	1:0:782:U:C6	2.56	0.41
1:0:2871:U:H2'	1:0:2872:U:C6	2.55	0.41
1:0:779:U:O5'	1:0:779:U:H6	2.03	0.41
1:0:1454:U:H2'	1:0:1455:C:C6	2.55	0.41
1:0:1723:U:O5'	1:0:1723:U:H6	2.03	0.41
1:0:346:C:C2'	1:0:347:C:H5'	2.51	0.41
1:0:1972:G:H2'	1:0:1973:C:O4'	2.21	0.41
1:0:2314:A:H1'	1:0:2315:A:N7	2.35	0.41
1:0:919:U:C4	1:0:920:G:N7	2.88	0.41
1:0:459:A:N7	1:0:484:G:C5	2.89	0.41
1:0:2226:A:H2'	1:0:2227:C:C6	2.55	0.41
1:0:197:G:C1'	1:0:211:U:H1'	2.45	0.41
1:0:474:G:C6	1:0:478:G:O6	2.73	0.41
1:0:2514:G:H2'	1:0:2515:G:H8	1.85	0.41
1:0:1545:G:N2	1:0:1558:C:O2	2.54	0.41
1:0:462:G:H8	1:0:462:G:O5'	2.03	0.41
1:0:1191:G:O2'	1:0:1192:A:H5'	2.20	0.41
1:0:1462:C:O2'	1:0:1560:A:H1'	2.19	0.41
1:0:1139:A:N6	1:0:2497:A:H61	2.16	0.41
1:0:833:A:H1'	1:0:954:U:O2'	2.21	0.41
1:0:1033:G:O2'	1:0:1035:G:N7	2.54	0.41
1:0:1629:G:C6	1:0:1633:C:N4	2.89	0.41
1:0:1761:G:C2'	1:0:1762:C:H5'	2.49	0.41
1:0:2382:C:N3	1:0:2393:G:N2	2.54	0.41
1:0:2034:A:H2	1:0:2035:G:O6	2.03	0.41
1:0:774:A:O5'	1:0:774:A:H8	2.04	0.41
1:0:357:A:H3'	1:0:358:C:H5'	2.02	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1588:A:H2'	1:0:1589:G:C8	2.50	0.41
1:0:9:U:O2'	1:0:10:A:H5'	2.20	0.41
1:0:2018:G:HO2'	1:0:2019:C:P	2.39	0.41
1:0:2302:G:H2'	1:0:2303:C:O4'	2.19	0.41
1:0:1273:G:H2'	1:0:1274:C:C6	2.56	0.41
1:0:2684:A:H3'	1:0:2685:A:H8	1.85	0.41
1:0:387:A:N6	1:0:388:G:N2	2.69	0.41
1:0:677:G:C2'	1:0:678:G:H5'	2.50	0.41
1:0:1341:G:H2'	1:0:1343:C:C5	2.55	0.41
1:0:1809:G:H2'	1:0:1810:U:O4'	2.21	0.41
1:0:922:A:H2'	1:0:923:A:C8	2.56	0.41
1:0:162:C:H5'	1:0:195:A:C1'	2.41	0.41
1:0:1260:A:C2'	1:0:1261:G:O5'	2.68	0.41
1:0:1219:C:H2'	1:0:1220:G:O5'	2.21	0.41
1:0:2633:A:C5'	1:0:2634:G:OP1	2.68	0.41
1:0:1698:C:H2'	1:0:1753:A:H2'	2.01	0.41
1:0:545:C:N4	1:0:546:A:N6	2.68	0.41
1:0:1755:G:H2'	1:0:1756:C:C6	2.56	0.41
1:0:1856:U:O3'	1:0:2388:G:O2'	2.39	0.41
1:0:200:A:C6	1:0:435:A:N7	2.88	0.41
1:0:200:A:H4'	1:0:432:C:O2	2.21	0.41
1:0:434:C:H2'	1:0:435:A:OP2	2.21	0.41
1:0:1749:G:C2'	1:0:1750:A:OP1	2.69	0.41
1:0:2498:U:H5'	1:0:2546:G:H21	1.86	0.41
1:0:2519:C:H2'	1:0:2520:A:O4'	2.21	0.41
1:0:2746:G:N3	1:0:2746:G:C2'	2.83	0.41
1:0:1450:G:H2'	1:0:1451:C:O4'	2.20	0.41
1:0:853:C:H2'	1:0:854:G:H8	1.86	0.41
1:0:1342:U:C5'	1:0:1343:C:H5	2.34	0.41
1:0:2380:U:O2	1:0:2380:U:H2'	2.20	0.41
1:0:1035:G:H21	1:0:1155:G:C5'	2.34	0.41
1:0:26:G:C6	1:0:27:G:C2	3.09	0.41
1:0:340:G:C5'	1:0:341:A:OP1	2.65	0.41
1:0:1908:C:O5'	1:0:1908:C:H6	2.03	0.41
1:0:2571:G:C5	1:0:2572:U:C4	3.08	0.41
1:0:122:G:N2	1:0:124:A:H4'	2.36	0.41
1:0:767:G:H2'	1:0:768:U:C6	2.55	0.41
1:0:1777:A:O2'	1:0:1778:U:P	2.77	0.41
1:0:700:C:C1'	1:0:801:A:O4'	2.69	0.41
1:0:459:A:H1'	1:0:466:A:N6	2.36	0.41
1:0:486:U:C6	1:0:486:U:OP2	2.74	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2404:A:O2'	1:0:2405:A:OP2	2.34	0.41
1:0:1057:A:H3'	1:0:1058:G:H5''	2.00	0.41
1:0:306:G:H2'	1:0:307:C:C6	2.56	0.41
1:0:1548:U:H2'	1:0:1549:C:C6	2.56	0.41
1:0:2334:C:H3'	1:0:2335:U:C5'	2.50	0.41
1:0:1394:G:H1'	1:0:1587:A:C2	2.56	0.41
1:0:1281:A:H1'	1:0:2592:U:O2	2.21	0.41
1:0:1184:G:C6	1:0:1185:C:N4	2.89	0.41
1:0:2830:U:H2'	1:0:2831:A:C8	2.52	0.41
1:0:1045:G:H2'	1:0:1046:U:C6	2.56	0.41
1:0:2434:G:H2'	1:0:2435:C:C6	2.56	0.41
1:0:889:C:O2'	1:0:890:U:H5'	2.20	0.41
1:0:1750:A:H5''	1:0:2695:C:H1'	2.02	0.41
1:0:2823:G:O2'	1:0:2843:A:N6	2.54	0.41
1:0:1452:U:C2'	1:0:1453:A:H5'	2.51	0.41
1:0:324:C:H2'	1:0:325:U:H5'	2.02	0.41
1:0:1333:G:N7	1:0:1342:U:H5'	2.35	0.41
1:0:991:A:C2	1:0:2020:G:N3	2.89	0.41
1:0:871:U:H1'	1:0:2248:A:H5''	2.03	0.41
1:0:1038:U:O2'	1:0:1039:A:H5'	2.21	0.41
1:0:212:U:H2'	1:0:213:C:C6	2.55	0.41
1:0:172:A:H1'	1:0:228:A:H1'	2.03	0.41
1:0:2262:C:C5	1:0:2368:G:H2'	2.56	0.41
1:0:1286:U:H4'	1:0:1288:A:OP1	2.21	0.41
1:0:1661:C:H2'	1:0:1662:G:C8	2.56	0.41
1:0:1352:G:H2'	1:0:1353:A:C8	2.56	0.41
1:0:2616:U:H3	1:0:2756:A:H62	1.69	0.41
1:0:1618:U:O5'	1:0:1618:U:O2	2.38	0.41
1:0:1619:A:N3	1:0:1619:A:O5'	2.54	0.41
1:0:2357:A:H2'	1:0:2358:C:H5'	2.03	0.41
1:0:605:G:N1	1:0:606:A:C6	2.90	0.41
1:0:1672:A:C2	1:0:2032:G:H4'	2.56	0.41
1:0:487:G:H4'	1:0:511:A:N6	2.36	0.41
1:0:1018:C:O5'	1:0:1018:C:H6	2.04	0.41
1:0:2843:A:N6	1:0:2844:G:N1	2.69	0.40
1:0:853:C:N3	1:0:950:G:C6	2.89	0.40
1:0:2532:G:C3'	1:0:2533:U:C5'	2.96	0.40
1:0:1681:A:C2	1:0:2706:U:C1'	3.00	0.40
1:0:1894:U:H6	1:0:1894:U:O5'	2.03	0.40
1:0:2041:A:N1	2:0:2881:TEL:O48	2.45	0.40
1:0:190:A:O2'	1:0:191:G:H5'	2.20	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:516:G:O2'	1:0:517:A:C8	2.73	0.40
1:0:439:C:C4	1:0:440:U:C2	3.09	0.40
1:0:13:A:H4'	1:0:14:A:H8	1.86	0.40
1:0:1141:U:O2'	1:0:1142:G:P	2.78	0.40
1:0:1456:C:H2'	1:0:1457:A:H8	1.86	0.40
1:0:2204:A:P	1:0:2204:A:H8	2.44	0.40
1:0:1419:G:H2'	1:0:1420:A:O4'	2.20	0.40
1:0:173:A:HO2'	1:0:174:A:P	2.43	0.40
1:0:2322:U:C2'	1:0:2323:U:H5'	2.51	0.40
1:0:2082:C:O2'	1:0:2083:G:H5'	2.20	0.40
1:0:1778:U:O2'	1:0:1779:C:H5'	2.21	0.40
1:0:171:G:C2	1:0:179:U:C2	3.09	0.40
1:0:178:C:O4'	1:0:399:G:N2	2.54	0.40
1:0:464:G:H2'	1:0:465:C:H6	1.86	0.40
1:0:1233:A:H2'	1:0:1234:C:OP1	2.22	0.40
1:0:1234:C:H2'	1:0:1235:C:H6	1.86	0.40
1:0:1458:A:H5''	1:0:1459:U:OP2	2.21	0.40
1:0:2633:A:C2	1:0:2644:A:H5''	2.56	0.40
1:0:2756:A:O2'	1:0:2757:G:C5'	2.69	0.40
1:0:1994:U:H2'	1:0:1995:G:H5'	2.03	0.40
1:0:748:A:H3'	1:0:749:C:C5	2.57	0.40
1:0:1597:A:H2'	1:0:1598:C:C6	2.56	0.40
1:0:619:A:H2'	1:0:620:G:H8	1.87	0.40
1:0:1446:U:H2'	1:0:1447:U:O4'	2.22	0.40
1:0:1816:G:O2'	1:0:1817:U:H5'	2.21	0.40
1:0:1294:G:N1	1:0:1302:C:N4	2.55	0.40
1:0:1688:U:N3	1:0:1691:G:OP2	2.52	0.40
1:0:2264:C:H2'	1:0:2265:A:H5'	2.02	0.40
1:0:1679:U:C2'	1:0:1680:U:C5'	2.97	0.40
1:0:796:A:C2	1:0:797:A:H4'	2.57	0.40
1:0:686:C:H2'	1:0:687:G:H8	1.86	0.40
1:0:701:U:H6	1:0:701:U:O5'	2.04	0.40
1:0:743:A:C6	1:0:744:C:C4	3.10	0.40
1:0:474:G:N2	1:0:476:G:C8	2.87	0.40
1:0:14:A:N6	1:0:15:G:H21	2.19	0.40
1:0:2816:C:O2	1:0:2852:G:N1	2.54	0.40
1:0:2783:U:C2	1:0:2866:A:N6	2.89	0.40
1:0:1406:A:H8	1:0:1406:A:O5'	2.04	0.40
1:0:2862:G:O2'	1:0:2863:U:H5'	2.21	0.40
1:0:1489:C:H3'	1:0:1490:U:C5'	2.51	0.40
1:0:2499:C:N1	1:0:2546:G:H1'	2.37	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1450:G:O2'	1:0:1451:C:H5'	2.21	0.40
1:0:683:A:H5''	1:0:684:C:O5'	2.21	0.40
1:0:834:A:O2'	1:0:955:G:H4'	2.22	0.40
1:0:2377:U:O2'	1:0:2378:G:OP1	2.36	0.40
1:0:1145:C:O5'	1:0:1146:G:OP2	2.39	0.40
1:0:844:G:H2'	1:0:845:U:O4'	2.21	0.40
1:0:2363:G:H2'	1:0:2364:C:OP1	2.21	0.40
1:0:874:A:C4	1:0:929:A:N6	2.89	0.40
1:0:873:U:N3	1:0:930:A:C6	2.69	0.40
1:0:2548:G:C2'	1:0:2549:G:C5'	3.00	0.40
1:0:1135:C:O2'	1:0:1136:G:H5'	2.22	0.40
1:0:698:A:C4'	1:0:700:C:H5	2.35	0.40
1:0:329:C:H2'	1:0:330:C:C6	2.57	0.40
1:0:541:C:N4	1:0:572:G:H5''	2.36	0.40
1:0:1308:C:H2'	1:0:1309:G:H8	1.87	0.40
1:0:2852:G:H2'	1:0:2853:U:H5'	2.03	0.40
1:0:2792:C:H3'	1:0:2793:G:H5''	2.04	0.40
1:0:185:C:O2'	1:0:186:C:H5'	2.22	0.40
1:0:924:C:H2'	1:0:925:U:O4'	2.22	0.40
1:0:1676:U:O2'	1:0:1677:C:H5'	2.22	0.40
1:0:1725:C:O2'	1:0:1726:C:H5'	2.22	0.40
1:0:2691:C:H5''	1:0:2694:G:H5'	2.04	0.40
1:0:1987:G:H2'	1:0:1988:A:C5'	2.52	0.40
1:0:1177:U:C2	1:0:1197:U:O2	2.75	0.40
1:0:1340:C:O2'	1:0:1341:G:H5'	2.21	0.40
1:0:1938:U:C2'	1:0:1938:U:O2	2.69	0.40
1:0:1029:C:O5'	1:0:1029:C:H6	2.05	0.40
1:0:174:A:H2	1:0:2413:A:H62	1.69	0.40
1:0:2322:U:H4'	1:0:2352:A:O3'	2.22	0.40
1:0:38:G:H2'	1:0:39:C:H6	1.80	0.40
1:0:1706:A:H2'	1:0:1707:A:C5'	2.51	0.40
1:0:516:G:H5''	1:0:519:C:H1'	2.04	0.40
1:0:2236:U:H2'	1:0:2237:C:O4'	2.22	0.40
1:0:441:A:H2'	1:0:442:A:H5'	2.04	0.40
1:0:839:U:N3	1:0:841:G:H1'	2.36	0.40
1:0:1430:G:H2'	1:0:1431:U:C6	2.56	0.40
1:0:2104:G:H2'	1:0:2105:U:C6	2.56	0.40
1:0:2160:C:H2'	1:0:2161:C:C6	2.56	0.40
1:0:1366:A:N7	1:0:1390:G:C2	2.89	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

There are no protein molecules in this entry.

5.3.2 Protein sidechains [i](#)

There are no protein molecules in this entry.

5.3.3 RNA [i](#)

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

All (580) RNA backbone outliers are listed below:

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

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Mol	Chain	Res	Type
1	0	119	G
1	0	123	A
1	0	124	A
1	0	129	A
1	0	135	U
1	0	149	A
1	0	155	G
1	0	158	A
1	0	173	A
1	0	174	A
1	0	176	A
1	0	177	U
1	0	182	G
1	0	193	A
1	0	199	A
1	0	200	A
1	0	201	G
1	0	205	A
1	0	206	U
1	0	207	U
1	0	210	A
1	0	218	A
1	0	219	G
1	0	220	U
1	0	225	G
1	0	227	G
1	0	229	G
1	0	242	A
1	0	244	C
1	0	245	C
1	0	302	U
1	0	303	C
1	0	305	A
1	0	312	G
1	0	322	A
1	0	334	G
1	0	335	A
1	0	340	G
1	0	341	A
1	0	343	A
1	0	348	U
1	0	358	C

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Mol	Chain	Res	Type
1	0	363	G
1	0	368	A
1	0	372	U
1	0	373	A
1	0	389	G
1	0	390	U
1	0	392	G
1	0	393	U
1	0	397	U
1	0	399	G
1	0	402	A
1	0	403	A
1	0	431	G
1	0	432	C
1	0	433	G
1	0	434	C
1	0	435	A
1	0	437	G
1	0	438	G
1	0	440	U
1	0	455	A
1	0	456	C
1	0	459	A
1	0	460	U
1	0	461	A
1	0	463	C
1	0	467	U
1	0	469	G
1	0	484	G
1	0	486	U
1	0	491	A
1	0	492	G
1	0	514	G
1	0	515	A
1	0	517	A
1	0	518	A
1	0	519	C
1	0	520	C
1	0	537	C
1	0	538	A
1	0	540	G
1	0	541	C

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Mol	Chain	Res	Type
1	0	542	A
1	0	554	U
1	0	555	U
1	0	556	A
1	0	558	G
1	0	559	C
1	0	560	G
1	0	572	G
1	0	582	G
1	0	584	A
1	0	587	A
1	0	596	C
1	0	601	A
1	0	602	C
1	0	613	A
1	0	616	U
1	0	617	U
1	0	624	A
1	0	632	A
1	0	638	A
1	0	639	G
1	0	648	A
1	0	652	C
1	0	654	A
1	0	667	U
1	0	669	G
1	0	683	A
1	0	684	C
1	0	698	A
1	0	699	G
1	0	700	C
1	0	712	A
1	0	728	G
1	0	742	G
1	0	743	A
1	0	753	U
1	0	760	U
1	0	761	G
1	0	765	C
1	0	766	A
1	0	775	U
1	0	778	G

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Mol	Chain	Res	Type
1	0	787	A
1	0	789	G
1	0	790	A
1	0	794	A
1	0	795	A
1	0	796	A
1	0	797	A
1	0	798	G
1	0	801	A
1	0	802	A
1	0	803	C
1	0	804	C
1	0	805	G
1	0	806	A
1	0	807	A
1	0	815	A
1	0	818	G
1	0	819	C
1	0	825	C
1	0	832	A
1	0	840	U
1	0	841	G
1	0	843	G
1	0	844	G
1	0	860	U
1	0	869	C
1	0	873	U
1	0	880	C
1	0	919	U
1	0	922	A
1	0	926	C
1	0	930	A
1	0	931	G
1	0	939	C
1	0	941	U
1	0	943	U
1	0	944	A
1	0	952	A
1	0	956	A
1	0	957	G
1	0	969	U
1	0	970	A

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Mol	Chain	Res	Type
1	0	972	C
1	0	984	A
1	0	985	G
1	0	990	A
1	0	994	A
1	0	996	C
1	0	1016	C
1	0	1019	U
1	0	1023	U
1	0	1024	G
1	0	1030	U
1	0	1032	A
1	0	1033	G
1	0	1034	U
1	0	1036	G
1	0	1037	U
1	0	1044	U
1	0	1055	A
1	0	1056	U
1	0	1057	A
1	0	1058	G
1	0	1059	A
1	0	1067	G
1	0	1071	U
1	0	1073	G
1	0	1074	G
1	0	1081	A
1	0	1082	G
1	0	1087	C
1	0	1090	C
1	0	1099	A
1	0	1130	U
1	0	1137	A
1	0	1138	A
1	0	1141	U
1	0	1142	G
1	0	1145	C
1	0	1146	G
1	0	1152	C
1	0	1153	A
1	0	1155	G
1	0	1166	A

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Mol	Chain	Res	Type
1	0	1167	A
1	0	1183	C
1	0	1185	C
1	0	1195	U
1	0	1199	U
1	0	1200	G
1	0	1223	G
1	0	1224	A
1	0	1233	A
1	0	1235	C
1	0	1250	A
1	0	1251	G
1	0	1253	C
1	0	1261	G
1	0	1262	U
1	0	1264	C
1	0	1265	G
1	0	1267	A
1	0	1269	G
1	0	1274	C
1	0	1278	A
1	0	1279	G
1	0	1284	G
1	0	1285	A
1	0	1286	U
1	0	1288	A
1	0	1289	A
1	0	1300	A
1	0	1302	C
1	0	1313	U
1	0	1314	A
1	0	1316	G
1	0	1324	G
1	0	1327	C
1	0	1334	A
1	0	1338	G
1	0	1339	U
1	0	1342	U
1	0	1343	C
1	0	1346	C
1	0	1354	A
1	0	1356	G

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Mol	Chain	Res	Type
1	0	1359	G
1	0	1391	A
1	0	1392	U
1	0	1397	A
1	0	1398	G
1	0	1407	G
1	0	1411	C
1	0	1433	A
1	0	1441	A
1	0	1442	C
1	0	1443	G
1	0	1450	G
1	0	1459	U
1	0	1460	G
1	0	1468	A
1	0	1469	U
1	0	1470	G
1	0	1474	A
1	0	1475	U
1	0	1476	G
1	0	1482	U
1	0	1489	C
1	0	1490	U
1	0	1505	U
1	0	1508	G
1	0	1513	U
1	0	1514	C
1	0	1524	C
1	0	1529	C
1	0	1552	C
1	0	1553	G
1	0	1573	G
1	0	1574	A
1	0	1583	A
1	0	1585	A
1	0	1614	C
1	0	1618	U
1	0	1619	A
1	0	1623	C
1	0	1624	A
1	0	1625	A
1	0	1627	C

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Mol	Chain	Res	Type
1	0	1631	C
1	0	1634	A
1	0	1635	G
1	0	1648	C
1	0	1652	G
1	0	1657	A
1	0	1664	G
1	0	1665	C
1	0	1670	G
1	0	1671	A
1	0	1680	U
1	0	1685	A
1	0	1686	A
1	0	1691	G
1	0	1692	C
1	0	1699	A
1	0	1711	C
1	0	1712	G
1	0	1715	A
1	0	1716	G
1	0	1717	A
1	0	1724	C
1	0	1733	U
1	0	1748	U
1	0	1749	G
1	0	1750	A
1	0	1754	G
1	0	1755	G
1	0	1763	G
1	0	1764	A
1	0	1770	U
1	0	1771	A
1	0	1772	C
1	0	1773	C
1	0	1776	A
1	0	1778	U
1	0	1792	C
1	0	1799	A
1	0	1800	A
1	0	1801	C
1	0	1802	A
1	0	1807	A

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Mol	Chain	Res	Type
1	0	1808	C
1	0	1812	U
1	0	1821	A
1	0	1831	G
1	0	1840	A
1	0	1864	G
1	0	1884	A
1	0	1889	G
1	0	1900	U
1	0	1909	U
1	0	1919	A
1	0	1920	A
1	0	1922	U
1	0	1924	C
1	0	1926	U
1	0	1927	U
1	0	1928	G
1	0	1930	C
1	0	1933	G
1	0	1938	U
1	0	1939	U
1	0	1946	U
1	0	1947	G
1	0	1948	C
1	0	1949	A
1	0	1950	C
1	0	1953	A
1	0	1954	A
1	0	1955	G
1	0	1956	G
1	0	1964	A
1	0	1975	G
1	0	1976	U
1	0	1979	C
1	0	1980	A
1	0	2002	A
1	0	2003	A
1	0	2004	U
1	0	2005	U
1	0	2006	G
1	0	2013	A
1	0	2014	A

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Mol	Chain	Res	Type
1	0	2015	G
1	0	2016	A
1	0	2019	C
1	0	2026	C
1	0	2038	C
1	0	2039	G
1	0	2043	A
1	0	2044	G
1	0	2045	A
1	0	2046	C
1	0	2047	C
1	0	2050	G
1	0	2051	U
1	0	2052	G
1	0	2060	A
1	0	2075	U
1	0	2076	G
1	0	2082	C
1	0	2094	C
1	0	2096	U
1	0	2118	A
1	0	2119	A
1	0	2121	U
1	0	2140	G
1	0	2162	C
1	0	2168	A
1	0	2181	A
1	0	2191	A
1	0	2192	U
1	0	2195	C
1	0	2199	C
1	0	2205	C
1	0	2218	G
1	0	2229	G
1	0	2230	G
1	0	2241	U
1	0	2245	A
1	0	2246	A
1	0	2247	A
1	0	2255	G
1	0	2262	C
1	0	2265	A

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Mol	Chain	Res	Type
1	0	2267	A
1	0	2268	G
1	0	2284	U
1	0	2285	U
1	0	2286	G
1	0	2287	G
1	0	2288	A
1	0	2298	U
1	0	2299	A
1	0	2300	G
1	0	2301	A
1	0	2312	A
1	0	2313	G
1	0	2314	A
1	0	2315	A
1	0	2316	G
1	0	2324	G
1	0	2325	A
1	0	2326	C
1	0	2335	U
1	0	2340	C
1	0	2351	G
1	0	2362	G
1	0	2364	C
1	0	2378	G
1	0	2381	A
1	0	2385	U
1	0	2386	G
1	0	2389	G
1	0	2396	C
1	0	2402	U
1	0	2403	C
1	0	2405	A
1	0	2406	C
1	0	2407	G
1	0	2408	G
1	0	2409	A
1	0	2410	U
1	0	2411	A
1	0	2414	A
1	0	2419	C
1	0	2426	G

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Mol	Chain	Res	Type
1	0	2427	A
1	0	2428	U
1	0	2447	G
1	0	2448	A
1	0	2455	A
1	0	2470	U
1	0	2476	A
1	0	2477	C
1	0	2480	C
1	0	2481	G
1	0	2482	A
1	0	2483	U
1	0	2492	G
1	0	2496	C
1	0	2497	A
1	0	2498	U
1	0	2499	C
1	0	2521	A
1	0	2522	G
1	0	2533	U
1	0	2545	A
1	0	2546	G
1	0	2549	G
1	0	2551	A
1	0	2552	C
1	0	2553	G
1	0	2557	G
1	0	2561	G
1	0	2565	C
1	0	2578	G
1	0	2581	A
1	0	2582	G
1	0	2588	U
1	0	2589	C
1	0	2591	C
1	0	2593	A
1	0	2594	U
1	0	2600	A
1	0	2608	A
1	0	2609	G
1	0	2625	U
1	0	2633	A

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Mol	Chain	Res	Type
1	0	2634	G
1	0	2660	C
1	0	2661	G
1	0	2669	C
1	0	2670	C
1	0	2692	A
1	0	2693	U
1	0	2694	G
1	0	2706	U
1	0	2707	G
1	0	2712	G
1	0	2713	A
1	0	2719	U
1	0	2728	A
1	0	2730	A
1	0	2732	C
1	0	2735	C
1	0	2737	A
1	0	2745	A
1	0	2756	A
1	0	2757	G
1	0	2758	A
1	0	2759	U
1	0	2760	G
1	0	2761	A
1	0	2769	C
1	0	2771	C
1	0	2774	U
1	0	2782	G
1	0	2783	U
1	0	2785	A
1	0	2793	G
1	0	2796	A
1	0	2798	A
1	0	2805	G
1	0	2807	U
1	0	2808	U
1	0	2809	A
1	0	2810	A
1	0	2823	G
1	0	2825	A
1	0	2841	U

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Mol	Chain	Res	Type
1	0	2842	C
1	0	2847	G
1	0	2849	C
1	0	2854	G
1	0	2855	C
1	0	2858	A
1	0	2866	A
1	0	2867	G
1	0	2868	G

All (62) RNA pucker outliers are listed below:

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

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Mol	Chain	Res	Type
1	0	1313	U
1	0	1315	A
1	0	1338	G
1	0	1345	G
1	0	1391	A
1	0	1617	G
1	0	1626	A
1	0	1634	A
1	0	1685	A
1	0	1691	G
1	0	1698	C
1	0	1715	A
1	0	1820	G
1	0	1975	G
1	0	2013	A
1	0	2015	G
1	0	2018	G
1	0	2093	G
1	0	2161	C
1	0	2191	A
1	0	2204	A
1	0	2245	A
1	0	2261	G
1	0	2312	A
1	0	2324	G
1	0	2377	U
1	0	2404	A
1	0	2469	G
1	0	2633	A
1	0	2756	A
1	0	2758	A
1	0	2824	C
1	0	2867	G

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

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

5.5 Carbohydrates ⓘ

There are no carbohydrates in this entry.

5.6 Ligand geometry

1 ligand is modelled in this entry.

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

Mol	Type	Chain	Res	Link	Bond lengths			Bond angles		
					Counts	RMSZ	# $ Z > 2$	Counts	RMSZ	# $ Z > 2$
2	TEL	0	2881	-	59,62,62	3.36	29 (49%)	72,92,92	3.21	28 (38%)

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

Mol	Type	Chain	Res	Link	Chirals	Torsions	Rings
2	TEL	0	2881	-	-	0/73/108/108	0/4/5/5

All (29) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	0	2881	TEL	C37-N41	-2.35	1.30	1.35
2	0	2881	TEL	C1-C2	2.04	1.57	1.51
2	0	2881	TEL	C12-C7	2.17	1.58	1.53
2	0	2881	TEL	O18-C13	2.18	1.25	1.21
2	0	2881	TEL	O29-C26	2.23	1.25	1.21
2	0	2881	TEL	C3-N6	2.38	1.53	1.47
2	0	2881	TEL	C36-N31	2.54	1.41	1.38
2	0	2881	TEL	O16-C10	2.60	1.25	1.21
2	0	2881	TEL	C8-C4	2.73	1.63	1.53
2	0	2881	TEL	C21-C15	2.80	1.57	1.51
2	0	2881	TEL	C33-C28	2.98	1.59	1.52
2	0	2881	TEL	O32-C28	3.09	1.51	1.44
2	0	2881	TEL	C28-C34	3.11	1.64	1.55
2	0	2881	TEL	C49-N53	3.11	1.55	1.48
2	0	2881	TEL	C2-C3	3.32	1.63	1.55
2	0	2881	TEL	C10-N6	3.36	1.41	1.35
2	0	2881	TEL	C56-N52	3.44	1.44	1.33
2	0	2881	TEL	C2-C4	4.06	1.66	1.54

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Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
2	0	2881	TEL	C44-C49	4.07	1.62	1.53
2	0	2881	TEL	O5-C10	4.19	1.42	1.35
2	0	2881	TEL	C30-C26	4.87	1.60	1.52
2	0	2881	TEL	C21-C26	5.15	1.60	1.52
2	0	2881	TEL	C51-C46	5.46	1.50	1.38
2	0	2881	TEL	C24-C19	5.80	1.62	1.54
2	0	2881	TEL	C11-N6	5.81	1.55	1.46
2	0	2881	TEL	C47-C43	6.67	1.51	1.39
2	0	2881	TEL	O9-C15	7.18	1.51	1.34
2	0	2881	TEL	C24-C28	7.79	1.64	1.52
2	0	2881	TEL	C30-C34	11.98	1.72	1.54

All (28) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	0	2881	TEL	C3-N6-C10	-12.74	96.35	111.94
2	0	2881	TEL	O39-C34-C28	-6.34	91.39	106.32
2	0	2881	TEL	C11-N6-C10	-6.30	113.68	122.14
2	0	2881	TEL	C2-O5-C10	-6.12	104.19	109.28
2	0	2881	TEL	O20-C15-C21	-6.05	115.73	124.77
2	0	2881	TEL	C4-O9-C15	-5.23	109.31	118.12
2	0	2881	TEL	C36-C40-C43	-4.59	123.05	129.44
2	0	2881	TEL	O9-C4-C8	-4.51	99.19	107.36
2	0	2881	TEL	C12-C7-C13	-4.25	100.44	108.21
2	0	2881	TEL	O32-C28-C34	-4.12	100.90	108.14
2	0	2881	TEL	C35-C30-C26	-3.60	101.64	108.21
2	0	2881	TEL	C2-C3-N6	-3.45	94.32	99.98
2	0	2881	TEL	C1-C2-C4	-3.14	106.62	112.40
2	0	2881	TEL	C33-C28-C34	-3.10	104.74	109.97
2	0	2881	TEL	C54-C49-N53	-2.59	108.05	115.70
2	0	2881	TEL	C24-C19-C13	-2.56	108.72	113.47
2	0	2881	TEL	O29-C26-C30	-2.46	116.79	120.52
2	0	2881	TEL	C54-C49-C44	-2.24	106.76	110.03
2	0	2881	TEL	C55-C50-C54	-2.22	109.68	113.38
2	0	2881	TEL	O32-C28-C24	2.19	110.43	105.73
2	0	2881	TEL	C17-C11-N6	2.53	117.15	113.52
2	0	2881	TEL	O5-C2-C1	2.58	111.53	107.22
2	0	2881	TEL	C56-N52-C47	2.72	121.84	116.84
2	0	2881	TEL	C34-C30-C26	5.19	119.17	110.05
2	0	2881	TEL	O9-C4-C2	5.22	117.95	105.44
2	0	2881	TEL	C28-C24-C19	5.43	125.17	116.09
2	0	2881	TEL	C24-C28-C34	6.34	117.61	110.03

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
2	0	2881	TEL	C42-O39-C34	6.95	128.76	116.30

There are no chirality outliers.

There are no torsion outliers.

There are no ring outliers.

1 monomer is involved in 11 short contacts:

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

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

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

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

EDS was not executed - this section will therefore be empty.

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

EDS was not executed - this section will therefore be empty.

6.3 Carbohydrates [i](#)

EDS was not executed - this section will therefore be empty.

6.4 Ligands [i](#)

EDS was not executed - this section will therefore be empty.

6.5 Other polymers [i](#)

EDS was not executed - this section will therefore be empty.