



Full wwPDB X-ray Structure Validation Report ⓘ

Sep 24, 2018 – 02:47 PM EDT

PDB ID : 2D3O
Title : Structure of Ribosome Binding Domain of the Trigger Factor on the 50S ribosomal subunit from *D. radiodurans*
Authors : Schlutzen, F.; Wilson, D.N.; Hansen, H.A.; Tian, P.; Harms, J.M.; McInnes, S.J.; Albrecht, R.; Buerger, J.; Wilbanks, S.M.; Fucini, P.
Deposited on : 2005-09-30
Resolution : 3.35 Å(reported)

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

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

A user guide is available at

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

with specific help available everywhere you see the ⓘ symbol.

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

MolProbity : 4.02b-467
Xtriage (Phenix) : **NOT EXECUTED**
EDS : **NOT EXECUTED**
Percentile statistics : 20171227.v01 (using entries in the PDB archive December 27th 2017)
Ideal geometry (proteins) : Engh & Huber (2001)
Ideal geometry (DNA, RNA) : Parkinson et al. (1996)
Validation Pipeline (wwPDB-VP) : rb-20031172

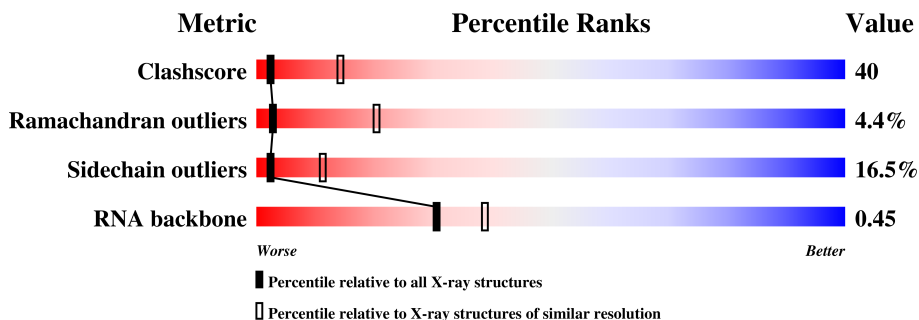
1 Overall quality at a glance

The following experimental techniques were used to determine the structure:

X-RAY DIFFRACTION

The reported resolution of this entry is 3.35 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	122126	1380 (3.42-3.30)
Ramachandran outliers	120053	1359 (3.42-3.30)
Sidechain outliers	120020	1358 (3.42-3.30)
RNA backbone	2636	1001 (3.82-2.90)

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

Note EDS was not executed.

Mol	Chain	Length	Quality of chain
1	0	2880	
2	R	95	
3	S	115	
4	W	67	
5	1	112	

2 Entry composition

There are 5 unique types of molecules in this entry. The entry contains 63004 atoms, of which 0 are hydrogens and 0 are deuteriums.

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

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

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
1	0	2802	Total	C	N	O	P	0	0	0
			60132	26824	11089	19418	2801			

- Molecule 2 is a protein called 50S RIBOSOMAL PROTEIN L23.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
2	R	93	Total	C	N	O	S	0	0	0
			726	458	136	130	2			

- Molecule 3 is a protein called 50S RIBOSOMAL PROTEIN L24.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
3	S	110	Total	C	N	O	S	0	0	0
			825	513	160	151	1			

- Molecule 4 is a protein called 50S RIBOSOMAL PROTEIN L29.

Mol	Chain	Residues	Atoms					ZeroOcc	AltConf	Trace
4	W	66	Total	C	N	O	S	0	0	0
			533	327	107	96	3			

- Molecule 5 is a protein called Trigger Factor.

Mol	Chain	Residues	Atoms				ZeroOcc	AltConf	Trace
5	1	100	Total	C	N	O	0	0	0
			788	494	146	148			

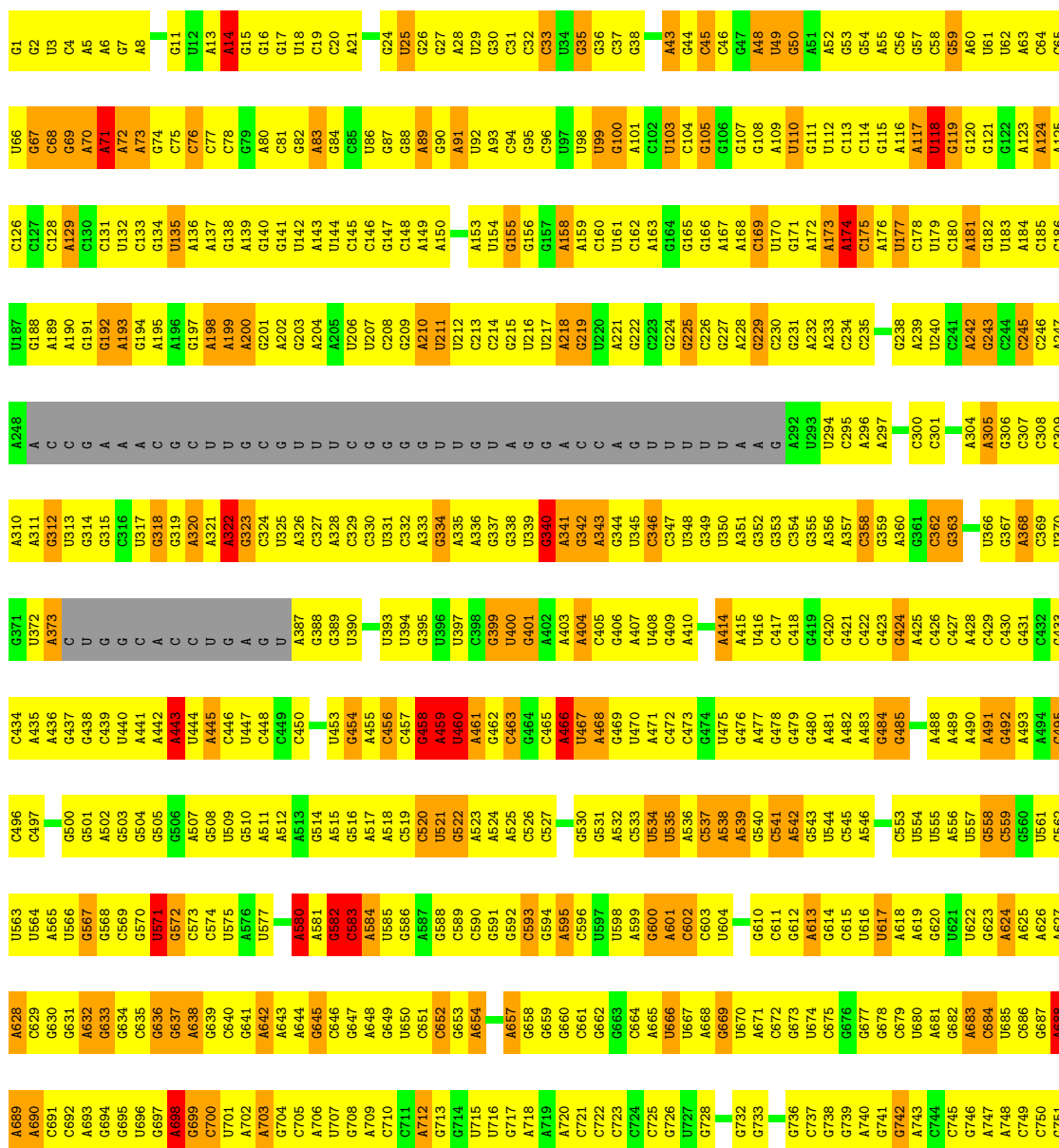
3 Residue-property plots

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

Note EDS was not executed.

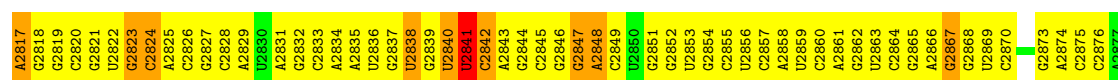
• Molecule 1: 23S RIBOSOMAL RNA

Chain 0: 



A1718	G1719	G1720	G1721	G1722	G1723	G1724	G1725	G1726	G1727	G1728	G1729	G1730	G1731	G1732	G1733	G1734	G1735	G1736	G1737	G1738	G1739	G1740	G1741	G1742	G1743	G1744	G1745	G1746	G1747	G1748	G1749	A1750	A1751	A1752	A1753	G1754	G1755	G1756	G1757	G1758	G1759	G1760	G1761	G1762	G1763	A1764	G1765	G1766	G1767	G1768	G1769	G1770	G1771	G1772	G1773	G1774	G1775	G1776	G1777	G1778	G1779	G1780	G1781	G1782	G1783	G1784	G1785	G1786	G1787	G1788	G1789	A1790	G1791	G1792	G1793	A1794	A1795	A1796	A1797	G1798	G1799	U800	A801	A802	C803	C804	C805	A806	A807	C808	C809	U810	G811	G812																																																																																																																																																																																																																																																																																																																													
C1648	U1651	G1652	C1653	C1654	G1655	G1656	A1657	A1658	G1659	G1660	G1661	G1662	G1663	G1664	G1665	G1666	G1667	G1668	G1669	G1670	A1671	A1672	C1673	C1674	A1681	A1682	G1683	G1684	A1685	A1686	C1687	A1688	A1689	A1690	A1691	A1692	A1693	A1694	A1695	A1696	A1697	A1698	A1699	A1700	A1701	G1704	U1705	G1706	A1707	C1708	U1709	A1710	A1711	G1712	G1713	A1714	A1715	G1716	A1717																																																																																																																																																																																																																																																																																																																																																																
C1580	C1581	A1582	A1583	G1584	G1585	G1586	A1587	A1588	A1589	G1590	U1591	U1592	C1593	U1594	A1595	A1596	A1597	C1598	U1599	U1600	U1601	G1602	A1603	A1604	A1605	C1606	G1607	A1608	A1609	A1610	U1611	U1612	U1613	G1614	C1615	A1619	C1620	C1621	G1622	G1623	A1624	A1625	A1626	C1627	C1628	G1629	A1630	C1631	C1632	A1633	A1634	G1635	G1636	U1637	A1638	A1639	A1640	A1641	A1642	A1643	A1644	A1645	A1646	A1647	A1648	A1649	A1650	A1651	A1652	A1653	A1654	A1655	A1656	A1657	A1658	A1659	A1660	A1661	A1662	A1663	A1664	A1665	A1666	A1667	A1668	A1669	A1670	A1671	A1672	A1673	A1674	A1675	A1676	A1677	A1678	A1679	A1680	A1681	A1682	A1683	A1684	A1685	A1686	A1687	A1688	A1689	A1690	A1691	A1692	A1693	A1694	A1695	A1696	A1697	A1698	A1699	A1700	A1701	A1702	A1703	A1704	A1705	A1706	A1707	A1708	A1709	A1710	A1711	A1712	A1713	A1714	A1715	A1716	A1717																																																																																																																																																																																																																																																																																					
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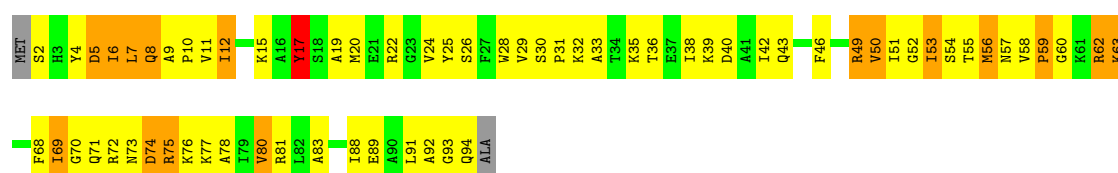
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G2757	C2695	G2627	U2564	G2503	U2439	G2379	A2315	A2252	A2188	G2108	A2040	U1976	C1917	U1843	A1780
A2758	A2696	G2628	C2566	G2504	U2440	U2380	G2319	A2253	A2189	G2109	A2041	C1977	C1918	C1781	A1782
U2759	G2697	A2629	A2566	G2505	U2441	A2381	G2320	C2254	A2190	G2110	A2042	U1978	A1919	A1844	
G2760	G2698	G2630	G2567	G2506	C2443	C2382	G2321	G2255	A2191	G2111	G2043	A1980	A1920	C1783	C1784
A2761	C2699	G2631	A2568	G2507	C2443	C2383	G2322	G2256	U2192	C2112	G2044	A1981	A1921	C1785	
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U2763	A2701	A2633	G2570	A2509	C2445	G2385	U2323	G2258	A2194	G2115	C2046	C1983	U1923	C1786	
G2764	G2702	G2634	G2571	A2510	C2446	U2386	G2324	G2259	C2195	G2116	C2047		U1924	C1852	
G2765	G2703	U2635	U2572	G2511	G2447	G2387	A2325	C2260	U2196	A2117	C2048	G1986	U1925	C1853	U1787
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G2767	A2705	A2637		G2513	G2449	A2389	G2327	C2262	U2198	G2123	G2050	A1988	U1927	C1855	U1789
G2768	U2706		G2576	A2514	A2450	A2390	G2328	C2263	C2199	C2124	U2051	C1989	G1928	U1857	G1791
C2769	G2707		G2576	G2515	G2451	A2391	C2329	C2264	G2200	C2125	G2052		U1929	C1858	C1792
A2770	U2708		A2579	U2516		G2392	G2330	A2265	G2201	U2126	G2053	G1993	C1930	C1859	A1793
G2771	C2709		G2580	G2517	C2454	G2393	A2331	A2266	U2127	U2127	A2054	U1994	A1931	A1860	A1794
U2772	G2710		A2581	C2518	A2455	G2394	G2332	C2267	G2202	U2128	G2055	G1995	G1932	C1861	C1795
G2773	G2711		G2582	G2519		C2395	A2333	G2268	A2204	U2129	G2056	A1996	G1933	C1862	
G2774	G2712		U2583	A2520	U2458	C2396	C2334	G2269	C2205	U2130	U2057	A1997	U1934	U1863	A1800
U2775	A2713		U2584	A2521	U2459	A2397	U2335	U2270	C2206	U2133	U2058	A1998	A1935	C1864	A1801
U2776	G2714		G2585	G2522	G2460	C2398	U2336	C2271		U2134	U2059	U1999	A1936	C1865	A1802
U2777	A2715		G2586	G2523		C2399	A2337	A2272	G2209		A2060	U2000	U1937	C1866	G1803
U2778	G2716		G2587	G2524	G2464	G2400	C2338	C2273	C2210	G2140	C2061	G2001	U1938	U1804	U1803
G2779	U2717		U2588	U2525	G2465	G2401	A2339	C2274	U2211	A2141	U2062	A2002	U1939	U1805	G1805
A2780	G2717		G2589	U2526	G2466	U2402	C2340	U2275	U2212	G2142	A2063	A2003	C1940	C1868	G1806
G2781	A2718		U2590	G2527	A2467	C2403		C2276	G2213	G2143	U2064	U2004	C1941	U1870	A1807
G2782	U2719		G2591	A2528		A2404	C2343	A2277	G2214	C2144	A2065	U2005	G1942	C1871	C1808
U2783	A2720		U2592	G2529	G2468	A2405	G2344	A2278	G2215	C2145	G2066	G2006	A1943	A1872	G1809
G2784	G2721		C2593	G2530	G2469	A2406	A2345	G2279	G2216	U2146	U2067	G2007	C1944	A1873	U1810
U2785	C2722		A2594	U2531	U2470	G2407	G2346	C2280	G2217	C2147	C2068	C2008	C1945	C1874	A1811
G2786	G2723		G2595	G2532	U2471	G2408	A2347	C2281	G2218	G2148	U2069	U2009	U1946	U1812	U1812
A2787	G2724		C2596	U2533	G2472	A2409	C2348		U2219	G2149	G2070	G2010	G1947	A1813	A1813
G2788	G2725		G2597	U2534	G2473	U2410	G2349	U2284	A2220	U2150	G2071	U2011	C1948	G1814	G1814
U2789	U2726		G2598	G2535	G2474	A2411		U2285	G2221	G2151	C2072	A2012	A1949	A1883	G1815
G2790	G2727		U2599	U2536	A2475	A2412	A2352	G2286	U2222	A2152	A2073	A2013	C1950	A1884	G1816
G2791	A2728		G2600	G2537	C2476	A2413	G2353	G2287	U2223	A2153	U2074	A2014	G1951	U1817	U1817
C2792	A2729		C2601	U2538	C2477	G2414	G2354	A2288	U2224	A2154	U2075	G2015	A1952	G1885	G1818
G2793	A2730		G2602	C2539	C2478	G2415	A2355	A2289	G2225	U2155	G2076	A2016	A1953	G1887	U1819
G2794	G2731		G2603	A2540	U2479	G2416	A2356	A2290	A2226	A2156	G2077	U2017	A1954	C1888	G1820
A2795	C2732		G2604	U2541	C2480	U2417	A2357	U2291	C2227		G2078	G2018	G1955	C1889	A1821
U2796	A2733		C2605	U2542	G2481	A2418	C2358	C2292	U2228	A2165	A2079	C2019	G1956	G1890	C1822
G2797	U2734		G2606	A2543	A2482	C2419	U2359	G2293	G2229	G2166	U2080	G2020	C1957	C1891	G1823
A2798	C2735		A2544	G2544	G2483	C2420	C2360	U2294	G2230	A2175	U2081	G2021	G1958	C1824	C1824
G2799	U2736		G2607	U2545	G2484	G2421	G2361	C2295	G2231	C2170	C2082	C2022	U1959	C1825	C1825
C2800	A2737		G2608	A2546	U2485	C2422	G2362	C2296	G2232	U2171	G2083	C2023	A1960	U1826	
A2801	G2738		G2609	G2546	C2486	G2423	G2363	U2297	G2233	U2172	G2084	U2024	A1961	U1900	U1827
G2802	G2739		A2610	C2547	G2487	G2424	G2364	G2298	G2234	G2173	G2085	A2025	C1962	C1828	C1828
C2803	C2740		G2611	G2548	G2488	G2425	U2365	A2299	G2235	G2174	U2086	C2026	G1963	A1902	C1829
G2804	G2741		A2612	U2549	C2489	G2426	U2366	G2300	U2236	A2175	U2087	C2027	A1964	C1830	C1830
G2805	G2742		A2613	C2550	U2490	G2427	U2367	A2301	C2237	U2176		C2028	U1965	G1831	G1831
U2806	G2743		U2614	A2551	C2491	A2427	A2367	G2302	G2238	U2177		C2029	C1966	U1832	U1832
G2807	A2744		U2615	G2552	G2492	U2428	G2368		G2239	U2178	G2094	G2030	U1967	C1907	U1833
U2808	U2745		G2616	C2553	U2493	A2429	G2369		C2240	U2179	G2095	A2031	G1968	C1908	G1834
A2809			A2617	U2554	C2494	A2430	G2370	A2306	U2241	C2179	A2096	G2032	G1969	U1909	C1835
G2810	A2749		G2618	G2555	G2495	C2431	A2371	A2307	C2242	U2180	A2097	C2033	G1970	C1836	C1836
C2811	G2750		U2556	A2556	C2496	A2432	A2372	C2308		A2181	G2098	A2034	C1971	A1910	C1837
G2812	G2751		G2557	G2557	A2497	G2433	C2373	G2309		A2182	G2099	A2034	C1971	C1837	C1837
G2813	C2752		C2558	C2558	U2498	G2434	C2374	G2310	A2245	C2183	A2100	G2035	G1972	G1912	G1838
G2814	G2753		U2559	U2559	U2499	U2435	C2375	U2311	A2246	C2184		G2036	C1973	G1913	A1839
C2815	C2754		G2560	G2560	C2500	U2436	G2376	A2312	A2247	U2185	U2105	A2037	U1974	U1914	A1840
G2816	A2755		U2561	G2561	U2501	G2437	U2377	G2313		G2186	G2106	C2038	G1975	G1841	G1841



C U C

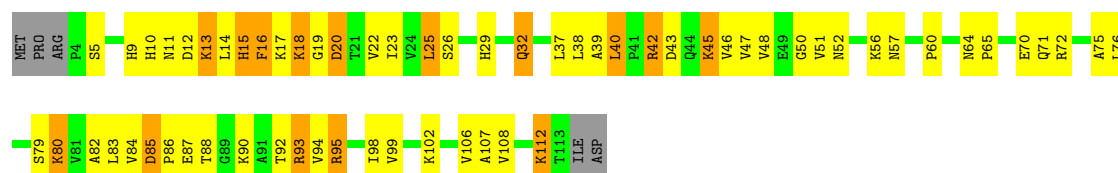
• Molecule 2: 50S RIBOSOMAL PROTEIN L23

Chain R: 28% 52% 17% ..



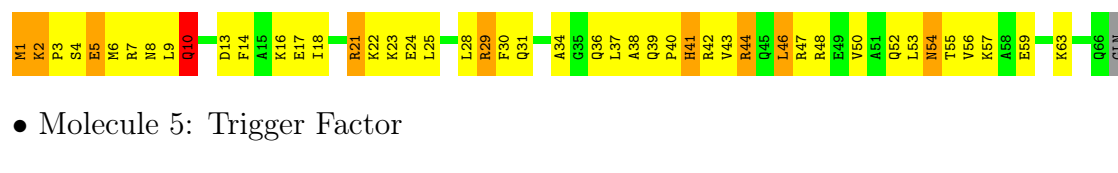
• Molecule 3: 50S RIBOSOMAL PROTEIN L24

Chain S: 41% 42% 13% .



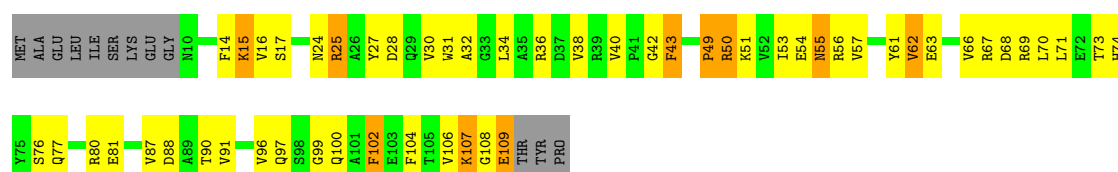
• Molecule 4: 50S RIBOSOMAL PROTEIN L29

Chain W: 30% 54% 13% ..



• Molecule 5: Trigger Factor

Chain 1: 41% 39% 9% 11%



4 Data and refinement statistics

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

Property	Value	Source
Space group	I 2 2 2	Depositor
Cell constants a, b, c, α , β , γ	169.50 Å 410.50 Å 695.20 Å 90.00° 90.00° 90.00°	Depositor
Resolution (Å)	29.84 – 3.35	Depositor
% Data completeness (in resolution range)	(Not available) (29.84-3.35)	Depositor
R_{merge}	(Not available)	Depositor
R_{sym}	(Not available)	Depositor
Refinement program	CNS 1.1	Depositor
R, R_{free}	0.299 , 0.322	Depositor
Estimated twinning fraction	No twinning to report.	Xtriage
Total number of atoms	63004	wwPDB-VP
Average B, all atoms (Å ²)	54.0	wwPDB-VP

5 Model quality

5.1 Standard geometry

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

Mol	Chain	Bond lengths		Bond angles	
		RMSZ	# $ Z > 5$	RMSZ	# $ Z > 5$
1	0	0.67	3/67338 (0.0%)	0.82	72/105044 (0.1%)
2	R	0.48	0/737	0.80	0/988
3	S	0.42	0/835	0.73	1/1121 (0.1%)
4	W	0.44	0/537	0.58	0/714
5	1	0.48	0/802	0.68	0/1084
All	All	0.66	3/70249 (0.0%)	0.82	73/108951 (0.1%)

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

Mol	Chain	#Chirality outliers	#Planarity outliers
1	0	0	169
2	R	0	1
All	All	0	170

All (3) bond length outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(Å)	Ideal(Å)
1	0	2776	U	C1'-N1	6.38	1.58	1.48
1	0	2775	U	C1'-N1	6.21	1.58	1.48
1	0	567	G	C5-C6	-5.13	1.37	1.42

All (73) bond angle outliers are listed below:

Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	2034	A	N9-C1'-C2'	10.22	127.28	114.00
1	0	1342	U	N1-C1'-C2'	9.78	126.71	114.00
1	0	1467	U	N1-C1'-C2'	8.63	125.23	114.00
1	0	2775	U	C2-N1-C1'	-8.26	107.78	117.70
1	0	1631	C	N1-C1'-C2'	8.21	124.68	114.00
1	0	777	A	N9-C1'-C2'	7.87	124.24	114.00

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	2776	U	C2-N1-C1'	-7.71	108.45	117.70
1	0	1715	A	N9-C1'-C2'	7.71	124.02	114.00
1	0	2841	U	N1-C1'-C2'	7.70	124.01	114.00
1	0	1278	A	N9-C1'-C2'	7.68	123.98	114.00
1	0	1263	G	N9-C1'-C2'	7.51	123.76	114.00
1	0	1975	G	C2'-C3'-O3'	7.27	125.50	109.50
3	S	38	LEU	CA-CB-CG	7.25	131.99	115.30
1	0	698	A	N9-C1'-C2'	7.23	123.39	114.00
1	0	1749	G	N9-C1'-C2'	7.21	123.38	114.00
1	0	2624	G	N9-C1'-C2'	7.17	123.32	114.00
1	0	582	G	N9-C1'-C2'	6.93	123.01	114.00
1	0	1698	C	N1-C1'-C2'	6.83	122.88	114.00
1	0	1141	U	C2'-C3'-O3'	6.82	124.61	113.70
1	0	1671	A	O5'-P-OP1	-6.82	99.56	105.70
1	0	1963	G	N9-C1'-C2'	6.80	122.84	114.00
1	0	1664	G	N9-C1'-C2'	6.76	122.79	114.00
1	0	1410	U	N1-C1'-C2'	6.74	122.77	114.00
1	0	1167	A	N9-C1'-C2'	6.66	122.65	114.00
1	0	571	U	N1-C1'-C2'	6.53	122.48	114.00
1	0	2560	G	N9-C1'-C2'	6.45	122.39	114.00
1	0	434	C	N1-C1'-C2'	6.38	122.29	114.00
1	0	2660	C	N1-C1'-C2'	6.38	122.29	114.00
1	0	2775	U	C6-N1-C1'	6.35	130.09	121.20
1	0	322	A	N9-C1'-C2'	6.35	122.25	114.00
1	0	818	G	N9-C1'-C2'	-6.30	105.06	112.00
1	0	789	G	N9-C1'-C2'	6.30	122.19	114.00
1	0	1410	U	OP1-P-O3'	6.29	119.03	105.20
1	0	1357	U	N1-C1'-C2'	6.26	122.14	114.00
1	0	443	A	N9-C1'-C2'	6.24	122.11	114.00
1	0	2237	C	N1-C1'-C2'	6.21	122.08	114.00
1	0	2476	A	N9-C1'-C2'	6.19	122.05	114.00
1	0	459	A	OP2-P-O3'	6.17	118.77	105.20
1	0	1337	G	N9-C1'-C2'	6.04	121.86	114.00
1	0	340	G	N9-C1'-C2'	6.03	121.84	114.00
1	0	1975	G	N9-C1'-C2'	6.00	121.80	114.00
1	0	2482	A	N9-C1'-C2'	5.91	121.69	114.00
1	0	2776	U	C6-N1-C1'	5.89	129.44	121.20
1	0	1469	U	OP1-P-O3'	-5.84	92.35	105.20
1	0	522	G	N9-C1'-C2'	5.82	121.57	114.00
1	0	804	C	N1-C1'-C2'	5.81	121.56	114.00
1	0	520	C	N1-C1'-C2'	-5.77	105.66	112.00
1	0	1685	A	OP2-P-O3'	5.74	117.83	105.20

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Mol	Chain	Res	Type	Atoms	Z	Observed(°)	Ideal(°)
1	0	458	G	N9-C1'-C2'	5.65	121.35	114.00
1	0	460	U	N1-C1'-C2'	5.56	121.22	114.00
1	0	1581	C	N1-C1'-C2'	5.54	121.20	114.00
1	0	2470	U	N1-C1'-C2'	-5.48	105.97	112.00
1	0	466	A	N9-C1'-C2'	5.45	121.08	114.00
1	0	1338	G	C1'-O4'-C4'	-5.43	105.55	109.90
1	0	600	G	N9-C1'-C2'	5.39	121.01	114.00
1	0	1723	U	N1-C1'-C2'	5.32	120.91	114.00
1	0	2028	C	N1-C1'-C2'	-5.29	106.18	112.00
1	0	312	G	N9-C1'-C2'	5.25	120.83	114.00
1	0	177	U	N1-C1'-C2'	5.25	120.82	114.00
1	0	1410	U	OP2-P-O3'	-5.23	93.70	105.20
1	0	753	U	N1-C1'-C2'	-5.23	106.25	112.00
1	0	805	G	N9-C1'-C2'	5.20	120.76	114.00
1	0	689	A	N9-C1'-C2'	5.18	120.73	114.00
1	0	860	U	N1-C1'-C2'	5.18	120.73	114.00
1	0	1469	U	OP2-P-O3'	5.16	116.55	105.20
1	0	1142	G	N9-C1'-C2'	5.14	120.68	114.00
1	0	580	A	N9-C1'-C2'	5.11	120.64	114.00
1	0	1634	A	N9-C1'-C2'	5.08	120.61	114.00
1	0	1775	A	C2'-C3'-O3'	5.08	121.83	113.70
1	0	2593	A	O4'-C1'-N9	-5.07	104.15	108.20
1	0	1199	U	N1-C1'-C2'	5.07	120.58	114.00
1	0	688	A	C5'-C4'-O4'	5.04	115.15	109.10
1	0	1807	A	O4'-C1'-N9	5.01	112.21	108.20

There are no chirality outliers.

All (170) planarity outliers are listed below:

Mol	Chain	Res	Type	Group
1	0	1000	G	Sidechain
1	0	1005	U	Sidechain
1	0	1009	C	Sidechain
1	0	1018	C	Sidechain
1	0	1141	U	Sidechain
1	0	1142	G	Sidechain
1	0	1158	A	Sidechain
1	0	1167	A	Sidechain
1	0	118	U	Sidechain
1	0	1206	G	Sidechain
1	0	1212	U	Sidechain
1	0	1247	U	Sidechain

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Mol	Chain	Res	Type	Group
1	0	1250	A	Sidechain
1	0	1262	U	Sidechain
1	0	1263	G	Sidechain
1	0	1284	G	Sidechain
1	0	1285	A	Sidechain
1	0	1286	U	Sidechain
1	0	1309	G	Sidechain
1	0	1313	U	Sidechain
1	0	1315	A	Sidechain
1	0	1316	G	Sidechain
1	0	1324	G	Sidechain
1	0	1325	U	Sidechain
1	0	1329	U	Sidechain
1	0	1341	G	Sidechain
1	0	1342	U	Sidechain
1	0	1344	C	Sidechain
1	0	1350	G	Sidechain
1	0	1357	U	Sidechain
1	0	1370	U	Sidechain
1	0	1373	G	Sidechain
1	0	1381	G	Sidechain
1	0	14	A	Sidechain
1	0	1407	G	Sidechain
1	0	1410	U	Sidechain
1	0	1414	G	Sidechain
1	0	1467	U	Sidechain
1	0	1470	G	Sidechain
1	0	1481	U	Sidechain
1	0	1531	C	Sidechain
1	0	1581	C	Sidechain
1	0	1583	A	Sidechain
1	0	1631	C	Sidechain
1	0	1632	A	Sidechain
1	0	1647	U	Sidechain
1	0	1672	A	Sidechain
1	0	1681	A	Sidechain
1	0	169	C	Sidechain
1	0	1692	C	Sidechain
1	0	1697	U	Sidechain
1	0	1710	U	Sidechain
1	0	1727	C	Sidechain
1	0	174	A	Sidechain

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Mol	Chain	Res	Type	Group
1	0	1740	G	Sidechain
1	0	1749	G	Sidechain
1	0	1757	C	Sidechain
1	0	1770	U	Sidechain
1	0	1771	A	Sidechain
1	0	1776	A	Sidechain
1	0	1810	U	Sidechain
1	0	1817	U	Sidechain
1	0	1818	G	Sidechain
1	0	1820	G	Sidechain
1	0	1834	G	Sidechain
1	0	1927	U	Sidechain
1	0	1933	G	Sidechain
1	0	1963	G	Sidechain
1	0	1964	A	Sidechain
1	0	1966	C	Sidechain
1	0	1967	U	Sidechain
1	0	1995	G	Sidechain
1	0	1999	U	Sidechain
1	0	2001	G	Sidechain
1	0	2004	U	Sidechain
1	0	2012	A	Sidechain
1	0	2025	A	Sidechain
1	0	2034	A	Sidechain
1	0	2047	C	Sidechain
1	0	2062	U	Sidechain
1	0	2074	U	Sidechain
1	0	211	U	Sidechain
1	0	2237	C	Sidechain
1	0	2246	A	Sidechain
1	0	2251	U	Sidechain
1	0	2312	A	Sidechain
1	0	2392	G	Sidechain
1	0	2393	G	Sidechain
1	0	2394	G	Sidechain
1	0	2404	A	Sidechain
1	0	2417	U	Sidechain
1	0	2428	U	Sidechain
1	0	2447	G	Sidechain
1	0	2469	G	Sidechain
1	0	2470	U	Sidechain
1	0	2472	U	Sidechain

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Mol	Chain	Res	Type	Group
1	0	2476	A	Sidechain
1	0	2482	A	Sidechain
1	0	2485	U	Sidechain
1	0	2498	U	Sidechain
1	0	25	U	Sidechain
1	0	2502	G	Sidechain
1	0	2540	A	Sidechain
1	0	2541	U	Sidechain
1	0	2542	U	Sidechain
1	0	2543	A	Sidechain
1	0	2557	G	Sidechain
1	0	2559	U	Sidechain
1	0	2565	C	Sidechain
1	0	2584	U	Sidechain
1	0	2590	U	Sidechain
1	0	2592	U	Sidechain
1	0	2614	A	Sidechain
1	0	2624	G	Sidechain
1	0	2634	G	Sidechain
1	0	2635	U	Sidechain
1	0	2666	U	Sidechain
1	0	2693	U	Sidechain
1	0	2706	U	Sidechain
1	0	2793	G	Sidechain
1	0	2795	A	Sidechain
1	0	2797	G	Sidechain
1	0	2804	G	Sidechain
1	0	2807	U	Sidechain
1	0	2813	G	Sidechain
1	0	2814	G	Sidechain
1	0	2817	A	Sidechain
1	0	2838	U	Sidechain
1	0	2840	U	Sidechain
1	0	320	A	Sidechain
1	0	334	G	Sidechain
1	0	340	G	Sidechain
1	0	43	A	Sidechain
1	0	443	A	Sidechain
1	0	445	A	Sidechain
1	0	454	G	Sidechain
1	0	480	G	Sidechain
1	0	521	U	Sidechain

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Mol	Chain	Res	Type	Group
1	0	534	U	Sidechain
1	0	535	U	Sidechain
1	0	559	C	Sidechain
1	0	571	U	Sidechain
1	0	583	C	Sidechain
1	0	699	G	Sidechain
1	0	71	A	Sidechain
1	0	712	A	Sidechain
1	0	753	U	Sidechain
1	0	757	U	Sidechain
1	0	759	C	Sidechain
1	0	786	U	Sidechain
1	0	806	A	Sidechain
1	0	813	A	Sidechain
1	0	814	G	Sidechain
1	0	818	G	Sidechain
1	0	819	C	Sidechain
1	0	824	U	Sidechain
1	0	840	U	Sidechain
1	0	841	G	Sidechain
1	0	863	C	Sidechain
1	0	873	U	Sidechain
1	0	932	G	Sidechain
1	0	954	U	Sidechain
1	0	969	U	Sidechain
1	0	978	U	Sidechain
1	0	985	G	Sidechain
1	0	989	G	Sidechain
1	0	991	A	Sidechain
1	0	993	C	Sidechain
1	0	999	A	Sidechain
2	R	17	TYR	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	60132	0	30298	3519	0

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Mol	Chain	Non-H	H(model)	H(added)	Clashes	Symm-Clashes
2	R	726	0	753	126	0
3	S	825	0	881	117	0
4	W	533	0	558	81	0
5	1	788	0	784	74	0
All	All	63004	0	33274	3848	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 40.

All (3848) 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)
2:R:69:ILE:CG2	2:R:70:GLY:H	1.26	1.38
1:0:1325:U:H1'	1:0:1619:A:N1	1.50	1.25
2:R:69:ILE:HG22	2:R:70:GLY:N	1.30	1.19
3:S:92:THR:HB	3:S:95:ARG:HH22	1.05	1.18
1:0:67:G:H21	1:0:72:A:H2'	1.09	1.16
1:0:918:A:H2'	1:0:919:U:H5''	1.29	1.15
1:0:940:G:H3'	1:0:941:U:H5''	1.16	1.15
1:0:1625:A:H1'	1:0:1632:A:H1'	1.26	1.15
2:R:62:ARG:HH11	2:R:62:ARG:HB3	1.04	1.11
1:0:168:A:H2'	1:0:169:C:H6	1.14	1.10
1:0:1791:C:H2'	1:0:1792:C:H5''	1.19	1.09
1:0:1151:U:H5''	1:0:1153:A:H5'	1.33	1.09
1:0:1029:C:H2'	1:0:1030:U:H5''	1.31	1.08
1:0:2691:C:H2'	1:0:2692:A:C8	1.88	1.08
1:0:2581:A:H3'	1:0:2582:G:H5''	1.30	1.07
1:0:1072:U:H3'	1:0:1073:G:H5'	1.36	1.07
1:0:1467:U:H3'	1:0:1468:A:H5'	1.23	1.07
1:0:1345:G:H2'	1:0:1625:A:C2	1.90	1.06
1:0:788:G:H5'	1:0:790:A:H1'	1.34	1.06
1:0:2198:U:H3'	1:0:2199:C:H5''	1.31	1.06
4:W:1:MET:HG2	4:W:2:LYS:HG2	1.32	1.06
1:0:1537:U:H2'	1:0:1538:A:C8	1.90	1.06
1:0:1572:C:C2'	1:0:1573:G:H5''	1.86	1.05
1:0:460:U:O4	1:0:592:G:H1'	1.54	1.05
1:0:2106:G:H2'	1:0:2107:G:H5''	1.36	1.04
1:0:1572:C:H2'	1:0:1573:G:H5''	1.08	1.04
1:0:2245:A:H4'	1:0:2246:A:N7	1.71	1.03
5:1:55:ASN:HD22	5:1:55:ASN:N	1.56	1.03
1:0:100:G:H1	3:S:102:LYS:HB3	1.18	1.03

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2466:G:H2'	1:0:2467:A:H8	1.21	1.03
1:0:104:C:H2'	1:0:105:G:H5''	1.36	1.02
1:0:1715:A:H1'	1:0:1717:A:H5''	1.41	1.02
1:0:942:U:H2'	1:0:943:U:O4'	1.59	1.02
1:0:1182:U:H3'	1:0:1183:C:H5''	1.39	1.02
1:0:168:A:H2'	1:0:169:C:C6	1.94	1.02
1:0:2548:G:H2'	1:0:2549:G:H5''	1.42	1.01
1:0:1458:A:H3'	1:0:1459:U:C5'	1.87	1.01
1:0:2197:U:H2'	1:0:2198:U:C6	1.96	1.01
1:0:2496:C:O2'	1:0:2497:A:H5'	1.60	1.00
1:0:701:U:O2	1:0:800:U:H4'	1.61	1.00
2:R:62:ARG:NH1	2:R:62:ARG:HB3	1.74	1.00
1:0:2507:U:H2'	1:0:2509:A:H5''	1.43	1.00
5:1:30:VAL:O	5:1:34:LEU:HG	1.60	1.00
1:0:67:G:N2	1:0:72:A:H2'	1.77	0.99
1:0:88:G:H3'	1:0:89:A:H5''	1.43	0.99
2:R:7:LEU:HB2	4:W:29:ARG:NH2	1.76	0.99
3:S:92:THR:HG22	3:S:106:VAL:HB	1.45	0.98
1:0:1754:G:N2	1:0:1756:C:H5''	1.77	0.98
1:0:1166:A:H2'	1:0:1167:A:H5''	1.42	0.98
1:0:2240:C:H2'	1:0:2241:U:H5'	1.42	0.98
1:0:813:A:H1'	1:0:815:A:H5'	1.45	0.98
1:0:1608:U:H2'	1:0:1609:G:H8	1.29	0.98
1:0:616:U:H2'	1:0:617:U:H5''	1.44	0.97
4:W:1:MET:HG2	4:W:2:LYS:CG	1.92	0.97
1:0:2030:U:H2'	1:0:2031:A:H8	1.30	0.97
1:0:681:A:H2'	1:0:683:A:N7	1.78	0.97
1:0:1313:U:H4'	1:0:1314:A:O5'	1.65	0.96
1:0:2482:A:H4'	1:0:2483:U:OP1	1.65	0.96
4:W:2:LYS:H	4:W:3:PRO:HD2	1.30	0.96
1:0:1057:A:H3'	1:0:1058:G:H5'	1.46	0.96
1:0:405:C:H2'	1:0:406:G:H8	1.26	0.96
3:S:16:PHE:HD2	3:S:80:LYS:HZ1	1.06	0.95
1:0:2299:A:H1'	1:0:2312:A:H62	1.32	0.95
1:0:1299:A:H2'	1:0:1301:U:OP2	1.66	0.94
3:S:92:THR:HB	3:S:95:ARG:NH2	1.82	0.94
1:0:161:U:H4'	1:0:194:G:H21	1.27	0.94
1:0:2057:U:H2'	1:0:2058:U:C6	2.03	0.93
1:0:357:A:H2'	1:0:358:C:H5'	1.48	0.93
1:0:564:U:H2'	1:0:565:A:C8	2.02	0.93
1:0:1071:U:H4'	1:0:1072:U:H5	1.31	0.93

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1474:A:O2'	1:0:1475:U:H5'	1.68	0.93
1:0:1373:G:N2	1:0:2192:U:H3	1.66	0.93
1:0:210:A:H61	1:0:442:A:H61	1.08	0.93
3:S:83:LEU:O	3:S:90:LYS:HE2	1.69	0.93
1:0:1345:G:H2'	1:0:1625:A:H2	1.34	0.92
5:1:90:THR:HB	5:1:107:LYS:NZ	1.83	0.92
1:0:1736:C:H2'	1:0:1737:G:H8	1.34	0.92
1:0:1748:U:H3	1:0:1753:A:H2	1.08	0.92
1:0:717:G:H2'	1:0:739:G:H22	1.31	0.92
1:0:994:A:H62	1:0:995:A:H2	1.12	0.92
1:0:2198:U:H3'	1:0:2199:C:C5'	2.00	0.92
1:0:929:A:H3'	1:0:930:A:H5''	1.52	0.92
5:1:55:ASN:HD22	5:1:55:ASN:H	1.15	0.91
1:0:2691:C:H2'	1:0:2692:A:H8	1.35	0.91
1:0:516:G:HO2'	1:0:517:A:H8	1.11	0.91
1:0:689:A:H8	1:0:2052:G:H21	1.10	0.91
1:0:2634:G:H2'	1:0:2643:G:O6	1.69	0.91
1:0:367:G:H2'	1:0:368:A:H5''	1.50	0.91
1:0:401:G:H2'	1:0:403:A:N7	1.86	0.91
1:0:2187:A:H2'	1:0:2188:A:H8	1.36	0.91
1:0:940:G:H3'	1:0:941:U:C5'	2.01	0.91
1:0:872:G:H2'	1:0:928:G:C6	2.06	0.91
2:R:33:ALA:H	2:R:76:LYS:HE3	1.37	0.90
2:R:33:ALA:N	2:R:76:LYS:HE3	1.87	0.90
3:S:85:ASP:CG	3:S:86:PRO:HD3	1.90	0.90
2:R:10:PRO:HG3	4:W:30:PHE:HA	1.52	0.90
1:0:1166:A:C2'	1:0:1167:A:H5''	2.00	0.90
1:0:2770:A:H5''	1:0:2867:G:N2	1.87	0.90
1:0:2074:U:H3'	1:0:2075:U:H5''	1.52	0.90
1:0:490:A:O2'	1:0:491:A:H5'	1.70	0.90
1:0:63:A:H5''	2:R:71:GLN:HB3	1.52	0.90
1:0:516:G:O2'	1:0:517:A:H8	1.53	0.89
2:R:43:GLN:HG2	2:R:50:VAL:HG23	1.54	0.89
3:S:85:ASP:OD1	3:S:86:PRO:HD3	1.71	0.89
1:0:940:G:C3'	1:0:941:U:H5''	2.01	0.89
1:0:317:U:H3	1:0:321:A:N6	1.71	0.89
1:0:73:A:N1	4:W:44:ARG:HD3	1.88	0.89
1:0:1586:A:H2'	1:0:1587:A:C8	2.07	0.89
1:0:2240:C:C2'	1:0:2241:U:H5'	2.01	0.89
1:0:139:A:H2'	1:0:140:G:C8	2.08	0.89
1:0:941:U:H2'	1:0:942:U:O4'	1.71	0.89

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:136:A:H2'	1:0:137:A:O4'	1.73	0.88
1:0:139:A:H2'	1:0:140:G:H8	1.34	0.88
1:0:1586:A:H2'	1:0:1587:A:H8	1.36	0.88
1:0:1234:C:H6	1:0:1234:C:OP2	1.57	0.88
2:R:29:VAL:HG22	2:R:76:LYS:HB2	1.56	0.88
1:0:1011:A:H2'	1:0:1012:A:H8	1.38	0.88
1:0:1345:G:N2	1:0:1625:A:H3'	1.87	0.88
1:0:2466:G:H2'	1:0:2467:A:C8	2.08	0.88
1:0:1373:G:H22	1:0:2192:U:H3	0.90	0.88
1:0:1392:U:O2'	1:0:1393:G:H5'	1.73	0.88
1:0:2266:A:N6	1:0:2323:U:H1'	1.87	0.88
1:0:2519:C:H2'	1:0:2520:A:H5'	1.55	0.88
1:0:2811:G:H2'	1:0:2812:A:C8	2.08	0.88
1:0:403:A:H5''	1:0:404:A:OP1	1.73	0.88
1:0:76:C:H6	1:0:76:C:H5'	1.39	0.88
1:0:2524:G:O2'	1:0:2525:U:H5'	1.74	0.87
1:0:128:C:H2'	1:0:129:A:H5''	1.56	0.87
1:0:1914:U:H3	1:0:1952:A:H62	1.20	0.87
1:0:2548:G:C2'	1:0:2549:G:H5''	2.04	0.87
2:R:56:MET:HE2	2:R:57:ASN:O	1.75	0.87
1:0:788:G:H5'	1:0:790:A:C1'	2.03	0.87
1:0:1608:U:H2'	1:0:1609:G:C8	2.08	0.87
1:0:659:G:H2'	1:0:660:G:C8	2.10	0.87
1:0:765:C:HO2'	1:0:766:A:H8	1.17	0.87
5:1:50:ARG:HG3	5:1:51:LYS:H	1.39	0.87
5:1:73:THR:O	5:1:77:GLN:HG3	1.75	0.87
1:0:813:A:H1'	1:0:815:A:C5'	2.05	0.87
1:0:70:A:O2'	1:0:71:A:H5''	1.74	0.86
1:0:752:G:H5''	1:0:753:U:OP1	1.75	0.86
4:W:37:LEU:HD23	4:W:39:GLN:H	1.40	0.86
1:0:2418:A:N1	1:0:2564:U:H4'	1.90	0.86
1:0:1736:C:H2'	1:0:1737:G:C8	2.10	0.86
1:0:104:C:C2'	1:0:105:G:H5''	2.05	0.86
1:0:2598:C:H2'	1:0:2599:U:C6	2.11	0.86
1:0:2:G:H2'	1:0:3:U:C6	2.11	0.85
1:0:2441:U:H2'	1:0:2442:C:H6	1.39	0.85
1:0:1083:C:H42	1:0:1103:C:N4	1.75	0.85
1:0:1199:U:H3'	1:0:1200:G:H5''	1.58	0.85
1:0:1791:C:H2'	1:0:1792:C:C5'	2.06	0.85
1:0:2058:U:H3'	1:0:2217:G:H22	1.40	0.85
1:0:918:A:C2'	1:0:919:U:H5''	2.06	0.85

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2259:G:H4'	1:0:2306:A:H5'	1.58	0.85
1:0:1563:U:H2'	1:0:1564:U:C6	2.12	0.85
1:0:2598:C:H2'	1:0:2599:U:H6	1.40	0.85
3:S:14:LEU:HD13	3:S:16:PHE:HE1	1.40	0.85
1:0:405:C:H2'	1:0:406:G:C8	2.11	0.85
1:0:1190:C:H2'	1:0:1191:G:C8	2.12	0.85
1:0:82:G:O2'	1:0:83:A:H5'	1.74	0.85
1:0:1852:G:H2'	1:0:1853:C:H6	1.37	0.84
1:0:1124:U:H2'	1:0:1125:G:H8	1.41	0.84
1:0:1493:A:H3'	1:0:1494:G:H8	1.39	0.84
1:0:799:C:O2'	1:0:800:U:H5'	1.77	0.84
1:0:947:C:H2'	1:0:948:C:H6	1.42	0.84
1:0:865:A:H2'	1:0:866:U:H6	1.42	0.84
1:0:48:A:H2	1:0:118:U:H3	1.22	0.84
1:0:1921:A:H2'	1:0:1922:U:H4'	1.59	0.84
1:0:2054:A:H2'	1:0:2055:G:H8	1.41	0.84
1:0:2770:A:H5''	1:0:2867:G:H21	1.42	0.84
4:W:56:VAL:HA	4:W:59:GLU:OE1	1.77	0.84
3:S:57:ASN:HD22	3:S:72:ARG:HH12	1.26	0.84
1:0:161:U:H4'	1:0:194:G:N2	1.92	0.83
1:0:947:C:H2'	1:0:948:C:C6	2.13	0.83
3:S:14:LEU:HD13	3:S:16:PHE:CE1	2.13	0.83
1:0:1467:U:H3'	1:0:1468:A:C5'	2.06	0.83
1:0:577:U:H5'	1:0:956:A:N6	1.93	0.83
1:0:1071:U:H4'	1:0:1072:U:C5	2.13	0.83
1:0:1380:C:H2'	1:0:1381:G:H5'	1.60	0.83
1:0:1764:A:N7	1:0:1821:A:H1'	1.93	0.83
1:0:362:C:H2'	1:0:363:G:H4'	1.61	0.83
1:0:446:C:H2'	1:0:447:U:O4'	1.78	0.83
1:0:1223:G:H4'	1:0:1224:A:O5'	1.79	0.83
2:R:63:LYS:HD2	2:R:69:ILE:O	1.77	0.83
1:0:1902:A:H2'	1:0:1903:C:H5''	1.61	0.83
1:0:545:C:O2'	1:0:546:A:H5'	1.77	0.83
1:0:582:G:H2'	1:0:583:C:H3'	1.61	0.83
1:0:1457:A:H2'	1:0:1458:A:O4'	1.79	0.82
1:0:58:C:H3'	1:0:59:G:H5''	1.61	0.82
2:R:7:LEU:HB2	4:W:29:ARG:HH21	1.41	0.82
1:0:1882:G:H21	1:0:1885:C:N4	1.76	0.82
1:0:978:U:H2'	1:0:979:A:H8	1.44	0.82
1:0:2058:U:H3'	1:0:2217:G:N2	1.94	0.82
1:0:594:G:C6	1:0:1264:C:H2'	2.14	0.82

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2197:U:H2'	1:0:2198:U:H6	1.45	0.82
1:0:584:A:O2'	1:0:585:U:H5'	1.80	0.82
2:R:32:LYS:N	2:R:76:LYS:HE2	1.95	0.82
1:0:1076:U:H3'	1:0:1077:U:C5'	2.09	0.82
1:0:2613:A:O2'	1:0:2614:A:H5'	1.80	0.82
1:0:2779:C:H2'	1:0:2780:A:C8	2.14	0.82
1:0:1211:G:O2'	1:0:1212:U:H5'	1.80	0.82
1:0:309:G:N2	1:0:350:U:H5	1.77	0.82
1:0:468:A:O2'	1:0:469:G:H4'	1.79	0.82
1:0:672:C:O2'	1:0:673:G:H5'	1.80	0.82
1:0:1006:C:H6	1:0:1006:C:H3'	1.44	0.81
1:0:1791:C:O2'	1:0:1793:A:H5'	1.80	0.81
1:0:2404:A:H5'	1:0:2406:C:O4'	1.79	0.81
1:0:976:C:O2'	1:0:977:G:H5'	1.81	0.81
1:0:1221:C:H2'	1:0:1222:G:H8	1.45	0.81
1:0:1043:A:H2	1:0:1133:G:H22	1.29	0.81
1:0:2124:C:H2'	1:0:2125:C:C6	2.15	0.81
1:0:2598:C:O2'	1:0:2599:U:H5'	1.80	0.81
1:0:2708:U:H2'	1:0:2709:C:C6	2.16	0.81
1:0:693:A:H2'	1:0:694:G:C8	2.14	0.81
1:0:29:U:H2'	1:0:30:G:H8	1.44	0.81
1:0:1011:A:H2'	1:0:1012:A:C8	2.15	0.81
1:0:1029:C:C2'	1:0:1030:U:H5''	2.09	0.81
1:0:564:U:H2'	1:0:565:A:H8	1.42	0.81
1:0:1610:A:H2'	1:0:1611:U:C6	2.16	0.81
1:0:1619:A:H8	1:0:1620:C:C6	1.99	0.81
1:0:2299:A:H1'	1:0:2312:A:N6	1.95	0.81
1:0:543:G:H2'	1:0:544:U:C6	2.16	0.81
1:0:2695:C:H2'	1:0:2696:A:H8	1.44	0.81
4:W:2:LYS:HG3	4:W:3:PRO:HD3	1.63	0.81
5:1:97:GLN:HG3	5:1:100:GLN:HE21	1.45	0.80
4:W:17:GLU:HB2	4:W:53:LEU:HD11	1.63	0.80
1:0:574:C:H4'	1:0:1266:G:C6	2.16	0.80
1:0:1595:A:H2'	1:0:1596:A:O4'	1.81	0.80
1:0:1528:C:H3'	1:0:1529:C:H5''	1.64	0.80
1:0:1030:U:H2'	1:0:1031:C:H5'	1.64	0.80
1:0:1083:C:H42	1:0:1103:C:H41	1.28	0.80
1:0:771:C:H2'	1:0:772:G:H8	1.46	0.80
5:1:67:ARG:O	5:1:71:LEU:HG	1.80	0.80
2:R:50:VAL:HG11	2:R:80:VAL:HB	1.64	0.80
1:0:1422:C:H2'	1:0:1423:A:H8	1.45	0.80

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:W:14:PHE:CE2	4:W:57:LYS:HB3	2.17	0.80
1:0:1016:C:C5	1:0:1154:A:H1'	2.16	0.80
1:0:1354:A:O4'	1:0:1354:A:OP1	1.99	0.80
1:0:1493:A:H2'	1:0:1494:G:O4'	1.82	0.80
1:0:2737:A:H2'	1:0:2738:A:H5'	1.63	0.80
1:0:2781:G:C2'	1:0:2782:G:H5''	2.11	0.80
1:0:693:A:H2'	1:0:694:G:H8	1.46	0.80
4:W:18:ILE:HG22	4:W:22:LYS:NZ	1.97	0.80
1:0:1791:C:C2'	1:0:1792:C:H5''	2.07	0.80
1:0:810:U:H2'	1:0:811:G:H8	1.47	0.80
1:0:1656:U:O2'	1:0:1657:A:H5''	1.81	0.80
1:0:1851:A:H61	1:0:1867:A:H1'	1.47	0.80
1:0:1966:C:H4'	1:0:2585:C:H4'	1.63	0.79
5:1:55:ASN:N	5:1:55:ASN:ND2	2.28	0.79
1:0:1938:U:O2'	1:0:1939:U:H5'	1.83	0.79
1:0:1563:U:H2'	1:0:1564:U:H6	1.46	0.79
1:0:1820:G:H4'	1:0:1821:A:OP1	1.81	0.79
1:0:1953:A:H5'	1:0:1954:A:OP1	1.82	0.79
1:0:1358:C:H1'	1:0:1409:U:H3	1.47	0.79
1:0:2245:A:H4'	1:0:2246:A:C5	2.17	0.79
1:0:1190:C:H2'	1:0:1191:G:H8	1.46	0.79
1:0:1725:C:H2'	1:0:1726:C:H6	1.47	0.79
1:0:2441:U:H2'	1:0:2442:C:C6	2.18	0.79
1:0:1588:A:H2'	1:0:1589:G:H8	1.47	0.79
1:0:213:C:H42	1:0:238:G:H1	1.31	0.79
1:0:2507:U:H2'	1:0:2509:A:C5'	2.12	0.79
1:0:2642:G:O2'	1:0:2643:G:H5'	1.82	0.79
1:0:537:C:C6	1:0:2759:U:H2'	2.16	0.79
1:0:466:A:C5'	1:0:467:U:H5'	2.12	0.79
5:1:50:ARG:HG3	5:1:51:LYS:N	1.97	0.79
1:0:1458:A:H3'	1:0:1459:U:H5'	1.62	0.78
1:0:2057:U:H2'	1:0:2058:U:H6	1.40	0.78
1:0:1047:G:H1	1:0:1130:U:H3	1.30	0.78
1:0:1683:G:O2'	1:0:1684:G:H5'	1.84	0.78
1:0:2054:A:H2'	1:0:2055:G:C8	2.18	0.78
1:0:211:U:O2	1:0:211:U:H2'	1.79	0.78
1:0:2187:A:H2'	1:0:2188:A:C8	2.18	0.78
1:0:1174:G:H2'	1:0:1175:A:C8	2.19	0.78
1:0:1673:C:H2'	1:0:1674:C:H6	1.47	0.78
1:0:1830:C:H42	1:0:1881:U:H3'	1.48	0.78
1:0:2124:C:H2'	1:0:2125:C:H6	1.47	0.78

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:857:U:C2'	1:0:858:G:H5'	2.13	0.78
1:0:983:G:C6	1:0:984:A:N6	2.50	0.78
2:R:28:TRP:HZ3	2:R:75:ARG:NE	1.81	0.78
1:0:48:A:N6	1:0:154:U:C5	2.51	0.78
1:0:2691:C:H3'	1:0:2691:C:C6	2.18	0.78
1:0:208:C:H2'	1:0:209:G:O4'	1.84	0.78
1:0:1495:G:H2'	1:0:1496:G:H8	1.47	0.78
1:0:1720:G:O2'	1:0:1721:G:H5'	1.84	0.78
1:0:1766:U:H2'	1:0:1767:G:H5'	1.65	0.78
3:S:15:HIS:HE1	3:S:80:LYS:NZ	1.80	0.78
1:0:2604:G:H2'	1:0:2605:C:C6	2.19	0.77
1:0:612:G:O3'	1:0:613:A:H4'	1.83	0.77
1:0:2468:G:H2'	1:0:2469:G:O4'	1.84	0.77
1:0:1949:A:H1'	1:0:2572:U:H4'	1.65	0.77
1:0:659:G:H2'	1:0:660:G:H8	1.50	0.77
1:0:1852:G:H2'	1:0:1853:C:C6	2.19	0.77
1:0:103:U:H2'	1:0:104:C:H6	1.50	0.77
1:0:1124:U:H2'	1:0:1125:G:C8	2.18	0.77
1:0:2840:U:H2'	1:0:2841:U:C5	2.20	0.77
1:0:668:A:H2'	1:0:669:G:O4'	1.83	0.77
2:R:43:GLN:OE1	2:R:49:ARG:HA	1.83	0.77
1:0:337:G:H21	3:S:10:HIS:CD2	2.01	0.77
1:0:2570:C:H2'	1:0:2571:G:C8	2.19	0.77
1:0:774:A:O5'	1:0:774:A:H8	1.66	0.77
1:0:1026:U:O2'	1:0:1027:C:H5'	1.85	0.77
5:1:90:THR:HB	5:1:107:LYS:HZ3	1.49	0.77
1:0:1557:G:O2'	1:0:1558:C:H5'	1.85	0.77
1:0:1774:A:H2	1:0:2567:G:O4'	1.68	0.77
3:S:15:HIS:HE1	3:S:80:LYS:HZ2	1.32	0.77
1:0:1452:U:O2'	1:0:1453:A:H5'	1.85	0.77
1:0:2270:U:O2'	1:0:2271:C:H5'	1.85	0.77
1:0:2402:U:H4'	1:0:2404:A:N7	2.00	0.77
1:0:2736:U:O2'	1:0:2737:A:H5'	1.85	0.77
1:0:745:C:H2'	1:0:746:G:H5'	1.68	0.77
1:0:2548:G:C2	1:0:2549:G:C8	2.73	0.76
1:0:569:C:O2'	1:0:570:G:H5'	1.85	0.76
1:0:58:C:H5'	1:0:59:G:OP2	1.84	0.76
1:0:1333:G:N2	1:0:1344:C:H41	1.82	0.76
1:0:1337:G:H4'	1:0:1632:A:H62	1.49	0.76
1:0:1174:G:H2'	1:0:1175:A:H8	1.50	0.76
1:0:1493:A:C2	1:0:1494:G:H1'	2.21	0.76

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1629:G:H22	1:0:1633:C:H2'	1.49	0.76
1:0:978:U:H2'	1:0:979:A:C8	2.20	0.76
3:S:25:LEU:N	3:S:25:LEU:HD13	2.01	0.76
1:0:2856:U:H2'	1:0:2857:C:H6	1.50	0.76
2:R:38:ILE:HD13	2:R:53:ILE:HD11	1.66	0.76
1:0:1818:G:H2'	1:0:1819:U:C6	2.20	0.76
1:0:3:U:H2'	1:0:4:C:C6	2.20	0.76
1:0:2661:G:O6	1:0:2708:U:H1'	1.84	0.76
3:S:18:LYS:H	3:S:18:LYS:HD3	1.50	0.76
1:0:1468:A:H5''	1:0:1472:C:N4	2.01	0.76
1:0:2788:C:O2'	1:0:2789:U:H5'	1.84	0.76
1:0:873:U:O2	1:0:2247:A:H5''	1.85	0.76
1:0:1108:U:H2'	1:0:1109:A:O4'	1.86	0.76
1:0:1352:G:N2	1:0:1619:A:H1'	2.01	0.76
1:0:521:U:C5	1:0:522:G:N3	2.54	0.76
1:0:2585:C:O2'	1:0:2586:G:H5'	1.86	0.76
1:0:1979:C:H2'	1:0:1980:A:O4'	1.86	0.75
1:0:2074:U:H3'	1:0:2075:U:C5'	2.16	0.75
3:S:25:LEU:H	3:S:25:LEU:HD13	1.51	0.75
1:0:1778:U:O2'	1:0:1779:C:H5'	1.86	0.75
1:0:1865:C:H2'	1:0:1866:G:O4'	1.86	0.75
1:0:1021:A:N3	1:0:1164:C:H1'	2.00	0.75
1:0:2581:A:H3'	1:0:2582:G:C5'	2.11	0.75
1:0:857:U:H2'	1:0:858:G:H5'	1.69	0.75
1:0:833:A:H1'	1:0:954:U:O2'	1.86	0.75
3:S:45:LYS:CG	3:S:75:ALA:HB1	2.17	0.75
1:0:1354:A:H5''	1:0:1410:U:O2	1.86	0.75
1:0:1964:A:H3'	1:0:1965:U:C5'	2.17	0.75
1:0:2018:G:H5''	1:0:2019:C:OP2	1.86	0.75
1:0:2469:G:H5''	1:0:2470:U:OP1	1.85	0.75
1:0:88:G:H3'	1:0:89:A:C5'	2.15	0.75
3:S:17:LYS:HB2	3:S:20:ASP:OD2	1.86	0.75
1:0:1418:C:H2'	1:0:1419:G:C8	2.21	0.75
1:0:1939:U:H1'	1:0:2531:U:OP1	1.86	0.75
1:0:861:G:C2	1:0:944:A:H1'	2.20	0.75
1:0:929:A:H5''	1:0:2247:A:N6	2.02	0.75
1:0:2:G:H2'	1:0:3:U:H6	1.48	0.75
5:1:50:ARG:CG	5:1:51:LYS:H	2.00	0.75
1:0:1467:U:C3'	1:0:1468:A:H5'	2.12	0.75
1:0:2194:A:C3'	1:0:2195:C:H5''	2.16	0.75
1:0:2668:U:H5'	1:0:2669:C:H5'	1.68	0.75

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2691:C:OP1	1:0:2694:G:H4'	1.87	0.75
1:0:782:U:H2'	1:0:783:G:H8	1.50	0.75
4:W:29:ARG:CB	4:W:29:ARG:HH11	2.00	0.75
1:0:2066:G:H2'	1:0:2067:U:O4'	1.87	0.75
2:R:94:GLN:HA	5:1:51:LYS:HD3	1.67	0.75
1:0:1775:A:H4'	1:0:1776:A:O5'	1.86	0.74
1:0:1006:C:C6	1:0:1006:C:H3'	2.22	0.74
1:0:1552:C:H2'	1:0:1553:G:O4'	1.87	0.74
1:0:190:A:O2'	1:0:191:G:H5'	1.87	0.74
1:0:1872:A:H1'	1:0:2070:G:H5'	1.68	0.74
1:0:1757:C:O2'	1:0:1758:C:H5'	1.88	0.74
1:0:2184:C:H2'	1:0:2185:U:H6	1.50	0.74
4:W:37:LEU:CD2	4:W:39:GLN:H	2.01	0.74
1:0:1508:G:C5'	1:0:1509:A:H5''	2.17	0.74
1:0:2535:C:H2'	1:0:2536:G:O4'	1.87	0.74
1:0:2753:C:H2'	1:0:2754:C:H6	1.51	0.74
1:0:70:A:OP2	1:0:111:G:H4'	1.87	0.74
4:W:29:ARG:HH11	4:W:29:ARG:HB3	1.53	0.74
1:0:2106:G:C2'	1:0:2107:G:H5''	2.16	0.74
1:0:841:G:N1	1:0:2226:A:H4'	2.03	0.74
1:0:1072:U:H3'	1:0:1073:G:C5'	2.15	0.74
1:0:2180:U:O4	1:0:2203:G:H2'	1.87	0.74
1:0:2301:A:H2'	1:0:2302:G:O4'	1.87	0.74
5:1:96:VAL:HG22	5:1:102:PHE:CE1	2.23	0.74
1:0:2334:C:H6	1:0:2334:C:O5'	1.70	0.74
1:0:2498:U:H2'	1:0:2520:A:N6	2.01	0.74
1:0:619:A:H2'	1:0:620:G:C8	2.23	0.74
2:R:93:GLY:C	5:1:50:ARG:HH21	1.90	0.74
1:0:173:A:C6	1:0:818:G:N2	2.55	0.74
4:W:2:LYS:H	4:W:3:PRO:CD	2.00	0.74
1:0:2522:G:H8	1:0:2522:G:H5'	1.53	0.74
1:0:689:A:H8	1:0:2052:G:N2	1.85	0.74
4:W:14:PHE:HE2	4:W:57:LYS:HB3	1.52	0.74
1:0:1570:C:H3'	1:0:1571:G:C5'	2.18	0.73
1:0:1412:C:H4'	2:R:22:ARG:HH12	1.52	0.73
1:0:751:G:H2'	1:0:752:G:H5'	1.70	0.73
1:0:1949:A:O2'	1:0:2572:U:H5'	1.87	0.73
1:0:317:U:H3	1:0:321:A:H62	1.35	0.73
1:0:792:U:O2'	1:0:793:G:H5'	1.86	0.73
1:0:93:A:O2'	1:0:94:C:H5'	1.89	0.73
3:S:94:VAL:HB	3:S:107:ALA:HB3	1.70	0.73

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1179:A:H2'	1:0:1180:A:C8	2.24	0.73
1:0:2454:C:H42	1:0:2508:G:H22	1.36	0.73
1:0:27:G:N2	1:0:522:G:O2'	2.21	0.73
1:0:2329:C:H2'	1:0:2330:G:O4'	1.88	0.73
1:0:745:C:C2'	1:0:746:G:H5'	2.18	0.73
1:0:1191:G:H2'	1:0:1192:A:H8	1.54	0.73
1:0:2005:U:H5''	1:0:2006:G:OP1	1.88	0.73
1:0:820:U:H2'	1:0:821:A:H8	1.54	0.73
5:1:25:ARG:H	5:1:25:ARG:HD2	1.51	0.73
2:R:94:GLN:HG2	5:1:51:LYS:HE2	1.70	0.73
4:W:21:ARG:N	4:W:21:ARG:HD2	2.03	0.73
1:0:1537:U:H2'	1:0:1538:A:H8	1.47	0.73
1:0:2107:G:C3'	1:0:2108:G:H5'	2.18	0.73
1:0:2321:C:H2'	1:0:2322:U:O4'	1.89	0.73
1:0:2826:C:C2'	1:0:2827:G:H5'	2.18	0.73
1:0:460:U:C4	1:0:592:G:H1'	2.24	0.73
1:0:1345:G:H22	1:0:1625:A:H3'	1.54	0.73
1:0:1434:U:H2'	1:0:1435:G:H8	1.53	0.73
1:0:2444:C:O2'	1:0:2445:C:H5'	1.89	0.73
1:0:445:A:O2'	1:0:446:C:H5'	1.88	0.73
1:0:751:G:C2'	1:0:752:G:H5'	2.18	0.73
1:0:246:C:H5	1:0:373:A:N3	1.86	0.73
2:R:28:TRP:CZ3	2:R:75:ARG:NE	2.56	0.73
1:0:349:G:P	3:S:13:LYS:NZ	2.62	0.73
1:0:161:U:C4'	1:0:194:G:H21	2.01	0.72
1:0:466:A:H4'	1:0:467:U:H5'	1.70	0.72
1:0:466:A:C4'	1:0:467:U:H5'	2.18	0.72
1:0:577:U:H5'	1:0:956:A:H61	1.53	0.72
1:0:623:G:O4'	1:0:626:A:N6	2.23	0.72
4:W:10:GLN:H	4:W:10:GLN:CD	1.91	0.72
1:0:1159:U:H2'	1:0:1160:C:H6	1.53	0.72
1:0:1182:U:H3'	1:0:1183:C:C5'	2.17	0.72
1:0:1228:G:H8	1:0:1228:G:O5'	1.73	0.72
1:0:1333:G:N2	1:0:1344:C:N4	2.37	0.72
1:0:1651:U:H5''	1:0:1652:G:OP2	1.89	0.72
1:0:239:A:H5''	1:0:620:G:H5'	1.72	0.72
1:0:859:U:H4'	1:0:860:U:C5	2.24	0.72
1:0:1252:C:C2'	1:0:1253:C:H5''	2.19	0.72
1:0:1493:A:H3'	1:0:1494:G:C8	2.24	0.72
1:0:1763:G:N2	1:0:1765:C:H5''	2.04	0.72
1:0:2737:A:C2'	1:0:2738:A:H5'	2.20	0.72

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2826:C:H2'	1:0:2827:G:H5'	1.71	0.72
1:0:441:A:H2'	1:0:442:A:O4'	1.90	0.72
1:0:1302:C:OP1	1:0:1664:G:N2	2.20	0.72
1:0:2491:C:H3'	1:0:2492:G:H5''	1.70	0.72
1:0:2840:U:H2'	1:0:2841:U:H5	1.54	0.72
1:0:466:A:H5''	1:0:467:U:H5'	1.70	0.72
1:0:813:A:C1'	1:0:815:A:H5'	2.18	0.72
1:0:1170:U:O2'	1:0:1171:A:H5'	1.90	0.72
1:0:16:G:H8	1:0:16:G:O5'	1.73	0.72
1:0:1726:C:H2'	1:0:1727:C:C6	2.24	0.72
1:0:174:A:N1	1:0:840:U:O4	2.23	0.72
1:0:537:C:H6	1:0:2759:U:H2'	1.53	0.72
3:S:57:ASN:ND2	3:S:72:ARG:HH12	1.85	0.72
1:0:1531:C:O2	1:0:1573:G:H1'	1.90	0.72
1:0:1730:G:H2'	1:0:1731:C:C6	2.24	0.72
1:0:2652:G:H2'	1:0:2653:A:H8	1.55	0.72
1:0:1:G:H2'	1:0:2:G:C8	2.25	0.72
1:0:349:G:P	3:S:13:LYS:HZ2	2.12	0.72
3:S:18:LYS:HE2	3:S:19:GLY:N	2.05	0.72
1:0:1710:U:O5'	1:0:1710:U:H6	1.73	0.72
1:0:1888:C:H4'	1:0:1912:G:C8	2.24	0.72
3:S:98:ILE:HG22	3:S:99:VAL:HG13	1.72	0.72
1:0:1495:G:N2	1:0:1529:C:H1'	2.05	0.71
1:0:2150:U:H1'	1:0:2154:A:H61	1.54	0.71
1:0:216:U:H2'	1:0:217:U:O4'	1.89	0.71
1:0:792:U:C2'	1:0:793:G:H5'	2.20	0.71
1:0:841:G:H1	1:0:2226:A:H4'	1.55	0.71
2:R:31:PRO:C	2:R:76:LYS:HE2	2.10	0.71
1:0:1226:A:H1'	1:0:1250:A:H2	1.55	0.71
1:0:415:A:H2'	1:0:416:U:H5'	1.72	0.71
1:0:2836:U:O2'	1:0:2837:G:H5'	1.88	0.71
1:0:1200:G:H8	1:0:1200:G:H5''	1.56	0.71
1:0:1369:G:H2'	1:0:1370:U:O4'	1.91	0.71
1:0:1825:C:O2'	1:0:1826:U:H5'	1.89	0.71
3:S:112:LYS:N	3:S:112:LYS:HD2	2.05	0.71
3:S:75:ALA:O	3:S:76:LEU:HD23	1.90	0.71
1:0:1635:G:O2'	1:0:1636:G:H5'	1.89	0.71
1:0:1774:A:C2	1:0:2567:G:O4'	2.43	0.71
1:0:1902:A:C2'	1:0:1903:C:H5''	2.20	0.71
1:0:2030:U:H2'	1:0:2031:A:C8	2.21	0.71
1:0:2397:A:H2'	1:0:2398:U:H6	1.54	0.71

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:86:U:P	3:S:42:ARG:HH21	2.13	0.71
1:0:2454:C:N4	1:0:2508:G:H22	1.87	0.71
1:0:598:U:H2'	1:0:599:A:O4'	1.90	0.71
1:0:782:U:H2'	1:0:783:G:C8	2.24	0.71
1:0:1514:C:OP2	1:0:1514:C:H6	1.73	0.71
1:0:1631:C:H3'	1:0:1632:A:H5''	1.72	0.71
3:S:15:HIS:CE1	3:S:80:LYS:HZ2	2.09	0.71
1:0:1854:G:O2'	1:0:1855:G:H5'	1.91	0.71
1:0:2212:U:H2'	1:0:2213:G:C8	2.26	0.71
1:0:2811:G:H2'	1:0:2812:A:H8	1.53	0.71
1:0:304:A:H2'	1:0:305:A:H5''	1.73	0.71
1:0:1528:C:C3'	1:0:1529:C:H5''	2.21	0.70
1:0:1915:A:N1	1:0:1956:G:H1'	2.06	0.70
1:0:641:G:H2'	1:0:642:A:H5''	1.73	0.70
1:0:1101:U:H3	1:0:1113:C:H1'	1.56	0.70
1:0:1220:G:H2'	1:0:1221:C:C6	2.26	0.70
1:0:1610:A:H2'	1:0:1611:U:H6	1.56	0.70
1:0:170:U:H2'	1:0:170:U:O2	1.90	0.70
1:0:2779:C:H2'	1:0:2780:A:H8	1.54	0.70
1:0:2781:G:H2'	1:0:2782:G:H5''	1.72	0.70
5:1:107:LYS:HD3	5:1:107:LYS:H	1.56	0.70
1:0:2024:U:O2'	1:0:2025:A:H5'	1.91	0.70
1:0:207:U:H2'	1:0:208:C:C6	2.25	0.70
1:0:815:A:N3	1:0:815:A:H2'	2.06	0.70
1:0:986:A:H2'	1:0:987:G:H5'	1.73	0.70
2:R:69:ILE:CG2	2:R:70:GLY:N	2.05	0.70
1:0:2713:A:H2'	1:0:2714:A:H8	1.57	0.70
1:0:1000:G:OP1	1:0:1168:G:H4'	1.91	0.70
1:0:230:C:H2'	1:0:231:G:H5'	1.74	0.70
1:0:222:G:H1'	1:0:397:U:O2	1.92	0.70
3:S:52:ASN:ND2	3:S:71:GLN:HE21	1.89	0.70
1:0:1016:C:C6	1:0:1154:A:H1'	2.27	0.70
1:0:2043:A:H1'	1:0:2481:G:C1'	2.22	0.70
1:0:2569:A:H2'	1:0:2570:C:C6	2.26	0.70
1:0:930:A:OP1	1:0:930:A:H4'	1.90	0.70
1:0:1619:A:C8	1:0:1620:C:C6	2.79	0.70
1:0:1683:G:C2'	1:0:1684:G:H5'	2.22	0.70
1:0:582:G:C2'	1:0:583:C:H3'	2.21	0.70
1:0:603:C:H2'	1:0:604:U:H6	1.55	0.70
1:0:1818:G:H2'	1:0:1819:U:H6	1.54	0.70
1:0:2519:C:C2'	1:0:2520:A:H5'	2.22	0.70

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:692:C:O2'	1:0:693:A:H5'	1.92	0.70
1:0:936:A:H2'	1:0:937:C:O4'	1.92	0.70
2:R:94:GLN:O	5:1:50:ARG:NH2	2.25	0.70
1:0:146:C:H2'	1:0:147:G:C8	2.26	0.70
1:0:2687:G:O2'	1:0:2688:G:H5'	1.91	0.70
1:0:973:U:H2'	1:0:974:U:H6	1.56	0.70
1:0:1226:A:C1'	1:0:1250:A:C2	2.74	0.69
1:0:167:A:N6	1:0:184:A:H1'	2.07	0.69
1:0:2245:A:H2'	1:0:2245:A:N3	2.06	0.69
1:0:2274:C:H2'	1:0:2275:U:H5'	1.72	0.69
1:0:2322:U:C2'	1:0:2323:U:H5'	2.22	0.69
2:R:69:ILE:HG22	2:R:70:GLY:CA	2.20	0.69
1:0:103:U:H2'	1:0:104:C:C6	2.27	0.69
1:0:1164:C:H2'	1:0:1165:G:O4'	1.93	0.69
1:0:1226:A:C1'	1:0:1250:A:H2	2.05	0.69
1:0:1604:A:H2'	1:0:1605:A:H8	1.55	0.69
1:0:176:A:H2'	1:0:2412:A:H61	1.56	0.69
1:0:2495:G:H2'	1:0:2496:C:O4'	1.91	0.69
1:0:482:A:H2'	1:0:483:A:O4'	1.92	0.69
1:0:540:G:N2	1:0:2004:U:C2	2.60	0.69
1:0:860:U:H2'	1:0:860:U:O2	1.91	0.69
1:0:861:G:N2	1:0:944:A:H1'	2.07	0.69
1:0:1151:U:H5''	1:0:1153:A:C5'	2.19	0.69
1:0:1619:A:H8	1:0:1620:C:C5	2.09	0.69
1:0:1888:C:H2'	1:0:1913:G:C5	2.28	0.69
1:0:1787:U:H2'	1:0:1788:C:C6	2.28	0.69
1:0:1888:C:O2'	1:0:1912:G:H2'	1.92	0.69
1:0:197:G:N3	1:0:210:A:H2	1.90	0.69
1:0:2210:C:H2'	1:0:2211:U:C6	2.28	0.69
1:0:2691:C:C3'	1:0:2691:C:C6	2.76	0.69
1:0:367:G:C2'	1:0:368:A:H5''	2.23	0.69
1:0:176:A:H3'	1:0:177:U:C5	2.26	0.69
1:0:2111:C:H2'	1:0:2112:C:C6	2.27	0.69
1:0:2262:C:H2'	1:0:2263:C:H5'	1.74	0.69
1:0:2446:C:H2'	1:0:2447:G:O4'	1.93	0.69
1:0:357:A:C2'	1:0:358:C:H5'	2.23	0.69
1:0:521:U:C5	1:0:522:G:C4	2.80	0.69
1:0:1197:U:H2'	1:0:1198:C:O4'	1.92	0.69
1:0:2148:G:H3'	1:0:2149:G:C8	2.28	0.69
1:0:91:A:H2'	1:0:92:U:C6	2.27	0.69
1:0:1690:U:O2'	1:0:1691:G:H5'	1.93	0.69

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:210:A:N6	1:0:442:A:H61	1.87	0.69
1:0:5:A:H2'	1:0:6:A:H8	1.58	0.69
1:0:68:C:C2	1:0:72:A:C4	2.81	0.69
2:R:11:VAL:O	2:R:12:ILE:HG13	1.93	0.69
1:0:2322:U:H2'	1:0:2323:U:H5'	1.73	0.69
1:0:317:U:N3	1:0:321:A:N6	2.40	0.69
1:0:521:U:O4	1:0:522:G:N3	2.26	0.69
2:R:2:SER:N	2:R:5:ASP:CG	2.46	0.69
2:R:4:TYR:CD2	4:W:23:LYS:HB3	2.28	0.69
1:0:58:C:H3'	1:0:59:G:C5'	2.21	0.69
1:0:1462:C:H2'	1:0:1463:A:C8	2.28	0.69
1:0:2107:G:H2'	1:0:2108:G:H5'	1.75	0.69
1:0:2266:A:H62	1:0:2323:U:H1'	1.56	0.69
1:0:750:C:H2'	1:0:751:G:O4'	1.93	0.69
1:0:91:A:H2'	1:0:92:U:H6	1.58	0.69
1:0:2644:A:O2'	1:0:2645:C:H5'	1.93	0.69
1:0:1137:A:H5''	1:0:1138:A:OP1	1.93	0.68
1:0:1727:C:H4'	1:0:2833:C:O2	1.93	0.68
1:0:28:A:H1'	1:0:523:A:C2	2.28	0.68
1:0:1310:C:H2'	1:0:1311:C:H6	1.58	0.68
1:0:717:G:C2'	1:0:739:G:H22	2.05	0.68
1:0:688:A:C8	1:0:817:A:C2	2.81	0.68
5:1:90:THR:HB	5:1:107:LYS:HZ1	1.55	0.68
1:0:1429:A:H1'	1:0:1603:A:C6	2.28	0.68
1:0:174:A:N1	1:0:840:U:C4	2.60	0.68
1:0:2319:G:H2'	1:0:2320:G:H8	1.58	0.68
1:0:585:U:H2'	1:0:586:G:C8	2.29	0.68
1:0:88:G:C3'	1:0:89:A:H5''	2.23	0.68
1:0:1030:U:C2'	1:0:1031:C:H5'	2.24	0.68
1:0:1567:A:H2'	1:0:1568:A:C8	2.28	0.68
1:0:2570:C:H2'	1:0:2571:G:H8	1.55	0.68
1:0:1096:A:H3'	1:0:1096:A:N3	2.08	0.68
1:0:2509:A:H2'	1:0:2510:A:H5''	1.74	0.68
1:0:2751:C:H2'	1:0:2752:C:C6	2.29	0.68
1:0:490:A:O2'	1:0:491:A:H3'	1.93	0.68
1:0:638:A:N6	1:0:647:G:H2'	2.09	0.68
1:0:2708:U:H2'	1:0:2709:C:H6	1.58	0.68
4:W:36:GLN:HE21	5:1:55:ASN:HB3	1.58	0.68
1:0:1226:A:H1'	1:0:1250:A:C2	2.29	0.68
1:0:192:G:C4'	1:0:193:A:H4'	2.23	0.68
1:0:2007:G:O2'	1:0:2008:C:H5'	1.94	0.68

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:48:A:N3	1:0:50:G:N2	2.42	0.68
1:0:2528:G:H2'	1:0:2529:G:H8	1.59	0.68
1:0:539:A:N7	1:0:2006:G:C5	2.61	0.68
5:1:24:ASN:HD22	5:1:25:ARG:CZ	2.07	0.68
3:S:52:ASN:HD21	3:S:71:GLN:HE21	1.41	0.68
4:W:17:GLU:HB2	4:W:53:LEU:CD1	2.22	0.68
1:0:1184:G:H2'	1:0:1185:C:H5''	1.74	0.68
1:0:212:U:H1'	1:0:443:A:H2	1.57	0.68
1:0:2279:G:O2'	1:0:2280:A:H5'	1.93	0.68
1:0:213:C:N4	1:0:238:G:H1	1.92	0.68
1:0:2828:C:H2'	1:0:2829:A:H8	1.59	0.68
1:0:788:G:C5'	1:0:790:A:H1'	2.21	0.68
1:0:889:C:H2'	1:0:890:U:H6	1.59	0.68
3:S:48:VAL:HG12	3:S:50:GLY:H	1.59	0.68
1:0:1105:U:O2	1:0:1107:A:H8	1.77	0.68
1:0:1503:G:H2'	1:0:1504:G:C8	2.29	0.68
1:0:1859:A:H2'	1:0:1860:A:O4'	1.94	0.68
1:0:1947:G:H2'	1:0:1950:C:OP1	1.94	0.68
1:0:48:A:H1'	1:0:50:G:N3	2.09	0.68
5:1:77:GLN:HA	5:1:80:ARG:HD2	1.76	0.68
2:R:73:ASN:O	2:R:75:ARG:NH1	2.27	0.68
1:0:2380:U:H2'	1:0:2381:A:H5'	1.75	0.67
1:0:2604:G:H2'	1:0:2605:C:H6	1.59	0.67
1:0:2633:A:H5''	1:0:2634:G:OP1	1.94	0.67
1:0:29:U:H2'	1:0:30:G:C8	2.27	0.67
1:0:665:A:H3'	1:0:666:U:C5'	2.23	0.67
1:0:745:C:H2'	1:0:746:G:C5'	2.24	0.67
1:0:865:A:H2'	1:0:866:U:C6	2.27	0.67
1:0:940:G:H2'	1:0:941:U:C4'	2.25	0.67
1:0:946:U:H2'	1:0:947:C:C6	2.29	0.67
1:0:1122:A:O2'	1:0:1123:G:H4'	1.94	0.67
1:0:1437:A:O2'	1:0:1438:G:H5'	1.93	0.67
1:0:404:A:H5'	1:0:425:A:H4'	1.76	0.67
1:0:846:A:H2'	1:0:847:C:C6	2.30	0.67
3:S:112:LYS:H	3:S:112:LYS:CD	2.08	0.67
1:0:561:U:H1'	1:0:1233:A:C2	2.29	0.67
1:0:165:G:H2'	1:0:166:G:H5'	1.77	0.67
1:0:2262:C:C2'	1:0:2263:C:H5'	2.24	0.67
1:0:489:A:H8	1:0:489:A:O5'	1.76	0.67
5:1:32:ALA:HB1	5:1:36:ARG:HH21	1.58	0.67
2:R:32:LYS:CA	2:R:76:LYS:HE2	2.23	0.67

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2062:U:H2'	1:0:2063:A:H8	1.59	0.67
1:0:2133:G:H2'	1:0:2134:U:C6	2.30	0.67
1:0:2740:C:O2'	1:0:2741:G:H5'	1.94	0.67
1:0:68:C:H2'	1:0:68:C:O2	1.94	0.67
1:0:1223:G:N1	1:0:1250:A:N7	2.42	0.67
1:0:1745:C:O2'	1:0:1746:A:H5'	1.95	0.67
1:0:1842:G:O2'	1:0:1843:U:H5'	1.94	0.67
1:0:2148:G:H3'	1:0:2149:G:H8	1.58	0.67
1:0:2839:G:C2	1:0:2840:U:C2	2.83	0.67
1:0:640:C:H4'	1:0:660:G:H21	1.59	0.67
5:1:31:TRP:CZ2	5:1:54:GLU:HG3	2.30	0.67
1:0:1039:A:H61	1:0:1136:G:H2'	1.60	0.67
1:0:202:A:H2'	1:0:203:G:O4'	1.94	0.67
1:0:2311:U:C5'	1:0:2315:A:H61	2.07	0.67
1:0:2436:U:H2'	1:0:2437:G:O4'	1.94	0.67
1:0:995:A:H5''	1:0:996:C:H5	1.58	0.67
1:0:128:C:C2'	1:0:129:A:H5''	2.24	0.67
1:0:1278:A:H2	1:0:1997:A:H62	1.41	0.67
1:0:2145:A:H1'	1:0:2156:A:C6	2.29	0.67
1:0:2571:G:H2'	1:0:2572:U:O4'	1.94	0.67
1:0:2867:G:H8	1:0:2867:G:OP2	1.78	0.67
1:0:629:C:H2'	1:0:630:G:O4'	1.95	0.67
1:0:653:G:H2'	1:0:654:A:H4'	1.76	0.67
2:R:19:ALA:O	2:R:24:VAL:HG23	1.93	0.67
4:W:18:ILE:HG22	4:W:22:LYS:HZ1	1.57	0.67
4:W:41:HIS:C	4:W:41:HIS:CD2	2.68	0.67
1:0:2673:G:N2	1:0:2696:A:C4	2.63	0.67
1:0:338:G:H5'	3:S:9:HIS:CE1	2.30	0.67
1:0:930:A:H5'	1:0:931:G:C8	2.29	0.67
2:R:5:ASP:N	2:R:5:ASP:OD2	2.27	0.67
1:0:1725:C:H2'	1:0:1726:C:C6	2.29	0.67
1:0:2698:G:H2'	1:0:2699:G:C8	2.30	0.67
1:0:738:G:H8	1:0:738:G:O5'	1.78	0.67
1:0:1401:G:O2'	1:0:1541:G:H5'	1.95	0.67
1:0:2111:C:H2'	1:0:2112:C:H6	1.60	0.67
1:0:1221:C:H2'	1:0:1222:G:C8	2.29	0.66
1:0:341:A:H1'	1:0:1223:G:O6	1.95	0.66
1:0:1418:C:H2'	1:0:1419:G:H8	1.58	0.66
1:0:1532:A:H2'	1:0:1533:G:H8	1.60	0.66
1:0:2194:A:H2'	1:0:2195:C:H5''	1.76	0.66
1:0:2286:G:N3	1:0:2286:G:H2'	2.10	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2182:A:C2	1:0:2183:C:H1'	2.30	0.66
1:0:2833:C:O5'	1:0:2833:C:H6	1.78	0.66
1:0:2863:U:H2'	1:0:2864:C:H6	1.61	0.66
1:0:1356:G:O4'	1:0:1613:G:H2'	1.95	0.66
1:0:1391:A:H2'	1:0:1392:U:C6	2.29	0.66
1:0:1572:C:H2'	1:0:1573:G:C5'	2.04	0.66
1:0:1658:A:H2'	1:0:1659:G:O4'	1.95	0.66
1:0:1824:C:H6	1:0:1824:C:O5'	1.79	0.66
1:0:2071:G:O2'	1:0:2072:C:H5'	1.95	0.66
1:0:2397:A:H2'	1:0:2398:U:C6	2.30	0.66
1:0:664:C:H2'	1:0:665:A:C8	2.30	0.66
1:0:1766:U:C2'	1:0:1767:G:H5'	2.25	0.66
1:0:976:C:O4'	1:0:2252:A:N3	2.28	0.66
1:0:1888:C:H4'	1:0:1912:G:H8	1.61	0.66
1:0:2705:A:O2'	1:0:2706:U:C6	2.49	0.66
1:0:689:A:H2	1:0:815:A:H61	1.43	0.66
1:0:704:G:O2'	1:0:705:C:H5'	1.95	0.66
1:0:732:G:H2'	1:0:733:G:C8	2.31	0.66
1:0:876:A:H2'	1:0:877:G:C8	2.30	0.66
5:1:97:GLN:CG	5:1:100:GLN:HE21	2.08	0.66
5:1:31:TRP:HZ2	5:1:54:GLU:HG3	1.57	0.66
1:0:1231:A:H2'	1:0:1232:U:C6	2.31	0.66
1:0:1301:U:O4	1:0:1340:C:H1'	1.96	0.66
1:0:2691:C:H6	1:0:2691:C:H3'	1.57	0.66
1:0:1975:G:H22	1:0:1979:C:H5	1.42	0.66
1:0:804:C:O2'	1:0:805:G:H5''	1.96	0.66
1:0:86:U:H1'	1:0:95:G:N2	2.11	0.66
2:R:7:LEU:CB	4:W:29:ARG:HH21	2.08	0.66
1:0:2246:A:N3	1:0:2246:A:H2'	2.11	0.66
1:0:1:G:H2'	1:0:2:G:H8	1.59	0.66
3:S:20:ASP:OD2	3:S:20:ASP:N	2.28	0.66
1:0:20:C:H2'	1:0:21:A:H8	1.61	0.66
1:0:246:C:C5	1:0:373:A:N3	2.64	0.66
1:0:531:G:H2'	1:0:532:A:H8	1.61	0.66
3:S:82:ALA:C	3:S:83:LEU:HD12	2.15	0.66
1:0:1218:C:H2'	1:0:1219:C:C6	2.30	0.66
1:0:1514:C:O4'	1:0:1593:C:H4'	1.96	0.66
1:0:1763:G:H2'	1:0:1764:A:H5'	1.78	0.66
1:0:1996:A:O2'	1:0:1997:A:H5'	1.96	0.66
1:0:2437:G:O2'	1:0:2438:A:C8	2.49	0.66
1:0:2787:A:O2'	1:0:2788:C:H5'	1.94	0.66

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:792:U:H2'	1:0:793:G:C5'	2.26	0.66
5:1:32:ALA:O	5:1:36:ARG:HG3	1.95	0.66
3:S:80:LYS:C	3:S:80:LYS:HD3	2.16	0.66
1:0:2459:C:H2'	1:0:2460:G:H5'	1.78	0.65
1:0:2759:U:H6	1:0:2759:U:O5'	1.79	0.65
1:0:441:A:O2'	1:0:442:A:H5'	1.96	0.65
1:0:765:C:O2'	1:0:766:A:H8	1.78	0.65
4:W:28:LEU:HD11	4:W:42:ARG:HG3	1.77	0.65
1:0:1198:C:H5''	1:0:1199:U:H4'	1.78	0.65
1:0:1350:G:H2'	1:0:1351:G:H8	1.59	0.65
1:0:1437:A:H2'	1:0:1438:G:H8	1.61	0.65
1:0:1515:U:O2'	1:0:1516:A:H5'	1.96	0.65
1:0:1626:A:H5''	1:0:1627:C:OP2	1.96	0.65
1:0:2826:C:H2'	1:0:2827:G:C5'	2.26	0.65
1:0:841:G:H22	1:0:2226:A:H5'	1.61	0.65
1:0:210:A:H61	1:0:442:A:N6	1.89	0.65
1:0:2372:A:H2'	1:0:2373:C:C6	2.31	0.65
1:0:603:C:H2'	1:0:604:U:C6	2.31	0.65
1:0:718:A:N6	1:0:739:G:H1'	2.11	0.65
2:R:63:LYS:CD	2:R:69:ILE:O	2.44	0.65
1:0:1922:U:OP1	1:0:1923:U:H3'	1.95	0.65
1:0:1937:G:N3	1:0:2530:C:H5'	2.12	0.65
1:0:2658:A:O2'	1:0:2659:C:H5'	1.96	0.65
1:0:76:C:O2'	1:0:77:C:H5'	1.95	0.65
1:0:841:G:H1	1:0:2226:A:C4'	2.09	0.65
1:0:1218:C:H2'	1:0:1219:C:H6	1.60	0.65
1:0:2179:C:H2'	1:0:2180:U:O4'	1.96	0.65
1:0:119:G:H2'	1:0:120:G:H8	1.60	0.65
1:0:1416:A:O2'	1:0:1417:C:H5'	1.96	0.65
1:0:1422:C:H2'	1:0:1423:A:C8	2.30	0.65
1:0:169:C:H2'	1:0:170:U:H5'	1.79	0.65
1:0:1803:G:O2'	1:0:1804:U:H5'	1.97	0.65
1:0:460:U:H5	1:0:592:G:HO2'	1.45	0.65
1:0:700:C:H2'	1:0:701:U:O4'	1.97	0.65
1:0:889:C:H2'	1:0:890:U:C6	2.32	0.65
1:0:1008:G:O2'	1:0:1009:C:H5'	1.95	0.65
1:0:810:U:H2'	1:0:811:G:C8	2.29	0.65
1:0:841:G:C2	1:0:2226:A:H4'	2.32	0.65
3:S:25:LEU:HD11	3:S:80:LYS:HA	1.79	0.65
1:0:1413:U:H2'	1:0:1414:G:C8	2.32	0.65
1:0:540:G:N2	1:0:2004:U:N3	2.45	0.65

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2062:U:H2'	1:0:2063:A:C8	2.32	0.65
1:0:2153:A:H2'	1:0:2154:A:H5'	1.78	0.65
1:0:931:G:H2'	1:0:932:G:H5'	1.79	0.65
1:0:104:C:H2'	1:0:105:G:C5'	2.22	0.65
1:0:753:U:H2'	1:0:754:G:O5'	1.96	0.65
4:W:43:VAL:HG12	4:W:47:ARG:NH2	2.11	0.65
1:0:1081:A:H5'	1:0:1082:G:H5''	1.78	0.65
1:0:1159:U:H2'	1:0:1160:C:C6	2.31	0.65
1:0:1468:A:H5''	1:0:1472:C:H41	1.61	0.65
1:0:1690:U:C2'	1:0:1691:G:H5'	2.27	0.65
1:0:2060:A:P	1:0:2060:A:H3'	2.38	0.65
1:0:521:U:H5	1:0:522:G:C2	2.15	0.65
1:0:930:A:H3'	1:0:931:G:C8	2.31	0.65
1:0:1456:C:O2'	1:0:1457:A:H5'	1.97	0.64
1:0:1337:G:C4'	1:0:1632:A:H62	2.10	0.64
1:0:1794:A:H2	1:0:1814:G:N3	1.95	0.64
1:0:31:C:H2'	1:0:32:C:O4'	1.97	0.64
1:0:368:A:H2'	1:0:369:C:O4'	1.97	0.64
1:0:614:G:N2	1:0:634:G:N2	2.45	0.64
1:0:955:G:H5''	1:0:956:A:H5'	1.79	0.64
1:0:2194:A:C2'	1:0:2195:C:H5''	2.27	0.64
1:0:2759:U:C6	1:0:2759:U:O5'	2.51	0.64
1:0:2838:U:H2'	1:0:2839:G:H8	1.61	0.64
1:0:792:U:H2'	1:0:793:G:H5'	1.77	0.64
1:0:1404:C:N4	1:0:1407:G:C8	2.66	0.64
1:0:2266:A:N3	1:0:2268:G:H1'	2.11	0.64
1:0:639:G:H4'	1:0:661:C:O2'	1.97	0.64
1:0:1220:G:H2'	1:0:1221:C:H6	1.62	0.64
1:0:2266:A:C2	1:0:2268:G:H1'	2.32	0.64
1:0:521:U:C4	1:0:522:G:N3	2.65	0.64
1:0:2327:U:O5'	1:0:2327:U:H6	1.80	0.64
1:0:794:A:H5'	1:0:795:A:N7	2.12	0.64
1:0:26:G:N1	1:0:27:G:N2	2.45	0.64
1:0:309:G:OP1	3:S:93:ARG:HA	1.98	0.64
1:0:408:U:H2'	1:0:409:G:C8	2.32	0.64
1:0:58:C:H1'	1:0:72:A:C8	2.33	0.64
1:0:815:A:C2	1:0:816:U:C2	2.86	0.64
5:1:40:VAL:HG12	5:1:42:GLY:H	1.63	0.64
1:0:1918:G:H1'	1:0:1947:G:N2	2.12	0.64
1:0:2825:A:H2'	1:0:2826:C:C6	2.32	0.64
1:0:1325:U:H1'	1:0:1619:A:C6	2.30	0.64

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1501:C:H2'	1:0:1502:G:O4'	1.97	0.64
1:0:1558:C:H2'	1:0:1559:G:O4'	1.98	0.64
1:0:2279:G:H2'	1:0:2280:A:H8	1.63	0.64
1:0:457:C:O2'	1:0:458:G:H5'	1.96	0.64
1:0:48:A:H4'	1:0:49:U:O5'	1.96	0.64
1:0:813:A:O2'	1:0:814:G:H3'	1.98	0.64
1:0:83:A:H8	1:0:83:A:O5'	1.81	0.64
3:S:18:LYS:C	3:S:18:LYS:HE2	2.18	0.64
1:0:132:U:H2'	1:0:133:C:H6	1.62	0.64
1:0:14:A:OP2	1:0:14:A:H3'	1.98	0.64
1:0:1921:A:H2'	1:0:1922:U:C4'	2.28	0.64
1:0:2107:G:C2'	1:0:2108:G:H5'	2.27	0.64
1:0:2184:C:H2'	1:0:2185:U:C6	2.33	0.64
1:0:230:C:C2'	1:0:231:G:H5'	2.27	0.64
1:0:2508:G:OP2	1:0:2509:A:H5'	1.98	0.64
1:0:2722:C:H2'	1:0:2723:C:H6	1.62	0.64
1:0:583:C:H4'	1:0:584:A:O5'	1.98	0.64
3:S:42:ARG:HG2	3:S:42:ARG:HH11	1.62	0.64
1:0:2241:U:H2'	1:0:2242:C:H6	1.63	0.64
1:0:2043:A:H1'	1:0:2481:G:H1'	1.79	0.64
1:0:2691:C:H2'	1:0:2692:A:N7	2.11	0.64
1:0:2756:A:N6	1:0:2762:G:N3	2.46	0.64
1:0:696:U:C2	1:0:697:G:C8	2.86	0.64
1:0:173:A:N1	1:0:818:G:N2	2.47	0.63
1:0:1974:U:H2'	1:0:1975:G:H5'	1.80	0.63
1:0:539:A:N7	1:0:2006:G:C6	2.66	0.63
3:S:112:LYS:H	3:S:112:LYS:HD2	1.62	0.63
1:0:1356:G:N3	1:0:1356:G:H2'	2.13	0.63
1:0:155:G:O2'	1:0:156:G:H5'	1.97	0.63
1:0:317:U:C3'	1:0:318:G:H5''	2.28	0.63
1:0:427:C:H2'	1:0:428:A:C8	2.33	0.63
1:0:1083:C:N4	1:0:1103:C:H41	1.94	0.63
1:0:1495:G:H2'	1:0:1496:G:C8	2.33	0.63
1:0:1715:A:H1'	1:0:1717:A:C5'	2.24	0.63
1:0:929:A:C5'	1:0:2247:A:H61	2.12	0.63
1:0:450:C:H6	1:0:450:C:O5'	1.82	0.63
3:S:90:LYS:HB2	3:S:108:VAL:HG21	1.79	0.63
1:0:1437:A:H2'	1:0:1438:G:C8	2.33	0.63
1:0:1681:A:C6	1:0:2706:U:C5	2.85	0.63
1:0:309:G:N2	1:0:350:U:C5	2.64	0.63
1:0:1197:U:O5'	1:0:1197:U:H6	1.81	0.63

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1541:G:N2	1:0:1562:G:H22	1.96	0.63
1:0:1754:G:N2	1:0:1756:C:C5'	2.58	0.63
1:0:1866:G:O5'	1:0:1866:G:H8	1.80	0.63
1:0:2032:G:O2'	1:0:2033:C:H5'	1.98	0.63
1:0:2624:G:H4'	1:0:2712:G:O2'	1.98	0.63
1:0:2826:C:O2'	1:0:2827:G:H5'	1.98	0.63
1:0:635:C:C3'	1:0:636:G:H5''	2.28	0.63
1:0:95:G:O2'	1:0:96:C:H5'	1.99	0.63
1:0:1534:A:H2'	1:0:1535:C:H6	1.61	0.63
1:0:1902:A:C3'	1:0:1903:C:H5''	2.29	0.63
1:0:2194:A:H3'	1:0:2195:C:H5''	1.81	0.63
1:0:841:G:N2	1:0:2226:A:H4'	2.12	0.63
1:0:403:A:C5'	1:0:404:A:OP1	2.45	0.63
1:0:1260:A:N6	1:0:1262:U:O2	2.32	0.63
1:0:1511:A:H2	1:0:1594:U:H1'	1.63	0.63
1:0:438:G:O2'	1:0:439:C:H5'	1.99	0.63
1:0:566:U:O2'	1:0:567:G:H5'	1.99	0.63
1:0:624:A:H3'	1:0:625:A:H8	1.63	0.63
1:0:640:C:C4'	1:0:660:G:H21	2.11	0.63
3:S:57:ASN:HD22	3:S:72:ARG:NH1	1.95	0.63
1:0:1404:C:H5'	1:0:1405:A:OP2	1.98	0.63
1:0:2632:U:O5'	1:0:2632:U:H6	1.80	0.63
1:0:2640:G:H2'	1:0:2641:A:O4'	1.98	0.63
1:0:2847:G:C2	1:0:2848:A:N6	2.66	0.63
1:0:921:A:O2'	1:0:922:A:H5'	1.99	0.63
1:0:983:G:OP2	1:0:985:G:H5''	1.98	0.63
2:R:39:LYS:O	2:R:43:GLN:HG3	1.98	0.63
1:0:1438:G:H2'	1:0:1439:G:H5'	1.81	0.63
1:0:1493:A:N3	1:0:1494:G:H1'	2.14	0.63
1:0:641:G:H4'	1:0:651:C:O2'	1.98	0.63
1:0:746:G:N7	1:0:774:A:C6	2.67	0.63
2:R:51:ILE:HD11	2:R:83:ALA:HB2	1.80	0.63
1:0:1570:C:H3'	1:0:1571:G:H5'	1.81	0.62
1:0:1933:G:C8	1:0:1934:U:H5	2.17	0.62
1:0:471:A:C2	1:0:481:A:C4	2.87	0.62
1:0:490:A:N6	1:0:492:G:N3	2.47	0.62
1:0:493:A:OP2	1:0:517:A:N6	2.28	0.62
1:0:641:G:C2'	1:0:642:A:H5''	2.28	0.62
1:0:1345:G:N2	1:0:1625:A:C3'	2.62	0.62
1:0:1619:A:C8	1:0:1620:C:C5	2.87	0.62
1:0:2241:U:H2'	1:0:2242:C:C6	2.34	0.62

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
5:1:15:LYS:C	5:1:15:LYS:HD2	2.19	0.62
1:0:2306:A:H2'	1:0:2307:A:C8	2.34	0.62
1:0:852:U:H1'	1:0:1205:G:H1'	1.81	0.62
1:0:712:A:H4'	1:0:1651:U:C4	2.35	0.62
1:0:347:C:H2'	1:0:348:U:H6	1.64	0.62
1:0:1392:U:OP1	1:0:1392:U:H6	1.82	0.62
1:0:2764:U:H2'	1:0:2765:C:C6	2.35	0.62
1:0:62:U:H2'	1:0:63:A:C8	2.34	0.62
1:0:683:A:H5''	1:0:684:C:OP1	1.99	0.62
3:S:29:HIS:HB3	3:S:32:GLN:HG3	1.82	0.62
1:0:1173:G:H2'	1:0:1174:G:H8	1.63	0.62
1:0:426:C:H4'	1:0:1863:U:O2'	1.99	0.62
1:0:2061:C:H1'	1:0:2413:A:N3	2.14	0.62
1:0:2438:A:H2'	1:0:2439:U:O4'	1.99	0.62
1:0:929:A:H5''	1:0:2247:A:H61	1.64	0.62
1:0:1252:C:O2'	1:0:1253:C:H5''	2.00	0.62
1:0:1825:C:C2'	1:0:1826:U:H5'	2.29	0.62
1:0:192:G:H4'	1:0:193:A:O5'	1.99	0.62
1:0:488:A:OP1	1:0:488:A:H8	1.83	0.62
1:0:574:C:H4'	1:0:1266:G:N1	2.15	0.62
1:0:614:G:O2'	1:0:615:C:H5'	2.00	0.62
1:0:64:C:O4'	2:R:68:PHE:HB3	2.00	0.62
3:S:85:ASP:H	3:S:86:PRO:CD	2.12	0.62
1:0:1288:A:H2'	1:0:1289:A:O4'	2.00	0.62
1:0:1039:A:N6	1:0:1136:G:H2'	2.15	0.62
1:0:1325:U:H5''	1:0:1326:U:OP1	1.99	0.62
1:0:1339:U:H6	1:0:1339:U:H5'	1.64	0.62
1:0:1442:C:H2'	1:0:1443:G:OP1	2.00	0.62
1:0:2222:U:O2'	1:0:2223:U:H5'	2.00	0.62
1:0:2628:C:O2'	1:0:2629:U:H5'	2.00	0.62
1:0:622:U:H2'	1:0:623:G:O4'	2.00	0.62
1:0:75:C:H2'	1:0:76:C:H5'	1.82	0.62
2:R:63:LYS:HB2	2:R:63:LYS:NZ	2.15	0.62
1:0:1032:A:O2'	1:0:1134:C:H5''	1.99	0.62
1:0:1286:U:H4'	1:0:1288:A:OP2	2.00	0.62
1:0:1851:A:N6	1:0:1867:A:H1'	2.14	0.62
1:0:2674:C:H2'	1:0:2675:U:C6	2.34	0.62
1:0:400:U:H2'	1:0:400:U:O2	2.00	0.62
1:0:1560:A:H2'	1:0:1561:A:O4'	2.00	0.61
1:0:1692:C:O2'	1:0:1693:A:H5'	2.00	0.61
1:0:2473:G:H2'	1:0:2474:G:H8	1.64	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2739:G:H8	1:0:2739:G:O5'	1.82	0.61
1:0:441:A:C2'	1:0:442:A:H5'	2.30	0.61
1:0:5:A:O2'	1:0:6:A:H5'	1.99	0.61
1:0:678:G:H2'	1:0:679:C:H6	1.64	0.61
5:1:24:ASN:HD22	5:1:25:ARG:NH2	1.98	0.61
1:0:215:G:H21	1:0:632:A:H8	1.48	0.61
1:0:2494:C:H2'	1:0:2495:G:H8	1.64	0.61
1:0:2862:G:O2'	1:0:2863:U:H5'	2.00	0.61
1:0:538:A:O5'	1:0:538:A:H8	1.82	0.61
2:R:94:GLN:HA	5:1:51:LYS:CD	2.30	0.61
5:1:63:GLU:H	5:1:63:GLU:CD	2.02	0.61
1:0:1231:A:H2'	1:0:1232:U:H6	1.64	0.61
1:0:1408:A:N3	1:0:1411:C:C4	2.69	0.61
1:0:1493:A:C3'	1:0:1494:G:H8	2.12	0.61
1:0:2579:A:C6	1:0:2580:C:N4	2.69	0.61
1:0:2827:G:H2'	1:0:2828:C:C6	2.34	0.61
1:0:994:A:N7	1:0:995:A:N3	2.48	0.61
5:1:69:ARG:HH22	5:1:70:LEU:HD23	1.63	0.61
4:W:7:ARG:HD2	4:W:8:ASN:N	2.15	0.61
1:0:1382:G:C6	1:0:1383:C:C5	2.88	0.61
1:0:1730:G:H2'	1:0:1731:C:H6	1.63	0.61
1:0:2657:G:H2'	1:0:2658:A:C8	2.34	0.61
1:0:311:A:H2'	1:0:345:U:O2'	2.01	0.61
1:0:313:U:O2'	1:0:314:G:H5'	2.01	0.61
1:0:428:A:H2'	1:0:429:C:O4'	2.00	0.61
1:0:987:G:H2'	1:0:988:G:H8	1.65	0.61
2:R:91:LEU:HD22	2:R:91:LEU:N	2.15	0.61
1:0:1478:U:H2'	1:0:1479:G:C8	2.36	0.61
1:0:18:U:O2'	1:0:19:C:H5'	2.01	0.61
1:0:2059:U:OP2	1:0:2217:G:N2	2.33	0.61
1:0:2123:G:H2'	1:0:2124:C:C6	2.34	0.61
1:0:230:C:H2'	1:0:231:G:C5'	2.31	0.61
1:0:613:A:H2'	1:0:614:G:H8	1.65	0.61
1:0:988:G:O2'	1:0:989:G:H5'	2.01	0.61
3:S:25:LEU:CD1	3:S:25:LEU:N	2.63	0.61
1:0:1698:C:O2'	1:0:1753:A:H2'	2.00	0.61
1:0:1785:A:H4'	1:0:1883:A:C6	2.36	0.61
1:0:1817:U:O5'	1:0:1817:U:H6	1.83	0.61
1:0:2677:U:H2'	1:0:2678:C:C6	2.36	0.61
1:0:635:C:H2'	1:0:636:G:H5''	1.82	0.61
1:0:1046:U:H3	1:0:1131:G:H1	1.48	0.61

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:141:G:H2'	1:0:142:U:O4'	2.00	0.61
1:0:7:G:H2'	1:0:8:A:O4'	2.01	0.61
5:1:70:LEU:O	5:1:74:HIS:CD2	2.54	0.61
1:0:1123:G:O2'	1:0:1124:U:H5'	2.01	0.61
1:0:992:A:H2	1:0:2010:G:N3	1.99	0.61
1:0:2210:C:H2'	1:0:2211:U:H6	1.64	0.61
1:0:2262:C:H2'	1:0:2263:C:C5'	2.31	0.61
1:0:2657:G:H2'	1:0:2658:A:H8	1.66	0.61
1:0:2800:C:H2'	1:0:2801:A:O4'	2.01	0.61
1:0:488:A:H2'	1:0:489:A:C8	2.35	0.61
1:0:929:A:H3'	1:0:930:A:C5'	2.29	0.61
1:0:982:C:O2'	1:0:983:G:H5'	2.01	0.61
4:W:4:SER:HB3	4:W:7:ARG:NH2	2.15	0.61
1:0:1006:C:C6	1:0:1006:C:C3'	2.84	0.61
1:0:45:C:OP2	1:0:192:G:H3'	2.01	0.61
1:0:207:U:H2'	1:0:208:C:H6	1.63	0.61
1:0:2781:G:O2'	1:0:2782:G:H5''	2.01	0.61
1:0:357:A:H8	1:0:357:A:O5'	1.83	0.61
1:0:627:A:H2'	1:0:628:A:C8	2.36	0.61
2:R:22:ARG:HE	2:R:24:VAL:CG2	2.13	0.61
1:0:985:G:C4	1:0:1200:G:N2	2.69	0.60
1:0:1440:G:H3'	1:0:1441:A:C5'	2.31	0.60
1:0:847:C:H1'	1:0:2337:A:C2	2.36	0.60
1:0:2827:G:H2'	1:0:2828:C:H6	1.65	0.60
1:0:1238:A:O2'	1:0:1239:A:H5'	2.00	0.60
1:0:1715:A:O2'	1:0:1716:G:H3'	2.00	0.60
1:0:1750:A:H1'	1:0:2690:A:C2	2.36	0.60
1:0:2506:C:O2'	1:0:2507:U:H5'	2.02	0.60
1:0:2779:C:O5'	1:0:2779:C:H6	1.84	0.60
1:0:1252:C:H2'	1:0:1253:C:H5''	1.84	0.60
1:0:1861:G:O2'	1:0:1862:C:H5'	2.01	0.60
1:0:2839:G:H2'	1:0:2840:U:C6	2.37	0.60
1:0:245:C:H5'	1:0:372:U:O2'	2.02	0.60
3:S:82:ALA:CB	3:S:83:LEU:HD12	2.30	0.60
1:0:1785:A:H2'	1:0:1786:C:C6	2.36	0.60
1:0:2335:U:O2'	1:0:2336:G:H5'	2.01	0.60
1:0:2689:C:H2'	1:0:2690:A:H8	1.67	0.60
1:0:26:G:C6	1:0:27:G:N2	2.70	0.60
1:0:2793:G:N1	1:0:2794:G:C5	2.69	0.60
1:0:65:C:H2'	1:0:66:U:O4'	2.02	0.60
1:0:1615:C:OP1	2:R:35:LYS:HB2	2.02	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1326:U:O4	1:0:1619:A:N6	2.35	0.60
1:0:1442:C:C2'	1:0:1443:G:OP1	2.50	0.60
1:0:1468:A:O5'	1:0:1468:A:H8	1.84	0.60
1:0:2048:C:O2'	1:0:2049:C:H5'	2.02	0.60
1:0:2838:U:C4	1:0:2839:G:N7	2.70	0.60
1:0:100:G:N1	3:S:102:LYS:HD3	2.15	0.60
1:0:1438:G:P	1:0:1439:G:OP2	2.60	0.60
1:0:1458:A:C3'	1:0:1459:U:C5'	2.72	0.60
1:0:1582:A:C2'	1:0:1583:A:OP1	2.49	0.60
1:0:2198:U:H2'	1:0:2199:C:O4'	2.02	0.60
1:0:2216:G:O5'	1:0:2216:G:H8	1.84	0.60
1:0:2507:U:C2'	1:0:2509:A:H5''	2.27	0.60
1:0:2660:C:C2	1:0:2704:U:O4	2.55	0.60
1:0:2785:A:H2'	1:0:2786:G:O4'	2.01	0.60
1:0:304:A:C3'	1:0:305:A:H5''	2.32	0.60
1:0:508:G:O2'	1:0:509:U:H5'	2.01	0.60
1:0:591:G:H2'	1:0:592:G:C8	2.35	0.60
3:S:18:LYS:HD3	3:S:18:LYS:N	2.14	0.60
1:0:1076:U:H3'	1:0:1077:U:H5''	1.83	0.60
1:0:2086:U:H6	1:0:2086:U:O5'	1.84	0.60
1:0:354:C:H2'	1:0:355:G:O4'	2.02	0.60
1:0:539:A:OP2	1:0:2025:A:N6	2.35	0.60
1:0:55:A:O2'	1:0:56:C:H5'	2.02	0.60
1:0:813:A:N3	1:0:813:A:H2'	2.17	0.60
1:0:173:A:N6	1:0:818:G:N2	2.49	0.60
1:0:2716:G:O2'	1:0:2717:G:H5'	2.01	0.60
1:0:957:G:O2'	1:0:958:G:H5'	2.02	0.60
1:0:1253:C:H2'	1:0:1254:G:C5'	2.32	0.60
1:0:1312:G:H5'	1:0:1314:A:H1'	1.84	0.60
1:0:1437:A:C4	1:0:1438:G:N7	2.70	0.60
1:0:1470:G:O2'	1:0:1471:G:H5'	2.02	0.60
1:0:192:G:C1'	1:0:193:A:H4'	2.31	0.60
1:0:194:G:H2'	1:0:195:A:O4'	2.01	0.60
1:0:2591:C:C5	1:0:2592:U:H5	2.19	0.60
1:0:876:A:H2'	1:0:877:G:H8	1.67	0.60
1:0:1019:U:H5''	1:0:1020:A:OP1	2.02	0.60
1:0:1339:U:C6	1:0:1339:U:H5'	2.37	0.60
1:0:1298:G:N1	1:0:1342:U:OP1	2.32	0.60
1:0:2001:G:H2'	1:0:2002:A:C8	2.36	0.60
1:0:2407:G:H5''	1:0:2408:G:OP1	2.02	0.60
1:0:24:G:N2	1:0:527:C:C2	2.69	0.60

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2569:A:H2'	1:0:2570:C:H6	1.66	0.60
1:0:585:U:H4'	1:0:2481:G:N7	2.15	0.60
2:R:69:ILE:HG22	2:R:70:GLY:H	0.46	0.60
1:0:1337:G:H1'	1:0:1632:A:N6	2.16	0.59
1:0:2324:G:N2	1:0:2360:C:H2'	2.17	0.59
1:0:672:C:C2'	1:0:673:G:H5'	2.32	0.59
1:0:77:C:H2'	1:0:78:C:C6	2.37	0.59
1:0:826:U:H2'	1:0:827:C:C6	2.37	0.59
1:0:1302:C:O2'	1:0:1303:U:H5'	2.02	0.59
1:0:1345:G:C5	1:0:1625:A:C6	2.90	0.59
1:0:1578:U:H2'	1:0:1579:G:C8	2.37	0.59
1:0:1604:A:H2'	1:0:1605:A:C8	2.37	0.59
1:0:1690:U:H2'	1:0:1691:G:H5'	1.82	0.59
1:0:1922:U:O5'	1:0:1923:U:H5''	2.03	0.59
1:0:2591:C:C4	1:0:2592:U:C5	2.90	0.59
1:0:2856:U:O2'	1:0:2857:C:H5'	2.01	0.59
1:0:617:U:C6	1:0:632:A:N6	2.71	0.59
1:0:773:G:O2'	1:0:774:A:H5'	2.02	0.59
2:R:43:GLN:HG2	2:R:50:VAL:CG2	2.29	0.59
3:S:25:LEU:CD1	3:S:80:LYS:HA	2.32	0.59
1:0:1588:A:C5	1:0:1589:G:N7	2.70	0.59
1:0:1748:U:N3	1:0:1753:A:H2	1.91	0.59
1:0:2797:G:O5'	1:0:2797:G:H8	1.85	0.59
1:0:803:C:H5'	1:0:804:C:OP2	2.02	0.59
5:1:25:ARG:N	5:1:25:ARG:HD2	2.17	0.59
2:R:29:VAL:CG2	2:R:76:LYS:HB2	2.31	0.59
1:0:2829:A:C6	1:0:2839:G:C6	2.91	0.59
1:0:329:C:H2'	1:0:330:C:H6	1.67	0.59
1:0:541:C:N4	1:0:572:G:H8	2.00	0.59
1:0:941:U:OP1	1:0:941:U:H4'	2.01	0.59
3:S:95:ARG:HH12	3:S:106:VAL:HA	1.67	0.59
1:0:1330:G:H2'	1:0:1331:G:O4'	2.01	0.59
1:0:1391:A:H2'	1:0:1392:U:H6	1.66	0.59
1:0:1941:C:O2'	1:0:1942:G:H5'	2.02	0.59
1:0:2240:C:C2'	1:0:2241:U:C5'	2.80	0.59
1:0:2459:C:C2'	1:0:2460:G:H5'	2.31	0.59
1:0:304:A:C2'	1:0:305:A:H5''	2.32	0.59
1:0:544:U:C4	1:0:545:C:N4	2.70	0.59
1:0:732:G:H2'	1:0:733:G:H8	1.66	0.59
1:0:1631:C:H3'	1:0:1632:A:C5'	2.32	0.59
1:0:1301:U:O2'	1:0:1664:G:N2	2.35	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1764:A:C5	1:0:1821:A:H1'	2.37	0.59
1:0:195:A:H2	1:0:212:U:H4'	1.68	0.59
1:0:2487:G:O2'	1:0:2488:G:H5'	2.02	0.59
1:0:2588:U:H5'	1:0:2589:C:OP2	2.01	0.59
1:0:520:C:O2'	1:0:1249:G:H5''	2.02	0.59
1:0:1544:A:O2'	1:0:1545:G:H5'	2.03	0.59
1:0:1567:A:O2'	1:0:1568:A:H5'	2.03	0.59
1:0:1708:C:H2'	1:0:1709:U:C6	2.37	0.59
1:0:198:A:H4'	1:0:199:A:OP2	2.02	0.59
1:0:20:C:O2'	1:0:21:A:H5'	2.03	0.59
1:0:2387:U:H2'	1:0:2388:G:C8	2.38	0.59
1:0:1778:U:H5'	1:0:2568:A:O2'	2.01	0.59
1:0:2585:C:C2'	1:0:2586:G:H5'	2.31	0.59
1:0:521:U:C5	1:0:522:G:C2	2.89	0.59
1:0:677:G:O2'	1:0:678:G:H5'	2.03	0.59
1:0:113:C:O2'	1:0:114:C:H5'	2.02	0.59
1:0:1211:G:HO2'	1:0:1212:U:H5'	1.68	0.59
1:0:1350:G:H2'	1:0:1351:G:C8	2.37	0.59
1:0:1391:A:N7	1:0:1393:G:C5	2.70	0.59
1:0:1697:U:H3	1:0:1754:G:H3'	1.68	0.59
1:0:1892:C:N4	1:0:1903:C:H42	2.00	0.59
1:0:2151:G:H2'	1:0:2153:A:OP2	2.03	0.59
1:0:2174:G:H2'	1:0:2175:A:C8	2.38	0.59
1:0:2494:C:H2'	1:0:2495:G:C8	2.38	0.59
1:0:2706:U:O2	1:0:2706:U:H2'	2.01	0.59
1:0:2722:C:O2'	1:0:2723:C:H5'	2.03	0.59
1:0:100:G:H1	3:S:102:LYS:CB	2.05	0.59
1:0:192:G:O4'	1:0:193:A:H4'	2.03	0.59
1:0:2142:G:O2'	1:0:2143:G:H5'	2.03	0.59
1:0:2484:G:O2'	1:0:2485:U:H5'	2.03	0.59
1:0:2642:G:H2'	1:0:2643:G:O4'	2.03	0.59
1:0:95:G:H4'	4:W:41:HIS:ND1	2.17	0.59
5:1:69:ARG:HH21	5:1:69:ARG:HG2	1.67	0.59
2:R:62:ARG:HH11	2:R:62:ARG:CB	1.96	0.59
1:0:1508:G:H5'	1:0:1509:A:H5''	1.84	0.59
1:0:1763:G:C2'	1:0:1764:A:H5'	2.33	0.59
1:0:742:G:C4	1:0:1766:U:O2	2.56	0.59
1:0:19:C:H2'	1:0:20:C:C6	2.38	0.59
5:1:51:LYS:O	5:1:51:LYS:HG2	2.03	0.59
5:1:91:VAL:HA	5:1:106:VAL:HG22	1.84	0.59
3:S:45:LYS:HG3	3:S:75:ALA:HB1	1.84	0.59

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1436:G:H22	1:0:1593:C:H1'	1.68	0.58
1:0:1844:C:O2'	1:0:1845:A:H5'	2.02	0.58
1:0:1858:C:H2'	1:0:1859:A:C8	2.38	0.58
1:0:2546:G:H2'	1:0:2547:C:C6	2.38	0.58
1:0:2758:A:O2'	1:0:2759:U:P	2.61	0.58
1:0:2859:U:C4	1:0:2860:C:C2	2.91	0.58
1:0:582:G:H5'	1:0:583:C:OP2	2.03	0.58
1:0:638:A:H61	1:0:647:G:H2'	1.67	0.58
1:0:1029:C:H2'	1:0:1030:U:C5'	2.20	0.58
1:0:1309:G:N2	1:0:1662:G:C4	2.71	0.58
1:0:1385:C:C2	1:0:1386:A:C8	2.91	0.58
1:0:13:A:O2'	1:0:14:A:N7	2.36	0.58
1:0:2742:G:O2'	1:0:2743:G:H5'	2.02	0.58
1:0:1014:G:N2	1:0:1015:U:C2	2.71	0.58
1:0:1793:A:O2'	1:0:1794:A:H5'	2.03	0.58
1:0:2012:A:H2'	1:0:2014:A:OP1	2.03	0.58
1:0:2176:U:O5'	1:0:2176:U:H6	1.85	0.58
1:0:322:A:O2'	1:0:343:A:O4'	2.22	0.58
1:0:619:A:H2'	1:0:620:G:H8	1.64	0.58
1:0:67:G:N2	1:0:73:A:H4'	2.19	0.58
1:0:742:G:O6	1:0:1765:C:N3	2.36	0.58
1:0:984:A:H2	1:0:1201:G:N2	2.00	0.58
1:0:172:A:C5	1:0:175:C:H5	2.22	0.58
1:0:2107:G:H3'	1:0:2108:G:H5'	1.84	0.58
1:0:2677:U:H2'	1:0:2678:C:H6	1.68	0.58
1:0:533:C:H2'	1:0:534:U:O4'	2.03	0.58
2:R:58:VAL:O	2:R:75:ARG:NH1	2.35	0.58
1:0:1007:A:C2	1:0:1008:G:C8	2.91	0.58
1:0:1262:U:H6	1:0:1262:U:H3'	1.69	0.58
1:0:2209:G:C5	1:0:2210:C:H5	2.22	0.58
1:0:2769:C:C2'	1:0:2770:A:H5'	2.34	0.58
1:0:471:A:C2	1:0:481:A:C5	2.92	0.58
1:0:490:A:C6	1:0:492:G:H1'	2.38	0.58
1:0:581:A:O2'	1:0:2018:G:N2	2.36	0.58
1:0:613:A:H61	1:0:635:C:N4	2.01	0.58
1:0:841:G:H22	1:0:2226:A:C5'	2.17	0.58
1:0:985:G:H1'	1:0:1001:A:N6	2.18	0.58
1:0:2058:U:H3'	1:0:2217:G:C2	2.39	0.58
1:0:2427:A:OP2	1:0:2478:C:OP2	2.20	0.58
1:0:1174:G:C2	1:0:1175:A:C5	2.92	0.58
1:0:2043:A:H1'	1:0:2481:G:O4'	2.03	0.58

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2610:G:H4'	1:0:2866:A:H5'	1.86	0.58
2:R:8:GLN:N	4:W:29:ARG:HH22	2.01	0.58
1:0:1210:C:O2	1:0:1210:C:H2'	2.02	0.58
1:0:1383:C:C2	1:0:1384:G:C8	2.91	0.58
1:0:1502:G:H2'	1:0:1503:G:H8	1.69	0.58
1:0:1545:G:O5'	1:0:1545:G:H8	1.87	0.58
1:0:1931:G:O2'	1:0:1932:G:H5'	2.04	0.58
1:0:2007:G:C2	1:0:2023:C:C2	2.92	0.58
1:0:221:A:H2'	1:0:222:G:C5'	2.33	0.58
1:0:73:A:H3'	1:0:73:A:N3	2.19	0.58
3:S:18:LYS:H	3:S:18:LYS:CD	2.17	0.58
1:0:1366:A:H2'	1:0:1367:A:C8	2.39	0.58
1:0:1572:C:O5'	1:0:1572:C:H6	1.87	0.58
1:0:1673:C:H2'	1:0:1674:C:C6	2.34	0.58
1:0:1969:G:O2'	1:0:1970:G:H5'	2.04	0.58
1:0:199:A:N1	1:0:201:G:C2	2.72	0.58
1:0:2404:A:H4'	1:0:2405:A:O5'	2.04	0.58
1:0:2427:A:OP1	1:0:2478:C:OP1	2.22	0.58
1:0:2555:G:H5'	1:0:2557:G:N7	2.18	0.58
1:0:2688:G:O2'	1:0:2689:C:H5'	2.04	0.58
2:R:7:LEU:HD13	2:R:7:LEU:N	2.18	0.58
2:R:4:TYR:HD2	4:W:23:LYS:HB3	1.68	0.58
4:W:4:SER:HB3	4:W:7:ARG:HH21	1.69	0.58
1:0:1081:A:H5'	1:0:1082:G:C5'	2.34	0.58
1:0:2482:A:O2'	1:0:2484:G:OP2	2.22	0.58
1:0:2492:G:H2'	1:0:2493:U:C6	2.39	0.58
1:0:338:G:H2'	1:0:339:U:C6	2.39	0.58
1:0:356:A:H2'	1:0:357:A:C8	2.39	0.58
4:W:1:MET:HG2	4:W:2:LYS:HG3	1.81	0.58
1:0:1653:C:O2	1:0:1751:A:H2	1.87	0.57
1:0:201:G:H2'	1:0:202:A:C8	2.39	0.57
1:0:214:C:O2'	1:0:215:G:H5'	2.03	0.57
1:0:1777:A:N6	1:0:2585:C:O4'	2.37	0.57
1:0:2861:A:H2'	1:0:2862:G:H8	1.68	0.57
1:0:427:C:H1'	1:0:1856:U:H1'	1.86	0.57
1:0:68:C:H1'	1:0:72:A:H1'	1.86	0.57
5:1:96:VAL:HG22	5:1:102:PHE:CZ	2.39	0.57
2:R:43:GLN:CG	2:R:50:VAL:HG23	2.30	0.57
2:R:8:GLN:N	4:W:29:ARG:NH2	2.52	0.57
1:0:1574:A:OP1	1:0:1574:A:O4'	2.22	0.57
1:0:1629:G:N2	1:0:1633:C:H2'	2.20	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2616:U:H2'	1:0:2617:G:O4'	2.04	0.57
1:0:343:A:OP2	1:0:343:A:H8	1.87	0.57
1:0:27:G:H1'	1:0:523:A:H61	1.69	0.57
1:0:5:A:H2'	1:0:6:A:C8	2.39	0.57
5:1:69:ARG:NH1	5:1:70:LEU:HG	2.19	0.57
1:0:1459:U:H6	1:0:1459:U:O5'	1.87	0.57
1:0:2144:C:O2'	1:0:2156:A:H1'	2.04	0.57
1:0:2447:G:O2'	1:0:2448:A:H5'	2.04	0.57
2:R:10:PRO:HD3	4:W:30:PHE:CD1	2.39	0.57
1:0:1198:C:OP1	1:0:1199:U:H1'	2.04	0.57
1:0:200:A:H4'	1:0:200:A:OP2	2.03	0.57
1:0:2053:G:C6	1:0:2054:A:C6	2.92	0.57
1:0:2177:U:H2'	1:0:2178:U:H6	1.67	0.57
1:0:2197:U:H2'	1:0:2198:U:C5	2.37	0.57
1:0:766:A:O2'	1:0:767:G:H5'	2.04	0.57
1:0:940:G:H2'	1:0:941:U:O4'	2.04	0.57
1:0:1615:C:OP2	2:R:35:LYS:HE3	2.04	0.57
2:R:71:GLN:HG3	2:R:72:ARG:N	2.19	0.57
1:0:1508:G:H5''	1:0:1509:A:H5''	1.84	0.57
1:0:1544:A:H2'	1:0:1545:G:C8	2.39	0.57
1:0:1925:C:H2'	1:0:1926:U:H5	1.69	0.57
1:0:356:A:H2'	1:0:357:A:N7	2.20	0.57
1:0:492:G:H2'	1:0:517:A:C6	2.39	0.57
1:0:562:G:H2'	1:0:563:U:O4'	2.04	0.57
1:0:567:G:C4	1:0:568:G:C8	2.92	0.57
1:0:638:A:H2'	1:0:639:G:O4'	2.04	0.57
1:0:810:U:O2'	1:0:811:G:H5'	2.05	0.57
1:0:979:A:O2'	1:0:980:G:H5'	2.04	0.57
3:S:95:ARG:HD2	3:S:95:ARG:N	2.20	0.57
1:0:1534:A:O2'	1:0:1535:C:H5'	2.04	0.57
1:0:1429:A:H1'	1:0:1603:A:N1	2.20	0.57
1:0:2209:G:H2'	1:0:2210:C:H6	1.69	0.57
1:0:2277:A:H2'	1:0:2278:A:O4'	2.04	0.57
1:0:2602:G:H2'	1:0:2603:G:H8	1.68	0.57
1:0:2770:A:O5'	1:0:2770:A:H8	1.88	0.57
1:0:428:A:O2'	1:0:429:C:H5'	2.04	0.57
1:0:670:U:H2'	1:0:671:A:C8	2.40	0.57
5:1:69:ARG:HH22	5:1:70:LEU:CD2	2.18	0.57
4:W:23:LYS:HG3	4:W:24:GLU:N	2.20	0.57
1:0:1807:A:O2'	1:0:1808:C:H4'	2.05	0.57
1:0:760:U:O2	1:0:1997:A:H1'	2.04	0.57

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2198:U:H2'	1:0:2199:C:C4'	2.35	0.57
1:0:2409:A:H2'	1:0:2410:U:C5'	2.34	0.57
1:0:2602:G:N3	1:0:2603:G:C8	2.73	0.57
1:0:401:G:C2'	1:0:403:A:N7	2.65	0.57
1:0:415:A:C2'	1:0:416:U:H5'	2.34	0.57
1:0:854:G:C2	1:0:855:G:C4	2.92	0.57
2:R:31:PRO:O	2:R:76:LYS:NZ	2.33	0.57
4:W:18:ILE:HG22	4:W:22:LYS:HZ3	1.69	0.57
1:0:1582:A:H2'	1:0:1583:A:OP1	2.05	0.57
1:0:1730:G:N1	1:0:1737:G:C6	2.72	0.57
1:0:2630:C:O2'	1:0:2631:C:H5'	2.05	0.57
1:0:2875:C:O2'	1:0:2876:C:H5'	2.04	0.57
1:0:521:U:OP2	1:0:522:G:C6	2.58	0.57
1:0:623:G:O3'	1:0:625:A:OP2	2.23	0.57
1:0:665:A:H3'	1:0:666:U:H5''	1.85	0.57
1:0:677:G:C2	1:0:678:G:C8	2.93	0.57
3:S:85:ASP:OD1	3:S:90:LYS:NZ	2.38	0.57
4:W:55:THR:O	4:W:59:GLU:HG3	2.04	0.57
1:0:137:A:H2'	1:0:138:G:H5'	1.85	0.57
1:0:1596:A:H2'	1:0:1597:A:O4'	2.05	0.57
1:0:2261:G:H4'	1:0:2262:C:OP2	2.02	0.57
1:0:2311:U:H5'	1:0:2315:A:H61	1.70	0.57
1:0:1034:U:H2'	1:0:1035:G:O4'	2.05	0.57
1:0:1255:A:H2'	1:0:1256:C:H6	1.68	0.57
1:0:1364:C:H2'	1:0:1365:U:C6	2.39	0.57
1:0:1445:A:C2	1:0:1446:U:C2	2.93	0.57
1:0:1457:A:C2'	1:0:1458:A:O4'	2.52	0.57
1:0:2209:G:C5	1:0:2210:C:C5	2.93	0.57
1:0:2384:G:H21	1:0:2391:A:H62	1.53	0.57
1:0:2634:G:H2'	1:0:2643:G:C6	2.39	0.57
1:0:409:G:O2'	1:0:410:A:H5'	2.04	0.57
1:0:33:C:N4	1:0:458:G:O2'	2.35	0.57
1:0:691:C:H2'	1:0:692:C:H6	1.68	0.57
1:0:863:C:O2'	1:0:864:C:H5'	2.05	0.57
1:0:919:U:H2'	1:0:920:G:O5'	2.05	0.57
1:0:1436:G:H2'	1:0:1437:A:O4'	2.04	0.56
1:0:1830:C:N4	1:0:1881:U:H3'	2.19	0.56
1:0:19:C:H2'	1:0:20:C:H6	1.70	0.56
1:0:2170:C:H2'	1:0:2171:U:O4'	2.05	0.56
1:0:2510:A:H2'	1:0:2511:G:H5'	1.85	0.56
1:0:2793:G:O2'	1:0:2794:G:H5'	2.05	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:394:U:H2'	1:0:395:G:H8	1.69	0.56
1:0:1398:G:C5	1:0:1416:A:C6	2.93	0.56
1:0:1514:C:C6	1:0:1514:C:OP2	2.56	0.56
1:0:1518:C:H2'	1:0:1519:G:H8	1.70	0.56
1:0:1917:C:H2'	1:0:1918:G:O4'	2.05	0.56
1:0:2053:G:C6	1:0:2054:A:C5	2.93	0.56
1:0:841:G:H22	1:0:2226:A:H4'	1.70	0.56
1:0:932:G:H2'	1:0:933:G:H8	1.70	0.56
5:1:97:GLN:OE1	5:1:100:GLN:NE2	2.38	0.56
1:0:1209:G:C2	1:0:1210:C:C6	2.92	0.56
1:0:1451:C:H2'	1:0:1452:U:C6	2.39	0.56
1:0:1567:A:O2'	1:0:1568:A:C5'	2.54	0.56
1:0:2094:C:H2'	1:0:2096:U:OP2	2.04	0.56
1:0:2793:G:C2	1:0:2794:G:C8	2.92	0.56
1:0:622:U:C2	1:0:626:A:N6	2.73	0.56
1:0:616:U:H5	1:0:630:G:C6	2.23	0.56
1:0:1286:U:O3'	1:0:1288:A:OP2	2.23	0.56
1:0:1577:G:O2'	1:0:1578:U:H5'	2.05	0.56
1:0:167:A:H62	1:0:184:A:H1'	1.69	0.56
1:0:1736:C:C2	1:0:1737:G:N7	2.74	0.56
1:0:333:A:H1'	1:0:351:A:C4	2.41	0.56
1:0:616:U:C2'	1:0:617:U:H5''	2.27	0.56
1:0:66:U:O2	1:0:67:G:N7	2.39	0.56
3:S:11:ASN:OD1	3:S:12:ASP:N	2.38	0.56
1:0:1253:C:H2'	1:0:1254:G:H5'	1.85	0.56
1:0:1278:A:O2'	1:0:1279:G:P	2.63	0.56
1:0:1764:A:N7	1:0:1821:A:C1'	2.67	0.56
1:0:2053:G:C2	1:0:2054:A:C4	2.93	0.56
1:0:2338:C:H2'	1:0:2339:A:C8	2.40	0.56
1:0:317:U:H3'	1:0:318:G:H5''	1.87	0.56
1:0:346:C:OP1	1:0:346:C:C6	2.59	0.56
1:0:534:U:H2'	1:0:535:U:C6	2.40	0.56
1:0:540:G:O3'	1:0:541:C:H4'	2.06	0.56
1:0:691:C:O2'	1:0:692:C:H5'	2.05	0.56
1:0:858:G:H5''	1:0:859:U:OP1	2.06	0.56
1:0:1001:A:H62	1:0:1200:G:H1'	1.70	0.56
1:0:1244:U:H2'	1:0:1245:G:H8	1.70	0.56
1:0:16:G:C8	1:0:16:G:O5'	2.56	0.56
1:0:2171:U:H2'	1:0:2172:U:C6	2.40	0.56
1:0:246:C:C5	1:0:373:A:H1'	2.41	0.56
1:0:441:A:H2'	1:0:442:A:C5'	2.35	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:619:A:H61	1:0:629:C:N4	2.04	0.56
1:0:986:A:C2	1:0:1001:A:N9	2.74	0.56
3:S:80:LYS:CD	3:S:80:LYS:C	2.74	0.56
1:0:1005:U:O2	1:0:1007:A:N7	2.38	0.56
1:0:1057:A:H3'	1:0:1058:G:C5'	2.30	0.56
1:0:1105:U:O2	1:0:1107:A:C8	2.58	0.56
1:0:1223:G:O2'	1:0:1224:A:OP2	2.21	0.56
1:0:1305:C:H2'	1:0:1306:U:O4'	2.04	0.56
1:0:1468:A:C8	1:0:1468:A:O5'	2.59	0.56
1:0:1478:U:H2'	1:0:1479:G:H8	1.68	0.56
1:0:1538:A:O2'	1:0:1539:U:H5'	2.06	0.56
1:0:1714:A:H5'	1:0:1715:A:O5'	2.06	0.56
1:0:1770:U:O4	1:0:1776:A:N6	2.39	0.56
1:0:1823:G:C6	1:0:1824:C:N4	2.74	0.56
1:0:2299:A:H5'	1:0:2300:G:C8	2.40	0.56
1:0:2372:A:H2'	1:0:2373:C:H6	1.70	0.56
1:0:2565:C:C5	1:0:2587:G:N2	2.72	0.56
1:0:2770:A:C8	1:0:2770:A:OP2	2.59	0.56
1:0:346:C:H6	1:0:346:C:OP1	1.89	0.56
1:0:941:U:O2'	1:0:942:U:H5'	2.05	0.56
2:R:75:ARG:HG3	2:R:75:ARG:HH11	1.70	0.56
4:W:3:PRO:HB2	4:W:5:GLU:HG3	1.87	0.56
1:0:1767:G:N2	1:0:1768:U:C1'	2.69	0.56
1:0:2011:U:H2'	1:0:2012:A:C8	2.41	0.56
1:0:537:C:O2'	1:0:2025:A:C2	2.58	0.56
1:0:2524:G:C2'	1:0:2525:U:H5'	2.35	0.56
1:0:2818:G:O2'	1:0:2819:G:H5'	2.04	0.56
2:R:56:MET:CE	2:R:58:VAL:HG22	2.36	0.56
3:S:15:HIS:CE1	3:S:80:LYS:NZ	2.68	0.56
1:0:1079:G:H2'	1:0:1080:A:O4'	2.06	0.56
1:0:1748:U:N3	1:0:1753:A:C2	2.61	0.56
1:0:1860:A:H2'	1:0:1861:G:O4'	2.05	0.56
1:0:2081:U:H6	1:0:2081:U:O5'	1.89	0.56
1:0:2690:A:OP1	1:0:2692:A:P	2.64	0.56
1:0:2831:A:H2'	1:0:2832:G:O4'	2.06	0.56
1:0:737:C:O5'	1:0:737:C:H6	1.88	0.56
1:0:1080:A:H4'	1:0:1107:A:O2'	2.06	0.56
1:0:1134:C:O2'	1:0:1135:C:H5'	2.06	0.56
1:0:1164:C:H3'	1:0:1165:G:H8	1.70	0.56
1:0:1198:C:C5'	1:0:1199:U:H4'	2.35	0.56
1:0:956:A:C5	1:0:2427:A:H2	2.23	0.56

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:622:U:H2'	1:0:626:A:H61	1.69	0.56
1:0:67:G:C2	1:0:73:A:H4'	2.41	0.56
1:0:695:G:O2'	1:0:696:U:H5'	2.06	0.56
1:0:80:A:H2'	1:0:81:C:O4'	2.06	0.56
1:0:1192:A:H2'	1:0:1193:G:H8	1.70	0.56
1:0:125:A:H5''	1:0:126:C:O4'	2.06	0.56
1:0:1314:A:N7	1:0:1316:G:C8	2.74	0.56
1:0:2209:G:C4	1:0:2210:C:C5	2.94	0.56
1:0:2334:C:O5'	1:0:2334:C:C6	2.58	0.56
1:0:2377:U:H6	1:0:2377:U:O5'	1.88	0.56
1:0:2828:C:C2	1:0:2829:A:C8	2.94	0.56
1:0:2856:U:H2'	1:0:2857:C:C6	2.36	0.56
1:0:594:G:O6	1:0:1264:C:H2'	2.05	0.56
2:R:22:ARG:HE	2:R:24:VAL:HG21	1.72	0.56
1:0:1076:U:H3'	1:0:1077:U:H5'	1.87	0.55
1:0:1220:G:O2'	1:0:1221:C:H5'	2.06	0.55
1:0:1302:C:H2'	1:0:1303:U:H6	1.70	0.55
1:0:1358:C:H1'	1:0:1409:U:N3	2.20	0.55
1:0:1532:A:H2'	1:0:1533:G:C8	2.40	0.55
1:0:1873:A:N7	1:0:1874:G:C8	2.74	0.55
1:0:2086:U:H2'	1:0:2087:U:H6	1.70	0.55
1:0:2107:G:H1	1:0:2156:A:N6	2.04	0.55
1:0:2324:G:H4'	1:0:2326:C:H5''	1.88	0.55
1:0:2560:G:N1	1:0:2589:C:C4	2.73	0.55
1:0:2794:G:C6	1:0:2796:A:C2	2.94	0.55
1:0:1013:G:H22	1:0:1165:G:H1'	1.71	0.55
1:0:1474:A:HO2'	1:0:1475:U:H5'	1.71	0.55
1:0:1871:G:H3'	1:0:1871:G:N3	2.21	0.55
1:0:2279:G:H2'	1:0:2280:A:C8	2.41	0.55
1:0:2630:C:H2'	1:0:2631:C:C6	2.41	0.55
1:0:300:C:H2'	1:0:301:C:O4'	2.06	0.55
1:0:490:A:N7	1:0:492:G:C4	2.74	0.55
1:0:66:U:O2	1:0:67:G:C8	2.59	0.55
1:0:765:C:H5	1:0:1772:C:C1'	2.20	0.55
1:0:1288:A:O2'	1:0:1289:A:H5'	2.06	0.55
1:0:1412:C:H2'	1:0:1413:U:C6	2.41	0.55
1:0:165:G:C2'	1:0:166:G:H5'	2.36	0.55
1:0:2522:G:C8	1:0:2522:G:H5'	2.40	0.55
1:0:647:G:H1'	1:0:649:G:O2'	2.06	0.55
2:R:6:ILE:C	2:R:7:LEU:HD13	2.27	0.55
1:0:1979:C:C2'	1:0:1980:A:O4'	2.54	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1989:C:O2'	1:0:2798:A:N3	2.38	0.55
1:0:588:G:O2'	1:0:2002:A:OP1	2.23	0.55
1:0:2502:G:O6	1:0:2520:A:C2	2.59	0.55
1:0:439:C:H2'	1:0:440:U:O4'	2.06	0.55
1:0:546:A:N6	1:0:565:A:H61	2.05	0.55
1:0:878:C:N4	1:0:920:G:C8	2.75	0.55
3:S:37:LEU:HD12	3:S:47:VAL:HG12	1.87	0.55
1:0:1355:A:C8	1:0:1410:U:H1'	2.41	0.55
1:0:1454:U:H2'	1:0:1455:C:H6	1.71	0.55
1:0:1779:C:N4	1:0:1780:A:C6	2.74	0.55
1:0:1902:A:H3'	1:0:1903:C:H5''	1.88	0.55
1:0:2021:G:O2'	1:0:2022:C:H5'	2.07	0.55
1:0:2307:A:H2'	1:0:2308:A:C8	2.41	0.55
1:0:2545:A:O2'	1:0:2546:G:OP2	2.24	0.55
3:S:40:LEU:HD12	3:S:40:LEU:H	1.72	0.55
3:S:87:GLU:O	3:S:88:THR:HG23	2.06	0.55
1:0:1656:U:C2'	1:0:1657:A:H5''	2.37	0.55
1:0:1698:C:O2'	1:0:1753:A:C2'	2.54	0.55
1:0:199:A:C2	1:0:201:G:C4	2.95	0.55
1:0:204:A:N6	1:0:2386:G:C8	2.75	0.55
1:0:2829:A:N6	1:0:2839:G:O6	2.40	0.55
1:0:337:G:N2	3:S:10:HIS:CD2	2.73	0.55
1:0:355:G:O5'	1:0:355:G:H8	1.90	0.55
1:0:543:G:C5	1:0:570:G:N2	2.74	0.55
1:0:974:U:HO2'	1:0:2229:G:N2	2.04	0.55
1:0:1404:C:O2	2:R:15:LYS:HG3	2.06	0.55
4:W:1:MET:CG	4:W:2:LYS:HG2	2.22	0.55
1:0:1188:A:H62	1:0:1189:G:H21	1.54	0.55
1:0:1234:C:C6	1:0:1234:C:OP2	2.48	0.55
1:0:1712:G:H3'	1:0:1712:G:N3	2.22	0.55
1:0:1777:A:HO2'	1:0:1778:U:P	2.30	0.55
1:0:2426:G:H1'	1:0:2480:C:C5	2.42	0.55
1:0:309:G:OP1	3:S:95:ARG:NE	2.40	0.55
1:0:3:U:C2	1:0:4:C:C5	2.95	0.55
1:0:1766:U:H2'	1:0:1767:G:C5'	2.36	0.55
1:0:1794:A:H2'	1:0:1795:C:H5'	1.89	0.55
1:0:2797:G:H2'	1:0:2798:A:H5''	1.89	0.55
1:0:2858:A:H3'	1:0:2859:U:H5'	1.88	0.55
1:0:173:A:N1	1:0:818:G:C2	2.74	0.55
1:0:955:G:H3'	1:0:955:G:C8	2.41	0.55
1:0:973:U:H2'	1:0:974:U:C6	2.40	0.55

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:982:C:H2'	1:0:983:G:C5'	2.37	0.55
1:0:98:U:H5'	1:0:99:U:H5''	1.89	0.55
2:R:7:LEU:HB2	4:W:29:ARG:HH22	1.69	0.55
1:0:1147:G:H2'	1:0:1148:G:C8	2.42	0.55
1:0:1347:C:O2'	1:0:1348:C:H5'	2.07	0.55
1:0:1440:G:H3'	1:0:1441:A:H5'	1.88	0.55
1:0:1980:A:C2	1:0:1981:A:C4	2.94	0.55
1:0:2025:A:N3	1:0:2025:A:H2'	2.22	0.55
1:0:221:A:H2'	1:0:222:G:H5'	1.88	0.55
1:0:2238:G:C5	1:0:2406:C:N4	2.74	0.55
1:0:2470:U:H2'	1:0:2471:U:H5'	1.89	0.55
1:0:2754:C:O2'	1:0:2755:A:H5'	2.07	0.55
1:0:2770:A:P	1:0:2770:A:H8	2.30	0.55
1:0:1095:A:H3'	1:0:1096:A:H5''	1.88	0.55
1:0:987:G:H4'	1:0:1167:A:N7	2.22	0.55
1:0:136:A:H3'	1:0:137:A:C8	2.41	0.55
1:0:1541:G:H22	1:0:1562:G:N2	2.05	0.55
1:0:765:C:H5	1:0:1772:C:H1'	1.72	0.55
1:0:2053:G:H2'	1:0:2054:A:C8	2.42	0.55
1:0:2105:U:H2'	1:0:2106:G:H8	1.72	0.55
1:0:216:U:H5''	1:0:601:A:N6	2.22	0.55
1:0:2065:A:C4	1:0:2218:G:N2	2.74	0.55
1:0:2280:A:H2'	1:0:2281:C:H6	1.71	0.55
1:0:2785:A:H61	1:0:2865:G:H1'	1.71	0.55
1:0:790:A:N7	1:0:806:A:H2	2.04	0.55
1:0:1192:A:H2'	1:0:1193:G:C8	2.42	0.54
1:0:1299:A:C2'	1:0:1301:U:OP2	2.46	0.54
1:0:1528:C:H2'	1:0:1529:C:C4'	2.37	0.54
1:0:48:A:N1	1:0:154:U:O4	2.40	0.54
1:0:1793:A:N6	1:0:1809:G:H21	2.04	0.54
1:0:2252:A:C2'	1:0:2253:A:H5'	2.37	0.54
1:0:2548:G:H2'	1:0:2549:G:C5'	2.27	0.54
1:0:2636:A:O2'	1:0:2637:C:H5'	2.07	0.54
1:0:338:G:H2'	1:0:339:U:H6	1.72	0.54
1:0:531:G:O2'	1:0:532:A:H5'	2.07	0.54
3:S:85:ASP:N	3:S:86:PRO:CD	2.70	0.54
1:0:1116:U:H2'	1:0:1117:G:C8	2.42	0.54
1:0:1717:A:H2'	1:0:1718:A:H5'	1.88	0.54
1:0:2200:G:C5	1:0:2201:G:N7	2.75	0.54
1:0:225:G:C5'	1:0:226:C:H5'	2.38	0.54
1:0:2446:C:O2'	1:0:2447:G:H5'	2.07	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2415:G:N2	1:0:2577:A:C2	2.72	0.54
1:0:2712:G:H3'	1:0:2713:A:H5'	1.90	0.54
1:0:2785:A:N6	1:0:2865:G:H1'	2.22	0.54
1:0:333:A:O4'	1:0:351:A:H1'	2.07	0.54
1:0:54:G:C2	1:0:55:A:C8	2.95	0.54
1:0:616:U:O4	1:0:617:U:H5	1.89	0.54
1:0:722:C:H2'	1:0:723:C:H6	1.72	0.54
1:0:789:G:H4'	1:0:790:A:O5'	2.07	0.54
1:0:1484:G:O6	1:0:1538:A:N1	2.39	0.54
1:0:1572:C:C3'	1:0:1573:G:H5''	2.37	0.54
1:0:1978:U:H3'	1:0:1979:C:H5''	1.88	0.54
1:0:2502:G:O2'	1:0:2503:G:H5'	2.07	0.54
1:0:2633:A:H1'	1:0:2635:U:C5	2.43	0.54
1:0:2787:A:H2	1:0:2864:C:C2	2.25	0.54
1:0:417:C:O5'	1:0:417:C:H6	1.89	0.54
1:0:635:C:C2'	1:0:636:G:H5''	2.37	0.54
1:0:851:C:O2'	1:0:852:U:H5'	2.06	0.54
1:0:986:A:C2	1:0:1001:A:C4	2.95	0.54
1:0:82:G:N1	1:0:100:G:H2'	2.22	0.54
1:0:1184:G:C2'	1:0:1185:C:H5''	2.38	0.54
1:0:1301:U:C2'	1:0:1302:C:OP1	2.55	0.54
1:0:1325:U:C1'	1:0:1619:A:N1	2.46	0.54
1:0:166:G:H1'	1:0:184:A:N6	2.21	0.54
1:0:188:G:H2'	1:0:189:A:C8	2.43	0.54
1:0:1887:G:N2	1:0:1911:A:H2	2.05	0.54
1:0:2698:G:H2'	1:0:2699:G:H8	1.72	0.54
1:0:2823:G:O2'	1:0:2824:C:P	2.65	0.54
2:R:32:LYS:CA	2:R:76:LYS:CE	2.84	0.54
4:W:29:ARG:NH1	4:W:29:ARG:CB	2.68	0.54
1:0:984:A:H1'	1:0:1202:U:C5	2.43	0.54
1:0:134:G:H2'	1:0:135:U:H5'	1.89	0.54
1:0:1441:A:O2'	1:0:1442:C:H5''	2.06	0.54
1:0:1460:G:C2	1:0:1461:C:C2	2.95	0.54
1:0:1557:G:H2'	1:0:1558:C:O4'	2.08	0.54
1:0:2126:U:H3'	1:0:2127:U:C5'	2.37	0.54
1:0:2195:C:C4	1:0:2196:U:C4	2.96	0.54
1:0:2232:G:H2'	1:0:2233:C:H6	1.73	0.54
1:0:2326:C:H2'	1:0:2327:U:C6	2.42	0.54
1:0:2492:G:C6	1:0:2493:U:C4	2.96	0.54
1:0:317:U:H2'	1:0:318:G:H5''	1.90	0.54
1:0:749:C:H2'	1:0:750:C:H6	1.73	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:820:U:O2'	1:0:821:A:H5'	2.07	0.54
5:1:34:LEU:O	5:1:38:VAL:HG23	2.07	0.54
5:1:50:ARG:CG	5:1:51:LYS:N	2.62	0.54
1:0:1332:G:N1	1:0:1333:G:C2	2.74	0.54
1:0:1557:G:C2'	1:0:1558:C:H5'	2.37	0.54
1:0:2182:A:H2'	1:0:2183:C:O4'	2.07	0.54
1:0:2232:G:H2'	1:0:2233:C:C6	2.43	0.54
1:0:2376:G:C2	1:0:2399:C:C2	2.95	0.54
1:0:2477:C:O2	1:0:2478:C:C5	2.61	0.54
1:0:2513:A:C2	1:0:2514:G:H1'	2.43	0.54
1:0:2005:U:H2'	1:0:2595:C:O2'	2.08	0.54
1:0:2860:C:H2'	1:0:2861:A:H5'	1.89	0.54
1:0:623:G:H4'	1:0:625:A:H62	1.72	0.54
1:0:793:G:C4	1:0:795:A:C2	2.95	0.54
1:0:1242:A:H2'	1:0:1243:G:C8	2.43	0.54
1:0:1545:G:O2'	1:0:1546:C:H5'	2.07	0.54
1:0:1726:C:H2'	1:0:1727:C:H6	1.72	0.54
1:0:2080:U:H2'	1:0:2081:U:C6	2.43	0.54
1:0:175:C:N4	1:0:225:G:H1	2.06	0.54
1:0:2355:A:H2'	1:0:2356:A:O4'	2.07	0.54
1:0:2391:A:H8	1:0:2391:A:O5'	1.90	0.54
1:0:2569:A:O2'	1:0:2570:C:H5'	2.08	0.54
1:0:2782:G:H5'	1:0:2782:G:N3	2.22	0.54
1:0:2838:U:O2'	1:0:2839:G:H5'	2.08	0.54
1:0:525:A:O2'	1:0:526:C:H5'	2.08	0.54
1:0:67:G:H3'	1:0:68:C:H6	1.72	0.54
4:W:52:GLN:O	4:W:53:LEU:HD23	2.08	0.54
1:0:11:G:H8	1:0:11:G:O5'	1.91	0.54
1:0:1443:G:H2'	1:0:1444:C:H6	1.73	0.54
1:0:1452:U:C2	1:0:1571:G:N2	2.76	0.54
1:0:167:A:C2	1:0:168:A:C4	2.96	0.54
1:0:1685:A:O2'	1:0:1686:A:OP2	2.24	0.54
1:0:1974:U:O2'	1:0:1975:G:H5''	2.08	0.54
1:0:199:A:N1	1:0:201:G:C4	2.75	0.54
1:0:2396:C:O2'	1:0:2397:A:H5'	2.08	0.54
1:0:2713:A:O2'	1:0:2714:A:H5'	2.08	0.54
1:0:2799:C:H2'	1:0:2800:C:O4'	2.08	0.54
1:0:100:G:N1	3:S:102:LYS:HB3	2.03	0.54
1:0:1392:U:OP1	1:0:1392:U:C6	2.61	0.54
1:0:1660:G:N2	1:0:1661:C:H1'	2.23	0.54
1:0:2204:A:O2'	1:0:2205:C:P	2.65	0.54

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:472:C:H6	1:0:472:C:O5'	1.91	0.54
1:0:674:U:H2'	1:0:675:C:O4'	2.08	0.54
1:0:867:G:C2	1:0:936:A:C2	2.96	0.54
1:0:1040:A:H2'	1:0:1041:G:O4'	2.08	0.54
1:0:1141:U:O2'	1:0:1142:G:H5'	2.08	0.54
1:0:1202:U:O2'	1:0:1203:A:H5'	2.08	0.54
1:0:1661:C:O2	1:0:1661:C:H2'	2.08	0.54
1:0:1706:A:C4	1:0:1717:A:N1	2.76	0.54
1:0:1779:C:H6	1:0:1779:C:O5'	1.91	0.54
1:0:191:G:O2'	1:0:192:G:H5'	2.06	0.54
1:0:541:C:N4	1:0:572:G:C8	2.76	0.54
1:0:742:G:H3'	1:0:742:G:N3	2.23	0.54
1:0:1448:A:C6	1:0:1449:C:N4	2.76	0.53
1:0:1449:C:O2'	1:0:1450:G:H5'	2.08	0.53
1:0:1549:C:H2'	1:0:1550:C:C6	2.43	0.53
1:0:1717:A:H2'	1:0:1718:A:C5'	2.38	0.53
1:0:1869:A:O2'	1:0:1870:U:H5'	2.08	0.53
1:0:1958:G:H2'	1:0:1959:U:C6	2.43	0.53
1:0:442:A:H2'	1:0:443:A:C8	2.43	0.53
1:0:634:G:H8	1:0:634:G:O5'	1.91	0.53
1:0:805:G:N7	1:0:2419:C:H1'	2.24	0.53
1:0:1215:A:H2'	1:0:1216:G:H8	1.73	0.53
1:0:1246:G:N3	1:0:1247:U:C6	2.76	0.53
1:0:1369:G:C6	1:0:1370:U:N3	2.76	0.53
1:0:1453:A:C4	1:0:1569:A:N6	2.76	0.53
1:0:15:G:C6	1:0:16:G:C6	2.96	0.53
1:0:192:G:H4'	1:0:193:A:H4'	1.89	0.53
1:0:232:A:C2	1:0:233:A:C4	2.96	0.53
1:0:2431:C:O2'	1:0:2432:A:H5'	2.07	0.53
1:0:2670:C:C2	1:0:2671:C:C5	2.96	0.53
1:0:2860:C:C2'	1:0:2861:A:H5'	2.37	0.53
1:0:347:C:H2'	1:0:348:U:C6	2.44	0.53
1:0:775:U:H5'	1:0:776:G:C8	2.42	0.53
1:0:788:G:O2'	1:0:789:G:OP2	2.23	0.53
4:W:37:LEU:HD23	4:W:38:ALA:N	2.22	0.53
1:0:1255:A:H2'	1:0:1256:C:C6	2.43	0.53
1:0:1260:A:HO2'	1:0:1261:G:H8	1.53	0.53
1:0:2174:G:H2'	1:0:2175:A:H8	1.72	0.53
1:0:493:A:H4'	3:S:56:LYS:HE3	1.88	0.53
1:0:1758:C:C4	1:0:1759:A:N7	2.77	0.53
1:0:1766:U:O5'	1:0:1766:U:H6	1.91	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1842:G:H5'	1:0:1842:G:H8	1.73	0.53
1:0:1962:C:C2'	1:0:1963:G:H5'	2.39	0.53
1:0:2619:G:C6	1:0:2755:A:C2	2.96	0.53
1:0:349:G:OP1	3:S:13:LYS:NZ	2.37	0.53
1:0:387:A:H2'	1:0:387:A:N3	2.24	0.53
1:0:476:G:H2'	1:0:477:A:C8	2.42	0.53
1:0:1086:C:N4	1:0:1087:C:N3	2.57	0.53
1:0:1002:C:OP2	1:0:1200:G:OP2	2.26	0.53
1:0:574:C:C4'	1:0:1266:G:N1	2.72	0.53
1:0:1301:U:C4	1:0:1340:C:H1'	2.43	0.53
1:0:1636:G:O2'	1:0:1637:U:H5'	2.08	0.53
1:0:2084:G:H2'	1:0:2085:G:C8	2.43	0.53
1:0:2086:U:H2'	1:0:2087:U:C6	2.44	0.53
1:0:2170:C:H2'	1:0:2171:U:C4'	2.39	0.53
1:0:2014:A:C6	1:0:2477:C:H1'	2.43	0.53
1:0:2828:C:H2'	1:0:2829:A:C8	2.40	0.53
1:0:441:A:H2'	1:0:442:A:H5'	1.91	0.53
1:0:641:G:C3'	1:0:642:A:H5''	2.38	0.53
1:0:678:G:H2'	1:0:679:C:C6	2.43	0.53
1:0:942:U:H2'	1:0:943:U:C4'	2.39	0.53
1:0:1514:C:H5'	1:0:1593:C:C5'	2.38	0.53
1:0:2196:U:H2'	1:0:2197:U:O4'	2.09	0.53
1:0:2252:A:O2'	1:0:2253:A:H5'	2.08	0.53
1:0:2670:C:N3	1:0:2671:C:C5	2.77	0.53
1:0:2754:C:C2'	1:0:2755:A:H5'	2.39	0.53
1:0:2796:A:H2'	1:0:2797:G:C8	2.44	0.53
1:0:362:C:H2'	1:0:363:G:C4'	2.36	0.53
1:0:623:G:C1'	1:0:626:A:H62	2.21	0.53
1:0:640:C:H4'	1:0:660:G:N2	2.24	0.53
1:0:798:G:H2'	1:0:799:C:H5'	1.89	0.53
1:0:839:U:N3	1:0:841:G:H1'	2.24	0.53
1:0:1064:C:H6	1:0:1064:C:O5'	1.92	0.53
1:0:1218:C:O2'	1:0:1219:C:H5'	2.08	0.53
1:0:1300:A:C2	1:0:1666:G:H4'	2.44	0.53
1:0:1407:G:H2'	1:0:1408:A:C8	2.43	0.53
1:0:2491:C:C3'	1:0:2492:G:H5''	2.36	0.53
1:0:2519:C:H2'	1:0:2520:A:C5'	2.33	0.53
1:0:2548:G:N1	1:0:2549:G:N7	2.57	0.53
1:0:57:G:N2	1:0:72:A:C8	2.76	0.53
1:0:583:C:O2'	1:0:584:A:OP2	2.21	0.53
1:0:62:U:H3'	1:0:63:A:C8	2.44	0.53

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1054:C:H2'	1:0:1055:A:C4'	2.39	0.53
1:0:1054:C:H2'	1:0:1055:A:H4'	1.91	0.53
1:0:1296:G:H2'	1:0:1298:G:OP2	2.09	0.53
1:0:1404:C:C4	1:0:1407:G:N7	2.76	0.53
1:0:1446:U:H2'	1:0:1447:U:H6	1.74	0.53
1:0:1459:U:C6	1:0:1459:U:O5'	2.62	0.53
1:0:1725:C:C2	1:0:1726:C:C5	2.97	0.53
1:0:2198:U:C3'	1:0:2199:C:C5'	2.82	0.53
1:0:2335:U:H6	1:0:2335:U:O5'	1.90	0.53
1:0:2362:G:H2'	1:0:2363:G:O4'	2.08	0.53
1:0:1140:A:H2	1:0:2548:G:N3	2.07	0.53
1:0:2689:C:O2'	1:0:2690:A:H5'	2.09	0.53
1:0:827:C:O2'	1:0:828:C:H5'	2.08	0.53
5:1:15:LYS:HD2	5:1:16:VAL:N	2.24	0.53
1:0:1166:A:C3'	1:0:1167:A:H5''	2.39	0.53
1:0:1653:C:H2'	1:0:1654:A:C8	2.44	0.53
1:0:1724:C:C4	1:0:1747:G:C6	2.97	0.53
1:0:1777:A:O2'	1:0:1778:U:OP1	2.27	0.53
1:0:1873:A:H2	1:0:2213:G:N3	2.06	0.53
1:0:1974:U:H2'	1:0:1975:G:C5'	2.39	0.53
1:0:1987:G:C5	1:0:1988:A:C8	2.97	0.53
1:0:19:C:C2	1:0:20:C:C5	2.97	0.53
1:0:603:C:C2	1:0:604:U:C5	2.97	0.53
1:0:705:C:H2'	1:0:706:A:C8	2.43	0.53
1:0:753:U:C2'	1:0:754:G:O5'	2.57	0.53
1:0:797:A:N6	1:0:805:G:H1'	2.24	0.53
1:0:922:A:C2	1:0:923:A:C2	2.97	0.53
1:0:946:U:C2	1:0:947:C:C5	2.97	0.53
2:R:30:SER:O	2:R:76:LYS:HG3	2.08	0.53
4:W:28:LEU:HA	4:W:31:GLN:OE1	2.09	0.53
1:0:1358:C:C2'	1:0:1359:G:H5''	2.39	0.53
1:0:2031:A:C2	1:0:2032:G:C4	2.97	0.53
1:0:2111:C:O2'	1:0:2112:C:H5'	2.08	0.53
1:0:2204:A:O2'	1:0:2205:C:OP2	2.25	0.53
1:0:2235:G:O2'	1:0:2236:U:H5'	2.09	0.53
1:0:2324:G:O2'	1:0:2325:A:H5''	2.09	0.53
1:0:407:A:H2'	1:0:408:U:C6	2.44	0.53
2:R:32:LYS:HA	2:R:76:LYS:CE	2.39	0.53
1:0:131:C:O2'	1:0:132:U:H5'	2.08	0.52
1:0:1333:G:H22	1:0:1344:C:N4	2.07	0.52
1:0:1518:C:H2'	1:0:1519:G:C8	2.43	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1542:G:C6	1:0:1559:G:H2'	2.43	0.52
1:0:1892:C:H6	1:0:1892:C:O5'	1.91	0.52
1:0:1903:C:H2'	1:0:1904:G:C8	2.43	0.52
1:0:1960:A:C2	1:0:1961:A:C4	2.98	0.52
1:0:1999:U:H2'	1:0:2000:U:O4'	2.09	0.52
1:0:2006:G:H2'	1:0:2007:G:O5'	2.09	0.52
1:0:2074:U:C5	1:0:2075:U:C5	2.97	0.52
1:0:2217:G:H5''	1:0:2218:G:OP1	2.08	0.52
1:0:2420:C:H2'	1:0:2421:C:H6	1.74	0.52
1:0:2026:C:OP2	1:0:2759:U:C4	2.62	0.52
1:0:2026:C:OP2	1:0:2759:U:O4	2.27	0.52
1:0:541:C:H41	1:0:572:G:H8	1.55	0.52
1:0:718:A:C2	1:0:740:A:H1'	2.45	0.52
1:0:770:U:O2'	1:0:771:C:H5'	2.08	0.52
1:0:792:U:C2'	1:0:793:G:C5'	2.87	0.52
1:0:1246:G:C2	1:0:1247:U:C6	2.97	0.52
1:0:1305:C:H2'	1:0:1306:U:C6	2.45	0.52
1:0:708:G:OP1	1:0:1393:G:O2'	2.27	0.52
1:0:1434:U:O2'	1:0:1435:G:H5'	2.09	0.52
1:0:1633:C:H5''	1:0:1634:A:OP2	2.09	0.52
1:0:1834:G:N2	1:0:1884:A:C4	2.77	0.52
1:0:1887:G:N2	1:0:1911:A:C2	2.76	0.52
1:0:2487:G:C4	1:0:2488:G:C8	2.97	0.52
1:0:2822:U:H6	1:0:2822:U:O5'	1.92	0.52
1:0:2845:C:O2'	1:0:2846:G:H5'	2.10	0.52
1:0:590:C:H2'	1:0:591:G:H8	1.75	0.52
1:0:690:A:C6	1:0:815:A:C6	2.97	0.52
5:1:30:VAL:HG13	5:1:34:LEU:HD21	1.92	0.52
2:R:2:SER:N	2:R:5:ASP:OD2	2.42	0.52
1:0:1090:C:H2'	1:0:1091:C:C6	2.44	0.52
1:0:1325:U:H4'	1:0:1326:U:C5	2.44	0.52
1:0:1287:A:N1	1:0:1662:G:H5'	2.24	0.52
1:0:1986:G:C6	1:0:1987:G:C5	2.98	0.52
1:0:2010:G:C5	1:0:2011:U:C4	2.98	0.52
1:0:211:U:O2	1:0:211:U:C2'	2.53	0.52
1:0:218:A:O2'	1:0:219:G:H4'	2.08	0.52
1:0:2387:U:H2'	1:0:2388:G:H8	1.72	0.52
1:0:2494:C:N3	1:0:2549:G:C6	2.77	0.52
1:0:613:A:H2'	1:0:614:G:C8	2.44	0.52
1:0:1127:C:H2'	1:0:1128:G:H8	1.74	0.52
1:0:1228:G:C6	1:0:1229:C:N3	2.77	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:141:G:H2'	1:0:142:U:H6	1.75	0.52
1:0:1696:C:O2	1:0:1973:C:H1'	2.09	0.52
1:0:1767:G:N2	1:0:1768:U:H1'	2.25	0.52
1:0:765:C:C5	1:0:1772:C:H1'	2.44	0.52
1:0:1859:A:H2'	1:0:1860:A:C8	2.44	0.52
1:0:2528:G:H2'	1:0:2529:G:C8	2.43	0.52
1:0:2866:A:H2'	1:0:2867:G:C8	2.45	0.52
1:0:883:A:C6	1:0:920:G:C6	2.97	0.52
3:S:70:GLU:OE1	3:S:72:ARG:HD2	2.09	0.52
4:W:17:GLU:CB	4:W:53:LEU:HD11	2.38	0.52
1:0:1301:U:C5	1:0:1340:C:O2	2.63	0.52
1:0:1404:C:N4	1:0:1407:G:N7	2.57	0.52
1:0:201:G:C2	1:0:202:A:C4	2.98	0.52
1:0:2549:G:H5'	1:0:2549:G:C8	2.44	0.52
1:0:2672:U:O2'	1:0:2673:G:H5'	2.10	0.52
1:0:2836:U:H3'	1:0:2836:U:C6	2.44	0.52
1:0:2863:U:C2	1:0:2864:C:C6	2.98	0.52
1:0:194:G:O6	1:0:444:U:O2	2.27	0.52
1:0:664:C:H2'	1:0:665:A:N7	2.25	0.52
1:0:872:G:H2'	1:0:928:G:O6	2.10	0.52
2:R:8:GLN:H	4:W:29:ARG:HH22	1.55	0.52
1:0:109:A:H2'	1:0:110:U:H5''	1.92	0.52
1:0:1211:G:C2'	1:0:1212:U:H5'	2.39	0.52
1:0:1531:C:H2'	1:0:1532:A:H5'	1.92	0.52
1:0:165:G:H2'	1:0:166:G:C5'	2.38	0.52
1:0:1693:A:N6	1:0:1694:A:N1	2.58	0.52
1:0:1790:G:N2	1:0:1811:A:OP2	2.42	0.52
1:0:2197:U:O2'	1:0:2198:U:H5'	2.08	0.52
1:0:2352:A:H2'	1:0:2353:G:C8	2.45	0.52
1:0:2555:G:H2'	1:0:2555:G:N3	2.23	0.52
1:0:536:A:N6	1:0:2605:C:H4'	2.25	0.52
1:0:312:G:C4	1:0:328:A:C2	2.97	0.52
1:0:582:G:H2'	1:0:583:C:C3'	2.38	0.52
1:0:67:G:C3'	1:0:68:C:H6	2.23	0.52
1:0:930:A:H5'	1:0:931:G:N7	2.24	0.52
3:S:92:THR:CG2	3:S:106:VAL:HB	2.32	0.52
1:0:1349:A:O2'	1:0:1350:G:H5'	2.09	0.52
1:0:1385:C:H2'	1:0:1386:A:O4'	2.10	0.52
1:0:1440:G:O5'	1:0:1440:G:H8	1.93	0.52
1:0:2420:C:O2'	1:0:2421:C:H5'	2.09	0.52
1:0:2443:C:C2	1:0:2466:G:N2	2.77	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:37:C:H2'	1:0:38:G:C8	2.45	0.52
1:0:635:C:H3'	1:0:636:G:H5''	1.90	0.52
1:0:707:U:O5'	1:0:707:U:H6	1.92	0.52
1:0:828:C:H2'	1:0:829:C:H6	1.74	0.52
1:0:875:G:C2'	1:0:876:A:H5'	2.40	0.52
1:0:1543:G:N2	1:0:1560:A:C2	2.78	0.52
1:0:1766:U:H3'	1:0:1766:U:C6	2.45	0.52
1:0:1837:G:O2'	1:0:1838:G:H5'	2.09	0.52
1:0:1854:G:C2	1:0:1855:G:C8	2.98	0.52
1:0:1994:U:H2'	1:0:1995:G:H5'	1.91	0.52
1:0:242:A:N7	1:0:442:A:N1	2.57	0.52
1:0:799:C:C2'	1:0:800:U:H5'	2.39	0.52
1:0:839:U:OP1	1:0:2408:G:OP2	2.28	0.52
5:1:57:VAL:HB	5:1:61:TYR:HB2	1.91	0.52
1:0:986:A:H2	1:0:1001:A:N9	2.08	0.52
1:0:1011:A:N6	1:0:1012:A:N6	2.57	0.52
1:0:1215:A:H2'	1:0:1216:G:C8	2.45	0.52
1:0:1373:G:C5	1:0:1374:G:C8	2.97	0.52
1:0:168:A:C4	1:0:169:C:C5	2.98	0.52
1:0:1141:U:C5	1:0:2009:U:OP2	2.63	0.52
1:0:2196:U:C4	1:0:2197:U:C4	2.98	0.52
1:0:2261:G:C6	1:0:2404:A:C2	2.98	0.52
1:0:2288:A:C8	1:0:2289:A:N7	2.78	0.52
1:0:2042:A:C5	1:0:2482:A:C2	2.97	0.52
1:0:2701:A:H2'	1:0:2702:G:O4'	2.10	0.52
1:0:1982:C:H4'	1:0:2703:C:O2	2.09	0.52
1:0:405:C:C2	1:0:406:G:C8	2.98	0.52
1:0:408:U:H2'	1:0:409:G:N7	2.25	0.52
1:0:43:A:C2	1:0:44:G:C2	2.97	0.52
1:0:565:A:H2'	1:0:566:U:C6	2.45	0.52
1:0:585:U:O2'	1:0:2481:G:C6	2.63	0.52
1:0:987:G:O6	1:0:999:A:C2	2.63	0.52
2:R:81:ARG:HH11	2:R:81:ARG:HG3	1.73	0.52
1:0:1458:A:H3'	1:0:1459:U:H5''	1.88	0.52
1:0:1356:G:H5'	1:0:1614:C:OP2	2.10	0.52
1:0:185:C:H2'	1:0:186:C:H6	1.75	0.52
1:0:1997:A:H2'	1:0:1998:A:C8	2.45	0.52
1:0:199:A:N6	1:0:201:G:C6	2.78	0.52
1:0:2040:A:H2'	1:0:2041:A:C8	2.45	0.52
1:0:2076:G:C6	1:0:2204:A:N7	2.78	0.52
1:0:2548:G:C3'	1:0:2549:G:H5''	2.40	0.52

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:351:A:C6	1:0:352:G:C4	2.98	0.52
1:0:1372:A:H2'	1:0:1373:G:O4'	2.10	0.51
1:0:137:A:C2'	1:0:138:G:H5'	2.40	0.51
1:0:1636:G:H2'	1:0:1637:U:C6	2.44	0.51
1:0:1709:U:H6	1:0:1709:U:O5'	1.94	0.51
1:0:1856:U:OP1	1:0:2389:G:O2'	2.26	0.51
1:0:1892:C:H42	1:0:1903:C:H42	1.58	0.51
1:0:2011:U:O2'	1:0:2012:A:H5'	2.10	0.51
1:0:2084:G:H2'	1:0:2085:G:H8	1.75	0.51
1:0:211:U:O2	1:0:212:U:O4'	2.28	0.51
1:0:2497:A:OP2	1:0:2498:U:C5	2.64	0.51
1:0:2546:G:H2'	1:0:2547:C:H6	1.74	0.51
1:0:1746:A:C2	1:0:2696:A:H1'	2.45	0.51
1:0:525:A:C8	1:0:526:C:C6	2.98	0.51
1:0:863:C:H42	1:0:939:C:H42	1.57	0.51
2:R:11:VAL:HG23	2:R:26:SER:O	2.10	0.51
2:R:28:TRP:CZ3	2:R:75:ARG:HB2	2.46	0.51
1:0:1142:G:H2'	1:0:1143:A:H8	1.75	0.51
1:0:1250:A:O2'	1:0:1251:G:O4'	2.28	0.51
1:0:1735:G:O2'	1:0:1736:C:H5'	2.10	0.51
1:0:2050:G:H5''	1:0:2051:U:OP2	2.11	0.51
1:0:2052:G:C2	1:0:2053:G:C8	2.99	0.51
1:0:212:U:O2	1:0:443:A:C2	2.63	0.51
1:0:2264:C:O4'	1:0:2267:A:N6	2.43	0.51
1:0:230:C:O2'	1:0:231:G:H5'	2.10	0.51
1:0:2670:C:O2	1:0:2671:C:C6	2.63	0.51
1:0:317:U:C2'	1:0:318:G:H5''	2.41	0.51
1:0:26:G:H1'	1:0:524:A:N6	2.24	0.51
3:S:45:LYS:HG2	3:S:75:ALA:CB	2.40	0.51
1:0:1210:C:N3	1:0:1211:G:C5	2.78	0.51
1:0:1337:G:H1'	1:0:1632:A:H61	1.75	0.51
1:0:2048:C:H1'	1:0:2428:U:O2	2.09	0.51
1:0:2141:A:H2'	1:0:2142:G:H4'	1.92	0.51
1:0:584:A:H2'	1:0:585:U:H6	1.75	0.51
1:0:720:A:H2'	1:0:721:C:H6	1.76	0.51
1:0:765:C:O2'	1:0:766:A:P	2.68	0.51
1:0:847:C:H1'	1:0:2337:A:N3	2.25	0.51
1:0:940:G:N7	1:0:941:U:C6	2.78	0.51
1:0:823:U:OP1	1:0:1266:G:N7	2.44	0.51
1:0:1404:C:C4	1:0:1406:A:C8	2.98	0.51
1:0:1693:A:C2'	1:0:1694:A:H5'	2.40	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1850:G:O2'	1:0:1851:A:H5'	2.10	0.51
1:0:2016:A:H2'	1:0:2018:G:OP2	2.10	0.51
1:0:2459:C:H2'	1:0:2460:G:C5'	2.40	0.51
1:0:659:G:C6	1:0:660:G:C6	2.98	0.51
1:0:700:C:O2'	1:0:701:U:H5'	2.09	0.51
1:0:824:U:H1'	1:0:1264:C:C6	2.45	0.51
1:0:982:C:OP2	1:0:985:G:N1	2.44	0.51
1:0:136:A:H3'	1:0:137:A:H8	1.74	0.51
1:0:1427:G:H2'	1:0:1428:G:O4'	2.11	0.51
1:0:1708:C:N3	1:0:1714:A:C2	2.78	0.51
1:0:2105:U:H2'	1:0:2106:G:C8	2.45	0.51
1:0:2310:G:N2	1:0:2364:C:C4	2.79	0.51
1:0:2383:C:H2'	1:0:2384:G:O4'	2.10	0.51
1:0:2487:G:H2'	1:0:2488:G:H8	1.75	0.51
1:0:2780:A:H2'	1:0:2781:G:H8	1.75	0.51
1:0:2818:G:C2'	1:0:2819:G:H5'	2.41	0.51
1:0:1393:G:C2	1:0:1394:G:C8	2.98	0.51
1:0:1514:C:O4'	1:0:1593:C:C4'	2.59	0.51
1:0:171:G:C2	1:0:179:U:C2	2.99	0.51
1:0:18:U:H2'	1:0:19:C:H6	1.76	0.51
1:0:2011:U:H2'	1:0:2012:A:H8	1.75	0.51
1:0:2280:A:H2'	1:0:2281:C:C6	2.45	0.51
1:0:2811:G:C6	1:0:2812:A:N6	2.79	0.51
1:0:2833:C:H2'	1:0:2834:A:O4'	2.11	0.51
1:0:414:A:H2'	1:0:415:A:H8	1.75	0.51
1:0:55:A:N6	1:0:69:G:H1	2.09	0.51
1:0:624:A:H2'	1:0:625:A:H5'	1.91	0.51
1:0:68:C:C1'	1:0:72:A:H1'	2.40	0.51
1:0:1139:A:O2'	1:0:1140:A:O4'	2.28	0.51
1:0:1541:G:H2'	1:0:1542:G:H5'	1.93	0.51
1:0:2309:G:N2	1:0:2365:U:C2	2.79	0.51
1:0:2836:U:C6	1:0:2836:U:C3'	2.94	0.51
1:0:502:A:H2'	1:0:503:G:O4'	2.10	0.51
1:0:789:G:O6	1:0:2055:G:OP1	2.28	0.51
1:0:846:A:C5	1:0:847:C:C4	2.99	0.51
1:0:976:C:C2'	1:0:977:G:H5'	2.41	0.51
3:S:52:ASN:HD21	3:S:71:GLN:HG3	1.75	0.51
1:0:110:U:H2'	1:0:111:G:O4'	2.11	0.51
1:0:117:A:H4'	1:0:118:U:O5'	2.11	0.51
1:0:1225:G:H2'	1:0:1249:G:H22	1.75	0.51
1:0:1724:C:N3	1:0:1725:C:C4	2.78	0.51

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2225:G:H2'	1:0:2226:A:C8	2.46	0.51
1:0:2836:U:H6	1:0:2836:U:H5''	1.75	0.51
1:0:543:G:C4	1:0:570:G:N2	2.79	0.51
1:0:76:C:C6	1:0:76:C:H5'	2.32	0.51
1:0:808:C:H2'	1:0:809:C:H6	1.75	0.51
1:0:838:A:H2'	1:0:839:U:H6	1.76	0.51
1:0:1035:G:OP1	1:0:1037:U:OP1	2.29	0.51
1:0:1077:U:H2'	1:0:1078:A:H5''	1.93	0.51
1:0:1164:C:H3'	1:0:1165:G:C8	2.46	0.51
1:0:1776:A:HO2'	1:0:1777:A:P	2.34	0.51
1:0:1925:C:H2'	1:0:1926:U:C5	2.44	0.51
1:0:2053:G:H2'	1:0:2054:A:H8	1.76	0.51
1:0:2133:G:H2'	1:0:2134:U:H6	1.75	0.51
1:0:2404:A:O2'	1:0:2405:A:P	2.69	0.51
1:0:2492:G:C5	1:0:2493:U:C4	2.99	0.51
1:0:2549:G:H5'	1:0:2549:G:H8	1.76	0.51
1:0:459:A:OP1	1:0:459:A:H4'	2.10	0.51
1:0:940:G:C3'	1:0:941:U:C5'	2.75	0.51
1:0:982:C:P	1:0:985:G:N2	2.84	0.51
5:1:70:LEU:O	5:1:74:HIS:NE2	2.44	0.51
3:S:112:LYS:N	3:S:112:LYS:CD	2.63	0.51
1:0:1255:A:C4	1:0:1256:C:C5	2.99	0.51
1:0:169:C:C2'	1:0:170:U:H5'	2.41	0.51
1:0:1761:G:O2'	1:0:1762:C:H5'	2.11	0.51
1:0:1882:G:H21	1:0:1885:C:H42	1.56	0.51
1:0:2069:U:H6	1:0:2069:U:O5'	1.93	0.51
1:0:2397:A:H2'	1:0:2398:U:O4'	2.11	0.51
1:0:2429:A:OP1	1:0:2476:A:C8	2.64	0.51
1:0:2764:U:H2'	1:0:2765:C:H6	1.74	0.51
1:0:2799:C:C4	1:0:2800:C:C2	2.98	0.51
1:0:26:G:C2	1:0:27:G:N2	2.79	0.51
1:0:2770:A:C5'	1:0:2867:G:H21	2.19	0.51
1:0:503:G:H2'	1:0:504:G:O4'	2.11	0.51
1:0:755:C:O2'	1:0:756:C:H5'	2.11	0.51
1:0:860:U:C2'	1:0:860:U:O2	2.59	0.51
1:0:1358:C:H2'	1:0:1359:G:H5''	1.92	0.50
1:0:1404:C:H41	1:0:1406:A:H3'	1.75	0.50
1:0:141:G:H2'	1:0:142:U:C6	2.46	0.50
1:0:1631:C:OP2	1:0:1633:C:N4	2.44	0.50
1:0:1682:A:O2'	1:0:1683:G:H5'	2.11	0.50
1:0:1975:G:O2'	1:0:1976:U:OP2	2.20	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2048:C:H2'	1:0:2049:C:O4'	2.11	0.50
1:0:2173:G:O2'	1:0:2174:G:H5'	2.11	0.50
1:0:2701:A:C2	1:0:2848:A:C4	2.99	0.50
1:0:2764:U:O2'	1:0:2765:C:H5'	2.11	0.50
1:0:2836:U:C2'	1:0:2837:G:H5'	2.40	0.50
1:0:80:A:O4'	1:0:305:A:C2	2.64	0.50
1:0:394:U:H3	1:0:406:G:H1	1.59	0.50
1:0:43:A:C6	1:0:44:G:C6	2.99	0.50
1:0:45:C:C2	1:0:46:C:C5	2.99	0.50
1:0:482:A:O2'	1:0:483:A:H5'	2.11	0.50
1:0:516:G:H4'	1:0:519:C:H1'	1.92	0.50
1:0:622:U:C2'	1:0:626:A:H61	2.23	0.50
1:0:1210:C:C2	1:0:1211:G:C8	3.00	0.50
1:0:1315:A:H5''	1:0:1316:G:OP2	2.11	0.50
1:0:1683:G:HO2'	1:0:1684:G:H5'	1.76	0.50
1:0:18:U:HO2'	1:0:19:C:H5'	1.75	0.50
1:0:2389:G:N2	1:0:2390:A:H1'	2.26	0.50
1:0:2473:G:O2'	1:0:2474:G:H5'	2.11	0.50
1:0:2492:G:C2	1:0:2493:U:C2	2.99	0.50
1:0:2648:G:N2	1:0:2649:A:H1'	2.27	0.50
1:0:2689:C:H2'	1:0:2690:A:C8	2.46	0.50
1:0:2720:A:C6	1:0:2744:A:C8	3.00	0.50
1:0:2838:U:H2'	1:0:2839:G:C8	2.44	0.50
1:0:490:A:O2'	1:0:491:A:C5'	2.52	0.50
1:0:538:A:N6	1:0:2027:C:OP1	2.45	0.50
1:0:600:G:C6	1:0:602:C:C4	2.99	0.50
1:0:62:U:H3'	1:0:63:A:H8	1.76	0.50
1:0:698:A:H1'	1:0:701:U:O4	2.11	0.50
1:0:715:U:H2'	1:0:716:U:O4'	2.11	0.50
1:0:754:G:C2	1:0:770:U:O2	2.64	0.50
1:0:944:A:O2'	1:0:945:G:H5'	2.12	0.50
1:0:983:G:N1	1:0:984:A:N6	2.56	0.50
1:0:1001:A:O5'	1:0:1002:C:OP2	2.29	0.50
1:0:1498:G:O2'	1:0:1499:A:H5'	2.12	0.50
1:0:1838:G:H2'	1:0:1839:A:O4'	2.11	0.50
1:0:1934:U:O2	1:0:1936:A:C8	2.64	0.50
1:0:2357:A:H2'	1:0:2358:C:H5'	1.92	0.50
1:0:2404:A:O2'	1:0:2405:A:OP2	2.25	0.50
1:0:2527:G:C2	1:0:2540:A:C2	2.99	0.50
1:0:2550:C:N4	1:0:2553:G:C8	2.79	0.50
1:0:2621:G:H2'	1:0:2622:G:H8	1.77	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2756:A:H4'	1:0:2758:A:OP1	2.12	0.50
1:0:619:A:H61	1:0:629:C:H42	1.59	0.50
1:0:640:C:H4'	1:0:660:G:N3	2.26	0.50
1:0:709:A:C2	1:0:710:C:C2	2.99	0.50
1:0:1511:A:H2'	1:0:1512:A:O4'	2.11	0.50
1:0:1586:A:C6	1:0:1587:A:C6	2.99	0.50
1:0:1763:G:N2	1:0:1765:C:C5'	2.73	0.50
1:0:1800:A:C6	1:0:1802:A:C6	3.00	0.50
1:0:1975:G:N2	1:0:1979:C:H5	2.07	0.50
1:0:1982:C:O2'	1:0:1983:G:H5'	2.11	0.50
1:0:2595:C:O2'	1:0:2596:C:H5'	2.11	0.50
1:0:2724:G:H1'	1:0:2741:G:N2	2.27	0.50
1:0:2834:A:N6	1:0:2835:A:N6	2.59	0.50
1:0:2860:C:H2'	1:0:2861:A:C5'	2.41	0.50
1:0:322:A:H1'	1:0:343:A:C5	2.46	0.50
1:0:24:G:C2	1:0:527:C:C2	2.99	0.50
1:0:690:A:N1	1:0:815:A:C6	2.79	0.50
1:0:939:C:H2'	1:0:940:G:C8	2.47	0.50
1:0:979:A:H2'	1:0:980:G:C8	2.46	0.50
1:0:1512:A:H2'	1:0:1514:C:C5	2.47	0.50
1:0:1552:C:O2'	1:0:1553:G:H5'	2.12	0.50
1:0:1672:A:C2	1:0:2032:G:H5''	2.46	0.50
1:0:2447:G:N2	1:0:2460:G:H2'	2.27	0.50
1:0:2511:G:H2'	1:0:2512:A:O4'	2.11	0.50
1:0:2549:G:C2	1:0:2550:C:C2	3.00	0.50
1:0:68:C:C2'	1:0:72:A:H1'	2.42	0.50
2:R:93:GLY:C	5:1:50:ARG:NH2	2.62	0.50
1:0:1352:G:N2	1:0:1619:A:N3	2.55	0.50
1:0:1404:C:N4	1:0:1406:A:H3'	2.27	0.50
1:0:1491:C:H2'	1:0:1492:A:O4'	2.12	0.50
1:0:1615:C:P	2:R:35:LYS:HB2	2.52	0.50
1:0:1743:C:O2'	1:0:1744:G:H5'	2.12	0.50
1:0:2210:C:O2'	1:0:2211:U:H5'	2.11	0.50
1:0:2355:A:C8	1:0:2355:A:OP1	2.65	0.50
1:0:2474:G:C6	1:0:2475:C:C4	3.00	0.50
1:0:2591:C:C4	1:0:2592:U:H5	2.30	0.50
1:0:2618:A:H1'	1:0:2758:A:C2	2.47	0.50
1:0:2851:G:H2'	1:0:2852:G:C8	2.46	0.50
1:0:296:A:N6	1:0:297:A:N6	2.59	0.50
1:0:337:G:N2	3:S:10:HIS:NE2	2.59	0.50
1:0:604:U:H2'	1:0:604:U:O2	2.12	0.50

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:71:A:O5'	1:0:71:A:H8	1.94	0.50
1:0:788:G:H4'	1:0:789:G:O5'	2.12	0.50
1:0:820:U:C2	1:0:821:A:C8	3.00	0.50
1:0:961:G:C5	1:0:962:C:C5	2.99	0.50
1:0:984:A:H2	1:0:1201:G:H21	1.57	0.50
1:0:987:G:H2'	1:0:988:G:C8	2.45	0.50
1:0:994:A:N7	1:0:995:A:C2	2.80	0.50
1:0:1092:U:H2'	1:0:1093:U:C6	2.46	0.50
1:0:1289:A:C2	1:0:1290:A:C8	2.99	0.50
1:0:1578:U:H2'	1:0:1579:G:H8	1.76	0.50
1:0:159:A:H61	1:0:192:G:H1	1.58	0.50
1:0:1882:G:H21	1:0:1885:C:H41	1.58	0.50
1:0:2182:A:C6	1:0:2204:A:C2	3.00	0.50
1:0:2526:U:C6	1:0:2545:A:C5	2.99	0.50
1:0:5:A:HO2'	1:0:6:A:H5'	1.75	0.50
1:0:14:A:OP2	1:0:15:G:OP2	2.28	0.50
1:0:1780:A:O5'	1:0:1780:A:H8	1.94	0.50
1:0:1804:U:O2'	1:0:1805:G:H5'	2.11	0.50
1:0:1919:A:O4'	1:0:1923:U:C4	2.65	0.50
1:0:1949:A:H61	1:0:2581:A:H61	1.60	0.50
1:0:2002:A:H2'	1:0:2003:A:O5'	2.12	0.50
1:0:2502:G:C6	1:0:2520:A:C2	2.99	0.50
1:0:313:U:H2'	1:0:314:G:H8	1.77	0.50
1:0:322:A:C2	1:0:342:G:OP2	2.65	0.50
1:0:496:C:O2'	1:0:497:C:H5'	2.12	0.50
1:0:617:U:H2'	1:0:618:A:C8	2.46	0.50
1:0:831:G:C2'	1:0:832:A:H5''	2.42	0.50
1:0:914:C:H2'	1:0:915:C:C6	2.46	0.50
1:0:953:G:C6	1:0:954:U:C2	3.00	0.50
3:S:45:LYS:HG2	3:S:75:ALA:HB1	1.93	0.50
1:0:1139:A:H1'	1:0:2495:G:O2'	2.12	0.50
1:0:1438:G:C2'	1:0:1439:G:H5'	2.42	0.50
1:0:1606:C:O2'	1:0:1607:A:H5'	2.12	0.50
1:0:1625:A:H2'	1:0:1625:A:N3	2.27	0.50
1:0:170:U:C2'	1:0:170:U:O2	2.60	0.50
1:0:1834:G:H2'	1:0:1835:C:O4'	2.12	0.50
1:0:2630:C:H2'	1:0:2631:C:H6	1.77	0.50
1:0:2840:U:H2'	1:0:2841:U:C6	2.46	0.50
1:0:765:C:O2'	1:0:766:A:O5'	2.30	0.50
4:W:2:LYS:HG3	4:W:3:PRO:CD	2.38	0.50
1:0:1004:A:H2'	1:0:1005:U:H5'	1.94	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1008:G:H2'	1:0:1009:C:H6	1.77	0.49
1:0:1313:U:HO2'	1:0:1314:A:P	2.35	0.49
1:0:1389:C:C5	1:0:1390:G:C5	2.99	0.49
1:0:1474:A:C6	1:0:1476:G:C5	3.00	0.49
1:0:1921:A:C2'	1:0:1922:U:H4'	2.37	0.49
1:0:2415:G:N3	1:0:2577:A:H2	2.10	0.49
1:0:2692:A:H5''	1:0:2693:U:OP2	2.12	0.49
1:0:2817:A:O2'	1:0:2818:G:H5'	2.12	0.49
1:0:712:A:H2'	1:0:713:G:O4'	2.12	0.49
1:0:718:A:C8	1:0:740:A:C2	3.00	0.49
1:0:989:G:O4'	1:0:1012:A:H2	1.94	0.49
1:0:1389:C:H2'	1:0:1390:G:O4'	2.12	0.49
1:0:1569:A:C2	1:0:1571:G:C8	3.00	0.49
1:0:172:A:N1	1:0:178:C:N3	2.59	0.49
1:0:188:G:H2'	1:0:189:A:H8	1.78	0.49
1:0:2145:A:H1'	1:0:2156:A:N1	2.28	0.49
1:0:2588:U:H3'	1:0:2589:C:H5'	1.95	0.49
1:0:567:G:H2'	1:0:568:G:H8	1.76	0.49
1:0:602:C:H2'	1:0:603:C:H6	1.76	0.49
1:0:932:G:H2'	1:0:933:G:C8	2.47	0.49
2:R:11:VAL:C	2:R:12:ILE:HG13	2.33	0.49
1:0:1116:U:H2'	1:0:1117:G:H8	1.76	0.49
1:0:1515:U:H2'	1:0:1516:A:O4'	2.12	0.49
1:0:1651:U:C5'	1:0:1652:G:OP2	2.59	0.49
1:0:1757:C:O2	1:0:1970:G:C2	2.65	0.49
1:0:1286:U:C6	1:0:1986:G:H4'	2.47	0.49
1:0:2295:C:H2'	1:0:2296:U:O4'	2.12	0.49
1:0:2529:G:C6	1:0:2530:C:C4	3.00	0.49
1:0:311:A:C5	1:0:345:U:H4'	2.47	0.49
1:0:430:C:H2'	1:0:431:G:H8	1.77	0.49
1:0:614:G:H22	1:0:634:G:N2	2.06	0.49
5:1:25:ARG:HA	5:1:28:ASP:OD2	2.12	0.49
1:0:1397:A:O5'	1:0:1397:A:H8	1.95	0.49
1:0:1698:C:H2'	1:0:1753:A:N3	2.28	0.49
1:0:1831:G:O2'	1:0:1832:G:H5'	2.11	0.49
1:0:1980:A:C2'	1:0:1981:A:H5'	2.43	0.49
1:0:2125:C:H3'	1:0:2126:U:C5'	2.42	0.49
1:0:2526:U:C2	1:0:2545:A:N6	2.81	0.49
1:0:2691:C:H6	1:0:2691:C:C3'	2.20	0.49
1:0:2698:G:O2'	1:0:2699:G:H5'	2.12	0.49
1:0:404:A:C6	1:0:405:C:C4	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:160:C:O2'	1:0:445:A:N3	2.42	0.49
1:0:497:C:O2	1:0:505:G:C2	2.65	0.49
1:0:516:G:C2'	1:0:517:A:OP2	2.60	0.49
1:0:568:G:H2'	1:0:569:C:H6	1.77	0.49
1:0:688:A:N3	1:0:2422:C:O2'	2.43	0.49
2:R:53:ILE:HD13	2:R:53:ILE:C	2.33	0.49
2:R:25:TYR:CE2	2:R:88:ILE:HD13	2.47	0.49
4:W:2:LYS:N	4:W:3:PRO:HD2	2.13	0.49
1:0:1216:G:C6	1:0:1217:U:C4	3.00	0.49
1:0:1221:C:C2	1:0:1222:G:C8	3.01	0.49
1:0:1349:A:P	2:R:63:LYS:O	2.70	0.49
1:0:1381:G:C2	1:0:1382:G:C8	3.00	0.49
1:0:1670:G:H4'	1:0:1671:A:O5'	2.12	0.49
1:0:1774:A:H8	1:0:1774:A:O5'	1.95	0.49
1:0:1949:A:C2	1:0:2572:U:H1'	2.48	0.49
1:0:1949:A:N3	1:0:2572:U:H4'	2.27	0.49
1:0:198:A:O4'	1:0:210:A:H1'	2.12	0.49
1:0:218:A:OP1	1:0:218:A:H8	1.95	0.49
1:0:2275:U:P	1:0:2275:U:C6	3.05	0.49
1:0:2268:G:H1	1:0:2322:U:H3	1.59	0.49
1:0:2266:A:H61	1:0:2323:U:H1'	1.70	0.49
1:0:2517:C:O2'	1:0:2518:C:H5'	2.12	0.49
1:0:318:G:H5'	1:0:318:G:H8	1.78	0.49
1:0:687:G:C2	1:0:817:A:C2	3.01	0.49
1:0:830:C:N4	1:0:831:G:C6	2.80	0.49
5:1:104:PHE:CD1	5:1:106:VAL:HG23	2.48	0.49
3:S:40:LEU:HD11	3:S:45:LYS:HB2	1.95	0.49
1:0:114:C:O2'	1:0:115:G:H5'	2.12	0.49
1:0:953:G:H1'	1:0:1203:A:C2	2.48	0.49
1:0:243:G:OP2	1:0:243:G:O4'	2.31	0.49
1:0:2578:G:O2'	1:0:2579:A:H5'	2.12	0.49
1:0:2791:C:H2'	1:0:2792:C:H6	1.78	0.49
1:0:436:A:OP1	1:0:437:G:H5''	2.11	0.49
1:0:1340:C:N4	1:0:1341:G:N1	2.61	0.49
1:0:1416:A:H2'	1:0:1417:C:H6	1.77	0.49
1:0:2308:A:H2'	1:0:2309:G:O4'	2.13	0.49
1:0:956:A:C6	1:0:2427:A:C2	3.01	0.49
1:0:2438:A:N6	1:0:2473:G:C6	2.80	0.49
1:0:2550:C:C4	1:0:2553:G:C8	3.01	0.49
1:0:2696:A:C2	1:0:2697:G:C5	3.00	0.49
1:0:2787:A:C2	1:0:2864:C:C2	3.00	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2792:C:C2	1:0:2805:G:N2	2.81	0.49
1:0:306:G:H2'	1:0:307:C:H6	1.77	0.49
1:0:332:C:H5''	1:0:333:A:OP2	2.13	0.49
1:0:442:A:C6	1:0:443:A:N6	2.81	0.49
1:0:685:U:O2'	1:0:686:C:H5'	2.12	0.49
1:0:688:A:C6	1:0:689:A:N6	2.81	0.49
1:0:811:G:N1	1:0:812:G:C5	2.81	0.49
1:0:830:C:O2'	1:0:852:U:H5''	2.11	0.49
2:R:6:ILE:N	2:R:7:LEU:HD13	2.28	0.49
2:R:8:GLN:HB3	2:R:28:TRP:HB2	1.94	0.49
3:S:17:LYS:HB2	3:S:20:ASP:CG	2.32	0.49
3:S:22:VAL:HG22	3:S:82:ALA:HA	1.94	0.49
1:0:526:C:H1'	1:0:1274:C:O2'	2.13	0.49
1:0:1438:G:C2	1:0:1591:U:C2	3.00	0.49
1:0:1685:A:HO2'	1:0:1686:A:P	2.34	0.49
1:0:2292:C:C4	1:0:2293:G:N7	2.81	0.49
1:0:2518:C:H2'	1:0:2519:C:H6	1.77	0.49
1:0:2549:G:C4	1:0:2550:C:C6	3.01	0.49
1:0:1681:A:N1	1:0:2706:U:C6	2.80	0.49
1:0:2825:A:C4	1:0:2826:C:C5	3.00	0.49
1:0:324:C:H2'	1:0:325:U:O4'	2.13	0.49
1:0:336:A:H2'	1:0:337:G:C8	2.47	0.49
1:0:765:C:H5	1:0:1772:C:O2	1.96	0.49
1:0:794:A:H5'	1:0:795:A:C8	2.47	0.49
1:0:1041:G:C6	1:0:1136:G:N2	2.81	0.49
1:0:1174:G:N2	1:0:1175:A:C4	2.81	0.49
1:0:1327:C:H2'	1:0:1328:C:C6	2.46	0.49
1:0:1443:G:H2'	1:0:1444:C:C6	2.47	0.49
1:0:1501:C:C2	1:0:1502:G:C8	3.00	0.49
1:0:1542:G:H1'	1:0:1561:A:N6	2.28	0.49
1:0:1887:G:N2	1:0:1888:C:C2	2.81	0.49
1:0:228:A:C5	1:0:229:G:H1'	2.47	0.49
1:0:2320:G:H2'	1:0:2321:C:C6	2.48	0.49
1:0:2380:U:C2'	1:0:2381:A:H5'	2.43	0.49
1:0:2873:G:O2'	1:0:2874:A:H5'	2.13	0.49
1:0:636:G:H2'	1:0:637:G:H5'	1.94	0.49
1:0:856:A:H2'	1:0:857:U:O4'	2.13	0.49
1:0:309:G:P	3:S:95:ARG:HE	2.36	0.49
1:0:1004:A:H2'	1:0:1005:U:C5'	2.43	0.49
1:0:1474:A:H3'	1:0:1474:A:N3	2.27	0.49
1:0:1692:C:H2'	1:0:1693:A:O5'	2.12	0.49

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2064:U:H2'	1:0:2065:A:H8	1.78	0.49
1:0:2205:C:O2'	1:0:2206:C:H5'	2.12	0.49
1:0:48:A:N6	1:0:154:U:H5	2.05	0.49
1:0:546:A:N6	1:0:565:A:N6	2.61	0.49
1:0:679:C:C2	1:0:680:U:C5	3.01	0.49
1:0:751:G:H2'	1:0:752:G:C5'	2.41	0.49
1:0:947:C:C2	1:0:948:C:C5	3.01	0.49
1:0:958:G:H2'	1:0:959:C:H6	1.77	0.49
2:R:53:ILE:O	2:R:53:ILE:HG23	2.12	0.49
2:R:7:LEU:CG	4:W:29:ARG:HH21	2.26	0.49
1:0:105:G:H5'	1:0:105:G:H8	1.78	0.48
1:0:829:C:C2	1:0:1206:G:N2	2.81	0.48
1:0:1287:A:C6	1:0:1315:A:C2	3.01	0.48
1:0:1407:G:N2	1:0:1411:C:C6	2.81	0.48
1:0:1463:A:C2	1:0:1479:G:C2	3.01	0.48
1:0:1685:A:H4'	1:0:1686:A:O5'	2.13	0.48
1:0:1910:A:H8	1:0:1910:A:O5'	1.96	0.48
1:0:1956:G:H8	1:0:1956:G:H5'	1.78	0.48
1:0:1993:G:O2'	1:0:1994:U:H5'	2.13	0.48
1:0:2195:C:O2'	1:0:2196:U:H5'	2.12	0.48
1:0:228:A:H2'	1:0:229:G:O4'	2.13	0.48
1:0:2523:G:O2'	1:0:2524:G:H5'	2.12	0.48
1:0:2531:U:C2	1:0:2533:U:H5''	2.47	0.48
1:0:2627:G:C5	1:0:2652:G:C2	3.00	0.48
1:0:311:A:O2'	1:0:329:C:O2	2.31	0.48
1:0:351:A:H2'	1:0:352:G:H5'	1.94	0.48
1:0:940:G:C5	1:0:941:U:C6	3.01	0.48
1:0:952:A:H2'	1:0:953:G:O4'	2.13	0.48
2:R:4:TYR:CD2	4:W:23:LYS:CB	2.96	0.48
2:R:10:PRO:CG	4:W:30:PHE:HA	2.36	0.48
4:W:41:HIS:C	4:W:41:HIS:HD2	2.15	0.48
4:W:43:VAL:HG12	4:W:47:ARG:CZ	2.43	0.48
1:0:113:C:N3	1:0:114:C:C5	2.81	0.48
1:0:1261:G:O2'	1:0:1262:U:P	2.70	0.48
1:0:145:C:C2	1:0:153:A:C2	3.00	0.48
1:0:2039:G:N3	1:0:2039:G:H2'	2.27	0.48
1:0:2272:A:C6	1:0:2273:C:C4	3.01	0.48
1:0:2379:G:O2'	1:0:2380:U:H5'	2.12	0.48
1:0:2469:G:H8	1:0:2469:G:O5'	1.96	0.48
1:0:2532:G:H2'	1:0:2533:U:O4'	2.13	0.48
1:0:2823:G:HO2'	1:0:2824:C:P	2.36	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2849:C:O5'	1:0:2849:C:H6	1.95	0.48
1:0:336:A:H2'	1:0:337:G:H8	1.79	0.48
1:0:718:A:H61	1:0:739:G:H1'	1.78	0.48
1:0:764:A:N7	1:0:802:A:C5	2.81	0.48
1:0:982:C:C2'	1:0:983:G:H5'	2.43	0.48
2:R:28:TRP:CE3	2:R:75:ARG:HB2	2.48	0.48
2:R:29:VAL:HG23	2:R:30:SER:O	2.14	0.48
2:R:91:LEU:HD22	2:R:91:LEU:H	1.78	0.48
2:R:7:LEU:HD23	4:W:29:ARG:HH21	1.78	0.48
1:0:1132:C:H2'	1:0:1133:G:O4'	2.14	0.48
1:0:1419:G:O2'	1:0:1420:A:H5'	2.12	0.48
1:0:1829:C:H4'	1:0:1911:A:H1'	1.95	0.48
1:0:2063:A:H2'	1:0:2064:U:C6	2.48	0.48
1:0:2210:C:C2	1:0:2211:U:C6	3.02	0.48
1:0:2359:U:H2'	1:0:2360:C:C6	2.48	0.48
1:0:2559:U:H2'	1:0:2560:G:H5'	1.95	0.48
1:0:2625:U:H6	1:0:2625:U:O5'	1.96	0.48
1:0:2729:A:N6	1:0:2730:A:N7	2.60	0.48
1:0:2834:A:O2'	1:0:2835:A:H5'	2.13	0.48
1:0:3:U:H2'	1:0:4:C:H6	1.71	0.48
1:0:574:C:H4'	1:0:1266:G:O6	2.13	0.48
1:0:754:G:H2'	1:0:755:C:O5'	2.14	0.48
1:0:746:G:C8	1:0:774:A:C6	3.01	0.48
1:0:836:G:H2'	1:0:837:U:H6	1.78	0.48
1:0:839:U:C2	1:0:841:G:H1'	2.47	0.48
1:0:1007:A:C6	1:0:1171:A:C2	3.01	0.48
1:0:1469:U:O5'	1:0:1470:G:OP2	2.30	0.48
1:0:1514:C:H4'	1:0:1592:U:O2'	2.12	0.48
1:0:2106:G:H2'	1:0:2107:G:C5'	2.25	0.48
1:0:2355:A:H8	1:0:2355:A:OP1	1.97	0.48
1:0:2845:C:C4	1:0:2846:G:N7	2.81	0.48
1:0:317:U:H3'	1:0:318:G:C5'	2.44	0.48
1:0:344:G:C5	1:0:345:U:C5	3.01	0.48
1:0:590:C:H2'	1:0:591:G:C8	2.49	0.48
1:0:754:G:C6	1:0:755:C:N4	2.82	0.48
1:0:838:A:H2'	1:0:839:U:C6	2.48	0.48
2:R:54:SER:O	2:R:78:ALA:HA	2.14	0.48
1:0:1313:U:O2'	1:0:1314:A:P	2.71	0.48
1:0:1460:G:O2'	1:0:1461:C:H5'	2.13	0.48
1:0:1476:G:C2	1:0:1477:C:C2	3.01	0.48
1:0:1933:G:H2'	1:0:1934:U:H6	1.78	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2293:G:H2'	1:0:2294:U:C6	2.49	0.48
1:0:2547:C:C2	1:0:2548:G:C8	3.01	0.48
1:0:2627:G:H2'	1:0:2628:C:C6	2.48	0.48
1:0:2696:A:O2'	1:0:2697:G:H5'	2.13	0.48
1:0:2738:A:H2'	1:0:2739:G:H5'	1.96	0.48
1:0:2770:A:C8	1:0:2770:A:O5'	2.66	0.48
1:0:344:G:C4	1:0:345:U:C6	3.00	0.48
1:0:613:A:H61	1:0:635:C:H42	1.62	0.48
1:0:657:A:C2	1:0:658:G:C4	3.01	0.48
1:0:83:A:H8	1:0:83:A:P	2.36	0.48
1:0:961:G:H2'	1:0:962:C:H6	1.77	0.48
2:R:59:PRO:HA	2:R:73:ASN:O	2.14	0.48
3:S:40:LEU:HD12	3:S:40:LEU:N	2.29	0.48
3:S:93:ARG:HG2	3:S:93:ARG:O	2.12	0.48
4:W:24:GLU:OE2	4:W:42:ARG:NH2	2.47	0.48
1:0:1077:U:C2'	1:0:1078:A:H5''	2.44	0.48
1:0:1434:U:C2	1:0:1435:G:C8	3.01	0.48
1:0:1523:A:O5'	1:0:1523:A:H8	1.97	0.48
1:0:1683:G:H2'	1:0:1684:G:H5'	1.92	0.48
1:0:2264:C:C4'	1:0:2267:A:H62	2.27	0.48
1:0:2284:U:H2'	1:0:2285:U:H5''	1.95	0.48
1:0:2497:A:OP2	1:0:2498:U:C4	2.67	0.48
1:0:2585:C:H2'	1:0:2586:G:O4'	2.13	0.48
1:0:2841:U:O2'	1:0:2842:C:P	2.71	0.48
1:0:405:C:C4	1:0:406:G:N7	2.82	0.48
1:0:1080:A:H4'	1:0:1107:A:HO2'	1.78	0.48
1:0:115:G:C6	1:0:117:A:N6	2.82	0.48
1:0:1174:G:N2	1:0:1175:A:C5	2.81	0.48
1:0:1250:A:O2'	1:0:1251:G:C4'	2.61	0.48
1:0:1295:U:C5	1:0:1296:G:N7	2.82	0.48
1:0:1558:C:O2'	1:0:1559:G:H5'	2.13	0.48
1:0:162:C:H2'	1:0:163:A:O4'	2.12	0.48
1:0:1763:G:H22	1:0:1765:C:H5''	1.78	0.48
1:0:1765:C:H6	1:0:1765:C:O5'	1.97	0.48
1:0:1914:U:H3	1:0:1952:A:N6	2.00	0.48
1:0:2197:U:C4	1:0:2198:U:O4	2.67	0.48
1:0:976:C:C1'	1:0:2252:A:C2	2.97	0.48
1:0:2274:C:C2'	1:0:2275:U:H5'	2.43	0.48
1:0:2637:C:H6	1:0:2637:C:O5'	1.96	0.48
1:0:477:A:H2'	1:0:478:G:H5'	1.94	0.48
1:0:538:A:O5'	1:0:538:A:C8	2.66	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:83:A:OP2	1:0:83:A:C8	2.66	0.48
1:0:928:G:H8	1:0:928:G:O5'	1.97	0.48
1:0:116:A:H2'	1:0:118:U:C5	2.49	0.48
1:0:1198:C:OP1	1:0:1199:U:C1'	2.62	0.48
1:0:1742:G:O2'	1:0:1743:C:H5'	2.13	0.48
1:0:1825:C:H2'	1:0:1826:U:C5'	2.44	0.48
1:0:2061:C:O4'	1:0:2413:A:H1'	2.13	0.48
1:0:245:C:H2'	1:0:245:C:O2	2.13	0.48
1:0:2565:C:H5	1:0:2587:G:N2	2.12	0.48
1:0:2603:G:N2	1:0:2604:G:C1'	2.77	0.48
1:0:2848:A:H5''	1:0:2849:C:OP2	2.14	0.48
1:0:2873:G:H2'	1:0:2874:A:O4'	2.14	0.48
1:0:359:G:N2	1:0:360:A:H1'	2.29	0.48
1:0:421:G:C5	1:0:422:C:C5	3.02	0.48
1:0:568:G:H2'	1:0:569:C:C6	2.49	0.48
1:0:668:A:C2'	1:0:669:G:O4'	2.60	0.48
1:0:673:G:H8	1:0:673:G:O5'	1.96	0.48
1:0:692:C:O2'	1:0:693:A:C5'	2.61	0.48
1:0:803:C:H5'	1:0:804:C:P	2.54	0.48
1:0:93:A:HO2'	1:0:94:C:H5'	1.79	0.48
1:0:984:A:O2'	1:0:1201:G:O2'	2.27	0.48
1:0:1003:C:H2'	1:0:1004:A:H8	1.78	0.48
1:0:109:A:C2'	1:0:110:U:H5''	2.44	0.48
1:0:1491:C:H2'	1:0:1492:A:H8	1.78	0.48
1:0:1541:G:H2'	1:0:1542:G:C5'	2.43	0.48
1:0:1588:A:C4	1:0:1589:G:C8	3.02	0.48
1:0:1610:A:C4	1:0:1611:U:C5	3.02	0.48
1:0:1764:A:N7	1:0:1782:A:H2	2.10	0.48
1:0:1949:A:H1'	1:0:2572:U:C4'	2.40	0.48
1:0:1949:A:H1'	1:0:2572:U:C5'	2.44	0.48
1:0:2196:U:C2'	1:0:2197:U:H5'	2.43	0.48
1:0:224:G:H4'	1:0:399:G:C6	2.48	0.48
1:0:2401:A:H2'	1:0:2403:C:C5	2.49	0.48
1:0:2695:C:H2'	1:0:2696:A:C8	2.34	0.48
1:0:2735:C:O2	1:0:2735:C:H2'	2.13	0.48
1:0:2834:A:H62	1:0:2835:A:N6	2.12	0.48
1:0:330:C:H2'	1:0:331:U:H5'	1.95	0.48
1:0:37:C:O2	1:0:456:C:O2	2.32	0.48
1:0:543:G:H2'	1:0:544:U:H6	1.73	0.48
1:0:1168:G:C6	1:0:1169:C:N4	2.82	0.48
1:0:1168:G:C6	1:0:1169:C:C4	3.02	0.48

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1309:G:C2	1:0:1662:G:C4	3.02	0.48
1:0:1859:A:H2'	1:0:1860:A:H8	1.79	0.48
1:0:1972:G:O2'	1:0:1973:C:H5'	2.14	0.48
1:0:2020:G:H2'	1:0:2021:G:C8	2.49	0.48
1:0:2176:U:O2'	1:0:2177:U:H5'	2.14	0.48
1:0:2177:U:O2'	1:0:2178:U:H5'	2.13	0.48
1:0:2262:C:N3	1:0:2368:G:C2	2.82	0.48
1:0:2409:A:H2'	1:0:2410:U:H5'	1.96	0.48
1:0:2446:C:O5'	1:0:2446:C:H6	1.97	0.48
1:0:2585:C:H2'	1:0:2586:G:C5'	2.44	0.48
1:0:2626:U:O2'	1:0:2627:G:H5'	2.14	0.48
1:0:2825:A:C6	1:0:2826:C:C4	3.01	0.48
1:0:414:A:H2'	1:0:415:A:C8	2.49	0.48
1:0:841:G:H2'	1:0:842:A:C8	2.49	0.48
2:R:8:GLN:HG2	2:R:75:ARG:HB3	1.95	0.48
3:S:22:VAL:HG13	3:S:82:ALA:HA	1.96	0.48
1:0:1250:A:HO2'	1:0:1251:G:C4'	2.27	0.47
1:0:1469:U:H6	1:0:1470:G:N7	2.12	0.47
1:0:1352:G:H21	1:0:1619:A:H1'	1.78	0.47
1:0:161:U:H4'	1:0:194:G:C2	2.48	0.47
1:0:1313:U:O2	1:0:1642:G:C6	2.67	0.47
1:0:2204:A:C2'	1:0:2205:C:OP2	2.62	0.47
1:0:1681:A:N6	1:0:2706:U:C5	2.82	0.47
1:0:326:A:N6	1:0:327:C:H42	2.12	0.47
1:0:209:G:N2	1:0:433:G:OP1	2.47	0.47
1:0:945:G:C5	1:0:946:U:C5	3.01	0.47
1:0:1207:G:N2	1:0:1208:A:C4	2.82	0.47
1:0:1246:G:C4	1:0:1247:U:C5	3.02	0.47
1:0:1411:C:O2'	1:0:1412:C:H5'	2.14	0.47
1:0:1766:U:C3'	1:0:1766:U:C6	2.97	0.47
1:0:1770:U:O2	1:0:1774:A:C6	2.67	0.47
1:0:1821:A:N6	1:0:1960:A:N6	2.61	0.47
1:0:1964:A:H5''	1:0:1965:U:OP2	2.14	0.47
1:0:2691:C:C2'	1:0:2692:A:N7	2.76	0.47
1:0:310:A:OP1	3:S:93:ARG:HB2	2.13	0.47
1:0:314:G:H2'	1:0:315:G:H8	1.78	0.47
1:0:619:A:N6	1:0:629:C:H42	2.13	0.47
1:0:819:C:C2	1:0:820:U:C5	3.02	0.47
1:0:930:A:C5'	1:0:931:G:C8	2.97	0.47
5:1:77:GLN:O	5:1:81:GLU:HG3	2.14	0.47
1:0:57:G:OP1	2:R:74:ASP:OD1	2.32	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
2:R:94:GLN:O	5:1:50:ARG:CZ	2.62	0.47
4:W:18:ILE:O	4:W:22:LYS:HE2	2.14	0.47
1:0:1003:C:H2'	1:0:1004:A:C8	2.49	0.47
1:0:1147:G:H2'	1:0:1148:G:H8	1.79	0.47
1:0:1215:A:N1	1:0:1257:U:O4	2.47	0.47
1:0:1230:C:O2'	1:0:1231:A:H5'	2.14	0.47
1:0:1247:U:H2'	1:0:1248:G:O4'	2.13	0.47
1:0:1218:C:H42	1:0:1255:A:N6	2.13	0.47
1:0:1262:U:H3'	1:0:1262:U:C6	2.49	0.47
1:0:1403:U:H3	1:0:1408:A:N6	2.12	0.47
1:0:1486:A:H2'	1:0:1487:C:C6	2.49	0.47
1:0:765:C:C5	1:0:1772:C:O2	2.67	0.47
1:0:1918:G:N2	1:0:1947:G:C5	2.83	0.47
1:0:2320:G:C2	1:0:2321:C:C2	3.02	0.47
1:0:2498:U:OP2	1:0:2498:U:H6	1.96	0.47
1:0:2614:A:H2'	1:0:2615:U:O5'	2.14	0.47
1:0:2652:G:N3	1:0:2653:A:C8	2.82	0.47
1:0:2665:G:H2'	1:0:2666:U:C6	2.50	0.47
1:0:692:C:H2'	1:0:693:A:C8	2.49	0.47
1:0:112:U:C2	1:0:113:C:C5	3.02	0.47
1:0:1226:A:N9	1:0:1250:A:C2	2.82	0.47
1:0:1381:G:O2'	1:0:1382:G:H5'	2.14	0.47
1:0:2379:G:H2'	1:0:2380:U:O4'	2.15	0.47
1:0:45:C:H2'	1:0:46:C:C6	2.49	0.47
1:0:841:G:H22	1:0:2226:A:C4'	2.27	0.47
1:0:847:C:O2'	1:0:848:A:H5'	2.14	0.47
1:0:919:U:C2'	1:0:920:G:O5'	2.62	0.47
1:0:984:A:H1'	1:0:1202:U:C6	2.48	0.47
1:0:1011:A:N1	1:0:1166:A:C4	2.82	0.47
1:0:1278:A:O2'	1:0:1279:G:O5'	2.28	0.47
1:0:146:C:H2'	1:0:147:G:H8	1.74	0.47
1:0:1947:G:C6	1:0:1950:C:C5	3.03	0.47
1:0:1970:G:N2	1:0:1971:C:C2	2.82	0.47
1:0:1141:U:N3	1:0:2008:C:OP1	2.42	0.47
1:0:2043:A:N3	1:0:2481:G:C4	2.83	0.47
1:0:2401:A:HO2'	1:0:2403:C:H6	1.61	0.47
1:0:652:C:H42	1:0:657:A:H61	1.60	0.47
1:0:929:A:C2	1:0:930:A:H1'	2.50	0.47
1:0:1404:C:H1'	2:R:15:LYS:HD3	1.97	0.47
1:0:1091:C:H6	1:0:1091:C:O5'	1.97	0.47
1:0:1140:A:C2	1:0:2549:G:O4'	2.68	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1779:C:N4	1:0:1780:A:N6	2.62	0.47
1:0:2383:C:N1	1:0:2393:G:N2	2.62	0.47
1:0:1726:C:O2'	1:0:2834:A:N3	2.44	0.47
1:0:421:G:O2'	1:0:422:C:H5'	2.15	0.47
1:0:525:A:C8	1:0:526:C:C5	3.02	0.47
1:0:583:C:C6	1:0:2038:C:H5''	2.50	0.47
1:0:67:G:C4	1:0:72:A:C2	3.03	0.47
1:0:854:G:N2	1:0:855:G:C4	2.83	0.47
5:1:76:SER:HB3	5:1:80:ARG:CZ	2.44	0.47
3:S:11:ASN:OD1	3:S:13:LYS:HD3	2.14	0.47
1:0:1359:G:H8	1:0:1359:G:H5'	1.79	0.47
1:0:16:G:O2'	1:0:17:G:H5'	2.14	0.47
1:0:200:A:C4'	1:0:200:A:OP2	2.63	0.47
1:0:2200:G:C4	1:0:2201:G:C8	3.03	0.47
1:0:805:G:N7	1:0:2419:C:C1'	2.77	0.47
1:0:2429:A:H2'	1:0:2429:A:N3	2.30	0.47
1:0:246:C:N3	1:0:247:A:N7	2.62	0.47
1:0:2537:C:C4	1:0:2538:C:C4	3.03	0.47
1:0:372:U:H6	1:0:372:U:H3'	1.80	0.47
1:0:406:G:C6	1:0:407:A:N7	2.82	0.47
1:0:644:A:H2'	1:0:645:G:C5'	2.45	0.47
1:0:682:G:H5''	1:0:683:A:OP2	2.14	0.47
1:0:742:G:C5	1:0:1766:U:O2	2.68	0.47
1:0:838:A:O2'	1:0:839:U:H5'	2.15	0.47
1:0:349:G:P	3:S:13:LYS:HZ1	2.34	0.47
4:W:9:LEU:N	4:W:9:LEU:HD23	2.30	0.47
1:0:1175:A:O2'	1:0:1176:U:H5'	2.15	0.47
1:0:1001:A:N6	1:0:1200:G:H1'	2.29	0.47
1:0:1332:G:C6	1:0:1333:G:N1	2.82	0.47
1:0:1373:G:N7	1:0:1374:G:C8	2.82	0.47
1:0:13:A:C2	1:0:535:U:H2'	2.49	0.47
1:0:1482:U:N1	1:0:1562:G:N2	2.63	0.47
1:0:1625:A:C4	1:0:1632:A:N3	2.82	0.47
1:0:1994:U:H2'	1:0:1995:G:C5'	2.45	0.47
1:0:2058:U:H3'	1:0:2217:G:N1	2.29	0.47
1:0:2209:G:C4	1:0:2210:C:H5	2.32	0.47
1:0:225:G:H5'	1:0:226:C:H5'	1.96	0.47
1:0:2665:G:C2	1:0:2704:U:O2	2.68	0.47
1:0:310:A:C6	1:0:311:A:C2	3.03	0.47
1:0:466:A:H4'	1:0:467:U:OP2	2.14	0.47
1:0:468:A:N3	1:0:470:U:C5	2.83	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:67:G:N2	1:0:73:A:C4'	2.77	0.47
1:0:1173:G:O2'	1:0:1174:G:H5'	2.15	0.47
1:0:1177:U:C2	1:0:1197:U:O2	2.67	0.47
1:0:1313:U:H5'	1:0:1314:A:N3	2.30	0.47
1:0:1428:G:O3'	1:0:1429:A:H8	1.97	0.47
1:0:1446:U:H2'	1:0:1447:U:C6	2.50	0.47
1:0:1595:A:H2'	1:0:1596:A:C8	2.50	0.47
1:0:1629:G:C2	1:0:1633:C:C2	3.03	0.47
1:0:1725:C:O2	1:0:1742:G:C2	2.68	0.47
1:0:2364:C:O2'	1:0:2365:U:H5'	2.15	0.47
1:0:2469:G:C5'	1:0:2470:U:OP1	2.59	0.47
1:0:2789:U:H2'	1:0:2790:C:H6	1.79	0.47
1:0:2802:C:H2'	1:0:2803:C:H6	1.79	0.47
1:0:366:U:H2'	1:0:367:G:H8	1.79	0.47
1:0:475:U:C2	1:0:801:A:N6	2.82	0.47
1:0:600:G:H3'	1:0:601:A:H5''	1.96	0.47
1:0:67:G:H2'	1:0:68:C:C6	2.50	0.47
2:R:11:VAL:CG2	2:R:26:SER:O	2.63	0.47
3:S:87:GLU:O	3:S:88:THR:CG2	2.62	0.47
1:0:107:G:C6	1:0:108:G:C5	3.03	0.47
1:0:1741:G:N1	1:0:1742:G:C5	2.83	0.47
1:0:1791:C:H1'	1:0:1793:A:H5'	1.97	0.47
1:0:1970:G:C2	1:0:1971:C:C2	3.03	0.47
1:0:2198:U:C4	1:0:2199:C:C6	3.02	0.47
1:0:2271:C:C2'	1:0:2272:A:O5'	2.63	0.47
1:0:2437:G:O2'	1:0:2438:A:N7	2.47	0.47
1:0:2451:G:C2	1:0:2454:C:N3	2.83	0.47
1:0:2712:G:H5'	1:0:2713:A:C8	2.50	0.47
1:0:2832:G:C4	1:0:2834:A:OP2	2.68	0.47
1:0:308:C:H2'	1:0:309:G:O4'	2.15	0.47
1:0:322:A:OP1	1:0:322:A:H8	1.98	0.47
1:0:404:A:C2	1:0:424:G:N2	2.83	0.47
1:0:669:G:H2'	1:0:670:U:O4'	2.15	0.47
1:0:755:C:H2'	1:0:756:C:C6	2.49	0.47
2:R:17:TYR:OH	2:R:94:GLN:O	2.29	0.47
1:0:986:A:C2	1:0:1001:A:C8	3.03	0.47
1:0:1520:G:H2'	1:0:1521:U:H6	1.80	0.47
1:0:1514:C:H4'	1:0:1593:C:H5'	1.95	0.47
1:0:1745:C:H2'	1:0:1746:A:O4'	2.15	0.47
1:0:174:A:N6	1:0:2409:A:N7	2.61	0.47
1:0:803:C:P	1:0:1772:C:N4	2.88	0.47

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2077:G:H8	1:0:2077:G:O5'	1.98	0.47
1:0:2081:U:H2'	1:0:2082:C:C6	2.50	0.47
1:0:2108:G:H5''	1:0:2109:A:H5'	1.97	0.47
1:0:2327:U:H2'	1:0:2328:G:H8	1.79	0.47
1:0:2560:G:N1	1:0:2589:C:C5	2.82	0.47
1:0:2708:U:C2	1:0:2709:C:C5	3.03	0.47
1:0:516:G:O2'	1:0:517:A:C8	2.41	0.47
1:0:865:A:C4	1:0:866:U:C5	3.03	0.47
1:0:930:A:H3'	1:0:931:G:H8	1.78	0.47
2:R:63:LYS:HZ3	2:R:63:LYS:HB2	1.80	0.47
3:S:23:ILE:HD12	3:S:23:ILE:C	2.36	0.47
3:S:40:LEU:CD1	3:S:45:LYS:HB2	2.45	0.47
1:0:1105:U:C2	1:0:1107:A:H5''	2.50	0.46
1:0:1380:C:C2'	1:0:1381:G:H5'	2.39	0.46
1:0:1445:A:N1	1:0:1446:U:C2	2.83	0.46
1:0:1450:G:H2'	1:0:1451:C:C6	2.50	0.46
1:0:1692:C:C2'	1:0:1693:A:O5'	2.63	0.46
1:0:1961:A:O2'	1:0:1962:C:H5'	2.15	0.46
1:0:1965:U:H6	1:0:1965:U:O5'	1.99	0.46
1:0:2217:G:C5'	1:0:2218:G:N7	2.78	0.46
1:0:229:G:H2'	1:0:230:C:H6	1.80	0.46
1:0:2484:G:O2'	1:0:2485:U:C5'	2.62	0.46
1:0:2602:G:C2	1:0:2603:G:C8	3.03	0.46
1:0:2695:C:O2'	1:0:2696:A:H5'	2.14	0.46
1:0:2736:U:C2'	1:0:2737:A:H5'	2.44	0.46
1:0:2720:A:C2	1:0:2744:A:C4	3.02	0.46
1:0:2841:U:O2	1:0:2843:A:H1'	2.15	0.46
1:0:80:A:O4'	1:0:305:A:H2	1.97	0.46
1:0:29:U:O2'	1:0:30:G:H5'	2.15	0.46
1:0:388:G:H2'	1:0:389:G:H8	1.79	0.46
1:0:422:C:O2'	1:0:423:G:H5'	2.15	0.46
1:0:472:C:O2'	1:0:473:C:H5'	2.15	0.46
1:0:596:C:O2	1:0:684:C:O4'	2.33	0.46
1:0:812:G:C6	1:0:813:A:N6	2.83	0.46
1:0:882:C:C4	1:0:883:A:N7	2.83	0.46
1:0:922:A:C2	1:0:923:A:H2	2.33	0.46
1:0:934:G:O2'	1:0:935:C:H5'	2.15	0.46
1:0:998:C:C2'	1:0:999:A:O5'	2.64	0.46
2:R:28:TRP:HA	2:R:77:LYS:HA	1.97	0.46
1:0:1098:G:C6	1:0:1114:A:C2	3.03	0.46
1:0:1153:A:C4	1:0:1155:G:N7	2.83	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1196:G:H2'	1:0:1197:U:O4'	2.15	0.46
1:0:1228:G:H3'	1:0:1228:G:C8	2.50	0.46
1:0:1358:C:C3'	1:0:1359:G:H5''	2.45	0.46
1:0:1725:C:N4	1:0:1726:C:H41	2.14	0.46
1:0:179:U:O2'	1:0:180:C:H5'	2.15	0.46
1:0:1933:G:C8	1:0:1934:U:C5	3.01	0.46
1:0:224:G:C2	1:0:229:G:C6	3.04	0.46
1:0:2405:A:OP1	1:0:2405:A:C8	2.68	0.46
1:0:2780:A:H2'	1:0:2781:G:C8	2.49	0.46
1:0:2810:A:C2	1:0:2853:U:OP2	2.69	0.46
1:0:2831:A:C5	1:0:2837:G:N2	2.83	0.46
1:0:641:G:N2	1:0:644:A:OP2	2.48	0.46
1:0:828:C:H2'	1:0:829:C:C6	2.49	0.46
1:0:888:G:H2'	1:0:889:C:O4'	2.16	0.46
1:0:888:G:N2	1:0:915:C:C2	2.83	0.46
1:0:931:G:C2'	1:0:932:G:H5'	2.44	0.46
2:R:33:ALA:N	2:R:76:LYS:CE	2.68	0.46
1:0:1246:G:C5	1:0:1247:U:C5	3.03	0.46
1:0:1395:A:C6	1:0:1396:C:N3	2.82	0.46
1:0:1425:G:C2	1:0:1607:A:C2	3.03	0.46
1:0:1464:A:C2	1:0:1478:U:O2	2.68	0.46
1:0:1636:G:H2'	1:0:1637:U:H6	1.78	0.46
1:0:1785:A:H4'	1:0:1883:A:N1	2.30	0.46
1:0:2023:C:H2'	1:0:2024:U:C6	2.50	0.46
1:0:2241:U:H4'	1:0:2307:A:C2	2.50	0.46
1:0:2324:G:C2	1:0:2360:C:H2'	2.50	0.46
1:0:2371:A:C4	1:0:2372:A:C8	3.04	0.46
1:0:2418:A:N1	1:0:2564:U:C4'	2.71	0.46
1:0:2674:C:H2'	1:0:2675:U:H6	1.79	0.46
1:0:2737:A:O2'	1:0:2738:A:H5'	2.14	0.46
1:0:2838:U:N3	1:0:2839:G:N7	2.64	0.46
1:0:2824:C:O2	1:0:2841:U:O2'	2.33	0.46
1:0:468:A:HO2'	1:0:469:G:H4'	1.80	0.46
1:0:537:C:O2'	1:0:2025:A:N1	2.48	0.46
1:0:68:C:C5	1:0:72:A:C2	3.04	0.46
1:0:971:A:C3'	1:0:972:C:H5''	2.44	0.46
1:0:982:C:OP2	1:0:985:G:C2	2.69	0.46
2:R:42:ILE:HG12	2:R:80:VAL:HG11	1.97	0.46
1:0:1850:G:O6	1:0:1867:A:H2'	2.16	0.46
1:0:1888:C:O2'	1:0:1912:G:C2'	2.63	0.46
1:0:2006:G:C2'	1:0:2007:G:O5'	2.64	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2217:G:H5'	1:0:2218:G:N7	2.30	0.46
1:0:2433:G:O2'	1:0:2434:G:H5'	2.16	0.46
1:0:2451:G:H2'	1:0:2454:C:H42	1.80	0.46
1:0:2623:A:H2'	1:0:2624:G:O4'	2.15	0.46
1:0:2823:G:O2'	1:0:2824:C:OP2	2.31	0.46
1:0:319:G:C6	1:0:320:A:C6	3.04	0.46
1:0:491:A:H2'	1:0:492:G:OP1	2.15	0.46
1:0:516:G:H2'	1:0:517:A:OP2	2.16	0.46
1:0:622:U:C2'	1:0:623:G:H5'	2.46	0.46
1:0:720:A:H2'	1:0:721:C:C6	2.49	0.46
1:0:873:U:H6	1:0:873:U:H3'	1.80	0.46
1:0:958:G:H2'	1:0:959:C:C6	2.50	0.46
4:W:29:ARG:HB2	4:W:29:ARG:NH1	2.31	0.46
1:0:1364:C:N3	1:0:1394:G:C6	2.84	0.46
1:0:1540:C:H2'	1:0:1541:G:O5'	2.16	0.46
1:0:2229:G:C8	1:0:2475:C:H5''	2.50	0.46
1:0:1936:A:C2	1:0:2529:G:O4'	2.69	0.46
1:0:2815:C:H2'	1:0:2816:C:C6	2.50	0.46
1:0:318:G:H21	1:0:341:A:H62	1.63	0.46
1:0:394:U:O2'	1:0:395:G:H5'	2.14	0.46
1:0:43:A:C2	1:0:44:G:C4	3.03	0.46
1:0:600:G:N1	1:0:602:C:N3	2.63	0.46
1:0:698:A:C5	1:0:787:A:C2	3.04	0.46
1:0:796:A:C4	1:0:798:G:H1'	2.51	0.46
1:0:818:G:H5'	1:0:819:C:H5	1.80	0.46
1:0:830:C:C4	1:0:831:G:C5	3.03	0.46
5:1:55:ASN:H	5:1:55:ASN:ND2	1.94	0.46
3:S:23:ILE:HD13	3:S:25:LEU:HD12	1.97	0.46
4:W:30:PHE:CD1	4:W:30:PHE:N	2.83	0.46
1:0:1044:U:C6	1:0:2730:A:C2	3.02	0.46
1:0:1076:U:C3'	1:0:1077:U:C5'	2.88	0.46
1:0:1598:C:H2'	1:0:1599:G:O4'	2.15	0.46
1:0:2230:G:H2'	1:0:2230:G:N3	2.30	0.46
1:0:2238:G:C5	1:0:2239:C:C5	3.03	0.46
1:0:2262:C:O2'	1:0:2263:C:H5'	2.16	0.46
1:0:2458:U:C4	1:0:2459:C:C5	3.03	0.46
1:0:2560:G:O6	1:0:2589:C:C2	2.69	0.46
1:0:2598:C:O2'	1:0:2599:U:C5'	2.59	0.46
1:0:2758:A:O2'	1:0:2759:U:OP1	2.31	0.46
1:0:2814:G:N2	1:0:2815:C:H1'	2.31	0.46
1:0:2825:A:H2'	1:0:2826:C:H6	1.80	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:318:G:H21	1:0:341:A:N6	2.13	0.46
1:0:78:C:O2	1:0:357:A:H2	1.97	0.46
1:0:627:A:C2	1:0:628:A:C6	3.03	0.46
1:0:679:C:H2'	1:0:680:U:C6	2.51	0.46
1:0:736:G:H2'	1:0:737:C:C6	2.49	0.46
1:0:927:C:H2'	1:0:928:G:C8	2.51	0.46
1:0:994:A:N6	1:0:995:A:C2	2.66	0.46
1:0:1054:C:O2'	1:0:1055:A:H4'	2.16	0.46
1:0:1440:G:C6	1:0:1441:A:N7	2.84	0.46
1:0:149:A:H2'	1:0:150:A:C8	2.51	0.46
1:0:155:G:H2'	1:0:156:G:O4'	2.15	0.46
1:0:1735:G:C6	1:0:1736:C:C4	3.04	0.46
1:0:1782:A:H61	1:0:1820:G:H2'	1.81	0.46
1:0:2203:G:O2'	1:0:2204:A:C1'	2.64	0.46
1:0:2226:A:H2'	1:0:2227:C:C6	2.51	0.46
1:0:2751:C:H2'	1:0:2752:C:H6	1.76	0.46
1:0:27:G:H1'	1:0:523:A:N6	2.31	0.46
1:0:599:A:C2	1:0:681:A:C2	3.03	0.46
1:0:819:C:H2'	1:0:820:U:H6	1.81	0.46
1:0:874:A:C2	1:0:929:A:C2	3.04	0.46
1:0:974:U:O2'	1:0:2229:G:N2	2.47	0.46
1:0:1095:A:N3	1:0:1095:A:H3'	2.31	0.46
1:0:1290:A:H2'	1:0:1291:G:C8	2.51	0.46
1:0:1364:C:C2	1:0:1394:G:C2	3.03	0.46
1:0:1391:A:C2'	1:0:1392:U:C6	2.99	0.46
1:0:1583:A:H5'	1:0:1584:G:N2	2.30	0.46
1:0:171:G:C2'	1:0:172:A:H5'	2.46	0.46
1:0:1825:C:H2'	1:0:1826:U:H5'	1.98	0.46
1:0:1831:G:C5	1:0:1832:G:C8	3.04	0.46
1:0:2009:U:H3	1:0:2020:G:H1	1.63	0.46
1:0:2268:G:H5'	1:0:2363:G:O2'	2.16	0.46
1:0:2597:G:O2'	1:0:2598:C:H5'	2.15	0.46
1:0:2608:A:N7	1:0:2869:U:C4	2.84	0.46
1:0:2681:A:C6	1:0:2682:C:C4	3.04	0.46
1:0:2787:A:O2'	1:0:2788:C:C5'	2.63	0.46
1:0:2791:C:O2	1:0:2858:A:O2'	2.34	0.46
1:0:629:C:O2'	1:0:630:G:H5'	2.15	0.46
1:0:955:G:C3'	1:0:955:G:C8	2.98	0.46
5:1:90:THR:O	5:1:106:VAL:HG13	2.15	0.46
2:R:62:ARG:NH1	2:R:62:ARG:CB	2.64	0.46
3:S:64:ASN:ND2	5:1:68:ASP:HB3	2.30	0.46

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1741:G:C2	1:0:1742:G:C8	3.03	0.46
1:0:1766:U:C5	1:0:1767:G:C8	3.04	0.46
1:0:1770:U:C5	1:0:1775:A:N7	2.84	0.46
1:0:2333:A:N6	1:0:2343:C:N4	2.63	0.46
1:0:2836:U:H2'	1:0:2837:G:O4'	2.15	0.46
1:0:367:G:C3'	1:0:368:A:H5''	2.46	0.46
1:0:48:A:H2	1:0:118:U:N3	2.03	0.46
1:0:745:C:O2'	1:0:746:G:H5'	2.16	0.46
3:S:46:VAL:H	3:S:76:LEU:H	1.64	0.46
3:S:93:ARG:CG	3:S:93:ARG:O	2.62	0.46
4:W:7:ARG:HD2	4:W:7:ARG:C	2.36	0.46
1:0:1064:C:C4	1:0:1065:A:N7	2.84	0.46
1:0:1249:G:O2'	1:0:1250:A:P	2.73	0.46
1:0:1292:A:C2'	1:0:1293:A:H5'	2.46	0.46
1:0:1807:A:H1'	1:0:1809:G:C4	2.51	0.46
1:0:1931:G:C4	1:0:1932:G:C8	3.04	0.46
1:0:199:A:N1	1:0:201:G:N3	2.63	0.46
1:0:198:A:HO2'	1:0:199:A:P	2.39	0.46
1:0:2155:U:H2'	1:0:2156:A:H5'	1.99	0.46
1:0:2068:C:H1'	1:0:2214:G:N2	2.31	0.46
1:0:2386:G:C6	1:0:2387:U:O4	2.68	0.46
1:0:239:A:C2	1:0:240:U:O2	2.69	0.46
1:0:2429:A:C2	1:0:2430:A:C4	3.04	0.46
1:0:2559:U:C2'	1:0:2560:G:H5'	2.46	0.46
1:0:764:A:N7	1:0:802:A:C6	2.84	0.46
1:0:753:U:C4	1:0:771:C:O2	2.68	0.46
1:0:801:A:OP2	1:0:801:A:H8	1.98	0.46
3:S:85:ASP:C	3:S:87:GLU:H	2.19	0.46
4:W:2:LYS:N	4:W:3:PRO:CD	2.69	0.46
1:0:1200:G:H2'	1:0:1201:G:H5'	1.98	0.45
1:0:1439:G:H2'	1:0:1440:G:C8	2.51	0.45
1:0:1453:A:N6	1:0:1568:A:O2'	2.49	0.45
1:0:1659:G:C4	1:0:1660:G:C8	3.04	0.45
1:0:1788:C:C4	1:0:1789:U:C5	3.04	0.45
1:0:1902:A:H3'	1:0:1903:C:C5'	2.45	0.45
1:0:2293:G:H2'	1:0:2294:U:H6	1.79	0.45
1:0:2293:G:O2'	1:0:2294:U:H5'	2.16	0.45
1:0:2325:A:HO2'	1:0:2326:C:P	2.39	0.45
1:0:2395:C:C2'	1:0:2396:C:H5'	2.47	0.45
1:0:2261:G:N1	1:0:2404:A:C2	2.84	0.45
1:0:2048:C:C2	1:0:2425:G:N2	2.85	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2471:U:O2	1:0:2471:U:H2'	2.17	0.45
1:0:2673:G:C2	1:0:2696:A:C4	3.04	0.45
1:0:2797:G:H2'	1:0:2798:A:C5'	2.46	0.45
1:0:2869:U:H2'	1:0:2870:C:C6	2.50	0.45
1:0:322:A:H1'	1:0:343:A:C4	2.51	0.45
1:0:441:A:C2'	1:0:442:A:C5'	2.94	0.45
1:0:70:A:C2'	1:0:71:A:OP2	2.64	0.45
5:1:69:ARG:HG2	5:1:69:ARG:NH2	2.30	0.45
2:R:6:ILE:HG22	2:R:29:VAL:HB	1.98	0.45
1:0:118:U:C2	1:0:143:A:C6	3.03	0.45
1:0:1223:G:H21	1:0:1225:G:N2	2.15	0.45
1:0:1754:G:H4'	1:0:1754:G:OP1	2.16	0.45
1:0:2343:C:O2'	1:0:2344:G:H5'	2.15	0.45
1:0:2464:G:O2'	1:0:2465:G:H5'	2.15	0.45
1:0:2621:G:O2'	1:0:2622:G:H5'	2.17	0.45
1:0:2659:C:N4	1:0:2660:C:H41	2.15	0.45
1:0:2741:G:O2'	1:0:2742:G:H5'	2.16	0.45
1:0:333:A:H1'	1:0:351:A:N9	2.31	0.45
1:0:577:U:H2'	1:0:577:U:O2	2.17	0.45
1:0:679:C:H2'	1:0:680:U:H6	1.81	0.45
1:0:725:C:HO2'	1:0:726:G:H8	1.59	0.45
2:R:8:GLN:HB3	2:R:28:TRP:CB	2.45	0.45
2:R:9:ALA:O	2:R:28:TRP:CD1	2.68	0.45
3:S:23:ILE:CD1	3:S:23:ILE:C	2.84	0.45
1:0:110:U:H6	1:0:110:U:H5'	1.82	0.45
1:0:1199:U:H3'	1:0:1200:G:C5'	2.39	0.45
1:0:1368:G:O2'	1:0:1369:G:H5'	2.16	0.45
1:0:1491:C:H2'	1:0:1492:A:C8	2.52	0.45
1:0:1969:G:N3	1:0:1970:G:C8	2.85	0.45
1:0:2177:U:C4	1:0:2178:U:C5	3.05	0.45
1:0:2265:A:H5''	1:0:2266:A:O4'	2.16	0.45
1:0:228:A:H2'	1:0:229:G:C4'	2.46	0.45
1:0:2348:A:O2'	1:0:2349:G:H5'	2.17	0.45
1:0:2533:U:H2'	1:0:2534:U:C6	2.50	0.45
1:0:2608:A:HO2'	1:0:2609:G:P	2.39	0.45
1:0:510:G:N2	1:0:512:A:H3'	2.31	0.45
1:0:1162:A:C2	1:0:1163:C:C2	3.04	0.45
1:0:1698:C:H5''	1:0:1699:A:OP2	2.17	0.45
1:0:179:U:H6	1:0:179:U:O5'	1.99	0.45
1:0:202:A:N6	1:0:203:G:C2	2.84	0.45
1:0:1872:A:C1'	1:0:2070:G:H5'	2.42	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2431:C:H2'	1:0:2432:A:O4'	2.17	0.45
1:0:2470:U:O2'	1:0:2549:G:OP1	2.21	0.45
1:0:2721:A:H2'	1:0:2722:C:O4'	2.16	0.45
1:0:35:G:O2'	1:0:36:G:O5'	2.30	0.45
1:0:6:A:O2'	1:0:7:G:H5'	2.16	0.45
1:0:859:U:H4'	1:0:860:U:C6	2.50	0.45
5:1:62:VAL:O	5:1:66:VAL:HG23	2.16	0.45
1:0:1033:G:O6	1:0:1150:C:C5	2.70	0.45
1:0:117:A:H5'	1:0:118:U:OP1	2.16	0.45
1:0:1216:G:C2	1:0:1257:U:O2	2.70	0.45
1:0:132:U:O2	1:0:140:G:C2	2.70	0.45
1:0:1444:C:H2'	1:0:1445:A:H8	1.81	0.45
1:0:1722:G:C2	1:0:1723:U:O2	2.70	0.45
1:0:1928:G:H2'	1:0:1929:U:O4'	2.15	0.45
1:0:2199:C:H2'	1:0:2200:G:O4'	2.16	0.45
1:0:2245:A:C2'	1:0:2245:A:N3	2.78	0.45
1:0:2295:C:H2'	1:0:2296:U:C6	2.50	0.45
1:0:2467:A:N1	1:0:2468:G:C5	2.85	0.45
1:0:2477:C:O2'	1:0:2478:C:H5'	2.17	0.45
1:0:2519:C:O2	1:0:2519:C:H2'	2.15	0.45
1:0:495:C:N4	1:0:507:A:C2	2.85	0.45
1:0:752:G:C5'	1:0:753:U:OP1	2.56	0.45
3:S:18:LYS:CD	3:S:18:LYS:N	2.79	0.45
4:W:63:LYS:HA	4:W:63:LYS:HE3	1.98	0.45
1:0:1035:G:N7	1:0:1036:G:N7	2.65	0.45
1:0:1086:C:C4	1:0:1087:C:C2	3.04	0.45
1:0:1207:G:O2'	1:0:1208:A:H5'	2.16	0.45
1:0:1246:G:C4	1:0:1247:U:C6	3.05	0.45
1:0:1448:A:H61	1:0:1574:A:H61	1.65	0.45
1:0:1653:C:H2'	1:0:1654:A:H8	1.80	0.45
1:0:1682:A:H2'	1:0:1683:G:O4'	2.17	0.45
1:0:1979:C:OP1	1:0:1979:C:O4'	2.35	0.45
1:0:2098:G:H3'	1:0:2099:G:H5'	1.98	0.45
1:0:2212:U:N3	1:0:2213:G:C6	2.85	0.45
1:0:2541:U:H2'	1:0:2542:U:O4'	2.17	0.45
1:0:2594:U:C2	1:0:2595:C:C5	3.05	0.45
1:0:2694:G:N2	1:0:2695:C:C2	2.85	0.45
1:0:314:G:H2'	1:0:315:G:C8	2.52	0.45
1:0:369:C:O2'	1:0:370:U:H5'	2.17	0.45
1:0:595:A:N1	1:0:822:G:O2'	2.44	0.45
1:0:825:C:H2'	1:0:826:U:H6	1.82	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1015:U:O4'	1:0:1021:A:C5	2.70	0.45
1:0:1028:G:O2'	1:0:1029:C:H5'	2.17	0.45
1:0:1033:G:C6	1:0:1150:C:C4	3.05	0.45
1:0:124:A:H3'	1:0:125:A:C8	2.52	0.45
1:0:1457:A:H2'	1:0:1458:A:C8	2.52	0.45
1:0:1313:U:H1'	1:0:1642:G:C2	2.52	0.45
1:0:168:A:O2'	1:0:169:C:H5'	2.17	0.45
1:0:1923:U:O2'	1:0:1924:C:C5	2.70	0.45
1:0:1962:C:O2'	1:0:1963:G:H5'	2.17	0.45
1:0:2077:G:C8	1:0:2077:G:O5'	2.70	0.45
1:0:2492:G:C6	1:0:2493:U:O4	2.70	0.45
1:0:2733:A:C2'	1:0:2734:U:H5'	2.46	0.45
1:0:2800:C:C6	1:0:2801:A:C8	3.05	0.45
1:0:2826:C:C2'	1:0:2827:G:C5'	2.88	0.45
1:0:569:C:C2'	1:0:570:G:H5'	2.46	0.45
1:0:773:G:C2'	1:0:774:A:H5'	2.47	0.45
4:W:34:ALA:HA	5:1:56:ARG:NH2	2.32	0.45
1:0:1225:G:H2'	1:0:1249:G:N2	2.32	0.45
1:0:140:G:O2'	1:0:141:G:H5'	2.17	0.45
1:0:1338:G:OP2	1:0:1632:A:N7	2.50	0.45
1:0:171:G:O2'	1:0:172:A:H5'	2.17	0.45
1:0:2144:C:O2	1:0:2156:A:H2	2.00	0.45
1:0:2058:U:C3'	1:0:2217:G:H22	2.21	0.45
1:0:2237:C:O2'	1:0:2238:G:P	2.74	0.45
1:0:2309:G:H2'	1:0:2310:G:O4'	2.16	0.45
1:0:2348:A:H2'	1:0:2349:G:C8	2.52	0.45
1:0:2359:U:H2'	1:0:2360:C:H6	1.81	0.45
1:0:2672:U:H2'	1:0:2673:G:C8	2.52	0.45
1:0:2839:G:C2	1:0:2840:U:O2	2.70	0.45
1:0:532:A:H2'	1:0:533:C:C6	2.51	0.45
1:0:824:U:O2	1:0:1264:C:C5	2.70	0.45
5:1:43:PHE:N	5:1:43:PHE:CD1	2.84	0.45
1:0:1693:A:N6	1:0:1694:A:C6	2.85	0.45
1:0:1701:C:H2'	1:0:1701:C:O2	2.17	0.45
1:0:171:G:H2'	1:0:172:A:O4'	2.17	0.45
1:0:1720:G:C2	1:0:1721:G:C8	3.05	0.45
1:0:1766:U:H3'	1:0:1766:U:H6	1.82	0.45
1:0:1786:C:H6	1:0:1786:C:O5'	2.00	0.45
1:0:1949:A:N6	1:0:2581:A:H61	2.14	0.45
1:0:202:A:N6	1:0:203:G:N2	2.64	0.45
1:0:956:A:C5	1:0:2427:A:C2	3.03	0.45

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2518:C:O2'	1:0:2519:C:H5'	2.17	0.45
1:0:36:G:N2	1:0:37:C:C2	2.85	0.45
1:0:592:G:C2'	1:0:593:C:O5'	2.65	0.45
1:0:616:U:C4	1:0:617:U:H5	2.35	0.45
1:0:615:C:N4	1:0:631:G:H21	2.14	0.45
1:0:71:A:N6	1:0:110:U:H4'	2.31	0.45
1:0:746:G:C8	1:0:774:A:N6	2.85	0.45
1:0:778:G:H5'	1:0:778:G:H8	1.82	0.45
1:0:782:U:C2	1:0:783:G:C8	3.05	0.45
1:0:876:A:O2'	1:0:877:G:H5'	2.16	0.45
2:R:20:MET:CE	2:R:92:ALA:HA	2.45	0.45
1:0:1195:U:H2'	1:0:1196:G:C8	2.52	0.45
1:0:1177:U:N3	1:0:1197:U:O2	2.50	0.45
1:0:159:A:C5	1:0:160:C:C4	3.05	0.45
1:0:1625:A:C5	1:0:1632:A:H2	2.34	0.45
1:0:1693:A:H2'	1:0:1694:A:H5'	1.99	0.45
1:0:1782:A:N6	1:0:1820:G:O2'	2.50	0.45
1:0:188:G:C6	1:0:189:A:C6	3.05	0.45
1:0:1938:U:O3'	1:0:1939:U:H6	2.00	0.45
1:0:208:C:C2'	1:0:209:G:H5'	2.47	0.45
1:0:2336:G:C4	1:0:2338:C:OP2	2.69	0.45
1:0:463:C:C2	1:0:465:C:C5	3.04	0.45
1:0:543:G:C5	1:0:544:U:C4	3.05	0.45
1:0:575:U:H4'	1:0:822:G:OP2	2.17	0.45
1:0:610:G:C6	1:0:611:C:C4	3.05	0.45
1:0:614:G:H2'	1:0:615:C:H6	1.82	0.45
1:0:705:C:H2'	1:0:706:A:H8	1.82	0.45
1:0:717:G:H2'	1:0:739:G:N2	2.14	0.45
1:0:929:A:C2	1:0:930:A:C1'	3.00	0.45
1:0:961:G:H2'	1:0:962:C:O4'	2.17	0.45
2:R:93:GLY:O	5:1:50:ARG:NH2	2.40	0.45
1:0:1016:C:C2	1:0:1017:C:C5	3.05	0.44
1:0:82:G:N2	1:0:101:A:OP2	2.45	0.44
1:0:1177:U:N3	1:0:1196:G:N1	2.65	0.44
1:0:1314:A:C2	1:0:1642:G:N2	2.81	0.44
1:0:1314:A:C8	1:0:1316:G:C8	3.05	0.44
1:0:1433:A:N7	1:0:1594:U:O4	2.50	0.44
1:0:1672:A:C6	1:0:1673:C:C2	3.05	0.44
1:0:1704:G:C6	1:0:1705:U:C4	3.05	0.44
1:0:1782:A:N6	1:0:1820:G:H2'	2.31	0.44
1:0:1825:C:HO2'	1:0:1826:U:H5'	1.82	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1859:A:C2'	1:0:1860:A:O4'	2.64	0.44
1:0:1998:A:H8	1:0:1998:A:O5'	2.00	0.44
1:0:2201:G:O2'	1:0:2202:G:H5'	2.17	0.44
1:0:2275:U:OP1	1:0:2275:U:C5	2.70	0.44
1:0:2473:G:N3	1:0:2474:G:C8	2.85	0.44
1:0:2038:C:H2'	1:0:2483:U:H5'	1.98	0.44
1:0:2659:C:N3	1:0:2660:C:C5	2.85	0.44
1:0:2665:G:C6	1:0:2666:U:N3	2.85	0.44
1:0:2842:C:OP1	1:0:2842:C:H6	2.00	0.44
1:0:593:C:H6	1:0:593:C:O5'	2.00	0.44
1:0:756:C:H2'	1:0:757:U:H6	1.82	0.44
2:R:55:THR:OG1	2:R:76:LYS:HD3	2.17	0.44
3:S:98:ILE:HG22	3:S:99:VAL:N	2.32	0.44
1:0:1016:C:C6	1:0:1154:A:C1'	2.99	0.44
1:0:120:G:O2'	1:0:121:G:H5'	2.17	0.44
1:0:1223:G:C6	1:0:1250:A:N7	2.85	0.44
1:0:1244:U:H2'	1:0:1245:G:C8	2.51	0.44
1:0:1369:G:N1	1:0:1370:U:C2	2.85	0.44
1:0:1586:A:C4	1:0:1587:A:C8	3.05	0.44
1:0:1595:A:O2'	1:0:1596:A:H5'	2.17	0.44
1:0:1312:G:N2	1:0:1657:A:C8	2.86	0.44
1:0:1686:A:H5''	1:0:2529:G:OP1	2.18	0.44
1:0:2051:U:H6	1:0:2051:U:H3'	1.81	0.44
1:0:2125:C:N4	1:0:2126:U:H5	2.15	0.44
1:0:2148:G:H2'	1:0:2149:G:O4'	2.17	0.44
1:0:2150:U:O5'	1:0:2150:U:H6	2.00	0.44
1:0:2196:U:C5	1:0:2197:U:C5	3.05	0.44
1:0:2220:A:C2	1:0:2221:G:C5	3.05	0.44
1:0:2602:G:C2	1:0:2603:G:N7	2.86	0.44
1:0:2793:G:C6	1:0:2794:G:N7	2.84	0.44
1:0:308:C:C2'	1:0:309:G:H5'	2.47	0.44
1:0:460:U:H5	1:0:592:G:O2'	1.97	0.44
1:0:602:C:C4	1:0:603:C:C5	3.05	0.44
1:0:700:C:N3	1:0:801:A:O4'	2.50	0.44
1:0:838:A:H2'	1:0:839:U:O4'	2.18	0.44
1:0:873:U:O2	1:0:2247:A:C5'	2.62	0.44
1:0:875:G:H2'	1:0:876:A:H5'	1.99	0.44
1:0:60:A:OP2	4:W:47:ARG:NH2	2.51	0.44
1:0:52:A:N6	1:0:115:G:O2'	2.49	0.44
1:0:1227:A:O2'	1:0:1228:G:H5'	2.17	0.44
1:0:826:U:O2	1:0:1238:A:H2	2.00	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1257:U:O2'	1:0:1258:G:H5'	2.18	0.44
1:0:1337:G:H3'	1:0:1338:G:H5'	1.99	0.44
1:0:1469:U:H5'	1:0:1470:G:C8	2.52	0.44
1:0:1516:A:C5	1:0:1517:C:C5	3.05	0.44
1:0:1541:G:N2	1:0:1562:G:N2	2.62	0.44
1:0:1686:A:H5''	1:0:1687:C:OP2	2.18	0.44
1:0:1913:G:HO2'	1:0:1914:U:H5	1.66	0.44
1:0:1978:U:C4	1:0:1979:C:C5	3.05	0.44
1:0:198:A:H62	1:0:440:U:H3	1.65	0.44
1:0:198:A:N7	1:0:243:G:C6	2.85	0.44
1:0:2186:G:O2'	1:0:2187:A:H5'	2.17	0.44
1:0:2253:A:N6	1:0:2255:G:N3	2.66	0.44
1:0:2288:A:H2'	1:0:2289:A:C8	2.53	0.44
1:0:234:C:C5	1:0:235:C:C5	3.05	0.44
1:0:2375:G:C2	1:0:2400:G:C2	3.05	0.44
1:0:2433:G:C2'	1:0:2434:G:H5'	2.47	0.44
1:0:2449:G:O2'	1:0:2450:A:H5'	2.17	0.44
1:0:2474:G:C5	1:0:2475:C:C5	3.05	0.44
1:0:2501:U:O2'	1:0:2626:U:H5''	2.17	0.44
1:0:2810:A:H2	1:0:2853:U:OP2	2.00	0.44
1:0:940:G:C6	1:0:941:U:C2	3.06	0.44
4:W:31:GLN:HB3	4:W:36:GLN:HB2	1.98	0.44
1:0:1145:C:N3	1:0:1149:G:C6	2.85	0.44
1:0:1188:A:H2'	1:0:1189:G:O4'	2.17	0.44
1:0:1469:U:OP2	1:0:1471:G:OP2	2.36	0.44
1:0:1469:U:H5'	1:0:1470:G:N7	2.32	0.44
1:0:1882:G:N2	1:0:1885:C:N4	2.56	0.44
1:0:2010:G:N2	1:0:2020:G:C4	2.85	0.44
1:0:203:G:C2	1:0:204:A:C2	3.05	0.44
1:0:2219:U:O2'	1:0:2220:A:H5'	2.18	0.44
1:0:2596:C:H2'	1:0:2597:G:H8	1.82	0.44
1:0:2786:G:N2	1:0:2787:A:N3	2.65	0.44
1:0:2792:C:C2	1:0:2805:G:C2	3.05	0.44
1:0:630:G:H8	1:0:630:G:O5'	2.00	0.44
1:0:642:A:N6	1:0:643:A:C2	2.85	0.44
1:0:831:G:O2'	1:0:832:A:H5''	2.17	0.44
1:0:973:U:C2	1:0:974:U:C5	3.06	0.44
2:R:52:GLY:O	2:R:80:VAL:HA	2.18	0.44
2:R:8:GLN:O	4:W:29:ARG:NH1	2.50	0.44
1:0:1054:C:C2'	1:0:1055:A:H4'	2.47	0.44
1:0:1073:G:H2'	1:0:1073:G:N3	2.32	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1086:C:N3	1:0:1087:C:C2	2.86	0.44
1:0:1159:U:O2'	1:0:1160:C:H5'	2.17	0.44
1:0:1199:U:O5'	1:0:1200:G:C5'	2.66	0.44
1:0:1329:U:O2'	1:0:1330:G:H5'	2.17	0.44
1:0:1673:C:O2'	1:0:1674:C:H5'	2.18	0.44
1:0:2415:G:H21	1:0:2577:A:H2	1.57	0.44
1:0:2826:C:C4	1:0:2827:G:N7	2.86	0.44
1:0:428:A:C2'	1:0:429:C:H5'	2.48	0.44
1:0:45:C:OP2	1:0:192:G:H8	1.99	0.44
1:0:473:C:C2	1:0:479:G:C2	3.05	0.44
1:0:754:G:N1	1:0:770:U:C2	2.86	0.44
1:0:100:G:C6	3:S:102:LYS:HD3	2.53	0.44
1:0:1016:C:H2'	1:0:1016:C:O2	2.18	0.44
1:0:1140:A:C2	1:0:2548:G:N3	2.86	0.44
1:0:116:A:H2'	1:0:118:U:H5	1.82	0.44
1:0:1207:G:C2	1:0:1208:A:C4	3.06	0.44
1:0:1235:C:O2'	1:0:1236:G:H5'	2.18	0.44
1:0:1514:C:H5'	1:0:1593:C:H5''	2.00	0.44
1:0:1579:G:O2'	1:0:1580:C:H5'	2.16	0.44
1:0:1365:U:H1'	1:0:1586:A:C2	2.52	0.44
1:0:1920:A:C6	1:0:1922:U:C5	3.06	0.44
1:0:19:C:H5'	1:0:563:U:OP1	2.18	0.44
1:0:233:A:O2'	1:0:234:C:H5'	2.17	0.44
1:0:2555:G:C2'	1:0:2555:G:N3	2.81	0.44
1:0:491:A:H2	1:0:509:U:O2	1.99	0.44
1:0:543:G:C2	1:0:544:U:C2	3.05	0.44
1:0:565:A:H2'	1:0:566:U:H6	1.83	0.44
1:0:799:C:H2'	1:0:800:U:O4'	2.18	0.44
1:0:880:C:O5'	1:0:880:C:H6	2.00	0.44
4:W:46:LEU:HD23	4:W:46:LEU:HA	1.76	0.44
1:0:1038:U:O2'	1:0:1039:A:H5'	2.18	0.44
1:0:1007:A:C5	1:0:1171:A:C2	3.05	0.44
1:0:1303:U:H2'	1:0:1304:U:C6	2.53	0.44
1:0:1938:U:C2'	1:0:1939:U:H5'	2.48	0.44
1:0:1974:U:C2'	1:0:1975:G:C5'	2.96	0.44
1:0:2016:A:N6	1:0:2019:C:C2	2.86	0.44
1:0:2098:G:O6	1:0:2100:A:OP1	2.36	0.44
1:0:2576:G:C6	1:0:2577:A:N6	2.86	0.44
1:0:2749:A:C2'	1:0:2750:G:H5'	2.47	0.44
1:0:404:A:C5	1:0:405:C:C4	3.05	0.44
1:0:58:C:N4	1:0:59:G:N3	2.66	0.44

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:633:G:H8	1:0:633:G:O5'	2.01	0.44
1:0:817:A:H5''	1:0:818:G:OP1	2.18	0.44
1:0:959:C:H2'	1:0:960:U:C6	2.52	0.44
4:W:7:ARG:CD	4:W:7:ARG:C	2.86	0.44
1:0:1142:G:C2'	1:0:1143:A:O5'	2.66	0.44
1:0:1153:A:C5	1:0:1155:G:O6	2.71	0.44
1:0:1198:C:H5''	1:0:1199:U:C4'	2.48	0.44
1:0:1459:U:H6	1:0:1459:U:P	2.41	0.44
1:0:1920:A:H2'	1:0:1921:A:C8	2.53	0.44
1:0:1938:U:O2'	1:0:1939:U:OP1	2.26	0.44
1:0:1969:G:C4	1:0:1970:G:C8	3.06	0.44
1:0:2454:C:H42	1:0:2508:G:N2	2.10	0.44
1:0:2603:G:N2	1:0:2604:G:N9	2.66	0.44
1:0:2706:U:C2'	1:0:2706:U:O2	2.66	0.44
1:0:67:G:C2	1:0:72:A:N3	2.85	0.44
1:0:754:G:C2'	1:0:755:C:O5'	2.65	0.44
1:0:829:C:C4	1:0:1206:G:N1	2.86	0.44
3:S:15:HIS:HE1	3:S:80:LYS:HZ1	1.64	0.44
1:0:1168:G:OP2	1:0:1169:C:OP2	2.34	0.44
1:0:1305:C:O2'	1:0:1306:U:H5'	2.18	0.44
1:0:137:A:H2'	1:0:138:G:O4'	2.18	0.44
1:0:2002:A:C2'	1:0:2003:A:O5'	2.66	0.44
1:0:2198:U:C2	1:0:2199:C:O4'	2.71	0.44
1:0:218:A:N1	1:0:232:A:H5''	2.33	0.44
1:0:2395:C:H2'	1:0:2396:C:H5'	1.99	0.44
1:0:2548:G:C2	1:0:2549:G:N7	2.86	0.44
1:0:2601:C:H1'	1:0:2799:C:H42	1.83	0.44
1:0:2687:G:C2'	1:0:2688:G:H5'	2.47	0.44
1:0:2726:U:C2	1:0:2739:G:N2	2.86	0.44
1:0:344:G:N2	1:0:345:U:H1'	2.33	0.44
1:0:394:U:H2'	1:0:395:G:C8	2.50	0.44
1:0:68:C:C2'	1:0:68:C:O2	2.65	0.44
1:0:986:A:H2	1:0:1001:A:C1'	2.31	0.44
1:0:1200:G:C2'	1:0:1201:G:H5'	2.48	0.43
1:0:1209:G:C2	1:0:1210:C:C5	3.07	0.43
1:0:1295:U:C5	1:0:1296:G:C5	3.06	0.43
1:0:1339:U:O2'	1:0:1993:G:O2'	2.32	0.43
1:0:143:A:H2'	1:0:144:U:C6	2.52	0.43
1:0:1480:G:H2'	1:0:1481:U:O4'	2.17	0.43
1:0:1511:A:C2	1:0:1594:U:H1'	2.47	0.43
1:0:1824:C:H2'	1:0:1825:C:H5'	1.99	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2125:C:C3'	1:0:2126:U:C5'	2.96	0.43
1:0:2170:C:H2'	1:0:2171:U:H4'	2.00	0.43
1:0:2081:U:H3	1:0:2174:G:H1	1.64	0.43
1:0:2198:U:H2'	1:0:2199:C:H4'	1.98	0.43
1:0:2228:U:H5''	1:0:2229:G:OP2	2.18	0.43
1:0:246:C:N3	1:0:247:A:C5	2.86	0.43
1:0:2767:C:C4	1:0:2768:C:C5	3.06	0.43
1:0:405:C:C2'	1:0:406:G:H8	2.13	0.43
1:0:836:G:H2'	1:0:837:U:C6	2.53	0.43
5:1:27:TYR:OH	5:1:63:GLU:HB3	2.18	0.43
2:R:29:VAL:CG2	2:R:76:LYS:HD2	2.47	0.43
1:0:1061:A:N1	1:0:2731:G:O6	2.51	0.43
1:0:126:C:C6	1:0:126:C:H3'	2.53	0.43
1:0:1366:A:C6	1:0:1367:A:C6	3.06	0.43
1:0:1466:C:H5''	1:0:1466:C:H6	1.83	0.43
1:0:1685:A:O2'	1:0:1686:A:P	2.76	0.43
1:0:15:G:C6	1:0:16:G:C5	3.06	0.43
1:0:1715:A:O2'	1:0:1716:G:C3'	2.66	0.43
1:0:1807:A:H1'	1:0:1809:G:N9	2.33	0.43
1:0:1827:G:H1'	1:0:1914:U:N3	2.33	0.43
1:0:1933:G:H2'	1:0:1934:U:C6	2.53	0.43
1:0:2084:G:HO2'	1:0:2085:G:H8	1.62	0.43
1:0:214:C:C2	1:0:215:G:C8	3.06	0.43
1:0:2058:U:H3'	1:0:2217:G:H1	1.83	0.43
1:0:2253:A:N6	1:0:2255:G:C4	2.86	0.43
1:0:2380:U:H2'	1:0:2381:A:C5'	2.47	0.43
1:0:2422:C:H2'	1:0:2423:G:H8	1.82	0.43
1:0:2488:G:C2	1:0:2489:C:C6	3.06	0.43
1:0:470:U:O4	1:0:481:A:N7	2.51	0.43
1:0:589:C:N4	1:0:590:C:N4	2.66	0.43
1:0:794:A:H4'	1:0:795:A:C8	2.53	0.43
1:0:832:A:C2	1:0:833:A:H1'	2.54	0.43
3:S:75:ALA:C	3:S:76:LEU:HD23	2.39	0.43
1:0:1142:G:O2'	1:0:1143:A:O5'	2.35	0.43
1:0:1236:G:C6	1:0:1240:G:C6	3.07	0.43
1:0:1262:U:C6	1:0:1262:U:C3'	3.01	0.43
1:0:1289:A:O2'	1:0:1290:A:H5'	2.18	0.43
1:0:1299:A:O2'	1:0:1300:A:OP1	2.35	0.43
1:0:1368:G:C6	1:0:1369:G:C5	3.06	0.43
1:0:1416:A:H2'	1:0:1417:C:C6	2.52	0.43
1:0:158:A:C2	1:0:159:A:C4	3.07	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1717:A:C2'	1:0:1718:A:H5'	2.48	0.43
1:0:172:A:C6	1:0:175:C:H5	2.36	0.43
1:0:179:U:H2'	1:0:180:C:C6	2.53	0.43
1:0:1964:A:H5''	1:0:1965:U:P	2.58	0.43
1:0:2185:U:H2'	1:0:2186:G:C8	2.53	0.43
1:0:2431:C:N4	1:0:2432:A:C6	2.87	0.43
1:0:2717:G:O2'	1:0:2718:A:H5'	2.19	0.43
1:0:2863:U:C2	1:0:2864:C:C5	3.06	0.43
1:0:300:C:H2'	1:0:301:C:C5'	2.48	0.43
1:0:311:A:H1'	1:0:330:C:H1'	2.00	0.43
1:0:62:U:C3'	1:0:63:A:H8	2.31	0.43
1:0:713:G:H5''	1:0:713:G:H8	1.84	0.43
1:0:777:A:C2	1:0:794:A:C2	3.06	0.43
1:0:956:A:O2'	1:0:957:G:OP1	2.28	0.43
1:0:968:C:H6	1:0:968:C:H3'	1.83	0.43
1:0:998:C:H2'	1:0:999:A:O5'	2.17	0.43
5:1:90:THR:CB	5:1:107:LYS:NZ	2.70	0.43
3:S:14:LEU:HA	3:S:14:LEU:HD23	1.83	0.43
1:0:1127:C:C2	1:0:1128:G:C8	3.07	0.43
1:0:128:C:H2'	1:0:129:A:C5'	2.37	0.43
1:0:1385:C:O2	1:0:1386:A:C1'	2.66	0.43
1:0:1385:C:N3	1:0:1386:A:C5	2.87	0.43
1:0:1462:C:C2	1:0:1480:G:N2	2.87	0.43
1:0:1489:C:H3'	1:0:1490:U:C5'	2.47	0.43
1:0:1629:G:C6	1:0:1635:G:O6	2.71	0.43
1:0:1715:A:O2'	1:0:1716:G:C5'	2.66	0.43
1:0:1754:G:H21	1:0:1756:C:H5''	1.70	0.43
1:0:1783:G:O2'	1:0:1784:C:H5'	2.18	0.43
1:0:1811:A:H1'	1:0:1813:A:C4	2.54	0.43
1:0:1919:A:H2	1:0:1925:C:N4	2.17	0.43
1:0:197:G:N3	1:0:210:A:C2	2.79	0.43
1:0:2231:G:O2'	1:0:2232:G:H5'	2.18	0.43
1:0:2388:G:C4	1:0:2389:G:C8	3.07	0.43
1:0:2477:C:O2	1:0:2477:C:H2'	2.18	0.43
1:0:2733:A:H2'	1:0:2734:U:H5'	2.00	0.43
1:0:326:A:N6	1:0:327:C:N4	2.66	0.43
1:0:339:U:C6	1:0:339:U:O5'	2.71	0.43
1:0:356:A:C2	1:0:357:A:N6	2.86	0.43
1:0:53:G:N2	1:0:54:G:H1'	2.34	0.43
1:0:929:A:C3'	1:0:930:A:H5''	2.35	0.43
4:W:54:ASN:ND2	4:W:54:ASN:H	2.17	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1167:A:OP1	1:0:1167:A:O4'	2.36	0.43
1:0:1287:A:C2	1:0:1310:C:O2	2.71	0.43
1:0:1355:A:OP1	1:0:1411:C:OP1	2.36	0.43
1:0:1773:C:O2'	1:0:1774:A:H5'	2.17	0.43
1:0:1792:C:O5'	1:0:1792:C:H6	2.02	0.43
1:0:211:U:H2'	1:0:212:U:H5'	1.99	0.43
1:0:2629:U:O2	1:0:2650:G:C2	2.72	0.43
1:0:2705:A:O2'	1:0:2706:U:C5	2.63	0.43
1:0:304:A:H3'	1:0:305:A:H5''	2.01	0.43
1:0:45:C:H2'	1:0:46:C:H6	1.83	0.43
1:0:462:G:O6	1:0:465:C:OP1	2.37	0.43
1:0:523:A:H4'	1:0:1230:C:H5'	2.01	0.43
1:0:534:U:C2	1:0:535:U:C5	3.06	0.43
1:0:55:A:C2	1:0:56:C:C2	3.06	0.43
3:S:45:LYS:CG	3:S:75:ALA:CB	2.91	0.43
1:0:75:C:OP1	4:W:48:ARG:NE	2.51	0.43
1:0:317:U:O2'	1:0:1224:A:N7	2.52	0.43
1:0:139:A:C2	1:0:140:G:C5	3.06	0.43
1:0:1628:C:C4	1:0:1629:G:N7	2.86	0.43
1:0:1763:G:N2	1:0:1765:C:OP1	2.49	0.43
1:0:2165:A:H2'	1:0:2166:G:C8	2.54	0.43
1:0:2219:U:H2'	1:0:2220:A:H8	1.83	0.43
1:0:2549:G:N2	1:0:2550:C:H1'	2.33	0.43
1:0:2585:C:C2'	1:0:2586:G:C5'	2.96	0.43
1:0:2635:U:H2'	1:0:2635:U:O2	2.18	0.43
1:0:2728:A:H3'	1:0:2728:A:C8	2.53	0.43
1:0:2782:G:H2'	1:0:2783:U:O5'	2.17	0.43
1:0:2799:C:C4	1:0:2800:C:N3	2.86	0.43
1:0:329:C:O2'	1:0:330:C:H5'	2.18	0.43
1:0:525:A:C2'	1:0:526:C:H5'	2.48	0.43
1:0:537:C:O4'	1:0:2759:U:C2	2.72	0.43
1:0:630:G:H5''	1:0:631:G:OP2	2.18	0.43
1:0:644:A:H2'	1:0:645:G:O4'	2.19	0.43
1:0:55:A:N6	1:0:69:G:N1	2.66	0.43
1:0:793:G:H2'	1:0:795:A:C5	2.54	0.43
2:R:62:ARG:HD2	2:R:62:ARG:C	2.39	0.43
1:0:1081:A:H3'	1:0:1108:U:H4'	2.01	0.43
1:0:1223:G:C5	1:0:1250:A:N6	2.87	0.43
1:0:1621:C:H4'	1:0:1626:A:C6	2.54	0.43
1:0:1621:C:H4'	1:0:1626:A:N6	2.34	0.43
1:0:1885:C:C5	1:0:1886:G:C8	3.06	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:188:G:C2	1:0:189:A:C4	3.07	0.43
1:0:1887:G:C2	1:0:1911:A:H2	2.37	0.43
1:0:1913:G:O2'	1:0:1914:U:H5	2.01	0.43
1:0:2021:G:C2	1:0:2022:C:C2	3.07	0.43
1:0:2053:G:C4	1:0:2054:A:C8	3.06	0.43
1:0:2218:G:O5'	1:0:2218:G:H8	2.02	0.43
1:0:2227:C:H2'	1:0:2228:U:H5'	2.00	0.43
1:0:2228:U:H5''	1:0:2229:G:P	2.58	0.43
1:0:2450:A:N6	1:0:2451:G:C2	2.87	0.43
1:0:971:A:C2	1:0:2475:C:H1'	2.54	0.43
1:0:2697:G:O2'	1:0:2698:G:H5'	2.18	0.43
1:0:2758:A:C2'	1:0:2759:U:OP1	2.66	0.43
1:0:2817:A:N6	1:0:2818:G:C6	2.87	0.43
1:0:2873:G:C6	1:0:2874:A:C5	3.06	0.43
1:0:581:A:H2'	1:0:582:G:O4'	2.19	0.43
1:0:706:A:H1'	1:0:1367:A:H1'	2.00	0.43
1:0:855:G:C6	1:0:856:A:C6	3.07	0.43
1:0:940:G:H2'	1:0:941:U:H4'	1.98	0.43
1:0:971:A:C6	1:0:973:U:H1'	2.54	0.43
1:0:1081:A:N6	1:0:1107:A:C2	2.86	0.43
1:0:1356:G:C6	1:0:1357:U:O4	2.71	0.43
1:0:1588:A:C4	1:0:1589:G:N7	2.87	0.43
1:0:1345:G:C6	1:0:1625:A:C5	3.06	0.43
1:0:1737:G:H2'	1:0:1738:U:C6	2.54	0.43
1:0:1768:U:N3	1:0:1769:U:C4	2.87	0.43
1:0:1920:A:N1	1:0:1922:U:C5	2.87	0.43
1:0:1964:A:H3'	1:0:1965:U:H5'	1.98	0.43
1:0:2495:G:C2	1:0:2496:C:C2	3.07	0.43
1:0:2661:G:H2'	1:0:2662:C:O5'	2.19	0.43
1:0:2811:G:O6	1:0:2812:A:N6	2.52	0.43
1:0:2817:A:C2'	1:0:2818:G:H5'	2.49	0.43
1:0:2832:G:H2'	1:0:2834:A:OP2	2.19	0.43
1:0:35:G:C2'	1:0:36:G:O5'	2.66	0.43
1:0:746:G:N7	1:0:774:A:C5	2.86	0.43
1:0:833:A:H2'	1:0:834:A:O4'	2.18	0.43
1:0:912:A:H3'	1:0:912:A:C8	2.54	0.43
5:1:24:ASN:ND2	5:1:25:ARG:NH2	2.66	0.43
1:0:1030:U:C4	1:0:1153:A:N6	2.87	0.43
1:0:1096:A:N3	1:0:1096:A:C3'	2.80	0.43
1:0:1200:G:C8	1:0:1200:G:H5''	2.45	0.43
1:0:1336:G:O2'	1:0:1337:G:H5'	2.19	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1391:A:O2'	1:0:1392:U:C5	2.71	0.43
1:0:1854:G:O2'	1:0:1855:G:C5'	2.64	0.43
1:0:201:G:H2'	1:0:202:A:H8	1.84	0.43
1:0:818:G:N1	1:0:2051:U:OP1	2.45	0.43
1:0:2052:G:O2'	1:0:2053:G:H5'	2.18	0.43
1:0:2347:C:C2'	1:0:2348:A:H5'	2.49	0.43
1:0:2429:A:N6	1:0:2480:C:O2	2.52	0.43
1:0:2549:G:H2'	1:0:2550:C:H6	1.83	0.43
1:0:2579:A:C2	1:0:2580:C:C4	3.06	0.43
1:0:2825:A:C2	1:0:2826:C:C2	3.07	0.43
1:0:2844:G:H2'	1:0:2845:C:O5'	2.19	0.43
1:0:353:G:O2'	1:0:354:C:H5'	2.18	0.43
1:0:389:G:H2'	1:0:390:U:C6	2.53	0.43
1:0:521:U:OP2	1:0:522:G:O6	2.37	0.43
1:0:627:A:H2'	1:0:628:A:H8	1.83	0.43
1:0:770:U:C2'	1:0:771:C:H5'	2.49	0.43
1:0:885:A:H2'	1:0:886:A:C8	2.54	0.43
4:W:37:LEU:C	4:W:37:LEU:HD23	2.39	0.43
1:0:1011:A:C8	1:0:1165:G:N2	2.87	0.43
1:0:1142:G:H2'	1:0:1143:A:C8	2.53	0.43
1:0:1441:A:HO2'	1:0:1442:C:H6	1.60	0.43
1:0:1501:C:O2'	1:0:1502:G:H5'	2.19	0.43
1:0:1545:G:H2'	1:0:1546:C:O4'	2.19	0.43
1:0:1775:A:H4'	1:0:1776:A:C5'	2.49	0.43
1:0:1794:A:C2	1:0:1814:G:N3	2.81	0.43
1:0:1922:U:O4	1:0:1950:C:H1'	2.18	0.43
1:0:2216:G:H2'	1:0:2218:G:O6	2.18	0.43
1:0:2286:G:N3	1:0:2286:G:C2'	2.81	0.43
1:0:2241:U:H4'	1:0:2307:A:H2	1.82	0.43
1:0:2364:C:OP1	1:0:2365:U:OP2	2.37	0.43
1:0:2409:A:H2'	1:0:2410:U:O5'	2.19	0.43
1:0:2603:G:N2	1:0:2604:G:C4	2.87	0.43
1:0:2699:G:O2'	1:0:2700:U:H5'	2.19	0.43
1:0:2616:U:C2	1:0:2762:G:N2	2.86	0.43
1:0:43:A:O5'	1:0:43:A:H8	2.02	0.43
1:0:658:G:H1'	1:0:2330:G:OP1	2.18	0.43
1:0:761:G:OP1	1:0:2591:C:N4	2.51	0.43
1:0:703:A:O2'	1:0:793:G:OP1	2.34	0.43
1:0:818:G:H5'	1:0:819:C:C5	2.54	0.43
1:0:855:G:C6	1:0:856:A:C5	3.07	0.43
1:0:86:U:H1'	1:0:95:G:H22	1.80	0.43

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:93:A:H2	4:W:40:PRO:HG2	1.83	0.43
1:0:979:A:H2'	1:0:980:G:H8	1.83	0.43
1:0:1412:C:C5'	2:R:22:ARG:HH22	2.32	0.43
3:S:13:LYS:H	3:S:13:LYS:HG2	1.71	0.43
1:0:1002:C:N4	1:0:1003:C:N4	2.67	0.42
1:0:112:U:C2	1:0:113:C:C6	3.06	0.42
1:0:1153:A:O2'	1:0:1154:A:H3'	2.19	0.42
1:0:1393:G:N2	1:0:1586:A:N1	2.67	0.42
1:0:1724:C:C4	1:0:1747:G:O6	2.71	0.42
1:0:1773:C:N3	1:0:2565:C:N4	2.56	0.42
1:0:201:G:O2'	1:0:202:A:H5'	2.19	0.42
1:0:2053:G:C2	1:0:2421:C:C2	3.07	0.42
1:0:2063:A:C2	1:0:2064:U:C2	3.07	0.42
1:0:213:C:H42	1:0:239:A:N6	2.17	0.42
1:0:2482:A:O2'	1:0:2483:U:P	2.76	0.42
1:0:2700:U:C6	1:0:2700:U:H5'	2.53	0.42
1:0:310:A:H2'	1:0:311:A:O4'	2.19	0.42
1:0:481:A:C6	1:0:482:A:C6	3.06	0.42
1:0:614:G:N2	1:0:634:G:C2	2.84	0.42
1:0:870:C:O2	1:0:933:G:C2	2.72	0.42
1:0:876:A:H2'	1:0:877:G:O4'	2.19	0.42
5:1:107:LYS:HD3	5:1:107:LYS:N	2.23	0.42
3:S:25:LEU:HD22	3:S:25:LEU:C	2.40	0.42
1:0:1006:C:H6	1:0:1006:C:C3'	2.20	0.42
1:0:69:G:H3'	1:0:111:G:O2'	2.19	0.42
1:0:1011:A:N6	1:0:1166:A:C8	2.88	0.42
1:0:126:C:H5''	1:0:126:C:H6	1.84	0.42
1:0:762:A:H4'	1:0:1284:G:N3	2.35	0.42
1:0:1296:G:H22	1:0:1299:A:H5''	1.83	0.42
1:0:1374:G:C2	1:0:1375:C:C6	3.07	0.42
1:0:1632:A:O2'	1:0:1633:C:P	2.77	0.42
1:0:765:C:H41	1:0:1772:C:H1'	1.84	0.42
1:0:1780:A:C6	1:0:1781:C:C4	3.07	0.42
1:0:1794:A:C8	1:0:1795:C:C6	3.07	0.42
1:0:1811:A:C2'	1:0:1812:U:OP2	2.67	0.42
1:0:193:A:N1	1:0:194:G:N3	2.66	0.42
1:0:229:G:O2'	1:0:230:C:H5'	2.19	0.42
1:0:1949:A:N3	1:0:2572:U:C4'	2.82	0.42
1:0:2749:A:H2'	1:0:2750:G:H5'	2.00	0.42
1:0:2859:U:C4	1:0:2860:C:O2	2.73	0.42
1:0:339:U:H6	1:0:339:U:O5'	2.02	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:567:G:C5	1:0:568:G:N7	2.87	0.42
1:0:616:U:C5	1:0:630:G:C6	3.07	0.42
1:0:960:U:H2'	1:0:961:G:H8	1.84	0.42
1:0:976:C:H1'	1:0:2252:A:C2	2.54	0.42
1:0:69:G:C2	1:0:112:U:C4	3.07	0.42
1:0:1251:G:C2	1:0:1252:C:C2	3.06	0.42
1:0:1299:A:O2'	1:0:1300:A:P	2.76	0.42
1:0:1448:A:H2'	1:0:1449:C:C6	2.55	0.42
1:0:1460:G:H2'	1:0:1461:C:H6	1.85	0.42
1:0:1908:C:H5	1:0:1912:G:O6	2.02	0.42
1:0:2014:A:C6	1:0:2477:C:C1'	3.03	0.42
1:0:2143:G:H2'	1:0:2144:C:C6	2.54	0.42
1:0:2200:G:C6	1:0:2201:G:C5	3.08	0.42
1:0:873:U:O2	1:0:2247:A:O4'	2.38	0.42
1:0:2325:A:C2	1:0:2362:G:N1	2.87	0.42
1:0:2346:G:O2'	1:0:2347:C:H5'	2.18	0.42
1:0:2443:C:C2	1:0:2466:G:C2	3.07	0.42
1:0:2526:U:C5	1:0:2545:A:C5	3.08	0.42
1:0:2621:G:N3	1:0:2622:G:C8	2.87	0.42
1:0:2802:C:H2'	1:0:2803:C:C6	2.54	0.42
1:0:2819:G:H2'	1:0:2820:C:H6	1.84	0.42
1:0:306:G:O2'	1:0:307:C:H5'	2.19	0.42
1:0:321:A:OP1	3:S:26:SER:C	2.57	0.42
1:0:37:C:H2'	1:0:38:G:H8	1.84	0.42
1:0:542:A:H2'	1:0:543:G:H5'	2.01	0.42
1:0:573:C:H2'	1:0:574:C:O4'	2.19	0.42
1:0:594:G:H3'	1:0:1264:C:H42	1.84	0.42
1:0:646:C:O2	1:0:650:U:H4'	2.19	0.42
1:0:773:G:H2'	1:0:774:A:O4'	2.19	0.42
1:0:797:A:N7	1:0:805:G:N3	2.67	0.42
1:0:846:A:H2'	1:0:847:C:H6	1.79	0.42
1:0:876:A:C2	1:0:877:G:C4	3.06	0.42
1:0:94:C:C2'	1:0:95:G:O5'	2.67	0.42
1:0:1312:G:H2'	1:0:1656:U:O4	2.18	0.42
1:0:1456:C:C2'	1:0:1457:A:H5'	2.50	0.42
1:0:1657:A:H2'	1:0:1658:A:O4'	2.19	0.42
1:0:1762:C:C2	1:0:1763:G:C8	3.08	0.42
1:0:2055:G:O2'	1:0:2056:C:H5'	2.19	0.42
1:0:2184:C:C2	1:0:2185:U:C5	3.07	0.42
1:0:2312:A:H2'	1:0:2313:G:OP2	2.19	0.42
1:0:2509:A:C2'	1:0:2510:A:H5''	2.45	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2571:G:C2	1:0:2582:G:C2	3.07	0.42
1:0:2610:G:C6	1:0:2611:A:N7	2.87	0.42
1:0:420:C:O2'	1:0:421:G:H5'	2.20	0.42
1:0:492:G:H2'	1:0:517:A:N1	2.34	0.42
1:0:668:A:O2'	1:0:669:G:C4'	2.68	0.42
1:0:867:G:C6	1:0:868:U:C4	3.08	0.42
5:1:71:LEU:HA	5:1:74:HIS:ND1	2.34	0.42
1:0:112:U:N3	1:0:113:C:C5	2.87	0.42
1:0:1270:C:H2'	1:0:1271:C:C6	2.55	0.42
1:0:1664:G:O5'	1:0:1665:C:OP1	2.38	0.42
1:0:1685:A:N1	1:0:1976:U:C6	2.88	0.42
1:0:1778:U:H2'	1:0:1779:C:C6	2.54	0.42
1:0:1785:A:H2'	1:0:1786:C:C5	2.55	0.42
1:0:1918:G:C4	1:0:1945:C:N4	2.87	0.42
1:0:1969:G:C2	1:0:1970:G:C8	3.07	0.42
1:0:2020:G:C6	1:0:2021:G:C6	3.07	0.42
1:0:2332:G:H2'	1:0:2333:A:O5'	2.20	0.42
1:0:2465:G:C2	1:0:2466:G:C4	3.08	0.42
1:0:541:C:HO2'	1:0:542:A:P	2.43	0.42
1:0:584:A:H2'	1:0:585:U:C6	2.54	0.42
1:0:590:C:O2'	1:0:591:G:H5'	2.19	0.42
1:0:623:G:C5'	1:0:625:A:H62	2.33	0.42
1:0:784:U:H2'	1:0:785:U:C6	2.55	0.42
1:0:833:A:C2'	1:0:834:A:H5'	2.50	0.42
1:0:912:A:H8	1:0:912:A:H3'	1.84	0.42
1:0:914:C:H2'	1:0:915:C:H6	1.84	0.42
2:R:91:LEU:CD2	2:R:91:LEU:N	2.81	0.42
1:0:1355:A:C5	1:0:1410:U:C6	3.07	0.42
1:0:1462:C:O2	1:0:1560:A:H2	2.02	0.42
1:0:1745:C:C2'	1:0:1746:A:H5'	2.49	0.42
1:0:1873:A:C8	1:0:1874:G:C8	3.07	0.42
1:0:2007:G:H2'	1:0:2008:C:H6	1.85	0.42
1:0:929:A:H5'	1:0:2247:A:H61	1.83	0.42
1:0:2491:C:H2'	1:0:2492:G:O4'	2.19	0.42
1:0:2598:C:H2'	1:0:2599:U:C5	2.54	0.42
1:0:2636:A:H2'	1:0:2637:C:C5'	2.50	0.42
1:0:2793:G:C6	1:0:2794:G:C5	3.07	0.42
1:0:2811:G:C6	1:0:2812:A:C6	3.07	0.42
1:0:617:U:N1	1:0:632:A:N6	2.67	0.42
1:0:749:C:C4	1:0:750:C:C5	3.07	0.42
1:0:81:C:C4	1:0:82:G:C2	3.08	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:955:G:H5''	1:0:956:A:C5'	2.48	0.42
3:S:85:ASP:H	3:S:86:PRO:HD3	1.84	0.42
1:0:1032:A:C2	1:0:1034:U:C2	3.07	0.42
1:0:1120:C:N4	1:0:1121:G:C2	2.87	0.42
1:0:1408:A:C2	1:0:1411:C:N3	2.88	0.42
1:0:1553:G:O5'	1:0:1553:G:H8	2.03	0.42
1:0:2010:G:H2'	1:0:2011:U:C6	2.55	0.42
1:0:2184:C:C4	1:0:2185:U:C4	3.08	0.42
1:0:2433:G:C5	1:0:2434:G:C8	3.08	0.42
1:0:2503:G:C4	1:0:2504:G:C8	3.07	0.42
1:0:2526:U:C6	1:0:2545:A:C6	3.07	0.42
1:0:2787:A:C2	1:0:2864:C:N3	2.88	0.42
1:0:28:A:H1'	1:0:523:A:N1	2.34	0.42
1:0:317:U:O5'	1:0:317:U:H6	2.03	0.42
1:0:393:U:H2'	1:0:394:U:H6	1.85	0.42
1:0:430:C:H2'	1:0:431:G:C8	2.55	0.42
1:0:430:C:H6	1:0:430:C:O5'	2.03	0.42
1:0:618:A:H2'	1:0:619:A:H5'	2.01	0.42
1:0:623:G:H4'	1:0:625:A:N6	2.34	0.42
1:0:716:U:O4	1:0:717:G:C2	2.73	0.42
1:0:792:U:H2'	1:0:793:G:O5'	2.20	0.42
1:0:861:G:C5	1:0:862:A:N7	2.88	0.42
2:R:46:PHE:N	2:R:46:PHE:CD1	2.87	0.42
3:S:39:ALA:C	3:S:40:LEU:HG	2.39	0.42
1:0:1228:G:C3'	1:0:1228:G:C8	3.02	0.42
1:0:1236:G:N1	1:0:1240:G:C6	2.88	0.42
1:0:1337:G:C2	1:0:1341:G:N1	2.87	0.42
1:0:1363:C:O2'	1:0:1364:C:H5'	2.20	0.42
1:0:1411:C:N3	1:0:1412:C:C4	2.88	0.42
1:0:1588:A:O2'	1:0:1589:G:H5'	2.20	0.42
1:0:1673:C:O5'	1:0:1673:C:H6	2.02	0.42
1:0:192:G:O2'	1:0:193:A:H5''	2.20	0.42
1:0:2320:G:C6	1:0:2321:C:C4	3.08	0.42
1:0:2376:G:N2	1:0:2399:C:H1'	2.35	0.42
1:0:2490:U:H2'	1:0:2491:C:C6	2.55	0.42
1:0:2647:G:O2'	1:0:2648:G:H5'	2.20	0.42
1:0:481:A:N6	1:0:482:A:C6	2.88	0.42
1:0:53:G:C6	1:0:115:G:N2	2.88	0.42
1:0:56:C:H6	1:0:56:C:O5'	2.03	0.42
1:0:708:G:C6	1:0:781:G:C6	3.08	0.42
1:0:859:U:H2'	1:0:860:U:OP2	2.19	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:979:A:C2	1:0:980:G:C4	3.08	0.42
2:R:80:VAL:HG23	2:R:81:ARG:N	2.35	0.42
1:0:1139:A:HO2'	1:0:1140:A:C4'	2.32	0.42
1:0:1223:G:O2'	1:0:1224:A:P	2.77	0.42
1:0:132:U:O2	1:0:140:G:N2	2.53	0.42
1:0:1720:G:N3	1:0:1721:G:C8	2.87	0.42
1:0:1737:G:H2'	1:0:1738:U:H6	1.85	0.42
1:0:1752:U:H2'	1:0:1753:A:H5'	2.02	0.42
1:0:1976:U:H2'	1:0:1976:U:O2	2.18	0.42
1:0:1980:A:H2'	1:0:1981:A:H5'	2.01	0.42
1:0:1986:G:C6	1:0:1987:G:N7	2.88	0.42
1:0:20:C:C2	1:0:21:A:C8	3.08	0.42
1:0:225:G:O5'	1:0:226:C:H5'	2.19	0.42
1:0:2356:A:H2'	1:0:2357:A:C8	2.54	0.42
1:0:2377:U:C2'	1:0:2378:G:O5'	2.68	0.42
1:0:2394:G:C6	1:0:2395:C:N4	2.88	0.42
1:0:2445:C:C2	1:0:2464:G:C2	3.08	0.42
1:0:2471:U:C2	1:0:2472:U:C5	3.07	0.42
1:0:2036:G:C2	1:0:2596:C:C2	3.07	0.42
1:0:2660:C:C4	1:0:2704:U:C5	3.08	0.42
1:0:2661:G:O2'	1:0:2662:C:H5'	2.20	0.42
1:0:2665:G:C5	1:0:2666:U:C4	3.08	0.42
1:0:600:G:C2	1:0:602:C:C2	3.08	0.42
1:0:672:C:H2'	1:0:673:G:H5'	2.02	0.42
1:0:717:G:H1'	1:0:740:A:N6	2.35	0.42
1:0:720:A:C4	1:0:721:C:C5	3.08	0.42
1:0:860:U:C4	1:0:945:G:N2	2.88	0.42
2:R:40:ASP:C	2:R:40:ASP:OD1	2.58	0.42
3:S:85:ASP:CG	3:S:86:PRO:CD	2.75	0.42
1:0:1029:C:C3'	1:0:1030:U:H5''	2.49	0.42
1:0:104:C:C3'	1:0:105:G:H5''	2.49	0.42
1:0:1013:G:N2	1:0:1165:G:H1'	2.33	0.42
1:0:1184:G:C3'	1:0:1185:C:H5''	2.50	0.42
1:0:119:G:N2	1:0:129:A:C4	2.88	0.42
1:0:1248:G:N1	1:0:1249:G:N2	2.67	0.42
1:0:1625:A:C4	1:0:1632:A:C2	3.07	0.42
1:0:167:A:H2'	1:0:168:A:C8	2.55	0.42
1:0:170:U:O2	1:0:171:G:C8	2.73	0.42
1:0:1767:G:C2	1:0:1768:U:C6	3.07	0.42
1:0:1780:A:C2'	1:0:1781:C:H5'	2.50	0.42
1:0:2196:U:O2'	1:0:2197:U:H5'	2.20	0.42

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2465:G:C2'	1:0:2466:G:O5'	2.68	0.42
1:0:2813:G:H2'	1:0:2814:G:O4'	2.19	0.42
1:0:2821:G:H2'	1:0:2822:U:C6	2.55	0.42
1:0:326:A:C6	1:0:327:C:N3	2.88	0.42
1:0:357:A:C3'	1:0:358:C:H5'	2.50	0.42
1:0:404:A:C4	1:0:424:G:N2	2.86	0.42
1:0:721:C:H6	1:0:721:C:O5'	2.03	0.42
1:0:951:G:H2'	1:0:952:A:C4'	2.49	0.42
1:0:957:G:N1	1:0:958:G:C5	2.87	0.42
1:0:982:C:H2'	1:0:983:G:H5'	2.02	0.42
5:1:71:LEU:N	5:1:71:LEU:HD23	2.34	0.42
1:0:1030:U:C5	1:0:1153:A:N6	2.73	0.41
1:0:1076:U:C3'	1:0:1077:U:H5''	2.50	0.41
1:0:1293:A:C2	1:0:1294:G:C4	3.08	0.41
1:0:128:C:C3'	1:0:129:A:H5''	2.50	0.41
1:0:1333:G:H8	1:0:1333:G:O5'	2.03	0.41
1:0:1440:G:H8	1:0:1440:G:P	2.43	0.41
1:0:1656:U:H2'	1:0:1657:A:C5'	2.50	0.41
1:0:1694:A:C2'	1:0:1695:U:O5'	2.68	0.41
1:0:1715:A:OP1	1:0:1715:A:H8	2.03	0.41
1:0:1817:U:H3'	1:0:1817:U:C6	2.55	0.41
1:0:1872:A:O2'	1:0:1873:A:H5'	2.20	0.41
1:0:2498:U:OP2	1:0:2498:U:C6	2.73	0.41
1:0:2552:C:OP1	1:0:2553:G:OP1	2.38	0.41
1:0:2624:G:C5'	1:0:2712:G:O2'	2.68	0.41
1:0:2697:G:C2'	1:0:2698:G:H5'	2.51	0.41
1:0:2840:U:H3'	1:0:2841:U:H6	1.85	0.41
1:0:340:G:C1'	1:0:488:A:H1'	2.50	0.41
1:0:500:G:C2	1:0:501:G:H1'	2.55	0.41
1:0:617:U:N3	1:0:632:A:N7	2.68	0.41
1:0:678:G:O2'	1:0:679:C:H5'	2.20	0.41
1:0:745:C:H2'	1:0:746:G:O4'	2.20	0.41
1:0:930:A:H3'	1:0:931:G:O4'	2.20	0.41
1:0:945:G:O2'	1:0:946:U:H5'	2.20	0.41
1:0:982:C:P	1:0:985:G:C2	3.13	0.41
1:0:1011:A:C2	1:0:1166:A:C2	3.07	0.41
1:0:1011:A:C5	1:0:1012:A:N7	2.88	0.41
1:0:1363:C:H2'	1:0:1364:C:H5'	2.01	0.41
1:0:1371:G:O5'	1:0:1371:G:H8	2.03	0.41
1:0:142:U:H5''	1:0:143:A:OP1	2.20	0.41
1:0:1459:U:O2	1:0:1477:C:OP2	2.37	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1479:G:O2'	1:0:1480:G:H5'	2.19	0.41
1:0:1558:C:C2'	1:0:1559:G:H5'	2.50	0.41
1:0:2321:C:O2'	1:0:2322:U:H5'	2.19	0.41
1:0:2377:U:H2'	1:0:2378:G:O5'	2.19	0.41
1:0:2793:G:C2	1:0:2794:G:N9	2.88	0.41
1:0:399:G:O2'	1:0:400:U:P	2.78	0.41
1:0:643:A:N3	1:0:2382:C:H1'	2.34	0.41
1:0:931:G:C6	1:0:932:G:C5	3.09	0.41
5:1:14:PHE:N	5:1:14:PHE:CD1	2.88	0.41
5:1:49:PRO:HB2	5:1:50:ARG:H	1.68	0.41
2:R:15:LYS:HD2	2:R:15:LYS:HA	1.83	0.41
1:0:1192:A:C2	1:0:1193:G:N7	2.88	0.41
1:0:1199:U:C5	1:0:1201:G:O6	2.73	0.41
1:0:1249:G:HO2'	1:0:1250:A:P	2.43	0.41
1:0:1444:C:H2'	1:0:1445:A:C8	2.56	0.41
1:0:1501:C:C4	1:0:1502:G:N7	2.88	0.41
1:0:1541:G:H2'	1:0:1542:G:O5'	2.21	0.41
1:0:1583:A:O2'	1:0:1584:G:OP2	2.33	0.41
1:0:1656:U:C2'	1:0:1657:A:C5'	2.98	0.41
1:0:765:C:C5	1:0:1772:C:C1'	3.01	0.41
1:0:1795:C:N4	1:0:1806:G:N2	2.67	0.41
1:0:1996:A:O2'	1:0:1997:A:C5'	2.65	0.41
1:0:2144:C:O2	1:0:2156:A:C2	2.73	0.41
1:0:215:G:C6	1:0:216:U:C2	3.09	0.41
1:0:2310:G:N2	1:0:2364:C:N3	2.67	0.41
1:0:2347:C:O2'	1:0:2348:A:H5'	2.20	0.41
1:0:226:C:C5	1:0:2374:C:OP1	2.73	0.41
1:0:2396:C:H6	1:0:2396:C:H5'	1.85	0.41
1:0:2516:U:H2'	1:0:2517:C:H6	1.85	0.41
1:0:2652:G:O2'	1:0:2653:A:H5'	2.20	0.41
1:0:2838:U:O4	1:0:2839:G:O6	2.39	0.41
1:0:295:C:H42	1:0:296:A:N6	2.18	0.41
1:0:343:A:N6	1:0:346:C:C4	2.88	0.41
1:0:36:G:C2	1:0:37:C:C2	3.09	0.41
1:0:224:G:H4'	1:0:399:G:C5	2.55	0.41
1:0:224:G:C4'	1:0:399:G:C6	3.03	0.41
1:0:459:A:C4'	1:0:459:A:OP1	2.68	0.41
1:0:641:G:N1	1:0:645:G:C6	2.89	0.41
1:0:702:A:H2'	1:0:792:U:O2'	2.20	0.41
1:0:849:G:C8	1:0:850:C:C5	3.08	0.41
3:S:42:ARG:HG2	3:S:42:ARG:NH1	2.32	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
4:W:25:LEU:CD1	4:W:43:VAL:HG22	2.49	0.41
1:0:1139:A:O2'	1:0:1140:A:O5'	2.38	0.41
1:0:1408:A:H2	1:0:1411:C:C2	2.39	0.41
1:0:1460:G:H2'	1:0:1461:C:C6	2.55	0.41
1:0:147:G:C5	1:0:148:C:H1'	2.54	0.41
1:0:1508:G:C5	1:0:1512:A:N6	2.88	0.41
1:0:1607:A:C6	1:0:1608:U:C4	3.08	0.41
1:0:1759:A:C6	1:0:1968:G:C6	3.08	0.41
1:0:1780:A:N6	1:0:1781:C:N4	2.67	0.41
1:0:180:C:C4	1:0:181:A:N7	2.89	0.41
1:0:1851:A:O5'	1:0:1851:A:H8	2.03	0.41
1:0:1956:G:C6	1:0:1957:C:C4	3.08	0.41
1:0:2006:G:N2	1:0:2024:U:O2	2.53	0.41
1:0:211:U:H2'	1:0:212:U:C5'	2.51	0.41
1:0:2177:U:H2'	1:0:2178:U:C6	2.53	0.41
1:0:2218:G:C2'	1:0:2219:U:H5'	2.51	0.41
1:0:2252:A:H2'	1:0:2253:A:O4'	2.21	0.41
1:0:2333:A:N6	1:0:2343:C:H42	2.18	0.41
1:0:2339:A:C2	1:0:2340:C:H1'	2.56	0.41
1:0:2451:G:C4	1:0:2454:C:N4	2.88	0.41
1:0:2528:G:C2	1:0:2529:G:N7	2.88	0.41
1:0:2418:A:C2	1:0:2564:U:H4'	2.55	0.41
1:0:2617:G:HO2'	1:0:2618:A:H8	1.68	0.41
1:0:2837:G:H8	1:0:2837:G:O5'	2.02	0.41
1:0:2842:C:OP1	1:0:2842:C:C6	2.74	0.41
1:0:497:C:C2	1:0:505:G:C2	3.08	0.41
1:0:500:G:C6	1:0:501:G:C4	3.08	0.41
1:0:804:C:O2'	1:0:805:G:C5'	2.68	0.41
1:0:985:G:H1'	1:0:1001:A:H62	1.84	0.41
1:0:994:A:N7	1:0:995:A:C4	2.87	0.41
4:W:13:ASP:O	4:W:16:LYS:HB3	2.21	0.41
1:0:1171:A:C5	1:0:1172:U:C4	3.09	0.41
1:0:829:C:C4	1:0:1206:G:C2	3.09	0.41
1:0:1363:C:C2'	1:0:1364:C:H5'	2.50	0.41
1:0:1391:A:N7	1:0:1393:G:N7	2.68	0.41
1:0:762:A:C6	1:0:1634:A:C2	3.09	0.41
1:0:1928:G:OP1	1:0:1928:G:C8	2.73	0.41
1:0:2035:G:O2'	1:0:2036:G:H5'	2.20	0.41
1:0:2410:U:OP2	1:0:2411:A:OP2	2.39	0.41
1:0:2603:G:C2	1:0:2604:G:C8	3.08	0.41
1:0:2614:A:C2'	1:0:2615:U:O5'	2.68	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2779:C:H3'	1:0:2779:C:C6	2.55	0.41
1:0:2803:C:H2'	1:0:2804:G:H8	1.85	0.41
1:0:2836:U:H3'	1:0:2836:U:H6	1.83	0.41
1:0:387:A:H1'	1:0:414:A:N6	2.36	0.41
1:0:580:A:N7	1:0:584:A:N6	2.68	0.41
1:0:867:G:C5	1:0:868:U:C5	3.08	0.41
3:S:51:VAL:HG12	3:S:51:VAL:O	2.21	0.41
4:W:37:LEU:C	4:W:37:LEU:CD2	2.89	0.41
1:0:109:A:H2'	1:0:110:U:C5'	2.51	0.41
1:0:114:C:H2'	1:0:115:G:O4'	2.20	0.41
1:0:1294:G:O2'	1:0:1295:U:H5'	2.20	0.41
1:0:1310:C:H2'	1:0:1311:C:C6	2.45	0.41
1:0:1441:A:C4	1:0:1586:A:OP2	2.73	0.41
1:0:1567:A:H2'	1:0:1568:A:H8	1.83	0.41
1:0:162:C:H6	1:0:162:C:O5'	2.03	0.41
1:0:1690:U:H2'	1:0:1691:G:C5'	2.50	0.41
1:0:1859:A:C4	1:0:1860:A:C8	3.09	0.41
1:0:1923:U:O2'	1:0:1924:C:H5	2.04	0.41
1:0:1999:U:O2'	1:0:2000:U:H5'	2.20	0.41
1:0:2055:G:C2	1:0:2417:U:O2	2.74	0.41
1:0:29:U:O5'	1:0:29:U:H6	2.03	0.41
1:0:468:A:C2	1:0:470:U:C4	3.08	0.41
1:0:520:C:C4	1:0:521:U:C6	3.08	0.41
1:0:60:A:H2'	1:0:61:U:H5'	2.02	0.41
1:0:239:A:C5'	1:0:620:G:H5'	2.45	0.41
1:0:638:A:C5	1:0:647:G:N2	2.89	0.41
1:0:644:A:H2'	1:0:645:G:H5'	2.02	0.41
1:0:668:A:O2'	1:0:669:G:H4'	2.21	0.41
1:0:770:U:C6	1:0:770:U:H3'	2.56	0.41
1:0:798:G:O2'	1:0:1770:U:H5''	2.20	0.41
2:R:38:ILE:HG21	2:R:53:ILE:HD11	2.02	0.41
2:R:56:MET:HE2	2:R:58:VAL:HG22	2.02	0.41
1:0:1011:A:C6	1:0:1166:A:C5	3.09	0.41
1:0:1055:A:H3'	1:0:1056:U:C5'	2.51	0.41
1:0:1253:C:H2'	1:0:1254:G:O5'	2.20	0.41
1:0:1474:A:C2'	1:0:1475:U:H5'	2.49	0.41
1:0:1604:A:O2'	1:0:1605:A:H5'	2.21	0.41
1:0:1958:G:H2'	1:0:1959:U:H6	1.83	0.41
1:0:1964:A:H3'	1:0:1965:U:H5''	1.98	0.41
1:0:2074:U:C5	1:0:2075:U:C6	3.09	0.41
1:0:2537:C:H2'	1:0:2538:C:O4'	2.21	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:2526:U:C4	1:0:2545:A:N7	2.89	0.41
1:0:1981:A:H4'	1:0:2704:U:O2'	2.21	0.41
1:0:953:G:C6	1:0:954:U:N3	2.89	0.41
1:0:970:A:N6	1:0:971:A:N6	2.69	0.41
2:R:88:ILE:HG13	2:R:89:GLU:N	2.35	0.41
2:R:91:LEU:CD2	2:R:91:LEU:H	2.34	0.41
3:S:85:ASP:H	3:S:86:PRO:HD2	1.86	0.41
1:0:1069:G:H8	1:0:1069:G:O5'	2.03	0.41
1:0:1103:C:C5	1:0:1104:G:N7	2.88	0.41
1:0:1108:U:C2'	1:0:1109:A:H5'	2.51	0.41
1:0:1160:C:O2'	1:0:1161:U:H5'	2.20	0.41
1:0:829:C:C6	1:0:1206:G:N2	2.89	0.41
1:0:1359:G:C8	1:0:1359:G:H5'	2.56	0.41
1:0:1369:G:C2	1:0:1370:U:C2	3.08	0.41
1:0:1412:C:H5'	2:R:22:ARG:HH22	1.85	0.41
1:0:1716:G:O6	1:0:1754:G:C4	2.74	0.41
1:0:1817:U:C3'	1:0:1817:U:C6	3.04	0.41
1:0:1837:G:H2'	1:0:1838:G:H8	1.85	0.41
1:0:1918:G:N2	1:0:1947:G:C8	2.89	0.41
1:0:199:A:O4'	1:0:199:A:OP2	2.38	0.41
1:0:2007:G:C6	1:0:2008:C:N4	2.88	0.41
1:0:2526:U:C5	1:0:2545:A:N7	2.89	0.41
1:0:2713:A:H8	1:0:2713:A:O5'	2.04	0.41
1:0:2799:C:C5	1:0:2800:C:C4	3.09	0.41
1:0:484:G:N2	1:0:485:G:C4	2.89	0.41
1:0:624:A:C2'	1:0:625:A:H5'	2.51	0.41
1:0:644:A:N3	1:0:2382:C:H4'	2.36	0.41
1:0:644:A:H2'	1:0:645:G:C4'	2.51	0.41
1:0:661:C:H2'	1:0:662:G:H8	1.85	0.41
1:0:941:U:C2'	1:0:942:U:H5'	2.50	0.41
2:R:35:LYS:HD3	2:R:53:ILE:O	2.20	0.41
1:0:348:U:O3'	3:S:13:LYS:NZ	2.52	0.41
1:0:1181:C:O5'	1:0:1181:C:H6	2.02	0.41
1:0:1201:G:O5'	1:0:1201:G:H8	2.04	0.41
1:0:1223:G:C4	1:0:1250:A:N6	2.83	0.41
1:0:1231:A:C6	1:0:1245:G:C6	3.09	0.41
1:0:137:A:H2'	1:0:138:G:C5'	2.50	0.41
1:0:1472:C:H5''	1:0:1473:U:OP2	2.21	0.41
1:0:1626:A:C5'	1:0:1627:C:OP2	2.65	0.41
1:0:1683:G:H2'	1:0:1684:G:C5'	2.51	0.41
1:0:1696:C:C5	1:0:1697:U:C5	3.09	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1745:C:H2'	1:0:1746:A:C5'	2.51	0.41
1:0:1789:U:C4	1:0:1811:A:C2	3.09	0.41
1:0:2198:U:C3'	1:0:2199:C:C4'	2.99	0.41
1:0:2199:C:C2	1:0:2200:G:C8	3.09	0.41
1:0:2213:G:O2'	1:0:2214:G:H5'	2.20	0.41
1:0:2242:C:N4	1:0:2257:A:C6	2.89	0.41
1:0:2322:U:H4'	1:0:2352:A:O3'	2.21	0.41
1:0:2355:A:H8	1:0:2355:A:P	2.44	0.41
1:0:2666:U:H2'	1:0:2667:C:O4'	2.21	0.41
1:0:294:U:H2'	1:0:295:C:H6	1.86	0.41
1:0:389:G:H2'	1:0:390:U:C5	2.55	0.41
1:0:525:A:H2'	1:0:526:C:C5'	2.51	0.41
1:0:55:A:C2'	1:0:56:C:H5'	2.51	0.41
1:0:614:G:C5	1:0:615:C:C5	3.09	0.41
1:0:756:C:H2'	1:0:757:U:O4'	2.21	0.41
1:0:857:U:O2'	1:0:858:G:H5'	2.21	0.41
1:0:961:G:C4	1:0:962:C:C6	3.09	0.41
5:1:107:LYS:HG2	5:1:108:GLY:N	2.35	0.41
2:R:94:GLN:HA	5:1:51:LYS:CE	2.50	0.41
1:0:1317:G:O2'	1:0:1318:A:H5'	2.21	0.41
1:0:1332:G:C2	1:0:1333:G:C2	3.09	0.41
1:0:1512:A:H5''	1:0:1513:U:OP1	2.21	0.41
1:0:1532:A:C2	1:0:1533:G:C5	3.09	0.41
1:0:173:A:N3	1:0:173:A:H2'	2.36	0.41
1:0:1788:C:N3	1:0:1815:G:C6	2.89	0.41
1:0:1941:C:H2'	1:0:1942:G:H8	1.86	0.41
1:0:2024:U:C2	1:0:2025:A:H8	2.38	0.41
1:0:2146:A:O2'	1:0:2147:C:H5'	2.21	0.41
1:0:2271:C:H2'	1:0:2272:A:O5'	2.21	0.41
1:0:2375:G:O2'	1:0:2376:G:H5'	2.21	0.41
1:0:2419:C:N4	1:0:2420:C:O2	2.54	0.41
1:0:2014:A:H1'	1:0:2434:G:O2'	2.20	0.41
1:0:2436:U:O2'	1:0:2437:G:H5'	2.20	0.41
1:0:2671:C:O2'	1:0:2672:U:H5'	2.20	0.41
1:0:2724:G:N7	1:0:2735:C:H1'	2.36	0.41
1:0:2739:G:H2'	1:0:2740:C:O4'	2.21	0.41
1:0:582:G:C3'	1:0:583:C:H3'	2.50	0.41
1:0:747:A:H2'	1:0:748:A:O5'	2.20	0.41
1:0:931:G:C5	1:0:932:G:C8	3.09	0.41
1:0:982:C:C2'	1:0:983:G:C5'	2.99	0.41
5:1:109:GLU:H	5:1:109:GLU:HG3	1.60	0.41

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1210:C:N3	1:0:1211:G:N7	2.69	0.41
1:0:1626:A:C4'	1:0:1627:C:OP2	2.69	0.41
1:0:1729:C:H2'	1:0:1730:G:C8	2.55	0.41
1:0:1787:U:H2'	1:0:1788:C:H6	1.82	0.41
1:0:1850:G:O6	1:0:1867:A:C2'	2.69	0.41
1:0:1928:G:C2	1:0:1929:U:C2	3.09	0.41
1:0:2046:C:N4	1:0:2047:C:N4	2.69	0.41
1:0:2225:G:H2'	1:0:2226:A:H8	1.85	0.41
1:0:2264:C:H4'	1:0:2267:A:H62	1.84	0.41
1:0:2447:G:O2'	1:0:2448:A:C5'	2.67	0.41
1:0:2603:G:N2	1:0:2604:G:H1'	2.36	0.41
1:0:2764:U:O2'	1:0:2765:C:C5'	2.69	0.41
1:0:2774:U:H2'	1:0:2775:U:H5''	2.03	0.41
1:0:632:A:C2	1:0:633:G:C5	3.09	0.41
1:0:819:C:C2	1:0:820:U:H5	2.38	0.41
3:S:15:HIS:C	3:S:15:HIS:ND1	2.74	0.41
4:W:28:LEU:CD1	4:W:42:ARG:HG3	2.49	0.41
1:0:1073:G:C8	1:0:1099:A:N3	2.89	0.40
1:0:1437:A:O2'	1:0:1438:G:C5'	2.68	0.40
1:0:1502:G:H2'	1:0:1503:G:C8	2.53	0.40
1:0:1537:U:C4	1:0:1538:A:N6	2.90	0.40
1:0:1713:G:C6	1:0:1714:A:C4	3.09	0.40
1:0:1881:U:H6	1:0:1881:U:O5'	2.04	0.40
1:0:1982:C:C2'	1:0:1983:G:H5'	2.52	0.40
1:0:2079:A:O2'	1:0:2080:U:H5'	2.21	0.40
1:0:212:U:C2	1:0:443:A:C2	3.09	0.40
1:0:2180:U:C5	1:0:2203:G:C5	3.09	0.40
1:0:2306:A:C5	1:0:2307:A:C6	3.09	0.40
1:0:2440:C:O2'	1:0:2441:U:H5'	2.21	0.40
1:0:2524:G:C2'	1:0:2525:U:C5'	2.99	0.40
1:0:2593:A:O2'	1:0:2594:U:H5'	2.21	0.40
1:0:2598:C:HO2'	1:0:2599:U:H5'	1.79	0.40
1:0:2841:U:O2'	1:0:2842:C:OP2	2.37	0.40
1:0:2817:A:N1	1:0:2851:G:C6	2.89	0.40
1:0:319:G:C1'	1:0:511:A:O4'	2.69	0.40
1:0:388:G:H2'	1:0:389:G:C8	2.55	0.40
1:0:404:A:C6	1:0:405:C:N3	2.89	0.40
1:0:492:G:H2'	1:0:517:A:N6	2.35	0.40
1:0:545:C:O2'	1:0:546:A:C5'	2.60	0.40
1:0:460:U:C5	1:0:592:G:H1'	2.55	0.40
1:0:672:C:HO2'	1:0:673:G:H5'	1.82	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:82:G:HO2'	1:0:83:A:H5'	1.82	0.40
1:0:873:U:OP1	1:0:2245:A:N6	2.55	0.40
3:S:84:VAL:HG13	3:S:88:THR:O	2.21	0.40
1:0:110:U:C6	1:0:110:U:H5'	2.56	0.40
1:0:120:G:N2	1:0:121:G:H1'	2.36	0.40
1:0:1399:C:O2'	1:0:1484:G:O2'	2.39	0.40
1:0:1660:G:C2	1:0:1661:C:N1	2.89	0.40
1:0:1834:G:H2'	1:0:1835:C:C6	2.55	0.40
1:0:2467:A:C2	1:0:2468:G:C5	3.09	0.40
1:0:2504:G:H2'	1:0:2504:G:N3	2.36	0.40
1:0:2652:G:C4	1:0:2653:A:C8	3.09	0.40
1:0:341:A:H3'	1:0:341:A:H8	1.86	0.40
1:0:461:A:N6	1:0:462:G:C6	2.89	0.40
1:0:472:C:C6	1:0:472:C:H3'	2.57	0.40
1:0:509:U:O2	1:0:510:G:O4'	2.39	0.40
1:0:866:U:O2'	1:0:867:G:H5'	2.21	0.40
1:0:942:U:O2'	1:0:943:U:H5'	2.21	0.40
1:0:1032:A:H3'	1:0:1033:G:H4'	2.04	0.40
1:0:1094:C:H4'	1:0:1096:A:C2	2.56	0.40
1:0:1073:G:C8	1:0:1099:A:C2	3.10	0.40
1:0:1313:U:O2'	1:0:1314:A:OP2	2.35	0.40
1:0:1804:U:O2'	1:0:1805:G:C5'	2.70	0.40
1:0:1884:A:O2'	1:0:1885:C:H5'	2.21	0.40
1:0:1962:C:H2'	1:0:1963:G:H5'	2.02	0.40
1:0:2260:C:H2'	1:0:2261:G:H8	1.87	0.40
1:0:2738:A:C2'	1:0:2739:G:H5'	2.50	0.40
1:0:27:G:N2	1:0:522:G:HO2'	2.18	0.40
1:0:2826:C:O5'	1:0:2826:C:H6	2.04	0.40
1:0:2845:C:C2'	1:0:2846:G:H5'	2.52	0.40
1:0:435:A:N6	1:0:436:A:N6	2.70	0.40
1:0:43:A:C2	1:0:44:G:N3	2.89	0.40
1:0:530:G:C6	1:0:531:G:C6	3.09	0.40
1:0:573:C:C2	1:0:574:C:C6	3.10	0.40
1:0:62:U:C2'	1:0:63:A:C8	3.02	0.40
1:0:63:A:H5''	2:R:71:GLN:CB	2.37	0.40
1:0:867:G:H2'	1:0:868:U:O4'	2.21	0.40
1:0:86:U:P	3:S:42:ARG:NH2	2.88	0.40
1:0:968:C:C6	1:0:968:C:H3'	2.57	0.40
4:W:13:ASP:O	4:W:17:GLU:OE2	2.39	0.40
1:0:1148:G:C5	1:0:1149:G:H1'	2.57	0.40
1:0:1248:G:C6	1:0:1249:G:N1	2.88	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:1369:G:C6	1:0:1370:U:C2	3.08	0.40
1:0:1394:G:H2'	1:0:1395:A:O5'	2.21	0.40
1:0:1768:U:C2	1:0:1769:U:C5	3.09	0.40
1:0:1785:A:H2'	1:0:1786:C:H6	1.84	0.40
1:0:1788:C:N4	1:0:1789:U:O4	2.54	0.40
1:0:1900:U:O2'	1:0:1901:A:H5'	2.22	0.40
1:0:1943:A:H2'	1:0:1944:C:O4'	2.21	0.40
1:0:1964:A:C3'	1:0:1965:U:C5'	2.95	0.40
1:0:1979:C:O2'	1:0:1980:A:C4'	2.69	0.40
1:0:2031:A:C6	1:0:2600:A:N1	2.90	0.40
1:0:2201:G:C2	1:0:2202:G:C8	3.10	0.40
1:0:2260:C:O4'	1:0:2367:A:C2	2.75	0.40
1:0:2418:A:O5'	1:0:2418:A:H8	2.04	0.40
1:0:2549:G:H2'	1:0:2550:C:O4'	2.21	0.40
1:0:2629:U:O2'	1:0:2630:C:H5'	2.22	0.40
1:0:2710:C:O5'	1:0:2710:C:H6	2.04	0.40
1:0:2713:A:C4	1:0:2714:A:C8	3.09	0.40
1:0:2781:G:H2'	1:0:2782:G:C5'	2.46	0.40
1:0:2818:G:H2'	1:0:2819:G:C5'	2.51	0.40
1:0:2825:A:C6	1:0:2826:C:N4	2.89	0.40
1:0:2827:G:H2'	1:0:2828:C:O4'	2.20	0.40
1:0:322:A:O2'	1:0:323:G:OP1	2.39	0.40
1:0:749:C:C5	1:0:750:C:H5	2.40	0.40
1:0:1293:A:O2'	1:0:1294:G:H5'	2.21	0.40
1:0:1340:C:H3'	1:0:1341:G:C8	2.57	0.40
1:0:1382:G:C2	1:0:1383:C:C6	3.09	0.40
1:0:1436:G:C8	1:0:1437:A:C8	3.10	0.40
1:0:203:G:O2'	1:0:204:A:H5'	2.22	0.40
1:0:2143:G:C5	1:0:2144:C:C4	3.10	0.40
1:0:2073:A:C2	1:0:2209:G:C2	3.09	0.40
1:0:2320:G:C5	1:0:2321:C:C4	3.10	0.40
1:0:2338:C:H2'	1:0:2339:A:H8	1.83	0.40
1:0:2425:G:H8	1:0:2425:G:O5'	2.04	0.40
1:0:2610:G:C6	1:0:2611:A:C5	3.08	0.40
1:0:2749:A:H2'	1:0:2750:G:C5'	2.50	0.40
1:0:2753:C:H2'	1:0:2754:C:C6	2.42	0.40
1:0:482:A:C2'	1:0:483:A:H5'	2.51	0.40
1:0:521:U:H2'	1:0:522:G:H5'	2.02	0.40
1:0:557:U:H5''	1:0:558:G:OP1	2.22	0.40
1:0:674:U:O5'	1:0:674:U:H6	2.04	0.40
1:0:706:A:O2'	1:0:707:U:H5'	2.21	0.40

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Atom-1	Atom-2	Interatomic distance (Å)	Clash overlap (Å)
1:0:70:A:OP1	1:0:111:G:H1'	2.22	0.40
1:0:71:A:HO2'	1:0:72:A:P	2.45	0.40
1:0:780:U:H2'	1:0:781:G:H8	1.86	0.40
3:S:95:ARG:NH1	3:S:106:VAL:HA	2.34	0.40
1:0:339:U:O2'	3:S:79:SER:HB3	2.21	0.40
4:W:41:HIS:CD2	4:W:42:ARG:N	2.89	0.40

There are no symmetry-related clashes.

5.3 Torsion angles [i](#)

5.3.1 Protein backbone [i](#)

In the following table, the Percentiles column shows the percent Ramachandran outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the backbone conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Favoured	Allowed	Outliers	Percentiles	
2	R	91/95 (96%)	70 (77%)	16 (18%)	5 (6%)	2	15
3	S	108/115 (94%)	79 (73%)	24 (22%)	5 (5%)	2	19
4	W	64/67 (96%)	54 (84%)	8 (12%)	2 (3%)	4	29
5	1	98/112 (88%)	81 (83%)	13 (13%)	4 (4%)	3	22
All	All	361/389 (93%)	284 (79%)	61 (17%)	16 (4%)	3	20

All (16) Ramachandran outliers are listed below:

Mol	Chain	Res	Type
3	S	42	ARG
3	S	65	PRO
4	W	2	LYS
5	1	49	PRO
2	R	69	ILE
5	1	50	ARG
3	S	60	PRO
3	S	93	ARG
5	1	99	GLY

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Mol	Chain	Res	Type
2	R	8	GLN
2	R	6	ILE
4	W	10	GLN
2	R	12	ILE
2	R	60	GLY
5	1	87	VAL
3	S	85	ASP

5.3.2 Protein sidechains ⓘ

In the following table, the Percentiles column shows the percent sidechain outliers of the chain as a percentile score with respect to all X-ray entries followed by that with respect to entries of similar resolution.

The Analysed column shows the number of residues for which the sidechain conformation was analysed, and the total number of residues.

Mol	Chain	Analysed	Rotameric	Outliers	Percentiles	
2	R	75/76 (99%)	61 (81%)	14 (19%)	1	7
3	S	91/96 (95%)	77 (85%)	14 (15%)	3	13
4	W	54/55 (98%)	43 (80%)	11 (20%)	1	5
5	1	83/93 (89%)	72 (87%)	11 (13%)	4	18
All	All	303/320 (95%)	253 (84%)	50 (16%)	2	11

All (50) residues with a non-rotameric sidechain are listed below:

Mol	Chain	Res	Type
2	R	5	ASP
2	R	7	LEU
2	R	17	TYR
2	R	36	THR
2	R	49	ARG
2	R	50	VAL
2	R	53	ILE
2	R	56	MET
2	R	59	PRO
2	R	62	ARG
2	R	63	LYS
2	R	74	ASP
2	R	75	ARG
2	R	80	VAL

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Mol	Chain	Res	Type
3	S	5	SER
3	S	13	LYS
3	S	15	HIS
3	S	16	PHE
3	S	18	LYS
3	S	20	ASP
3	S	25	LEU
3	S	32	GLN
3	S	40	LEU
3	S	43	ASP
3	S	45	LYS
3	S	80	LYS
3	S	95	ARG
3	S	112	LYS
4	W	1	MET
4	W	5	GLU
4	W	6	MET
4	W	10	GLN
4	W	21	ARG
4	W	29	ARG
4	W	41	HIS
4	W	44	ARG
4	W	46	LEU
4	W	50	VAL
4	W	54	ASN
5	1	15	LYS
5	1	17	SER
5	1	25	ARG
5	1	43	PHE
5	1	53	ILE
5	1	55	ASN
5	1	62	VAL
5	1	88	ASP
5	1	102	PHE
5	1	107	LYS
5	1	109	GLU

Some sidechains can be flipped to improve hydrogen bonding and reduce clashes. All (11) such sidechains are listed below:

Mol	Chain	Res	Type
2	R	94	GLN
3	S	15	HIS

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Mol	Chain	Res	Type
3	S	32	GLN
3	S	57	ASN
3	S	64	ASN
3	S	71	GLN
4	W	36	GLN
5	1	24	ASN
5	1	55	ASN
5	1	97	GLN
5	1	100	GLN

5.3.3 RNA ⓘ

Mol	Chain	Analysed	Backbone Outliers	Pucker Outliers
1	0	2798/2880 (97%)	580 (20%)	88 (3%)

All (580) RNA backbone outliers are listed below:

Mol	Chain	Res	Type
1	0	14	A
1	0	25	U
1	0	33	C
1	0	35	G
1	0	45	C
1	0	49	U
1	0	50	G
1	0	59	G
1	0	67	G
1	0	68	C
1	0	69	G
1	0	70	A
1	0	71	A
1	0	72	A
1	0	73	A
1	0	74	G
1	0	76	C
1	0	83	A
1	0	84	G
1	0	87	G
1	0	89	A
1	0	90	G
1	0	91	A

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Mol	Chain	Res	Type
1	0	99	U
1	0	100	G
1	0	103	U
1	0	105	G
1	0	110	U
1	0	117	A
1	0	118	U
1	0	119	G
1	0	123	A
1	0	124	A
1	0	129	A
1	0	135	U
1	0	155	G
1	0	158	A
1	0	173	A
1	0	174	A
1	0	175	C
1	0	181	A
1	0	182	G
1	0	183	U
1	0	193	A
1	0	199	A
1	0	200	A
1	0	206	U
1	0	210	A
1	0	218	A
1	0	219	G
1	0	225	G
1	0	227	G
1	0	229	G
1	0	242	A
1	0	243	G
1	0	245	C
1	0	305	A
1	0	318	G
1	0	322	A
1	0	323	G
1	0	334	G
1	0	335	A
1	0	340	G
1	0	341	A
1	0	342	G

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Mol	Chain	Res	Type
1	0	343	A
1	0	346	C
1	0	358	C
1	0	362	C
1	0	363	G
1	0	368	A
1	0	373	A
1	0	399	G
1	0	400	U
1	0	401	G
1	0	404	A
1	0	414	A
1	0	418	C
1	0	424	G
1	0	443	A
1	0	448	C
1	0	453	U
1	0	454	G
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	468	A
1	0	484	G
1	0	491	A
1	0	492	G
1	0	495	C
1	0	514	G
1	0	515	A
1	0	518	A
1	0	537	C
1	0	538	A
1	0	539	A
1	0	541	C
1	0	542	A
1	0	553	C
1	0	554	U
1	0	555	U
1	0	556	A

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Mol	Chain	Res	Type
1	0	558	G
1	0	559	C
1	0	572	G
1	0	580	A
1	0	582	G
1	0	583	C
1	0	584	A
1	0	593	C
1	0	595	A
1	0	601	A
1	0	602	C
1	0	613	A
1	0	617	U
1	0	624	A
1	0	628	A
1	0	632	A
1	0	633	G
1	0	636	G
1	0	637	G
1	0	638	A
1	0	642	A
1	0	645	G
1	0	648	A
1	0	652	C
1	0	654	A
1	0	657	A
1	0	666	U
1	0	667	U
1	0	669	G
1	0	684	C
1	0	688	A
1	0	690	A
1	0	699	G
1	0	700	C
1	0	703	A
1	0	728	G
1	0	741	G
1	0	742	G
1	0	743	A
1	0	752	G
1	0	753	U
1	0	754	G

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Mol	Chain	Res	Type
1	0	760	U
1	0	765	C
1	0	766	A
1	0	775	U
1	0	776	G
1	0	778	G
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	806	A
1	0	807	A
1	0	813	A
1	0	814	G
1	0	815	A
1	0	818	G
1	0	819	C
1	0	825	C
1	0	832	A
1	0	840	U
1	0	841	G
1	0	843	G
1	0	844	G
1	0	859	U
1	0	873	U
1	0	874	A
1	0	879	A
1	0	919	U
1	0	920	G
1	0	922	A
1	0	926	C
1	0	930	A
1	0	931	G
1	0	941	U
1	0	944	A
1	0	952	A

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Mol	Chain	Res	Type
1	0	957	G
1	0	968	C
1	0	970	A
1	0	972	C
1	0	973	U
1	0	981	C
1	0	984	A
1	0	994	A
1	0	995	A
1	0	996	C
1	0	1005	U
1	0	1006	C
1	0	1016	C
1	0	1019	U
1	0	1022	A
1	0	1023	U
1	0	1024	G
1	0	1030	U
1	0	1032	A
1	0	1033	G
1	0	1036	G
1	0	1037	U
1	0	1044	U
1	0	1045	G
1	0	1056	U
1	0	1057	A
1	0	1058	G
1	0	1059	A
1	0	1072	U
1	0	1073	G
1	0	1077	U
1	0	1078	A
1	0	1081	A
1	0	1089	C
1	0	1090	C
1	0	1095	A
1	0	1096	A
1	0	1101	U
1	0	1120	C
1	0	1137	A
1	0	1138	A
1	0	1140	A

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Mol	Chain	Res	Type
1	0	1142	G
1	0	1143	A
1	0	1145	C
1	0	1146	G
1	0	1149	G
1	0	1152	C
1	0	1153	A
1	0	1154	A
1	0	1155	G
1	0	1167	A
1	0	1168	G
1	0	1182	U
1	0	1183	C
1	0	1185	C
1	0	1199	U
1	0	1200	G
1	0	1224	A
1	0	1226	A
1	0	1233	A
1	0	1234	C
1	0	1240	G
1	0	1249	G
1	0	1250	A
1	0	1253	C
1	0	1254	G
1	0	1261	G
1	0	1262	U
1	0	1264	C
1	0	1265	G
1	0	1266	G
1	0	1269	G
1	0	1278	A
1	0	1279	G
1	0	1284	G
1	0	1285	A
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

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Mol	Chain	Res	Type
1	0	1324	G
1	0	1326	U
1	0	1327	C
1	0	1334	A
1	0	1337	G
1	0	1338	G
1	0	1339	U
1	0	1340	C
1	0	1342	U
1	0	1343	C
1	0	1346	C
1	0	1354	A
1	0	1358	C
1	0	1359	G
1	0	1378	A
1	0	1381	G
1	0	1391	A
1	0	1392	U
1	0	1397	A
1	0	1398	G
1	0	1405	A
1	0	1409	U
1	0	1411	C
1	0	1428	G
1	0	1430	G
1	0	1433	A
1	0	1441	A
1	0	1442	C
1	0	1443	G
1	0	1459	U
1	0	1465	G
1	0	1467	U
1	0	1468	A
1	0	1469	U
1	0	1470	G
1	0	1475	U
1	0	1476	G
1	0	1482	U
1	0	1484	G
1	0	1490	U
1	0	1491	C
1	0	1498	G

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Mol	Chain	Res	Type
1	0	1505	U
1	0	1513	U
1	0	1514	C
1	0	1524	C
1	0	1528	C
1	0	1529	C
1	0	1552	C
1	0	1562	G
1	0	1571	G
1	0	1573	G
1	0	1574	A
1	0	1576	G
1	0	1583	A
1	0	1585	A
1	0	1595	A
1	0	1601	U
1	0	1619	A
1	0	1623	C
1	0	1625	A
1	0	1627	C
1	0	1632	A
1	0	1633	C
1	0	1634	A
1	0	1635	G
1	0	1648	C
1	0	1651	U
1	0	1652	G
1	0	1657	A
1	0	1661	C
1	0	1664	G
1	0	1665	C
1	0	1671	A
1	0	1686	A
1	0	1691	G
1	0	1692	C
1	0	1698	C
1	0	1709	U
1	0	1712	G
1	0	1715	A
1	0	1716	G
1	0	1717	A
1	0	1723	U

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Mol	Chain	Res	Type
1	0	1724	C
1	0	1732	U
1	0	1747	G
1	0	1749	G
1	0	1750	A
1	0	1754	G
1	0	1755	G
1	0	1764	A
1	0	1771	A
1	0	1772	C
1	0	1773	C
1	0	1775	A
1	0	1776	A
1	0	1777	A
1	0	1778	U
1	0	1791	C
1	0	1801	C
1	0	1802	A
1	0	1807	A
1	0	1808	C
1	0	1811	A
1	0	1812	U
1	0	1821	A
1	0	1831	G
1	0	1840	A
1	0	1842	G
1	0	1884	A
1	0	1890	G
1	0	1903	C
1	0	1906	U
1	0	1919	A
1	0	1920	A
1	0	1922	U
1	0	1926	U
1	0	1927	U
1	0	1928	G
1	0	1938	U
1	0	1939	U
1	0	1948	C
1	0	1949	A
1	0	1950	C
1	0	1953	A

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Mol	Chain	Res	Type
1	0	1954	A
1	0	1955	G
1	0	1956	G
1	0	1964	A
1	0	1965	U
1	0	1974	U
1	0	1976	U
1	0	1979	C
1	0	1980	A
1	0	2004	U
1	0	2006	G
1	0	2007	G
1	0	2009	U
1	0	2011	U
1	0	2014	A
1	0	2015	G
1	0	2016	A
1	0	2019	C
1	0	2026	C
1	0	2029	G
1	0	2034	A
1	0	2035	G
1	0	2038	C
1	0	2039	G
1	0	2043	A
1	0	2044	G
1	0	2045	A
1	0	2051	U
1	0	2052	G
1	0	2060	A
1	0	2064	U
1	0	2075	U
1	0	2076	G
1	0	2099	G
1	0	2107	G
1	0	2110	G
1	0	2115	C
1	0	2116	G
1	0	2117	A
1	0	2126	U
1	0	2127	U
1	0	2128	U

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Mol	Chain	Res	Type
1	0	2129	U
1	0	2140	G
1	0	2142	G
1	0	2181	A
1	0	2188	A
1	0	2189	A
1	0	2191	A
1	0	2192	U
1	0	2195	C
1	0	2199	C
1	0	2204	A
1	0	2205	C
1	0	2217	G
1	0	2218	G
1	0	2222	U
1	0	2229	G
1	0	2230	G
1	0	2238	G
1	0	2241	U
1	0	2245	A
1	0	2246	A
1	0	2247	A
1	0	2252	A
1	0	2262	C
1	0	2268	G
1	0	2275	U
1	0	2285	U
1	0	2286	G
1	0	2287	G
1	0	2288	A
1	0	2291	U
1	0	2298	U
1	0	2300	G
1	0	2306	A
1	0	2313	G
1	0	2314	A
1	0	2315	A
1	0	2325	A
1	0	2326	C
1	0	2362	G
1	0	2364	C
1	0	2369	U

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Mol	Chain	Res	Type
1	0	2378	G
1	0	2385	U
1	0	2396	C
1	0	2402	U
1	0	2403	C
1	0	2405	A
1	0	2406	C
1	0	2407	G
1	0	2408	G
1	0	2409	A
1	0	2410	U
1	0	2418	A
1	0	2419	C
1	0	2420	C
1	0	2426	G
1	0	2427	A
1	0	2428	U
1	0	2448	A
1	0	2454	C
1	0	2455	A
1	0	2470	U
1	0	2476	A
1	0	2477	C
1	0	2481	G
1	0	2482	A
1	0	2483	U
1	0	2484	G
1	0	2485	U
1	0	2492	G
1	0	2497	A
1	0	2498	U
1	0	2499	C
1	0	2508	G
1	0	2509	A
1	0	2521	A
1	0	2522	G
1	0	2545	A
1	0	2546	G
1	0	2549	G
1	0	2552	C
1	0	2561	G
1	0	2565	C

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Mol	Chain	Res	Type
1	0	2582	G
1	0	2588	U
1	0	2591	C
1	0	2593	A
1	0	2594	U
1	0	2609	G
1	0	2624	G
1	0	2625	U
1	0	2633	A
1	0	2634	G
1	0	2660	C
1	0	2661	G
1	0	2668	U
1	0	2670	C
1	0	2691	C
1	0	2693	U
1	0	2694	G
1	0	2700	U
1	0	2707	G
1	0	2712	G
1	0	2713	A
1	0	2728	A
1	0	2730	A
1	0	2731	G
1	0	2732	C
1	0	2737	A
1	0	2745	A
1	0	2757	G
1	0	2758	A
1	0	2759	U
1	0	2761	A
1	0	2769	C
1	0	2771	C
1	0	2774	U
1	0	2775	U
1	0	2777	A
1	0	2782	G
1	0	2783	U
1	0	2795	A
1	0	2796	A
1	0	2798	A
1	0	2807	U

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Mol	Chain	Res	Type
1	0	2808	U
1	0	2809	A
1	0	2810	A
1	0	2824	C
1	0	2841	U
1	0	2842	C
1	0	2847	G
1	0	2854	G
1	0	2855	C
1	0	2867	G
1	0	2868	G

All (88) RNA pucker outliers are listed below:

Mol	Chain	Res	Type
1	0	48	A
1	0	67	G
1	0	117	A
1	0	192	G
1	0	198	A
1	0	399	G
1	0	454	G
1	0	458	G
1	0	466	A
1	0	485	G
1	0	571	U
1	0	583	C
1	0	683	A
1	0	698	A
1	0	741	G
1	0	765	C
1	0	777	A
1	0	788	G
1	0	789	G
1	0	795	A
1	0	801	A
1	0	804	C
1	0	814	G
1	0	956	A
1	0	1139	A
1	0	1141	U
1	0	1223	G

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Mol	Chain	Res	Type
1	0	1225	G
1	0	1249	G
1	0	1261	G
1	0	1263	G
1	0	1264	C
1	0	1266	G
1	0	1278	A
1	0	1299	A
1	0	1301	U
1	0	1313	U
1	0	1337	G
1	0	1338	G
1	0	1342	U
1	0	1355	A
1	0	1357	U
1	0	1410	U
1	0	1442	C
1	0	1626	A
1	0	1632	A
1	0	1633	C
1	0	1634	A
1	0	1651	U
1	0	1664	G
1	0	1670	G
1	0	1684	G
1	0	1685	A
1	0	1691	G
1	0	1698	C
1	0	1715	A
1	0	1775	A
1	0	1777	A
1	0	1807	A
1	0	1811	A
1	0	1820	G
1	0	1889	G
1	0	1938	U
1	0	1963	G
1	0	1975	G
1	0	2016	A
1	0	2018	G
1	0	2034	A
1	0	2059	U

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Mol	Chain	Res	Type
1	0	2204	A
1	0	2228	U
1	0	2237	C
1	0	2254	C
1	0	2261	G
1	0	2404	A
1	0	2409	A
1	0	2418	A
1	0	2476	A
1	0	2482	A
1	0	2624	G
1	0	2633	A
1	0	2660	C
1	0	2693	U
1	0	2758	A
1	0	2823	G
1	0	2841	U
1	0	2848	A
1	0	2867	G

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

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

5.5 Carbohydrates [i](#)

There are no carbohydrates in this entry.

5.6 Ligand geometry [i](#)

There are no ligands in this entry.

5.7 Other polymers [i](#)

There are no such residues in this entry.

5.8 Polymer linkage issues [i](#)

There are no chain breaks in this entry.

6 Fit of model and data

6.1 Protein, DNA and RNA chains

EDS was not executed - this section is therefore empty.

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

EDS was not executed - this section is therefore empty.

6.3 Carbohydrates

EDS was not executed - this section is therefore empty.

6.4 Ligands

EDS was not executed - this section is therefore empty.

6.5 Other polymers

EDS was not executed - this section is therefore empty.